The Lancaster Health Improvement Partnership presents:
(Action Team for Lancaster Healthy Communities and PA Department of Health SHIP Partner)

A Plan for Creating a Healthy Lancaster Community






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Who should read this?

The Lancaster Health Improvement Plan has been written with all citizens of the community in mind. We have attempted to write a plan that has something to say to anyone interested in improving their own health, that of their family, or their community. This plan should be of particular interest to health care providers and policy-makers. For some, data is important—we have that. Others want to know what they can do for themselves or whom they can call—we have that too. Still others want to know where they can research programs that are achieving good results in other communities—that also has been made available. We believe that information on health that provides the keys to higher quality of life can and should be accessible to everyone.

Who is Lancaster Healthy Communities and the Lancaster Health Improvement Partnership?

Lancaster Healthy Communities (LHC) is a voluntary association of individuals, community leaders, institutions, and agencies. We support a civic movement to create "A whole community enabling all of its people to be healthy, to live healthy lifestyles, and to reach their full potentials." We've been such a movement since 1998, convening public forums that promote community dialogue around planning, community problem-solving, and providing information concerning a variety of issues. We believe that facilitated dialogue is critical to understanding community values—those elements of community life that everyone holds dear and that define who we are—linking us to our past and providing the key to decision-making for a sustainable future. We promote and facilitate collaboration in the community as the best way to utilize and share human and fiscal resources. We promote facilitative leadership skills. We attempt to base our work on information gathered about the current way the community works so that we can more adequately take aim at that which needs to be changed—or does not.

Lancaster Healthy Communities facilitates three volunteer-driven Action Teams: Family and Youth, Stewardship of Resources, and the local State Health Improvement Plan (SHIP), now known as the Lancaster Health Improvement Partnership (LHIP). These teams study the data and identify available resources around issues that our stakeholders have identified as community priorities. They then bring together collaboratives around specific projects that advance upstream solutions.

How did we convene the local SHIP process?

LHC convened Lancaster Health Improvement Partners as the SHIP Action in August of 2000 to focus on what we considered traditional health issues. We recruited a chair, Alice Yoder, Director of Community Health for Lancaster General Hospital, who facilitated a small group from the LHC Coordinating Committee in putting together a recruitment plan that identified potential community partners. This group also provided materials on Healthy People (HP) 2010 and PA SHIP for orientation purposes. We convened a diverse group from across the county that met monthly. We found that having a diversity of viewpoints and disciplines was valuable because different kinds of questions were asked than those that might have surfaced from just health care professionals. These questions surfaced because there were no set assumptions being made by a majority of us as experts in any one field. Many questions were those we believe the general public would have asked.

We began by introducing the team to Healthy People 2010 and the proposed PA Department of Health State Health Improvement Plan (SHIP) for background information on national and state planning efforts. LHC is committed to building on existing resources. We asked, however, that the group decide on their own mission and goals after reading the materials.

The team decided to continue meeting and established a Mission, Goals, and Working Agreements (see Appendix, p. 1). The team accepted the challenge from the Department of Health to begin a local health planning process based on Healthy People 2010 work. This document reflects that decision as it addresses the goal to develop and publicize health improvement priorities.

What is Healthy People 2010?

Before we go much further, it is important that we address in some detail Healthy People 2010. Healthy People 2010 was developed by citizens from throughout the Nation, in a multiyear process that was coordinated by the U.S. Department of Health and Human Services (HHS). For two decades, HHS had used Healthy People objectives to improve the health of the American people. Healthy People 2010 is the third set of health promotion and disease prevention objectives.

The impact of HP 2010 has been more keenly felt because its promotion has coincided with the federal government's charge to change state health planning processes. They were the initial force behind local health planning and mandated local health planning efforts as the key to developing state plans. By forcing that perspective on planning, more community efforts have looked at HP 2010 as a resource or guide to local work.

HP 2010 has inspired activity on the part of states, local communities, agencies, institutions, and individuals. It is asking us as a nation to focus attention on key health issues in a way that heightens our awareness of prevention strategies and to identify the root causes of illness and what determines health. It asks us to cross disciplines and bring an integrated approach to improving health outcomes.

What is the PA Department of Health (SHIP) and why a community focus?

In 1999, the PA Department of Health (DOH) chose seven pilot partners including LHC to begin experimenting with a new way of planning to meet the state's health priorities. The idea was to have local groups set their own priorities and develop a local plan that the state could then support. These local priorities would then be incorporated into a state plan. The keys to validating the local plan were community input by a variety of participants and the use of credible information and data in setting local priorities. This process, known as SHIP (State Health Improvement Plan) has since expanded. Local partners were encouraged to use HP 2010 objectives within their plans as DOH modeled how they might be used in their own planning.

Developing community focus was not as easy as it sounded. In many communities, the process required rival institutions and agencies to sit down for the first time to talk about issues. Complicating the process further was the issue that these groups would be asked to share local data the institutions or programs had collected for themselves in order to gain an upper hand in the local health care or human service market. Trust-building skills became important.

Lancaster Healthy Communities was uniquely situated in that we had the full cooperation of the five county hospitals from our inception (Community Hospital of Lancaster, Ephrata Community Hospital, Lancaster General Hospital, LGH—Susquehanna Division, and Lancaster Regional Medical Center). In fact, LHC was the brainchild of our hospitals, and they have remained our primary funding sources. Additionally, we were already organized to collect data through our work on a Local Community Indicator Project (LCIP) and had some experience with convening groups for the purpose of studying difficult issues through collaborative structures.

LHC sent representatives to three committees at the PA Department of Health. The charge to those committees was to lend guidance in drawing up a plan that might shape partnering criteria from the state's perspectives. In addition, these groups served to represent the needs of Pennsylvania's communities and shared what they believed communities needed from the state to better undertake health planning in the way it was being envisioned in our home areas. Our representatives were Alice Yoder (Community Partners Committee), Rick Kastner (Program Committee), and Dr. John Hahn and Sean Flaherty (Data Committee). These groups met until 2001, when a new state organizational plan was implemented and the current planning process began.

The Department of Health has provided matching funds for our Healthy Communities work and LHIP process. They have provided data support and made research opportunities available. They are convening Regional SHIP meetings so that we can meet with our peer counties to study regional issues. Furthermore, they have been supporting national efforts to educate partners and the public about Healthy People 2010.

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Healthy People 2010 Goals and Focus Areas

Healthy People 2010 builds on initiatives pursued over the past twenty years to achieve **two overarching goals: (1) to increase the quality and years of healthy life** and **(2) to eliminate health disparities.** A health disparity is a gap in the health status of different groups of people, in which one group is healthier than the other group or groups. Like its predecessors, Healthy People 2010 was developed through a broad consultation process, built on the best scientific knowledge and designed to measure programs over time.

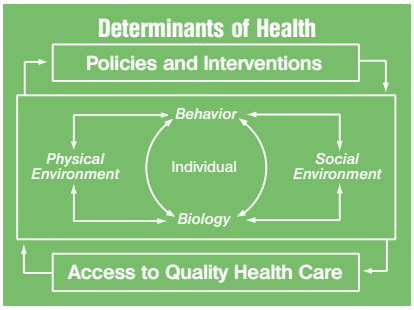
Healthy People 2010 contains a comprehensive set of 467 health objectives in 28 focus areas for the nation to achieve over the first decade of the century.

Healthy People 2010: 28 Focus Areas

1. Access to Quality Health Services
2. Arthritis, Osteoporosis, Chronic Back Conditions
3. Cancer
4. Chronic Kidney Disease
5. Diabetes
6. Disability and Secondary Conditions
7. Educational and Community-Based Programs
8. Environmental Health
9. Family Planning
10. Food Safety
11. Health Communication
12. Heart Disease and Stroke
13. HIV
14. Immunization and Infectious Diseases
15. Injury and Violence Prevention
16. Maternal, Infant, and Child Health
17. Medical Product Safety
18. Mental Health and Mental Disorders
19. Nutrition and Overweight
20. Occupational Safety and Health
21. Oral Health
22. Physical Activity and Fitness
23. Public Health Infrastructure
24. Respiratory Diseases
25. Sexually Transmitted Diseases
26. Substance Abuse
27. Tobacco Use
28. Vision and Hearing

What determines health and health outcomes and how did that factor into choosing Leading Health Indicators?

The determinants of health—individual biology and behavior, physical and social environments, policies and interventions, and access to quality health care (see Appendix, p. 3)—have a profound effect on the health of individuals, communities, and the nation. An evaluation of these determinants is an important part of developing any strategy to improve health. For example, individual behaviors and environmental factors are responsible for about 70 percent of all premature deaths in the United States. Developing and implementing policies and prevention strategies that effectively address these determinants of health can reduce the burden of illness, enhance quality of life, and increase our longevity.



Important ideas around determinants of health influenced the selection of the Leading Health indicators by HP 2010. The process was led by an interagency work group within the U.S. Department of Health and Human Services. Individuals and organizations provided comments at national and regional meetings or via mail and the Internet. A report by the Institute of Medicine, National Academy of Sciences, provided several scientific models on which to support a set of indicators (Leading Health Indicators For Healthy People 2010).

The ideas that impacted the selection were:

- Multiple factors, both internal and external, impact individual and population risk factors including the role of medical care. These risk factors include physical environment, social environment, genetic assets of the individuals, prosperity, individual behaviors, Individual biology, health and function, disease, and finally health care systems and overall well-being.

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It is important to move health policy beyond simply health care policy to include social, political, and environmental policies as well as characteristics and behaviors inherent in individuals and societies. Relationships among the various determinants are important because they can suggest very different mandates for community intervention to achieve community health.

▪ Many determinants of health have different magnitudes of effect at different stages in life (e.g. in very young children, family factors seem to have a greater impact than personal behaviors).

▪ Health and disease status are a result of cumulative factors as well as the effects of factors at certain critical periods of one's life. It is possible to predict future health status based on early experiences and, therefore, to develop preventive measures and more effective health promotion activities.

Even though each person may begin with different health assets, by understanding their impact we can intervene meaningfully and strategically to improve a person's quality of life in the future.

▪ The general population: Iindividuals, in collaboration with public and private health professionals should take action to promote health and prevent disease in themselves and others.

Individuals and non–health care audiences should be targeted and measures should emphasize public and community activities and personal behaviors as well as clinical changes and practice.

What are the Leading Health Indicators?

Healthy People 2010's 467 objectives can be mind-boggling to those attempting to do local planning with limited local resources. Understanding this, those guiding Healthy People 2010 asked a great number of well-informed people to identify a set of health priorities that reflect 10 major public health concerns in the United States. These 10 Leading Health Indicators are intended to help everyone more easily understand the importance of health promotion and disease prevention. What was hoped was that motivating individuals to act on just one of the indicators can have a profound effect on increasing the quality and years of healthy life and on eliminating health disparities—for the individual, as well as the community overall.

Locally, we have used the Leading Health Indicators targeted by HP 2010 as our base for local priorities. We have also included other indicators on which to focus concern as dictated by the local data. We have looked at the 467 target outcomes set by HP 2010 to help gauge our performance but also to set our own standards. HP 2010 offers a simple but powerful idea: Provide health objectives in a format that enables diverse groups to combine their efforts and work as a team.

How did LHIP decide on the local focus areas?

LHIP members agreed we would initially look at existing data that was well accepted by local providers and practitioners. We then developed a process for studying the data within a geographic and peer county context. We believed that we needed to compare ourselves to similar communities and places where we knew something of their assets and resources. We felt it important to look to communities within Pennsylvania because of similar definitions in data collection and funding streams for local assets. We developed a formal partnership with Franklin & Marshall College that insured that faculty and students would help gather, present, and analyze data.

First, we looked at data from HRSA, The Department of Health, *The State of the Child* and the Behavioral Risk Factor Surveillance Survey. We compared local results with Healthy People

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2010 goals, national and state trends, and with geographically adjacent and demographically peer counties in Pennsylvania (as defined by HRSA, these are counties with a similar demographic makeup.) Once we studied this data and determined the areas we believed needed further research, we asked experts to join in our analysis. Often we were motivated to look at additional data sources because of the sheer lack of local data and information on an issue, and yet these issues were highlighted as a national or state priority. One such issue was mental health. We also had an epidemiologist evaluate our work. The epidemiologist looked at PHC4 data as well as our sources. As a result, other areas of concern were then highlighted for deeper investigation.

Focus Areas	Goals
Physical Activity	Promote regular physical activity
Overweight and Obesity	Promote healthier weight and good nutrition
Tobacco Use	Prevent and reduce tobacco use
Substance Abuse	Prevent and reduce substance abuse
Responsible Sexual Behavior	Promote responsible sexual behavior
Mental Health	Promote mental health and well-being
Injury and Violence	Promote safety and reduce violence
Environmental Quality	Promote healthy environments
Immunization	Prevent infectious disease through immunization
Access to Health Care	Increase access to quality health care

The local expert groups were asked to answer a set of questions within their groups. They were asked to review the HP 2010 indicators for local relevance. They then met with us to review the work we had all done in studying the data. These experts brought targeted information to the table that was culled through their field experience or research. We examined community resources and programs. We researched best practices in other communities. Once the report was in draft form, it was shared again with experts before the final draft was printed.

HP 2010 Leading Health Indicators were deemed useful because they would help communities and organizations to focus attention on a small number of key health and social issues. In that way, they would motivate actions that would change the basic factors that really impact and influence our personal and community health. In having this happen from community to community or institution to institution, one would be able to influence the health of the county.

Finally, we chose indicators based on leading indicators proposed by HP 2010 and the National Institute of Medicine study groups that put together the original lists from which the HP 2010 indicators were chosen. We diverged from HP 2010 by including Heart Disease and Stroke, Cancer Prevention and Screening, and Cognitive Development. Local data strongly supported that additional attention be paid to these areas to improve local health status. These indicators reflected the four enabling goals that are set out by Healthy People 2010: 1) promote healthy behaviors, 2) promote a healthy community, 3) prevent and reduce disease and disorders, and 4) improve systems for personal and public health.

We asked the following questions in choosing specific measures for the indicators and goals:

- Is data available?—Many HP 2010 measures are not immediately useful for Lancaster because there is no data collection in place for the information at the local level. HP 2010 has recommended some measures that they believe are important, but which they recognize are not available and need development nationally, statewide, and locally.
- What is the local context for the issue?—The measures have to reflect the demographics and geography of the local area. For example, we in Lancaster would not measure the incidence of an infectious disease or illness that is prevalent in desert regions.
- Will the information motivate action?—If the community is doing very well in the Lead Indicator and it is not a major community concern, why expend extra time and resources to collect additional data at the expense of other issues? What matters most and requires attention now?
- Are we able to find ways to measure progress for diverse populations? Often the data on the overall population of the county may be very good, but there are pockets of incidence that account for a vast majority of incidence. For example, research has shown that poor and ethnic populations often have higher incidences of teen pregnancy, infant

mortality, and deaths due to lack of early detection of illness or access to care. How do we research those assumptions in our own communities?

- Will measures taken over time reflect actions? If we act on this data, can we make improvements and are there proven actions (personal behavior, access to services, implementation of new policies or programs) that can change the direction of the indicator? Why measure something that you cannot change?

Leading Indicators with the greatest impact generally link to many different health and community issues requiring work and collaboration by many sectors of the community. Consequently, by having a wide variety of agencies, organizations, diverse population groups, and community institutions focusing on a small number of indicators, we not only have a greater impact on the community selected issues but, by acting together, we also reinforce a strong community identity.

"The Leading Health Indicators are intended to help everyone more easily understand the importance of health promotion and disease prevention and to encourage wide participation in improving health in the next decade. Developing strategies and action plans to address one or more of these indicators can have a profound effect on increasing the quality of life and the years of healthy life and on eliminating health disparities—creating healthy people in healthy communities." Healthy People 2010 Leading Health Indicators Report.

How was data collected for HP 2010 objectives and how did that process affect this report? (This can get technical!)

The availability and comparability of data for national, state, and local monitoring of Healthy People objectives vary considerably. Some data, especially vital statistics, are readily available at national, state, county, and some municipal levels. The standardization of vital statistics data contributes to its comparability. Mortality and natality data are readily accessible and generally comparable. However, vital statistics data provide only a limited perspective on health status, risk behaviors, and access to health care. Morbidity and risk factor data are required to monitor a very large proportion of the current and proposed Healthy People objectives. Data for these objectives come from a wide range of household surveys, environmental hazard data, and other sources. These are not usually available at the local level, either county or municipal.

Many of the national Healthy People objectives are monitored using data from the National Health Interview Survey (NHIS). Some of these objectives are monitored at state and some local levels using data from the Behavioral Risk Factor Surveillance System (BRFSS). Details of these surveys (for example, design and sampling) can be found at the PA Department of Health or Centers of Disease Control (CDC) Web sites. It should be noted that both differences in the data collection methods (household interview versus telephone interview) and wording of questions used to monitor the same objectives can affect the comparability of the information collected. Additionally, some objectives monitored with identical questions in both the NHIS and the BRFSS (e.g., firearm storage) are only included periodically in a specific rotating module of the BRFSS or supplements to the NHIS. Not all states use these modules or the year of the "rotation" may not coincide with national data from the NHIS. This limits comparability between national and state data.

Other national Healthy People objectives are monitored using composite data sources (e.g., General Estimates System, National Water Quality Trends Report). The national data from these systems are aggregated from data collected at state or local levels. Unlike the vital statistics data (which include all births and deaths), several of these systems are samples of events that use somewhat different data collection and analysis methods between states or between communities. This affects the quality and comparability of national, state, and local data.

For yet other Healthy People objectives, state and local jurisdictions were unable to monitor progress. This prompted the development of Priority Data Needs under Healthy People 2000, which identified sources of state and local data that could be used to track important

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health issues, such as adult immunization and access to primary health care. The availability of data for the Leading Health Indicators may be somewhat limited at the state level and it represents a substantial challenge for measurement at the local level.

How did HP 2010 set targets and assess progress for measurable objectives, and how did LHIP?

When possible, LHIP accepted HP 2010 goals. However, it was difficult for us to set specific targets for areas for which we had no local data. In those areas, our goals always included finding ways to begin tracking local data. Often we maintained the indicator but chose local measures for which we either had data or that we believed we could collect in the near future. Those local measures might also reflect an aspect of a focus area that was a greater problem for us here in Lancaster than nationally. Or we may have been doing better than the national rate but believed we should do even better given the long-term risks associated with the problem. An example of this category is teen pregnancy. Another area of concern is the availability of data on sub-populations, so that disparity can be measured. We often had anecdotal information from local experts on pockets of poor health outcomes. But we had no corroborating data. One population that was often mentioned was the Amish population.

Target-Setting Methods For HP 2010

The framework of Healthy People 2010 has proposed to "eliminate health disparities" as one of the two primary goals for the next decade. To support this goal of eliminating health disparities, a single national target that is applicable to all select populations has been set for each measurable, population-based objective. Three guiding principles were used in setting targets for the measurable, population-based objectives:

- For objectives that address health services and protection (e.g., access to prenatal care, health insurance coverage, etc.), the targets have been set so that there is an improvement for all racial/ethnic segments of the population (i.e., the targets are set "better than the best" racial/ethnic subgroup shown for the objective). Data points for at least two population groups under the race and ethnicity category are needed to use "better than the best" as the target-setting method.

- For objectives that can be influenced in the short term by policy decisions, lifestyle choices, and behaviors (e.g., physical activity, diet, smoking, suicide, alcohol-related motor vehicle deaths, etc.), the target-setting method is also part of the "better than the best" group.

- For objectives that are unlikely to achieve an equal health outcome in the next decade, regardless of the level of investment (e.g., occupational exposure and resultant lung cancer), the target represents an improvement for a substantial proportion of the population and is regarded as a minimum acceptable level. Implicit in setting targets for these objectives is the recognition that population groups with baseline rates already better than the identified target should continue to improve.

The specific method for developing the target is described under each objective in Healthy People 2010. Beyond this general guidance, the lead agency work groups that developed the objectives determined the exact target levels. The work groups used various methods for arriving at the target levels, including retention of the year 2000 target, computation of a statistical regression using current rates to project a target, knowledge of the programs currently in place and expected change, and expert judgment.

The following target-setting methods have been used:

- Better than the best.
- __ percent improvement.
- "Total coverage" or "Total elimination" (for targets like 100 percent, 0 percent, all States, etc.).
- Consistent with _____ (another national program, e.g.,national education goals).
- Retain year 2000 target (the Healthy People 2000 target has been retained).

Assessing Progress

- Most objectives are tracked by a single measure. For these objectives, progress will be assessed by the change from the baseline measure toward the target. Some objectives seek to increase positive behaviors or outcomes, while others are stated in terms of decreasing negative behaviors or outcomes.
- A number of objectives contain multiple measures. Progress will be assessed separately for each measure. For these objectives, therefore, the progress may be mixed if some measures are progressing toward the target and others are regressing.
- For some objectives, precise measures that match the objective are not available. In these cases, similar proxy measures may be used to track progress. The tracking data and methods for assessing progress will be reviewed during the mid-course review in 2005, and a determination will be made at that time whether any changes will be made.

What will be found in each chapter?

Each chapter has been organized in the following manner:

Focus Area Definition
Hp 2010 Goals and Measures
Local Goals and Measures
Background and Local Context
Researched Practices
Local Recommendations
Local Assets
What Businesses, Institutions and Individuals Can Do
Related HP Objectives

In conclusion, we encourage the readers of this Health Improvement Plan to focus initially on those Indicators and goals that impact them most personally. While an overall view of the health needs of Lancaster County is helpful in understanding the work ahead of us all, progress begins with individual health improvement and choices. Personal ownership fuels the energy and commitment to community action. The Lancaster Health Improvement Partnership has great confidence in the promise of this collaborative effort to inspire real action to improve our quality of life. Knowledge empowers each individual to have a significant positive impact on their own health as well as that of the community.

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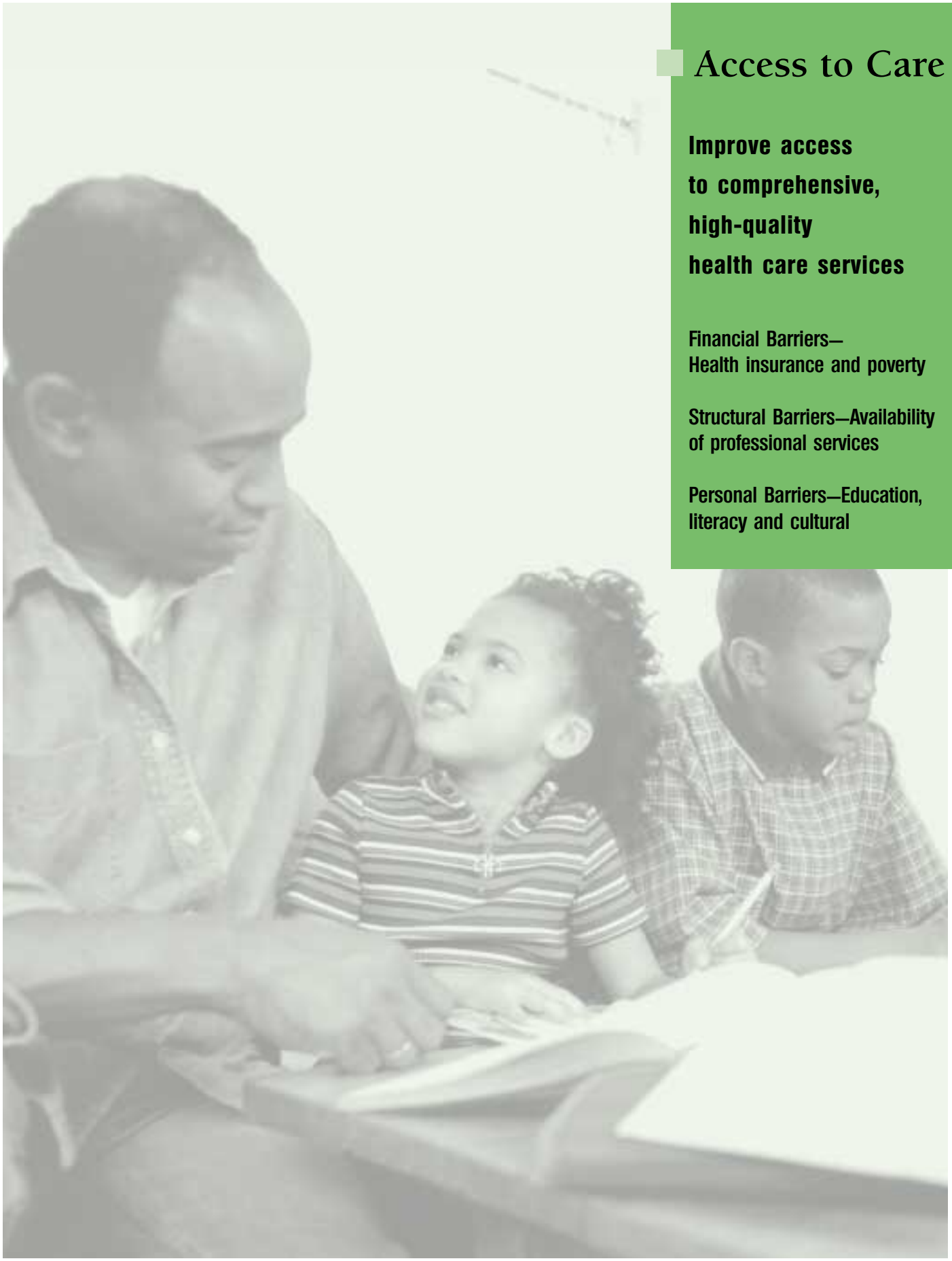

Access to Care

Improve access to comprehensive, high-quality health care services

Financial Barriers—
Health insurance and poverty

Structural Barriers—Availability of professional services

Personal Barriers—Education, literacy and cultural

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Access to Care

Goal: Better than the best

HP 2010 Measures and Local Measures

1-1 Increase the proportion of persons with health insurance.

Target: 100 percent.
Baseline: 83 percent of persons under age 65 years were covered by health insurance in 1997 (age adjusted to the year 2000 standard population).
Target-setting method: Total coverage.
Data source: National Health Interview Survey (NHIS), CDC, NCHS.

1-4 Increase the proportion of persons who have a specific source of ongoing care.

Baseline: Varies by population.
Target-setting method: Better than the best.
Data source: National Health Interview Survey (NHIS), CDC, NCHS.

16-6 Increase the proportion of pregnant women who receive early and adequate prenatal care.

Target-setting method: Better than the best.
Data sources: Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPH; National Health Interview Survey (NHIS), CDC, NCHS; National Vital Statistics System (NVSS); CDC, NCHS, PA Vital Statistics (PAVS).

7-1 Percentage of population ages 18–24 who have completed high school.

Target-setting method: Better than the best.
Baseline: 85 percent of persons aged 18 to 24 years had completed high school in 1998.
Target-setting method: Consistent with National Education Goals Panel—Goals 2000.
Data source: Current Population Survey, U.S. Department of Commerce, PA Vital Statistics (PAVS), Bureau of the Census.

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Description

There are four components of the health care system: clinical preventive care, primary care, emergency services, and long-term and rehabilitative care. Together with health care delivered by specialists and care received in hospital settings, these are the major components of the continuum of care. Access to quality health care and this continuum of care depends strongly on having health insurance, a higher income level, and a regular primary care provider or other source of ongoing health care (Weissman, J.S., and Epstein, A.M. "The insurance gap: Does it make a difference?" *Annual Review of Public Health* 14:243–270, 1993).

When looking for ways to measure access, some have employed the use of clinical preventive services, such as early prenatal care or screening procedures. Children's access to care as well as mother's prenatal care is important because early intervention can greatly reduce the impact of illness on future health status. It can even prevent lifelong chronic illness and disability. But there are many reasons a community may not be able to access care. Barriers are financial, structural, and personal.

Financial Barriers—Health Insurance and Poverty

Financial barriers include not having health insurance, not having enough health insurance to cover needed services, or not having the personal financial ability to cover services outside a health plan or insurance program. The lack of health insurance coverage creates significant social, structural, system, and personal barriers to the receipt of appropriate health care services in appropriate settings at appropriate times.

- It reduces the ability of individuals to access regular preventive care, screenings, timely diagnostic procedures and adequate care in managing chronic conditions.
- It hampers the health care system's attempts to manage costs due to the inefficient or inappropriate use of services like the emergency room in place of primary care.

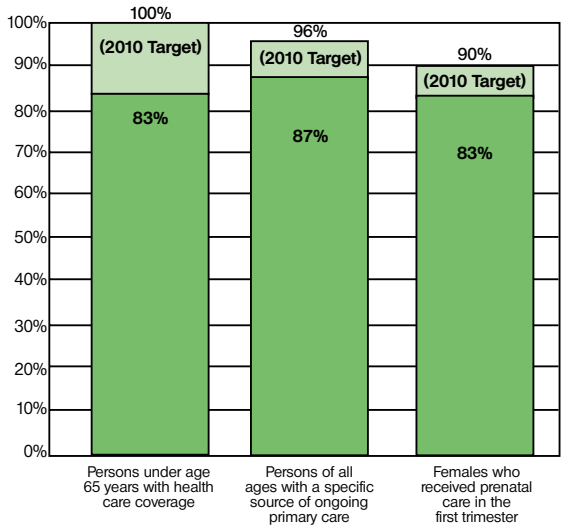
Persons with health insurance are more likely to have a primary care provider (PCP) and to have received appropriate preventive care such as a recent Pap test, immunization, or early prenatal care. (Partnership for Prevention. *Results From the William M. Mercer Survey of Employer Sponsored Health Plans*. Washington, DC: the Partnership, 1999.) Adults with health insurance are twice as likely to receive a routine checkup as adults without health insurance. Evidence suggests that lack of insurance over a long period of time significantly increases the risk of premature death and that death rates among uninsured hospitalized patients are significantly higher than among insured patients (Reinhardt, U.E. *Coverage and access in health care reform*. New England Journal of Medicine 330:1452–1453, 1994).

Most individuals and families in the United States receive access to health insurance through their employers. At one time, employers assumed all of the costs of insuring employees and even their families. But as health care costs have climbed, the structure of insuring and paying for health benefits as well as the availability of a benefit variety has changed. Co-payment of insurance premiums and also per visit co-pays are more usual than unusual. An employee pays extra to include family members under a health insurance plan. Eye, dental, and pharmaceutical coverage is extra and again sometimes not offered. Furthermore, employees are often required to join HMOs rather than maintaining fee-for-service plans. Those in low wage jobs are often not offered health benefits and the vulnerability of their job market makes attempts at consistent coverage almost futile. The federal government mandates that certain employers make health insurance coverage available after an employee leaves a job if they were entitled to coverage as an employee. But availability does not mean real access to coverage as COBRA benefits are often well beyond the financial reach of the employee and family. Private health insurance requires that about one-third of total medical costs be picked up by the consumer in the form of deductibles, premiums, and co-payments. Many states have moved to very strict low income or medical disaster eligibility standards for their public systems for those under 65.

In 1997, 83 percent of all persons under age 65 years had health insurance. In 1998, 87 percent of persons of all ages had a usual source of health care. Also in that year, 83 percent of pregnant women received prenatal care in the first trimester of pregnancy.

The Department of Health Policy and Management at Johns Hopkins School of Public Health and Hygiene in Baltimore, Maryland, conducted a study that examined the association between type of health insurance coverage and quality of primary care. They found that the experience of primary care varies according to insurance status. The insured are able to obtain better primary care than the uninsured, and the privately insured are able to obtain better primary care than the publicly insured (Medicaid and Medicare). Those insured through fee-for-service coverage experienced better longitudinal care and fewer access barriers than those insured through health maintenance organizations (HMOs). They concluded that while expanding insurance coverage is important for establishing access to care, efforts are needed to enhance the quality of primary health care, particularly for the publicly insured.

Access to health care, United States, 1997 and 1998



And while legislatures balance their state budgets by cutting back eligibility for Medicaid, a study from the National Health Interview Survey (NHIS), demonstrated that Medicaid expansions that increase the proportion of a state's population eligible for Medicaid lead to increases in enrollment, enhanced utilization of medical services, and lower child death rates (Currie, J., and Gruber, J. "Health insurance eligibility, utilization of medical care, and child health." *Quarterly Journal of Economics* 111(2):431–466, 1996.) Another study showed that among those without insurance, chronically ill persons are even less likely than those with acute conditions to get health care services they need (Hafner-Eaton, C. "*Physician utilization disparities between the uninsured and insured: Comparisons of the chronically ill, acutely ill, and well nonelderly populations*." *Journal of the American Medical Association* 269:787–792, 1993.) Policymakers should closely monitor the quality of primary care provided by HMOs. Here in Lancaster County as elsewhere in PA, Health Choices is being implemented for those on Medicaid. It is important that we as a community monitor the provider networks that are being assembled to meet our communities' needs.

Extensive epidemiological literature documents the unquestionable correlation between income and health. Those at the lowest end of the income spectrum, those with total family incomes at or below the federal poverty level, have significantly greater burdens of illness and poorer disease outcomes.

Local Data

Pennsylvania has had relatively high insurance coverage rates although we are slipping in employee-based coverage as are many states. Lancaster County has maintained high employment and, unlike many locations, has not lost manufacturing jobs (that usually include health benefits) at the same rate as other areas in the US and the state. The current national economic downturn is just beginning to affect our local economy as we have a strong balanced economic base. The state of PA, however, is facing a large budget deficit like most states and the federal government. This usually does not bode well for health care either for poor consumers or providers who often face cuts in reimbursement fees.

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1-1 Increase the proportion of persons with health insurance.

Target: 100 percent.
Baseline: 83 percent of persons under age 65 years were covered by health insurance in 1997 (age adjusted to the year 2000 standard population).
Target-setting method: Total coverage.
Data source: National Health Interview Survey (NHIS), CDC, NCHS.

Persons Under Age 65 Years, 1997	Health Insurance
	Percent
TOTAL 83	
Race and ethnicity	
American Indian or Alaska Native	62
Asian or Pacific Islander	81
Asian	81
Native Hawaiian and other Pacific Islander	80
Black or African American	80
White	84
Hispanic or Latino	66
Cuban	79
Mexican American	61
Puerto Rican	81
Not Hispanic or Latino	85
Black or African American	80
White	86
Gender	
Female	84
Male 81	
Family income level	
Poor 66	
Near poor	69
Middle/high income	91
Geographic location	
Within MSA	83
Outside MSA	80
Disability status	
Persons with disabilities	83
Persons without disabilities	83
Sexual orientation	DNC
Select populations	
Age groups	
10 to 24 years	DNA
10 to 14 years	DNA
15 to 19 years	DNA
20 to 24 years	DNA

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable. MSA=Metropolitan statistical area.
Note: Age adjusted to the year 2000 standard population.

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Until recently, HMO's had low penetration in our market, meaning that they were not the normal form of insurance. Instead, a fee-for-service system dominated medical expense reimbursement. The use of HMO's is climbing and carries serious ramifications. Lancaster County is now a medium-level managed-care penetration area. There is increased tension between providers and insurers, patients and insurers, and a growing discontent with not being able to choose one's source of care. Other issues include higher employee co-pay for premiums for eye, dental, and pharmaceutical coverage, if this coverage is offered at all. Coverage for behavioral health services is very limited throughout PA, where the issue of parity of coverage for Drug and Alcohol Services and Mental Health Services is an often-revisited political battle in Harrisburg. But many major employers do offer Employee Assistance Programs (EAP) to employees in order to help manage personal behavior issues within the work environment.

% of Adults with Health Insurance Aged 18–64 Years

	2010 Goal	PA 2001	PA 2000	PA 1999	PA 1998	PA 1997
Persons 18–64	100	89	89	87	87	88
Males 18–64	100	86	87	85	86	87
Females 18–64	100	91	90	90	88	90
Non-Hispanic Whites 18–64	100	90	90	88	88	89
Non-Hispanic Blacks 18–64	100	84	81	84	79	84
Hispanics 18–64	100	DSU	74	88	76	83
Metro Statistical Areas 18–64	100	89	87	81	86	87
Non-Metro Statistical Areas 18–64	100	88	87	81	86	87

Health Insurance Coverage Status and Type of Coverage by State—Children Under 18: 1987 to 2000

(Numbers in thousands. People as of March of the following year covered by private or government health insurance.)

State/Year	All People	Private or Gov't Health Insurance		Private Insurance		Employment-based	
		Number	Percent	Number	Percent	Number	Percent
United States:							
2000 c/	72,553	64,148	88.4	51,193	70.6	48,082	66.3
1999 r/	72,325	63,180	87.4	50,606	70.0	47,127	65.2
1999	72,325	62,302	86.1	49,822	68.9	46,594	64.4
1998	72,022	60,949	84.6	48,627	67.5	45,593	63.3
1997 2/	71,682	60,939	85.0	47,968	66.9	44,869	62.6
1996	71,224	60,670	85.2	47,219	66.3	44,054	61.9
1995	71,148	61,353	86.2	47,021	66.1	43,822	61.6
1994 3/	70,509	60,505	85.8	46,266	65.6	42,966	60.9
Pennsylvania:							
2000 c/	2,993	2,848	95.1	2,408	80.5	2,292	76.6
1999 r/	2,866	2,646	92.4	2,263	79.0	2,089	72.9
1998	2,955	2,687	90.9	2,201	74.5	2,057	69.6
1997 2/	2,940	2,699	91.8	2,210	75.2	2,096	71.3
1996	2,939	2,725	92.7	2,332	79.3	2,165	73.7
1995	3,055	2,782	91.1	2,279	74.6	2,159	70.7
1994 3/	2,979	2,649	88.9	2,099	70.5	1,985	66.6

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Health Insurance Coverage Status and Type of Coverage by State—Children Under 18: 1987 to 2000

(Numbers in thousands. People as of March of the following year covered by private or government health insurance.)

State/Year	Government Health Insurance							
	Medicaid		Medicare		Military Health Care/1		Not Covered	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
United States:								
2000 c/.....	14,739	20.3	517	0.7	2,133	2.9	8,405	11.6
1999 r/.....	14,572	20.1	359	0.5	2,083	2.9	9,145	12.6
1999.....	14,479	20.0	355	0.5	2,080	2.9	10,023	13.9
1998.....	14,274	19.8	325	0.5	2,240	3.1	11,073	15.4
1997 2/.....	14,683	20.5	395	0.6	2,163	3.0	10,743	15.0
1996.....	15,502	21.8	484	0.7	2,291	3.2	10,554	14.8
1995.....	16,524	23.2	348	0.5	2,336	3.3	9,795	13.8
1994 3/.....	16,132	22.9	228	0.3	2,708	3.8	10,003	14.2
Pennsylvania:								
2000 c/.....	525	17.6	7	0.2	50	1.7	145	4.9
1999 r/.....	539	18.8	7	0.3	37	1.3	181	6.3
1999.....	532	18.6	7	0.3	37	1.3	219	7.6
1998.....	621	21.0	2	0.1	43	1.5	267	9.1
1997 2/.....	669	22.7	17	0.6	31	1.0	241	8.2
1996.....	510	17.4	–	–	38	1.3	214	7.3
1995.....	646	21.1	4	0.1	62	2.0	273	8.9
1994 3/.....	618	20.7	7	0.3	68	2.3	331	11.1

Represents zero or rounds to zero.
r/ Estimates reflect the results of follow-up verification questions.
c/ Based on a November 2001 weighting correction.
1/ Includes CHAMPUS (Comprehensive Health and Medical Plan for Uniformed Services)/Tricare, Veterans, and military health care.
2/ Implementation of a new March CPS processing system.
3/ Implementation of 1990 census population controls.
4/ Data collection method changed from paper and pencil to computer-assisted interviewing.
5/ Health insurance questions were redesigned. Increases in estimates of employment-based and military health care coverage may be partially due to questionnaire changes. Overall coverage estimates were not affected.
6/ Beginning with the March 1998 CPS, people with no coverage other than access to Indian Health Service are no longer considered covered by health insurance; instead, they are considered to be uninsured. The effect of this change on the overall estimates of health insurance coverage is negligible; however, the decrease in the number of people covered by Medicaid may be partically due to this change.
SOURCE: U.S. Census Bureau, Income Statistics Branch/HHES Division, March Current Population Survey

The reliance on the Medicare system by Lancaster's significant elderly population poses many access issues. Many elderly cannot afford Medi-gap insurance plans that cover services or medical supplies not covered by Medicare. Those suffering from chronic illnesses and conditions that require long-term care are most financially vulnerable. PA is one of the top two states for wrapping support services around our senior population. However, the crisis in financing pharmaceutical benefits and long-term care needs has yet to be addressed systemically at any level. As a community, we need to be mindful of our systemic and personal responses to the needs of our parents, grandparents, and neighbors as they face these health challenges.

Children's Health Insurance Plan

CHIP is Pennsylvania's program to provide quality health insurance for children of working families who otherwise could not afford it. It is not a welfare program. As of September of 2000, the following benefits are available through CHIP: Immunizations, Routine Check-ups, Diagnostic Testing, Prescription Drugs, Dental, Vision, Hearing Services, Emergency Care, Maternity Care, Mental Health Benefits, Up to 90 Days Hospitalization in any Year, Durable Medical Equipment, Substance Abuse Treatment, Partial Hospitalization for Mental Health Services, Rehabilitation Therapies, and Home Health Care.

The following factors are considered for a child's eligibility for CHIP:

- Must not be eligible for Medicaid or have any other health insurance
- Must be under age 19
- Must be a U.S. citizen or lawful alien
- Must be a Pennsylvania resident for at least 30 days, except for a newborn
- The family's income is below the following levels based on federal poverty guidelines released February 2001. Family income is adjusted to allow for a monthly deduction of $90 from earnings and a deduction for day care.

Number of People in Family, including Parents	*Maximum Income for Free Program	*Maximum Income for Subsidized Program
1	$17,180	$20,187
2	23,220	27,284
3	29,260	34,381
4	35,300	41,478
5	41,340	48,575
6	47,380	55,672
7	53,420	62,769
8	59,460	69,866

Children Enrolled in Medicaid (MA)

	State	All-County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
1998 Rate per 100 children under 19	23.6	N/A	11.5	8.1	13.2	18.0	23.2	16.6	19.2	14.7

Children Enrolled in Children's Health Insurance Program (CHIP)

	State	All-County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
1999 Rate per 100 children under 19	2.3	N/A	1.1	1.7	1.2	1.2	1.4	0.8	1.6	1.4

Children Receiving TANF/AFDC

	State	All-County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
1998 Rate per 100 children under 18	9.7	5.7	3.1	2.4	3.7	6.6	9.4	3.6	6.3	4.1

Higher than Lancaster County Lower than Lancaster County Equivalent to Lancaster County

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Poverty

The federal government uses set levels of income to define poverty. It often seems to have little relationship to what we may know is enough to be self-sufficient in a community. But such standards must be set. People who live at or below poverty are not, as the myth suggests, living high off the government dole. Living at these income levels is debilitating and difficult and presents individuals and families with innumerable obstacles to any quality of life and health. For a family of four, the average Federal poverty level weighted for family composition was $16,813 in 1998. A family of four making $33,626 is 200% of poverty or middle income. Many state programs use the federal standard of poverty as their own thresholds for programs.

Poverty levels
Poor (below the Federal poverty level)
Near poor (100–199%) of the Federal poverty level)
Middle and high income (200% or more of the Federal poverty level)

When measured against other areas of the state and nation, our overall economic health is very good. Our poverty rates for the county are low. But pockets of poverty do exist that are predominantly minority, single mothers, and elderly. Additionally, there is rural

Poverty Thresholds for 2001 by Size of Family and Number of Related Children Under 18 Years (in dollars)

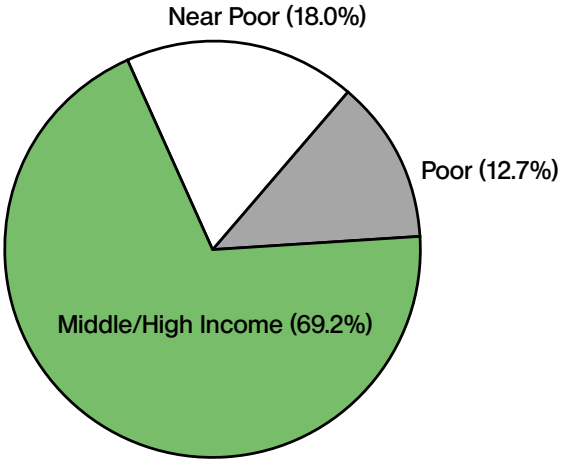
Size of Family Unit	Weighted Average Thresholds	Related Children Under 18 Years								
		None	One	Two	Three	Four	Five	Six	Seven	Eight or more
One person (Unrelated Individual)	9,039									
Under 65 years	9,214	9,214								
65 years and over	8,494	8,494								
Two persons	11,569									
Householder under 65 years	11,920	11,859	12,207							
Householder 65 years and over	10,715	10,705	12,161							
Three persons	14,128	13,583	14,255	14,269						
Four persons	18,104	18,267	18,566	17,960	18,022					
Five persons	21,405	22,029	22,349	21,665	21,135	20,812				
Six persons	24,195	25,337	25,438	24,914	24,411	23,664	23,221			
Seven persons	27,517	29,154	29,336	28,708	28,271	27,456	26,505	25,462		
Eight persons	30,267	32,606	32,894	32,302	31,783	31,047	30,112	29,140	28,893	
Nine persons or more	36,286	39,223	39,413	38,889	38,449	37,726	36,732	35,833	35,610	34,238

Source: http://www.census.gov/hhes/poverty/threshld/thresh01.html

Percent of Population Below the Poverty Level in 1999: 2000 Census

National	PA	Lancaster	York	Berks	Chester	Dauphin	Northampton	Lehigh	Lebanon
12.4	11.0	7.8	6.7	9.4	5.2	9.7	7.9	9.3	7.5

Source: Census 2000 Demographic Profiles
http://www.census.gov/hhes/poverty/2000census/poppvstat00.html



Percent based on total population=271,059,000 (as of March 1999)
Source: U.S. Bureau of the Census, Current Population Reports.

poverty related to agriculture and older industries where low wages are still the norm. We have a significant number of families that might be classified as working poor. These are individuals or families wherein too much money is earned to be part of a public system, but where the employee cost of the health care benefits offered by employers is too expensive. Sometimes the benefits are not offered at all or are only offered to the employee and not to his or her family. And it is not unusual to find that dental and eye coverage is optional or prohibitive. Rural poverty presents its own issues with regard to access to care including transportation and services.

In addition, the Amish and Old Order Mennonite populations, known as the Plain Sects of Lancaster County, do not carry insurance for cultural reasons. They pay all expenses out of pocket. Transportation is a challenge because they do not use automobiles, which increases the need for access to local services. Education and preventive services must be promoted within the community, and their acceptance is based on building trust with specific providers over time. Cultural and social beliefs and customs present unique challenges to improving and even measuring their health status.

Percent of Children Below Poverty, below 50% Poverty and Below 200% Poverty

	Below Poverty	Below 50% Poverty	Below 200% Poverty
Pennsylvania	14.7	6.9	34.4
Lancaster	11.2	4.9	31.4
Berks	13.4	6.2	30.9
Chester	5.4	2.6	15.2
Dauphin	14.1	6.9	34.3
Lebanon	11.3	4.9	35.0
Lehigh	14.0	6.2	31.0
Northampton	10.3	4.6	25.4
York	8.7	3.9	26.6

Source: Kid Count Census Data Online

Although poverty negatively impacts the health status of all groups, the effects of poverty on children persist throughout life. Even when individuals experience greater affluence at later stages in life, as children they were more likely to have experienced poor nutrition and housing, decreased access to enrichment and basic educational programs, and significantly lower access to health care services. As a result, they will experience acute and chronic health conditions at significantly higher rates and of greater severity. Additionally, racial and ethnic minorities are overrepresented among the nation's poor, directly affecting the disparity in health status for these groups. Data from the U.S. Department of Labor supplemented by state and local economic indicators and Vital Statistics may provide information about this indicator. (Source: Institute of Medicine)

Contracted by the State of PA, Health Choices has begun rolling out a care system in Lancaster County for Medicaid clients (mandatory on April 1, 2002). It's emergence replaces Lancaster Community Health Plan (LCHP), a local non-profit managed-care plan that provided services on a fee-for-service basis with a comprehensive network of physicians who accepted a fee for providing a regular place of care for Medicaid consumers. Putting together such a network is the challenge faced by Health Choices. Children's Health Insurance Plan, known as CHIP, is a state and federal program to insure children who do not qualify for Medicaid but have no health care benefits. These children are often from working families who cannot afford health insurance for any number of reasons. There are income eligibility standards that must be met. Many counties have special programs in place to increase enrollment in this program. Lancaster has such a partnership, called Reach Out Lancaster. This "Reaching Out" effort has been successful in increasing enrollment in many areas across the state.

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Source of Ongoing Care

Description

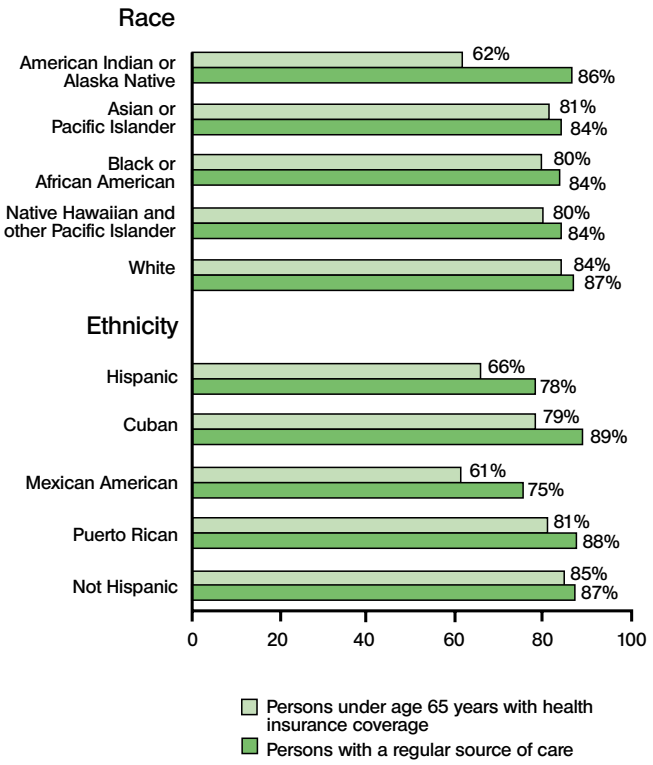
Ongoing care can be defined as having a medical home. There is a provider who maintains a consumers medical record and is able to treat that person with some continuity. A relationship is established between the consumer and the care provider that is compatible with cultural and medical needs so that together they not only manage illness but also manage wellness. The goal is to improve quality of life and to share information that enables both the provider and consumer to prevent illness by intervening effectively and quickly when necessary. Primary care physicians, neighborhood clinics, hospital clinics, home visitors, and even parish nurses can be ongoing sources of care that can head off major illness by providing access to and information about preventive and screening services.

More than 40 million Americans do not have a particular doctor's office, clinic, health center, or other place where they usually go to seek health care or health-related advice. Even among privately insured persons, a significant number lack a usual source of care or report difficulty in getting needed care due to financial constraints or insurance problems. People aged 18 to 24 years were the most likely to lack a usual source of ongoing primary care. Only 80 percent of individuals below the poverty level and 79 percent of Hispanics had a usual source of ongoing primary care (HP 2010).

A study by the Center for Studying Health System Change, in Washington, D.C., conducted a cross-sectional survey of households during 1996 and 1997 with a nationally representative sample of 14,271 low-income persons. They wanted to (1) examine the effects of managed care on the likelihood of low-income persons having a usual source of care and a usual physician; and (2) examine the association between usual source of care and access. They looked at the usual source of care, usual physician, managed-care enrollment, and managed-care penetration. They found that:

- When there is high managed-care penetration in the community there will be a lower likelihood of having a usual source of care for uninsured persons (54.8% vs. 62.2% in low penetration areas).
- When there is high managed-care penetration in the community there is lower likelihood of having a usual physician (60% vs. 72.8%).
- Managed care has only marginal effects on the likelihood of having a usual source of care for privately insured and Medicaid beneficiaries.
- Having a usual physician substantially reduces unmet medical needs for the insured but less so for the uninsured.

Access to Quality Health Services
(By race and ethnicity, United States, 1997)



*Age adjusted to the year 2000 standard population.

Source: CDC, NCHS, National Health Interview Survey (NHIS), 1997.

They concluded that having a usual physician can be an effective tool in improving access to care for low-income populations, although it is most effective when combined with insurance coverage. However, the effectiveness of managed care in linking more low-income persons to a medical home is uncertain, and may have unintended consequences for uninsured persons.

Access and availability to primary care is a major issue due to shortages in family practitioners, nurses, office and medical support staffing, mental health professionals, some

Structural Barriers—Availability Of Professional Services

specialists, and dental professionals. Minority and ethnic populations, elderly and children, and rural populations particularly feel the lack of availability of professionals and services. Mental health professionals are particularly at a premium for all populations, but especially for children.

Data

In 1998, 87 percent of persons of all ages had a usual source of health care. People aged 18 to 24 years were the most likely to lack a usual source of ongoing primary care. Only 80 percent of individuals below the poverty level and 79 percent of Hispanics had a usual source of ongoing primary care. In 1998, 83 percent of pregnant women received prenatal care in the first trimester of pregnancy.

1-4 Increase the proportion of persons who have a specific source of ongoing care.

Target and baseline:

Objective Increase in Persons With Specific Source of Ongoing Care	1998 Baseline*	2010 Target
	Percent	
1–4a All ages	87	96
1–4b Children and youth aged 17 years and under	93	97
1–4c Adults aged 18 years and older	85	96

*Age adjusted to the year 2000 standard population.

Target-setting method: Better than the best.

Data source: National Health Interview Survey (NHIS), CDC, NCHS

From the 1998 National Health Interview Survey:

- Is there a place that you usually go when you are sick or need advice about your health?
- What kind of place is it: a clinic, doctor's office, emergency room, or some other place?
  - (a) Hospital emergency room
  - (b) Urgent care/walk-in clinic
  - (c) Doctor's office
  - (d) Clinic
  - (e) Health center facility
  - (f) Hospital outpatient clinic
  - (g) HMO (Health Maintenance Organization)/Pre-paid group
  - (h) Military or other VA healthcare
  - (i) Some other place

Expected Periodicity—Annual.

Comments: A specific source of primary care includes responses (b) through (i) listed above. A hospital emergency room (a) is not included as a specific source of primary care. Data are age adjusted to the 2000 standard population. Age-adjusted percents are weighted sums of age-specific percents.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

Access to care depends in part on access to an ongoing source of care. People with a usual source of health care are more likely than those without a usual source of care to receive a variety of preventive health care services. (Ettner, S.L. "The timing of preventive services for women and children: The effect of having a usual source of care." *American Journal of Public Health* 86:1748–1754, 1996.) The National Health Interview Survey (NHIS) does not count emergency departments as a usual source of care. An estimated 15 percent of adults in the United States lack a usual source of care. An estimated 93 percent of children

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Population by Age Group, 1998 (unless noted)	Specific Source of Ongoing Care		
	1-4a. All Ages	1-4b. Aged 17 Years and Under	1-4c. Aged 18 Years and Older
	Percent		
TOTAL	87	93	85
Race and ethnicity			
American Indian or Alaska Native	82	89	79
Asian or Pacific Islander	84	89	81
Asian	84	89	82
Native Hawaiian and other Pacific Islander	83	90	82
Black or African American	86	91	84
White	88	95	86
Hispanic or Latino	79	86	76
Cuban	86	95	82
Mexican American	75	83	72
Puerto Rican	86	90	85
Not Hispanic or Latino	89	95	87
Black or African American	86	91	85
White	89	96	87
Gender			
Female	91	93	90
Male	84	94	81
Family income level			
Poor	80	88	77
Near poor	82	90	79
Middle/high income	91	97	88
Geographic location			
Urban	87	93	85
Rural	89	95	87
Disability status			
Persons with disabilities	89 (1997)	95 (1997)	86 (1997)
Persons without disabilities	86 (1997)	93 (1997)	84 (1997)
Sexual orientation	DNC	DNC	DNC
Select populations			
Age groups			
10 to 24 years	DNA	NA	NA
10 to 17 years	91 (1997)	NA	NA
18 to 24 years	72 (1997)	NA	NA

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.
NA=Not applicable. Note: Age adjusted to the year 2000 standard population.

aged 17 years and under have a specific source of ongoing care. CHIP has helped increase this percentage.

- The usual source of care can vary among groups according to their age, race and ethnicity, and health insurance coverage.

1-4c Percent of Adults with Specific Source of Ongoing Care

	PA 2001	National Baseline 1998	2010 Goal
All Aduts	88	85	96
Male Adults	83	81	96
Female Adults	93	90	96
Non-Hispanic White Adults	89	87	96
Non-Hispanic Black Adults	82	85	96
Urban Adults	88	85	96
Rural Adults	87	87	96

Source: http://webserver.health.state.pa.us/health/lib/health/HP2010-FA01PA.pdf

- Young children and elderly adults aged 65 years and older are most likely to have a usual source of care.

- Adults aged 18 to 64 years are not as likely to have a usual source of care. Young adults aged 18 to 24 years are the least likely of any age group.

- Hispanic persons are the least likely to have a usual source of care. Some 24 percent of the adult Hispanic population (and 28 percent of the Mexican American population) lack a usual source of care 15 percent of African Americans lack a usual source of care.

- Some 88 percent of persons with a usual source of care use an office-based provider, and 11 percent use a hospital outpatient department or clinic. African Americans and Hispanics are more likely to use hospital-based providers (including hospital clinics and outpatient departments) as their usual source of care.

- Uninsured persons under age 65 years are more likely to lack a usual source of care (38 percent) than those who have either public or private insurance. When compared with their counterparts who have private health insurance, uninsured people under age 65 years are 2.6 times more likely to lack a usual source of care.

A usual source of primary care helps people clarify the nature of their health problems and can direct them to appropriate health services, including specialty care. (Starfield, B. "Primary Care: Balancing Health Needs, Services and Technology." New York, NY: *Oxford University Press*, 1998.) Primary care also emphasizes continuity, which implies that individuals use their primary source of care over time for most of their health care needs. Greater continuity has been observed for individuals with shorter appointment waits, insurance, and access to more after-hours care (Forrest, C.B., and Starfield, B. "Entry into primary care and continuity: The affects of access." *American Journal of Public Health* 88:1334, 1998.) Other advantages of primary care are that a primary care provider deals with all common health needs (comprehensiveness) and coordinates health care services, such as referrals to specialists. Evidence suggests that first-contact care provided by an individual's primary care provider leads to less costly medical care. (Forrest, C.B., and Starfield, B. *The effect of first-contact care with primary care clinicians on ambulatory health care expenditures*. Journal of Family Practice 43:40–48, 1996.)

Many of the risk factors for high-risk pregnancies and children born at low birth weight or with birth defects can be mitigated or prevented with good preconception and prenatal care. An early start in life is very important to good long-term health outcomes. A woman who has an ongoing source of care is more likely to get preconception and prenatal care. She is more likely to understand women's health issues and know the dangers of risky behavior to her baby. Preconception screening and counseling is an opportunity to identify and mitigate risk factors before pregnancy begins, including daily folic acid consumption (a protective factor) and cessation of alcohol or tobacco use (a risk factor). Fetal death often is associated with maternal complications of pregnancy, such as problems with amniotic fluid levels and blood disorders. Rates of fetal mortality are 35 percent greater than average in women who use tobacco during pregnancy and 77 percent higher in women who use alcohol.

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(Hoyert, D.L. "Medical and life-style risk factors affecting fetal mortality, 1989–90." *Vital and Health Statistics 20 Data National Vital Statistics System* 31:1–32, 1996.) During preconception counseling, health care providers can refer women for medical and psychosocial or support services for any risk factors identified. Counseling needs to be culturally appropriate and linguistically competent. These issues are of particular importance to those populations that have an unusually high risk for maternal and infant health problems.

- The 1997 infant mortality rate among African American infants was 2.3 times that of white infants. Although infant mortality rates have declined within both racial groups, the proportional discrepancy between African Americans and whites remains largely unchanged. (Hoyert, D.L.; Kockanck, K.D.; and Murph, S.L. "Deaths: Final data for 1997." *National Vital Statistics Report* 47(19), 1999.)

- The rate of maternal mortality among African Americans is 20.3 per 100,000 live births, nearly four times the white rate of 5.1 per 100,000. African American women continue to be three to four times more likely than white women to die of pregnancy and its complications.

- Rates of Low Birth Weight babies for white women have risen from 5.7 percent of births in 1990 to 6.5 percent in 1998. Among African Americans, the LBW rate has declined slightly in the 1990s but remains twice as high as that of whites—13 percent in 1998. Puerto Ricans also are especially likely to have LBW infants. (Ventura, S.J.; Martin, J.A.; Curtin, S.C.; et al. "Births: Final data for 1997." *National Vital Statistics Report* 48(3), 2000.)

- African Americans also are more likely to have other risk factors, such as young maternal age, high birth order (that is, having many live births), less education, and inadequate prenatal care.

16-6 Increase the proportion of pregnant women who receive early and adequate prenatal care.

Target and baseline:

Objective Increase in Maternal Prenatal Care	1998 Baseline	2010 Target
	Percent of Live Births	
16-6a. Care beginning in first trimester of pregnancy	83	90
16-6b. Early and adequate prenatal care	74	90

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Prenatal care should begin early and continue throughout pregnancy, according to accepted standards of periodicity. The American College of Obstetricians and Gynecologists recommends that women receive at least 13 prenatal visits during a full-term pregnancy. (American College of Obstetricians and Gynecologists [ACOG]. *Manual of Standards in Obstetric-Gynecologic Practice*. 2nd ed. Chicago, IL: ACOG, 1965.) The Adequacy of Prenatal Care Utilization Index (APNCU) measures two dimensions of care: the adequacy of initiation of care and the adequacy of the use of prenatal services once care has begun (by comparing actual use to the recommended number of visits based on the month of initiation of care and the length of the pregnancy). (Kotelchuck, M. "An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index." *American Journal of Public Health* 84:1414–1420, 1994.)

These dimensions are combined to classify each woman's prenatal care history as inadequate, intermediate, adequate, or adequate-plus. The baseline rates presented above include all women who received either adequate or adequate-plus care.

The use of timely, high-quality prenatal care can help to prevent poor birth outcomes and improve maternal health by identifying women who are at particularly high risk and taking steps to mitigate risks, such as the risk of high blood pressure or other maternal complications. Interventions targeted at prevention and cessation of substance use during pregnancy may be helpful in further reducing the rate of preterm delivery and low birth weight. (AAP, Committee on Substance Abuse. "Drug-exposed infants." *Pediatrics 96* (2):364-367, 1995.) Prenatal care is more likely to be effective if women begin receiving care early in pregnancy.

Since 1990, the proportion of infants whose mothers entered prenatal care in the first trimester increased 8.8 percent, from 76 percent to 83 percent. Among African Americans, this proportion grew 19 percent, and among Hispanics, 22 percent. (National Center for Health Statistics (NCHS). Health, United States, 1999. Hyattsville, MD: U.S. Department of Health and Human Services, 1999.)

LIVE BIRTHS	Early Care	Adequate Care
TOTAL	83	74
Mother's race and ethnicity		
American Indian or Alaska Native	69	57
Asian or Pacific Islander	83	74
Asian	86	76
Native Hawaiian and other Pacific Islander	75	67
Black or African American	73	67
White	85	76
Hispanic or Latino	74	66
Not Hispanic or Latino	85	76
Black or African American	73	67
White	88	79
Mother's education level		
Less than high school	68	61
High school graduate	81	74
At least some college	91	82
Select populations		
Mother's age groups		
Under 15 years	48	48
15 to 19 years	69	64
20 to 24 years	78	70
25 to 29 years	86	77
30 to 34 years	89	79
35 years and older	88	79

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable

- The risk of poor birth outcomes is greatest among the youngest mothers (aged 15 years and under). Clearly, therefore, continued work is needed to educate women, particularly young women, about the need to begin prenatal care early in pregnancy.
- The likelihood of early entry into prenatal care rises with age.
- Increases in early entry into prenatal care have been concentrated in those populations whose perinatal illness and disability rates and mortality rates are highest and who are most likely to have low incomes. These increases are in part due to:

  ✔ Increased access to Medicaid coverage for pregnancy-related services.

  ✔ Improved outreach by Medicaid programs. (Grad, R., and Hill, I.T. "Financing maternal and child health care in the United States." In: Kotch, J.B.; Blakely, C.; Brown, S.; et al.; eds. *A Pound of Prevention: The Case for Universal Maternity Care in the U.S.* Washington, DC: American Public Health Association, 1992.)

Our Public Health System

The continuum of care is possible when all four components of the health care system (clinical preventive care, primary care, emergency services, and long-term and rehabilitative care) are working together and seamlessly with community support services. The public health system educates people about prevention and addresses the need to eliminate disparities by working to provide access to preventive services for everyone. It ensures the availability of primary care through direct funding of clinics and providers or by providing public insurance. It coordinates emergency services systems and oversees long-term and rehabilitative care. Communities committed to the continuum of care, and access to it for all, address cultural and socio-economic factors by supporting wrap-around services such as transportation, translation, visiting nurse, and school nurse services. Major changes in the structure of the U.S. health care system, including the increasing influence of market forces, changes in

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Lack of Early Prenatal Care

	State	All County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)
1994–1996 Rate per 100 Births	16.9	16.4	21.4	14.5	13.9	21.2	16.4	23.2	12.2
Overall Relative Performance			*	***	***	*	**	*	***
UrbnCntyAvg=17.1							**		***
MxdCntyAvg=16.7			*	***	***	*		*	
RuralCntyAvg=16.8									

**** Performs much better than average *** Performs better than average ** Performs worse than average * Performs much worse than average

Lack of Early Prenatal Care by Race

	State	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
1996 Rate per 100 Births									
African American	32.9	21.9	35.2	33.6	36.4	24.4	N/A	30.5	28.4
Caucasian	12.9	21.1	11.7	11.2	20.1	11.6	N/A	12.1	11.5
Hispanic	29.4	18.2	35.4	25.9	43.0	16.3	N/A	25.6	28.5
AfrAm/Caucasian	2.6	1.0	3.0	3.0	1.8	2.1	N/A	2.5	2.5
Hispanic/Caucasian	2.3	0.9	3.0	2.3	2.1	1.4	N/A	2.1	2.5

Lack of Early Prenatal Care City-County Profile

	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (E) (P)	Northampton (B) (P)
1996 Rate per 100 Births									
City	14.9	N.C.C	25.1	34.3	22.2	N.C.C	19.9	15.4	22.5
County**	22.9	N.C.C	10.0	13.4	11.4	N.C.C	8.1	10.9	10.7
City/County	0.7	N.C.C	2.5	2.6	1.9	N.C.C	2.5	1.4	2.1

*Less than 5 lbs., 9 oz. or 2500 grams **Excluding municipality N.C.C.=No Central City
County:City=Lancaster:Lancaster; York:York; Dauphin:Harrisburg; Lebanon:N.C.C.; Berks:Reading; Chester:N.C.C.; Lehigh:Allentown; Northampton:Bethlehem, Easton

payment and delivery systems, and welfare reform, have significant implications for vulnerable and at-risk populations. In light of these systems changes, federal, state, and local public health agencies must redouble their efforts to address access barriers and reduce disparities for these populations (HP 2010—Tracking Healthy people 2010).

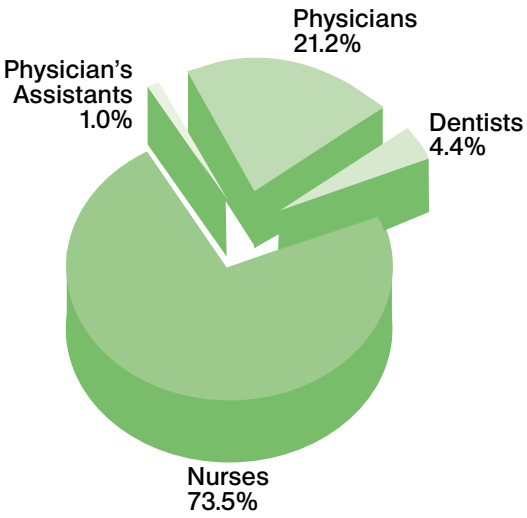
Local Context

Lancaster County has been blessed with a good health care delivery system. Year after year our hospitals and services have consistently been highly rated for services and for cost. We have five hospitals in the county. Three are non-profit: Ephrata Community Hospital (Ephrata Borough), Lancaster General Hospital (Lancaster City and the Health Campus that includes the Mother and Baby Hospital in East Hempfield Township) and Susquehanna Division of Lancaster General Hospital (Columbia). There are two for-profit institutions: Community Hospital of Lancaster (Lancaster Township with a new hospital to be built in Warwick Township), and Lancaster Regional Medical Center (Lancaster City). We have two Federally Qualified Health Clinics that were founded to provide medical and dental services to those underserved areas of the county: Welsh Mountain Health and Dental Services (Welsh Mountain Area in eastern end of county) and Southeast Lancaster Health Services (Lancaster City). The transition of the two hospitals from non-profit to for-profit resulted in the establishment of two community-oriented health foundations: Osteopathic Health Foundation and St. Joseph Health Foundation.

Our health care providers have collaborated with each other and with community organizations to provide many different kinds of outreach services in the community. They have opened primary care clinics in underserved neighborhoods. They have attempted to put clinics in two city elementary schools until insurance issues made them prohibitive. They had representatives on local coalitions focused on specific issues such as family violence, children's safety, healthy mothers and babies, and teen pregnancy. When managed care came to Lancaster County, local providers did their best to establish networks that did not dictate exclusivity. For example, many local doctors could practice at more than one hospital. This has changed.

But many issues are changing the local picture. These are national, state, and local in scope. Critical issues are:

- The loss of practicing doctors due to prohibitive malpractice insurance costs and HMO operating procedures, which limits a doctor's ability to manage patient care.
- The inability to staff positions critical to good care such as nurses, emergency and lab technicians, physician's assistants, and case managers.
- The lack of dentists, psychiatrists, and psychologists (particularly child). In addition, the number of students studying such professions is low, suggesting an increasing shortage of these specialists.
- A lack of minority representation in all of the health fields.



1998 Selected Health Occupations in Pennsylvania

Total: 167,108

Health Care Provider Resources

	PA	US
Primary Care Physicians, 1998 (%)	38.4	40.5
Racial/Ethnic Diversity, All Physicians, 1998 (%)		
White (non-Hispanic)	78.7	75.5
Black (non-Hispanic)	2.8	3.5
Asian/Pacific Islander	12.5	12.5
American Indian/Alaskan Native	0.0	0.1
Hispanic	2.3	4.9
Underepresented Minority Physicians (includes Black non-Hispanic; Hispanic and American Indian/Alaskan Native)	8.8	12.0
Distribution of Active Primary Care Physicians (rate per 100,000 pop.), 1998		
Total	99.7	91.7
Metropolitan area	107.4	100.4
Non-Metropolitan area	57.3	55.8
Percent of active physicians in patient care	87.9	88.0
Physician Assistants (rate per 100,000 pop.), 1999	13.3	10.5
Registered Nurses (rate per 100,000 pop.), 1996	1,019.0	798.0
Nurses with Baccalaureate Degree or Higher, 1996	39.6	41.6
Dentists (rate per 100,000 pop.), 1998	60.6	55.0

Two issues facing physicians, consumers, and local health care systems are tort reform and managed care. Physicians are choosing to leave primary care and specialty services (particularly OB/GYN), or moving to other states to practice because of the high rates for malpractice insurance in PA. Tort reform has yet to be dealt with systemically in many states and

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at the federal level for a variety of political reasons. But when an entire country is facing a shortage of physicians, it is not hard for PA doctors to find another community to serve.

Yet other physicians are frustrated by conflicts with insurers over the quality of care they are able to provide their patients. There is a strong belief that insurers are driving medical decisions rather than patients and physicians. Local examples often involve a change in an insurance carrier or drug formularies. An example of this is a case that took several years of trial and error for the doctor and patient to find the right medication to meet the needs of both the person's diabetes and mental illness. The new insurers had a set of drug protocols that the physicians had to follow and would not approve the drugs that the patient and doctor had painstakingly settled upon. Going back to the old drugs resulted in less than optimum care, but the physician and patient were powerless. There are many examples that frustrate patients and physicians. A dialogue about who has the final decision on care options is long overdue.

Many areas of professional care cannot recruit or retain practitioners. The loss of OB/GYNs and nurses has been well publicized. But the area of mental health providers must be highlighted. Local experts have been concerned for many years about our inability to recruit enough child psychiatrists and psychologists to serve those currently identified as being in need of services. Reports and hearings have, for years, been peppered with families' sad stories of severely depressed or emotionally disturbed children not receiving services in a timely way, or at all. Waiting lists exist at every level, and many patients in outpatient care wait many weeks and months between appointments, flying in the face of accepted best practice and treatment.

The ability to recruit ethnically and racially competent professionals is greatly hindered by a national shortage. The personal affects on individuals and families are all around us.

Our large institutions are facing issues as well. It is no longer unusual for those entering a local hospital to be faced with a long wait before seeing a health care provider. Every staffing level is short, from the nurses who provide floor care, to the support staff that prepares a room, to those who move the waiting patient from place to place within the hospital areas. Hospitals must increasingly utilize expensive agency nursing to fill in staffing shortages. Although we are blessed with strong local training programs for all of these critical support positions at Harrisburg Area Community College, Millersville University, Lancaster General, and even Hershey Medical School and Center, the regional and national competition for these workers is fierce. Higher wages, signing bonuses, or negotiated assignment hours all play a role in where these highly needed workers choose to go. The health care employment section regularly has advertisements from outside the area, including Maryland and New Jersey. It is not speculation that this is going to drive up health care costs—it IS driving health care costs and access to care.

Future Trends

Additionally, when the health care community was planning for the changes managed care would bring, they projected a lesser demand on certain services. It was widely believed that there would be less need for critical care (hospital beds, emergency services, etc.) because managed care would find people a regular source of ongoing care that would result in less admissions of a critical nature. Less hospital space would be needed and more prevention or diagnostic programs, services, and facilities would be demanded. Hospitals reallocated, remodeled, and built space accordingly. Those assumptions have not proven to be true as cited earlier in the study by the Center for Studying Health System Change. In fact, as communities get a higher penetration of managed care, the guarantee of an ongoing source of care goes down. Lancaster has moved from low to moderate penetration in ten years. We are still seeing a demand for hospital beds, and it is less unusual for a hospital to be diverting patients to another hospital because they are no longer able to take in more patients.

We are seeing that providing access to care is increasingly difficult with fewer professionals and support staff. Also, it is increasingly difficult to manage costs as the demand for services continues to increase. If costs continue to increase, insurers will raise premiums,

which will exclude another round of employees. Coverage is not only critical to the individual's health but also critical to hospital reimbursement. This vicious cycle is further complicated by the fact that we are not isolated or in a contained market. We are competing in a much larger arena than Lancaster County. There are some important consumer questions we must keep in mind. How have critical health care issues affected the patients' view of the care they receive and their faith in the future of our health care system? How powerless do they feel as consumers within that system?

Lancaster is fortunate to have two Federally Qualified Community Health Centers. These two organizations partner with local hospitals to increase their capacity to serve clients and to improve their ability to draw on professional staff. Both have an ongoing relationship with local residency programs, which enables them to provide high-quality care. They have both been able to access federal funding to expand care beyond the Medicaid population, to the working poor and uninsured who are able to access care on a sliding-fee basis. Dental and medical services are provided, although it is increasingly difficult to find dental professionals. Additionally, Welsh Mountain provides mental health services to its consumers as well as immunization outreach programs to the rural and Plain communities.

7-1 Increase High School Completion

Persons Aged 18 to 24 Years, 1998 (unless noted)	Completed High School
	Percent
TOTAL	85
Race and ethnicity	
American Indian or Alaska Native	85
Asian or Pacific Islander	94
Asian	94
Native Hawaiian and other Pacific Islander	DSU
Black or African American	81
White	85
Hispanic or Latino	63
Not Hispanic or Latino	DNA
Black or African American	81
White	90
Gender	
Female	87
Male	83
Family income level	
Poor	DNA
Near Poor	DNA
Middle/high income	DNA
Disability status	
Persons with disabilities	79 (1995)
Persons without disabilities	86 (1995)

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable.

An evaluation of community health centers' ability to mitigate health status disparities simply by providing access to a regular and usual source of care was undertaken by researchers at Johns Hopkins, School of Hygiene and Public Health. This is a major focus of HP 2010. Researchers used comprehensive site-level data, patient surveys, and medical record reviews from a variety of studies. They concluded that safety net community health centers have reduced racial/ethnic, income, and insurance status disparities in access to primary care and important preventive screening procedures. In addition, the centers have reduced low birth weight disparities for African American infants. Evidence suggests that health centers are successful in reducing and eliminating health access disparities by establishing themselves as their patients' usual and regular source of care. This relationship portends well for reducing and eliminating health status disparities.

Racial and ethnic minorities make up about 25 percent of the U.S. population. Their representation among health professionals, however, is in the range of 10 percent. Several studies have shown that minority health professionals are more likely to serve areas with high proportions of underrepresented racial and ethnic groups and to practice in or near designated health care shortage areas (Cooper-Patrick, L.; Gallo, J.; Gonzales, J.; et al. "Race, gender, and partnership in the patient-physician relationship." *Journal of the American Medical Association* 282:583-589, 1999.) Several strategies need to be given attention, such as providing financial assistance for underrepresented racial and ethnic group students to pursue health care degrees, encouraging mentor relationships, promoting the early recruiting of students before they graduate from high school, and increasing the number of racial and ethnic group faculty and administrative staff members in schools that train health care professionals. Increasing cultural competency among all health workers and increasing the number of lay health workers from underrepresented racial and ethnic groups is a good interim step.

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Personal Barriers—Graduation and Literacy Rates

Description

As with poverty, level of educational attainment is highly correlated with a wide range of social and behavioral risk factors and poor health outcomes. Education level affects a person's ability to understand how their own behavior can influence their health, how the health care delivery system works, and how to use the health care delivery system to maximize personal benefit. In addition to the independent effects of education on health, educational level is also related to income and employment opportunities, with lower incomes associated with lower rates of high school completion and more restricted job opportunities. A person's income is directly related to their ability to learn new skills in a changing economy. Good jobs are those that provide health insurance benefits and that include pharmaceutical, vision, dental, and mental health coverage. Jobs at the lower end of the pay scale are also less likely to provide health care benefits to employees and families. Data on high school graduation rates can be obtained from the PA Department of Education or the U.S. Department of Education.

Data

Functional literacy is necessary for adults to participate fully as citizens of the community and as parents and workers. Unfortunately, a large percentage of our citizenry do not possess the minimum skills that are necessary to be self-sufficient. Functional illiteracy makes holding a well-paying job nearly impossible, which lowers the likelihood of receiving employee health benefits and keeps many people in poverty. According to the Lancaster-Lebanon Literacy Council, as reported in *Measure Up Lancaster*, in 1990, of the approximately 311,000 adults living in Lancaster County:

- 100,000 needed some form of basic adult education service
- 90,000 were functionally illiterate.
- 38,000 read at less than a 9th grade reading level
- 3,100 read at less than a 5th grade reading level

7-1 Percent of Persons Ages 18 to 24 Who Have Completed Highschool, 2000 Census

	Total	Female	Male
National	85	87	83
HP 2010 Goal	90	90	90
Pennsylvania	79.8	82.6	76.9
Lancaster	70.7	74.5	66.7
Berks	77.7	79.8	76.0
Chester	78.3	81.8	74.7
Dauphin	73.3	75.9	70.7
Lebanon	74.6	76.5	72.8
Lehigh	72.2	82.1	74.2
Northampton	81.0	82.1	74.2
York	76.6	78.6	74.6

Source: Kids Count Census Data Online

The inability to read has been associated with increased risks for social, physical, and mental health problems. If one cannot read, how are they to be able to properly follow any written instructions they receive from their physicians? This is extremely dangerous for those suffering chronic illnesses such as diabetes or asthma.

This problem is unlikely to go away any time soon without direct intervention. It seems to pass from generation to generation. Many skills supporting literacy are learned in the home, prior to children entering kindergarten. If parents cannot help their children master basic skills at home, they are at a severe disadvantage when they do reach kindergarten and elementary school.

Researched Best Practices

- The recommendations of the U.S. Preventive Services Task Force (U.S. Preventive Services Task Force. *Guide to Clinical Preventive Services*. 2nd ed. Washington, DC: U.S. Department of Health and Human Services (HHS), 1995) serve as a guide to quality preventive health care. The task force reconvened in 1998 and, in conjunction with AHRQ's Evidence-Based Practice Centers (EPCs), will provide additional information regarding the effectiveness and cost-effectiveness of individual clinical preventive services.

▪ Consensus is growing regarding the value of a range of preventive services, but providers identify lack of time and reimbursement as specific barriers to more consistent delivery of counseling about behavioral risk factors such as diet and exercise. (American College of Preventive Medicine. *1998 National Prevention in Primary Care Study*. Washington, DC: the College, 1998.) Computerized or manual tracking systems, patient and clinician reminders, guidelines, and patient information materials can help providers improve delivery of necessary preventive care. (HHS. *Clinician's Handbook of Preventive Services*. 2nd ed. Washington, DC: HHS, 1998.)

▪ Systems interventions that can increase delivery of health care include:

- ✔ Offering clinical preventive services among standard covered benefits
- ✔ Providing feedback on performance to providers and practices
- ✔ Offering incentives for improved performance
- ✔ Developing and implementing systems to identify and provide outreach to patients in need of services.

▪ Significant progress in the delivery of clinical preventive services (CPS) is unlikely without appropriate data systems which allow providers and administrators to identify services and populations most in need of better delivery.

▪ To be effective, preventive care must be linked to systems to ensure appropriate follow-up services or counseling for patients identified through risk assessment or screening.

▪ Increasing the number and proportion of members of underrepresented racial and ethnic groups who are primary care providers.

▪ Emergency services are increasingly contributing to primary prevention by providing immunizations and other preventive care in association with treatment for acute health problems. Emergency rooms provide immediate access to immunizations and are the only institutional providers required by Federal law to evaluate anyone seeking care. (Josiah Macy, Jr. Foundation. "The role of emergency medicine in the future of American medical care: Summary of the conference." *Annals of Emergency Medicine* 25:230–233, 1995.)

▪ The following groups provide tools to evaluate different parts of the health care system:

- ✔ The National Committee for Quality Assurance (NCQA), a managed-care accreditation group, led a collaborative effort to develop the Health Plan Employer Data and Information Set (HEDIS), a widely used tool for evaluating health plan performance. (NCQA. *Health Plan Employer Data and Information Set* [HEDIS 3.0] Washington, DC: NCQA, 1997.)
- ✔ The Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) has developed performance measures.
- ✔ AHRQ has developed the Consumer Assessment of Health Plans Survey (CAHPS), an instrument to assess consumer experiences with health plans. AHRQ also has developed the Healthcare Cost and Utilization Project (HCUP), which makes available state and nationwide estimates of hospital use. These data can be used with the HCUP Quality Indicators to provide measures of ambulatory-care-sensitive conditions, which can uncover potential problems in access to primary care services.
- ✔ Quality monitoring systems tend to emphasize measures that focus on delivery rates for clinical preventive services because access to and use of these services are important indicators of the quality of health care providers and of delivery systems.

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The complementary *National Report on Healthcare Quality* will explore methods for integrating the data from these quality-monitoring systems with population-based data collected by the public sector.

✔ The Federal Advisory Commission on Consumer Protection and Quality in the Health Care Industry was established in 1997 to study changes occurring in the health care system and to recommend ways to ensure consumer protection and quality health care. The Commission's report (President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry. *Quality First: Better Health Care for All Americans: Final Report to the President of the United States*. Washington, DC: U.S. Government Printing Office, 1998) provides a foundation for the emerging issues of the next decade in monitoring and reporting on quality of health care. It also includes a "Consumer Bill of Rights and Responsibilities" (President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry. *Consumer Bill of Rights and Responsibilities—Report to the President*. Washington, DC: the Commission, 1997), which is designed to strengthen consumer confidence in the health care system while holding participants in the system accountable for improving quality.

Promising Practices Network for Children, Families, and Communities:
http://www.promisingpractices.net/benchmark.asp?benchmarkid=7

Benchmark: Increase the percentage of students who graduate from high school

Proven Programs
Perry Preschool Project

Promising Programs
Communities In Schools
I Have a Dream
Quantum Opportunity Program
Teen Outreach Program

Local Assets

Healthy Beginnings Plus
Community Hospital of Lancaster—(717) 239-4141
Ephrata Community Hospital—(717) 738-6695
Lancaster General Medical Center—(717) 290-4305
Lancaster Regional Medical Center—(717) 291-8388
SouthEast Lancaster Health Services—(717) 299-6371
Walter L. Aument Family Health Center—(717) 290-5098

Healthy Kids Helpline
1-800-986-5437

Blue Chip (Insurance for Kids)
1-800-543-7101

All Area Hospitals offer special programs to reduce health costs:
Community Hospital of Lancaster—(717) 397-3711
Ephrata Community Hospital—(717) 733-0311
Lancaster General Hospital—(717) 290-5511
Lancaster General Hospital–Susquehanna Division—(717) 684-2841
Lancaster Regional Medical Center—(717) 291-8211
The Women's and Babies Hospital—(717) 290-3700

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Lancaster County Assistance Office
(Medical Assistance)
717-299-7421

Southeast Lancaster Heath Services
717-2996371

Welsh Mountain Medical and Dental Health Services
717-354-4711

Physician Link
Community Hospital of Lancaster Healthy Communities
(717) 392-4942

Contact LINC for a more inclusive list of services:
717-291-LINC (5462)

Additional Resources

Robert Wood Johnson Foundation funded the Georgetown University Institute for Health Care Research and Policy to write **A CONSUMER GUIDE FOR GETTING AND KEEPING HEALTH INSURANCE** for each state and the District of Columbia.
http://www.healthinsuranceinfo.net/

The Official U.S. Government Site for People with Medicare:
http://www.medicare.gov/

CHIP—Pennsylvania's program to provide quality health insurance for children of working families who otherwise could not afford it:
http://www.insurance.state.pa.us/html/chip.html

The EMPLOYER QUALITY PARTNERSHIP provides this site to help employees, employers, and the self-employed understand the issues and the resources for navigating the Health Care System:
http://www.eqp.org/

What You Can Do

Businesses and Institutions

- Provide health insurance, including mental health coverage, for your employees.
- Educate employees on how to best utilize their coverage and stress the importance of primary care physicians.
- Encourage legislators to provide blanket health care coverage for all children without eligibility barriers.
- Look at all issues affecting the health care system when lobbying legislators for change—those include Tort Reform, Insurance and HMO regulation, and Tuition Reimbursement for students entering the broad range of health professions.

Schools

- Educate parents on how to enroll their children in medical assistance if they are eligible.
- Encourage pregnant mothers to seek prenatal care early in their pregnancy.
- Provide support to students who may be at risk for dropping out of school. Do whatever you can to help them stay in school and receive their diploma.
- Provide a strong school nurse program.
- Encourage students to consider the medical arts and a wide variety of health professions from an early age and provide clubs and mentoring programs to encourage that choice.

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Individuals

- Mentor a young person and encourage them to finish high school and move on to additional education.
- Have a primary care physician, and encourage friends and family members to have one as well. Proper use of primary care physicians can greatly reduce the number of unnecessary visits to the emergency room, particularly among the chronically ill, and can be a great source of health education materials.
- If you are pregnant, seek prenatal care early in your pregnancy and encourage others to do the same. There are services available even if you are uninsured and think you cannot afford to pay for care.
- Write to elected officials to encourage them to support legislation that will improve the health care system.
- When considering a career change, consider health care.

Remaining Questions

- How can we continue to find areas of collaboration among competing county health care providers that will result in increasing access to quality care.
- How do we best influence our political leaders to put together a comprehensive package of health care provisions that would include tort reform, insurance regulation, and tuition reimbursement for those entering the health professions.
- What can we do to help our young people further their education?
- How can we monitor the quality and accessibility of services, particularly within the underserved populations of Lancaster?
- Is there a way to better demonstrate to taxpayers and legislators that providing medical assistance to a larger number of people will actually be more cost-effective in the long run?

Access to Care—HP 2010 Objectives

Clinical Preventive Care

1-1	Persons with health insurance
1-2	Health insurance coverage for clinical preventive services
1-3	Counseling about health behaviors
1-3a	Physical activity or exercise
1-3b	Diet and nutrition
1-3c	Smoking cessation
1-3d	Reduced alcohol consumption
1-3e	Childhood injury prevention: vehicle restraints and bicycle helmets
1-3f	Unintended pregnancy
1-3g	Prevention of sexually transmitted diseases
1-3h	Management of menopause

Primary Care

1-4	Source of ongoing care
1-4a	All ages
1-4b	Children and youth aged 17 years and under
1-4c	Adults aged 18 years and older
1-5	Usual primary care provider
1-6	Difficulties or delays in obtaining needed health care
1-7	Core competencies in health provider training
1-8	Racial and ethnic representation in health professions
1-8a	American Indian or Alaska Native—Health professions
1-8b	Asian or Pacific Islander—Health professions
1-8c	Black or African American—Health professions

1-8d Hispanic or Latino—Health professions
1-8e American Indian or Alaska Native—Nursing
1-8f Asian or Pacific Islander—Nursing
1-8g Black or African American—Nursing
1-8h Hispanic or Latino—Nursing
1-8i American Indian or Alaska Native—Medicine
1-8j Asian or Pacific Islander—Medicine
1-8k Black or African American—Medicine
1-8l Hispanic or Latino—Medicine
1-8m American Indian or Alaska Native—Dentistry
1-8n Asian or Pacific Islander—Dentistry
1-8o Black or African American—Dentistry
1-8p Hispanic or Latino—Dentistry
1-8q American Indian or Alaska Native—Pharmacy
1-8r Asian or Pacific Islander—Pharmacy
1-8s Black or African American—Pharmacy
1-8t Hispanic or Latino—Pharmacy
1-9 Hospitalization for ambulatory-care-sensitive conditions
1-9a Pediatric asthma
1-9b Uncontrolled diabetes
1-9c Immunization-preventable pneumonia or influenza

Emergency Services

1-10 Delay or difficulty in getting emergency care
1-11 Rapid prehospital emergency care
1-12 Single toll-free number for poison control centers
1-13 Trauma care systems
1-14 Special needs of children
1-14a On-line medical direction
1-14b Guidelines

Long-Term Care and Rehabilitative Services

1-15 Long-term care services
1-16 Pressure ulcers among nursing home residents

Related Objectives From Other Focus Areas

Arthritis, Osteoporosis, and Chronic Back Conditions

2-2 Activity limitations due to arthritis
2-3 Personal care limitations
2-6 Racial differences in total knee replacement
2-7 Seeing a health care provider
2-11 Activity limitations due to chronic back conditions

Cancer

3-10 Provider counseling about cancer prevention
3-11 Pap tests
3-12 Colorectal cancer screening
3-13 Mammograms

Diabetes

5-1 Diabetes education
5-4 Diagnosis of diabetes
5-11 Annual urinary microalbumin measurement
5-12 Annual glycosylated hemoglobin measurement
5-13 Annual dilated eye examinations

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5-1. Annual foot examinations
5-16 Aspirin therapy

Disability and Secondary Conditions

6-7 Congregate care of children and adults with disabilities
6-10 Accessibility of health and wellness programs

Educational and Community-Based Programs

7-2 School health education
7-3 Health-risk behavior information for college and university students
7-5 Work site health promotion programs
7-7 Patient and family education
7-8 Satisfaction with patient education
7-12 Older adult participation in community health promotion activities

Family Planning

9-1 Intended pregnancy
9-2 Birth spacing
9-3 Contraceptive use
9-5 Emergency contraception
9-6 Male involvement in pregnancy prevention
9-10 Pregnancy prevention and sexually transmitted disease (STD) protection
9-11. Pregnancy prevention education
9-13 Insurance coverage for contraceptive supplies and services

Health Communication

11-2 Health literacy
11-6 Satisfaction with health care providers' communication skills

Heart Disease and Stroke

12-1 Coronary heart disease (CHD) deaths
12-15 Blood cholesterol screening

HIV

13-6 Condom use
13-8 HIV counseling and education for persons in substance abuse treatment
13-9 HIV/AIDS, STD, and TB education in State prisons
13-10 HIV counseling and testing in State prisons

Immunization and Infectious Diseases

14-5 Invasive pneumococcal infections
14-22 Universally recommended vaccination of children aged 19 to 35 months
14-23 Vaccination coverage for children in day care, kindergarten, and first grade
14-24 Fully immunized young children and adolescents
14-25 Providers who measure childhood vaccination coverage levels
14-26 Children participating in population-based immunization registries
14-27 Vaccination coverage among adolescents
14-28 Hepatitis B vaccination among high-risk groups
14-29 Influenza and pneumococcal vaccination of high-risk adults

Injury and Violence Prevention

15-7 Nonfatal poisonings
15-8 Deaths from poisoning
15-10 Emergency department surveillance systems
15-12 Emergency department visits
15-19 Safety belts
15-20.Child restraints

15-21 Motorcycle helmet use
15-23 Bicycle helmet use
15-24 Bicycle helmet laws

Maternal, Infant, and Child Health

16-1 Fetal and infant deaths
16-2 Child deaths
16-3 Adolescent and young adult deaths
16-17 Prenatal substance exposure
16-18 Fetal alcohol syndrome
16-20 Newborn bloodspot screening
16-22 Medical homes for children with special health care needs
16-23 Service systems for children with special health care needs

Medical Product Safety

17-3 Provider review of medications taken by patients
17-5 Receipt of oral counseling about medications from prescribers and dispensers

Mental Health and Mental Disorders

18-6 Primary care screening and assessment
18-7 Treatment for children with mental health problems
18-8 Juvenile justice facility screening
18-9 Treatment for adults with mental disorders
18-10 Treatment for co-occurring disorders
18-11 Adult jail diversion programs
18-12 State tracking of consumer satisfaction
18-13 State plans addressing cultural competence
18-14 State plans addressing elderly persons

Nutrition and Overweight

19-1 Healthy weight in adults
19-2 Obesity in adults
19-3 Overweight or obesity in children and adolescents
19-4 Growth retardation in children
19-17 Nutrition counseling for medical conditions
19-18 Food security

Oral Health

21-7 Annual examinations for oral and pharyngeal cancers
21-10 Use of oral health care system
21-11 Use of oral health care system by residents in long-term care facilities
21-13 School-based health centers with oral health component
21-14 Health centers with oral health service components
21-15 Referral for cleft lip or palate
21-16 Oral and craniofacial state-based surveillance system
21-17 Tribal, State, and local dental programs

Physical Activity and Fitness

22-12 School physical activity facilities
22-13 Work site physical activity and fitness
22-14 Community walking
22-15 Community bicycling

Public Health Infrastructure

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23-1 Public health employee access to the Internet
23-2 Public access to information and surveillance data
23-3 Use of geocoding in health data systems
23-8 Competencies for public health workers
23-9 Training in essential public health services
23-10 Continuing education and training by public health agencies
23-12 Health improvement plans
23-13 Access to public health laboratory services
23-14 Access to epidemiology services

Respiratory Diseases

24-6 Patient education
24-7 Appropriate asthma care
24-11 Medical evaluation and follow-up

Sexually Transmitted Diseases

25-11 Responsible adolescent sexual behavior
25-13 Hepatitis B vaccine services in STD clinics
25-14 Screening in youth detention facilities and jails
25-15 Contracts to treat nonplan partners of STD patients
25-16 Annual screening for genital chlamydia
25-17 Screening of pregnant women
25-18 Compliance with recognized STD treatment standards
25-19 Provider referral services for sex partners

Substance Abuse

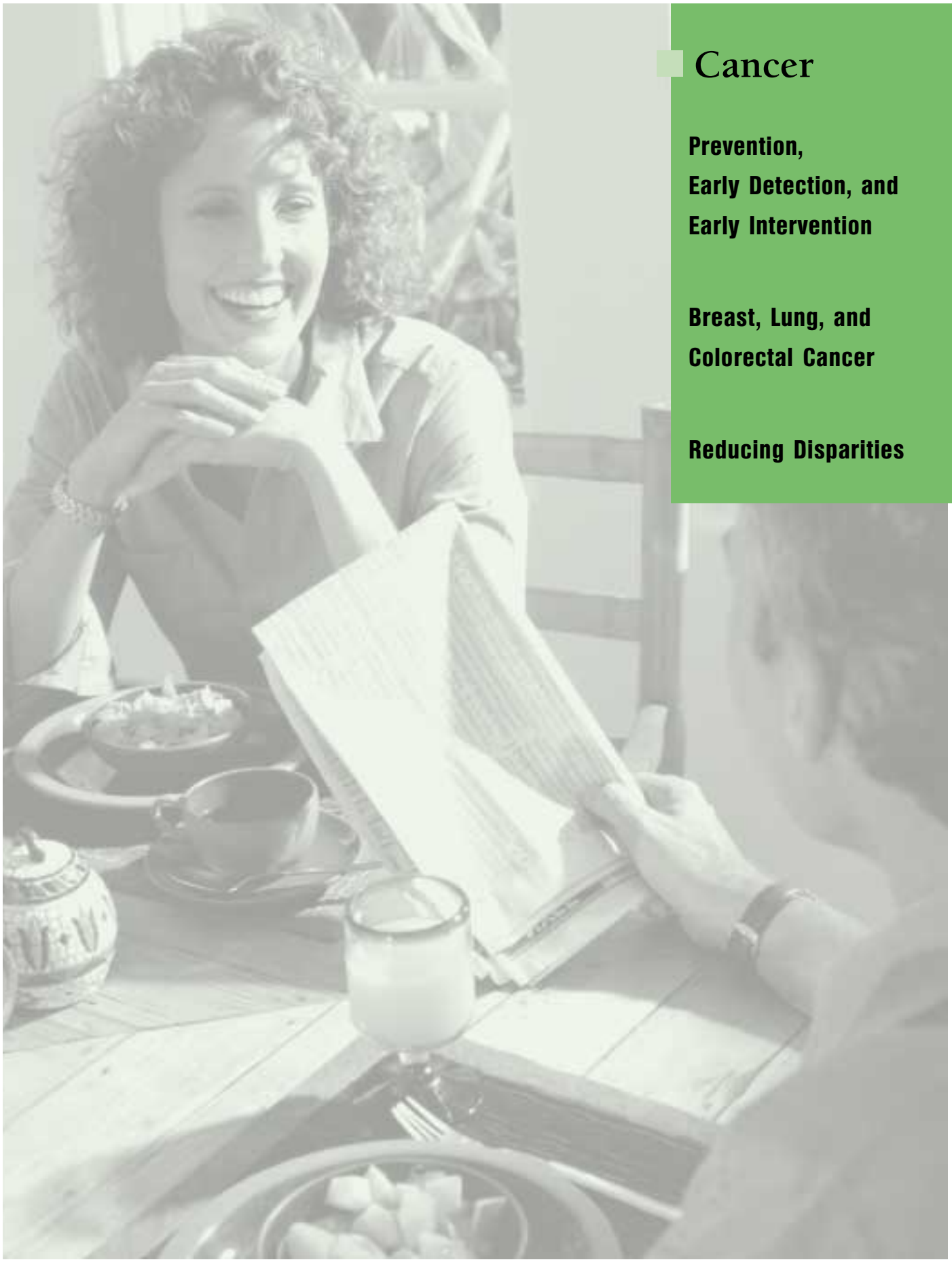
26-18 Treatment gap for illicit drugs
26-20 Treatment of injection drug use
26-21 Treatment gap for problem alcohol use
26-22 Hospital emergency department referrals

Tobacco Use

27-5 Smoking cessation by adults
27-7 Smoking cessation by adolescents
27-8 Insurance coverage of cessation treatment

Vision and Hearing

28-1 Dilated eye examinations
28-2 Vision screening for children
28-10 Vision rehabilitation services and devices
28-11 Newborn hearing screening, evaluation, and intervention
28-13 Rehabilitation for hearing impairment
28-14 Hearing examination
28-15 Evaluation and treatment referral



Cancer

Prevention, Early Detection, and Early Intervention

Breast, Lung, and Colorectal Cancer

Reducing Disparities

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All Cancer

Goal: Reduce the number of new cancer cases as well as the illness, disability, and death caused by cancer.

HP 2010 Measures and Local Measures

3-1 Reduce the overall cancer death rate.

Target-setting method: 21 percent improvement
Data source: National Vital Statistics System (NVSS), CDC, NCHS

3-2 Reduce the lung cancer death rate.

Target setting method: 22 percent improvement.
Data source: National Vital Statistics System (NVSS), CDC, NCHS

3-3 Reduce the breast cancer death rate.

Target: 22.3 deaths per 100,000 females
Baseline: 27.9 breast cancer deaths per 100,000 females occurred in 1998.
Target-setting method: 20 percent improvement
Data source: National Vital Statistics system (NVSS), CDC, NCHS

3-5 Reduce the colorectal cancer death rate.

Target: 13.9 deaths per 100,000 population
Baseline: 21.2 colorectal cancer deaths per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population).
Target-setting method: 34 percent improvement
Data source: National Vital Statistics System (NVSS), CDC, NCHS

3-10 Increase the proportion of physicians and dentists who counsel their at-risk patients about tobacco use cessation, physical activity, and cancer screening.

This indicator is developmental. Complete operational definitions have not been specified.
Target-setting method: Better than the best.
Data sources: Survey of Physicians' Attitudes and Practices in Early Cancer Detection, NIH, NCI; National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; Survey of Current Issues in Dentistry, American Dental Association

The 2002 local BRFSS survey will provide more accurate information regarding local people's behaviors related to cancer screening and prevention activities. This will guide future indicator choices.

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Description

National statistics indicate a disturbing rise in the incidence of cancer over the past ten years. More than any other, this disease strikes a chord of resignation and helplessness in individuals and families dealing with its human toll. According to the Centers for Disease Control and Prevention, cancer is the second leading cause of death behind heart disease. However, considerable good news is imbedded in this statistic. Much of the apparent rise in incidence has to do with improved early detection techniques and effective interventions. While the incidence rate appears to be increasing, the death rate is decreasing.

More people are living longer with cancer. Clinical trials have demonstrated that mammography screening can reduce breast cancer deaths by 20 to 39 percent in women aged 50 to 75 years. Detection and removal of precancerous polyps through sigmoidoscopy and colonoscopy is key to colorectal cancer survival. With the introduction of the prostate-specific antigen test in 1992, early detection and intervention occurs much more frequently in diagnosing prostate cancer.

All Cancer Sites, 1994–1998

	Age-Adjusted Mortality*		Age-Adjusted Incidence*		Ratio [AAM/AAI]	
	Male	Female	Male	Female	Male	Female
Lancaster	**188.5**	**130.7**	**431.2**	**341.5**	**.44**	**.38**
Peers**	196.4	132.5	501.7	384.1	.39	.34
Neighbors**	197.1	134.8	471.2	372.0	.42	.36
State	211.2	140.9	490.6	376.9	.43	.37

*per 100,000 population; age-adjustment to 1970 standard million population
** weighting for Peer and Neighbor aggregations by number of cases

	Total Deaths		Total Cases		Ratio [Deaths/Cases]	
	Male	Female	Male	Female	Male	Female
Lancaster	**2,354**	**2,291**	**5,209**	**5,160**	**.45**	**.44**
Peers	5,502	5,175	13,540	13,031	.41	.40
Neighbors	8,286	7,721	19,409	19,165	.43	.40
State	77,099	73,051	173,008	172,075	.45	.43

Source: Pennsylvania Department of Health, *Cancer Incidence and Mortality, 1994–1998,* http://www.health.state.pa.us/stats/cancer/cancer98.htm

Studies indicate that communities and individuals have greater control over the likelihood of contracting the most common cancers through improved dietary habits, increased physical activity, and elimination of self-destructive habits such as smoking and over exposure to the sun. According to the American Cancer Society, nearly one third of the more than 500,000 annual U.S. cancer deaths are attributable to diet and physical activity behaviors. For example, physical activity decreases the amount of exposure of breast tissue to circulating estrogen thus reducing risk for breast cancer. The risk of colon cancer is similarly reduced because physical activity accelerates the movement of food through the digestive system, reducing the time that the lining of the bowel is exposed to potentially cancer-causing substances. Obesity significantly increases the risk of breast cancer and colorectal cancer. Even if the individual is not obese, a diet high in fat and low in fruits and vegetables is a strong risk factor. In addition, cigarette smoking causes 87% of all lung cancer.

A very disturbing trend nationally and echoed in every community with racial/ethnic diversity is a much higher rate of mortality from these cancers in the black and Hispanic communities. This seems to indicate that not everyone is being reached with cancer prevention and early detection strategies and screenings. This disparity has prompted, since April 2000, several action task forces initiated by both the Centers for Disease Control and Prevention and the National Cancer Institute to address the issue. When seeking to reduce cancer death rates, each community must evaluate resources and interventions especially directed toward its racially diverse populations. Socioeconomics plays a role in the availability of cancer interventions. The higher the income and education level for any individual, regardless of race or ethnic background, the greater the likelihood that individual will survive cancer. Without special attention to the issue of disparity, no community can hope to effectively reduce its cancer death rate.

The key to success in achieving locally adopted HP 2010 target objectives appears to be in the areas of early detection, intervention, prevention, and elimination of disparity in cancer death rates.

All cancers combined are the second leading cause of death in the United States. During 2000, an estimated 1,220,100 persons were expected to be diagnosed and 552,200 persons were expected to die from cancer. One-half of the new cases of cancer occur in people aged 65 and over. Lung and bronchus, prostate, female breast, and colon and rectum were the most common cancers for all racial and ethnic populations in the United States and together they accounted for approximately 54 percent of all newly diagnosed cancers. Four in ten people diagnosed with cancer in a given year are expected to be alive five years after diagnosis. This rate means that the chance of a person recently diagnosed with cancer being alive in five years is 60 percent of the chance of someone not diagnosed with cancer. Commonly, these five-year survival rates are used to monitor progress in the early detection and treatment of cancer. All persons who are living five years after diagnosis, whether in remission, disease free, or under treatment, are included.

Causes of cancer incidence are as varied as the types of cancers. Environmental pollutants, exposure to chemicals, chronic infections such as Hepatitis B, tobacco use, overexposure to UV rays, and various personal health issues such as obesity and lack of physical activity, play a role in the rise of cancer incidence. Because this health issue is complex, and because interventions for the five most common cancers carry implications for the others, we will focus on the most common. According to the American Cancer Society, other less common cancers in descending order of their contribution to total cancer deaths include: Non-Hodgkins' Lymphoma (4.4 per cent of deaths), Liver and intrahepatic bile duct (2.3 percent of deaths), Esophagus (2.2 percent of deaths), Melanoma (1.4 percent), Acute Myeloid Leukemia (1.3 percent), and Soft Tissue including Heart (0.7).

In addition to the staggering human toll, the financial burden of cancer is substantial. The overall annual costs for cancer are estimated at $107 billion, with $37 billion for direct medical costs, $11 billion for costs of illness (low productivity due to illness), and $59 billion for costs of death (lost productivity due to death).

Cancer Detection and Screening

Uterine/cervical, colorectal, and breast cancers, besides being among the most prevalent cancers in this country, are also more likely to be cured if they are detected early. Early detection tends to prevent long-term illness or death. This indicator reflects whether or not individuals are able or willing to avail themselves appropriately of screening examinations. Furthermore, it reveals the ability of the health care system to provide screening exams in addition to the effectiveness of the health care delivery system in ensuring that individuals are scheduled at the proper intervals for these examinations. Information about the stage of disease at the time of diagnosis would best be provided by a locally-based cancer registry but may be supplemented by the National Hospital Discharge Survey. Attitudes and behaviors concerning screening can be measured through the Behavioral Risk Factor Surveillance Survey.

Physicians are also encouraged to be more aggressive in certain cancer screenings and prevention counseling. Although the indicator is in development, the following table provides some guidelines for local areas and institutions interested in promoting these activities among their provider population.

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3-10 Increase the proportion of physicians and dentists who counsel their at-risk patients about tobacco use cessation, physical activity, and cancer screening.

Target and baseline:

Objective	Increase in Counseling About Tobacco Use Cessation, Physical Activity, and Cancer Screening	1988 Baseline (unless noted)	2010 Target
		Percent	
3-10a.	Internists who counsel about smoking cessation	50	85
3-10b.	Family physicians who counsel about smoking cessation	43	85
3-10c.	Dentists who counsel about smoking cessation	59 (1997)	85
3-10d.	Primary care providers who counsel about blood stool tests	56	85
3-10e.	Primary care providers who counsel about proctoscopic examinations	23	85
3-10f.	Primary care providers who counsel about mammograms	37	85
3-10g.	Primary care providers who counsel about Pap tests	55	85
3-10h.	Primary care providers who counsel about physical activity	22 (1995)	85

Smoking cessation, adoption of healthy diets, increased physical activity, and increased cancer screening can all contribute to reduced numbers of cancer deaths. Experts recommend that providers screen patients for breast, cervical, and colorectal cancers and counsel patients to prevent or reduce tobacco use, promote physical activity, and promote a healthy diet. Provider counseling should be conducted in a linguistically and culturally appropriate manner.

Income and Cancer Screening Behaviors

Research studies comparing the effects of both education and income on the tendency of women to avail themselves of screening exams for breast and cervical cancer show that both higher income and higher education result in greater prevalence. A study reported by the *Journal of the National Cancer Institute* in April of 2002 concluded that a lower income status is more important than race in determining the quality of medical care for women with breast cancer. The study used a cancer registry in Detroit to identify women with breast cancer and then searched for those included who were also on Medicaid, a program that provides medical care for the poor. Researchers found that women on Medicaid were 41 percent more likely to be diagnosed with late-stage breast cancer and 44 percent less likely to receive radiation, a key part of therapy. Women on Medicaid were three times more likely to die of the disease than were non-Medicaid patients. It seems likely that if one doesn't receive regular care prior to diagnosis, one is more likely to be in a late stage of the disease when diagnosed. Furthermore, analysis provided by the Behavioral Factor Surveillance Survey (BRFSS) in the state of Pennsylvania, 1993–1997, showed that increased household income led to a higher prevalence of screening through mammography, clinical breast exam, and Pap smear.

Five-year survival rates in colorectal cancer for the 1989–94 period are 64 percent in whites and 52 percent in African Americans. Early detection and treatment also play a key

role in these survival rates. Dr. Otis Brawley of the Winship Cancer Institute of Emory University, in an article in the *Journal* suggests that "rather than speaking in racial/ethnic terms of black and white population, it is more appropriate to speak in socio-economic terms of the 'haves' and 'have nots'. This focus would rightfully bring other socio-economically deprived populations that include whites, Hispanics, Native American, and Asians into the discussion."

Recent Trends

Some progress is being made in the protracted fight against deaths caused by the major cancers. Cancer death rates for all sites combined decreased an average of 0.6 percent a year from 1990–1996. This decrease occurred after rates had increased by 0.4 percent per year from 1973 to 1990. Death rates for male lung, female breast, prostate, and colorectal cancers decreased significantly during the 1990-–1996 period.

Lung cancer is the number one cause of cancer death among men and women in all racial and ethnic groups. This cancer is linked to smoking and smoking cessation trends led to a 1.9 percent decrease per year in men from 1992 to 1998. Unfortunately, for women, death from lung cancer increased at a rate of 0.8 percent per year in the same time period.

Female breast cancer is one of a dozen cancers with an upward statistical trend, showing a 1.2 percent per year increase in incidence from 1992 to 1998. Since increases are limited to early stage breast cancer (I and II), this trend may be related to increased screening, particularly with mammograms. Other factors, such as an increase in obesity, may have contributed to the increase. Breast cancer death rates decreased 1.6 percent annually from 1989 to 1995 and then more rapidly, at a rate of 3.4 percent per year between 1995 and 1998. Again, early detection and better screening and treatment probably contribute to these rates of decrease.

Data on colorectal cancer shows a decline in new cases and death rates in white males and females, stable new cases in African Americans, and a continued rise in death rates in African American males. Five-year survival rates for 1989 to1994 were 64 percent in whites and 52 percent in African American males. Early detection and treatment play a key role in these survival rates.

Local Context

In Lancaster County, the overall cancer mortality rate (age-adjusted 116 per 100,000) is lower than that of the state overall, most referent areas, and the HP 2010 objective of 159 per 100,000. The site-specific, age-adjusted cancer incidence rates indicate that breast, lung, and colorectal cancers are the leading causes of cancer in the county. Again, the rates for these cancers are below those reported for the state overall and each reference county. However, the death rate from breast cancer is higher than the state, each surrounding county, and considerably higher than the HP 2010 objective of 22.2/10,000 cases. Two of the three cancers most prevalent in Lancaster County, breast and colorectal, both have effective screening technologies to provide early detection, which greatly increases survival rate.

Breast Cancer

In 2002, the American Cancer Society estimates:

- 11,000 new cases of breast cancer will be diagnosed among women in Pennsylvania.
- 2,200 women will die of breast cancer in Pennsylvania.

In 1998, the Behavioral Risk Factor Surveillance System of the U.S. Department of Health and Human Services monitored Lancaster County for risk factors contributing to premature death. Results revealed that 75.1 percent of Lancastrians eat very few fresh fruits and vegetables. The same group is also sedentary, the highest risk factor for premature death. It is ironic that an area referred to statewide as the "Garden Spot" would have residents whose consumption of the local bounty is scarce. The BRFSS data for Lancaster also indicates that 57 per cent of adults report being overweight, 21 percent use cigarettes, 14.5 percent report acute drinking, and 3 percent reporting chronic drinking. The local 2002 BRFSS will provide more accurate information regarding at-risk behaviors.

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Lancaster County reflects, along with the rest of the nation, a trend toward higher percentages of obesity and, tragically, much greater rates of obesity in its children. Weight issues are generally regarded to be a personal vanity problem and possibly a mobility problem. The public seems largely unaware of their heightened risk for the most prevalent cancers as a result of their dietary habits. They know that cigarettes can cause lung cancer, but they are blissfully unaware that super-sizing their fast food choices and eating saturated fats will put them on the fast track to a cancer diagnosis.

Against the backdrop of this local dietary landscape stand the American Cancer Society's new guidelines (February 2002) that stress adopting a diet with a wide variety of healthy foods that are primarily plant-based.

Attitudes toward physical exercise are best exemplified by the changing curriculum in Lancaster County schools and public schools across the nation regarding physical education. Over the past ten years, in the face of educational reform calling for heavy emphasis on "the basics," the state has permitted school districts to greatly reduce physical education time. The importance of physical activity in leading a full and healthy life is not being emphasized by the actions of community institutions. In addition, pedestrian activity is discouraged in the county by the presence of farmland and the tendency of drivers within cities to disregard the rights of those on foot. Furthermore, rapid population growth over the past 25 years has rendered the available parks and trails for exercise inadequate to the needs of the local populace.

The Average Annual Age-adjusted Mortality Rates for Breast Cancer Deaths per 100,000 Women, by Race, 1995–19993

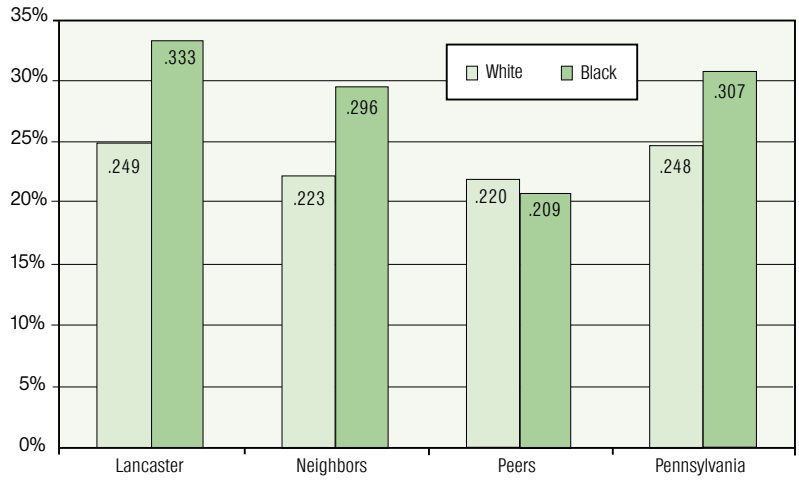
	Pennsylvania	National
Overall	30.9	28.8
White	30.3	28.2
Black	40.2	37.1
Hispanic	19.8	17.2
Asian/Pacific Islander	12.8	13.0
American Indian/ Alaska Native	–	15.0

Source: American Cancer Society Facts and Figures, 2002. Estimates exclude more than a million cases of basal and squamous cell skin cancers and in situ cancers, except urinary bladder, that will be diagnosed in 2002. Lung cancer rates include bronchus cancer. State death totals were rounded to nearest 100. Hyphens represent suppression of rates when there were 75,000 or fewer persons in the denominator or 20 or fewer deaths in the numerator.

Disparities Issues

Mortality/incidence ratios for Lancaster County from the Pennsylvania Department of Health report, *Cancer Incidence and Mortality*, 1994–1998, indicates that the ratio among white women is commensurate with the state level. The ratio for black women is considerably higher. Furthermore, the gap is greater than Lancaster's peer counties, neighbors, and the state. Clearly, this is a great area of concern in reaching the goal of reduced death rates locally. This report will present the most prevalent cancers in the community—breast, lung, and colorectal—in this order, starting with the cancer showing the most disparity.

Female Breast Cancer Mortality/Incidence Ratios 1985–99, by Race



Possible disparities regarding the health status of lesbian women and possible barriers to access to health service by lesbians has been identified by the Institute of Medicine as a research priority. Better local research and tracking statistics would allow us to know to what degree this group is contributing to the unacceptably high cancer death rate.

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Disparities

- Cancer death rates vary by gender, race, and ethnicity.
- Lung cancer deaths among males have declined since 1990 while female lung cancer deaths have continued to rise.
- The four leading cancer sites for the five racial/ethnic populations (Caucasian, African American, Asian/Pacific Islanders, Native American/Alaskan Native, and Hispanic) are: lung and bronchus, prostate, female breast, and colorectal.
- African Americans are 34 percent more likely to die of cancer than whites and more than two times more likely to die of cancer compared to the other ethnic/racial populations.
- African American women are more likely to die of breast cancer and colon cancers than are women of any other racial/ethnic group.
- African American men have the highest death rates of colon, rectum, lung, and prostate cancers.
- Hispanics have higher rates of cervical, esophageal, gallbladder, and stomach cancers than those of non-Hispanic whites.
- New cases of female breast and lung cancer are increasing among Hispanics, who are diagnosed at later stages and have lower rates of survival than non-Hispanic whites.

Researched Best Strategies

Evidence suggests that several types of cancer can be prevented and that the prospects for surviving cancer continue to improve. The ability to reduce cancer death rates depends, in part, on the existence and use of various types of resources. First, it is essential to make certain that culturally and linguistically appropriate information on prevention, early detection, and treatment is provided for everyone in a culturally diverse population. Collaboration with acknowledged leaders within the racially/ethnically diverse community is critical to the success of this endeavor. Best means for reaching the public can only be ascertained in this way. Screening techniques, such as mammography and colonoscopy, are under-utilized.

Secondly, means or systems must exist for providing all people with access to state-of-the-art preventive services and treatment. Where suitable, participation in clinical trials also should be encouraged.

Third, continued progress in research must be fostered. Genetic information is emerging as a result of new research that can be used to improve the effectiveness of both clinical and preventive medical services. Vital research on the causes of cancer (including genetic and environmental) needs to translate biologic and epidemiological findings into effective prevention and control programs for use by government and community agencies.

Fourth, a national cancer surveillance system that collects information across the entire life cycle could be used to target populations with prevention and early detection initiatives, to focus research, and to improve access to treatment and palliative care for all cancer patients and survivors.

In addition, every five years, the American Cancer Society works with experts in the fields of nutrition, physical activity, and cancer prevention to review current scientific evidence in order to develop recommendations regarding the relationship between diet, activity, and cancer risk. The Society's 2002 guidelines for prevention of cancer include for the first time recommended changes within workplaces, schools, and communities to ensure that Americans have opportunities to be physically fit and eat healthfully. Changes are needed in school curricula toward a greater emphasis on health and physical activity; in workplaces, policies need to be initiated that support activity; and in government, zoning and urban planning must consciously provide and promote activity. Recommended healthy diet guidelines (higher consumption of fresh fruits and vegetables, eating whole grains, limiting saturated fats), are well established but need to be aggressively promoted by doctors, dentists, and all civic and social service organizations. Tobacco reduction programs (tobacco smoking is responsible for 30 percent of all cancer deaths) and other prevention programs such as sunscreen education to prevent melanoma and immunization against Hepatitis B to prevent infection must be supported and expanded.

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Finally, central to the success of cancer prevention strategies nationwide is reducing racial/ethnic/gender disparities across diverse populations by disseminating information and treatment to all people to increase survival, improve quality of life, and decrease mortality. Training programs are needed to increase the diversity of scientists in biomedical research and to enhance existing careers.

What You Can Do

Businesses and Institutions

- Actively support local, state, and national initiatives such as the American Cancer Society's Relay for Life by fielding teams and supporting walkers.
- Provide the ACS' educational materials on diet, activity, and preventive screenings for employees and reinforce reminders of the value of proactivity in the face of cancer risk.
- Accommodate the workplace needs of cancer survivors as employees with an attitude that emphasizes their continuing value to the work environment.
- Build incentives into smoking cessation programs.
- Encourage workplace weight reduction programs such as those offered by Weight Watchers, providing space, time, and incentives for those who succeed.
- Sponsor and support health fairs provided by area churches and other community agencies as a means to promote cancer-preventing lifestyle choices.

Individuals

- Smoke less or quit smoking.
- Exercise a minimum of 30 minutes per day.
- Participate in a weight-loss regimen if you are overweight.
- Know and follow the American Cancer Society's researched guidelines for prevention of cancer through dietary food choices.
- Know and commit to the recommended screening and early detection programs for your age and gender.
- Take an active role in your health and that of your children in partnership with a family physician.
- Research and know the risk factors for cancer that are particular for you through family health history and environmental factors (workplace exposure, air and water quality where you live, secondhand tobacco smoke.) Do what you can to avoid unnecessary exposure.

Breast Cancer

3-3 Reduce the breast cancer death rate.

Target: 22.3 deaths per 100,000 females
Baseline: 27.9 breast cancer deaths per 100,000 females occurred in 1998 (age adjusted to the year 2000 standard population).
Target-setting method: 20 percent improvement
Data source: National Vital Statistics System (NVSS), CDC, NCHS

Description

Breast cancer is the most common cancer among women in the United States. An estimated 184,000 new cases were expected to be diagnosed in 2000, with 40,800 deaths. These numbers account for 15.2% of the cancer deaths among women (Landis and Bolden, 2000, 2398–2424). When approximately one out of every nine women has received a breast cancer diagnosis, the human toll impacts nearly every family in this country. These women are

Females, 1998	Breast Cancer Deaths Rate per 100,000
TOTAL	27.9
Race and ethnicity	
American Indian or Alaska Native	14.2
Asian or Pacific Islander	13.1
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	35.7
White	27.3
Hispanic or Latino	16.8
Not Hispanic or Latino	28.5
Black or African American	36.7
White	27.9
Education level (aged 25 to 64 years)	
Less than high school	20.0
High school graduate	28.4
At least some college	22.0

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.

mothers, daughters, spouses, and valued members of the work force at every level. Even when they survive, the impact of their disability during cancer treatment and sometimes continuing afterward requires families and workplaces to support them and compensate for the loss of their considerable services.

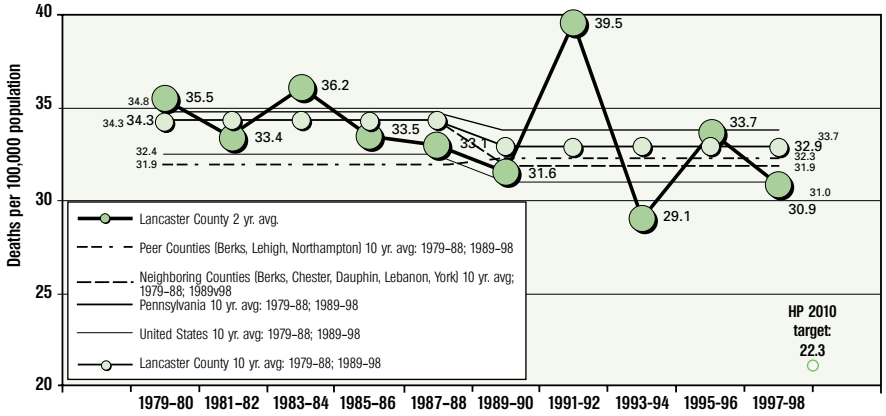
The need to identify causes of breast cancer is intensified by a rising incidence rate over the past ten years. Because the rises are in early stage cancers (I and II), some of that increase might be attributable to better early detection technologies. Furthermore, women may be becoming more vigilant in getting scheduled mammography and clinical breast examinations performed by a health professional and in performing their own breast self-examinations. Risk factors for breast cancer that cannot be changed include gender, age, race, inherited genetic factors, a family history of breast cancer, previous occurrence, previous breast irradiation, and lengthy lifetime menstruation (early at age 12 to after age 50). Awareness of these factors can motivate a woman and her physician to be more aggressive in utilizing detection measures and in avoiding the risk factors that are lifestyle related.

No woman likes to hear that she may have participated in causing her own breast cancer. This message is not emphasized post-diagnosis out of sheer compassion and respect for the struggles that are about to ensue. More women, however, need to know and be firmly reminded by their health care professionals that lifestyle choices can result in a breast cancer diagnosis. The most controllable of these choices involve obesity, fat consumption, alcohol consumption, and physical inactivity. According to the American Cancer Society, research studies have repeatedly and clearly shown that healthful choices in these areas reduce the risk of breast cancer.

Local Context

According to the Pennsylvania Department of Health's report, *Cancer Incidence and Mortality, 1994–98*, Lancaster County has a **lower than average incidence** of breast cancer when compared to both its peer counties and the state as a whole. What is alarming is that it has a **higher than average death rate from breast cancer.**

Age-Adjusted Death Rates: Female Breast Cancer (200 Million Standard Population)



Source: CDC Wonder; http://wonder.cdc.gov/

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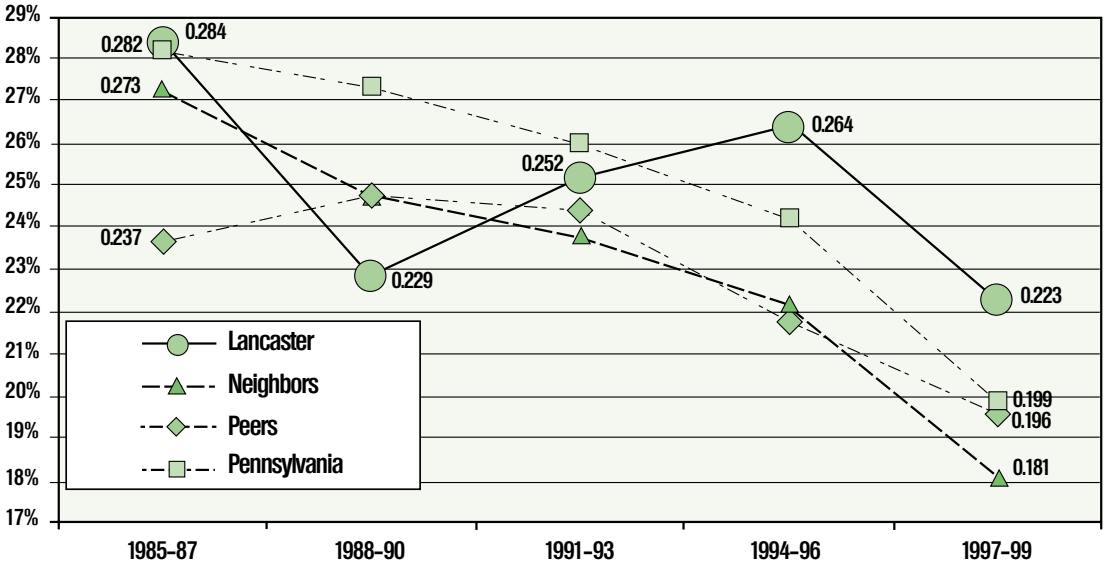
Disparity

A closer look at the available statistical information would shed more light on precisely where within this group the death rate is the highest.

According to the Census 2000 Redistricting Data, Lancaster County's population was 5.7% Hispanic or Latino of any race, 2.8% African American or Black, and 1.4% Asian (*State and County QuickFacts*, http://www.census.gov). These were the largest racial/ethnic groups after whites. We know from the national data that the breast cancer death rate among black women is higher than among white women. The Pennsylvania Department of Health statistics find that this is especially true in Lancaster County.

Female Breast Cancer: Mortality/Incidence Ratios



Source: CDC Wonder (Mortality Data); PA Department of Health (Incidence)

There are **no available data** of the same sort for Hispanic women specific to this county, though we know that nationwide they too are diagnosed at later stages and are more likely to die from breast cancer even though their incidence rate is lower. Since Hispanics constitute the largest racial/ethnic minority in Lancaster County, more research must be done to discover how the community is faring in terms of death rate and the availability of appropriate medical care, including utilization of early detection methods.

Other data available concerning state and national trends in health-related behaviors can be projected on local minority groups in the absence of current local statistics. One of the top risk factors for breast cancer for all women is obesity. The Pennsylvania Department of Health's new *Special Report on Minority Health*, April 2002, points out that 20 percent of white non-Latinos, 32 percent of black non-Latinos, and 19 percent of Latinos are obese. However, the report cites a national study in 1996 that reported that 33 percent of all Hispanic women were overweight. Of even greater concern is the fact that between 1986 and 1998, the national percentage of black and Hispanic children who were overweight increased by 120 percent, while the rate for white children increased 50 percent. Greater disparity is very probable for the future both in Lancaster County and throughout the country.

Researched Best Strategies

Being overweight is a well-established breast cancer risk, especially for postmenopausal women. Since the incidence of breast cancer is highest in this group, attention to healthful diet and weight loss must be presented as being as important as early detection strategies. Physical activity is an integral part of this picture.

Following the American Cancer Society's guidelines for early detection of breast cancer improves the chances that breast cancer can be diagnosed early and treated successfully. All women should be aware of these guidelines, and means should be provided for all women to

follow them. Women aged 40 or older should have a mammogram each year. Between the ages of 20 and 39, women should have a clinical breast exam by a health professional every three years; after 40, every year. Women aged 20 and older should perform breast self-examination every month and should be taught how to properly conduct this exam.

Information concerning risk factors that can be controlled and the effectiveness of early detection techniques in reducing the death rate must be presented to racial/ethic minority groups in a culturally sensitive, language appropriate format. Directly involving the leadership in these groups from the outset is the only effective way to connect with the women who most need to hear the message.

What We Can Do

Businesses and Institutions

- Conduct an evaluation of availability of health resources located along lines of public transportation and proximate to low income and racial/ethnic groups most in need of improved adherence to early detection guidelines.
- Seek practical means to insure that geographical issues do not prevent recommended care.
- With the help of local leaders in minority communities, create health fairs and education sessions within the community that are culturally sensitive and designed to inform women of risk factors in a way that motivates them to become personally responsible for those factors they can control.
- Investigate the availability of regular preventive care to women at high risk of breast cancer to prevent late diagnosis and ensure survival.
- Local physicians and other health care providers recommit themselves to usingblunt messages to women regarding the top risk factors, obesity and lack of physical activity.
- Seek financial supporters within the community for a media campaign directed toward women regarding the connection between weight loss and reduced breast cancer risk. The only message being heard right now is from the pharmaceutical company selling preemptive Tamoxifen.

Individuals

- Know and follow the age appropriate guidelines for mammography and clinical breast exam.
- Learn and perform breast self-exam monthly.
- Exercise a minimum of 30 minutes per day.
- Maintain a healthy weight by reducing calories, eating at least five fruits and vegetables daily, using whole grains, and eliminating saturated fats.
- Avoid alcohol consumption.
- Do not smoke.
- Educate yourself regarding your risk factors not subject to intervention (family history, reproductive history, age).

Other Resources

National Cancer Institute: http://www.cancer.gov
American Cancer Society: http://www.cancer.org
Susan G. Komen Breast Cancer Foundation: http://www.komen.org
The Breast Cancer Network: http://www.breastcancer.net
The Y-Me Breast Cancer Organization: http://www.y-me.org

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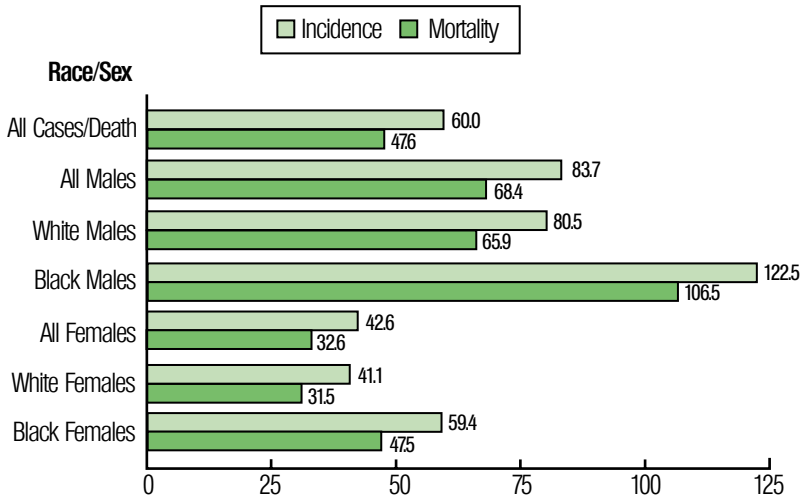
Lung Cancer

Description

"When you can't breathe, nothing else matters." This logo heads the American Lung Association's home page on its Web site. Lung cancer is the most tragic of the cancers because, in most cases, it is totally preventable. Yet it is the leading cancer killer among both men and women, with an estimated 164,100 new cases and 156,900 deaths in this country in 2000. (American Lung Association, 2002, "What is Lung Cancer," para. 1) Furthermore, early detection is very difficult, treatment does not lead to remission, and the only way to reduce this horrendous death toll is through aggressive prevention campaigns. Use of tobacco is responsible for all but 13% of lung cancer cases. Cigarettes contain over 4,000 different chemicals, most of which are proven carcinogens. The second leading cause of lung cancer in the United States today is radon, an odorless gas that seeps up through the soil and into the cracks in the foundations of homes and buildings. Our modern buildings are more airtight than ever before, making the risks much greater. The Environmental Protection Agency estimates that approximately 1 in 15 homes has indoor radon levels unacceptably high. Radon causes 12 percent of all lung cancer deaths. (American Lung Association, 2002, "What Causes Lung Cancer?," para. 4).

Average Annual Age-Adjusted Incidence and Monthly Rates* by Sex and Race, Pennsylvania Residents, 1994-1998



*per 100,000 1970 U.S. standard million population.

Lung cancer is deadly because, in its early stages, it does not cause symptoms. When symptoms such as chronic cough, hoarseness, shortness of breath, weight loss, and coughing up blood, do occur, the cancer is often advanced.

As indicated by Pennsylvania Department of Health studies, more men die of lung cancer than women, with African American men having the highest mortality of any group.

Local Context

As is the case with female breast cancer, Lancaster County has an equivalent or lower lung cancer incidence than its peers and the state. However, we again show a significantly higher ratio of deaths to incidence. This takes place in a statistical environment in Pennsylvania reported by the Centers for Disease Control and Prevention where the age-adjusted mortality rate, based on the 2000 standard population, per 100,000 population, is 46.8 for whites and 79.8 for blacks. Centers for Disease Control and Prevention Surveillance Report, states that we clearly have some work to do as a community in getting the message out to those who are not choosing to hear at the current levels of communication. Tobacco use levels are too high and radon detection and remediation is occurring too infrequently.

Lung Cancer

In 2002, the American Cancer Society estimates[1]:

- 8,700 new cases of lung cancer will be diagnosed among men and women in Pennsylvania.
- 8,000 men and women will die of lung cancer in Pennsylvania.

The average annual age-adjusted mortality rates for lung cancer deaths per 100,000 persons, by race, 1995–1999.

Cancers of the Trachea, Bronchus, Lung, and Pleura, 1994–1998

	Age-Adjusted Mortality*		Age-Adjusted Incidence*		Ratio [AAM/AAI]	
	Male	Female	Male	Female	Male	Female
Lancaster	55.6	26.1	62.8	31.3	.89	.83
Peers**	61.2	28.0	75.4	38.0	.83	.78
Neighbors**	62.7	30.1	83.7	42.6	.84	.79
State	68.4	32.6	83.7	42.6	.82	.77

*per 100,000 of population; age-adjustment to 1970 standard million population
** weighting for Peer and Neighbor aggregations by number of cases

	Total Deaths		Total Cases		Ratio [Deaths/Cases]	
	Male	Female	Male	Female	Male	Female
Lancaster	687	433	758	487	.91	.89
Peers	1,677	1,042	2,026	1,332	.83	.78
Neighbors	2,584	1,650	3,037	2,004	.85	.82
State	24,533	16,149	29,560	19,913	.83	.81

Source: Pennsylvania Department of Health, Cancer Incidence and Mortality, 1994–1998, http://www.health.state.pa.us/stats/cancer/cancer98.htm

	Pennsylvania	National
Overall	57.5	57.7
White	55.8	57.5
Black	82.6	67.8
Hispanic	27.3	23.4
Asian/Pacific Islander	22.5	29.0
American Indian/Alaska Native	-	36.2

Source: American Cancer Society Facts and Figures, 2002. Estimates exclude more than a million cases of basal and squamous cell skin cancers and in situ cancers, except urinary bladder, that will be diagnosed in 2002. Lung cancer rates include bronchus cancer. State death totals were rounded to nearest 100. Hyphens represent suppression of rates when there were 75,000 or fewer persons in the denominator or 20 or fewer deaths in the numerator.

Disparity

In its TIPS Report (Tobacco Information and Prevention Source), the Centers for Disease Control and Prevention points out that African American men are 50% more likely than white men to develop lung cancer and have a higher rate of mortality. (Centers for Disease Control and Prevention, 1998, African Americans and Tobacco, para. 4). There is no reason to think that Lancaster County's incidence/mortality rate contains anything but a similar disproportionate burden carried by African American men.

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What You Can Do

Businesses and Institutions

- Follow guidelines regarding smoking cessation strategies through the workplace provided in the "Tobacco Use" chapter.
- Be aware and informed regarding workplace air quality and the risks of airborne pollutants in increasing the risks of lung cancer.
- Contribute to community coalitions looking for media sponsors for campaigns against smoking.
- Field an employee-driven team for the annual Relay for Life events in our area to raise awareness and build cooperative attitudes. New team kits are available at the American Cancer Society.

Individuals

- Smoke less, and then quit.
- Seek help to quit through support groups and medical interventions.
- Don't allow others to smoke in your home and patronize no-smoking establishments.
- Know the warning signs for lung cancer if you smoke. Work in partnership with your family physician to monitor your lungs while you are in the process of quitting.
- Have your home tested for radon and, if the levels are unacceptably high, contract for the interventions that will reduce the effect of this silent killer.

Colorectal Cancer

3-5 Reduce the colorectal cancer death rate.

Target: 13.9 deaths per 100,000 population
Baseline: 21.2 colorectal cancer deaths per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population).
Target-setting method: 34 percent improvement
Data source: National Vital Statistics System (NVSS), CDC, NCHS

Total Population, 1998	Colorectal Cancer Deaths Rate per 100,000
TOTAL	21.2
Race and ethnicity	
American Indian or Alaska Native	13.3
Asian or Pacific Islander	13.7
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	28.2
White	20.8
Hispanic or Latino	12.8
Not Hispanic or Latino	21.7
Black or African American	28.9
White	21.1
Gender	
Female	18.2
Male	25.4
Education level (aged 25 to 64 years)	
Less than high school	10.4
High school graduate	12.0
At least some college	7.5

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable. Note: Age adjusted to the year 2000 standard population.

Description

Colorectal cancer is the second leading cause of cancer-related deaths in the United States. Risk factors that cannot be controlled include a family history of colorectal cancer, familial syndromes for this cancer, a past history of colorectal cancer, a history of intestinal polyps or chronic inflammatory bowel disease, and aging (90 percent of cases diagnosed are in people over age 50). Risk factors associated with controllable behaviors include a diet high in fat, especially from animal sources, and low in fiber from

lack of fruits, vegetables, and whole grains and legumes. Physical inactivity and obesity increase the risk of colorectal cancer, as does smoking. Early detection through the use of yearly Fecal Occult Blood Tests at age 50 and sigmoidoscopy every five years after age 50 is the best defense against colorectal cancer. These methods detect polyps that develop into cancer. Removing them before they grow results in a total cure.

Local Context

Cancer of the Colon, 1994–1998

	Age-Adjusted Mortality*		Age-Adjusted Incidence*		Ratio [AAM/AAI]	
	Male	Female	Male	Female	Male	Female
Lancaster	19.2	13.4	40.1	29.1	.48	.46
Peers**	17.7	12.8	46.0	33.6	.38	.38
Neighbors**	19.0	13.8	44.6	34.2	.43	.40
State	19.3	13.5	45.6	33.3	.42	.41

*per 100,000 of population; age-adjustment to 1970 standard million population
** weighting for Peer and Neighbor aggregations by number of cases

	Total Deaths		Total Cases		Ratio [Deaths/Cases]		
	Male	Female	Male	Female	Male	Female	Total
Lancaster	242	267	497	533	.49	.50	.49
Peers	501	560	1,284	1,339	.39	.42	.40
Neighbors	808	869	1,861	1,990	.43	.44	.44
State	7,176	7,933	16,551	18,119	.43	.44	.44

Source: Pennsylvania Department of Health, Cancer Incidence and Mortality, 1994–1998, http://www.health.state.pa.us/stats/cancer/cancer98.htm

The age-adjusted death rate from colorectal cancer in Lancaster County is significantly higher than the rate of its peer counties and the state, even though its incidence rate is lower. This discrepancy, as with breast cancer mortality rates, sends a strong message to the community that perhaps we are failing in the effort to get across the message that this cancer can be completely cured through early detection. While our unhealthy eating habits and lack of exercise put us at the same level of incidence statewide, it is apparent that too few of us are following guidelines for early detection and prevention.

Colorectal Cancer

In 2002, the American Cancer Society estimates:

- 8,700 new cases of colorectal cancer will be diagnosed among men and women in Pennsylvania.
- 3,300 men and women will die of colorectal cancer in Pennsylvania.

	Pennsylvania	National
Overall	24.7	21.7
White	24.2	21.3
Black	32.1	29.0
Hispanic	11.8	12.9
Asian/Pacific Islander	10.3	13.3
American Indian/Alaska Native	–	13.5

Source: American Cancer Society Facts and Figures, 2002. Estimates exclude more than a million cases of basal and squamous cell skin cancers and in situ cancers, except urinary bladder, that will be diagnosed in 2002. Lung cancer rates include bronchus cancer. State death totals were rounded to nearest 100. Hyphens represent suppression of rates when there were 75,000 or fewer persons in the denominator or 20 or fewer deaths in the numerator.

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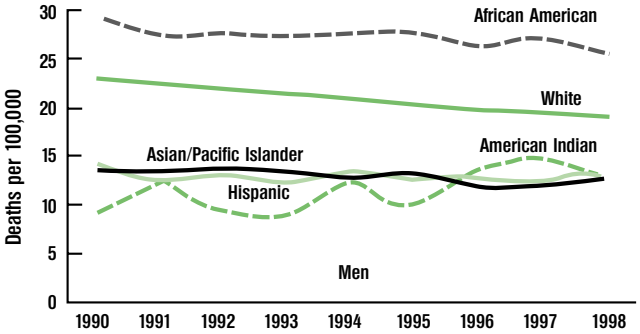
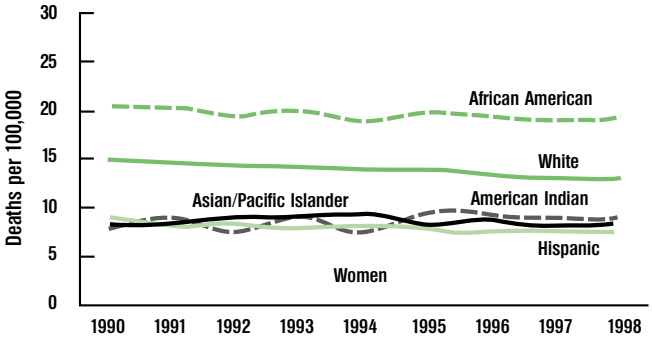
Rates of Colorectal Cancer Death Among Men and Women, by Race and Ethnicity, United States, 1990–1998*



Rates of Colorectal Cancer Death Among Men and Women, by Race and Ethnicity, United States, 1990–1998*



Rates are age-adjusted to 1970 U.S. population.
Includes Hispanics of any race.
Source: CDC, National Center for Health Statistics.

Disparity

As is indicated by the research of the National Center for Health Statistics, the pattern again repeats itself. African Americans in the state of Pennsylvania are more likely to die of colon cancer than whites (mortality rate per 100,000 21.8 for whites, 32.6 for blacks (Centers for Disease Control and Prevention, wonder, compressed mortality). This pattern is reflected nationally.

What We Can Do

Businesses and Institutions

- With the help of local leaders in minority communities, create health fairs and education sessions that are culturally sensitive and designed to inform about the prevalence of colorectal cancer and the strategies to prevent death.
- Local churches, through congregation nurses and pastors, can help initiate health education courses under the title of responsible stewardship of the body. Preventable cancer such as colorectal can be a cornerstone.
- Workplaces can provide information to employees by willingly distributing pamphlets and materials regarding fecal occult tests, sigmoidoscopies, and colonoscopies for all employees over 50.
- Local physicians and health care providers can recommit themselves to providing blunt messages about lifestyle preventions such as proper diet and exercise along with the early detection tests.
- Community leaders can contact the Centers for Disease Control for their "Screen for Life—National Colorectal Cancer Action Campaign," which provides materials that are reproducible and easily adapted for education of the general public. State-specific data is available through this program.

Individuals

- Eat foods high in fiber and low in fat.
- Exercise a minimum of thirty minutes daily.
- Investigate and be aware of family genetic risk factors.
- Take a proactive role with your family doctor to assure that you get a yearly Fecal Occult Blood Test after age 50, a sigmoidoscopy every five years, and a colonoscopy every ten years.
- Do not allow lack of knowledge and misplaced modesty to prevent you from taking advantage of these life-saving early detection strategies.

Additional Questions

- Are there any connections between our cancer rates in Lancaster County and the use of pesticides and herbicides particularly in light of the high number of households using on-site well water as a drinking source?
- How do we increase the availability of affordable fresh fruits and vegetables to everyone, including urban poor?
- How do we encourage more restaurants and workplace food vending machine providers to include a wider variety of freshly cooked vegetables, fresh fruit, and low-fat items on their menus?
- How do we encourage the parents of young families that are on the go, to avoid high-fat-content fast food as a way of teaching children to eat healthily for a lifetime?
- How do we help people make the connection between lack of physical activity and poor diets to increased cancer risk?

Local Assets

Cancer Research Trials
Lancaster General Hospital
Cancer Research
Contact: Becky Ayers
Phone: (717) 290-5965
E-mail: RKAyers@LancasterGeneral.org

Breast Care Center and Breast Support Groups
Lancaster General Hospital
Contact: Teresa Smink
Phone: (717) 290-3206

Saint Joseph Health Ministries
The Life Enhancement Center
832 Marietta Avenue
Lancaster, PA 17603
Executive Director, Jennifer Thompson
Coordinator, Barbara Landis, RN
Phone: (717) 239-1196
web site: www.sjhm.org

Lancaster General Cancer Center
Lancaster General Hospital
Contact: Melanie McCurdy
Phone: (717) 290-3112
E-mail: MAMccurd@LancasterGeneral.org

Lancaster General Gamma Knife Center
Lancaster General Hospital
Contact: Melanie McCurdy

Cancer Registry
Lancaster General Hospital
Contact: Judy George
Phone: (717) 290-4072
E-mail: JAGeorge@LancasterGeneral.org

American Cancer Society
Local Programs and Services
Phone: (717) 397-3744

American Cancer Society
Cancer Support Resources
314 Good Drive
Lancaster, PA 17603
(717) 397-3744

Breast Care Center and Breast Cancer Support Groups
Lancaster General Hospital
Contact: Teresa Smink
Phone: (717) 290-3206
E-mail: TESmink@LancasterGeneral.org

The Life Enhancement Center
St. Joseph Health Ministries
832 Marietta Avenue
Contact: Barbara Landis, RN
Phone: (717) 239-1196
E-mail: barbaralandis@chi-east.org

American Lung Association of Pennsylvania
630 Janet Avenue
Lancaster, PA 17601
(717) 397-5203

St. Joseph Health Ministries
Life Enhancement Center
Lung Cancer Community
828 Marietta Avenue
Lancaster, PA 17603
Contact person: Barbara Landis, RN
(717) 239-1196

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American Cancer Society
Lancaster County Unit
314 Good Drive
Lancaster, PA 17603
(717) 397-3744

Nicotine Anonymous Support Group
Contact person: Eric
(717) 898-8571

Lancaster General Hospital
Individual Smoking Cessation Counseling
(717) 290-3138

Lancaster Regional Medical Center
American Lung Association:
Freedom from Smoking
(717) 291-8377

Other Resources

Association of Cancer On-line http://www.acor.org
University of Pennsylvania Cancer Center http://www.med.upenn.edu
CDC's Screen for Life program http://www.cdc.gov/cancer/screenforlife

Minority Health Resource Center (800) 444-6472
Salud Hispana (717) 396-1155
South East Lancaster Health Services (717) 299-6371

Centers of Disease Control. (1998). African Americans and Tobacco. Tobacco Information and Prevention Source. http://www.cdc.gov./tobacco/sgr/sgr1998/sgr-min-fs-afr.htm

Centers of Disease Control. (2002, October). Cancer Burden Data. Pennsylvania. Cancer Prevention and Control. Retrieved July 26, 2002, from: http://www.cdc.gov/cancer/CancerBurden/pa.htm

HP 2010 Objectives

Objective Number and Short Title

Cancer

3-1 Overall cancer deaths
3-2 Breast cancer deaths
3-3 Colorectal cancer deaths
3-4 Prostate cancer deaths
3-12 Colorectal cancer screening
3-13 Mammograms

Related Objectives from Other Focus Areas

Weight Status and Growth

19-2 Obesity in adults
19-3 Overweight or obesity in children and adolescents

Fruit and Nutrient Consumption

19-5 Fruit intake
19-6 Vegetable intake
19-7 Grain product intake
19-8 Saturated fat intake
19-9 Total fat intake

Schools, Work sites, and Nutrition Counseling

19-16 Work site promotion of nutrition education and weight management
19-17 Nutrition counseling for medical conditions

Physical Activity in Adults

22-1 No leisure time physical activity
22-2 Moderate physical activity

Physical Activity in Children and Adolescents

22-6 Moderate physical activity in adolescents
22-8 Physical education requirements in schools
22-9 Daily physical education in schools

Access

22-13 Work site physical activity and fitness
22-14 Community walking

Prevention Research

23-17 Population-based prevention research

Tobacco Use in Population Groups

27-1 Adult tobacco use
27-2 Adolescent tobacco use

Cessation and Treatment

27-5 Smoking cessation by adults
27-6 Smoking cessation by adolescents

Exposure to Secondhand Smoke

27-10 Exposure to environmental tobacco smoke

Educational and Community-Based Programs

7-2 School health education
7-5 Work site health promotion programs
7-6 Participation in employer-sponsored health promotion activities
7-9 Health care organization sponsorship of community health promotion activities
7-10 Community health promotion programs
7-11 Culturally appropriate and linguistically competent community health promotion programs

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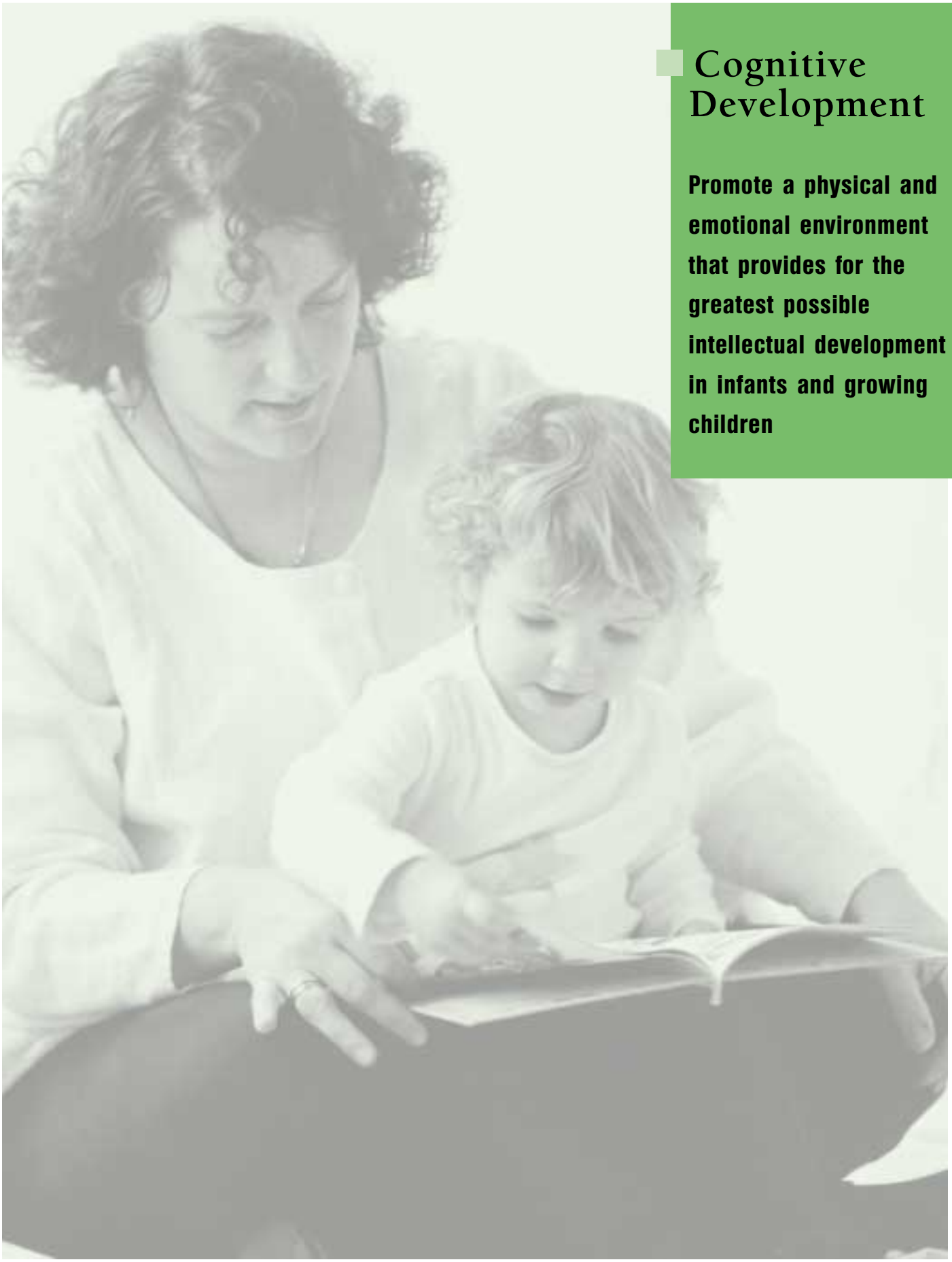

Cognitive Development

Promote a physical and emotional environment that provides for the greatest possible intellectual development in infants and growing children

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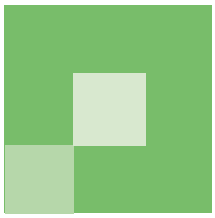

Cognitive Development

Goal: Better than the best

Prenatal

Goal: Reduce the number of babies whose cognitive development in utero is threatened by poor nutrition, smoking, and lack of prenatal care of their mothers.

HP 2010 Measures and Local Measures

16-6 Increase the proportion of pregnant women who receive early and adequate prenatal care.

Care beginning in first trimester of pregnancy
Early and adequate prenatal care
Target setting method: Better than the best
Data source: National Vital Statistics System (NVSS), CDC, NCHS

16-12 (Developmental) Increase the proportion of mothers who achieve a recommended weight gain during their pregnancies.

Potential data source: National Vital Statistics System (NVSS), CDC, NCHS

16-14 Reduce the occurrence of developmental disabilities.

Mental retardation
Cerebral palsy
Autism spectrum disorder
Epilepsy
Target-setting method: 5 percent improvement
Data source: Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP), CDC, NCEH

16-16 Increase the proportion of pregnancies begun with an optimum folic acid level.

Target-setting method: Better than the best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
Increase abstinence from alcohol, cigarettes, and illicit drugs among pregnant women.

a. Alcohol
b. Binge drinking
c. Cigarette smoking†
d. Illicit drugs

Target-setting method: Better than the best for 16-17a and 16-17c; complete elimination for 16-17b and 16-17d
Data sources: National Household Survey on Drug Abuse, SAMHSA for 16-17a, 16-17b, and 16-17d; National Vital Statistics System, CDC, NCHS for 16-17c.

16-18 (Developmental) Reduce the occurrence of fetal alcohol syndrome (FAS).

Potential data source: Fetal Alcohol Syndrome Network (FASNet), CDC, NCEH

19-13 Reduce anemia among low-income pregnant females in their third trimester.

Target: 20 percent improvement
Baseline: 29 percent of low-income pregnant females in their third trimester were anemic (defined as hemoglobin <11.0 g/dL) in 1996.
Target-setting method: Better than the best
Data source: Pregnancy Nutrition Surveillance System, CDC, NCCDPHP

19-14 (Developmental) Reduce iron deficiency among pregnant females.

Potential data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS

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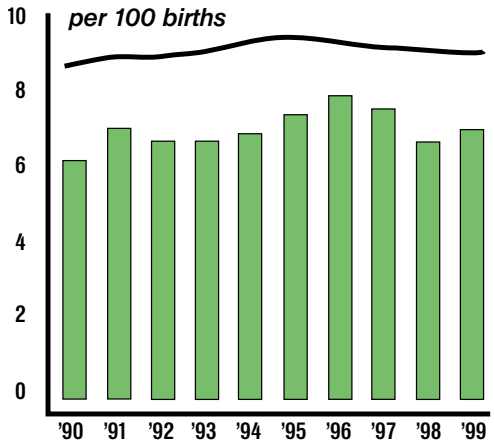
27-6	Increase smoking cessation during pregnancy.

Target: 30 percent
Baseline: 14 percent of females aged 18 to 49 years stopped smoking during the first trimester of their pregnancy in 1998.
Target-setting method: Better than the best
Data source: National Health Interview Survey (NHIS), CDC, NCHS

Description

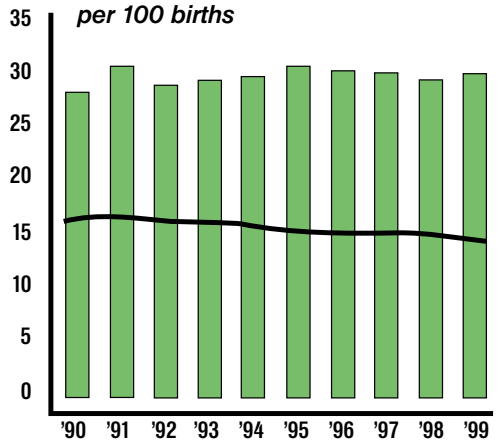
Cognitive development, the ability of infants and young children to grow intellectually and relate to their environment, is critical to their future health and well-being. It includes the way that children think, reason, and solve problems. Each child depends, in turn, on the prenatal health of his or her mother to begin to create the conditions needed to allow maximizing of potential cognitive growth. While some of the factors affecting cognitive development are purely biological in nature, many other factors are sociodemographic. That is, optimal cognitive development can be profoundly hindered by environmental negatives such as physical and emotional neglect or abuse. Physical neglect can begin in utero in the case of mothers whose diets are inadequate or who participate in risk behaviors such as alcohol and drug abuse or cigarette smoking. These behaviors result in low birth weight babies and babies born with Fetal Alcohol Syndrome, both proven to negatively affect cognitive development. Poverty, lack of insurance, single parenthood, and the age of the mother may influence whether or not the mother receives good prenatal medical care. Prenatal care for the mother lowers the risk of giving birth to low birth weight babies who have been proven to have long-term cognitive delays. (O'Callaghan, Burns, and Gray, "School Performance in Extreme Low Birth Weight Children: A Controlled Study." Dev Med Child Neurol. 1996:38: 917.)

Children Born to Single Mothers Under Age 20



	1990 rate	1999 rate	1999 rate	change in rate	1999 one in
County	6.3	480	7.1	+0.7	1 in 14
State	8.8	13,311	9.2	+0.4	1 in 11
Mixed	7.3	3,454	7.9	+0.6	1 in 13

Children Born to Mothers with Less Than a High School Education



	1990 rate	1999 rate	1999 rate	change in rate	1999 one in
County	28.4	2,015	30.0	+1.7	1 in 3
State	16.4	20,908	14.8	-1.6	1 in 7
Mixed	16.8	6,948	16.2	-0.6	1 in 6

16-6a	Increase the proportion of pregnant women who begin prenatal care in the first trimester of pregnancy.

Target and baseline:

Objective	Increase in Maternal Prenatal Care	1998 Baseline	2010 Target
		Percent of Live Births	
16-6a	Care beginning in first trimester of pregnancy	83	90
16-6b	Early and adequate prenatal care	74	90

Target-setting method: Better than the best
Data source: National Vital Statistics System (NVSS), CDC, NCHS

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Live Births, 1998	Maternal Prenatal Care	
	16-6a First Trimester	16-6b Early and Adequate
	Percent	
TOTAL	83	74
Mother's race and ethnicity		
American Indian or Alaska Native	69	57
Asian or Pacific Islander	83	74
Asian	86	76
Native Hawaiian and other Pacific Islander	75	67
Black or African American	73	67
White	85	76
Hispanic or Latino	74	66
Not Hispanic or Latino	85	76
Black or African American	73	67
White	88	79
Mother's education level		
Less than high school	68	61
High school graduate	81	74
At least some college	91	82
Mother's disability status		
Mothers with disabilities	DNC	DNC
Mothers without disabilities	DNC	DNC
Select populations		
Mother's age groups		
Under 15 years	48	48
15 to 19 years	69	64
20 to 24 years	78	70
25 to 29 years	86	77
30 to 34 years	89	79
35 years and older	88	79

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.

16-06a Percent of live births to mothers who began prenatal care in the first trimester, 1998–2000

HP 2010 target: 90%
1998 national baseline: 83%

PA	Lancaster	Berks	Chester	Dauphin	Lebanon	Lehigh	Northampton	York
85.1	80.7	73.5	87.6	85.6	80.2	87.9	88.6	87.8

16-06b Percent of live births to mothers who received early and adequate prenatal care, 1998–2000

HP 2010 target: 90%
1998 national baseline: 74%

PA	Lancaster	Berks	Chester	Dauphin	Lebanon	Lehigh	Northampton	York
71.8	54.0	69.4	67.0	72.3	72.1	69.1	66.4	76.0

The rate of early prenatal care in Lancaster County is lower than the average for the state and most reference counties, and considerably lower than the Healthy People 2010 objective of 90%. Breakdown by race and ethnicity indicates that all groups are below the HP 2010 objective. According to the Pennsylvania Department of Health's Health Status

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Indicators, in 1998 Lancaster County had 8.73 percent occurrence of no prenatal care during the first trimester, which is significantly higher than the Pennsylvania state average of 3.8 percent. It is important that the community determine which pregnant women are not seeking early prenatal care and make a concerted effort to get the message out that this is a high-risk behavior. The patterns in national statistics suggest that lack of prenatal care clusters in younger women, in those with less education, and in certain ethnic groups.

Lancaster County Resident Births by Trimester of the First Prenatal Visit and Age of Mother, 1996–2000

Age	Total Births	First Trimester	Second Trimester	Third Trimester	No Visits	Unknown Trimester
‹ 15	39	21	14	2	1	1
15–19	2,851	2,228	415	67	36	105
20–24	8,224	6,207	1,635	151	52	179
25–29	9,975	8,011	1,572	198	25	169
30–34	7,881	6,544	1,052	159	15	111
35–39	3,478	2,621	656	119	14	68
40–44	682	448	186	32	4	12
45+	35	20	10	4	0	1
Unknown	5	0	2	0	1	2
Total	33,170	26,100	5,542	732	148	648

Source: http://webserver.health.state.pa.us/health/lib/health/multyr99.pdf

Adolescent Mothers

A careful look at the issues and circumstances that impact single mothers under the age of 20 also sheds light on at-risk behaviors of all pregnant women in the area of prenatal and postnatal cognitive development for their children.

According to a study published in *Adolescence* magazine in the spring of 2000 (Sommer, Kristen S., "Prenatal Maternal Predictors of Cognitive and Emotional Delays in Children of Adolescent Mothers"), children of adolescent mothers are at increased risk for intellectual and social-emotional problems. (Statistics referred to in this discussion come from that study unless otherwise indicated.) Infants of adolescent mothers performed less well than infants of adult mothers on the Bayley developmental scales at eight months of age, the Stanford Binet at four years, and the WISC at seven years. (Marecek, J., *Economic, social and psychological consequences of adolescent childbearing: an analysis of date from the Philadelphia Collaborative Perinatal Project*. NICHD, 1979). Adolescent mothers often have inadequate readiness for parenting and, as a result, have unrealistic expectations concerning their child's development. They tend to overestimate or underestimate motoric and linguistic skills. One-year-old infants of adolescent mothers had fewer vocalizations than did infants of adult mothers.

Some of the prenatal factors that put the children of adolescent mothers at greater risk for developmental delays would also do so for the children of adult women. Lack of prenatal medical care leads to nutritional deficits—not enough weight gain, less than the required 400 mcg. of folic acid daily, and inadequate calcium consumption—result in poor birth outcomes. The incidence of spina bifida (a birth defect characterized by a congenital cleft in the spine) and neural tube defects (abnormal development of the brain and precursor of the spinal cord) could be cut in half with adequate folic acid consumption (Healthy People 2010, *Maternal, Infant, and Child Health*). In general, low birth weight babies (LBW) and extremely low birth weight babies (ELBW) are at much greater risk for cognitive delays. Both adolescent mothers and adult mothers have a much higher probability of giving birth to LBW and ELBW babies when they smoke, consume alcohol, or use "street" drugs. Absence of good prenatal care means a lack of information about how these behaviors affect the growth and cognitive development of a child. Mothers need help in order to stop these activities before pregnancy occurs or immediately after.

Local Data and Disparity

According to the Pennsylvania Department of Health, in 1996 Lancaster County had a higher than the state average birth rate for children born to single mothers under 20. While the Caucasian rate was similar between the state and the county (7.3 per 100,000 for the state and 7.4 for the county), among Hispanics the state rate was 22.4 per 100,000 and county was 27.5. Among African American single mothers below 20, the state average was 22.8 while the County average was 29.4. In the same year, low birth weight statistics showed the Lancaster County Hispanic community as having a higher incidence of low birth weight babies at 11.3 per 100,000 births compared to the state average of 9.5 for the same group. Both Caucasian and African American communities in Lancaster had a lower than state average incidence of low birth weight babies at 5.2 and 9.3 respectively. According to the Pennsylvania Department of Health, in 1998 the percentage of babies born to Caucasian mothers under 18 was 2.9 for the state and 2.6 for Lancaster County. The percentage born to Hispanic mothers under 18 was 10.9 for the county and 10.7 percent for the state.

Nationwide, the low birth weight incidence for white women has risen from 5.7 percent in 1990 to 6.5 percent in 1998. According to Healthy People 2010, among African Americans, the LBW rate has declined slightly in the 1990's but is twice as high as whites at 13 percent in 1998. Puerto Ricans, the Hispanic subgroup most prevalent in Lancaster County, are especially likely to have low birth weight babies. (Ventura, S.J., Anderson, R.N., Martin, J.A.; et al. Births: Final Data for 1998. *National Vital Statistics Report* 48(3), 2000.)

Neonatal

Goal: Reduce the number of infants put at high risk for developmental delay due to low birth weight, insensitive home environment, and poor parenting skills resulting in little stimulation or challenge.

HP 2010 Measures

16-19	**Increase the proportion of mothers who breastfeed their babies.**

16-23	**Service systems for children with special health care needs.**

Target-setting method: Better than the best
Data sources: Mothers' Survey, Ross Products Division, Abbott. Title V Block Grant Application form 13, HRSA, MCHB

NOTE: In addition to these HP 2010 measures, goals should include parenting skill classes available to all adolescent mothers and to all parents experiencing difficulty providing a positive environment for young children.

Description
Impact of Low Birth Weight and Extremely Low Birth Weight

16-10	**Reduce low birth weight (LBW) and very low birth weight (VLBW).**

Target and baseline:

Objective	Reduction in Low and Very Low Birth Weight	1998 Baseline	2010 Target
		Percent	
16-10a	Low birth weight (LBW)	7.6	5.0
16-10b	Very low birth weight (VLBW)	1.4	0.9

Target-setting method: Better than the best
Data source: National Vital Statistics System (NVSS), CDC, NCHS

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Live Births, 1998 (unless noted)	Maternal Prenatal Care	
	16-10a Low Birth Weight	16-10b Very Low Birth Weight
	Percent	
TOTAL	7.6	1.4
Mother's race and ethnicity		
American Indian or Alaska Native	6.8	1.2
Asian or Pacific Islander	7.4	1.1
Asian	7.2	1.1
Native Hawaiian and other Pacific Islander	6.5	1.4
Black or African American	13.0	3.1
White	6.5	1.1
Hispanic or Latino	6.4	1.1
Not Hispanic or Latino	7.8	1.5
Black or African American	13.2	3.1
White	6.6	1.1
Gender		
Female	8.1 (1997)	1.4 (1997)
Male	7.0 (1997)	1.4 (1997)
Mother's education level		
Less than high school	9.0	1.6
High school graduate	7.9	1.5
At least some college	6.5	1.3
Mother's disability status		
Mothers with disabilities	DNC	DNC
Mothers without disabilities	DNC	DNC
Select populations		
Mother's age groups		
Under 15 years	13.1	3.3
15 to 19 years	9.5	1.8
20 to 24 years	7.5	1.4
25 to 29 years	6.7	1.3
30 to 34 years	7.0	1.4
35 years and older	8.7	1.7

16-10a Percent of infants born at low birth weight (LBW), 1998–2000

HP 2010 target: 5.0
1998 national baseline: 7.6

PA	Lancaster	Berks	Chester	Dauphin	Lebanon	Lehigh	Northampton	York
7.8	5.6	7.1	6.0	8.9	6.5	8.6	9.0	7.9

16-10b Percent of infants born at very low birth weight (VLBW), 1998–2000

HP2010 target: 0.9
1998 national baseline: 1.4

PA	Lancaster	Berks	Chester	Dauphin	Lebanon	Lehigh	Northampton	York
1.6	1.2	1.5	1.1	1.5	1.2	1.7	1.4	1.6

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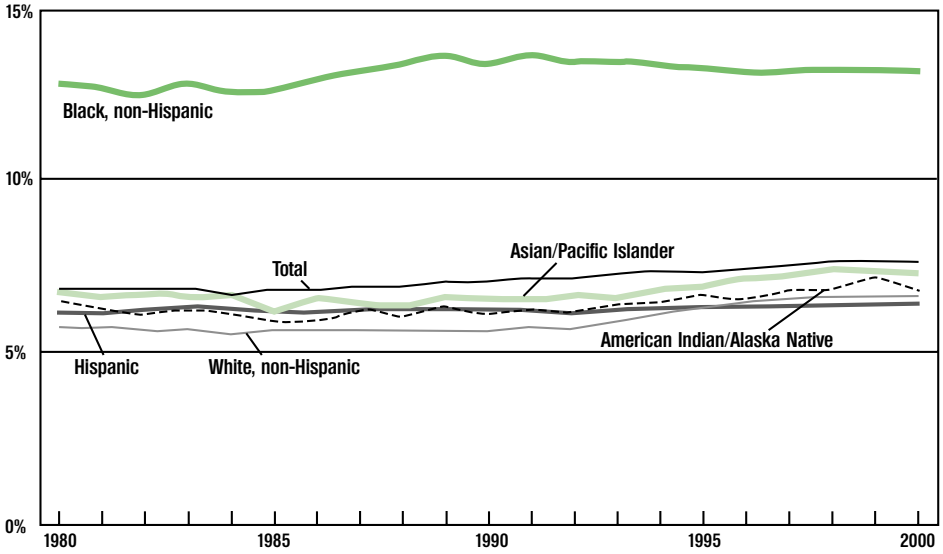
Low birth weight is defined as a weight of 5.5 pounds or under due to shorter gestation or to various maternal risk behaviors. Extremely low birth weight is defined as 3.3 pounds or less at birth. Both groups of infants are at higher risk for long-term illness, developmental delays, and disability.

Between 1997 and 1999 in Lancaster County, one in 21 babies was born to either of these categories.(*The State of the Child in Pennsylvania: a 2002 Guide to Child Well Being in Pennsylvania*). While this figure overall is better than the state average, the statistical study as a whole found that 63% of LBW babies were born in urban areas, so it is logical to assume that the rate of these births is higher in Lancaster City. Both at the state level and nationwide, the rate of LBW and ELBW births is worsening, in part due to an increase in multiple births due to fertility treatments. Nationally, African American women under the age of 15 without a high school education are the most likely to give birth to an LBW child.

Percentage of Infants Born of Low Birth Weight by Mother's Race and Hispanic Origin, 1980–2000



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System

A study reported in the *New England Journal of Medicine* (Hack et al., Jan. 17, 2002) followed a group of 233 LBW and ELBW people from birth until they reached their 20's. Marie C. McCormick, M.D., of the Harvard School of Public Health observed, "This is one of our first opportunities to look at the long-term issues facing these . . . babies as they approach adulthood. It is not surprising that they continue to have lower IQ scores and other evidence of learning problems . . . " IQ scores averaged five points lower for the LBW group (87 vs. 92). Fewer of the young adults graduated from high school than their normal weight counterparts (74% vs. 83%) and very low birth weight men were significantly less likely to be enrolled in colleges or universities (30% vs. 53%). However, this was not true of the women. The follow-up of these children does show that they do not "outgrow" the problems associated with low birth weight.

Breastfeeding

Epidemiological research has shown that human milk and breastfeeding of infants provide advantages to general health, growth, and development while significantly reducing risk for a large number of acute and chronic diseases (American Academy of Pediatrics, Policy Statement, "Breastfeeding and the Use of Human Milk" [RE9729]). *Pediatrics*, vol. 100, 6, pp. 1035–1039). Breastfeeding has been related to possible enhancement of cognitive development. A study conducted to clarify risk factors in development during the first two years examined the relationship between breastfeeding and cognitive development. A significant difference was found on the Mental Development Index of Bayley Scales at ages one and two years favoring breastfed children over bottlefed children (Morrow-Tlucak M., Haude, R.H., Ernhart, C.B. "Breastfeeding and cognitive development in the first two years of life." *Social Science Medicine*, 26:635–639, 1988). In 1997, the American Academy of Pediatrics issued a mandate to pediatricians to "promote and support breastfeeding enthusiastically."

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Impact of Maternal IQ, Parenting Skill, and Social Support

Intellectual and linguistic delays in developing young babies were most directly correlated to the mother's performance IQ, parenting skill, and social support from an extended family, regardless of the mother's age. However, research has shown that many adolescent mothers function in a low-average to mildly mentally handicapped range of intelligence (Sommer, et al., "Cognitive Readiness and Adolescent Parenting," *Developmental Psychology*, 1993). Results of the Sommer study also showed that the maternal Performance IQ was a more important predictor than the maternal Verbal IQ.

School, day care, child care, and home environments that provide little stimulation and challenge can produce children with cognitive-intellectual delays in early and middle childhood. In this way, the IQ and preparedness of the mother has both a direct (genetic) impact on the child and an indirect impact. Cognitive readiness in the parent is defined in terms of knowledge about child development, parenting styles, and parenting attitudes. Young mothers less prepared to parent than adult mothers have more stress and more authoritarian parenting styles. (Camp, "Maternal characteristics of adolescent mothers and older mothers of infants." *Psychological Reports*, 77, 1152-1154, 1995.) Cognitive readiness of the parent is related to children's intelligence and language development because more prepared mothers utilize their knowledge and child-caring experience to help themselves become more competent teachers of their children. Young children of inexperienced, adolescent mothers were found to be overly conforming and uncommunicative and, as they grew older, became resentful of authority, exhibiting aggressiveness, impulsiveness, and distractibility. (Marecek, J. "Economic, social and psychological consequences of adolescent childbearing: An analysis of data from the Philadelphia Collaborative Perinatal Project." Final Report to NICHD 1979.) This combination of traits becomes a challenge for classroom teachers attempting to move these children along in a group toward normal and expected educational goals. The alienation that results for the child who does not really understand why he or she cannot adjust to the school environment only compounds the developmental delay. These children need special understanding and early diagnosis of cognitive and adjustment delays in order for the school system to best provide for them in a way that helps to prevent frustration and failure.

Social support for young mothers and for those with little formal education is paramount in the prevention of an ongoing cycle of poor cognitive development in young children. This support should give cognitive guidance, social reinforcement, tangible assistance, and emotional support to both parent and child. (Nath, P.S., Borkowski, J.G., Whitman, T.L., Schellenbach, C.J. "Understanding adolescent parenting: The dimensions and functions of social support." *Family Relations*, 40, 411–420. 1991.) The Lancaster City School District has in place a parenting program that supports and educates young parents who are enrolled in the high school. An onsite childcare program allows young mothers to continue their high school education while learning how to best parent their children. However, there are many more young parents outside the school system who need to be reached. Churches and other community organizations must provide the vital contact with these young families. Programs such as the Bridge Program at St. John's Episcopal Church in Lancaster City "adopt" young single mothers, providing not only material needs but mentoring support and a feeling of personal belonging to a larger group in a lifelong commitment to her and her child. Programs like this are to be encouraged throughout the community. Other means of social support include support expected from the primary partner, from friends, and from the grandmother, and extended family, and siblings.

Interestingly, gender significantly interacted with social support from partner and friends to predict the Stanford-Binet IQ score for the child. In each case, social support was unrelated to outcomes for boys, but significantly, and positively, related to outcomes for girls. The more an adolescent mother expected her partner and friends to provide support, the higher her daughter scored on cognitive development. (Sommer, "Prenatal Maternal Predictors of Cognitive and Emotional Development," *Adolescence*, Spring 2000). The social support issue is complex. Support from partner and friends was the only consistently positive type of support while, in contrast, support from siblings and extended family were consis-

tently negative. Support from the grandmother can sometimes hinder the emergence of good parenting skills in the adolescent mother. Counseling and support of these young families needs to concentrate on reducing conflicts within the extended family for the sake of the cognitive and emotional development of the child. And reports indicate that increasing numbers of children are being raised by grandparents.

Early Childhood

Goal: To reduce risk factors for continued cognitive delay through food insufficiency, childhood abuse, lead poisoning, lack of quality day care, and lack of quality programs for special-needs children

Description

According to the American Academy of Pediatrics, research on children's cognitive and developmental problems shows that they do not have single causes nor do risks have specific outcomes. Rather risk factors are additive, and the more risks a child has, the worse the outcomes of all types. (Alaimo, K., "Food Insuffiency and American School-Aged Children's Cognitive, Academic, and Psychosocial Development." *Pediatrics*, July 2001.) Duration of poverty, school and neighborhood influences, personality traits of the child, and parental characteristics have been demonstrated to be associated with children's development. (Duncan, J., Brooks-Gunn J. *Consequences of Growing Up Poor*, Russell Sage Foundation, New York, 1997.)

Food Insufficiency

The results of a study reported in the American Academy of Pediatrics' *Pediatric Journal* in July 2001, demonstrated that family food insufficiency is associated with school-aged children's academic and psychosocial development. They support a growing body of research on the negative consequences of food insecurity and hunger on American children. Studies previously conducted by U.S. Nutrition programs such as the Special Supplemental Food Program for Women, Infants, and Children, Head Start, and the School Lunch and Breakfast Programs have shown small, but significant benefits of food supplementation in cognition, academic achievement, and school absence. (Hicks L., Langham R., Takenaka, J. "Cognitive and health measures following early nutritional supplementation: a sibling study." *American Journal of Public Health* 72:1110–1118.) A child's height at the time of the study was used as an indicator of past nutrition status. An association was detected between food insufficiency and lower reading scores in children with fewer other risk factors. Furthermore, we know that low academic achievement in younger ages and grade failure is a predictor of low long-term education achievement. (Baydar N., Brooks-Gunn J., Furstenberg F., "Early Warning Signs of functional illiteracy: predictors in childhood and adolescence." *Child Development* 64:815–829, 1993.).\ It is important, however, to realize that ensuring food sufficiency without addressing other risk factors affecting cognitive development may not lead to measurable improvements.

- Between 1990 and 1996, the number of children born to young, single mothers increased in the county by 26.2 percent, much higher than the state increase, which was only 7.4 percent. As we have previously noted, these children are at much higher risk for cognitive and developmental delay.
- In Lancaster County in 1997, 7.8% of the county population was living in poverty. This figure includes 15,300 children under the age of 18, a rate of 11.8%. This is lower than the average for the state of Pennsylvania's rate of 16.6 percent.
- Many poor children are concentrated in urban areas. The public schools in the Lancaster District see the majority of children affected by the multiple risk factors imposed by poverty, including low birth weight, lead poisoning, child abuse and neglect, hunger, learning disabilities, and high incidence of school drop-outs.

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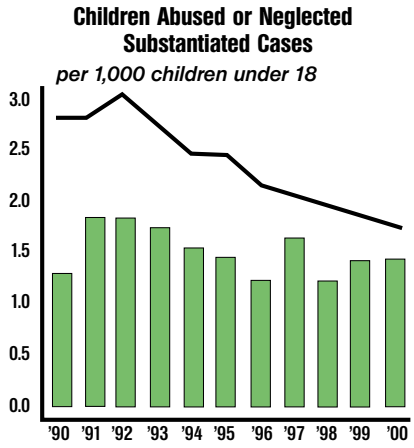
Child Abuse



	1990 rate	2000 total	2000 rate	change in rate	2000 one in
County	1.3	179	1.4	+0.2	1 in 700
State	2.8	5,002	1.7	-1.1	1 in 584
Mixed	2.6	1,381	1.5	-1.0	1 in 650

A recent report of the National Research Council and Institute of Medicine of the National Academies (Committee on Integrating the Science of Early Childhood Development. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. National Academy Press, 2000), provided extensive evidence that childhood experience has a substantial impact on brain development. In studies during the past decade, child maltreatment was consistently associated with impaired cognitive ability within a childhood population. (Kaplan, et al. "Child and adolescent abuse and neglect research: a review of the past 10 years." *American Academy of Child and Adolescent Psychiatry*, 38:1212–1222, 1999.) It was found also that among ELBW infants who were followed to 4.5 years of age, a referral to child protective services was more significant in predicting cognitive outcome than severe intraventricular hemorrhage, chronic neonatal lung disease, or low socioeconomic status. Young, single, poorly educated mothers were more likely to experience severe stress and, consequently, were more likely to be reported for child maltreatment.

In Lancaster County, between 1990 and 2000, substantiated cases of child abuse or neglect rose from 140 to 193, an increase of 29 percent, while the rate statewide declined by as much (United Way, *Lancaster County 2000 Child Care Report*). Even though the total number of cases is better than the state average, the problem is increasing as the severity of abuse of children seems worse. This also increases the severity of the impact on the cognitive development of these unfortunate children.

Lead Poisoning

8-22 Increase the proportion of persons living in pre-1950s housing that has been tested for the presence of lead-based paint.

Target: 50 percent
Baseline: 16 percent of persons living in homes built before 1950 reported in 1998 that their homes had been tested for the presence of lead-based paint (age adjusted to the year 2000 standard population).
Target-setting method: Better than the best
Data source: National Health Interview Survey (NHIS), CDC, NCHS

Lead poisoning is one of the most common pediatric health problems in the United States—and is entirely preventable. Almost 60 million American homes currently contain lead paint and 14 million children younger than seven years of age live in the houses with the highest concentrations of lead (Linakis J., "Childhood lead poisoning, though preventable, still devastates lives." *Brown University Child and Adolescent Behavior Letter*, April 2000). Unacceptable levels of lead exposure are measured by micrograms of deciliters found in the blood. The Centers of Disease Control's current standard for risk in children is 10:g/dl. As an environmental toxin, lead has some unique qualities. Being an element, once lead has been introduced into the environment it is there forever. The most familiar sources are paint and car exhaust, but lead was a component of some pesticides prior to 1988 and may be present in the soil. Lead can still be found in ceramic ware, sealants of cans, and ethnic cosmetics.

Persons Living in Pre-1950's Housing, 1998	Persons Living in Homes Tested for Lead-Based Paint
	Percent
TOTAL	16
Race and ethnicity	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	13
Asian	11
Native Hawaiian and other Pacific Islander	24
Black or African American	22
White	14
Hispanic or Latino	14
Not Hispanic or Latino	16
Black or African American	23
White	15
Gender	
Female	17
Male	15
Family income level	
Poor	19
Near Poor	16
Middle/High Income	15

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. Note: Age adjusted to the year 2000 standard population.

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Lead has a variety of effects on various organs of the body. One of the most long-lasting effects is on the neuropsychiatric function. Comparatively minor elevations in lead levels at two years of age are associated with significant impairments in intellectual and academic performance. Recent studies have been careful to adjust for variables such as parental intelligence, socioeconomic status, education, and home environment; the studies and have found that the detrimental effect on IQ remained significant (Bellinger D., Needleman H.L., "Low-level lead exposure, intelligence and academic achievement: a long-term follow-up study." *Pediatrics*. 90:855–861, 1993).

In 1984, between two million and three million children aged 6 months to 5 years had blood lead levels greater than 15 :g/dl and almost a quarter million had blood lead levels above 25:g/dl. (ATSDR. *The Nature and Extent of Childhood Lead Poisoning in Children in the United States: A Report to Congress*, HHS, 1988). In the early 1990s, fewer than 900,000 had BLLs over 10:g/dl. (CDC, "Update: Blood lead levels in the United States," 1991–1994. *Morbidity and Mortality Weekly Report* 46:143, 1997). During the 1990s, the decline in childhood lead poisoning represents a public health success.

Despite these successes, due in part to professional and public campaigns to spread the word, much needs to be done. Risk is not spread evenly throughout all population groups. Furthermore, an analysis of childhood blood lead data collected by state surveillance programs found that prevalence of elevated blood lead levels varied from state to state and county to county, indicating that lead poisoning is still a problem at the local level (Binns, "Targeted screening for elevated blood lead levels: populations at high risk." *Pediatrics*, December 2001). An important risk factor for lead poisoning is low socioeconomic status, a criterion for Medicaid eligibility. Based on data from NHANES III, Phase 2 (1991–1994), among the estimated 890,000 children with elevated blood lead levels, 60 percent (535,000) were on Medicaid. Even though the Centers of Medicare and Medicaid Services now mandate that children enrolled in Medicaid receive blood lead screening, an estimated 81 percent of Medicaid children had not been screened for lead poisoning (US General Accounting Office, "Medicaid: Elevated Blood Lead Levels in Children." GAO Publ. No. CAO-HEHS-98-78, 1998).

Locally, the Childhood Lead Poison Program of Harrisburg, Pinnacle Health along with clinics and individual doctors are charged with lead paint investigation. A staff person of the CLPP works out of the Lancaster City office several days a week and is notified if anything higher than 15:g/dl is recorded. The state of Pennsylvania's CLPPP projects systematically perform blood lead screening tests on children under the age of 6, focusing on those estimated to have the highest risk of being lead poisoned. CLPPP projects also provide the following: referral for diagnostic services and medical treatment, investigation of lead hazards in the homes of lead-poisoned children, technical assistance to property owners and local health officials regarding the remediation of lead-based paint hazards, and community, professional, and parent education regarding lead poisoning. The CDC recommends that all children between the ages of 1 and 2 years be tested since lead exposure can come from outside the home. However, not every child is being tested. Private practice doctors who do not see a high-risk population do not think it necessary to test even though middle and upper class families may live in old, remodeled homes. Overall, pediatricians attempt to screen about one-half of their patients aged 9–24 months for lead poisoning: pediatricians report screening an average of 52% of their 9–12 month olds, 48% of their 13–14 month olds, and 37% of their patients aged 25–36 months (American Academy of Pediatrics, *Lead Screening Practices of Pediatricians*, Division of Health Policy Research, 2002). A finger stick can show the presence of lead but to determine actual blood lead levels necessitates a visit to the hospital. Many parents will not follow through. The Amish community is at special risk with their high exposure to older buildings and sanding and repainting old buggies.

This year there were 18 cases in Lancaster County with BLL greater than 20:g/dl. The number is higher for those above 15. When a child shows levels above 15:g/dl., a staff member visits the home with an informational packet and cleaning kit, and then retests after three months to make sure that levels are declining. Although there have been some programs for landlords in Lancaster City, organized by the city, there is currently no capacity to educate

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parents. In June of this year, the city conducted an education program for safe work practices for contractors and landlords. Grant money is available from the Environmental Protection Agency for lead poisoning education.

It is the municipality's responsibility to facilitate an abatement process, assess any other housing code violations, and do follow-up on both. Lancaster City has an extensive ordinance governing this procedure. Lead paint must be treated as seriously as any other housing violation. They enforce the federal Residential Lead-Based Paint Hazard Reduction Act of 1992 and work under its regulation, managing lead-based paint hazards in housing and imposing control standards for federally assisted housing. The Act also authorizes grants to cities and states to help fund primary prevention.

Day Care and Early Childhood Cognitive Development

Cognitive development and early literacy are an important part of a young child's readiness for school. Early success depends in part on four skills to be demonstrated by 3 to 5 year olds as reported by their parents: the ability to recognize letters, to count to 20 or higher, to write his or her name, and to read or pretend to read (National Education Goals Panel. *Reconsidering Children's Early Development and Learning: Toward Common Views and Vocabulary*. Washington, DC, 1995).

Between 1993 and 1999, 3 to 5 year olds able to exhibit three or four cognitive/literacy school readiness skills increased slightly from 35 to 39 percent. A variety of risk factors can make a profound difference in a child's readiness.

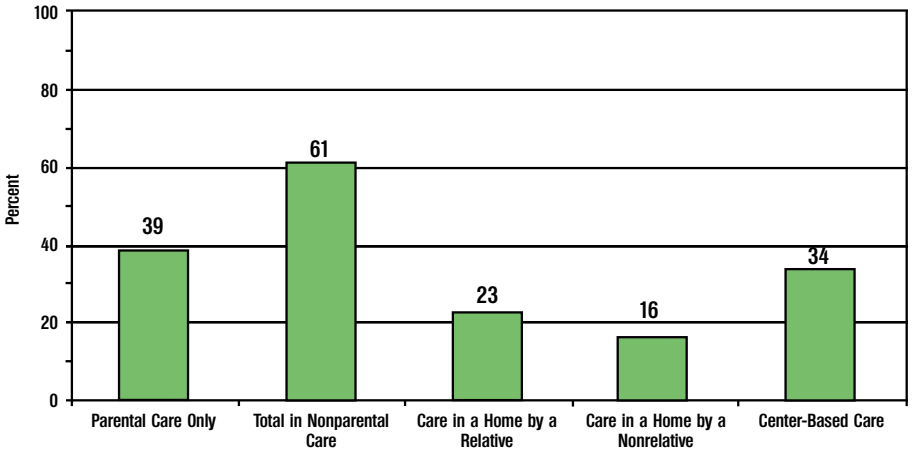
- Children who live in poverty are much less likely to exhibit these skills. Since 1993 the percentages have increased for children above the poverty threshold (from 40 to 45 percent) and decreased for children below the poverty threshold (from 23 to 19 percent.) (Child Trends Databank, Early School Readiness, www.childrensdatabank.org.)

- The mother's educational level is directly related to the likelihood that a child will demonstrate 3 or 4 of the readiness skills, ranging from 15 percent of children of mothers who did not complete high school to 57 percent of mothers with graduate/professional training or degrees.

- As the data indicates in the chart above, children who are white, non-Hispanic, or "other" are more likely to have three or four readiness skills than children who are either Hispanic or black, non-Hispanic.

- In addition, in 1999, 41 percent of young children whose mother's home language was English had three to four skills compared to 14 percent of those whose mother's home language was not English.

Percentage of Children from Birth through Six Years Old, Who Are Not Yet in Kindergarten, in Various Child Care Arrangements, 2001



Note: Some children participate in more than one type of nonparental care arrangement. Thus, details do not sum to the total percentage of children in nonparental care.
Source: Federal Interagency Forum on Child Family Statistics, America's Children: Key National Indicators of Well-Being, 2002. Table POP: Federal Interagnecy Forum on Child Family Statistics, Washington, D.C. U.S. Government Printing Office. Based on National Center for Education Statistics, National Household Education Survey, 2001.

Source: http://www.childtrendsdatabank.org/figures/21-Figure-1.gif

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In 2001, 61 percent of children from birth to age six spent time in nonparental child care. There is no conclusive evidence that childcare is either better or worse for children than being cared for solely by a parent. However, many researchers have found that high-quality day care is more beneficial for children's cognitive, language, and social development than low-quality day care (National Research Council and Institute of Medicine. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Committee on Integrating the Science of Early Childhood Development, 2000).

Over 15,000 children in Lancaster County will need regulated childcare this year, as opposed to relative care, a nanny, or care from an unregulated provider (United Way, *Lancaster County Child Care 2000*, The Climate). 15,300 children living in poverty in the county will not be able to afford quality childcare. Quality childcare is defined as care which goes beyond the minimum standards set by the Pennsylvania Department of Public Welfare for the operation of childcare centers and group day care homes. High-quality programs are rooted in the community they serve, center around developmentally appropriate practices, promote close communication with the children's families, recognize and celebrate their cultural diversity, and employ teachers and assistants who are well-trained and well compensated (Eithiel, N. Ed., *Reflections of NAEYC Accreditation: Lessons Learned and Goals for the Future*. Washington, DC, National Association for the Education of Young Children, 1997). In Lancaster County, there are 121 childcare centers, 19 group day care homes, and 135 registered family day care homes. In addition, the state of Pennsylvania allows the legal operation of some unregulated childcare. An estimated 30 percent of the county's children are in unregulated childcare.

National accreditation by one of the five nationally recognized organizations is one reliable measure of the quality of a program. It is voluntarily pursued by a childcare program and involves visits by a panel of professionals. Of the 203 centers in Pennsylvania that are accredited by the National Association for the Education of Young Children (NAEYC), only six are located in Lancaster County. Park City Child Care Center is the only one geographically available to most city residents. Statewide, the number of programs accredited is less than 10 percent. Financial concerns create barriers to accreditation. The process itself costs between $425 and $1,200, and costs are associated with qualified staffing and structural improvements. Our local county affiliate of the NAEYC will assist programs by paying for half of their application and accreditation fees.

Other features of high-quality, early childhood programs include:

- Children's school readiness and success as it relates to pre-school experiences.
- High-quality staff where several caregivers have advanced or continued education.
- Low staff-child ratios.
- High retention rate.
- Partnerships between day care centers and schools.

Quality and safety cannot be measure in unregulated day care and relative care. The number of unregulated providers in Lancaster County is increasing due to the increase in demand. These providers, because they care for too few children, may have no basic health and safety standards and are not required to undergo criminal or child abuse background checks (Galinsky, E., Howes, C., Kontos, S., and Shinn, M., "The Study of Children in Family Child Care and Relative Care: Highlights of Findings." *Work and Family Institute*, 1994). It is estimated that the number of children in unregulated care, with relatives, or who are latchkeys could be as high as 4,000. The number of children receiving subsidy money who are in unregulated care is about 19.5 percent of the subsidized population of Lancaster County (Child Care Information Service [CCIS]. Community Action Program, Lancaster, PA).

In the face of these discouraging statistics, we must realize that the quality of early childhood experiences in day care has a decisive and long-lasting effect on how children develop, both academically and socially. School readiness is positively correlated to high-

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quality childcare experiences. Knowledge about how the brain functions indicates that environment is as important to early brain development as heredity. By the age of three, the brains of children are two and a half times more active than the brains of adults, and they remain that way throughout the first decade of life (Shore, R., *Rethinking the Brain: New Insights into Early Development*. Families and Work Institute, 1997). In the area of cognitive development, quality childcare and early childhood experience needs to be much more than just custodial care.

Another issue to be considered in childhood cognitive development through quality day care is the growing need for facilities for children with special needs. Between 1996–97 and 1999–2000, the School District of Lancaster saw an increase of 25.4 percent expenditure on special education. Many special-needs children are in the system and many more are on the way. Generally poor quality day care arrangements have helped to contribute to the staggering 10.3 percent dropout rate in the city schools, far higher than any other county districts (Pennsylvania Partnership for Children, *The State of the Child in Pennsylvania*, School District Profiles, p. 234). The benefits of inclusive early childhood programs for young children with disabilities include socialization as a key factor. However, the ability of programs to provide responsive care to these children depends on the quality of the program—and there is wide variance—rom programs that are excellent to those that can actually harm children.

Children Enrolled in Head Start

	State	All County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
Rate per 100 eligible children 3–4, 1999	47.6	N/A	45.6	49.7	39.7	42.6	46.9	58.9	40.8	49.7

Regulated Childcare Capacity

	State	All County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
Spaces per 100 children under 14 in need, 1998	88.0	66.0	78.7	110.9	73.1	86.1	110.7	80.7	108.6	113.5

Higher than Lancaster County Lower than Lancaster County Equivalent to Lancaster County

Pennsylvania remains one of nine states that fails to invest in preschool; therefore, quality options for parents are slim, especially for low-income parents. Lacking access to quality preschool, too many at-risk kids start school at an unfair advantage, without the basic tools of learning that are critical to acquiring new knowledge and succeeding in school (Pennsylvania Partnerships for Children, *From Building Blocks to Books: Learning from Birth through 8 in Pennsylvania*, p. 25). Head Start is the federal government's child development and school readiness program for low-income children from birth to age 5. Eligible children come from families whose income is 100 percent of poverty or below, but eligibility does not guarantee admission. Only 28,895 children of the 56,895 eligible in Pennsylvania were served in 2002, despite an 80% increase in federal funding from 1989 to 2002. Clearly, the risk factors of poverty and babies born to single adolescent mothers are outstripping the ability of programs to keep up with the need. Many young children are not being cared for in the existing system.

Researched Best Practices

Optimal cognitive development in babies and young children depends both on biological/genetic factors such as nutritional status during pregnancy and mother's IQ, and on environmental/nurturing factors such as parenting skill, exposure to lead, and access to quality day care.

- Early and continued prenatal care is paramount to protecting and guaranteeing optimal conditions for brain development in unborn children. All mothers must be educated in nutritional care for their children before birth, especially in maintaining adequate levels of iron in the blood and the requisite 400 mcg of folic acid daily for prevention of spina bifida, neural tube disorders, and other neurological problems.

- Compliance throughout pregnancy should be monitored. Women must give themselves the best possible chance to carry their babies full term. High-risk behaviors such as cigarette smoking, poor nutrition, and drug and alcohol use may lead to low or extremely low birth weight babies, a condition dangerous to proper development of the brain.

- Communities, churches, and schools must work together to provide information to adolescents about the high risk for developmental delays in children born to single mothers under 20. Adolescent girls in some cultural traditions and from families with low socioeconomic status often see childbirth as a way to obtain attention and medical care for themselves along with an increase in their intrinsic value within their own family. They are largely unaware of the risks they expose their unborn children to through poverty, unstable home life, and lack of parenting skill.

- Parenting classes are needed for adolescent mothers and for parents mistreating their children as a result of stress, poverty, or lack of knowledge about developmental issues. Parents should recognize that they are their children's first teachers in school readiness behaviors like counting, recognizing colors, writing their own name, and pretending to read. Children should be read to at home.

- All children between the ages of 1 and 2 years should be tested for blood lead levels. This is especially true of children on Medicaid who are more likely to live in older homes with flaking paint. Blood lead levels can become elevated in high traffic areas also. Any reading of 10:g./dl or above should trigger an immediate intervention response.

- Nutrition programs such as the Special Supplemental Food Program for Women, Infants and Children; Head Start; and the School Lunch and Breakfast Programs should continue to be funded and available to all families of children who have experienced hunger. Community food banks and programs like the Water Street Rescue Mission and Brightside Baptist Church's hot meals must reach out to those not being reached by other programs.

- Regulated, high-quality childcare must be made available especially to children at risk for developmental delays through other factors. Every effort must be made to assist daycare providers to aspire to and achieve national accreditation for their programs.

- Every effort should be made by communities to influence Congress and state legislatures to fully fund Head Start.

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The ARC of Lancaster County
(717) 299-5561

Child Care Information Services
(717) 393-4004

Child Care Management Agency
(800) 937-4546

Child Lead Poisoning Prevention Program
(717) 291-4708

Children and Youth Social Service Agency
(717) 299-7925

Community Hospital of Lancaster
Childbirth Educator
(717) 394-2377

CONTACT Kids/Teen Line
(717) 394-2000

Family Service
(Counseling, Teen Pregnancy/ Parenting Classes)
(717) 397-5241

Head Start
(717) 299-7301

Healthy Beginnings Plus
Community Hospital of Lancaster—(717) 239-4141
Ephrata Community Hospital—(717) 738-6695
Lancaster General Medical Center—(717) 290-4305
Lancaster Regional Medical Center—(717) 291-8388
SouthEast Lancaster Health Services—(717) 299-6371
Walter L. Aument Family Health Center—(717) 290-5098

Homeless Student Project
School District of Lancaster
(717) 396-6829

Lancaster County Coalition for the Prevention of Teen Pregnancy
(717) 290-3203

Lancaster General Health Campus
Childbirth Education
(717) 290-3138

Lancaster Regional Medical Center
Family Health Center
(717) 291-8388

Lancaster-Lebanon IU#13
(717) 569-7331

Mental Health/Mental Retardation Program
(717) 393-0421

Plain Sect
Maternal, prenatal, and infant care
(717) 687-9407

S. June Smith Center
(At-risk and developmentally delayed children)
(717) 299-4829

Schreiber Pediatric Rehab Center
(717) 393-0425

Southeast Lancaster Health Services
(717) 299-6371

The Special Kids Network
1-800-896-4550

Success by 6
(717) 394-0731

United Way LINC
(717) 291-6462 for day care resources and preschool programs

Welsh Mountain Family Planning
(717) 354-4711

WIC
(Women, Infant, Children)
1-800-732-0018

Additional Resources

National Child Care Information Center (NCCIC)
http://nccic.org
1-800-616-2242

National Lead Information Center
http://www.epa.gov/lead/nlic.htm
1-800-424-LEAD (1-800-424-5323)

National Center for Education in Maternal and Child Health
http://www.ncemh.org
1-703-524-7802

National Maternal and Child Health Clearinghouse (NMCHC)
http://www.nmchc.org
1-888-434-4MCH (1-888-434-4624)

National Women's Health Information Center (NWHIC)
http://www.4woman.gov
1-800-994-9662

What You Can Do

Businesses/Institutions

- Educate employees and clients on the importance of proper prenatal care.
- Provide full or partial day care vouchers available as a benefit for employees. Help make quality day care affordable to everyone.
- Provide prenatal services which are convenient for teens (after-school hours, fast service, drop-ins available, close to schools, etc).
- Provide greater opportunities for prenatal visits in the homes of the Plain sect (nurse practitioners and midwives).
- Encourage Primary Care Providers to talk to child-bearing-age women about nutrition during annual checkups.

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Schools

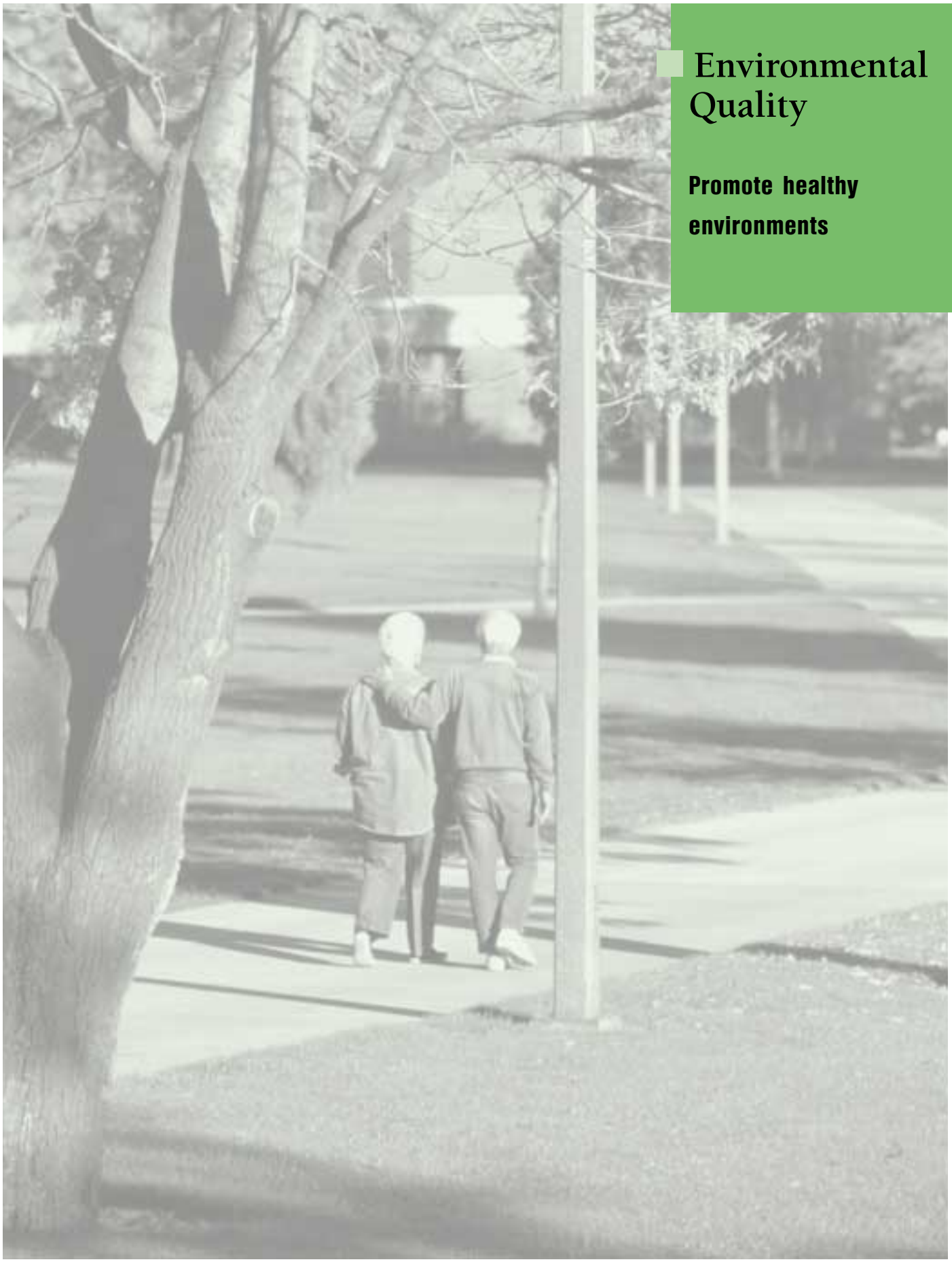
- Educate students about the importance of proper nutrition.
- Send materials home to families regarding proper nutrition and helping them to eat properly on a budget.
- Provide quality pre-Kindergarten programs to help better prepare young children with the skills they need to succeed in the early years of grade school.
- Provide workshops and evening classes for parents on healthy eating and cooking healthy.
- Help pregnant teens to understand the importance of proper checkups as well as the importance of receiving their diploma.
- Help connect children and teens with medical assistance if they qualify.
- Talk about the medical risks of parenting in health class.

Individuals

- If you suspect you may be pregnant, go to the doctor immediately.
- Eat a healthy diet and exercise regularly.
- Mentor young people.
- Teach your daughters about the importance of maintaining a balanced diet.

Remaining Questions

- How can we better serve low-income and/or minority women who are less likely to receive proper pre- and post-natal care and who are at higher risk for complications?
- How do we account for the difference in county and city early prenatal visits?
- In what ways can we do a better job of educating women of the Plain community on the importance of seeking proper prenatal care?
- How can our community work together to provide medical coverage of prenatal care and testing to all women living in Lancaster County?
- How do we put together an effective campaign to convince lawmakers of the importance of full funding for Head Start?
- How do we discuss the role of family planning on cognitive development issues in a rational atmosphere of respect?



Environmental Quality

Promote healthy environments

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Air Quality

Goal: Better than the best

HP 2010 Measures

8-1a	Reduce the proportion of persons exposed to air that does not meet the U.S. Environmental Protection Agency's health-based standards for ozone.

27-10	Reduce the proportion of nonsmokers exposed to environmental tobacco smoke.

Target-setting method: Consistent with the Clean Air Act (Public Law 101-549)
Data source: Aerometric Information Retrieval System (AIRS), EPA, OAR. U.S. Environmental Protection Agency, Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey

Local Measures

1.	Reduce total number of days annually designated "Code Orange" under the 8-hour standard for ground-level standards for ground-level ozone.

2.	Reduce total number of days annually designated "Code Red" under the 8-hour standard for ground-level standards for ground-level ozone .

Target-setting method: Consistent with the Clean Air Act
Data source: Source: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards

Water Quality

Goal: Better than the best

HP 2010 Measures

8-5	Increase the proportion of persons served by community water systems who receive a supply of drinking water that meets the regulations of the Safe Drinking Water Act.

Target: 95 percent
Baseline: 85 percent of persons served by community water systems received drinking water that met SDWA (Public Law 93-523) regulations in 1995.

Target-setting method: Consistent with EPA's strategic plan
Data sources: Potable Water Surveillance System (PWSS) and Safe Drinking Water Information System (SDWIS), EPA. The Environmental Protection Agency or the PA Department of Environmental Protection may have data that can be used to track this indicator. Local data directly correlating disease and illness and poor local air and water quality has yet to be collected.

Local Measures

1.	Increase the proportion of persons served by community water systems who receive a supply of drinking water that meets the regulations of the Safe Drinking Water Act.

2.	Increase the number of municipalities with local ordinances requiring testing of existing on-lot wells.

Target-setting method: Consistent with EPA's strategic plan
Data sources: Same as above and Lancaster Conservation District and Lancaster County Planning Commission

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Disparities

Environmental factors play a central role in human development, health, and disease. Broadly defined, the environment, including infectious agents, is one of three primary factors that affect human health. The other two are genetic factors and personal behavior.

Human exposures to hazardous agents in the air, water, soil, and food and to physical hazards in the environment are major contributors to illness, disability, and death worldwide. Furthermore, deterioration of environmental conditions in many parts of the world slows sustainable development. Poor environmental quality is estimated to be directly responsible for approximately 25 percent of all preventable ill health in the world, with diarrheal diseases and respiratory infections heading the list. Ill health resulting from poor environmental quality varies considerably among countries. Poor environmental quality has its greatest impact on people whose health status already may be at risk.

Air Quality

The Centers for Disease Prevention and Control associated air pollution in the United States with 50,000 premature deaths and an estimated $40 billion to $50 billion in health-related costs annually. Poor air quality accounts for increased emergency room visits and exacerbates a wide range of respiratory ailments including asthma, chronic obstructive pulmonary disease, and certain allergic reactions. For example, asthma can be triggered or worsened by exposure to ground-level ozone and ETS (Environmental Tobacco Smoke). The overall death rate from asthma increased 57 percent between 1980 and 1993, and for children it increased 67 percent.

There are economic consequences linked to poor air quality. Federal Transportation funding may be reduced unless conditions are mitigated and tougher vehicle inspection and gasoline station regulations may be enforced.

There are many compounds responsible for air pollution. In 1997, despite continued improvements in air quality, approximately 120 million people lived in areas with unhealthy air based on established standards for one or more commonly found air pollutants, including ozone. In 1996, a disproportionate number of Hispanics and Asian and Pacific Islanders lived in areas that failed to meet these standards compared with whites, African Americans, and American Indians or Alaska Natives.

Ozone (O_3) is a naturally occurring constituent of the part of the upper atmosphere known as the stratosphere. The presence of this ozone is important, because it absorbs UV light from the sun, and hence ***decreases*** the risk of skin cancer. The same chemical, ozone, is also formed in the lower atmosphere, the troposphere, the air that we breathe. It is produced especially on hot, sunny, stagnant summer days when the air pollutants, nitrogen oxides (NOx), and volatile organic compounds (VOCs) have been emitted in large amounts and "cook" in the atmosphere. As it happens, the same chemical, ozone, that protects us from UV light, is also a powerful respiratory irritant, and is bad to breathe. That's why we teach school children the motto: "Ozone: Good Up High; Bad Nearby!" Ground-level ozone is an invisible pollutant.

Ground-level ozone is an invisible pollutant formed when two types of pollutants react in the presence of heat and sunlight. These pollutants are:

- Volatile organic compounds or VOCs, including solvent vapors and unburned fuel.
- Sources include unburned fuel from cars, trucks, other vehicles, and yard equipment, as well as vapors from paints and industrial processes such as printing and de-greasing.
- Nitrogen oxides resulting primarily from processes that burn a fuel such as coal, oil, motor fuel, or natural gas. Important sources during the ozone season (locally, May through September, when temperatures are highest and the amount of sunlight is greatest) include diesel engines and fossil-fuel-burning electric power plants.

How Is Air Quality Measured?

At outdoor levels, ozone is invisible and odorless, but it can still sear the lungs and make it difficult to breathe. Ground-level ozone concentrations are measured in parts per billion (ppb). A monitor exceeds the 8-hour ozone standard when it records a concentration of 85 ppb or above (averaged over 8 hours); it exceeds the 1-hour standard when a single (hourly) reading is 120 ppb or higher.

- During a *code orang*e day, when the 8-hour reading falls in the 85 to 104 ppb range, the air is considered unhealthy for children, the elderly, and people with heart or respiratory ailments; people in these groups should avoid prolonged outdoor activity.
- On a *code red* day, the eight-hour reading falls in the 105 to 124 ppb range. In this case the air is unhealthy for all persons; everyone should avoid prolonged outdoor activity.
- Even more serious advisories regarding outdoor activity are offered for days when the 8-hour reading exceeds 124 ppb (*code purple*), but such events are rare; the highest 8-hour reading ever recorded for Lancaster County was 121 ppb in July of 1997.

It is important to remember that ozone action alerts are weather-based predictions of the possibility or liklihood of Code Orange or Code Red days. Although they are usually accurate and should be taken seriously, they may or may not result in an 84 ppb exceedance.

In 1997, the EPA issued a National Ambient Air Quality Standard based on 8-hour readings. There were challenges to the implementation of this standard. But, in March of 2002, the District of Columbia Circuit Court decision removed all remaining legal challenges to the 1997 standard and that the EPA intends to move forward with its usage.

The fourth highest 8-hour readings in each of three calendar years are combined to produce a three-year-average score. A county is in *non-attainment* of the EPA's 8-hour attainment standard when its monitor's three-year-average score is 85 ppb or higher. Another (earlier established) attainment standard is based on 1-hour readings, with an ozone threshold value of 120 ppb. An area meets the yearly standard when there is no more than one day with an hourly reading above the 120 ppb threshold. The area is in *non-attainment* of the 1-hour attainment standard when it fails to meet the yearly standard in any one of three consecutive years.

Lancaster Context and Related Data

When the EPA's 1-hour attainment standard was implemented following the passage of the Clean Air Act Amendments in 1990, Lancaster County was identified as being in non-attainment of the standard, owing to its having experienced three ground-level ozone readings of 120 ppb or greater in 1988 (see the table). In the early 1990s, a limited number of exceedance days brought the county into temporary attainment of the standard, but, as the table makes clear, the county has been in a non-attainment status since 1997.

The table also makes clear that Lancaster County has never been in attainment of the 8-hour standard, which has only been calculable since 1997 (beginning with the three-year period 1995–97). The Clean Air Network's *Smogwatch* 2000, using the EPA's 8-hour attainment standard for the 1997–99 period, ranked U. S. metropolitan areas on the quality of their air. The Lancaster Metropolitan Area's 3-year average (non)attainment score of 101 ppb placed the county in a tie for 15th in *Smogwatch's* ranking of the "Top 50 Dirty Metropolitan Areas" (and 3rd among Pennsylvania metropolitan areas). Using a related but somewhat different criterion—the total number of days during the period with 8-hour readings of 85 ppb or more—*Smogwatch* identified Lancaster's 66 such days as being the 14th highest among metropolitan areas across the nation and the highest in Pennsylvania.

Note: A metropolitan area is a county or an integrated cluster of counties with at least one "central city." The Lancaster Metropolitan Statistical Area (MSA), named for its central city, Lancaster, consists of all of Lancaster County. Similarly, the Reading MSA consists of all of Berks County; the Harrisburg-Lebanon-Carlisle MSA, named for its three central cities, consists of the entirety of Dauphin, Cumberland, Lebanon, and Perry counties. Ozone levels

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for Lancaster County, the Lancaster MSA, are measured by one monitor, which is located at The Abraham Lincoln Middle School on Grofftown Road, approximately one mile from the center of the City of Lancaster. The entire county is designated as either meeting or not meeting EPA air quality standards as determined by readings from this monitor.

It is clear from the table that the 1997–99 period represents Lancaster's worst performance for ozone pollution. The American Lung Association's more recent report, *State of the Air: 2002*, focuses on the three-year period from 1998 to 2000 and uses a different evaluation criterion to rank counties and metropolitan areas (i.e., a weighted average of code orange [weight = 1], code red [weight = 1.5], and code purple [weight = 2] days over the three years). Lancaster's 45 code orange and 5 code red days from 1998 to 2000 generated a weighted average score of 17.5, placing Lancaster County in a tie for the fourth 'dirtiest' air in Pennsylvania and (tied for) 65th out of the 595 counties across the United States with complete monitoring data for ozone pollution (i.e., in the 88th percentile). The "good news" is that the Lancaster MSA has dropped out of the "top 25" metropolitan areas across the U.S. in the latest *State of the Air* report, having been ranked at 20th in the previous report and 22nd in the first report of this series (*State of the Air: 2000*).

Lancaster County Air Quality Data: Ozone Pollution

	1-Hour Reading		8-Hour Reading			
	Number of Exceedance days	Attainment Status*	Code Orange Days	Code Red Days	3-Year Avg. Attainment Score	Attainment Status**
Year						
1988	3					
1989	0					
1990	0	N (88/89/90)				
1991	0	Y (89/90/91)				
1992	0	Y (90/91/92)				
1993	1	Y (91/92/93)				
1994	0	Y (92/93/94)				
1995	1	Y (93/94/95)	16	2		
1996	0	Y (94/95/96)	4	0		
1997	3	N (95/96/97)	18	3	96 ppb	N (95/96/97)
1998	0	N (96/97/98)	26	1	96 ppb	N (96/97/98)
1999	2	N (97/98/99)	15	3	101 ppb	N (97/98/99)
2000	0	N (98/99/00)	4	1	98 ppb	N (98/99/00)
2001	2	N (99/00/01)	14	1	96 ppb	N (99/00/01)

Notes:
1-hour attainment standard status: Y=attainment of standard—no more than 1 exceedance day (highest daily 1-hour reading ≥ 120 ppb) in current year and in previous two years.
N=nonattainment of standard—more than 1 exceedance day in current year and/or in previous two years.
**8-hour attainment standard status: N=nonattainment of standard—average of fourth highest 8-hour readings from current and previous two years is 85 ppb or greater.
Code orange day: highest daily 8-hour reading 85 to 104 ppb; air quality is unhealthy for sensitive groups.
Code red day: highest daily 8-hour reading 105 to 124 ppb; air quality is unhealthy.
8-hour readings are not available for years prior to 1995.
Source: Compiled from information provided by EPA Office of Air Quality Planning and Standards.
[http://www.epa.gov/aqspubl1/annual_summary.html; http://www.epa.gov/air/oaqps/greenbk/o3co.html]

The American Lung Association has also compiled some estimates on the number of persons at risk in Lancaster County on *code orange* days, when children, the elderly, and persons with chronic lung disease are advised to limit outdoor activity (also at risk are those engaged in strenuous outdoor activity, like athletes and laborers). The table below reports

Lancaster County Populations At Risk on Code Orange Days, 1999

Total Population	Children (14 and under)	Elderly (65 and older)	Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema
460,035	102,273	64,845	6,450	22,164	15,154	5,187

Notes: Columns should not be summed; lung disease estimates are derived by applying age-specific prevalence rates from national and/or state samples to age-specific county population estimates.
Source: American Lung Association, State of the Air, 2002

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those numbers, which are based on Census Bureau population estimates for 1999 and national studies of lung disease prevalence. Based on these estimates, it seems fair to surmise that roughly 40 percent of Lancaster County's population falls into one of the "sensitive" groups that should limit outdoor activity on *code orange* days. The Susquehanna Valley Ozone Action Partnership issues alerts when weather forecasts indicate the likelihood of *code orange* conditions or worse.

The HP 2010 objective (8-1 a) to reduce the proportion of persons exposed to air that does not meet the EPA's health-based standards for ozone does not directly translate to Lancaster County because for us it's an "all or nothing" proposition: the entire county (and its population) is either in a status of *attainment* or *nonattainment* of the EPA standard. But, given our current baseline status of *nonattainmen*t, we can adapt the HP 2010 goal as follows: reduce the average annual number of unsafe air days (code orange or above) and eventually reach attainment status so that no one among Lancaster County's population must be wary of limiting outdoor activity to avoid health risks, except in very rare instances.

Disparities

Disparities exist in the environmental exposures certain populations face and in the health status of these populations. For example, in New York City, African American, Hispanic, and low-income populations have been found to have hospitalization and death rates from asthma three to five times higher than those for all New York City residents. African American children have been found to be three times more likely than white children to be hospitalized for asthma and asthma-related conditions and four to six times more likely to die from asthma.

Research

Within the United States, significant strides toward a reduction in harmful air emissions can be achieved by individuals choosing not to drive their cars. People need to use public transit, walk, or bicycle more often. Laws can help improve street and highway design to facilitate pedestrians and bicyclists, and employers can embrace telecommuting, but the choice remains with the individual. Encouraging individuals to walk or bike also may play a role in reducing the problems of obesity and overweight individuals, which have risen to alarming levels in the U.S. population.

Urban sprawl has become an increasingly important concern in the United States and Lancaster County for several reasons: increased outdoor air pollution, reduced quality of life due to the loss of free time and the stress of increased commuting time, and less green space in major metropolitan areas. Between 1983 and 1995, the average annual vehicle miles traveled increased 80 percent. These conditions lead to negative health conditions, such as asthma and injuries from road rage due to traffic-related stress. In addition, sprawl diminishes the amount of land available for prime recreational and agricultural uses and can bring two land uses together that do not coexist well. For example, a residential development in an area that was previously agricultural may expose residents to environmental hazards, such as pesticides, which may pose a threat to their health.

Improving the availability of environmental health data also will help meet these objectives. The Internet has increased access dramatically access to environmental information. Databases such as TOXNET (at http://toxnet.nlm.nih.gov/), Internet Grateful Med (at http://igm.nlm.nih.gov), and TRI (the Toxics Release Inventory www.epa.gov/ceisweb1/ceishome/ceisdata/xplor-tri/explorer.htm) may provide useful information about environmental hazards or other environmental problems in communities to health care providers, policymakers, and the public. Moreover, better dissemination of global environmental health information may reduce the occurrence of disease or exposure to harmful environmental agents for U.S. citizens traveling abroad.

To be successful, programs to improve environmental health must be based on scientific evidence. The complex relationship between human health and the acute and long-term effects of environmental exposures must be studied so prevention measures can be developed.

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Surveillance systems to track exposures to toxic substances such as commonly used pesticides and heavy metals must be developed and maintained. To the extent possible, these systems should use bio-monitoring data, which provide measurements of toxic substances in the human body. A mechanism is needed for tracking the export of pesticides restricted or not registered for use in the United States.

Over 100 million Americans live in areas that failed at least one National Ambient Air Quality Standard. Transportation vehicles produce 25–75% of key chemicals that pollute the air, causing smog and health problems. All new cars must meet federal emissions standards. But as vehicles get older, the amount of pollution they produce increases. Vehicles with better fuel economy may produce less pollution over time than vehicles with lower fuel economy

What You Can Do

Businesses and Government

- Encourage car-pooling.
- Set up bike stands and make showers available for those interested in biking to work.
- Work with public transportation systems to accommodate your work force where possible.
- Encourage community design that supports village concepts that reduce the need to use cars.
- Design car parks at access points to major transportation routes to encourage car-pooling.
- Partner with the Susquehanna Valley Ozone Action Partnership to educate and encourage good behaviors among your employees and in your own operations.
- Landscape your properties in ways that increase shade and discourage mowing.
- Be aware of ozone alert days and encourage your employees to take precautions both on the job and at home.

Individuals

- Walk or ride a bike instead of using your car when possible.
- Try a bus.
- When choosing a new home, consider one located within walking distance to amenities such as shops, schools, parks, and your job.
- Reduce your number of car trips, especially during summer months.
- Plant trees.
- Consider plantings around your home that reduce the use of lawn mowers and power equipment.
- Use a rake instead of a gas leaf-blower.
- Consider turning in your old gas-powered mower for an electric one.
- Purchase vehicles that burn less fuel.
- Maintain your vehicle to reduce exhaust.
- Check appliances, and trade in those that were built prior to the new standards for reducing ozone.
- Write to policy-makers to advocate for maintaining clean air standards and more fuel-efficient and cleaner vehicle standards.
- Contact the American Lung Association for the Ozone Action Partnership's list of "50 Ways to Help Prevent Air Pollution on Ozone Action Days" and "What You Can Do About Air Pollution."

Remaining Questions

- What is the local correlation between exceedance days and emergency room admissions?
- Is there a local correlation between sprawl and local air pollution?
- What are the asthma statistics for Lancaster County and how are they affected by (indoor and outdoor) air quality?
- How is our air quality being affected by other areas and how might we impact changes?
- How do we promote transportation plans and community design that truly encourage public transportation systems and safe pedestrian and bike paths?

Water Quality

Water quality has a significant impact through a wide range of waterborne diseases, many of which affect the gastrointestinal tract (e.g., giardiasis, cryptosporidiosis, and Campylobacter enteritis). Note that one of the earliest triumphs of public health that led to significant reductions in deaths from illnesses such as cholera and typhoid was a result of making the water supply safe. Drinking water can come from either groundwater sources (via wells) or surface water sources (such as rivers, lakes, and streams). Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. As long as they occur below EPA's standards, they don't pose a significant threat to health, although people with severely compromised immune systems and children may have special needs. EPA sets standards for approximately 90 contaminants in drinking water. EPA's standards, along with each contaminant's likely source and health effects, are available at www.epa.gov/safewater/mcl.html.

Water suppliers must deliver to their customers annual drinking water quality reports (or consumer confidence reports). These reports will tell consumers what contaminants have been detected in their drinking water, how these detection levels compare to drinking water standards, and where their water comes from. The reports must be provided annually before July 1, and, in most cases, are mailed directly to customers' homes. To find the source of your drinking water, check your annual water quality report or call your water supplier.

Lancaster Context

There are 1,364.85 miles of streams in Lancaster County of which 38% were impaired, meaning that they are polluted. Most pollution is "non-point source" or agricultural in nature. If our streams are being polluted, it is natural to assume that the nearby on-site wells may also be in danger of pollution.

A number of Lancaster communities experienced drinking water restrictions in the last decade which resulted in a flurry of activity to build new water systems and refurbish older water systems. Some of that building activity was simply the result of population growth, but some of it was spurred as well by the contamination of existing supplies (i.e., a public well). Well head protection plans (see appendix)are springing up around the county in response to high nitrate levels. However, we have yet to gauge the extent or even existence of pollution due to pesticides and herbicides which are widely used in lawned suburbs and heavily agricultural areas. Additionally, at least at first glance, we seem to have a slightly elevated incidence of waterborne illnesses according to Department of Health statistics. That will require greater research for verification.

Data

The PA Department of Environmental Protection has an ongoing program to assess the quality of the state's surface waters. But the quality of on-site well water is left to municipalities to assess and regulate. Most municipalities allow private on-lot wells, but none have testing requirements.

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Nationally, most water systems use a groundwater source (80%), but most people (66%) are served by a water system that uses surface water. This is because large metropolitan areas tend to rely on surface water, whereas small and rural areas tend to rely on groundwater. In addition, 10–20% of people nationally have their own private well for drinking water. This is in contrast to Lancaster.

In Lancaster County 31% of water delivered by community systems is from wells and 40% of homes have their own on-lot wells for drinking water as well as on-lot sewer systems.

In 1993 there were:

- 150,956 households in Lancaster County.
- 91,264 served by community water suppliers.
- 59,692 served by on-lot wells, cisterns, etc.

Only 32 of the 60 municipalities of the county require compliance with the Lancaster County Subdivision and Land Development Ordinance that requires yield and quality testing before NEW construction.

None of the county's 60 municipalities require testing of on-lot wells. Drinking water protection is a community-wide effort. It begins with:

- Protecting the source of your water.
- Education, funding, and conservation .
- Establishing source water protection programs such as well-head protection planning.
- Adopting watershed efforts.
- Stream bank restoration projects.
- Enacting animal waste management legislation (the enforcement and efficacy should be audited).

Researched Best Practices

Installation of a home water treatment system may be a feasible option for people with contaminated drinking water. However, such systems are usually considered a temporary solution due to periodic maintenance requirements, performance monitoring difficulties, and varying effectiveness with changes in the intensity and type of contamination. The only permanent solutions to water contamination problems are discontinuation of the source(s) of the contamination or finding a new drinking water source. Different types of systems are available involving different treatment technologies. The list of treatment processes includes activated carbon filtration, ion exchanging, reverse osmosis, distillation, chemical oxidation, and UV radiation. No one system removes all possible contaminants, and the various treatment technologies differ widely in their effectiveness in removing different classes of contaminants. For example, while activated carbon filters are efficient in removing organic compounds, pesticides, and lead, distillation effectively removes metals and microorganisms. Therefore, an important first step for the homeowner, before any system is purchased, is to have the drinking water analyzed. The county health department or a private laboratory can provide this analysis and public health officials can interpret these results to help the homeowner determine which treatment process is most appropriate. No federal, state. or local regulations govern the manufacturing or use of home water treatment units. Many different brands are available in the marketplace. To ensure some level of quality and effectiveness, certification of treatment units is carried out by independent testing laboratories such as NSF International (formerly the National Sanitation Foundation). Their insignia will be evident on the packaging, or individuals can contact the NSF to find out if a particular product has been certified for the use intended. Also, the Water Quality Association (WQA), a trade association of manufacturers and distributors, offers voluntary validation standards and advertising guidelines to their members. Thus, the WQA seal of approval provides another indication of product quality.

What You Can Do

Everyone—Homeowners and Businesses

- If you have your own well, ensure that your water is safe to drink. Private wells should be tested annually for nitrate and coliform bacteria to detect contamination problems early. Test more frequently and for other contaminants, such as radon or pesticides, if you suspect a problem.

- Check with your local health department and local public water systems that use groundwater to learn more about well water quality in your area and what contaminants you are more likely to find in your own well.

- You can help protect your water supply by carefully managing activities near the water source. Call your local water supplier to find out if your community participates in well-head protection activities.

- You can support efforts to improve operation, maintenance, and construction of water treatment processes.

- Work with communities to identify local sources of contamination. You can contact your state source water protection program to find out how to get involved in this process, or join a local group in working on a local watershed.

Local Assets

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards (OAQPS)
Air Quality Index—Guide to Air Quality and Your Health
http://www.epa.gov/airnow/aqibroch/

EPA–AIR–Teacher and Student Resource Site
http://www.epa.gov/students/air.html

EPA–AIR and Radiation
http://www.epa.gov/air/data/index.html

Fuel Economy
http://www.fueleconomy.gov/
Is that new car you're planning to buy a gas guzzler? This U.S. Department of Energy site lets car shoppers find out which vehicles have the best—and worst—gas mileage.The site also includes estimated annual fuel costs, links to vehicle crash test results, and tips for improving your car's gas mileage.

American Lung Association
Ozone Air Pollution and Your Kids: What Parents Should Know
http://www.lungusa.org/air/envozoneparents.html

American Lung Association
Indoor and outdoor air pollution site
http://www.lungusa.org/air/

American Lung Association
Susquehanna Valley Ozone Action Partnership

DEP Bureau of Watershed Conservation
(717) 787-5259

Lancaster County Conservancy
(717) 392-7891

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Lancaster County Conservation District
(717) 299-5361

Hourglass Foundation
http://www.hourglassfoundation.org/
(717) 295-0755

Penn State Extension Program
http://www.extension.psu.edu/

Various Watershed Associations

Various Public Water Systems

Additional Resources

EPA—Windows To My Environment
An interactive site that allows you to view your environment based on zip code input
http://www.epa.gov/enviro/wme/

Farm*A*Syst/Home*A*Syst
Provides information to help farmers and rural residents assess pollution risks and develop management plans to meet their unique needs.
http://www.wisc.edu/farmasyst/

EPA's page for private well owners:
http://www.epa.gov/safewater/pwells1.html

EPA Adopt a Watershed
http://www.epa.gov/adopt/

DEP Site
Watershed Weekly
http://www.greenworks.tv/watershed_weekly/index.html

Remaining Questions

- How do we encourage municipalities to review the status of on-site wells and sewer systems?
- How does the analysis of our water quality impact our community dialogue around sprawl and urban growth boundaries?
- How would we, as a larger community, react to the identification of widespread well water contamination? Would it remain for the individual municipalities to resolve or be regionally addressed?
- How do we design and carry out research on the health effects of our current water delivery systems?
- What role does the medical community play in the discussion around clean water?
- How do drought conditions affect water quality?

Related Objectives from Other Focus Areas

Access to Quality Health Services

1-7 Core competencies in health provider training
1-12 Single toll-free number for poison control centers

Cancer

3-1 Overall cancer deaths
3-2 Lung cancer deaths
3-8 Melanoma deaths
3-9 Sun exposure and skin cancer
3-10 Provider counseling about cancer prevention
3-14 Statewide cancer registries

Chronic Kidney Disease

4-1 End-stage renal disease

Disability and Secondary Conditions

6-12 Environmental barriers affecting participation in activities

Educational and Community-Based Programs

7-2 School health education
7-10 Community health promotion programs

Food Safety

10-1 Food-borne Infections
10-2 Outbreaks of food-borne infections
10-5 Consumer food safety practices

Health Communication

11-1 Households with Internet access
11-2 Health literacy
11-4 Quality of Internet health information sources

Heart Disease and Stroke

12-1 Coronary heart disease (CHD) deaths

Immunization and Infectious Diseases

14-31 Active surveillance for vaccine safety

Injury and Violence Prevention

15-7 Nonfatal poisonings
15-8 Deaths from poisoning
15-10 Emergency department surveillance systems
15-11 Hospital discharge surveillance systems
15-12 Emergency department visits
15-13 Deaths from unintentional injuries
15-14 Nonfatal unintentional injuries

Maternal, Infant, and Child Health

16-10 Low birth weight and very low birth weight
16-11 Preterm births
16-14 Developmental disabilities

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Occupational Safety and Health

20-1 Work-related injury deaths
20-2 Work-related injuries
20-7 Elevated blood lead levels from work exposure
20-8 Occupational skin diseases or disorders

Physical Activity and Fitness

22-14 Community walking
22-15 Community bicycling

Public Health Infrastructure

23-1 Public health employee access to the Internet
23-2 Public access to information and surveillance data
23-3 Use of geocoding in health data systems
23-4 Data for all population groups
23-5 Data for Leading Health Indicators, Health Status Indicators, and Priority Data Needs at state, tribal, and local levels
23-6 National tracking of Healthy People 2010 objectives
23-7 Timely release of data on objectives
23-8 Competencies for public health workers
23-9 Training in essential public health services
23-10 Continuing education and training by public health agencies
23-11 Performance standards for essential public health services
23-12 Health improvement plans
23-13 Access to public health laboratory services
23-14 Access to epidemiology services
23-15 Model statutes related to essential public health services
23-16 Data on public health expenditures
23-17 Population-based prevention research

Respiratory Diseases

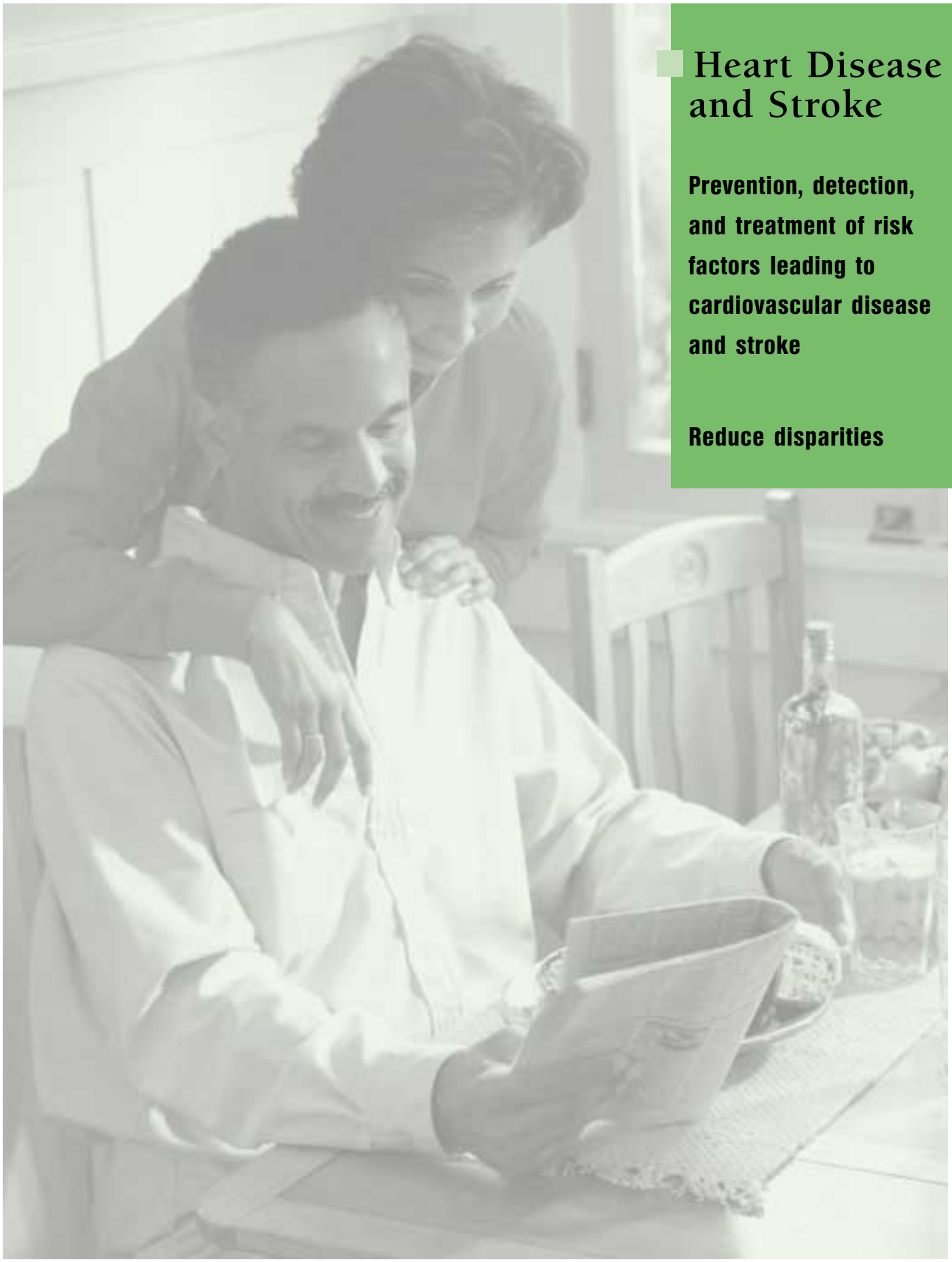
24-1 Deaths from asthma
24-2 Hospitalizations for asthma
24-3 Hospital emergency department visits for asthma
24-4 Activity limitations
24-5 School or work days lost
24-6 Patient education
24-7 Appropriate asthma care
24-8 Surveillance systems

Tobacco Use

27-9 Exposure to tobacco smoke at home among children
27-10 Exposure to environmental tobacco smoke
27-11 Smoke-free and tobacco-free schools
27-12 Work site smoking policies
27-13 Smoke-free indoor air laws

Vision and Hearing

28-16 Hearing protection
28-17 Noise-induced hearing loss in children
28-21 Noise-induced hearing loss in adults



Heart Disease and Stroke

Prevention, detection, and treatment of risk factors leading to cardiovascular disease and stroke

Reduce disparities

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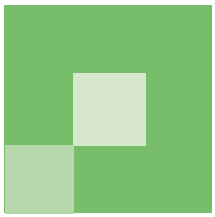

Heart Disease and Stroke

Goal: Improve cardiovascular health and quality of life through the prevention, detection, and treatment of risk factors; early identification of heart attacks and strokes; and prevention of recurrent cardiovascular events

HP 2010 Measures/Local Measures

12-1 Reduce coronary heart disease deaths.

Target-setting method: 20 percent improvement
Data source: National Vital Statistics System (NVSS), CDC, NCHS

12-2 Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing rapid emergency care by calling 911. (developmental)

Potential Data Source: National Health Interview Survey (NHIS), CDC, NCHS

12-7 Reduce stroke deaths.

Target-setting Method: 20 percent
Data source: National Vital Statistics System (NVSS), CDC, NCHS

12-8 Increase the proportion of adults who are aware of the early warning symptoms and signs of stroke. (developmental)

Potential data source: National Health Interview Survey (NHIS), CDC, NCHS

12-9 Reduce the proportion of adults with high blood pressure.

Target setting method: Better than best
Data Source: National Health and Nurtrition Examination Survey (NHANES), CDC, NCHS

12-10 Increase the proportion of adults with high blood pressure whose blood pressure is under control.

Target-setting method: Better than best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS

12-14 Reduce the proportion of adults with high total blood cholesterol levels.

Target-setting method: Better than best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS

12-15 Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.

Target-setting method: Better than best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS, BRFSS

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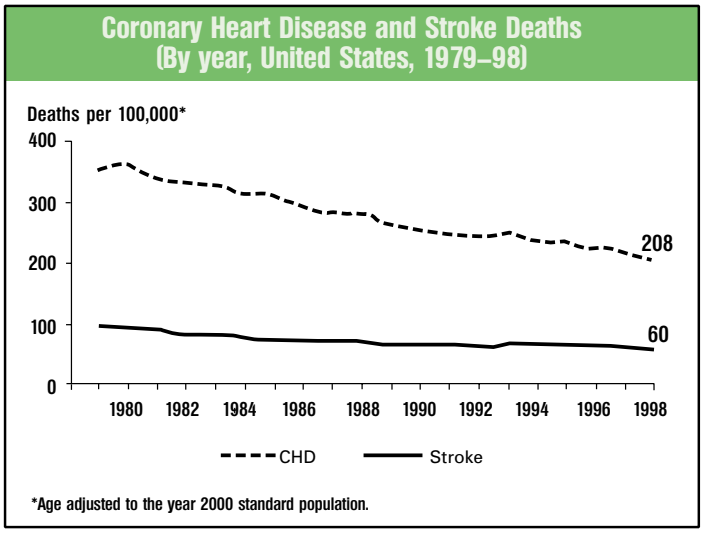
Description

A silent killer at work in all of us is currently taking over 2,600 Americans each day, an average of one death every 33 seconds (American Heart Association, 2002, *2002 Heart and Stroke Update*). Cardiovascular disease in its various forms claims almost as many deaths each year as the next seven leading causes of death combined. Clearly, this is a serious threat to our well-being as a nation. The true tragedy is that, even among those with a genetic predisposition, this is a highly preventable and highly treatable health problem. The toll on our population is a direct result of lack of awareness and a denial of personal consequences to making unhealthy lifestyle choices related to food and dieting. We live in a culture where we travel at the speed of light, with increasing stress and overwork, and are encouraged in our fast food consumption, eating on the run, and enjoying the "value" of supersizing one's meals. We take no time for exercise and pay little attention to our bodies until symptoms notify us of well-established heart disease. Media attention to overweight and obesity issues appeals to the vanity of physical appearance and, now, the clothing industry has responded to the needs of the expanding American girth by creating and selling designs that hide the bulk while fudging size numbers.



Source: CDC, NCHS, National Vital Statistics System (NVSS), 1979–98

According to the American Heart Association's 2002 Statistical Update, one in five deaths from cardiovascular disease is attributable to smoking and, even worse, between 37,000–40,000 nonsmokers die of cardiovascular disease each year as a result of secondhand smoke. Though public awareness has improved in this area, and adult smoking is going down, teenagers, despite all the evidence of its risks, have begun to smoke in increasing numbers.

Since 1900, cardiovascular disease (CVD) has been the number one killer in the United States every year except for 1918. (American Heart Association, *2002 Heart and Stroke Statistical Update*.) Risk factors and types of CVD include high blood cholesterol, high blood pressure, coronary heart disease including myocardial infarction and angina pectoris, stroke, congenital cardiovascular defects, and congestive heart failure. Coronary heart disease (CHD) is the number one killer of both men and women in the United States. Each year, more than 500,000 Americans die of heart attacks caused by CHD. (National Heart, Lung, and Blood Institute, *Facts about Coronary Heart Disease*).

Cardiovascular disease is the leading cause of death for women. A need exists for greater awareness among women in this area and media campaigns similar to those encouraging an awareness of breast cancer and the need for mammography. The early signs and symptoms of heart attack for women are different than those for men. Women often do not seek treatment for early symptoms. Females have poorer outcomes after a heart attack than do males and, at older ages, are twice as likely to die within a few weeks.

Risk Factors

High Blood Cholesterol

The higher one's blood cholesterol level, the greater is the risk for heart disease, heart attack, and stroke. Cholesterol is a waxy, fatlike substance in the body that, in excess amounts, builds up on the walls of the arteries to cause a condition called atherosclerosis, or hardening of the arteries. The arteries narrow, and thus the heart is deprived of the oxygen it needs to function. If the blood supply becomes completely cut off, a heart attack occurs.

There are two types of cholesterol: HDL (high-density lipoprotein), which is good and keeps cholesterol from building up on the walls of arteries, and LDL (low-density lipoprotein), which is bad because it is the main source of cholesterol buildup and blockage in the

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Adults Aged 20 Years and Older, 1988–94 (unless noted)	Total Blood Cholesterol Level of 240 mg/dL or Greater
	Percent
TOTAL	21
Race and ethnicity	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	DSU
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	19
White	21
Hispanic or Latino	DNC
Mexican American	18
Not Hispanic or Latino	DNA
Black or African American	19
White	21
Gender	
Female	22
Male	19
Education level	
Less than high school	22
High school graduate	22
At least some college	19
Disability status	
Persons with disabilities	24 (1991–94)
Persons without disabilities	19 (1991–94)

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.

arteries. High blood cholesterol, above 200 mg/dL, is caused by consuming saturated fat and cholesterol in the diet, by being overweight, by lack of physical activity, by heredity, and by age and gender. People with blood cholesterol above 240 mg/dL are at very high risk for cardiovascular disease. In the years 1988–1994, an average of 21 percent of all adults aged 20 and older fell into this very high risk category. (Healthy People 2010, Heart Disease and Stroke). This constitutes 1 in 5 Americans.

High Blood Pressure

Blood pressure or hypertension is the force of the blood pushing against the walls of the arteries. It is given in two numbers that measure systolic pressure (while the heart is contracting) and diastolic pressure (while the heart is at rest). Desirable pressure is defined as less than 130/85 mmHg. High blood pressure (HBP or hypertension) is defined as systolic pressure of 140mm Hg or higher and diastolic pressure of 90 mm Hg or higher, or taking anti-hypertensive medicine. According to the Pennsylvania Department of Health, the percent of Pennsylvania adults who have had their blood pressure checked in the past two years has declined since the 1991 figures. Control of high blood pressure depends on the public realizing that it is a symptomless condition until it has already done damage to the heart.

- According to the Framingham Heart Study, hypertension is associated with a two- to three-fold risk for the development of congestive heart failure. High blood pressure preceded the development of congestive heart failure in 91 percent of the cases.

- One in four American adults have HBP.

- From 1989 to 1999 the age-adjusted death rate from HPB increased 21 percent, but the actual number of deaths rose 46 percent. (American Heart Association, *2002 Heart and Stroke Statistical Update*.)

- Of the one in four American adults with HBP, 31.6 percent are unaware of their condition.

- 27.4 percent of those with known high blood pressure are on medication and have it controlled; 26.2 percent are on medication but do not have their HBP controlled; and 14.8 percent aren't on medication. (American Heart Association, *2002 Heart and Stroke Statistical Update*.)

Coronary Heart Disease (CHD)

Coronary heart disease is a condition in which the flow of blood to the heart muscle is reduced. When coronary arteries become clogged or narrowed, not enough oxygen carrying blood reaches the heart and it may respond with pain called angina. When the blood supply is cut off completely, the result is myocardial infarction, or heart attack.

Risk factors include HBP, cigarette smoking, high blood cholesterol, overweight, physical inactivity, and diabetes. The symptoms of CHD include shortness of breath, heaviness, tightness, pain, burning, pressure or squeezing, usually behind the breastbone but sometimes in arms, neck, or jaws and there is a wide range of severity. Some people have no symptoms

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at all; some have intermittent mild symptoms; some find their lives severely restricted by these symptoms. Tests for this condition may include: an electrocardiogram (ECG or EKG); a stress test; nuclear scanning; and coronary angiography.

While many people can control CHD through lifestyle changes and medication, frequent and disabling angina may signal the need for surgery. Surgery and medication are not cures for CHD. They relieve symptoms and buy time. Lifestyle changes can relieve the body of its effects.

Stroke

Stroke is a cardiovascular disease process that affects the blood vessels supplying blood to the brain. It occurs when a vessel bringing oxygen and nutrients to the brain bursts or is clogged by a blood clot or some other particle. Nerve cells in the brain, deprived of oxygen, can't function and die within minutes. The effect is devastating because dead brain cells are not replaced and the part of the body they control is permanently affected.

Stroke accounted for 1 out of every 14.3 deaths in the United States and, when considered separately from other cardiovascular disease, ranks as the third leading cause of death. (American Heart Association, 2002, *Stroke*, para. 1). According to the Framingham Heart Study, each year about 600,000 people suffer from new or recurrent stroke; about 500,000 of these are first attacks and 100,000 are recurrent attacks. Over four million stroke survivors are alive today, coping with the damage done by their strokes.

The most important risk factor for stroke is high blood pressure. "Like CHD death rates, stroke death rates have declined over the past 30 years. The decline accelerated in the 1970's for whites and African Americans. The rate of decline however, has slowed in recent years. The overall decline has occurred mainly because of improvements in the detection and treatment of high blood pressure (hypertension)." (American Heart Association, 2002, *Stroke*) Age, heredity, and race are factors in stroke risk.

- The chance of having a stroke more than doubles for each decade of life after age 65.
- Those with a family history have higher risk, as do African Americans, largely because they have a greater incidence of high blood pressure.
- Cigarette smoking greatly increases risk of stroke, especially smoking along with the use of oral contraceptives. (American Stroke Association, n.d., *Risk Factors of Stroke*, para. 6).
- Stroke deaths occur more often during extremely hot or cold weather.
- Cocaine use and excessive alcohol intake can cause heart failure and lead to stroke.

There are four main types of stroke, two caused by blood clots and/or other particles and two by hemorrhage (internal bleeding). Blood clots plug the artery in cerebral thrombosis and cerebral embolism, and these events account for 70 to 80 percent of all strokes. (American Stroke Association, n.d., *Impact of Stroke*), The other two, cerebral and subarachnoid hemorrhages, are caused by ruptured blood vessels and have a much higher fatality rate.

The effects of a stroke depend primarily on the location of the obstruction and the extent of brain tissue affected. Because one side of the brain controls the opposite side of the body, a stroke affecting the right brain will result in neurological complications for the left side of the body. Prior to a stroke, about 10 percent of people may experience a transient ischemic attack or "mini-stroke" or TIA. A person who has had TIAs is 9.5 times more likely to have a stroke.

The warning signs of stroke include:

- Sudden numbness of the face, arm, leg, especially on one side of the body
- Sudden confusion and trouble speaking or understanding
- Trouble seeing in one or both eyes

- Trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache with no known cause

Treatment for ischemic stroke includes anticoagulants to dissolve clots, carotid endarectomy, and angioplasty with stents. The purpose is to restore blood flow to the brain. Treatment for hemorrhagic stroke includes surgical interventions to repair or remove abnormal blood vessels that contain aneurysms.

Data

According to the Pennsylvania Department of Health's Bureau of Health Statistics, heart disease was the leading cause of death in Lancaster County. It is followed closely by all forms of cancer. Stroke is the third leading cause of death. The effects of high cholesterol rates, overweight, lack of exercise, smoking, and poorly controlled blood pressure take years to finally result in a heart attack or stroke. As Lancaster County residents age, the insidious effect of these risk factors becomes more and more evident. Up to the age of 24, heart disease is the fifth leading cause of death in the county, but by age 45 it becomes the second leading cause, and by age 65 it is the leading cause by a significant margin. Clearly, many Lancaster Countians, unaware or ignoring the danger, may be quietly and efficiently setting the scene for premature death through poor lifestyle choices.

Disparity rates in Lancaster County reflect the national trends outlined below. From 1994 to 1996, age-adjusted mortality for whites from coronary heart disease was 207.8 per 100,000. For African Americans overall, the mortality rate was significantly higher at 306.

- Males, regardless of race, died at higher rates than females, 266.9 per 100,000 as opposed to 165.3 for women.
- African American males were the most profoundly affected with a death rate of 317.7.
- African American females have a death rate of 283.0, higher than both white males (267.4) and white females (164.6). (NHLBI, 1994–96, chart 1).
- In Lancaster County, African American males suffer the highest age-adjusted mortality rate at 153.9 while white males die from heart attack at the rate of 98.5.
- Congestive heart failure afflicts whites much more than African Americans, with a death rate of 25.3 in contrast to 7.9. In this case, white women fare better than white men, but African American women fare worse than African American men.

12-1 Reduce Coronary Heart Disease Deaths

HP 2010 Goal 1998	United States 1998	Pennsylvania 1998	Lancaster County
166	208.3	209.3	186.2

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12-1 Reduce CHD Deaths,
Age-Adjusted* Lancaster Death Rates, by Race and Gender

Years	Total	Whites			Blacks		
		Males	Females	Total	Males	Females	Total
1979–1983	331.2	443.3	251.6	331.4	602.9	254.6	397.1
1984–1988	277.8	352.1	224.5	277.7	457.3	211.6	315.8
1989–1993	228.5	294.8	183.0	229.4	171.2 U	185.0	180.5
1994–1998	198.4	257.6	155.0	198.1	295.2	251.1	274.6

*to 2000 Standard Population U=Statistically Unreliable CHD=ICD 9 codes, 402, 410–414, 429.2

CHD Death Rates for Pennsylvania, Age-Adjusted* by Race and Gender

Years	Total	Whites			Blacks		
		Males	Females	Total	Males	Females	Total
1979–1983	371.1	489.9	296.7	376.8	358.6	243.0	290.4
1984–1988	310.7	406.9	249.4	314.4	322.1	218.4	260.1
1989–1993	264.2	343.8	207.1	263.7	341.9	224.2	271.3
1994–1998	228.5	291.8	180.5	227.4	317.5	201.0	247.5

*to 2000 Standard Population

CHD Death Rates for the United States, Age-Adjusted* by Race and Gender

Years	Total	Whites			Blacks		
		Males	Females	Total	Males	Females	Total
1979–1983	340.9	456.2	259.0	341.4	428.5	286.5	346.2
1984–1988	295.0	388.7	226.6	294.2	390.8	263.7	316.3
1989–1993	252.9	328.1	194.3	250.4	363.1	244.7	244.9
1994–1998	223.3	285.1	172.4	220.7	323.1	223.3	264.8

*to 2000 Standard Population

12-7 Reduce Stroke Deaths

HP 2010 Goal 1998	United States 1998	Pennsylvania 1998	Lancaster County 1998
48	59.6	56.7	53.4

Stroke kills more African American men at 82.6 per 100,000, a much higher rate than both white genders. Interestingly, African American women in Lancaster have the lowest stroke mortality rate at 28.2.

12-7 Reduce Stroke Deaths,
Age-Adjusted* Lancaster Death Rates by Race and Gender

Years	Total	Whites			Blacks		
		Males	Females	Total	Males	Females	Total
1979–1983	76.2	80.2	72.6	76.0	106.5 U	94.7 U	105.1 U
1984–1988	64.1	66.2	62.0	63.9	59.7 U	92.1 U	81.3 U
1989–1993	58.5	60.7	55.9	58.1	97.4 U	81.4 U	89.2 U
1994–1998	57.9	60.4	56.0	58.2	48.3 U	27.2 U	36.1 U
1979–1988	69.7	72.7	66.9	69.5	81.4 U	93.3 U	92.0
1989–1998	58.3	60.6	56.0	58.2	69.6 U	51.3 U	59.5

U=Statistically Unreliable

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Stroke Deaths Age-adjusted*		
Years	Females	Males
1979–1983	72.7	80.4
1984–1988	62.2	66.1
1989–1993	56.2	69.2
1994–1998	55.8	60.1
*to 2000 Standard Population		

Although we do better than national and state rates, we have yet to meet the HP 2010 goals. At this time, we do not have NHANES data for Lancaster to compare to the US on the other HP indicators. Additional data that is relevant to lifestyle choices and risk factors will be collecting through the local BRFSS being conducted in Lancaster County. The questions will include information on diet, exercise, awareness, access to care, screening, and compliance with doctor's recommendations with regard to these health issues.

Disparity

In the case of heart attack and stroke, swift and immediate treatment is the key to survival. Long delays in seeking medical attention for symptoms are associated with factors such as age (older), gender (female), race or ethnicity, low socioeconomic status, and prior medical condition. Coexisting conditions such as high blood cholesterol, high blood pressure, and congestive heart failure affect disparity in death rates.

- According to the American Heart Association's *2002 Heart and Stroke Statistical Update*, age-adjusted death rates for cardiovascular disease, including stroke, was 42 percent higher in African American males than white males, and
- 65 percent higher in African American females than white females, and nearly twice as high in males as females. (Healthy People 2010, *Heart Disease and Stroke*, p. 4).

Relevant Facts

- The age-adjusted prevalence of cardiovascular disease in adults is:

  30 percent for white males
  23.8 percent for white females
  40.5 percent for African American males
  39.6 percent for African American females
  28.8 percent for Mexican American males
  26.6 percent for Mexican American females
  (NHANES III (1988–94) CDC, NHS)

- The prevalence of high blood pressure in African Americans in the U.S. is among the highest in the world. Compared with whites, they develop HBP earlier in life and their average blood pressure is much higher, increasing their rate of fatal stroke 1.8 times, and of heart disease death 1.5 times.
- A higher percentage of men than women have high blood pressure until the age of 55.
- When adjusted for age, stroke deaths are almost 80 percent higher in African Americans than in whites and about 17 percent higher in men than women.
- The age-adjusted stroke incidence rates (per 1,000 person-years) are:

  1.78 for white men

  4.44 for African American men

  1.24 for white women

  3.10 for African American women
  (NHLBI's ARIC study, *Stroke* 1999)

- Among children and adolescents ages 4–19, females have significantly higher mean total cholesterol and low-density lipoprotein (LDL) cholesterol than males.

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- Non-Hispanic black children and adolescents have significantly higher mean total cholesterol, LDL, and HDL levels when compared to non-Hispanic white and Mexican American children and adolescents (NHANES III, 1988–94, CDC, NCHS).

Culturally and linguistically appropriate counseling by health care providers is critical to reducing the disparity evident from these statistics. Accessibility to preventive health monitoring and education to ensure early detection and intervention must be investigated and corrected if this disparity is to be eliminated or reduced.

Best Researched Practices

The risk for heart attack and death among persons with established coronary heart disease (CHD) or other atherosclerotic (hardening of the arteries) disease is five to seven times higher than it is for the general public. (Healthy People 2010, National Cholesterol Education Program, "Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults"). Risk factor control in the 12 million adults in this country with CHD could lower the overall rate of heart attacks and CHD deaths by 20 percent. Many people with CHD are not receiving the aggressive risk factor management that they need to comply. While many know their cholesterol levels and blood pressure and understand their relationship to heart disease, compliance with recommended interventions seems to provide a challenge for most people.

- Clinical trials have proven that lowering low-density lipoprotein (LDL) cholesterol levels and lowering blood pressure dramatically reduces total deaths from heart disease, stroke, heart attacks, and coronary heart disease.
- People need to be willing and able to carry out dietary and exercise recommendations.
- Health care providers and health care systems must provide encouragement and monitoring of therapeutic interventions by supporting lifestyle changes and long-term patient cooperation with pharmacological regimens.
- Advanced technology, such as magnetic resonance imaging and ultrasound, allows researchers to screen noninvasively and painlessly for developing atherosclerosis.
- Early management strategies in the area of public outreach and community health interventions are needed to help people lower their cholesterol and manage their blood pressure.
- Delivering outreach messages in ways that people from all cultures can understand and incorporate into their unique cultural lifestyles is critical to reducing disparities.
- Smoking cessation programs that are culturally competent are important parts of health care in the United States.

Early identification and treatment in both heart attack and stroke is critical to both survival and limiting damage. Early treatment of heart attack reduces heart-muscle damage, improves heart muscle function, and lowers the heart attack death rate. (Healthy People 2010, *Heart Disease and Stroke, Rapid Identification and treatment of patients with acute myocardial infarction, 1994 Annals of Emergency Medicine*, 23:311–329)

- Recognition of collapse or symptoms by bystanders is a key factor because the sooner CPR and defibrillation is administered, the greater the chance of survival
- The American Heart Association stresses the importance of calling 911 when symptoms arise, rather than calling family or friends, your physician, or waiting for them to pass. Calling 911 at the first sign of symptoms will grant you early access to emergency care services and, improve your chance of survival.
- Patients who receive clot-dissolving agents in the first and second hours after the onset of a heart attack experience significant reductions in disability and death (Healthy People 2010, 1996, *Lancet* 348:771–775).

- Other effective acute interventions include balloon angioplasty, coronary stenting, and coronary artery bypass surgery.

Reestablishing blood flow in the affected coronary artery as quickly as possible is always the primary objective. As with heart attacks, deaths from stroke can be reduced or delayed by using the most effective therapies in the most timely way. Damage that results in permanent disability can be minimized if a person is treated with clot-dissolving therapy within three hours of a stroke (Healthy People 2010, 1995, *New England Journal of Medicine* 333(24):1581-1587).

Local Assets

American Heart Association
(717) 393-0725
Operation Stroke, through the local American Heart Association
http://www.americanheart.org/

Community Hospital of Lancaster
Cardiology (717) 239-4219
Cardiac Rehabilitation (717) 396-0150

Ephrata Wellness Program
(717) 859-3991
ECHWellness@yahoo.com

HealthSouth
(717) 691-3718

Lancaster General Health Campus
Cardiac Rehabilitation
(717) 290-3126

Lancaster General
Heart Center (717) 290-4921
Pulmonary Services (717) 290-5930
Stroke Center (717) 290-3170

The Lancaster Heart Foundation
(717) 290-6680

Lancaster Regional Medical Center
Cardiac Rehabilitation (717) 291-8593
Cardiology Services (717) 291-8268
Heart Hospital (717) 291-8208

St. Joseph Health Ministries
Life Enhancement Center
(717) 239-1195

American Heart Association Basic Life Support Courses Offered at the following locations:
Ephrata Community Hospital—Wellness Center
(717) 859-3991

Masonic Homes
717-367-1121 ext. 33816

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Lancaster EMS
(717) 481-4841

Lancaster General Hospital Wellness Center
(717) 290-3138

Additional Resources

American Heart Association
2002 Heart and Stroke Statistical Update, *from:*
http://www.americanheart.org/presenter.jhtml?identifier=1200000

American Stroke Association
About Stroke, from: http://www.nhlbi.nih.gov/resources/deca/descriptions/asympt.htm

Centers of Disease Control, 2002, Cardiovascular Health: Preventing Heart Disease and Stroke, from: http://www.cdc.gov/nccdphp/cvd/cvdaag.htm

Healthy People 2010, Cardiovascular Health Partners
http://www.heartandstrokepartners.org

The National Heart, Lung and Blood Institute Health Information Center
(301) 592-8573
http://www.nhlbi.nih.gov
and Publication Resources for Women, Hispanics, and African Americans, from:
http://www.nhlbi.nih.gov/health/pubs/pub_gen.htm#women

National Stroke Association
1-800-STROKES
http://www.stroke.org

National Institute of Neurological Disorders and Stroke (NINDS)
Brain Resources and Information Network (BRAIN)
NINDS/NIH
1-800-496-5751
http://www.ninds.nih.gov

PA Department of Health, 1996 Behavioral Health Risks of Pennsylvania Adults
http://webserver.health.state.pa.us/health/site/default.asp

U.S. Department of Health and Human Services Healthfinder
http://www.healthfinder.gov

Information on Lowering Cholesterol and Information on Lowering High Blood Pressure
National Institutes of Health
http://www.nhlbi.nih.gov/chd and www.nhlbi.nih.gov/hbp

What We Can Do

Businesses and Institutions

- Encourage and facilitate workplace programs such as Weight Watchers to help employees with weight and obesity issues.
- Support national initiatives such as the American Heart Association's Heart Walk by encouraging workplace teams.
- Support and encourage lunchtime walkers and other opportunities for employees to participate in regular physical activities.
- Invite education programs into the workplace that teach early warning sign recognition of heart attack and stroke in others and themselves.
- Sponsor and provide yearly opportunities for cholesterol checks and blood pressure monitoring through employee health programs.
- Churches and nonprofit health organizations target minority populations especially vulnerable to coronary heart disease and stroke risk in health fairs and information fairs located within easily accessible community areas and in culturally and linguistically appropriate formats.
- Hospitals, doctors' offices, and church and parish nurses commit to an ongoing campaign designed to support people in controlling risk factors like weight, smoking, and exercise on a regular basis.
- Support programs that educate the public in clinically proven diet choices like the Therapeutic Lifestyle Change (TLC) cholesterol-lowering diet and the DASH, Dietary Approach to Stop Hypertension, diet.
- Provide rewards and incentives for employees successful at smoking cessation, weight loss, and regular exercise programs.
- Community education in the form of public speaking engagements.
- Stroke screenings
- Provide educational programs to primary and secondary schools on heart attack and stroke.

Individuals

- Know your hereditary and genetic risk for coronary heart disease and stroke.
- Know your cholesterol numbers, including HDL and LDL, and what they mean. Have these numbers checked yearly.
- Know your blood pressure numbers and what is optimal for you. Have your blood pressure checked regularly.
- Lose weight if you are overweight or obese.
- Peri- and post-menopausal women should insist on risk factor evaluations from their doctors for heart disease and stroke.
- Consult the American Heart and Stroke Association for guidelines for the right kind of diet for your goals.
- Engage in regular physical activity, at least 30 minutes per day on most, if not all, days.
- Take your medication faithfully if you are receiving drug treatment for high blood pressure or for lowering your cholesterol.

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- If you are a parent, make certain your children follow a healthful diet and get regular exercise. Model these positive behaviors for them. Do not allow your children to become overweight.
- Indulge in fast food only rarely and make wise choices. Reduce sodium consumption.
- Increase your consumption of fruit, vegetables, and high-fiber carbohydrates, using meat as a garnish.
- Don't smoke. If you do, join a smoking cessation program and enlist the aid of your family doctor.
- Participate in AHA's community Operation Stroke initiative.

Remaining Questions

- How can we better educate people to recognize stroke symptoms?
- In what ways can communities encourage habits and behaviors to prevent heart disease and stroke?
- How do we get schools to do a better of job of providing heart healthy meals, physical education, and health training to set up a lifetime of making heart-wise choices?
- How can local organizations, institutions, and schools work together to move forward their initiatives regarding heart disease and stroke.
- Are we effectively targeting women in education and prevention initiatives? How can we improve our work with this audience?
- How can we more competently reach and educate minority populations regarding heart disease and stroke?

Related Objectives from Other Focus Areas

Access to Quality Health Services

1-3	Counseling about health behaviors
1-7	Core competencies in health provider training
1-10	Delay or difficulty in getting emergency care
1-11	Rapid pre-hospital emergency care

Chronic Kidney Disease

4-2	Cardiovascular disease deaths in persons with chronic kidney failure

Educational and Community-Based Programs

7-2	School health education
7-5	Work site health promotion programs
7-8	Satisfaction with patient education
7-10	Community health promotion programs
7-11	Culturally appropriate and linguistically competent community health promotion programs
7-12	Older adult participation in community health promotion activities

Health Communication

11-1	Households with Internet access
11-2	Health literacy
11-4	Quality of Internet health information sources
11-6	Satisfaction with health care providers' communication skills

Nutrition and Overweight

19-1 Healthy weight in adults
19-2 Obesity in adults
19-3 Overweight or obesity in children and adolescents
19-5 Fruit intake
19-6 Vegetable intake
19-8 Saturated fat intake
19-9 Total fat intake
19-11 Calcium intake
19-16 Worksite promotion of nutrition education and weight management

Physical Activity and Fitness

22-1 No leisure-time physical activity
22-2 Moderate physical activity
22-3 Vigorous physical activity
22-6 Moderate physical activity in adolescents
22-7 Vigorous physical activity in adolescents
22-11 Television viewing
22-13 Worksite physical activity and fitness
22-14 Community walking
22-15 Community bicycling

Public Health Infrastructure

23-1 Public health employee access to Internet
23-3 Use of geocoding in health data systems
23-10 Continuing education and training by public health agencies
23-16 Data on public health expenditures

Tobacco Use

27-1 Adult tobacco use
27-2 Adolescent tobacco use
27-3 Initiation of tobacco use
27-4 Age at first use of tobacco
27-5 Smoking cessation by adults
27-10 Exposure to environmental tobacco smoke
27-16 Tobacco advertising and promotion targeting adolescents and young adults
27-17 Adolescent disapproval of smoking

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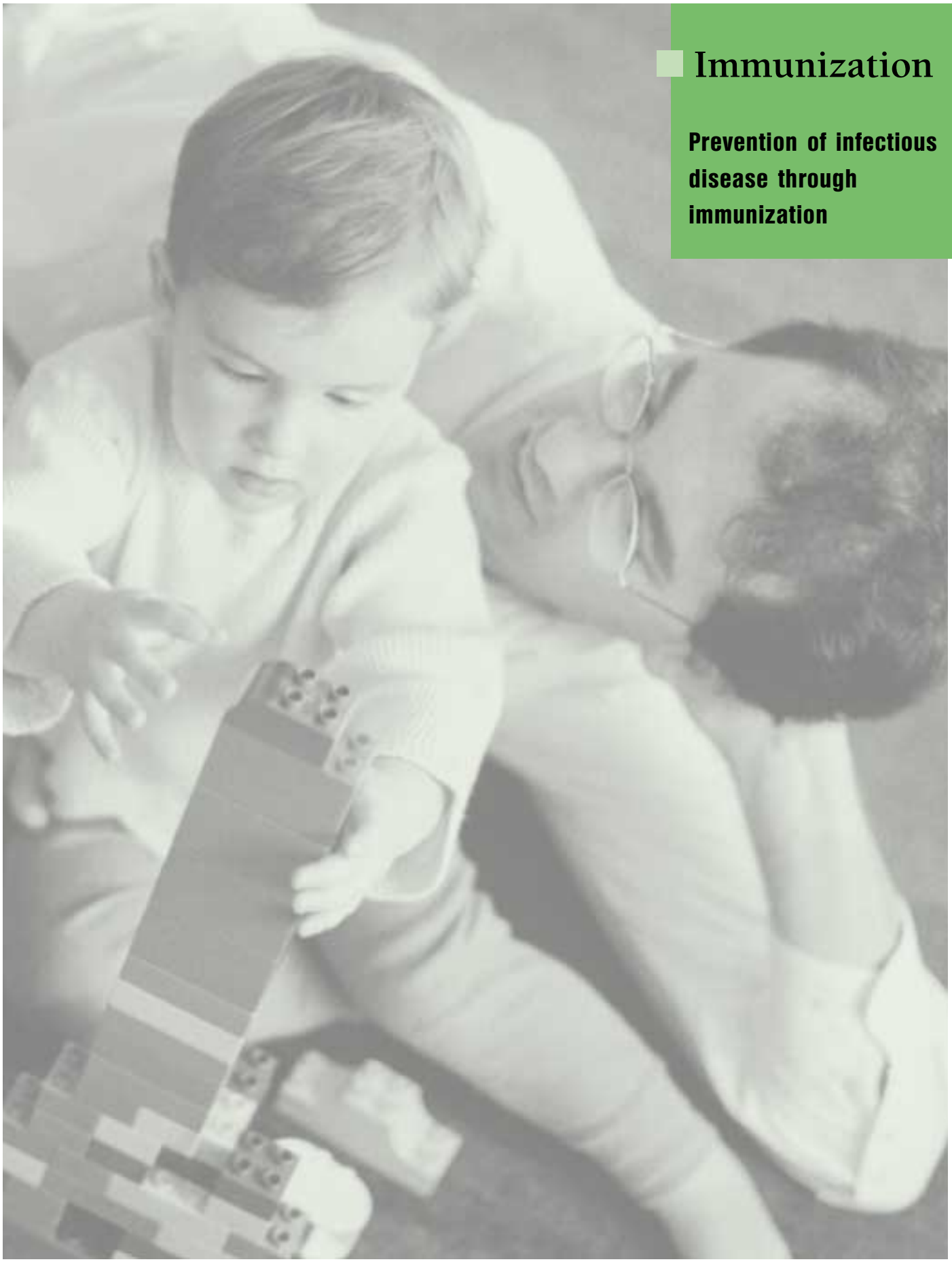

Immunization

Prevention of infectious disease through immunization

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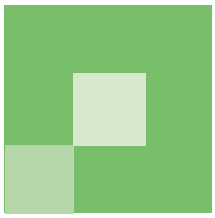

Chilhood Immunizations

Goal: Better than the best

HP 2010 Measures and Local Measures

14-24 Increase the proportion of young children and adolescents who receive all vaccines that have been recommended for universal administration for at least 5 years.

Target and baseline:
Children aged 19 to 35 months who receive the recommended vaccines (4DTaP, 3 polio, 1 MMR, 3 Hib, 3 hep B)
Adolescents aged 13 to 15 years who receive the recommended vaccines (Developmental)
Target-setting method: Better than the best
Data source: National Immunization Survey (NIS), CDC, NCHS and NIP; National Health Interview Survey (NHIS), CDC, NCHS

14-25 Increase the proportion of providers who have measured the vaccination coverage levels among children in their practice population within the past 2 years.

Target and baseline:
Public health providers and private providers
Target-setting method: 36 percent improvement for public health providers; 1,400 percent improvement for private providers
Data source: Immunization Program Annual Reports, CDC, NIP

14-29 Increase the proportion of adults who are vaccinated annually against influenza and never vaccinated against pneumococcal disease.

Target and baseline:
Noninstitutionalized adults aged 65 years and older:
  Influenza vaccine
  Pneumococcal vaccine
Noninstitutionalized, high-risk adults aged 18 to 64 years:
  Influenza vaccine
  Pneumococcal vaccine
Institutionalized adults (persons in long-term or nursing homes†)
  Influenza vaccine
  Pneumococcal vaccine
†National Nursing Home Survey estimates include a significant number of residents who have an unknown vaccination status.
Target-setting method: Better than the best
Data sources: National Health Interview Survey (NHIS), CDC, NCHS—noninstitutionalized populations; National Nursing Home Survey (NNHS), CDC, NCHS—institutionalized populations

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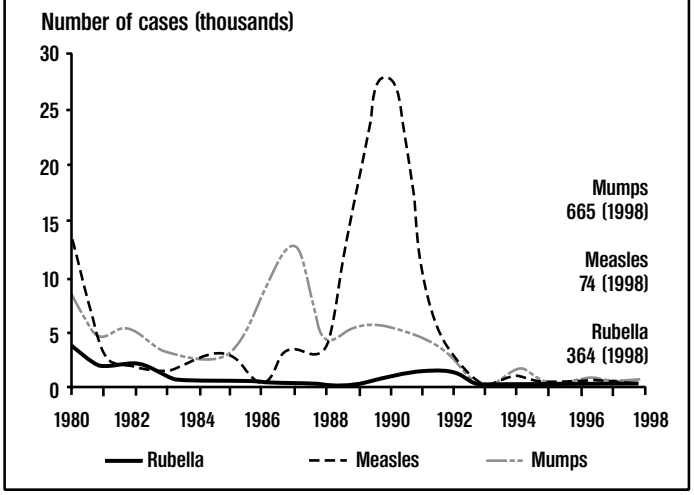
Description

Vaccines are among the greatest public health achievements of the 20th century. Immunizations can prevent disability and death from infectious diseases for individuals and can help control the spread of infections within communities. When vaccination levels in a community are high, those who are not vaccinated are often indirectly protected because they live among vaccinated persons who are less likely to expose them to disease.

Vaccines are biological material that works with the person's immune system to produce a prevention response in the same way as one that is produced when a person is naturally infected. Vaccines can prevent the effects of infectious diseases. Vaccines have helped to eliminate the illness and disability of polio, measles, and rubella. That doesn't mean the diseases have disappeared. They have retreated, but will re-emerge if the vaccination coverage drops. The evidence of this was in the measles outbreak of 1989 to 1991, resulting in more than 55,000 cases, 11,000 hospitalizations, 120 deaths, and $100 million in direct medical care costs. Vaccination coverage levels of 90 percent are, in general, sufficient to prevent circulation of viruses and bacteria-causing, vaccine-preventable diseases.

Vaccine-Preventable Diseases: Number of Cases of Rubella, Measles, and Mumps (by year, United States, 1980–98)



Source: CDC, EPO, National Notifiable Disesases Surveillance System (NNDSS), 1980–98

Infectious diseases still remain major causes of illness, disability, and death. Considered as a group, three infectious diseases—pneumonia, influenza, and HIV infection—constituted the fifth leading cause of death in the United States in 1997. Between 1980 and 1992, the number of deaths from infectious diseases rose 58 percent in the United States. Even when human immunodeficiency virus (HIV)-associated diagnoses are removed, deaths from infectious diseases still increased 22 percent during this period.

New infectious diseases are being detected, but some diseases that public health officials believed were under control have been coming back. This is due to resistant strains evolving rapidly for a variety of reasons, including infected people who may have less than adequate access to the regular and ongoing heath care that is needed to treat some infectious diseases such as tuberculosis.

Infectious diseases must be considered in a global context. Increases in international travel, importation of foods, inappropriate use of antibiotics on humans and animals, and environmental changes multiply the potential for worldwide epidemics of all types of infectious diseases. Actions taken to improve health in one country affect the health of people worldwide (source: HP 2010).

Childhood Immunization

Since 1989, vaccination requirements have been expanded for schools and day care settings. As of the 1998–99 school year, all states required vaccination against diphtheria, measles, and polio. Similarly, all states and the District of Columbia now require vaccination for children in day care.

Childhood immunization rates measure other aspects of health status in a community: access to pediatric primary care and public health immunization programs. Smallpox has been eradicated. Vaccinations have reduced reported cases of the most common childhood illnesses (measles, mumps, rubella, varicella, diphtheria, tetanus, pertussis, polio, hepatitis B, and invasive Hib disease) to record-low levels. Pertussis among children will be reduced by increasing vaccination coverage, but the disease will continue to occur because the organism circulates among older age groups and the vaccine is not 100 percent effective. Hepatitis B virus (HBV) infection will be reduced greatly as the age groups covered by universal infant and adolescent vaccination efforts enter young adulthood, a period when the risk of HBV infection increases.

Three childhood vaccines—diphtheria, tetanus toxoids, and acellular pertussis vaccine (DTaP); measles, mumps, and rubella vaccine (MMR); and *Haemophilus influenzae* type b (Hib) vaccine—result in substantial direct medical savings for each dollar spent to vaccinate children against these diseases. Consideration of indirect savings—prevention of work loss by parents to care for ill children and prevention of death and lost earnings from disability—shows that vaccines routinely recommended for children are highly cost saving. Savings range from $24 for every dollar spent on DTaP to $2 for the more recently approved Hib vaccine (source: HP 2010).

All children born in the United States (11,000 per day) should be receiving 12 to 16 doses of vaccine by age 2 years to be protected against 10 vaccine-preventable childhood diseases. This recommendation will change in the years ahead as new vaccines are developed, including combinations of current vaccines that may even reduce the number of necessary shots. To decrease hepatitis A transmission, universal vaccination was recommended in 1999 for children who lived in states where the rate of new cases was greater than two times the national average.

Data

National Target and Baseline:

Objective	Increase in Coverage Levels of Universally Recommended Vaccines	1998 Baseline	2010 Target
		Percent	
14-24a	Children aged 19 to 35 months who receive the recommended vaccines (4DTaP, 3 polio, 1 MMR, 3 Hib, 3 hep B)	73	80
14-24b	Adolescents aged 13 to 15 years who receive the recommended vaccines	Developmental	

Measuring vaccination coverage is difficult, as no mandated and universal reporting system has been established in Pennsylvania for children or adults. But some evidence about the achievement of the HP 2010 objective (14-24a)—that children aged 19 to 35 months should have received 4 doses of DTP vaccine, 3 doses of polio vaccine, 1 dose of MMR vaccine, 3 doses of Hib vaccine, and 3 doses of HepB vaccine (the so called 4:3:1:3:3 series)—is available from the National Immunization Survey (NIS), conducted by the National Immunization Program (NIP) of the Centers for Disease Control (CDC). This national survey, covering approximately 30,000 randomly selected children in the 19 to 35 months of age cohort, provides estimates of 4:3:1:3:3 series coverage for the state of Pennsylvania, for Philadelphia, and for the rest of the state (but unfortunately not for any smaller geographical areas within the state).

It would seem appropriate to use the "rest of the state" estimates as reasonably good estimates for Lancaster County. As panel C of Table I-1 suggests, the "Rest of P" has made good progress in improving its 4:3:1:3:3 series coverage during the latter half of the 1990s. The latest figures available, covering the period from July 2000 through June 2001, indicate that the "Rest of P" has achieved coverage of about 83% (83.3 ± 4.8, meaning that we can be "95 percent confident" that the true percent of children vaccinated falls somewhere in the range from 78.5% to 88.1%). This "Rest of PA" rate compares favorably both to the national rate of 74% (74.2 ± 0.9) and to the Philadelphia rate of 71% (71.4 ± 5.4).

For the more limited vaccination series 4:3:1 and 4:3:1:3 (see panels A and B), both Pennsylvania and the nation as a whole show somewhat higher coverage rates, and Pennsylvania, particularly the "Rest of PA," again demonstrates superior coverage rates to those of the nation as a whole. It also appears to be the case that the growth in Pennsylvania's coverage rates has been somewhat more rapid than for the U.S. as a whole.

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We do have some early childhood vaccination coverage data specific to Lancaster County, as measured by the Pennsylvania Department of Health's *Clinic Assessment Software Application* (CASA) results, which compile the vaccination records of two-year-old children (24–35 months) served by public vaccination provider sites (i.e., County or Municipal Health Departments, State Health Centers, and/or Community Health Projects). The table at right presents these data from 1998 through 2002 for all Pennsylvania reporting units (PA total), Lancaster County, and the five Pennsylvania counties that abut Lancaster County.

The most extensive (4:3:1:3:3) vaccination series, which is the focus of the HP 2010 objective, is not reported in the CASA data until 2002. There are two more important distinctions between these data and those compiled in the National Immunization Survey (NIS): (1) the "completed by 24 months" cutoff date of the CASA data is somewhat more restrictive than the NIS cutoff (up to 35 months, depending on the child's age at the time of the survey); and (2) the "public provider only" nature of the CASA data constitutes a more restricted sampling of children in the target population. Nevertheless, the CASA 4:3:1 series coverage rates in the "PA total" column—which do not include any Philadelphia data—are quite compatible with the NIS rates for the "Rest of PA" in panel A of the table I-1(viz: compare 1999 CASA rates of 83% and 85% to 1999 NIS rate of 87% [87.3 ± 4.2]; compare 2000 CASA rate of 86% to 1999 NIS rate of 82% [82.0 ± 5.1]).

In general, the Lancaster coverage rates do not compare favorably with the state rate or with those of our neighboring counties. With the exception of the 2001 results, Lancaster's coverage rates are always below the state rates by "double digits" and always lower than those of four out of our five neighboring counties (the Dauphin County results, however, are decidedly inferior to Lancaster's).

We must be cautious, however, about generalizing these patterns to county populations as a whole. The Lancaster data is compiled from the records of the Lancaster State Health Center, whose clientele may not be wholly representative of the larger county population. Similarly, the Lancaster State Health Center clientele may not be similar to those of reporting units in other counties, so the generally lower coverage rates for Lancaster may reflect demographic differences rather than different coverage rates within otherwise similar populations. One potential explanation we can rule out, however, is that the Lancaster coverage data is influenced by cultural practices endemic to the Amish. The Lancaster State Health Center has only a small number of Amish clients, so results based on its aggregate records are not likely to reflect any such influence. Another

Childhood Immunization Data
(from the National Immunization Survey)

A. Estimated vaccination coverage (4:3:1 series*) among children 19–35 months of age

	U.S.	PA	Philadelphia Co.	Rest of PA
1995	76%	79%	71%	81%
1996	78%	80%	79%	80%
1997	78%	81%	83%	81%
1998	81%	84%	82%	84%
1999	80%	87%	83%	87%
2000	78%	81%	77%	82%
07/00–06/01	78%	86%	78%	87%

*4:3:1 series: four or more doses of DTP/diphtheria and tetanus toxoids and pertussis vaccines; three or more doses of poliovirus vaccine; and one or more doses of any MCV.

B. Estimated vaccination coverage (4:3:1:3 series*) among children 19–35 months of age

	U.S.	PA	Philadelphia Co.	Rest of PA
1995	74%	77%	67%	78%
1996	76%	79%	74%	79%
1997	76%	79%	81%	79%
1998	79%	83%	80%	84%
1999	78%	86%	81%	87%
2000	76%	78%	74%	79%
07/00–06/01	77%	84%	75%	85%

*4:3:1:3 series: 4:3:1 series and three or more doses of Hib vaccine.

C. Estimated vaccination coverage (4:3:1:3:3 series*) among children 19–35 months of age

	U.S.	PA	Philadelphia Co.	Rest of PA
1995	55%	62%	46%	65%
1996	68%	70%	72%	70%
1997	69%	71%	69%	71%
1998	73%	76%	69%	77%
1999	73%	81%	70%	83%
2000	73%	78%	71%	79%
07/00–06/01	74%	82%	71%	83%

*4:3:1:3:3 series: 4:3:1:3 series and three or more doses of HepB vaccine.
Source: compiled from data available at the National Immunization Program Web site, http://www.cdc.gov/nip/coverage/#NIS
Notes: these data are derived from a random-digit-dialing telephone survey to determine vaccination records of about 30,000 children across the country in the 19–35 months of age birth cohort. Vaccination coverage information is obtained from parents and then checked with reported vaccination providers. Coverage rates in this table are rounded from 1 decimal point; 95% confidence intervals for PA rates are generally in the '*plus or minus*' 4 to 5 range.

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Pennsylvania Childhood Immunization Data
(from Clinic Assessment Software Application (CASA) Results*)

Recorded (4:3:1 series; 4:3:1:3:3 series starting in 2002) vaccination rates, completed by 24 months of age; from immunization records of children aged 24–35 months who are receiving vaccinations at public immunization provider sites; data collected from State Health Centers, County/Municipal Health Departments, and/or Community Health Projects

	PA Total[a]	Lancaster[b]	Berks[c]	Chester[d]	Dauphin[c]	Lebanon[e]	York[e]
Date/Series							
Sept. 1998 4:3:1	78%	60%	70%	68%	54%	94%	92%
Mar. 1999 4:3:1	83%	65%	90%	73%	42%	92%	94%
Sept. 1999 4:3:1	85%	71%	87%	91%	43%	93%	93%
Mar. 2000 4:3:1	86%	65%	88%	87%	44%	97%	89%
Mar. 2001 4:3:1	89%	85%	84%	80%	71%	90%	89%
Mar. 2002 4:3:1	84%	71%	88%	80%	n.a.	90%	94%
4:3:1:3:3	81%	66%	84%	76%	n.a.	85%	88%

4:3:1 series: four or more doses of DTP; three or more doses of poliovirus vaccine; and one or more doses of any MCV (e.g., MMR).
4:3:1:3:3 series: **4:3:1** series and 3 or more doses of Hib vaccine and 3 or more doses of HepB vaccine.

[a]PA total: 63 reporting units, including 8 County/Municipal Health Departments and 55 State Health Centers and/or Community Health Projects (note: Philadelphia not included)
[b]Lancaster County State Health Center, 1661 Old Philadelphia Pike, 299-7597
[c]Berks County, Dauphin County: Community Health Projects
[d]Chester County: County Health Department
[e]Lebanon County, York County: State Health Centers

*Source: Michael Jamula (717-783-254-8235), Pennsylvania Department of Health, Bureau of Health Statistics

possibility that could provide some explanation with further research is that the Lancaster State Health Center may serve a disproportionately high number of "immigrants" and/or otherwise "transitory" families.

Returning to the NIS data, we can also find some information regarding differences in coverage rates by race and ethnicity (see the table at right). In the most recently published 4:3:1:3:3 coverage results (for July 2000–June 2001), white, non-Hispanic children had the highest coverage rate across the nation as a whole: 76.4. Asian children exhibited no significant difference, at 76.0, but the same cannot be said of Hispanic and black, non-Hispanic children, whose coverage rates were, respectively, 71.3 and 69.8. Within Pennsylvania, smaller sample sizes generated a more limited set of statistically meaningful results. In Philadelphia, white, non-Hispanic children showed a 78.1 coverage rate, as against one of only 66.2 for black, non-Hispanic children; in the "Rest of PA" the white, non-Hispanic coverage rate was slightly greater, at 83.9, than the total (i.e., all-group) coverage rate of 83.3 (see the table). Unfortunately, no coverage rates specific to Hispanic children living in Pennsylvania are available from the NIS survey data.

As might be expected, children living in poor households are less likely to have completed the 4:3:1:3:3 series; furthermore, there appears to be very little difference in coverage rates across racial/ethnic groups for children who live in poor households (compare across row 1.a.1 of the table). For the entire country, poverty status appears to exert a more powerful (negative) effect than central city residence, whereas the opposite might appear to be true for Pennsylvania (see Panel B). However, this result may be driven by an over-sampling within Pennsylvania of Philadelphia County, which is an Immunization Action Plan Area. If children in Philadelphia are more likely to be poor than children in other Pennsylvania cities, then an over-sampling of Philadelphia will cause a larger difference associated with residency status in Pennsylvania than would otherwise be the case.

The "good news" is that even poor and/or city resident children in Pennsylvania show a higher vaccination series completion rate than the total U.S. rate and, furthermore, the "non-poor" U.S. (compare **bold values** in Panel B), although not to a statistical certainty. Similarly, the vaccination rate among white, non-Hispanic children in Pennsylvania is decidedly higher—and this time to a "statistical certainty"—than it is for the same demographic group in the nation as a whole. While we do not have sufficient evidence to speak with certainty about other racial and/or ethnic groups, it seems reasonable to surmise that, within a given racial/ethnic category, Pennsylvania children are more likely to have completed the 4:3:1:3:3 vaccination series than children in the rest of the nation. It is troubling, however, to note that Philadelphia children, particularly those within the black population, do not measure up well against the overall national rate (i.e., total U.S. coverage rate = 74.2±0.9>

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Evidence on 4:3:1:3:3 Vaccination Rates Among Children 19–35 Months of Age by Race and Ethnicity, Poverty Status, and Central City Residence, from the National Immunization Survey, July 2000–June 2001

Panel A. Race and Ethnicity

	White, non-Hispanic	Black, Hispanic[a] non-Hispanic	Asian	Amer. Indian or Pac. Islr.	Amer. Indian or Alaska Nat.
1.a United States	76.4±1.0	69.8±2.6	71.3±2.1	76.0±4.8	71.3±8.7
1.a.1 Poor[b]	69.3±3.6	69.3±4.0	68.3±3.7	na	na
2.a Pennsylvania	83.5±4.7	na	na	na	na
2.a.1 Philadelphia	78.1±9.0	66.2±8.1	na	na	na
2.a.2 Rest of PA	83.9±5.0	na	na	na	na

Panel B. Poverty Status and Central City Residence

	Total	Poor[b]	non-Poor[b]	Central City[c]
1.b United States	74.2±0.9	68.7±2.2	76.1±1.0	72.6±1.4
2.b Pennsylvania	81.5±4.2	79.7±9.6	82.5±5.0	77.5±6.9
2.b.1 Philadelphia	71.4±5.4	na	80.5±6.5	71.4±5.4
2.b.2 Rest of PA	83.3±4.8	na	82.7±5.5	na

Notes:
[a]Children of Hispanic ethnicity may be of any race; estimated percentages of Hispanic children 19–35 months of age: U.S., 22.1±0.8; Pennsylvania, 7.0±2.3; Philadelphia, 13.1±3.7; "Rest of PA," na; estimated percentages of white, non-Hispanic children 19–35 months of age: U.S., 57.3±0.9; Pennsylvania, 74.6±4.4; Philadelphia, 30.9±5.4; "Rest of PA," 82.3±5.1; estimated percentages of black, non-Hispanic children 19–35 months of age: U.S., 15.4±0.8; Pennsylvania, 14.7±3.5; Philadelphia, 50.6±6.0; "Rest of PA," na.
[b](non-)Poor=children living in households with income levels (at or above) below the poverty threshold; estimated percentages of children 19–35 months of age living in poverty: U.S., 20.6±0.8; Pennsylvania, 13.8±3.7; Philadelphia, 28.4±5.4; 'Rest of PA', na;
[c]Central City=children living in a central city of a metropolitan statistical area; estimated percentages of children 19-35 months of age living in an MSA central city: U.S., 36.6±0.9; Pennsylvania, 34.0±4.5; Philadelphia, 100.0 (Philadelphia is a central city); 'Rest of PA', 22.3±5.3
na=not available, generally due to small sample size.

Source: compiled from data available at the National Immunization Program Web site: http://www.cdc.gov/nip/coverage/#NIS

Philadelphia rate = 71.4±5.4 > Philadelphia black rate = 66.2±8.1). Indeed, the coverage rate for all black children in Philadelphia is below the observed rates for poor children within each of the (white, black, and/or Hispanic) racial/ethnic categories.

Adult Immunization

As the U.S. population ages, more adults will be at risk for infectious diseases to be a major cause of illness and death. Persons with high-risk conditions such as heart disease, diabetes, and chronic respiratory disease remain at increased risk for these diseases, as do persons living in institutional settings. They are more likely to experience serious complications brought on by weakened immune systems.

Immunizations against influenza and pneumococcal disease are important. Adult immunization rates are not as high as children's rates, yet the health effects may be just as great. Pneumococcal disease and influenza account for more than 30,000 deaths annually, most of which occur in elderly persons. Many adults don't know which immunizations are needed, don't understand vaccinations, and are not adequately informed by their health care providers. Current levels of coverage among adults vary widely among age, risk, and racial and ethnic groups. High-risk adults aged 18 to 64 years may not have insurance coverage for influenza and pneumococcal vaccines. Influenza and pneumococcal vaccines are covered by Medicare; thus vaccinating greater numbers of adults aged 65 years and older is feasible.

Vaccination rates among persons aged 65 years and older continued to increase over the past decade. Influenza vaccine coverage rates were up from 33 percent in 1989 to 64 percent in 1998, and pneumococcal vaccine coverage rates were up from 15 percent to 46 per-

cent. Despite these increases, coverage rates for certain racial and ethnic groups remain substantially below the general population

Any new universally recommended vaccine for adults should be at a 60 percent coverage level within five years of recommendation. Recommended immunizations for adults aged 65 years and older include a yearly immunization against influenza (the "flu shot") and a one-time immunization against pneumococcal disease. In 1996, a vaccine against hepatitis A virus (HAV) was licensed that has the potential to reduce the health burden of this disease. The vaccine is now recommended primarily for high-risk groups.

National Target and Baseline:

Objective	Increase in Adults Vaccinated	1998* Baseline (unless noted)	2010 Target
		Percent	
	Noninstitutionalized adults aged 65 years and older		
14-29a	Influenza vaccine	64	90
14-29b	Pneumococcal vaccine	46	90
	Noninstitutionalized high-risk adults aged 18 to 64 years		
14-29c	Influenza vaccine	26	60
14-29d	Pneumococcal vaccine	13	60
	Institutionalized adults (persons in long-term or nursing homes)†		
14-29e	Influenza vaccine	59 (1997)	90
14-29f	Pneumococcal vaccine	25 (1997)	90

*Age adjusted to the year 2000 standard population.
†National Nursing Home Survey estimates include a significant number of residents who have an unknown vaccination status.
See *Tracking Healthy People 2010* for further discussion of the data issues.

Local Data

Objective	Increase in Adults Vaccinated	State (1999)	State (1997)	State (1996)	Local
	Noninstitutionalized adults aged 65 years and older				
14-29a	Influenza vaccine	64±4	67±4	62±4	NA
14-29b	Pneumococcal vaccine	54±4	48±4	43±4	NA
	Noninstitutionalized high-risk adults aged 18 to 64 years				
14-29c	Influenza vaccine	23±2	19±2	17±2	NA
14-29d	Pneumococcal vaccine	9±1	9±1	9±1	NA

Disparities

Significant achievements were made among racial and ethnic groups in that most of the 1996 goals for the Childhood Immunization Initiative were met for individual vaccines. Vaccination rates for preschool children in racial and ethnic groups with lower vaccination rates, however, have been increasing at a more rapid rate, significantly narrowing the gap. Neighborhood Health Centers, Head Start and early school programs have increased the number of vaccinated children. But very young children are still at risk, particularly children living in poverty in both urban areas or isolated rural communities.

The updated *Preventing Emerging Infectious Diseases: A Strategy for the 21st Century* focuses on certain emerging infectious disease issues and on particular groups of people at risk. In addition to very young children, many adults are at increased risk for VPDs.

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Vaccination against pneumonia and influenza among persons aged 65 years and older has increased slightly for African Americans and Hispanics. The coverage in these groups, however, remains substantially below the general population. For example, influenza vaccination rates for whites were 66 percent in 1997, while for African Americans and Hispanics rates were only 45 percent and 53 percent, respectively. In September 1997, the U.S. Department of Health and Human Services approved a plan to improve adult vaccination rates and reduce disparities among racial and ethnic groups. The elimination of disparities, however, may require further interventions in particular geographic, cultural, and racial and ethnic populations (source: HP 2010).

Local Experts

Financing for childhood vaccinations has improved significantly as a result of two initiatives—Vaccines for Children and the States' Children's Health Insurance Programs (CHIP)—that cover children on Medicaid, uninsured children, and American Indian and Alaska Native children. Under-insured children who receive vaccinations at federally qualified health centers also are covered. Because they promote free vaccines for children, these programs eliminate vaccine cost as a barrier to childhood vaccination. Also, the Public Health Service Act, Section 317 immunization grant program and state funds provide free vaccines for children not covered by other programs.

Locally, Southeast Health Center provides vaccines for its patients. Lancaster General's Child Protect Program provides free vaccines. Welsh Mountain Clinic has provided a vaccine outreach program that has gone into local Plain churches to provide immunizations in rural Lancaster County. These have been well attended. This program, however, is in need of staffing as the health care professional shortage has affected their pool of nursing volunteers. Local hospital clinics do not get reimbursed for their vaccination program for the uninsured and one hospital noted that the cost ran as much as $9000 a month in vaccines alone. They have continued to provide outreach programs with the Department of Health, particularly for those adults in high risk categories including those suffering from asthma, CCPD and diabetes during cold and flu season. Most nursing homes also provide vaccination programs to their patients.

Requiring immunizations for school enrollment in public schools in PA has helped increase immunization rates for children in school. But there are many exemptions for private schools and those home-schooled. Compliance by private schools is not mandatory. Licensed child care facilities also require compliance. But most children are not in licensed child care. Changes in required immunizations for all school-age children should be considered. That still leaves very young children unmonitored except through well baby visits. Greater outreach in non-traditional settings may be the best options for increasing coverage.

Adults without insurance are not likely to visit primary care physicians for annual physicals. Nor would a provider readily offer immunization updates to such a patient. Additionally, many adults do not know enough about the importance of immunizations to take advantage of those that exist. Again, non-traditional opportunities must be developed to reach this population and increase awareness of the importance to quality of life and longevity issues. Continued partnerships with the Office of the Aging, home health care organizations, and visiting nurses is essential. But we must increase outreach to churches and service organizations as well.

Researched Best Practices

According to HP 2010 and CDC, the major strategies to protect people from infectious diseases are the following:

- Improving the quality and quantity of vaccination delivery services.
- Minimizing financial burdens for needy persons.
- Increasing community participation, education, and partnership.
- Improving monitoring of disease and vaccination coverage.
- Developing new or improved vaccines and improving vaccine use.

Many communities have used a variety of strategies to increase coverage rates among children and adults. Some of these proven strategies are:

- Over 90 million emergency department visits are made in the United States annually. Emergency department vaccination is likely to increase vaccination rates among select populations that are difficult to vaccinate through office-based programs.
- Churches and community centers hold pot luck suppers that include free vaccination programs.
- Emergency rooms share vaccination information with primary care physicians.
- Private schools also require immunizations as entry requirements for school and report regularly to the department of health.
- PTOs encourage immunizations in extended families.
- Populations can be reached through linkages with other programs, including Women, Infants, and Children (WIC) services or Healthy Beginnings Plus programs.
- State and local registries have enrolled children and record their vaccinations to help parents and providers identify immunization needs of individual children, assessing coverage in individual practices, and generating communitywide estimates.
- All health care providers should assess routinely the vaccination status of their patients. Likewise, health plans should develop mechanisms for assessing the vaccination status of their participants, as vaccinations decrease health care costs.
- Nursing home facilities and hospitals should ensure that policies exist to promote vaccination.
- Guidelines and tools for implementing interventions (such as standing orders for vaccinations) are available through Put Prevention Into Practice, a national campaign to improve delivery of clinical preventive services.

HP 2010 recommends population-based immunization registries that will be a cornerstone of the nation's immunization system by 2010. Responsibility for registry development rests with state and local communities, with assistance from federal agencies and private partners. Registries facilitate the timely vaccination of children by ensuring that the child's complete vaccination history is available to the health care provider. Registries are valuable considering the mobile nature of today's population and that many persons do not see the same provider consistently. Registries also can be used to monitor the vaccination status of populations that are low income, uninsured, and at greater risk for incomplete vaccination.

A fully operational population-based registry includes capabilities to:

- Protect confidential information.
- Enroll all children at the state or community level automatically at birth.
- Give providers access to complete vaccination history.
- Recommend needed vaccinations.
- Notify children who are due and overdue for vaccinations.
- Assess practice and geographic-level coverage.
- Produce authorized immunization records.

Registries may provide other important functions such as assisting in the evaluation of vaccine safety. Registries may serve other purposes as well, including VPD surveillance, vaccine efficacy monitoring, and vaccine inventory management (source: HP 2010).

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Local Assets

Community Hospital of Lancaster—(717) 397-3711

Ephrata Community Hospital—(717) 733-0311

Hepatitis C Clinic—(717) 290-3069

Lancaster County Office of the Aging—(717) 299-7979

Lancaster General's Child Protect Program —(717) 290-5511

Lancaster Regional Medical Center Clinic—(717) 291-8388

PA Dept of Health (local office)—(717) 299-7597

Southeast Health Clinic—(717) 299-6371

State Health Hotline—(800) 692-7254

United Way LINC—(717) 291-LINC (5462)

Welsh Mountain Medical and Dental Clinic—(717) 354-4711

Additional Resources

National Immunization Program/CDC
800-232-2522 (English); 800-232-0233 (Spanish);
888-CDC-FAXX (fax-back);
http://www.cdc.gov/nip/

PA Dept of Health, Division of Immunizations
(717) 787-5681

What You Can Do

Businesses and Institutions

- Work with insurers to improve health care coverage for vaccinations.
- Work with health care providers to distribute information on vaccinations to employees.
- Provide opportunities to get vaccinations conveniently during organized events at the workplace.
- Provide information on recommendations for vaccination to retirees.
- Ask providers to make screening for vaccinations a part of their annual check up of your employees.
- Make vaccinations a part of workplace safety education programs.

Individuals

- Vaccinate your children in a timely manner and keep good records.
- Take your elderly parents for free vaccinations when you see them advertised.
- Call your local Office of the Aging about available programs.
- Have your college-bound student vaccinated before they leave home.
- Check for your vaccination updates at you annual check-up—most immunizations are not once for a lifetime.

Remaining Questions

- How do we encourage insurance companies to increase the scope of immunization coverage.
- How do we increase accessibility to the most vulnerable populations (non-insured) within the economic constraints posed by lack of third-party payment.
- How do we deal with the new threats of bio-terrorism and the building of a quick response infrastructure to deal with possible immunization challenges.
- How do we deal with the issue of confidentiality while trying to track babies and their mothers in a registry to ensure timely immunization for all children under three.

Complete Set of HP 2010 Immunization Related Indicators

Diseases Preventable Through Universal Vaccination

14-1 Vaccine-preventable diseases
14-2 Hepatitis B in infants and young children
14-3 Hepatitis B in adults and high-risk groups
14-4 Bacterial meningitis in young children
14-5 Invasive pneumococcal infections

Diseases Preventable Through Targeted Vaccination

14-6 Hepatitis A
14-7 Meningococcal disease
14-8 Lyme disease

Infectious Diseases and Emerging Antimicrobial Resistance

14-9 Hepatitis C
14-10 Identification of persons with chronic hepatitis C
14-11 Tuberculosis
14-12 Curative therapy for tuberculosis
14-13 Treatment for high-risk persons with latent tuberculosis infection
14-14 Timely laboratory confirmation of tuberculosis cases
14-15 Prevention services for international travelers
14-16 Invasive early onset group B streptococcal disease
14-17 Peptic ulcer hospitalizations
14-18 Antibiotics prescribed for ear infections
14-19 Antibiotics prescribed for common cold
14-20 Hospital-acquired infections
14-21 Antimicrobial use in intensive care units

Vaccination Coverage and Strategies

14-22 Universally recommended vaccination of children aged 19 to 35 months
14-23 Vaccination coverage for children in day care, kindergarten, and first grade
14-24 Fully immunized young children and adolescents
14-25 Providers who measure childhood vaccination coverage levels
14-26 Children participating in population-based immunization registries
14-27 Vaccination coverage among adolescents
14-28 Hepatitis B vaccination among high-risk groups
14-29 Influenza and pneumococcal vaccination of high-risk adults

Vaccine Safety

14-30 Adverse events from vaccinations
14-31 Active surveillance for vaccine safety

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Related Indicators from Other Focus Areas

Access to Quality Health Services

- 1-1 Persons with health insurance
- 1-2 Health insurance coverage for clinical preventive services
- 1-3 Counseling about health behaviors
- 1-4 Source of ongoing care
- 1-5 Usual primary care provider
- 1-6 Difficulties or delays in obtaining needed health care
- 1-7 Core competencies in health provider training
- 1-8 Racial and ethnic representation in health professions
- 1-9 Hospitalization for ambulatory-care-sensitive conditions
- 1-14 Special needs of children
- 1-15 Long-term care services

Educational and Community-Based Programs

- 7-2 School health education
- 7-4 School nurse-to-student ratio
- 7-5 Work site health promotion programs
- 7-6 Participation in employer-sponsored health promotion activities
- 7-7 Patient and family education
- 7-8 Satisfaction with patient education
- 7-9 Health care organization sponsorship of community health promotion activities
- 7-10 Community health promotion programs
- 7-11 Culturally appropriate and linguistically competent community health promotion programs
- 7-12 Older adult participation in community health promotion activities

Environmental Health

- 8-5 Safe drinking water
- 8-6 Water-borne disease outbreaks
- 8-29 Global burden of disease
- 8-30 Water quality in the U.S.-Mexico border region

Food Safety

- 10-1 Food-borne infections
- 10-2 Outbreaks of food-borne infections
- 10-3 Antimicrobial resistance of *Salmonella* species

Health Communication

- 11-1 Households with Internet access
- 11-2 Health literacy
- 11-3 Research and evaluation of communication programs
- 11-4 Quality of Internet health information sources
- 11-5 Centers for excellence
- 11-6 Satisfaction with health care providers' communication skills

HIV

- 13-9 HIV/AIDS, STD, and TB education in state prisons
- 13-11 HIV testing in TB patients
- 13-12 Screening for STDs and immunization for hepatitis B

Maternal, Infant, and Child Health

- 16-22 Medical homes for children with special health care needs

Public Health Infrastructure

23-1 Public health employee access to the Internet
23-2 Public access to information and surveillance data
23-3 Use of geo-coding in health data systems
23-4 Data for all population groups
23-5 Data for Leading Health Indicators, Health Status Indicators, and Priority Data Needs at State, Tribal, and local levels
23-6 National tracking of Healthy People 2010 objectives
23-7 Timely release of data on objectives
23-8 Competencies for public health workers
23-9 Training in essential public health services
23-10 Continuing education and training by public health agencies
23-11 Performance standards for essential public health services
23-12 Health improvement plans
23-14 Access to epidemiology services
23-15 Model statutes related to essential public health services
23-17 Population-based prevention research

Sexually Transmitted Diseases

25-13 Hepatitis B vaccine services in STD clinics

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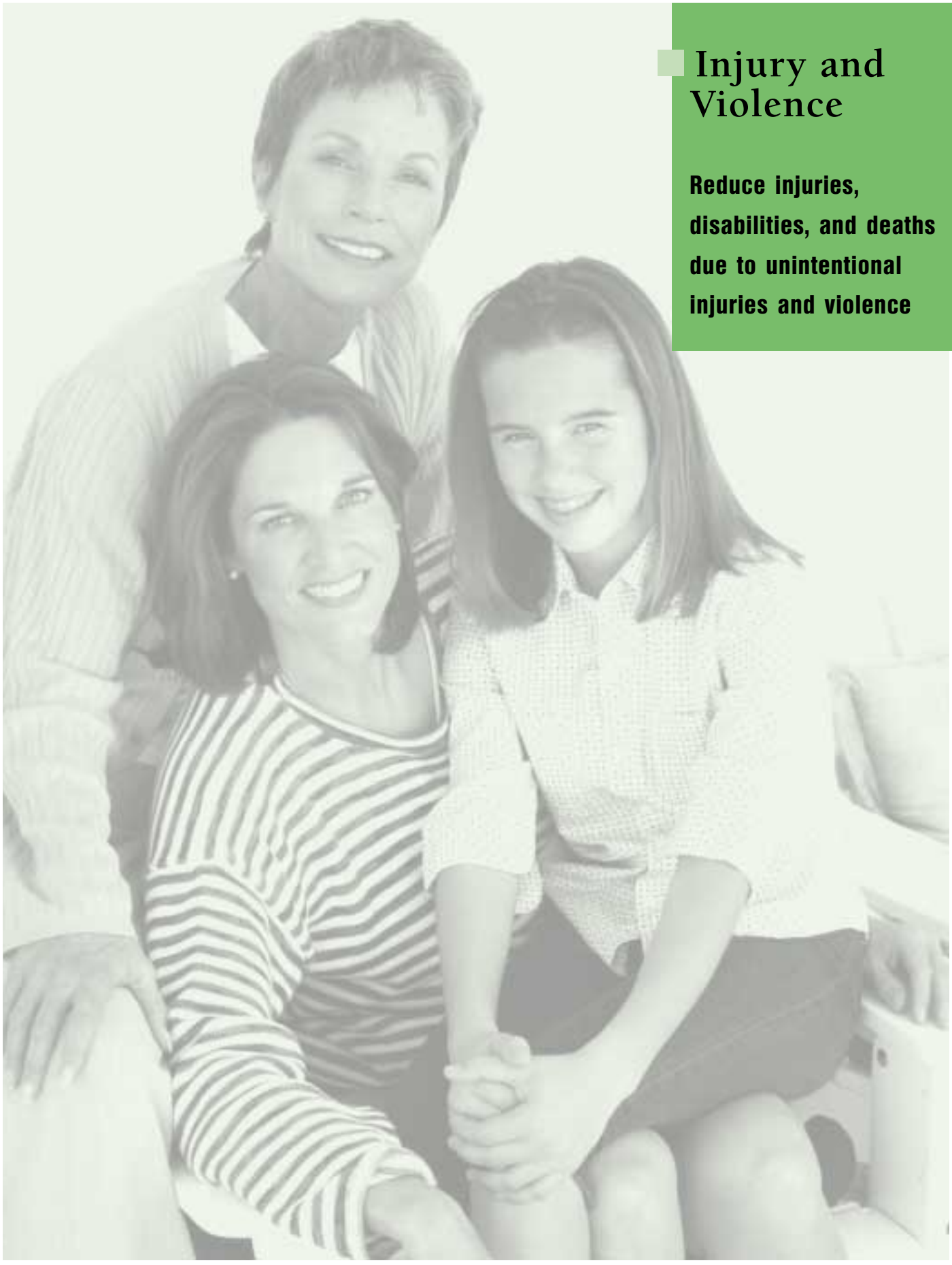

Injury and Violence

Reduce injuries, disabilities, and deaths due to unintentional injuries and violence

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Injuries and Violence

Goal: Better than the best

HP 2010 Measures and Local Measures

15-15 Reduce deaths caused by motor vehicle crashes.

Target and baseline:
Deaths per 100,000 population
Deaths per 100 million vehicle miles traveled
Target-setting method: Better than the best for 15-15a; 50 percent improvement for 15-15b. (Better than the best will be used when data are available.)
Data sources: National Vital Statistics System (NVSS), CDC, NCHS; Fatality Analysis Reporting System (FARS), DOT, NHTSA

15-27 Reduce deaths from falls.

Target: 3.0 deaths per 100,000 population
Baseline: 4.7 deaths per 100,000 population were caused by falls in 1998 (age adjusted to the year 2000 standard population)
Target-setting method: Better than the best
Data source: National Vital Statistics System (NVSS), CDC, NCHS

15-32 Reduce homicides.

Target: 3.0 homicides per 100,000 population
Baseline: 6.5 homicides per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population)
Target-setting method: Better than the best
Data sources: National Vital Statistics System (NVSS), CDC, NCHS; FBI Uniform Crime Reports, U.S. Department of Justice

15-33 Reduce maltreatment and maltreatment fatalities of children.

15-33a Reduce maltreatment of children.

Target: 10.3 per 1,000 children under age 18 years.
Baseline: 12.9 child victims of maltreatment per 1,000 children under age 18 years were reported in 1998.
Target-setting method: 20 percent improvement. (Better than the best will be used when data are available.)
Data source: National Child Abuse and Neglect Data System (NCANDS), Administration on Children, Youth and Families, Administration for Children and Families (ACF), Children's Bureau
Data for population groups currently are not analyzed.

15-33b Reduce child maltreatment fatalities.

Target: 1.4 per 100,000 children under age 18 years
Baseline: 1.6 child maltreatment fatalities per 100,000 children under age 18 years occurred in 1998
Target-setting method: 12 percent improvement. (Better than the best will be used when data are available.)
Data source: National Child Abuse and Neglect Data System (NCANDS), Administration on Children, Youth, and Families, Administration for Children and Families (ACF), Children's Bureau

15-34 Reduce the rate of physical assault by current or former intimate partners.

Target: 3.3 physical assaults per 1,000 persons aged 12 years and older
Baseline: 4.4 physical assaults per 1,000 persons aged 12 years and older by current or former intimate partners occurred in 1998.
Target-setting method: Better than the best
Data source: National Crime Victimization Survey (NCVS), U.S. Department of Justice, Bureau of Justice Statistics

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15-35 Reduce the annual rate of rape or attempted rape.

Target: 0.7 rapes or attempted rapes per 1,000 persons
Baseline: 0.8 rapes or attempted rapes per 1,000 persons aged 12 years and older occurred in 1998
Target-setting method: Better than the best
Data source: National Crime Victimization Survey (NCVS), U.S. Department of Justice, Bureau of Justice Statistics

15-37 Reduce physical assaults.

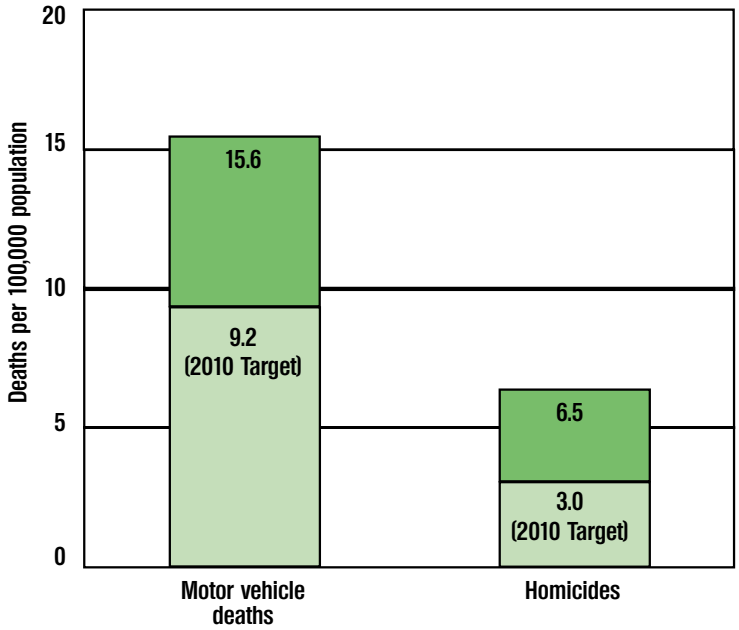
Target: 13.6 physical assaults per 1,000 persons aged 12 years older
Baseline: 31.1 physical assaults per 1,000 persons aged 12 years and older occurred in 1998
Target-setting method: Better than the best
Data source: National Crime Victimization Survey (NCVS), U.S. Department of Justice, Bureau of Justice Statistics

Description

Preventable death due to unintentional injuries is a significant cause of death. It does not include intentional deaths caused by violence. Most persons sustain a significant injury at some time during their lives. (Baker, S.P.; O'Neill, B.; Ginsburg, M.J.; et al. *The Injury Fact Book*. 2nd ed. New York, NY: Oxford University Press, 1992.) Many systems are impacted by and are needed to impact firearm safety, falls, poisoning, fire safety, traffic, and workplace safety. Most injuries are not accidents but are predictable and preventable. Actions taken to reduce deaths from unintentional injuries are also likely to reduce morbidity due to injury. Many areas could be studied, including choking, poisoning, fire, drowning, and suffocation. Motor vehicle crashes are the most common cause of serious injury. We will focus on motor vehicle crashes and also consider death by falls, of particular significance to our aging population. The impact of these injuries on the quality of life is enormous. For example, half of all elderly adults hospitalized for hip fracture cannot return home or live independently after the fracture. The total direct cost of all fall injuries for adults aged 65 years and older in 1994 was $20.2 billion. (Englander, F.; Hodson, T.J.; and Teregrossa, R.A. "Economic dimensions of slip and fall injuries." *Journal of Forensic Science* 41(5): 746–773, 1996.)

In 1998, there were 15.6 deaths from motor vehicle crashes per 100,000 persons.

Motor vehicle deaths and homicides, United States, 1998



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System. 1998

To say that we are a society plagued by violence is a statement that would get little resistance in these times. The violence is more often from within our own homes or between acquaintances than perpetrated by strangers. Awareness of the health, social, and economic effects of violence on our families, children, and the community at large has been increasing. Yet the levels of violence in a community are not easily measured and certainly not by a single factor. Communities should choose measures that reflect the intensity of the effects of violence over a lifetime. Rates for homicide, family or partner violence, maltreatment of our children, and delinquent youth violence capture important elements of the emotional, psychological, and social environments of different population groups.

Measuring the incidence of violence against children gives us insight into our ability and will as a caring and just society to protect our most vulnerable members. It also gives us

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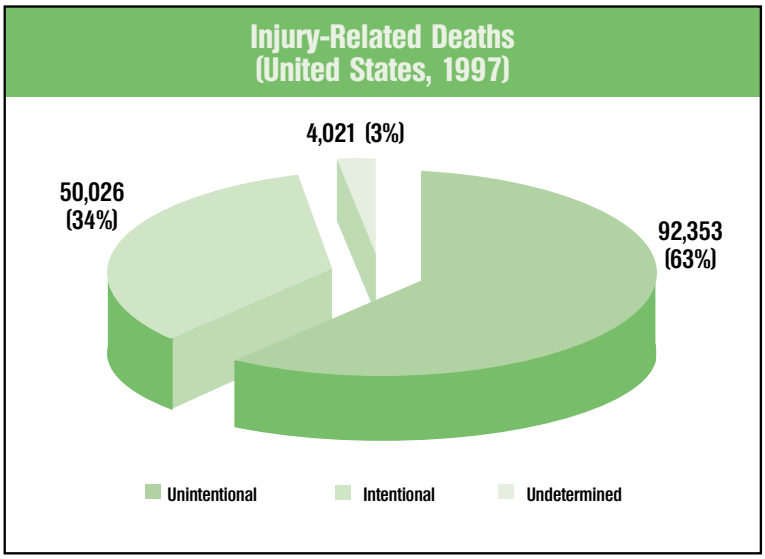
a glimpse of what the future may hold for families if we do not intervene into the lives of our most injured youth. Youth may be carrying the violence found in their homes into other areas of life, such as school. These violent behaviors of youth are a reflection of the community's atmosphere of violence.



Source: CDC, NCHS; National Vital Statistics System (NVSS), 1997

Physical violence is the leading cause of death and injury among youths and young adults and correlates to a community's sense of its quality of life. Potential data sources for this indicator might be community statistics provided by local law enforcement agencies, social welfare organizations, and national data disseminated by the U.S. Department of Justice. It is difficult to compare data from different counties or systems. Issues that impede the public health response to progress in this area include lack of comparable data sources, lack of standardized definitions and definitional issues, lack of resources to establish adequately consistent tracking systems, and lack of resources to fund promising prevention programs.

Unintentional Injury

In 1997, 146,400 persons in the United States died from injuries due to a variety of causes such as motor vehicle crashes, firearms, poisonings, suffocations, falls, fires, and drownings. One death out of every 17 in the United States results from injury. In 1997, injuries accounted for 20 percent more years of potential life lost (YPLL) than cancer did (1,990 per 100,000 compared to 1,500 per 100,000). (Baker, S.P.; O'Neill, B.; Ginsburg, M.J.; et al. *The Injury Fact Book*. 2nd ed. New York, NY: Oxford University Press, 1992.) For ages one through 44 years, deaths from injuries far surpass those from cancer—the overall leading natural cause of death at these ages—by about three to one.

- Unintentional injury deaths include approximately 42,000 resulting from motor vehicle crashes per year. Motor vehicle crashes account for approximately half the deaths from unintentional injuries.

Health Profile, 1999: Leading Causes of Death per 1,000 by Age Group (1997)

	State	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
Under 5									
Unintentional Injury	0.12	0.09	0.10	0.08	0.21			0.16	
Homicide		0.06							
5 to 24									
Unintentional Injury	0.22	0.23	0.20	0.21	0.25	0.32	0.33	0.23	0.14
Homicide	0.09	0.02	0.03	0.03	0.06	0.06	0.07	0.04	0.03
Suicide	0.05		0.04	0.03	0.03	0.05			
25 to 44									
Unintentional Injury	0.36	0.45	0.24	0.25	0.31	0.21	0.24	0.26	0.18
Suicide	0.17	0.13	0.09	0.17	0.31	0.16	0.15	0.22	0.16
Homicide									0.07
45 to 64									
Unintentional Injury	0.30	0.27	0.23	0.26	0.23	0.27	0.45	0.41	0.25

Higher than Lancaster County Lower than Lancaster County Equivalent to Lancaster County

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- In 1997, of approximately 50,000 intentional injury deaths, almost 31,000 were classified as suicide and nearly 20,000 as homicide.

Of the unintentional deaths caused by injury, 63 percent are classified as unintentional and 34 percent as intentional injuries. Additional millions of persons are incapacitated by unintentional injuries, with many suffering lifelong disabilities. In 1995, 29 million persons visited emergency departments as a result of unintentional injuries. (Schappert, S.M. "Ambulatory care visits to physician offices, hospital outpatient departments and emergency departments: U.S., 1995." *Vital and Health Statistics* 13(29):1–38, 1997.)

Some Demographics

- More persons aged 1 to 34 years die as a result of unintentional injuries than any other cause of death.
- Injuries cause more than two out of five deaths (43 percent) of children aged one through 4 years and result in four times the number of deaths due to birth defects, the second leading cause of death for this age group.
- For ages 15 to 24 years, injury deaths exceed deaths from all other causes combined from ages 5 through 44 years.
- For ages 15 to 24 years, injuries are the cause of nearly four out of five deaths. After age 44 years, injuries account for fewer deaths than other health problems, such as heart disease, cancer, and stroke. But the death rate from injuries is actually higher among older persons than among younger persons.
- The motor vehicle death rate per 100,000 persons is especially high among persons aged 16 to 24 years and persons aged 75 years and older.
- In 1998, persons aged 70 years and older made up 9 percent of the population but accounted for 14 percent of all traffic fatalities and 18 percent of all pedestrian fatalities.

U.S. Dept. of Health & Human Services, Health Resources and Services Administration (HRSA)
Community Health Status Indicators Project, July 2000

National Leading Causes of Death in Lancaser County Ages 25–44 by Race

	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
Ages 25–44								
Injuries								
White	28%	24%	19%	16%	16%	19%	14%	15%
Black	20%	19%	14%	nrf	14%	nrf	11%	nrf
Hispanic	21%	nrf	nrf	10%	10%	nrf	16%	14%

Higher than Lancaster County

Lower than Lancaster County

Equivalent to Lancaster County

The common cause of death among motorcyclists is catastrophic head injury. Death rates from head injuries are twice as high among cyclists in states lacking helmet laws or having laws that apply only to young riders, compared with states where laws apply to all riders. The physical and emotional toll associated with head and spinal cord injuries can be significant for the survivors and their families. In addition, persons with existing disabilities from head and spinal cord injuries are at high risk for further secondary disabilities.

Falls account for 87 percent of all fractures among adults aged 65 years and older and are the second leading cause of both spinal cord injury and brain injury for this age group. (Kraus, K.F.; Black, M.A.; Hessol, N.; et al. "The incidence of acute brain injury and serious impairment in a defined population." *American Journal of Epidemiology* 119:186–201, 1984.) Falls also cause the majority of deaths and severe injuries from head trauma among children under age 14 years. Falls account for 90 percent of the most severe playground-related injuries treated in hospital emergency departments (mostly head injuries and fractures) and one-third of reported fatalities.

Human suffering and loss of life is incalculable, and the financial cost is staggering. The costs of direct medical care and rehabilitation as well as lost income and productivity are included in the costs associated with injuries.

- By the late 1990s, injury costs were estimated at more than $441 billion annually, an increase of 42 percent over the 1980s. (National Safety Council. Accident Facts. 1995 ed. Itaska, IL: the Council, 1995.)
- Every bicycle helmet saves $395 in direct medical costs and other costs. (National Safe Kids Campaign. *Childhood Injury Factsheet*. Itaska, IL: the Campaign, 1997.)
- Every smoke detector saves $35 in direct medical costs and an additional $865 in other costs.

Violence and Abuse Prevention

On an average day in America:

- 53 persons die from homicide.
- At least 8,000 persons survive interpersonal assaults.
- 84 persons complete suicide.
- 3,000 persons attempt suicide.
- 17 youth homicide victims die per day in the United States.

Low income, discrimination, lack of education, and lack of employment opportunities are risk factors for violent and abusive behavior. Violence can be random. This is what most fear: being attacked or struck down while going about our business in life. But the fact is that most violence is perpetrated by family members or acquaintances. Elderly persons, females, and children continue to be targets of both physical and sexual assaults.

Homicide was the cause of death for 19,491 persons in United States (7.2 per 100,000 population) in 1997. (NCHS. *Mortality Data Tapes*. Hyattsville, MD: NCHS.) Homicide is the second leading cause of death for young persons aged 15 to 24 years and the leading cause of death for African Americans in this age group. (Singh, G.K.; Kochanek, K.D.; and MacDorman, M.F. "Advance report of final mortality statistics, 1994." *Monthly Vital Statistics Report* 45(3S), 1996.) In 1997, 32,436 individuals died from firearm injuries; of this number, 42 percent were victims of homicide. The increase in the total homicide rate from 1979 through 1993 resulted solely from increases in firearm-related homicides. (Fingerhut, L.A.; Ingram, D.D; and Feldman, J.J. "Firearm and non firearm homicide among persons 15 to 19 years of age: Differences by level of urbanization. United States 1979–89." *Journal of the American Medical Association* 267(22):3048–3053, 1992.)

Males are most often the victims and the perpetrators of homicides. The homicide rate among males aged 15 to 24 years in the United States is 10 times higher than in Canada, 15 times higher than in Australia, and 28 times higher than in France or Germany. (World Health Organization (WHO). *World Health Statistics Annual*, 1994. Geneva, Switzerland: WHO, 1995.) African Americans are more than five times as likely as whites to be murdered. There has been a decline in the homicide of intimates, including spouses, partners, boyfriends, and girlfriends over the past decade, but this problem remains significant.

Homicide rates are dropping among all groups, but the decreases are not as dramatic among youth, who already exhibit the highest rates. Youth are involved as both perpetrators and victims of violence. In 1997, homicide was the third leading cause of death for children aged 5 to 14 years, an increasing trend in childhood violent deaths. In 1996, more than 80 percent of infant homicides were considered to be fatal child abuse.

In 1997, nearly 19,000 children aged 19 years and under were victims of injury—33 percent from violence. (NCHS. *Vital Statistics Mortality Data, Underlying Cause of Death*, 1962–97. Hyattsville, MD: HHS, 1999.) The United States has higher rates of lethal childhood violence than every other industrialized country. (CDC. "Rates of homicide, suicide, and firearm-related death among children—26 industrialized countries, 1950–1993." *Morbidity*

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and Mortality Weekly Report 46(5):101, 1995.) In examination of these trends in childhood injury-related cause of death, information has typically come from one of several sources (vital statistics, protective service records, and the FBI Uniform Crime Report), each with specific limitations.

15-15 Reduce deaths caused by motor vehicle crashes.

Target and baseline:

Objective	Reduction in Deaths Caused by Motor Vehicle Crashes	1998 Baseline	2010 Target
Target 15-15a.	Deaths per 100,000 population	15.6*	9.2

*Age adjusted to the year 2000 standard population

Target setting method: Better than the best for 15-15a; 50 percent improvement for 15-15b. (Better than the best will be used when data are available.)

Data sources: National Vital Statistics System (NVSS), CDC, NCHS; Fatality Analysis Reporting System (FARS), DOT, NHTSA

Data

Total Population, 1998 (unless noted)	Motor Vehicle Crash Deaths 15-15a Rate per 100,000
TOTAL	15.6
Race and ethnicity	
American Indian or Alaska Native	30.4
Asian or Pacific Islander	9.3
Black or African American	16.8
White	15.6
Hispanic or Latino	14.7
Cuban	10.9
Mexican	16.5
Puerto Rican	10.8
Not Hispanic or Latino	15.6
Black or African American	17.3
White	15.5
Gender	
Female	10.1
Male	21.6
Education level (aged 25 to 64 years)	
Less than high school	25.8
High school graduate	20.2
At least some college	8.9
Select populations	
Children aged 14 years and under (not age adjusted)	4.4
Persons aged 15 to 24 years (not age adjusted)	26.4
Persons aged 70 years and older (not age adjusted)	25.5
Motorcyclists	NA

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. NA=not applicable. Note: Data for 15-15a. are age adjusted to the year 2000 standard population.

In 1998, 41,471 persons died in motor vehicle crashes. Thirty-eight percent of these deaths occurred in alcohol-related crashes. (Federal Bureau of Investigation. *Crime in the United States: 1996*. Washington, DC: GPO, 1997.)

Fewer persons aged 70 years and older are licensed to drive compared to younger persons, and they drive fewer miles per licensed driver. Persons in this older age group, however, have higher rates of fatal crashes per mile driven, per 100,000 persons, and per licensed driver, than any other group except young drivers (aged 16 to 24 years). Compared with the fatality rate for drivers aged 25 through 69 years, the rate for drivers in the oldest group is nine times higher. (NHTSA. *Traffic Safety Facts 1998: Older Populations*. Washington, DC: NHTSA, 1998.) Older persons also are more susceptible than younger persons to medical complications following motor vehicle crash injuries. Thus, they are more likely to die from their injuries.

Pedestrians account for about 13 percent of motor vehicle deaths. The problem of pedestrian deaths and injuries is worse among young children and older adults. Children are more likely to be injured, while older adults are more likely to die in pedestrian crashes. On average, a pedestrian is killed in a motor vehicle crash every 101 minutes, and one is injured every 8 minutes. (NHTSA. *Traffic Safety*

15-15 Reduce Deaths Caused by Motor Vehicle Crashes.

National Baseline 1998	Pennsylvania 1998	Lancaster 1998	HP 2010 Goal
15.6	13.2	13.3	9.2
Rates are per 100,000 and are age adjusted to 2000 standard population			

15-15 Neighbor and Peer County Death Rates from Motor Vehicle Crashes, 1998

Berks	Chester	Dauphin	Lebanon	Lehigh	Northampton	York
15.4	12.1	10.6	17.1	13.7	13.6	13.6

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Facts 1998: Pedestrians. Washington, DC: NHTSA, 1998.) In 1998, 69,000 pedestrians were injured and 5,220 were killed in traffic crashes in the United States.

15-27 Reduce deaths from falls.

Target: 3.0 deaths per 100,000 population
Baseline: 4.7 deaths per 100,000 population were caused by falls in 1998 (age adjusted to the year 2000 standard population).
Target-setting method: Better than the best
Data source: National Vital Statistics System (NVSS), CDC, NCHS

Total Population, 1998	Deaths from Falls Rate Per 100,000
TOTAL	4.7
Race and ethnicity	
American Indian or Alaska Native	4.4
Asian or Pacific Islander	3.4
Black or African American	3.1
White	4.9
Hispanic or Latino	3.7
Not Hispanic or Latino	4.7
Black or African American	3.2
White	4.9
Gender	
Female	3.5
Male	6.4
Education level (aged 25 to 64 years)	
Less than high school	2.9
High school graduate	2.4
At least some college	1.2
Select populations	
Persons aged 65 to 84 years (not age adjusted)	17.2
Persons aged 85 years and older (not age adjusted)	107.9

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. Note: Age adjusted to the year 2000 standard population.

15-27 Reduce deaths from falls

National Baseline 1998	Pennsylvania 1998	Lancaster 1998	HP 2010 Goal
4.7	4.3	2.9	3.0

Rates are per 100,000 and are age adjusted to 2000 standard population

15-27 Neighbor and Peer County death rates from falls, 1997–1998

Berks	Chester	Dauphin	Lebanon	Lehigh	Northampton	York
3.1	4.0	4.5	1.8**	6.2	3.1**	6.8

**Statistically unreliable

Among the elderly, falls are the most common cause of injuries and hospital admissions for trauma. For persons aged 65 years and older, 60 percent of fatal falls occur in the home, 30 percent occur in public places, and 10 percent occur in health care institutions. (Hingson, R., and Howland, J. "Alcohol and non-traffic intentional injuries." *Addiction* 88(7):877–883, 1993.) The most serious fall-related injury is hip fracture. Approximately 212,000 hip fractures occur each year in the United States among adults aged 65 years and older; 75 to 80 percent of all hip fractures are sustained by females. (Cummings, S.R.; Rubin, S.M.; and Black, D. "The future of hip fractures in the United States. Numbers, costs, and potential effects of postmenopausal estrogen." *Clinical Orthopedics* 252:163–166, 1990.)

Since most fractures are the result of falls, understanding the reasons falls occur is essential to designing effective prevention and intervention strategies. For all ages combined, alcohol use has been implicated in 35 to 63 percent of deaths from falls. Factors that contribute to falls include difficulties with walking and balance, neurological and musculoskeletal disabilities, psychoactive medications, dementia, and visual impairment. (Tinetti, M.E., and Speechley, M. "Prevention of falls among the elderly." *New England Journal of Medicine* 320(16)1055–1059, 1989.) Other hazards such as slippery surfaces, uneven floors, poor lighting on stairs, loose rugs, unstable furniture, and objects on floors also may play a role. Often the elderly are unable to keep up with the maintenance of their home and this increases their risk of accident. Although we will not go into detail here about workplace safety issues, suffice it to say that clean work sites are safer work sites. Falls in the workplace is another area that should be studied; it is also an area of concern in the farming and construction industries.

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15-32 Reduce homicides.

Target: 3.0 homicides per 100,000 population
Baseline: 6.5 homicides per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population).
Target-setting method: Better than the best
Data sources: National Vital Statistics System (NVSS), CDC, NCHS; FBI Uniform Crime Reports, U.S. Department of Justice

Violence and Abuse Prevention

15-32 Reduce Homicides

National Baseline 1998	Pennsylvania 1998	Lancaster 1997–1998 Avg.	HP 2010 Goal
6.5	5.4	2.7	3.0

Rates are per 100,000 and are age adjusted to 2000 standard population

In both 1997 and 1998 there were 12 homicides each year. Between 1979 and 1998 the number of homicides in Lancaster County ranged from 4 in 1984 to 16 in 1993.

15-27 Neighbor and Peer County Homicide Rates, 1994–1998*

Berks	Chester	Dauphin	Lebanon	Lehigh	Northampton	York
4.3	1.7	7.2	2.5**	4.3	2.3	2.6

*Used 5-year average so that counties would have statistically relliable rates.
**Statistically unreliable

15-33 Reduce maltreatment and maltreatment fatalities of children.

15-33a Reduce maltreatment of children.

Target: 10.3 per 1,000 children under age 18 years
Baseline: 12.9 child victims of maltreatment per 1,000 children under age 18 years were reported in 1998.
Target-setting method: 20 percent improvement (Better than the best will be used when data are available.)
Data source: National Child Abuse and Neglect Data System (NCANDS), Administration on Children, Youth and Families, Administration for Children and Families (ACF), Children's Bureau

Currently, data for population groups is not analyzed.

15-33b Reduce child maltreatment fatalities.

Target: 1.4 per 100,000 children under age 18 years
Baseline: 1.6 child maltreatment fatalities per 100,000 children under age 18 years occurred in 1998.
Target-setting method: 12 percent improvement (Better than the best will be used when data are available.)
Data source: National Child Abuse and Neglect Data System (NCANDS), Administration on Children, Youth, and Families, Administration for Children and Families (ACF), Children's Bureau

Currently, data for population groups is not analyzed.

Total Population, 1998	Homicides Rate per 100,000
TOTAL	6.5
Race and ethnicity	
American Indian or Alaska Native	9.1
Asian or Pacific Islander	3.5
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	22.6
White	4.0
Hispanic or Latino	8.8
Cuban	8.3
Mexican	9.0
Puerto Rican	7.9
Not Hispanic or Latino	6.2
Black or African American	23.4
White	3.1
Gender	
Female	3.1
Male	10.0
Education level (aged 25 to 64 years)	
Less than high school	17.1
High school graduate	9.9
At least some college	2.7
Select populations (not age adjusted)	
Children under 1 year	8.1
Children aged 1 to 4 years	2.6
Children aged 10 to 14 years	1.5
Adolescents aged 15 to 19 years	11.7
Persons aged 15 to 34 years	13.0
Intimate partners aged 14 to 45 years (spouse, ex-spouse, boyfriend, girlfriend)	DNC
Black or African Americans aged 15 to 34 years	48.2
Females	13.3
Males	84.9
Hispanic males aged 15 to 34 years	33.5

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. Note: Age adjusted to the year 2000 standard population.

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The 1997 Child Maltreatment report from individual states to the National Child Abuse and Neglect Data System found:

- In 1996 there were 1 million child victims of mistreatment in the 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, and Guam. In 1997 there were approximately 984,000 victims.
- The national rate of child victims was 13.9 per 1,000 children in the general population in 1997, which is slightly higher than the rate of 13.4 victims per 1,000 children in 1990.
- Based on data from 39 states, 75.4 percent of the perpetrators were the victim's parents, 10.2 percent were relatives, and 1.9 percent were individuals in other care-taking relationships. (HHS, Administration on Children, Youth, and Families. Child Maltreatment 1997: Reports from the States to the National Child Abuse and Neglect Data System. Washington, DC: U.S. Government Printing Office (GPO), 1999.)
- In 1997, there were an estimated 1,196 fatalities due to child maltreatment in the 50 states and the District of Columbia.
- Types of maltreatment were as follows: 55.9 percent neglect, 24.6 percent physical abuse, 12.5 percent sexual abuse, and 6.1 percent emotional abuse.
- 58.8 percent of the substantiated or indicated reports of maltreatment were reported by professional sources: legal, medical, social service, or education professionals.

The issue for us locally is how to measure the number of maltreated children. We asked local experts about using the numbers of substantiated cases that all PA County Children and Youth Agencies report to the state. This is the indicator used by Kids Count (Anne E. Casey Foundation publication, with statistics for each state). It is linked to their "State of the Child" report.

The following are the comparative numbers for PA, Lancaster, and our peer counties.

Children Abused or Negelected—Substantiated Cases

	State	All County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
1995–1997 Rate per 100 children under 18	2.2	2.2	1.4	1.0	2.1	2.3	2.1	2.0	2.0	1.8

Children In Out-of-Home Placements

	State	All County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
1995–1997 Rate per 1,000 children under 18	7.4	4.6	4.1	2.0	4.7	6.7	6.2	5.5	6.5	6.8

Delinquent Children Placed Out-of-Home by Juvenile Court

	State	All County Mean	Lancaster	Chester (G)	York (G)	Berks (P)	Dauphin (G)	Lebanon (G)	Lehigh (P)	Northampton (P)
1995–1997 Rate per 1,000 children 10–17	3.2	2.0	2.8	1.1	2.1	4.0	6.1	2.2	4.1	1.5

Higher than Lancaster County Lower than Lancaster County Equivalent to Lancaster County

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Indicators are more meaningful when combined with an analysis of the communities reporting the substantiation findings. States have different laws, different definitions of abuse, and different mandated action levels. Counties within the state of PA vary significantly as well. A low substantiated rate may mean a county has a low abuse rate. It can also mean that the county is under-performing in identifying and processing reports. Children being placed out of the home certainly reflect a terrible family situation. But low rates of such placements may also reflect a lack of foster or institutional placements, which would hamper or, at the very least, affect the decision to remove a child. Some differences may be because:

- Community awareness may be higher or lower and, therefore, people may be more or less likely to report suspected abuse or neglect.
- Norms may be different, and what some communities may view as vigilance, others may view as interfering with a parent's right to discipline their child as they see fit.
- The judicial philosophy of particular judges may make it more or less difficult for agencies to prove their cases of neglect and abuse or to free abused children for adoption.
- Standards for bringing a case to court may be different from county to county based on caseload, ability to prosecute successfully, and the ability to place a child after a substantiation finding.
- Definitions vary from county to county.
- The inability to hire and maintain an experienced staff makes it difficult to build cases to substantiate abuse or free a child for adoption, or even to aggressively manage family restorative efforts. Throughout 1999–00, the Lancaster Children & Youth Agency has struggled with ongoing staff turnover. During this time period, 17 caseworkers, four clerical, two case aides, and two casework supervisors resigned from the Agency. The Agency was able to hire 16 new caseworkers, two fiscal technicians, and one case aide. Several times during this period, the Agency exhausted the available civil service lists for caseworkers. The Agency not only competes with the Office of Aging and Office of Mental Health Mental Retardation, but surrounding county children and youth agencies as well. The Agency has started the process of trying to hire staff in various classifications through an emergency hiring process (from the 2001–03 Lancaster County Children and Youth Annual Plan).

Better indicators would be those that follow a child or family over time and indicate that both the family and child have survived and even benefited from contact with the child welfare system. Many abused and neglected children end up in the juvenile justice system, drug and alcohol or mental health systems, as homeless, teen parents, and/or in the system as parents who abuse, neglect, or in some way are unable to protect their children from abusers. It is a well-documented cycle of family violence and abuse. No tracking system exists at this time in Lancaster County. Confidentiality laws are major barriers in developing such a system. Software that can track cases across delivery systems and caseworker time to manage such a system and data inputting is a challenge.

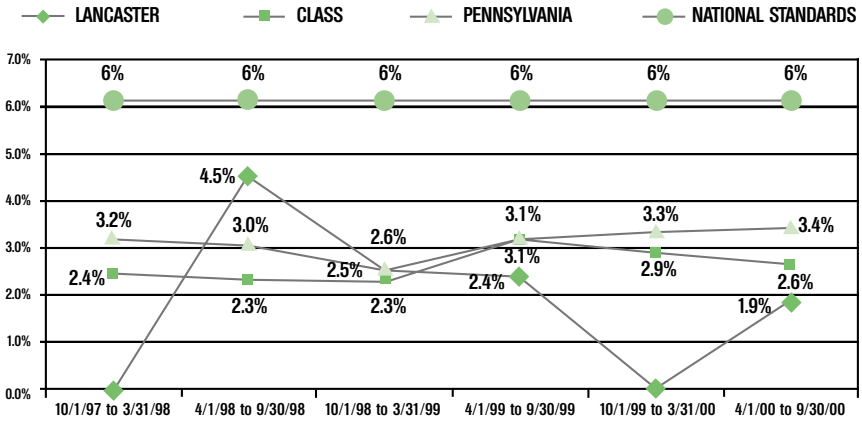
Additionally, poverty rates, numbers of single mothers with children, and the prevalence of children living in homes with alcohol or substance abusers are important to consider.

- One in five Lancastrians live in poverty. Those most likely to live in poverty are also the most vulnerable to family abuse and violence.
- According to the 1990 Census, 30,517 Lancaster County children are living in poverty.
- For female-headed households with children under five, the likelihood of living in poverty rose to 51.7%.
- The median family income for Lancaster County residents is $37,800. However, for families living in Lancaster City median income is only $27,002.

- Some families are forced to reside in emergency shelters or other transitional housing facilities as they work to stabilize their lives. According to recently published statistics, 58% of the homeless in Lancaster County are women and children.
- 50% of homeless women and children are fleeing domestic violence situations.
- As of March 2000, 1,118 families were receiving TANF (Temporary Assistance to Needy Families) through the Lancaster County Assistance Office. In addition, 29,819 persons were eligible for medical assistance and 4,986 received food stamps.

Additionally, it is important that we begin to understand and to evaluate the standard of care that our children receive while in county custody (dependents of the court). We must study the number of children that are freed for adoption and the length of time they spend in the system before they are freed. This data is gathered and should be analyzed. The sooner a child finds a stable and loving home, the better chance they have of becoming happy and functioning adults. We should measure the opportunities available for children to be adopted into homes that may love and care for them in order to repair the damage of their short and troubled family history

Federal Outcome Measure 1.1



The following graph is the percentage of children who were victims of substantiated or indicated child abuse and/or neglect that had another substantiated or indicated report within a six-month period. "Class" is an average of all the Pennsylvania Class 3 counties. Class 3 counties include Berks, Chester, Dauphin, Erie, Lackawanna, Lancaster, Lehigh, Luzerne, Northampton, Westmoreland, and York.

In PA, county Children and Youth Agencies are mandated to provide programs and services that help achieve movement toward three statewide child welfare goals. Programs, services, and strategies to improve service delivery are directly related to the major issues described under each of the three goals.

Goal #1

Prevent child abuse, neglect, and exploitation.

The significant issues impacting this goal include the number of families presenting with drug and/or alcohol abuse issues, poverty, limited accessibility of mental health treatment for adults and children, adolescent/family issues, and parenting. Other agency issues include providing adequate and mandated legal representation, staff turnover, and Pennsylvania Automated Child Welfare Information System (PACWIS) implementation.

Child Abuse Rate per 1000 Children

	Actual		Estimated	Projected	
	1998	1999	2000	2001	2002
Child abuse rate per thousand	1.1	1.3	1.1	1.1	1.1

According to the 1997 U.S. Census estimate, Lancaster County's population of 0–17 year olds was 121,514. The rate per thousand children who were victims of child abuse in Lancaster County in 1999 is 1.3. This number increased only slightly from the 1998 figure of 1.1. Lancaster County has remained at or below the statewide average since 1996. The statewide average for 1999 is 1.6.

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Substantiated Abuse Reports

	Actual		Estimated	Projected	
	1998	1999	2000	2001	2002
Number	146	170	190	190	200
Percentage	22.2%	23.3%	24%	24%	25%

Child Protective Services and General Protective Services

	Actual		Estimated	Projected	
	1998	1999	2000	2001	2002
CPS Reports	658	729	366	720	730
GPS Reports	1,288	1,227	624	1,230	1,240
Total Reports	1,946	1,956	990	1,950	1,970

The number of referrals necessitating Child Protective Services (CPS) and General Protective Investigations (GPS) has remained approximately the same for the past two years. Neglect investigations (GPS) are mostly referrals concerning lack of supervision, allegations of parental drug and alcohol use, and poor living conditions.

Drug and alcohol addiction is a major problem in the lives of many of the families and children served by our agencies. Agency staff estimates that over 75% of the families active with the agency are using drugs and/or alcohol. During May 1999 through May 2000, agency clients completed 265 drug screens. This tool is extremely valuable to caseworkers providing services to families where there may be a suspicion of drug use by the parent or caretaker.

A need exists in the community for improved mental health services for adults and children. Changes in Medical Assistance coverage for mental health services have restricted the access for this service. In many cases, the issues presented by children and adults may not meet the criteria established by the county MH/MR system. Nevertheless, families and children could benefit from mental health services that would be accessible and affordable.

Goal #2

Ensure that all abused, neglected, or otherwise dependent children are protected from further abuse and neglect in their own or some other permanent home.

The significant issues which impact this goal include providing culturally sensitive, community collaborative services to families in their own homes and to children in some other permanent home. Services need to be timely, competent, and professional. Casework services include but are not limited to: announced and unannounced home visits; school visits; court appearances; placement of children via Court Order in foster care; transportation of clients to doctor appointments; mental health counseling; grocery shopping; employment; court hearings; attending multidisciplinary team meetings; referring clients for community services and office visits.

Because of staff shortages in the Child Protective Services unit, many in-home protective social workers assist intake workers to help investigate child abuse cases. In addition, approximately 50% of caseworkers' job duties involve documentation of case activity and other state and federally mandated paperwork.

There is a need to reduce caseload size, increase reunification services, and locate more foster/adopt placement resources. The need to see children on a regular basis is important, but the ever-increasing demands of documentation for federal and state programs causes a strain on the social work practice of in-home units. This strain causes many qualified social workers to exit child welfare and enter more financially rewarding and less stressful employment.

Children Re-abused and Known to the Agency

	Actual		Estimated	Projected	
	1998	1999	2000	2001	2002
Number	9	13	7	8	8
Percentage	6.2%	7.6%	3.7%	4%	4%

According to the 1999 Child Abuse Report, there were 13 substantiated re-abuses in Lancaster County, or 7.6%. The percentage remains below the statewide average of 13%.

Number of Children Served in Their Own Homes

1999–00					
1st Q	2,402	583	2,985	80.47%	19.53%
2nd Q	2,314	600	2,914	79.41%	20.59%
3rd Q	2,261	605	2,866	78.89%	21.10%
4th Q	2,236	609	2,845	78.59%	21.41%
2000–01	2,373	615	2,988	79.42%	20.58%
2001–02	2,420	615	3,035	79.74%	20.26%

As of March 31, 2000, the agency was active with a total of 2,859 children. As of March 31, 1999, the agency was active with 2,580 children, an additional 1,157 children when compared to FY 1996–97, or an increase of 81%. Through the use of purchased and direct services, the Agency projects that more than 80% of all children served will receive services in their own home.

Number and Percent of Children in Placement Who Have a Goal of Adoption

	1997–98	1998–99	1999–00	2000–01	2001–02
Number	86	113	135	140	145
Percentage	18.81%	19.89%	22.65%	22.76%	23.56%

The number of children with a goal of adoption has increased significantly over the past four years. The trend is expected to continue. In cases of aggravated circumstance, the Agency has successfully petitioned the court to set a goal of adoption at the time of a child's placement. There are currently 135 children with a goal of adoption or 22.65% of the total number of children in placement.

Number and Percent of Children With the Goal of Adoption Who Have Been Freed for Adoption and Who Are Awaiting Adoptive Placement

	1997–98	1998–99	1999–00	2000–01	2001–02
Number	40	29	19	25	25
Percentage*	8.75%	5.10%	3.19%	4.07%	4.07%

*Average of four available quarters for 97–98, 98–99, and 99–00 of children in placement, chart b, column 2.

Currently, the number of children who have been freed for adoption and are awaiting adoptive placement is 19. This represents six percent of the total population in placement with a goal of adoption.

Number and Percent of Adoptions Finalized

	1997–98	1998–99	1999–00	2000–01	2001–02
Number	21	2	45	55	55
Percentage*	5.25%	4.05%	7.51%	8.94%	8.94%

*Average of four available quarters for 97–98, 98–99, and 99–00 of children in placement, chart b, column 2.

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Number and Percent of Children Adopted in the FY Who Are Receiving Adoption Assistance

	1997–98	1998–99	1999–00	2000–01	2001–02
Number	21	27	32	45	50
Percentage*	4.61%	4.75%	5.37%	7.32%	8.13%

*Average of four available quarters for 97–98, 98–99, and 99–00 of children in placement, chart b, column 2.

During 1999–00, thirty-two children who were adopted were receiving adoption assistance. The Agency anticipates continued growth in the number of children who are eligible for and who receive adoption assistance. There are currently 167 children receiving adoption subsidies. Subsidies normally correlate with our approved foster family rates, which are allotted by the age of the child. The average subsidy can now be as high as $734 per month. The average subsidy, however, is $558.

Provide for the well-being of children during substitute care.

Goal #3

The major issues impacting this goal include the recruitment of more quality foster homes, more timely access to court, the exploration of increased relative care, the development of more adoptive homes, the reduction of foster care caseloads, and the movement to managed care. Another significant issue is the timely provision of quality mental health services for children.

Children reentering care within 12 months of reunification with parents or caretakers
(This number could include children placed in an emergency shelter for one night only. The inclusion of this information could artificially inflate the statistics. Nevertheless, the Agency remains significantly below the statewide average.)

Quarter	Number of Children	Percentage of Children	Satewide Average Percentage
Oct 97–Mar 98	12	8.6%	14.9%
Apr 98–Sep 98	7	4.2%	17.5%
Oct 98–Mar99	5	3.2%	18.7%
Apr 99–Sep 99	12	9.4%	17.8%
Total number and percentage of children replaced within 12 months of reunification			

As of July 2000, the Agency had 194 foster homes. In 1999–00, the Agency approved and opened 38 new homes and closed 17 homes. In addition, it is anticipated that ten additional homes will be approved following the June/July orientation currently under way. The composite of Agency foster homes as of July 2000 is:

Hispanic: 25
African American: 18
Biracial: 1
Caucasian: 150
Total foster homes: 194

Mental health issues presented by foster children can be very challenging to foster parents and other temporary caregivers. The Agency makes great efforts to assure that foster parents receive training so that they are equipped to assist these children and maintain them in their foster home. Caseworkers also work closely with foster parents to address concerns and to refer and coordinate community services the child may receive while in foster care. Combined, these efforts target reducing placement disruption.

15-34 Reduce the rate of physical assault by current or former intimate partners.

Target: 3.3 physical assaults per 1,000 persons aged 12 years and older
Baseline: 4.4 physical assaults per 1,000 persons aged 12 years and older by current or former intimate partners occurred in 1998.
Target-setting method: Better than the best
Data source: National Crime Victimization Survey (NCVS), U.S. Department of Justice, Bureau of Justice Statistics

Persons Aged 12 Years and Older, 1998	Physical Assault by Current and/or Former Intimate Partners
	per 1,000
TOTAL	4.4
Race and ethnicity	
Black or African American	5.1
White	4.3
Hispanic or Latino	3.4
Not Hispanic or Latino	4.4
Black or African American	DNA
White	DNA
Gender	
Female	7.2
Male	1.3

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable.

Local and state data is not readily available. Local groups have attempted to gauge the number of individuals, including children, living with family violence by looking at Protection From Abuse orders (PFA) and violations of PFAs. But these inquiries have their own set of challenges that are methodological, systemic, and analytical.

Both females and males experience family and intimate violence and sexual assault. Perpetrators can be the same or opposite sex. Male victimization of females is more common in intimate partner violence and sexual assault. Violence against women is primarily partner violence. Although most assault victims survive, they suffer physically and emotionally. About one in three females who were injured during a rape or physical assault required medical care. (Tjaden, P., and Thoennes, N. *Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey*. Pub. No. NCJ 172837. Washington, DC: National Institute of Justice and CDC, 1998.)

In 1994, more than 500,000 females were seen in hospital ERs for violence-related injuries, and 37 percent of those females were there for injuries inflicted by spouses, ex-spouses, or nonmarital partners. (Bureau of Justice Statistics (BJS). *Violence-Related Injuries Treated in Hospital Emergency Departments*. Washington, DC: U.S. Department of Justice (DOJ), 1997.)

- In 1995, almost 5,000 females in the United States were murdered. In those cases for which the Federal Bureau of Investigation had data on the relationship between the offender and the victim.
  - ✔ 85 percent were killed by someone they knew.
  - ✔ Nearly half of the females who knew the perpetrators were murdered by a husband, ex-husband, or boyfriend. (Federal Bureau of Investigation. *Crime in the United States: 1996.* Washington, DC: GPO, 1997.)

Estimates of abuse rates during pregnancy are a concern. The proportion of pregnant women who had experienced IPV at any time in the past ranged between 9.7 percent and 29.7 percent. (Gazmararian, J.A.; Lazorick, S.; Spitz, A.M.; et al. "Prevalance of violence against pregnant women." *Journal of the American Medical Association* 275:1915–1920, 1996.)

Males who are physically violent toward their partners are more likely to be sexually violent toward them and are more likely to use violence toward children. (Hotaling, G.T., and Sugarman, D.B. "An analysis of risk markers in husband to wife violence: The current state of knowledge." *Violence and Victims* 1:101–124, 1986.) Perpetrators of this violence are usually adults who, as children or adolescents, witnessed family violence or who were the targets of violence from their parents or guardians. (CDC. "Youth Risk Behavior Surveillance—United States, 1999." *Morbidity and Mortality Weekly Report* 49(SS5), June 9, 2000.)

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15-35 Reduce the annual rate of rape or attempted rape.

Target: 0.7 rapes or attempted rapes per 1,000 persons
Baseline: 0.8 rapes or attempted rapes per 1,000 persons aged 12 years and older occurred in 1998.
Target-setting method: Better than the best
Data source: National Crime Victimization Survey (NCVS), U.S. Department of Justice, Bureau of Justice Statistics

15-35 Reduce the Annual Rate of Rape or Attempted Rape

National Baseline 1998	Pennsylvania 1998	Lancaster 1998	HP 2010 Goal
0.8*	25.2 per 100,000 .25	19.7 per 100,000 .20 24 Arrests 90 Offenses	0.7*

*Rates are per 1,000 population aged twelve years and older.

Persons Aged 12 Years and Older, 1998	Rape or Attempted Rape per 1,000
TOTAL	0.8
Race and ethnicity	
Other (Asian/Pacific Islander and American Indian/Alaska Native)	DNA
Native Hawaiian and other Pacific Islander	DNC
Black or African American	DSU
White	0.8
Hispanic or Latino	DSU
Not Hispanic or Latino	0.8
Black or African American	DSU
White	DSU
Gender	
Female	1.4
Male	DSU
Select populations	
Age groups	
Adolescents aged 12 to 15 years	DSU
Adolescents aged 16 to 19 years	DSU
Young adults aged 20 to 24 years	3.4

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.

In PA there were 1,506 people charged with forcible rape, 1391 arrested, 1,180 total dispositions, 245 guilty of offense charged, 250 guilty of lesser offense, 430 acquitted or dismissed, 255 referred to juvenile court, 3,017 reported offenses.

A national survey conducted from November 1995 to May 1996 estimates that:

- Approximately 1.5 million females and 834,700 males are raped and/or physically assaulted by an intimate partner annually in the United States.
- Seventy-six percent of the females who were raped and/or physically assaulted since age 18 years were assaulted by a current or former husband, cohabiting partner, or date, compared with 18 percent of the males.
- 32 percent of the females and 16 percent of the males who were raped since age 18 years were injured during their most recent rape.
- 39 percent of the females and 25 percent of the males who were physically assaulted since age 18 years were injured during their most recent assault.

The National Women's Study, in conjunction with estimates based on the U.S. Census, suggests that 12.1 million females in the United States have been victims of forcible rape sometime in their lives. According to this study, 0.7 percent or approximately 683,000 of adult females experienced a forcible rape in the past year. (Kilpatrick, D.G.; Edmunds, C.N.; and Seymour, A.L. "Rape in America: A Report to the Nation." Arlington, VA: National Victim Center, 1992, p. 2.)

The issue of teen date rape and violence requires national attention and prevention efforts that focus on adolescent violence within the larger context of family violence. Battering in teen relationships is very different from IPV that occurs between adults. Teen dating violence is a concern that may stem from childhood abuse or other experiences with violence. Little is known about the factors that increase or decrease the likelihood that males will behave violently toward females, the factors that endanger or protect females from violence, and the physical and emotional consequences of such violence for females and their children.

15-37 Reduce physical assaults.

Target: 13.6 physical assaults per 1,000 persons aged 12 years older
Baseline: 31.1 physical assaults per 1,000 persons aged 12 years and older occurred in 1998.
Target-setting method: Better than the best
Data source: National Crime Victimization Survey (NCVS), U.S. Department of Justice, Bureau of Justice Statistics

Persons Aged 12 Years and Older, 1998	Physical Assaults
	Rate per 1,000
TOTAL	31.1
Race and ethnicity	
American Indian or Alaska Native	99.4
Asian or Pacific Islander	13.7
Asian	DNC
Native Hawaiian and other Pacific Isander	DNC
Black or African American	33.8
White	31.0
Hispanic or Latino	25.9
Not Hispanic or Latino	31.4
Black or African American	DNA
White	DNA
Gender	
Female	25.1
Male	DSU
Select populations	
Age groups	
Adolescents aged 12 to 15 years	70.5
Adolescents aged 16 to 19 years	76.8
Young adults aged 20 to 24 years	56.0

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.

The PA UCR report has assaults divided into two categories: aggravated and other. This makes it difficult to compare local and state data to national data, and is the reason this table is fractured between Physical Assaults, Aggravated Assaults, and Other Assaults. PA and Lancaster data are significantly below the national baseline as well as the HP 2010 goal, which would lead one to suspect that the categories may not be completely comparable.

- Assaults were significantly higher among males.
- While the total assaults for blacks and whites and Hispanics and non-Hispanics were similar, aggravated assault was higher for blacks than whites (11.9 versus 7.0 per 1,000), and simple assault was higher for non-Hispanics than Hispanics (23.9 versus 19.5 per 1,000).
- Assaults were higher for those with lower household incomes; rates of assault victimization decreased from 54.2 per 1,000 persons in households with annual incomes of less than $7,500 to less than 30 per 1,000 persons in households with annual incomes greater than $35,000. (DOJ. *Statistics. Criminal Victimization 1998: Changes 1997–98 With Trends, 1993–98*. Pub. No. NCJ-176353. Washington, DC: DOJ, 1999.)

Juveniles and Violence

In 1998, physical assault victimization among adolescents took place twice as often as in the general population of persons aged 12 years and older. Nationwide, 4 percent of students had been treated by a doctor or nurse for injuries sustained in a physical fight one or more times during the 12 months preceding the survey. Overall, male students were significantly more likely than female students to have been in a physical fight. This gender difference was identified for white and Hispanic students and for each grade.

- In 1999, 36 percent of students in grades 9 through 12 had been in a physical fight one or more times during the 12 months preceding the survey.
- Overall, Hispanic students (40 percent) were significantly more likely than white students (33 percent) to have been in a physical fight.
- Female and male students in grade 9 were significantly more likely than female and male students in grade 11 to have been in a physical fight.
- Black female students were more likely than white female students to report this behavior, and male students in grade 9 were much more likely than male students in grade 12 to report this behavior.

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15-35 Reduce Physical Assaults				
	National Baseline 1998	**Pennsylvania 1998**	**Lancaster 1998**	**HP 2010 Goal**
Physical Assaults	31.1 per 1,000			13.6 per 1,000
Aggravated Assaults		227.0 per 100,000 2.3 per 1,000	127.2 per 100,000 1.3 per 1,000 580 Offenses 332 Arrests	
Other Assaults		709.1 per 100,000 7.1 per 1,000	483.4 per 100,000 4.8 per 1,000 2,205 Offenses 1,685 Arrests	
PA and Lancaster data is from the Crime in Pennsylvania Annual Uniform Crime Report, 2000. http://ucrreport.psp.state.pa.us/UCR/Reporting/Annual/AnnualSumArrestUI.asp				

Nationwide, 6.9 percent of students carried a weapon (a gun, a knife, or a club) onto school property one or more times during the 30 days preceding the survey. Overall, male students were significantly more likely than female students to have carried a weapon onto school property. This significant gender difference was identified for white and Hispanic students and each grade.

Lancaster County has a juvenile population between the ages of 10–7 years of 51,584, the sixth highest in the state of Pennsylvania, as indicated by the 1997 estimates furnished by the Pennsylvania State Data Center. During 1999, they experienced a 6.1% decrease in referrals (1,744) as compared to 1,858 in 1998. However, even with significant decreases in referrals for crimes and decreases in possession of weapons on or off school property by 30.2% and 39.5%, respectively, and a decrease of 9.8% in the total crimes referred, there is reason to worry.

The trends and current status indicate that, while numbers of referrals, total crimes, and possession of weapons charges have decreased, major crimes involving violence and drug charges have increased. In 1999, Lancaster County JPP experienced increases of 8.1% in violent crimes, 9.2% in drug offenses, and a 22% increase in the number of juveniles violating their probation/parole either by committing new misdemeanors/felonies and/or technical violations.

Locally, special programs and services have been developed over the past few years (i.e., School-Based, Community Intensive Treatment for Youth Services (CITY), and Pathways Sex Offender Services). Youth at Promise (YAP) is an initiative wherein balanced attention is given to each juvenile and victim of juvenile crime regarding accountability, community protection, and competency development as to available resources within the community to assist juveniles. it helps them to develop necessary skills for responsible behavior in the community. Nevertheless, the challenges have become more difficult in application of the Balanced and Restorative Justice (BARJ) principles.

Violent crimes and drug offenses increased in 1999 as compared to 1998, while possession of weapons, in and out of school, and total crimes decreased significantly. Additionally, the total number of referrals decreased by 6.1% with 1,744 juveniles referred as compared to 1,858 in 1998. Juveniles who commit violent crimes, serious felonies, or meet other detention eligibility criteria are considered for detention pending their hearing in Juvenile Court.

Other information that is being collected about the lives of these youth seem to present a trend whereby overall violence and drug involvement by juveniles is directly connected to other associated problems. These problems include an increase in dysfunctional families, out of control youth, disconnected/detached youth from society in general, and an ever-increasing number of youth with mental health needs.

Juvenile Crime Trends Over the Past Three Years with the Percentage Change from 1998 to 1999:					
	1997	1998	1999	Change	% of Change
Violent Crimes	457	432	467	+35	+ 8.1%
Weapons Possession	68	76	53	-23	-30.2%
Weapons at School	35	43	26	-17	-39.5%
Drug Charges	298	304	332	+28	+9.2%
Total Crimes	3,479	3,417	3,081	-336	- 9.8%
Detention Days	10,034	10,306	11,544	+1,238	+12.0%
Cost of Treatment*	$7.5 mil	$7.8 mil	$9.6 mil	+1.8 mil	+22.0%
*Juveniles sent to state or private facilities					

A growing number of delinquent youth choose not to take advantage of the services offered. Issues and situations such as failure to attend, continual use of drugs/alcohol, out-of-control behavior, lack of parental involvement/support, and unwillingness on the part of the juvenile to change behaviors continue to occur. Without full cooperation and positive connection by the juveniles and families in the treatment process, we will continue to struggle in our efforts to reduce out-of-home placements while maintaining protection of the community from known juvenile offenders.

Even with the aforementioned programs in place to serve juvenile offenders, JPP experienced a 22% increase in the number of juveniles re-offending in 1999 as compared to 1998. During 1998 we experienced a decrease of 15.5%. In the preceding years, we experienced increases of 8.1% in 1997 and 21.7% in 1996.

The number and percentage of juvenile offenders re-adjudicated while under juvenile court supervision are as follows:

1997		1998		1999	
247	61%	205	60%	284	68%

Disparities

- Higher death rates from unintentional injury occur among African Americans.
- African American, Hispanic, and American Indian children are at higher risk than white children for home fire deaths. (U.S. Fire Administration. *Curious Kids Set Fires*. Washington, DC: Federal Emergency Management Agency, 1990.)
- Adults aged 65 years and older are at increased risk of death from fire because they are more vulnerable to smoke inhalation and burns and are less likely to recover. Sense impairment (such as blindness or hearing loss) may prevent older adults from noticing a fire, and mobility impairment may prevent them from escaping its consequences. Older adults also are less likely to have learned fire safety behavior and prevention information because they grew up at a time when minimal fire safety was taught in schools, and most current educational programs target children.
- Homicide victimization is especially high among African American and Hispanic youth.
- In 1995, African American males and females aged 15 to 24 years had homicide rates (74.4 per 100,000) that were more than twice the rate of their Hispanic counterparts (34.1 per 100,000) and nearly 14 times the rate of their white non-Hispanic counterparts (5.4 per 100,000). (Anderson, R.N.; Kockanck, K.D.; and Murphey, S.L. "Report of final mortality statistics, 1995." *Monthly Vital Statistics Report* 45(Suppl. 2):11, 1997.)
- Trends in suicide among blacks aged 10 to 19 years in the United States during 1980–95 indicate that suicidal behavior among all youth has increased; however, rates for black youth have shown a greater increase. (CDC. "Suicide Among Black Youths—United States, 1980–1995." *Morbidity and Mortality Monthly Report* 47(10):193, 1998.) Although black youth historically have lower suicide rates than whites, during 1980–95, the suicide rate for black youth aged 10 to 19 years increased from 2.1 to 4.5 per 100,000 population. As of 1995, suicide was the third leading cause of death among blacks aged 15 to 19 years.

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Researched Best Practices

Understanding injuries allows for the development and implementation of effective prevention interventions. Some interventions can reduce injuries from both unintentional and violence-related episodes. For instance, efforts to promote proper storage of firearms in homes can help reduce the risk of assaultive, intentional self-inflicted, and unintentional shootings in the home. (Cummings, P.; Grossman, D.C.; Rivara, F.P.; et al. "State gun safe storage laws and child mortality due to firearms." *Journal of the American Medical Association* 278(13), 1997.) Higher taxes on alcoholic beverages are associated with lower death rates from motor vehicle crashes and lower rates for some categories of violent crime, including rape (Cook, P.J., and Moore, M.J. "Economic perspectives on reducing alcohol-related violence." In: Martin, S.E., ed. *Alcohol and Interpersonal Violence: Fostering Multidisplinary Perspectives*. Based on a workshop on alcohol-related violence sponsored by NIAAA, May 14-15, 1992. NIH Pub. No. 93–3496. Rockville, MD: NIH, 1993.)

- Many school-aged children suffer disabling and fatal injuries each year. Quality health education curricula should include injury prevention information for children at appropriate grade levels.
- Community-based prevention models can work. For instance, Metro Pizza in Lititz and the volunteer fire corps teamed up to send firefighters to check random homes for smoke detectors with pizza delivery. If they passed inspection, the pizza was free. If detectors failed, firemen installed a new one for free.
- Safety belts and child restraints, *when worn correctly*, are the most effective way to reduce the risk of death and serious injury in a motor vehicle crash. As of December 1998, the national safety belt use rate was 69 percent. As of December 1997, 49 states had safety belt laws. Eleven states had primary enforcement laws, and the remaining 38 States had secondary enforcement laws. (Advocates for Highway and Auto Safety (AHAS). *Safety Belt Fact Sheet*. Washington, DC: AHAS, 1998). In 1998, the average observed belt use rate by states with secondary enforcement laws was 62 percent, compared to 79 percent in states with primary enforcement laws. Among children aged 1 to 14 years, crash injuries are the leading cause of death. Because all states have child restraint laws, more children now ride restrained. However, loopholes in the laws exempt many children from coverage under either safety belt or child restraint use laws. Another problem is the persistence of incorrect use of child restraints and safety belts. (NHTSA. *Traffic Safety Facts 1997: Children*. Washington, DC: NHTSA, 1997.)
- Wearing a motorcycle helmet reduces the chances of dying in a motorcycle crash by 29 percent and reduces the chances of brain injury by 67 percent. Riders without helmets are 40 percent more likely to suffer a fatal head injury than helmeted riders.
- Teenagers accounted for 10 percent of the U.S. population in 1997 and 15 percent of the motor vehicle deaths. (NHTSA. *Traffic Safety Facts 1998: Young Drivers*. Washington, DC: NHTSA, 1998.) Graduated licensing laws allow a young driver to gain driving experience at incremental levels. Graduated licensing is a system for phasing in on-road driving that allows beginners to obtain their initial experience under lower-risk conditions. The National Committee on Uniform Traffic Laws and Ordinances (NCUTLO) has developed a model law that calls for a minimum of 6 months in the learner stage and a minimum of 6 months in the intermediate license stage with night driving restrictions.
- The public health approach to violence prevention must be multidisciplinary. We must encourage experts from scientific disciplines, community organizations, churches and citizens to work together to find solutions to violence.
- Strategies for reducing violence should begin early in life, before violent beliefs and behavioral patterns can be adopted. Family violence and abuse in the very young has devastating effects on a child's cognitive development. Many day cares are beginning anti-violence and anti-family violence curriculums.

- Successful communities reorganized themselves after they evaluated the effectiveness of existing anti-violence programs in their schools, institutions, and churches. They focused on what worked and turned the page on what did not.

- Respite care and respite opportunities for families in crisis, mediation services and training, shelters for runaway teens, drug and alcohol prevention, and intervention programs are all in short supply but very effective. Once a family or individual breaks the silence that perpetuates violence and neglect, a compassionate community must respond swiftly. Systems must be efficient and well staffed so that the response is professional and encourages recovery. These services are labor intensive and require vigilance.

- Many culturally and linguistically competent intervention strategies for violence prevention exist, such as parent training, mentoring, home visitation, and education. (NCIPC. *Best Practices for Preventing Violence by Children and Adolescents: A Source Book.* Atlanta, GA: NCIPC, November 1999 (in press.) Evaluation of ongoing programs is a major part of identifying effective approaches for violence prevention.

- Violence prevention programs for youth need to focus on strategies that reduce involvement in physical fighting and discourage weapon carrying on school property. Strategies to reduce weapon carrying on school property, physical fighting, and resulting injuries among youth should begin early in life and must be tailored to youth of widely varying social, economic, cultural, and ethnic backgrounds. (NCIPC. *Best Practices for Preventing Violence by Children and Adolescents: A Source Book.* Atlanta, GA: NCIPC, November 1999 in press.)

- Physicians and other health professionals are in a position to provide effective primary prevention messages to youth and their families. Primary care physicians can be instrumental in screening for family violence issues that range from spousal abuse to elder abuse.

- In response to the increasing trend of violence against children and the lack of a comprehensive data source on violent childhood deaths, the Child Fatality Review Team (CFRT) process was developed in 1978 in California. The goal of the CFRTs is the prevention of childhood fatalities. Their responsibility is to review “suspicious” or “preventable” childhood fatalities. Minimal or core standards for CFRTs must include representatives from criminal justice, health, and social services. After integrating information from multiple sources, review teams determine if the cause and manner of death was recorded accurately and suggest prevention initiatives for all relevant agencies. Simply reviewing fatalities is not helpful unless recommendations for prevention are included and periodic follow-ups are completed to ensure that recommendations are being acted on. Focusing on children aged 14 years and under will include most “unexplained” childhood deaths and is considered a more reasonable goal to achieve.

- ED workers treating adolescents with fight-related injuries can practice secondary interventions, as they do with victims of child abuse, sexual assault, or attempted suicide.

- Emergency department (ED) patient records and hospital discharge systems are an important source of public health surveillance and an integral part of the vision of electronically linked health information systems that can serve multiple purposes. Communities also need to begin collecting data from pre-emergency room sources (EMTs). Because of the volume and case mix of patients they treat, EDs are well positioned to provide data on cause and severity of injuries. Access to such data can help with the development of population-based public health.

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County-Wide Communications (9-1-1)
(717) 664-1100
1-800-297-LCWC (5292)

Domestic Relations
(717) 299-8141

Drug & Alcohol Commission
(717) 299-8023

Emergency Management Agency
(717) 664-1200
Toll Free 1-800-808-5236

Lancaster County Children & Youth Agency
(717) 299-7925

Lancaster County Juvenile Probation and Parole
(717) 299-8161

Lancaster General Hospital
Wound Management
(717) 290-3216
Emergency and Trauma Information
(717) 290-4925

Lancaster Regional Medical Center
Wound Care Services
(717) 291-6720

The Lancaster Shelter for Abused Women
(717) 299-7249

Mental Health/Mental Retardation
(717) 299-8021

Office of Aging
(protective services)
(717) 299-7979
1-800-490-8505

PA Dept of Health
local office
(717) 299-7597

St. Joseph Health Ministries
(717) 397-7625

Sexual Assault Hotline
(717) 392-7273

Sheriff
(717) 299-8200

State Health Hotline
(800) 692-7254

Additional Resources

Youth Intervention Center
(717) 299-7821

Adoptions from the Heart
zhttp://www.adoptionsfromtheheart.org/

Children's Aid Society
http://www.caspa.org/

COBYS Family Services
http://www.co.lancaster.pa.us/LINC/950yibwm.htm

Bethany Christian Services
http://www.bethany.org/

Children's Home of Pittsburgh
http://www.adopt-infant.org/

Juvenile Justice Center of Philadelphia
http://www.adoptionsfromtheheart.org/

Lutheran Services Northeast
http://www.lsn.org/

PA Adoption Exchange
http://www.dpw.state.pa.us/adoptpakids/

Welcome House Social Services of the Pearl S. Buck Foundation
http://www.pearl-s-buck.org/

Adoption Forum, Inc.
PO Box 12502
Philadelphia, PA 19151
Tel: 215-238-1116

National Youth Violence Prevention Resource Center
http://www.SAFEYOUTH.org

National Center for Injury Prevention and Control (NCIPC)
http://www.cdc.gov/ncipc

U.S. Consumer Product Safety Commission (CPSC)
http://www.cpsc.gov

National Highway Traffic Safety
http://www.nhsta.dot.gov

National Domestic Violence Hotline
1-800-799-SAFE (800-799-7233)
TDD 1-800-787-3224

National Health Resource Center on Domestic Violence
1-800-537-2238

Violence Against Women Office
http://www.ojp.usdoj.gov/vawo/welcome.html

National Criminal Justice Reference Service
http://www.ncjrs.org

National Clearinghouse on Child Abuse and Neglect Information
http://www.calib.com/nccanch

National Clearinghouse for Alcohol and Drug Information (NCADI)
http://www.health.org

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What You Can Do

Businesses and Institutions

- Provide mental health services for your employees and their families.
- Provide ongoing education related to workplace safety and be mindful of literacy and language issues when preparing materials.
- Sponsor car seat checks where parents can stop and have someone make sure their children's car safety seats are properly installed.
- Provide strict safety standards to your employees regarding drinking and driving, and also the use of cell phones while driving.
- Encourage mentoring of youth by your employees in order to encourage school success.
- Communities should send clear messages about their intolerance of the physical and sexual mistreatment of children by anyone, including parents. Communities that succeed in protecting children are clear about what constitutes abuse. Courts must reinforce the community's standards of conduct and prove that they are being upheld.
- Policy-makers at every level must readjust their spending priorities to combat the cycle of family violence if they truly believe in family values. This cycle that produces generations of dysfunctional families and young violent offenders, threatens the future safety and health of our entire community.
- Voice your opinion about setting public spending priorities. Our children represent the future work force with which businesses will deal. We will be a more productive society if every child has the opportunity to grow into a healthy and balanced adult.

Schools

- Be vigilant in looking for signs of abuse or neglect among your students.
- Educate students on safety issues (i.e. helmet use; buckling up; stop, drop, and roll, etc.)
- Ensure that students play safely on playground equipment. Potentially dangerous equipment should be brought to the attention of school officials.
- Implement a curriculum that combats bullying and fighting.
- Work to ensure students are safe going to school. Violence often occurs on the way to and from school and can result in absenteeism and poor academic performance.
- Refer students to proper mental health services and be diligent about following up to be sure they are receiving the treatment they need.
- Provide workshops on date rape and dating violence for parents and students. Watch for signs of dating violence among your students. Take student comments and conversations seriously.
- Children must be taught about respecting themselves and others. They must know what is appropriate—not just sexually, but in conflict resolution, anger, relationships, and stress management. Adults must model respectful behavior in their relationships. Everyone is a teacher when conveying family, personal, and community values.

Individuals

- Use proper safety equipment when riding bikes, motorcycles, scooters, etc. Insure that your children use proper safety equipment at all times.
- Take you family, including elderly parents, to safety fairs.
- Regularly check that your smoke detectors are in working order.
- Reduce alcohol consumption.
- Never drink and drive or allow your friends to drink and drive.

- Enroll your teenage son or daughter in their high school's "Behind the Wheel" drivers' education program. Do not let them drive with friends who they tell you drive recklessly.
- Be aware of family situations in your neighborhood. If you feel that children are being neglected or abused, contact Children and Youth.
- Whenever you are in a moving vehicle be sure that everyone uses their seatbelts, and make sure you have properly installed child safety seats that are appropriate for your childs size.
- If you have firearms or other weapons in your home, lock them up and keep them away from the hands of children.
- Turn off violent shows and don't purchase violent video games. Question the appropriateness of violence in children's programming and games. Talk to your children about the violence they watch. (Studies are being done on the exposure of young children and youth to violence on television and in video games.)
- Understand the role that anger and violence has played in shaping you and your own beliefs.
- Be conscious of the messages your children get from the world around them: movies, TV, music, newspapers, your home, their friends. Talk to them about what they believe is right and wrong and why they believe what they do.
- Know what your children do with their free time and with whom they are hanging out. Get to know the parents of your child's friends.
- Teach your sons and daughters that, in a sexual context, "no" means "no."
- Make sure that older adults have living arrangements that will not unnecessarily put them in danger of falling or otherwise injuring themselves. Check in with them often.
- Talk to your sons and daughters from an early age about violence and sex. Be vigilant!
- If you are in a relationship in which you do not feel safe, seek help.
- If we, the community, want to send the message that we care about every child, then we must be willing to financially support children who need to find caring and safe homes. Tell your legislators and local officials.

Additional Questions

- How can we as a community make mental health services available and accessible?
- How do we grow the political will to deal with the issue of full staffing in the agencies that provide support to our most troubled families and children?
- What can we do to encourage proper safety habits within our citizenry?
- How do we encourage more mentors for youth everywhere?
- How can we ensure that juvenile offenders are receiving proper treatment for mental health, substance abuse, and cognitive developmental issues?
- How does the entire community address the fact that we are growing increasingly violent youth? How do we deal with the conditions that produce this result in a scientifically sound but community- and family-based way?
- How can our community provide better support to those who are victims of child abuse, domestic violence, or elder abuse? How do we increase the options for safe living situations?
- How do we raise our sons and daughter in ways that will build self-respect and respect for members of the opposite sex?

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Healthy People 2010—Summary of Objectives

Injury and Violence Prevention

Goal: Reduce injuries, disabilities, and deaths due to unintentional injuries and violence.

Injury Prevention

15-1 Nonfatal head injuries
15-2 Nonfatal spinal cord injuries
15-3 Firearm-related deaths
15-4 Proper firearm storage in homes
15-5 Nonfatal firearm-related injuries
15-6 Child fatality review
15-7 Nonfatal poisonings
15-8 Deaths from poisoning
15-9 Deaths from suffocation
15-10 Emergency department surveillance systems
15-11 Hospital discharge surveillance systems
15-12 Emergency department visits

Unintentional Injury Prevention

15-13 Deaths from unintentional injuries
15-14 Nonfatal unintentional injuries
15-15 Deaths from motor vehicle crashes
15-16 Pedestrian deaths
15-17 Nonfatal motor vehicle injuries
15-18 Nonfatal pedestrian injuries
15-19 Safety belts
15-20 Child restraints
15-21 Motorcycle helmet use
15-22 Graduated driver's licensing
15-23 Bicycle helmet use
15-24 Bicycle helmet laws
15-25 Residential fire deaths
15-26 Functioning smoke alarms in residences
15-27 Deaths from falls
15-28 Hip fractures
15-29 Drownings
15-30 Dog bite injuries
15-31 Injury protection in school sports

Violence and Abuse Prevention

15-32 Homicides
15-33 Maltreatment and maltreatment fatalities of children
15-34 Physical assault by intimate partners
15-35 Rape or attempted rape
15-36 Sexual assault other than rape
15-37 Physical assaults
15-38 Physical fighting among adolescents
15-39 Weapon carrying by adolescents on school property

Related Objectives from Other Focus Areas

Access to Quality Health Services

1-3 Counseling about health behaviors
1-11 Rapid prehospital emergency care
1-12 Single toll-free number for poison control centers

Educational and Community-Based Programs

7-3 Health-risk behavior information for college and university students

Environmental Health

8-13 Pesticide exposures
8-24 Exposure to pesticides
8-25 Exposure to heavy metals and other toxic chemicals

Mental Health and Mental Disorders

18-1 Suicide
18-2 Adolescent suicide attempts

Occupational Safety and Health

20-1 Work-related injury deaths
20-2 Work-related injuries
20-5 Work-related homicides
20-6 Work-related assaults

Subtance Abuse

26-1 Motor vehicle crash deaths and injuries
26-5 Alcohol-related hospital emergency department visits
26-6 Adolescents riding with a driver who has been drinking
26-7 Alcohol- and drug-related violence
26-24 Administrative license revocation laws
26-25 Blood alcohol concentration (BAC) levels for motor vehicle drivers

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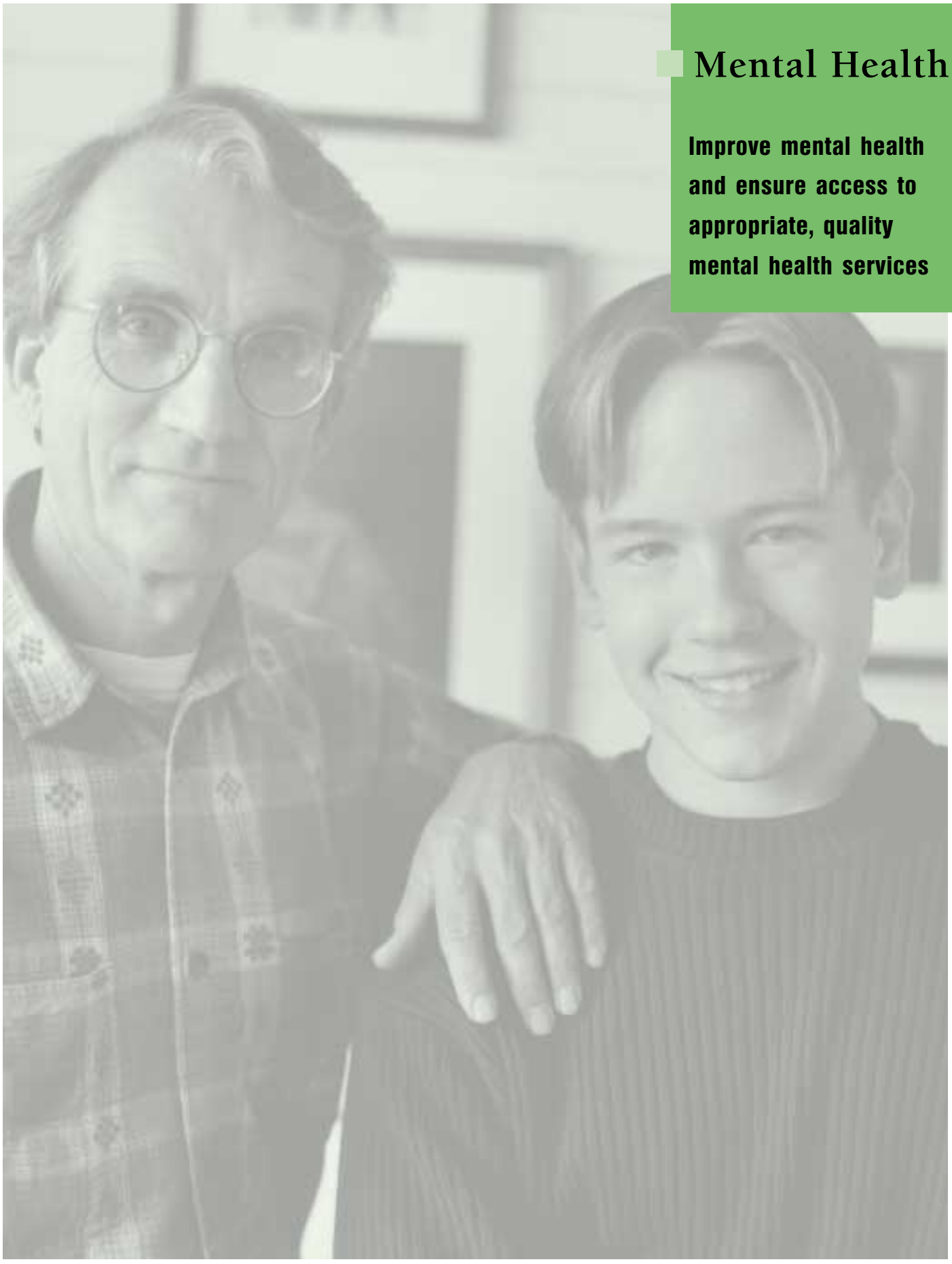

Mental Health

Improve mental health and ensure access to appropriate, quality mental health services

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Mental Health

Goal: Better than the best

HP 2010 Measures and Local Measures

18-1 Reduce the suicide rate.

Target: 5.0 suicides per 100,000 population
Baseline: 11.3 suicides per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population).
Target-setting method: Better than the best
Data source: National Vital Statistics System (NVSS), CDC, NCHS

18-3 Reduce the proportion of homeless adults who have serious mental illness (SMI).

Target: 19 percent.
Baseline: 25 percent of homeless adults aged 18 years and older had SMI in 1996.
Target-setting method: 24 percent improvement. (Better than the best will be used when data are available.)
Data source: Projects for Assistance in Transition from Homelessness (PATH) Annual Application, SAMHSA, CMHS
Data for population groups currently are not collected.

18-6 (Developmental) Increase the number of persons seen in primary health care who receive mental health screening and assessment.

Potential data source: Primary Care Data System/Federally Qualified Health Centers, HRSA

18-7 (Developmental) Increase the proportion of children with mental health problems who receive treatment.

Potential data source: National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS

18-9 Increase the proportion of adults with mental disorders who receive treatment.

Target and baseline:
a. Adults aged 18 to 54 years with serious mental illness
b. Adults aged 18 years and older with recognized depression
c. Adults aged 18 years and older with schizophrenia
d. Adults aged 18 years and older with generalized anxiety disorder

Target-setting method: 17 percent improvement for 18-9a. (Better than the best will be used when data are available.) Better than the best for 18-9b, 18-9c, and 18-9d.
Data sources: Epidemiologic Catchment Area (ECA) Program, NIH, NIMH; National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS; National Comorbidity Survey, SAMHSA, CMHS; NIH, NIMH

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18-10 (Developmental) Increase the proportion of persons with co-occurring substance abuse and mental disorders who receive treatment for both disorders.

Potential data sources: National Health Interview Survey (NHIS), CDC, NCHS; National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS; Replication of National Comorbidity Survey, NIH, NIMH.

Local Indicators:

- Increase the number of juveniles in the juvenile justice system being screened for mental health and drug and alcohol addiction or abuse and learning disabilities to 100% (developmental).
- Increase the percentage of employers who provide health insurance that includes mental health services in their benefits.
- Increase the percentage of employers who provide some Employee Assistance Programs or have contracted services for such.

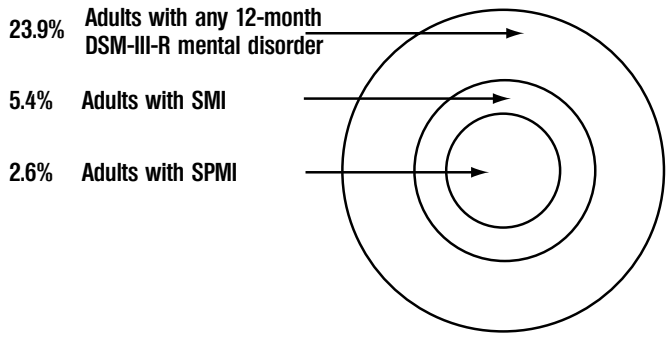
Targe-setting method: Better than the best

Data sources: Pennsylvania Vital Statistics (PAVS); Annual Homeless Survey; School-based Assistance Programs (SAP), Special Education Programs; Drug & Alcohol Commission and MH/MR, PA DOH and PA DPW; Chamber of Commerce Surve.

Description

Like physical health, mental health is not just the absence of disease. It includes a sense of well-being and extends to a person's ability to meet routine demands of ordinary daily life. Healthy People 2010 defines it as "*a state of successful mental functioning, resulting in productive activities, fulfilling relationships, and the ability to adapt to change and cope with adversity. Mental health is indispensable to personal well-being, family and interpersonal relationships, and one's contribution to society*." An example of the breadth of mental health topics is stress. Stress, and living with constant stress, is a major risk factor for mental and physical illness. It complicates our ability to perform well at work and at home, to enjoy relationships, and to appreciate life. Stress management is being seen as a major issue by businesses and health professionals. The total estimated direct and indirect cost of mental illness in the United States in 1996 was $150 billion. In established market economies such as the United States, mental illness is on a par with heart disease and cancer as a cause of disability. (Murray, C.J.L., and Lopez, A.D. *The Global Burden of Disease*. Cambridge, MA: Harvard University Press, 1996.)

Proportion of Adults Aged 18 Years and Older With Mental Illness (by level of severity)



*A mental disorder is any disorder coded in the Diagnostic and Statistical Manual of Mental Disorders, III, Revised (DSM-III-R), American Psychiatric Association, 1987.

SMI = Serious mental illness as coded in the DSM-III-R
SPMI = Serious and persistent mental illness as coded in the DSM-III-R

Source: Kessler, R.C.; Berglund, PA; Zbao, S; et al. "The 12-month prevalence and correlates of serious mental illness." *Mental Health, United States,* 1998. DHHS Publication Number (SMA) 99-8235, Rockville, MD: HHS, PHS, SAMHSA, CMHS, 1999

Ninety percent of those who complete suicide have a diagnosed mental illness. Mental illness is the term that refers collectively to all diagnosable mental disorders. Helping persons with mental illnesses to access appropriate scientifically based care and treatments is essential. Some of the most commonly diagnosed problems are mood disorders (depression, bipolar disorder, anxiety), psychotic disorders, and schizophrenia. *Mental disorders* are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof). They are associated with distress and/or impaired functioning and spawn a host of human problems that may include disability, pain, or death.

Mental disorders vary in severity and in their impact on people's lives. Mental disorders—such as schizophrenia, major depression and bipolar illness (manic depression), and obsessive-compulsive disorder and panic disorder—can be enormously disabling.

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Affective disorders, which encompass major depression and bipolar illness, constitute a second category of severe mental illness. Bipolar illness affects around one percent of adults, with comparable rates of occurrence in men and women. A high rate of suicide is associated with such mood disorders.

Depression is associated with other medical conditions, such as heart disease, cancer, and diabetes as well as anxiety and eating disorders. Depression also has been associated with alcohol and illicit drug abuse. At some time or another, almost all adults will experience an unexpected or tragic loss or a serious setback. Almost everyone suffers times of profound sadness, grief, or distress. Major depressive disorder is different both quantitatively and qualitatively from normal sadness or grief, which is usually less all-consuming and generally of a more limited amount of time. Some of the symptoms of severe depression, such as the inability to experience pleasure, severe hopelessness, and loss of one's ability to feel a mood uplift in response to something positive, only rarely accompany normal sadness.

Major depression is the leading cause of disability and is the cause of more than two-thirds of suicides each year. A person with a depressive disorder often is unable to fulfill the daily responsibilities of being a spouse, partner, or parent. Yet the misunderstanding of mental illness and the associated stigma prevents many persons with depression from seeking professional help. Although only a minority seek professional help to relieve a mood disorder, depressed people are significantly more likely than others to visit a physician for some other reason. Available medications and psychological treatments, alone or in combination, can help 80 percent of those with depression.

In the workplace, depression is a leading cause of absenteeism and diminished productivity. Depression also has been associated with alcohol and illicit drug abuse. An estimated 8 million persons aged 15 to 54 years had coexisting mental and substance abuse disorders within the past year.

Schizophrenia will affect more than 2 million people in the United States in one year. It is characterized by profound disruption in cognition and emotion, affecting the most fundamental human attributes: language, thought, perception, effect, and sense of self. Persons suffering from schizophrenia assign unusual significance or meaning to normal events or hold fixed false beliefs. The disorder tends to follow a long-term course, although the severity of symptoms may be fluid depending on the availability and response to treatment. With modern treatments, increasing numbers of persons with schizophrenia can and do view recovery as an achievable goal.

Anxiety disorders encompass several discrete conditions, including panic disorder, obsessive-compulsive disorder, posttraumatic stress disorder, and phobia. More common than other mental disorders, anxiety disorders affect as many as 19 million people in the United States annually. Twenty-four percent of the population will experience an anxiety disorder, many with overlapping substance abuse disorders.

> *Co-occurring mental and addictive disorders are more common than previously recognized. In general, 19 percent of the adult U.S. population has a mental disorder alone (in one year); three percent have both mental and addictive disorders; and six percent have addictive disorders alone. About 28 to 30 percent of the population has either a mental or addictive disorder.*

In the United States approximately 40 million people aged 18 to 64 years, or 22 percent of the population, had a diagnosis of mental disorder alone (19 percent) or of a co-occurring mental and addictive disorder in the past year. (Regier; Narrow; Rae. National Institute of Mental Health unpublished analysis, 1999.) Adults and older adults have the highest rates of depression. An estimated 25 percent of older people (8.6 million) experience specific mental disorders, such as depression, anxiety, substance abuse, or dementia, that are not part of normal aging.

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Modern treatments for mental disorders are highly effective, with a variety of treatment options available for most disorders; there is no "one size fits all" treatment. Similarly, there exists today a diverse array of treatment settings. A person may have the option of selecting a setting based on health care coverage, the clinical needs associated with a particular type or stage of illness, and personal preference.

18-9 Increase the proportion of adults with mental disorders who receive treatment.

Target and baseline:

Objective	Increase in Adults With Mental Disorders Receiving Treatment	1997 Baseline (unless noted)	2010 Target
		Percent	
18-9a	Adults aged 18 to 54 years with serious mental illness	47 (1991)	55
18-9b	Adults aged 18 years and older with recognized depression	23	50
18-9c	Adults aged 18 years and older with schizophrenia	60 (1984)	75
18-9d	Adults aged 18 years and older with generalized anxiety disorder	38	50

Target-setting method: 17 percent improvement for 18-9a. (Better than the best will be used when data are available.) Better than the best for 18-9b, 18-9c, and 18-9d.

Data sources: Epidemiologic Catchment Area (ECA) Program, NIH, NIMH; National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS; National Comorbidity Survey, SAMHSA, CMHS; NIH, NIMH.

Adults Aged 18 Years and Older With Mental Disorders, 1997 (unless noted)	Received Treatment			
	18-9a Serious Mental Illness (aged 18 to 54 years, 1991)	18-9b Recognized Depression	18-9c Schizophrenia (1984)	18-9d Generalized Anxiety Disorder
		Percent		
TOTAL	47	23	60	38
Race and ethnicity				
American Indian or Alaska Native	DNA	DSU	DSU	DSU
Asian or Pacific Islander	DNA	DSU	DSU	DSU
Asian	DNA	DNC	DSU	DNC
Native Hawaiian and other Pacific Islander	DNA	DNC	DSU	DNC
Black or African American	DNA	16	DNC	26
White	DNA	24	DNC	39
Hispanic or Latino	DNA	20	42	DSU
Not Hispanic or Latino	DNA	DNC	DNC	40
Black or African American	DNA	DNA	41	DNA
White	DNA	DNA	63	DNA
Gender				
Female	DNA	24	63	32
Male	DNA	21	51	49
Education level				
Less than high school	DNA	22	48	48
High school graduate	DNA	19	71	34
At least some college	DNA	28	66	32
Sexual orientation	DNC	DNC	DNC	DNC

Despite the effectiveness of treatment, two issues prevent people from seeking and obtaining that help. The first issue is personal choice in treatment. Insurance policies do not adequately reimburse for long-term or even short-term care. There is a national shortage of mental health providers, but especially providers for children. Additionally, there is a lack of providers who are culturally competent. Many facilities do not accept dually-diagnosed

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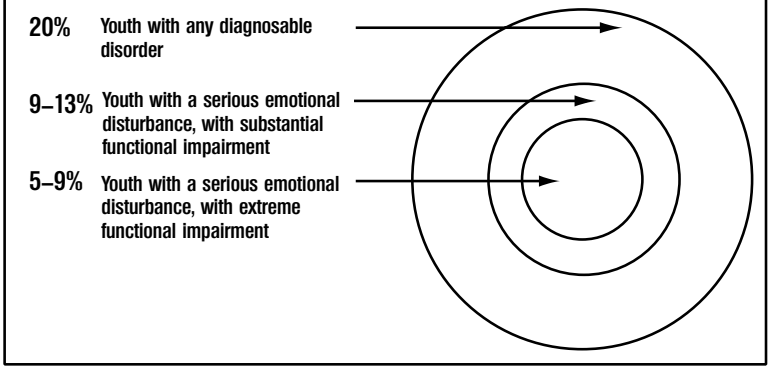
patents. Only 25 percent of persons with a mental disorder obtain help for their illness in the health care system. In comparison, 60 to 80 percent of persons with heart disease seek and receive care. More critically, 40 percent of all people who have a severe mental illness do not seek treatment from either general medical or specialty mental health providers. Indeed, the majority of persons with mental disorders do not receive mental health services. Of those aged 18 years and older getting help, about 15 percent receive help from mental health specialists. The second issue is the stigma attached to mental illness. Our society reacts with compassion to physical issues such as heart disease, cancer, and diabetes, but is wary and uncertain about mental issues. There is a tendency to either attach blame, or, in the case of depression, to believe that the sufferer simply is not rising to life's challenges.

The direct costs of diagnosing and treating mental disorders totaled approximately $69 billion in 1996. Lost productivity and disability insurance payments due to illness or premature death accounted for an additional $74.9 billion. People with mental illnesses are overrepresented in jail populations; many do not receive treatment. (Frese, *Psychiatric Clinics of North America* 21:233–249. 1998). Of the $69 billion spent for diagnosing and treating mental disorders, nearly 70 percent was for the services of mental health specialty providers, with most of the remainder for general medical services providers. The majority—53 percent—of mental health treatment was paid for by public sector sources, including states and local governments as well as Medicaid and Medicare and other Federal programs; 47 percent of expenditures were from private sources. Of expenditures from private sources, almost 60 percent were from private insurance. The remainder came from out-of-pocket payments, including insurance copayments, with a small amount from sources such as foundations.

Proportion of Youth Aged 9 to 17 Years With Emtional Disturbances (by level of severity)



Source: Friedman, R.M.; Katz-Leavy, J.W.; Manderscheid, R.W.; et al. "Prevalence of serious emotional disturbance: An update." Mental Health United States, 1996. DHHS Publication Number (SMA) 96-3098. Rockville, MD: HHS, PHS, SAMHSA, CMHS, 1996

Mental health issues affect children whether they are themselves the sufferers or live in a home with someone who is mentally ill. Because they are children, their symptoms (defiance, sadness, inability to pay attention, sleep problems, eating disorders, angry outbursts) are often seen simply as bad behavior. The same symptoms in adults would be a signal for treatment. Mental and behavioral disorders and serious emotional disturbances (SEDs) in children and adolescents can lead to school failure, alcohol or illicit drug use, violence, or suicide. (Brandenberg, N.; Friedman, R.; and Silver, S. "The epidemiology of childhood psychiatric disorders: Prevalence findings from recent studies." *Journal of the American Academy of Child and Adolescent Psychiatry* 29:76–83, 1990.)

- At least one in five children and adolescents between age 9 and 17 years has a diagnosable mental disorder in a given year. (Shaffer, D.; Fisher, P.; Dulcan, M.K.; et al. "The NIMH Diagnostic Interview Schedule for Children, version 2.3 (DSIC 2.3): Description, acceptability, prevalence rates and performance in the Methods for the Epidemiology of Child and Adolescent Mental Disorders Study". *Journal of the American Academy of Child and Adolescent Psychiatry* 35:865–877, 1996.)
- About 5 percent of children and adolescents are extremely impaired by mental, behavioral, and emotional disorders. (Friedman, R.M.; Katz-Levey, J.W.; Manderschied, R.W.; et al. "Prevalence of serious emotional disturbance in children and adolescents." In: Manderscheid, R.W., and Sonnenschein, M.A., eds. *Mental Health, United States*, 1996. Rockville, MD: Center for Mental Health Services (CMHS), 1996, 71–78.)

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Of young people aged 9 to 17 years who have a mental disorder, 27 percent receive treatment in the health sector. (Howard and Lyons, *Archives of General Psychiatry* 53:696–703, 1996). However, an additional 20 percent of children and adolescents with mental disorders use mental health services only in their schools.

Disparities

Differences between men and women are evident in the number of cases of particular mental disorders.

- Major depression affects approximately twice as many women as men (Weisman and Klerman, *Annual Review of Public Health*, 13:319–339, 1992).
- Women who are poor, on welfare, less educated, unemployed, and from certain racial or ethnic populations are more likely to experience depression.
- 12 percent of older persons hospitalized for problems such as hip fracture or heart disease are diagnosed with depression.
- Anxiety, panic, and phobic disorders affect two to three times as many women as men (American Psychiatric Association, *American Journal of Pschiatry* 155: 1–34, 1998).
- Rates of depression for older persons in nursing homes range from 15 to 25 percent. (Healthy People 2010).
- Alzheimer's disease strikes 8 to 15 percent of people over age 65 years, with the number of cases in the population doubling every 5 years of age after age 60 years. By age 85 years, the rate grows to 25 percent (Ritchie and Kildea, *Lancet* 346:931–934, 1995).
- Alzheimer's disease is thought to be responsible for 60 to 70 percent of all cases of dementia and is one of the leading causes of nursing home placements. Alzheimer's disease affects equal numbers of women and men, although women's longer average life spans mean that more women than men have Alzheimer's disease at any point in time (CDC, Priorities for Women's Health. 1993).
- A history of physical or sexual abuse appears to be a serious risk factor for suicide attempts in both women and men (Van der Kolk and Perry, *American Journal of Psychiatry*, 148:1665–1671, 1991).
- Women attempt suicide more often than men, but men's risk of completed suicide is on average four and one half times higher than women's (CDC, Scientific Data, Surveillance, and Injury Statistics, 1999). This suicide gender gap begins in adolescence and grows through middle and later life (NCHS, CDC, Vital Statistics of the United States, 1991).
- Schizophrenia occurs more often in young men than in women and usually has its onset in the late teen and early adult years.
- Eating disorders, affecting up to 2 percent of the population, arise predominantly—but not exclusively—in adolescent and young adult women (90 percent of all cases); the median age of onset is 17 years. Eating disorders often persist into adulthood and have among the highest death rates of any mental disorder.
- Although fewer old persons attempt suicide than do young persons, the rate of completed suicide is highest among elderly men. Elderly white men have a suicide rate six times the national average.
- Studies of the number of cases of mental health problems among racial and ethnic populations, while increasing in number, remain limited and often inconclusive. Discussion of the rates of existing cases must consider differences in how persons of different cultures and racial and ethnic groups perceive mental illness.
- Depression and anxiety are seen more frequently among people with disabilities than those without disabilities.

Local Experts

Local experts say that Healthy People 2010 goals and those that the Department of Health have set forth are somewhat helpful. The problem is that there is no way to accurately *count* those suffering from mental illnesses locally. The stigma attached to mental illness makes this so, as well as the laws of Pennsylvania regarding confidentiality. Furthermore, these laws are important to many who fear prejudice in the workplace and social settings, where knowledge of their illness may have serious repercussions. "A striking finding of the landmark *Global Burden of Disease* study is that the impact of mental illness on overall health and productivity in the United States and throughout the world often is profoundly underrecognized. In established market economies such as the United States, mental illness is on a par with heart disease and cancer as a cause of disability" (HP 2010).

Accurate accounting of the incidence of illness locally may enable our community to calculate its impact on productivity, which may, in turn, help to build our political and societal will to deal with mental illness more effectively. It is important for us to begin measuring the occurrence of this illness so that we can adequately recruit and train enough professionals to deal with the challenges our families, businesses, and communities face.

Many ideas have surfaced about how we could begin such a local measuring process. But all of these require coordinating a collaborative local effort. And then it must be recognized that the data may not be comparable to other areas. Additionally, the analysis and significance of the data would rest with those gathered to study the issue within this community. Some suggested ideas are:

- Count the number of prescriptions written/consumed including, over-the-counter pain and stress relief medications, anti-depressants, anti-psychotics, anti-anxiety. Source: pharmacists, drug companies; admittedly may be tough to get.
- Count the number of calls for mental health help, specifically measuring peak times. Source: CIS, hospital intake, triage, contact.
- Count the number of petty disturbance calls which are often mental health related. Source: police records.
- Count the number of people who define themselves as feeling connected/balanced or who admit to being stressed or depressed. Source: BRFSS.
- Measure stigma/public perceptions: 1) receiving mental health assessments, 2) being diagnosed, 3) length of treatment, 4) leaving treatment prematurely. Source: Locally commissioned random survey.
- Track persons by diagnoses—the percentage of the general population with character pathology. Axis I are by far the primary consumers of mental health services. The following breakdown of four types was suggested: Axis I psychotic, Axis I non-psychotic, Axis I and/or Axis II, and Axis I and Axis III. Source: Physicians and hospitals would have such information available but, again, the collection (which would not include specific client data) would be time-consuming to gather.
- Keep records on number and types of mental health commitments. Source: CIS, hospital and provider records.
- Track number of persons on waiting lists and the lengths of waiting lists. Source: MH/MR, D&A Commission, private and public facilities, pchools.
- Measure the impact of state and mental hospital closings. After 6–12 months, track where the deinstitutionalized persons live. How many in shelters, prisons, homeless, etc.?
- Measure the number of primary care practitioners who attended training on mental health issues, psychotropic meds, system-wide mental health referrals. Track the number of bicultural/bilingual mental health professionals.

Again, all of these issues need some attention and could lead to improving our interventions and strategies for dealing with mental health issues. But the community's will and capacity to deal with the research of all of these queries requires examination as well. There are some established measures that we can begin to look at in the meantime.

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18-1 Reduce the suicide rate.

National target: 5.0 suicides per 100,000 population
National baseline: 11.3 suicides per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population)
Target-setting method: Better than the best
Data source: National Vital Statistics System (NVSS), CDC, NCHS

Total Population, 1998	Suicides Rate per 100,000
TOTAL	11.3
Race and ethnicity	
American Indian or Alaska Native	12.6
Asian or Pacific Islander	6.6
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	5.8
White	12.2
Hispanic or Latino	6.3
Not Hispanic or Latino	11.8
Black or African American	6.0
White	12.8
Gender	
Female	4.3
Male	19.2
Education level (aged 25 to 64 years)	
Less than high school	17.9
High school graduate	19.2
At least some college	10.0

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.

Although 90% of people who kill themselves have a mental or substance abuse disorder, or a combination of disorders, most persons with a mental or substance abuse disorder do not kill themselves. Suicide, however, is the most often used measure of mental illness because it can be counted more accurately. But suicide is a very small part of the mental health picture. The real struggle for those with mental health issues is living and functioning with mental illness and mental disorders.

Healthy People 2010 Goal	National Baseline (1998)	Pennsylvania (1998)	Lancaster County (1998)
5.0	11.3	11.1	10.6

Suicide was the ninth leading cause of death in the United States in 1996 and the third leading killer of young persons between age 15 and 24 years (NCHS, CDC, *Health, United States*, 1996). Suicide is a complex behavior that can be prevented in many cases by early recognition and treatment of mental disorders (NIMH Suicide Research Consortium, *Suicide Facts*, 1997). As the population gets older, experts predict that by 2015, suicide and complications due to mental illness will be the third leading cause of death in America.

18-3 Reduce the proportion of homeless adults who have serious mental illness (SMI) (developmental).

National target: 19 percent
Baseline: 25 percent of homeless adults aged 18 years and older had SMI in 1996.
Target-setting method: 24 percent improvement. (Better than the best will be used when data are available.)
Data source: Projects for Assistance in Transition from Homelessness (PATH) Annual Application, SAMHSA, CMHS. Data for population groups currently are not collected nationally.
Local target: Better than the Best
Local baseline: Developmental
Data sources: Annual Homeless Survey

Approximately one-quarter of homeless persons in the United States have a serious mental illness (SMI) (Tessler and Dennis, DHHS Pub. No. 94-303014, 1989). Many of these individuals are the victims of the deinstitutionalization that took place in the last decade. It occurred without sufficient national and state funding for community-based mental health, support, and housing services as had been promised to advocated and local providers. These are those lost to our society through federal and state budget cutting sessions and who, because of their illnesses, are unable to lift their own voices for redress and services. New approaches developed over the past 10 years provide ways to lower the number of persons who are homeless and who also have Severe Mental Illness (SMI). Using persistent patient outreach and engagement strategies, service providers are helping homeless persons with SMI connect with mainstream treatment systems (Lam and Rosenheck, *Medical Care* 37:894–907, 1999). but these are costly and too few.

Treatment alone, however, is not enough. Once permanent housing is located, appropriate mental health and social supports can help persons with mental illness maintain that housing. Much of this support occurs in the form of case management, particularly if it is responsive both to emerging mental health issues and to the skills a person needs to function and thrive in the community. Counter to popular thought, many people who receive treatment and services for mental illness can and do work and are productive members of our communities. Recreational opportunities are equally important.

18-6 (Developmental) Increase the number of persons seen in primary health care who receive mental health screening and assessment.

Potential data source: Primary Care Data System/Federally Qualified Health Centers, HRSA

Family, clergy, family physicians, friends, teachers and school counselors need to be able to access information so that they can appropriately help the person confiding in them. Because of the stigma associated with mental illness, too few people actually receive appropriate treatment. It is important that those with whom they speak are able to direct them to appropriate help. It is also important that such help be available and accessible.

The primary care medical system (family doctors, internists, pediatricians, and nurse practitioners in office-based practice, clinics, acute medical and surgical hospitals, and nursing homes) has long been identified as the initial point of contact for many adults with mental disorders. For some, it may be the only source of mental health services. Therefore, attention to mental state in primary care can promote early detection and intervention for mental health problems. Close to six percent of the adult U.S. population use the general medical sector for mental health care, with an average of about four mental health visits per year—far lower than the average of 14 visits per year found in the specialty medical sector. (Regier, D.A.; Narrow, W.; Rae, D.S.; et al. “The de facto U.S. mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services.” *Archives of General Psychiatry* 50:85–94, 1993.)

Two prominent forces of change are federal and state efforts to improve access to health care, including mental health care and the rapid growth and impact of managed care. In 1998, the Mental Health Parity Act (P.L. 104–204) was implemented to help increase access to care. (The term “parity” or “mental health parity” refers generally to insurance coverage for mental health services that include the same benefits and restrictions as coverage for other health services.) Although the Federal Mental Health Parity Act is quite limited in reducing insurance coverage discrepancies between physical and mental disorders, 53 percent of the U.S. population is now covered by state mental health parity laws.

Because of issues of confidentiality and the inability to access private files, we do not know who is or isn't getting service. Except through testimonies at local public agency planning hearings or during events that rally advocates, a data-driven picture cannot be drawn.

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It is hard to answer the questions concerning the number of adults and children who are in need of mental health services and are not receiving them. Possible sources: Adults—clergy survey, ICAN, family doctors, shelters, emergency rooms. Children—daycare centers, CAP, public and private schools, CYA, Boys and Girls Club.

18-7 (Developmental) Increase the proportion of children with mental health problems who receive treatment.

Potential data source: National Household Survey on Drug Abuse (NHSDA), AMHSA, OAS
Local target: Better than the best
Local baseline: Developmental
Data sources: School-based Student Assistance Programs (SAP), Special Education Programs

For many children aged 18 years and under, lifelong mental disorders may start in very early childhood or adolescence. They range in severity and level of debilitation. These disorders may affect their ability to learn and to pursue or maintain strong social and family connections or absorb lessons that are essential to getting along in life and with others.

We must promote effective collaboration across critical areas of support: families, social services, health, mental health, juvenile justice, and schools in order to provide effective services for children, particularly for those with serious emotional disturbance. The goals for these children, particularly for children with serious emotional disturbance and their families, are greater school retention, decreased contact with the juvenile justice system, increased stability of living arrangements, and improved educational, emotional, and behavioral development. (Greenburg, Domitrovich, and Burnbarger, *Preventing Mental Disorders in School Children…*, HHS, PHS, SAMHSA, CMHS, 1999.)

Mental and addictive disorders together are also evident in children and teens (Kessler, Nelson, and McGonagle, et al, *American Journal of Orthopsychiatry*, 66:21–23, 1996). Especially at risk for alcohol use problems are boys diagnosed with so-called externalizing disorders such as conduct problems, oppositional-defiant disorder, and attention deficit/hyperactivity disorder (ADHD) (Winkle, *Journal of Studies in Alchohol*, 1988). From public health promotion and disease prevention perspectives, it is noteworthy that children and adolescents with mental illnesses often do not become substance abusers until after the mental illness becomes apparent (Christie, Burke and Regier, et al, *Amnerican Journal of Psychiatry* 145:971–975, 1988). This time lag creates a window of opportunity when prevention of substance abuse in these children may be possible.

For many other children, normal development is disrupted by biological, environmental, and psycho-social factors which impair their mental health, interfere with education and social interactions, and keep them from realizing their full potential as adults. Children can be victimized by family violence or family addiction issues. Many undiagnosed and diagnosed young people end up in the juvenile justice system. Unfortunately, this is often the point of entry into a lifetime of systems, programs, and incarceration, some of which may have been avoided with early diagnosis.

Other ideas for local tracking include:

- Track the number of children in treatment; the number who transition into adult services, CYA, and juvenile justice and criminal systems; the number who complete treatment as children; how many in residential placement; rate of recidivism; level of parental involvement; the number in therapeutic foster care; integration of treatment and consequences between justice and mental health systems.
- The number of children successfully completing treatment (SAP, PCP, Private Providers, IP, OP, schools, therapists, Salud Hispana, BC/GC, Nuestra Clinica).
- The number of children successfully completing school each year.

LOCAL INDICATOR: (Developmental) Increase the number of juveniles in the juvenile justice system being screened for mental health, drug and alcohol abuse, and learning disabilities to 100%.

Local target: 100% of juveniles involved with Lancaster Juvenile Probation and Parole who are screened for mental health, drug and alcohol addiction, or abuse and learning disabilities
Local baseline: Developmental
Data sources: Lancaster County JPP
Potential data source: Inventory of Mental Health Services in Juvenile Justice Facilities, SAMHSA

It is estimated that over 100,000 youth are placed in juvenile justice facilities annually (Otto, *Responding to the Mental Health Needs of Youth in the Juvenile Justice System*, National Coalition for the Mentally Ill in the Criminal Justice System, 1992). Although exact numbers of youths with mental disorders among those entering this system are not available, the proportion is considerably higher than in the general population. Not surprisingly, problems of suicide, self-injurious behavior, and other disorders are significant among youths in the juvenile justice system (Cocozza, *Corrections Today*, December 1997). Screening activities, including parent or caregiver interviews, should be conducted by qualified mental health personnel. This approach can help ensure that all youths entering the juvenile justice system who also have a treatable mental health problem are identified and receive appropriate treatment.

18-10 Increase the proportion of persons with co-occurring substance abuse and mental disorders who receive treatment for both disorders.

Potential data sources: National Health Interview Survey (NHIS), CDC, NCHS; National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS; Replication of National Comorbidity Survey, NIH, NIMH
Local target: Developmental
Data sources: D&A Commission and MH/MR, PA DOH and PA DP

The lifetime rates of co-occurrence of mental disorders and addictive disorders are strikingly high. About 28 to 30 percent of the population has either a mental or addictive (Kessler, R.C.; Nelson, C.B.; McGonagle, K.A.; et al. "The epidemiology of co-occurring addictive and mental disorders: Implications for prevention and service utilization." *American Journal of Orthopsychiatry* 66:21–23, 1996). Nearly one in three adults who have a mental disorder in their lifetime also experience a co-occurring substance abuse (alcohol or other drugs) disorder, which complicates treatment. Individuals who suffer from mental illness and addiction are more likely to experience a chronic course and to use services than are those with either type of disorder alone. Clinicians, program developers, and policymakers need to be aware of these high rates of co-existing conditions. How public health service systems can best address issues of treating the full range of persons with co-occurring mental and substance-related disorders remains a challenge. Treatment protocols continue to be refined as research findings and promising practices are disseminated to programs and practitioners.

Access to Care Indicators

Businesses everywhere are concerned with productivity, employability, and workplace skills of the work force, all of which are affected by mental illness. In addition to the stigma of mental illness, those who finally choose to get help or who are asked to do so by their employers must still find providers and work through the insurance system to get coverage. Employers can help by providing Employee Assistance Programs and training their Human Resource departments in how to make referrals in a sensitive, effective, and efficient manner.

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Increase the % of employers who provide health insurance that includes mental health services in their benefits.

Increase percentage of employers who provide health insurance who have some kind of Employee Assistance Program or contracted service for such. Increase percentage of employers who mandate drug screening and have an AEP in place.
Target: Better than the best
Local baseline: Developmental
Data sources: Chamber of Commerce Survey

Researched Best Practices

Stigma creates barriers to providing and receiving competent and effective mental health treatment and can lead to inappropriate treatment, unemployment, and homelessness. The reduction of stigma associated with mental disorders will, in turn, encourage more individuals to seek needed mental health care. Evidence that mental disorders are legitimate and highly responsive to appropriate treatment promises to be a potent antidote to stigma.

Social and behavioral research is beginning to explore the concept of resilience to identify strengths that may promote health and healing. It is generally assumed that resilience involves the interaction of biological, psychological, and environmental processes. We know that children who lack this quality tend to have problems later in life. With increased understanding of how to identify and promote resilience, it will be possible to design effective programs that draw on such internal capacity.

The public health sector increasingly is concerned with the impact of stress, its prevention and treatment, and the need for better coping skills. Coping skills, acquired throughout the lifespan, affect the ability to manage stressful events. Additional research can help identify ways to prevent or alleviate stress through environmental or individual strategies.

Progress in fundamental science and emphasizing clinical applications of that knowledge can strengthen opportunities for change in the clinical and service system.

Local Assets

Achievement Center
(717) 293-1314

Catholic Charities
(717) 299-3659

Christian Counseling Association
(800) 308-1834

Crisis Intervention Unit
(717) 394-2631

CONTACT
Lancaster (717) 299-4855
Ephrata (717) 738-0738
Hensel & Kirkwood (717) 786-5444
TTY (717) 299-7184

Council on Alcohol & Drug Abuse
(717) 299-2831

Ephrata Community Hospital
Behavioral Health Services
(717) 738-6630

Enhanced Treatment for Children
(717) 581-6561

Intensive Case Management
(717) 293-5104

Intensive Day Treatment
(for children)
(717) 295-9630

Lancaster Behavioral Health Network
(717) 560-3782

Lancaster General Health Campus
Behavioral Medicine and Neuropsychology
(717) 290-3172

Lancaster General Hospital
Mental Health & Substance Abuse Services
(717) 290-5887

Lancaster Guidance Center
(717) 560-2971

Lancaster-Lebanon I.U. 13
(717) 655-2366

Lancaster Regional Medical Center
(717) 291-8030

LUTHERCARE
(717) 626-1171

Mental Health Association
(717) 397-7461

Mental Health/Mental Retardation
Case Management (717) 393-0421
Children & Adolescent Service System Program (717) 399-7416

Nuestra Clinica
(717) 293-4150

PA Mental Health Consumers
(717) 564-4930

Philhaven
(717) 299-4829

Samaritan Counseling Center
(717) 299-7979

United Way LINC
(717) 291-LINC

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Additional Resources

Center for Mental Health Services, SAMHSA
http://www.mentalhealth.org/cmhs/index.htm

Knowledge Exchange Network, SAMHSA
http://www.mentalhealth.org/

National Institute of Mental Health Information Line, NIH
800-421-4211
http://www.nimh.nih.gov/publicat/depressionmenu.cfm

Additional Questions

- How do we get increased funding for mental health services, that is flexible and even "family" oriented?
- Do we have the ability to look outside the box for new, creative, effective services which integrate across treatment systems and counties?
- How do we integrate mental health and D&A services given the current funding dilemmas?
- What do we in Lancaster mean by integration of services in the mental health area?
- Can we create true community behavioral health centers with reduced fragmentation and improved coordination of services for dually-diagnosed persons and their families?
- How can we recruit mental health professionals for Lancaster County including child specialists and bi-cultural practitioners?
- Can we improve access to mental health screenings and consequent treatment of children involved in "at risk" situations, like parents in drug and alcohol treatment, residential placement, or prison?
- What do we mean by prevention efforts when we are talking about mental health issues?

Related Objectives from Other Focus Areas

Mental Health Status Improvement

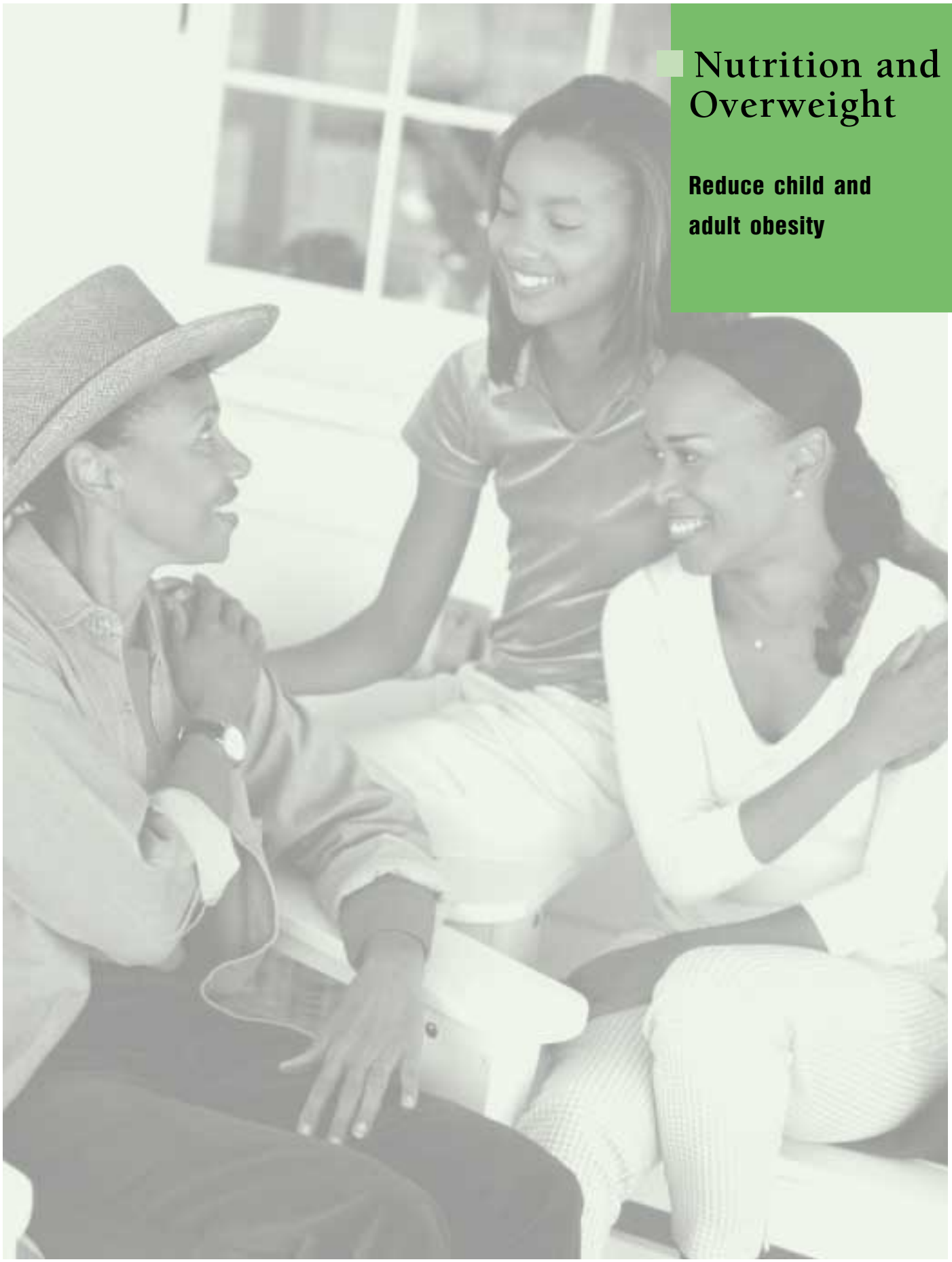
18-1 Suicide
18-2 Adolescent suicide attempts
18-3 Serious mental illness (SMI) among homeless adults
18-4 Employment of persons with SMI
18-5 Eating disorder relapses

Treatment Expansion

18-6 Primary care screening and assessment
18-7 Treatment for children with mental health problems
18-8 Juvenile justice facility screening
18-9 Treatment for adults with mental disorders
18-10 Treatment for co-occurring disorders
18-11 Adult jail diversion programs

State Activities

18-12 State tracking of consumer satisfaction
18-13 State plans addressing cultural competence
18-14 State plans addressing elderly persons



Nutrition and Overweight

Reduce child and adult obesity

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Adult and Adolescent Obesity and Overweight

Goal: Better than the best

HP 2010 Measures and Local Measures

19-2 Reduce the proportion of adults who are obese.

Target-setting method: Better than the best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
Target: 15 percent
Baseline: 23 percent of adults aged 20 years and older were identified as obese (defined as a BMI of 30 or more) in 1988–1994 (age adjusted to the year 2000 standard population).

19-3 Reduce the proportion of children and adolescents who are overweight or obese.

Target-setting method: Better than the best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
Target: 5 percent
Baseline: 11 percent of children and adolescents aged 6–19 years were overweight or obese 1988–1994.

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Description

Although the push to be thin seems greater than ever, the American lifestyle increasingly promotes an overweight and unhealthy population. One in three Americans is considered overweight, making us the most overweight major nation in the industrialized world. Higher body weights are associated with higher death rates. Leading national health organizations, such as the NIH and the CDC, define overweight as a body mass index of 25 or more. Body mass index (BMI) is your weight (in kilograms) divided by the square of height (in meters), or weight (in pounds) divided by the square of height (in inches) times 704.5. Because it is readily calculated, BMI is the measurement of choice as an indicator of healthy weight, overweight, and obesity. Even more disturbing are the health risks associated with the rising number of obese people (defined as having BMIs of 30 or greater). Obese individuals suffer from more chronic health problems than do daily smokers and heavy drinkers. In fact, weight may soon overtake smoking as the number one cause of preventable disease and death (Pierce, Neal. "How to Combat Our Obesity Epidemic?" *Neal Pierce Column, Washington Post Writer's Group*. Jan 27, 2002).

Being overweight or obese typically reflects a diet higher in fat and lower in more healthful foods such as whole grains, fruits, and vegetables. Even though research documenting the precise relationships between dietary habits and disease incidence and outcomes is in its infancy, we know that nutritional, or dietary, factors contribute substantially to the burden of preventable illnesses and premature deaths in the United States (Frazao, E. "The high costs of poor eating patterns in the United States." In: Frazao, E., ed. *America's Eating Habits: Changes and Consequences*. Washington, DC: U.S. Department of Agriculture (USDA), Economic Research Service (ERS), AIB–750, 1999). Dietary factors are associated with 4 of the 10 leading causes of death: coronary heart disease (CHD), some types of cancer, stroke, and type 2 diabetes (National Center for Health Statistics (NCHS). Report of Final Mortality Statistics, 1995. *Monthly Vital Statistics Report* 45(11):Suppl. 2, June 12, 1997). Obesity is directly associated with both the prevalence and the consequences of diabetes. Approximately 300,000 deaths from diabetes, hypertension, breast and colon cancer are directly linked to obesity (Pierce, Neal. "How to Combat Our Obesity Epidemic?" *Neal Pierce Column, Washington Post Writers Group*. Jan 27, 2002). Dietary factors also are associated with osteoporosis, which affects more than 25 million persons in the United States and is the major underlying cause of bone fractures in postmenopausal women and elderly persons (*NIH Consensus Statement: Optimal Calcium Intake*. 12(4), 1994).

Conversely, those falling below a BMI of 18.5 are also at risk for certain health issues, such as menstrual irregularity, infertility, and osteoporosis. The epidemic of overweight and obesity in the United States, often overshadows the issue of under-nutrition. We may think under-nutrition in the U.S. is only the result of eating disorders, such as anorexia and bulimia. But hunger and lack of food does affect segments of the population, particularly those who are poor and socially isolated, such as elderly and homeless persons. People living in settings where access to food may be strictly limited, such as nursing homes or correctional facilities, could also be at at risk for under nutrition.

Behavioral Risk Factor Surveillance Survey and the Youth Risk Behavior Survey may serve as potential sources of data concerning body mass index and exercise.

Nutrition

There are many nutritional deficiencies that we could measure, all of which have health implications that impact us more intensely at different times of our lives. Some of them are: fat intake (increased heart disease and cancer risk), sodium intake (increased blood pressure and risk for pregnant women), calcium deficiency (children and teens, pregnant women, and post menopausal/osteoporosis), iron deficiency (children and pregnant women, anemia). Risk is highest for these negative health outcomes among the poor. However, Americans' eating habits are such that everyone must be vigilant. It is the guidelines to sound nutrition and good eating on which we will concentrate.

The 2000 *Dietary Guidelines for Americans* recommends that, to stay healthy, persons aged two years and older should follow these ABCs for good health: **A**im for fitness, **B**uild a healthy base, and **C**hoose sensibly.

- Aim for fitness, aim for a healthy weight, and be physically active each day.
- Build a healthy base, let the Pyramid guide food choices; choose a variety of grains daily, especially whole grains; choose a variety of fruits and vegetables daily; and keep food safe to eat.
- Choose sensibly, choose a diet that is low in saturated fat and cholesterol and moderate in total fat; choose beverages and foods to moderate intake of sugars; choose and prepare foods with less salt; and, if consuming alcoholic beverages, do so in moderation.

(USDA and U.S. Department of Health and Human Services (HHS). *Dietary Guidelines for Americans*. 5th ed. USDA Home and Garden Bulletin No. 232. Washington, DC: USDA, 2000.)

The *Dietary Guidelines for Americans* also emphasizes the need for adequate consumption of iron-rich and calcium-rich foods. Some progress has been made since the 1970s in reducing the prevalence of iron deficiency among low-income children, (Yip, R. "The changing characteristics of childhood iron nutritional status in the United States." In: Filer, Jr., L.J., ed. *Dietary Iron: Birth to Two Years*. New York, NY: Raven Press, Ltd., 1989, 37–61), but much more is needed to improve the health of children of all ages and of women who are pregnant or are of childbearing age. Since the start of this decade, consumption of calcium-rich foods, such as milk products, has generally decreased and is especially low among teenaged girls and young women (NCHS. Healthy People 2000 Review, 1998–99. DHHS Pub. No. (PHS) 99-1256. Hyattsville, MD: Public Health Service (PHS), 1997). In recent years there has been a concerted effort to increase the folic acid intake of females of childbearing age through fortification and other means to reduce the risk of neural tube defects (HHS. "Recommendations for the use of folic acid to reduce the number of cases of spina bifida and other neural tube defects." *Morbidity and Mortality Weekly Report* 41:1–7, 1992).

Away-from-home food tends to have a higher saturated fat content, and persons tend to consume more calories when eating away from home than at home (Lin, B.H.; Guthrie, J.; and Frazao, E. *Nutrient contribution of food away from home*. In: Frazao, E., ed. America's "Eating Habits: Changes and Consequences." Washington, DC: USDA, ERS, AIB-750, 1999). The proportion of all meals and snacks from away-from-home sources increased by more than two-thirds between 1977–78 and 1995, from 16 percent of all meals and snacks in 1977–78 to 27 percent of all meals and snacks in 1995. In 1995, the average total fat and saturated fat content of away-from-home foods (a percentage of calories) was 38 percent and 13 percent, respectively, compared with 32 percent and 11 percent for at-home foods.

Overweight and Obesity

- 55 percent of the U.S. adult population was defined as overweight or obese in 1988–94, compared to 46 percent in 1976–80 (World Health Organization [WHO]). "*Obesity: Preventing and Managing the Global Epidemic." Report of a WHO Consultation on Obesity,* Geneva, 3–5 June 1997. Geneva, Switzerland: WHO, 1998).
- The proportion of adults defined as obese by a BMI of 30 or greater has increased from 14.5 percent to 22.5 percent (Flegal, K.M.; Carroll, M.D.; Kuczmarski, R.J.; et al. "Overweight and Obesity in the United States: Prevalence and Trends, 1960–1994." *International Journal of Obesity* 22(1):39–47, 1998).
- A similar increase in overweight and obesity also has been observed in children above age 6 years in both genders and in all population groups (Troiano, R.P., and Flegal, K.M. "Overweight Children and Adolescents: Description, Epidemiology, and Demographics." *Pediatrics* 101:497–504, 1998).

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- Total costs (medical costs and lost productivity) attributable to obesity alone amounted to an estimated $99 billion in 1995 (Wolf, A.M., and Colditz, G.A. "Current Estimates of the Economic Cost of Obesity in the United States." *Obesity Research* 6(2):97–106, 1998).

Adults

Americans are gaining weight with age, and often do not become overweight until adulthood. But losing our girlish or boyish figure is not simply a cosmetic issue. There are serious consequences associated with the growing epidemic of overweight Americans. As we get older, our bodies tend to burn fewer calories due to a slowing of the metabolism. We also lose muscle mass, which requires increased physical activity and exercise to a moderate fitness level. Because excess weight is usually the result of a diet high in fat and calories and deficient in healthy foods like fruits and vegetables, we are more at risk for diseases affected by diet. Carrying excess weight can also cause undue stress on internal organs, such as the heart, and in a vicious cycle can keep us from being physically active. This is bad news for the 61 percent of American adults considered overweight or obese (Doheny, Kathleen. "Baby Boomers Need Help Beating the Bulge." *Health Scout*. Aug 4, 2002. http://healthscout.com/template.asp?page= newsdetail&ap=1&id=507835 [Oct. 10, 2002]). Adults over 40 years old are particularly susceptible to being overweight or obese. According to the National Center for Health Statistics, weight problems peak between the ages of 45 and 64. (Doheny, Kathleen. "Baby Boomers Need Help Beating the Bulge." *Health Scout*. Aug 4, 2002. http://healthscout.com/template.asp?page= newsdetail&ap=1&id=507835 [Oct. 10, 2002]).

Although younger adults have fewer weight problems, a longitudinal study indicates that those who are even mildly overweight at 20 or 21 are more likely to become obese by 36. In fact, the researchers were able to develop a statistical model to predict obesity using BMI, gender, and ethnicity (Melville, Nancy. "Obesity Sets in Between 20 and 35 for Many." *Health Scout*. Aug 18, 2002. http://healthscout.com/template.asp?page=news Detail&ap=43&id=507563 [October 10, 2002]). While this does not suggest we have a weight destiny that cannot be altered, it does suggest that unhealthy lifestyle patterns may leave early clues before completely manifesting themselves later in life. Early intervention of those at risk for obesity should be a top priority of both the individual and their health care provider.

Data

Overweight and obesity are caused by many factors. These factors reflect the contributions of inherited, metabolic, behavioral, environmental, cultural, and socioeconomic components. Between 1976 and 1994, the number of cases of obesity alone increased more than 50 percent—from 14.5 percent of the adult population to 22.5 percent. Approximately 25 percent of U.S. adult females and 20 percent of U.S. adult males are obese (Flegal, K.M.; Carroll, M.D.; Kuczmarski, R.J.; et al. "Overweight and obesity in the United States: Prevalence and trends, 1960–1994." *International Journal of Obesity* 22(1):39–47, 1998).

19-2 Reduce the proportion of adults who are obese.

Target-setting method: Better than the best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
Target: 15 percent
Baseline: 23 percent of adults aged 20 years and older were identified as obese (defined as a BMI of 30 or more) in 1988–1994 (age adjusted to the year 2000 standard population).

Adults Aged 20 Years and older, 1988–94 (unless noted)	Obese		
	Both Genders	Females	Males
	Percent		
TOTAL	23	25	20
Race and ethnicity			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DNC	DNC	DNC
Native Hawaiian and other Pacific Islander	DNC	DNC	DNC
Black or African American	30	38	21
White	22	24	21
Hispanic or Latino	DSU	DSU	DSU
Mexican American	29	35	24
Not Hispanic or Latino	22	25	20
Black or African American	30	38	21
White	22	23	20
Age 20 to 39 years	18	21	15
40 to 59 years	28	30	25
60 years and older	24	26	21
Family income level†			
Lower income (‹130 percent of poverty threshold)	29	35	21
Higher income (›130 percent of poverty threshold)	22	23	20
Disability status (1991–1994)			
Persons with disabilities	30	38	21
Persons without disabilities	23	25	22
Select populations			
Persons with arthritis	30	33	27
Persons without arthritis	21	23	19
Persons with diabetes	41	DNA	DNA
Persons without diabetes	22	DNA	DNA
Persons with high blood pressure	38	47	33
Persons without high blood pressure	18	20	16

DNA=Data have not bee analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable. Note: Age adjusted to the year 2000 standard population
*Data for females and males are displayed to further characterize the issue. †A household income below 130 percent of poverty threshold is used by the Food Stamp Program.

PA Adults Aged 18 Years and Older, 2000 (with 95% confidence intervals)	Overweight		
	Total No.	No.	%
All Adults	3,389	1,920	58±2
Gender			
Male	1,413	966	67±3
Female	1,976	954	48±2
Ethnicity			
White, non-Hispanic	2,940	1,630	56±2
Black, non-Hispanic	261	193	74±2
Hispanic	96	54	61±11
Age 18–29	509	210	42±5
30–44	1,071	610	60±3
45–64	1,141	700	63±3
65+	651	390	2±4
Education			
‹High school	339	220	65±6
High school	1,295	780	61±3
Some college	706	399	55±4
College degree	1,043	517	52±3
Income			
‹$15,000	343	213	65±6
$15,000 to $24,999	572	332	57±5
$25,000 to &49,999	1,047	624	61±3
$50,000 to $74,999	535	301	57±5
$75,000+	531	274	53±5

Source: Pennsylvania Department of Health, 2000 Behavioral Health Risks of Pennsylvania Adults *Excludes missing, don't know, and refused.

Simple and health-oriented definitions of overweight and obesity should be based on the amount of excess body fat at which health risks to individuals begin to increase. No such definitions currently exist. Most current clinical studies assessing the health effects of overweight rely on BMI. While the relation of BMI to body fat differs by age and gender, it provides valid comparisons across racial and ethnic groups (Gallagher, D.; Visser, M.; Sepulveda, D.; et al. "How useful is body mass index for comparison of body fatness across age, sex, and ethnic groups?" *American Journal of Epidemiology* 143(3):228–239, 1996). However, BMI does not provide information concerning body fat distribution, which has been identified as an independent predictor of health risk (NIH. "Clinical guideline on the identification,

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evaluation and treatment of overweight and obesity in adults—The evidence report." *Obesity Research* 6(Suppl. 2):51S–209S, 1998). Health risks also increase as waist measurements increase, and thus waist measurement also can be a useful indicator (USDA and U.S. Department of Health and Human Services (HHS). *Dietary Guidelines for Americans*. 5th ed. USDA Home and Garden Bulletin No. 232. Washington, DC: USDA, 2000).

Overweight and Obese Youth

The epidemic of overweight and obesity is not limited to adults. Although the percentage of overweight and obese children and adolescents is lower than the percentage of adults, the situation is no less dangerous. The condition of our youth will profoundly affect the health of our nation as they grow older. A healthy diet is important throughout life, but especially important for children and adolescents. As we tend to carry the same eating patterns throughout life, parents should establish good habits for their children early. Unfortunately, if parents follow a poor diet themselves, they make it nearly impossible for their children to eat well. Even children who eat poorly but are not overweight, are at risk for being overweight as an adult and also developing diseases associated with a high-fat, high-caloric diet.

Because childhood and adolescence is a time of growth, it is important that strategies incorporate physical activity and a properly balanced diet. A recent study done by the University of Minnesota, suggests children of middle-school age need repeated reminders, classroom intervention, and access to healthy food in order to change eating habits (Health Scout. "Shaping Up Kids' Eating Habits." Aug 7, 2002. http://healthscout.com/template.asp?page=newsdetail&ap=43&id=508319 [Oct. 10, 2002]). School, following closely behind family, remains an important influence on children's eating habits.

Data

Because puberty occurs at different ages, and has different effects on girls and boys, measures of body fat and weight are much more difficult to interpret for children and adolescents. Teenaged boys lose some fat accumulated before puberty during adolescence, but fat deposition continues in girls. Thus, without measures of sexual maturity, measures of body fat and body weight are difficult to interpret in children and adolescents. Therefore, the goal is to reduce overweight and obese children by 5 percent. Healthy People 2010 uses gender- and age-specific 95th percentile of BMI from CDC Prevention Growth Charts for overweight and obese designations.

19-3 Reduce the proportion of children and adolescents who are overweight or obese.

Target-setting method: Better than the best
Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
Target: 5 percent
Baseline: 11 percent of children and adolescents aged 6–19 years were overweight or obese from 1988 to 1994.

Obese children also may experience psychological stress. Research is needed to better define the prevalence and health consequences of overweight and obesity in children and adolescents, as well as the implications of such findings for these persons as they become adults.

Improving the quality of students' diet at school is important because, for many children, meals and snacks eaten at school make a major contribution to their total daily intake of food and nutrients. National food consumption data collected in 1994 and 1995 show that school foods had the highest saturated fat density of all food outlets (Lin, B.H.; Guthrie, J.; and Frazao, E. "Nutrient Contribution of Food Away From Home." In: Frazao, E., ed. *America's Eating Habits: Changes and Consequences.* Washington, DC: USDA, ERS, AIB–750, 1999).

Children and Adolescents Aged 9 to 19 Years, 1988–94 (unless noted)	Overweight or Obese		
	19-3a Children Aged 6 to 11 Years	19-3b Adolescents Aged 12 to 19 Years	19-3c Children and Adolescents Aged 6 to19 Years
	Percent		
TOTAL	11	11	11
Race and ethnicity			
American Indian or Alaska Native	DSU	DSU	DNA
Asian or Pacific Islander	DSU	DSU	DNA
Asian	DNC	DNC	DNC
Native Hawaiian and other Pacific Islander	DNC	DNC	DNC
Black or African American	15	13	14
White	11	11	11
Hispanic or Latino	DSU	DSU	DSU
Mexican American	17	14	15
Not Hispanic or Latino	11	10	11
Black or African American	15	13	14
White	10	10	10
Gender			
Female	11	10	10
Male	12	11	12
Family income level*			
Lower income (‹130 percent of poverty threshold)	11	16	13
Higher income (›130 percent of poverty threshold)	11	8	10
Disability status			
Persons with disabilities	DSU (1991–94)	DSU (1991–94)	DSU (1991–94)
Persons without disabilities	13 (1991–94)	11 (1991–94)	12 (1991–94)

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.
*A household income below 130 percent of poverty threshold is used by the Food Stamp Program.

School foods also had higher than recommended levels of sodium—as did other away-from-home foods and at-home foods. Nonetheless, these analyses also showed positive aspects of foods obtained from school. School foods had the highest calcium density of all sources and the highest dietary fiber density of all away-from-home sources.

Disparities

Biology, environment, and culture can all influence weight. Consequently, disparities in body mass indexes exist between different gender, age, ethnic, racial, and income groups. Overweight and obesity are observed in all population groups, but obesity is particularly common among Hispanic, African American, Native American, and Pacific Islander women

Despite concerns about the increase in overweight and certain excesses in U.S. diets, segments of the population also suffer from under-nutrition, including persons who are socially isolated and poor. Over the years, the recognition of the consequences of food insecurity (limited access to safe, nutritious food) has led to the development of national measures and surveys as to accessibility to fresh food, hunger, and the ability to assess disparities. Data also are insufficient to target the fastest-growing segment of the population, old and very old persons who live independently.

Best Researched Practices

A concerted public effort will be needed to prevent further increases of overweight and obesity. Health care providers, health plans, and managed care organizations need to be alert to the development of overweight and obesity in their clients and should provide information concerning the health risks. These groups need to provide guidance to help consumers address this health problem. Work site programs can reach employees with information, activities, and services that encourage healthy dietary and physical activity behaviors (PHS. "Worksite Nutrition: A Guide to Planning, Implementation, and Evaluation." 2nd ed. Washington, DC: American Dietetic Association (ADA) and Office of Disease Prevention and Health Promotion, PHS, HHS, 1993). Health care professionals, as well as those training to be primary care physicians need more training related to diet, nutrition and exercise. Preventive counseling related to diet and nutrition, must be reimbursable for consumers and physicians. Overweight persons will need long-term lifestyle changes in dietary and physical activity patterns that they can easily incorporate into their lives if they are to lose weight and keep it off.

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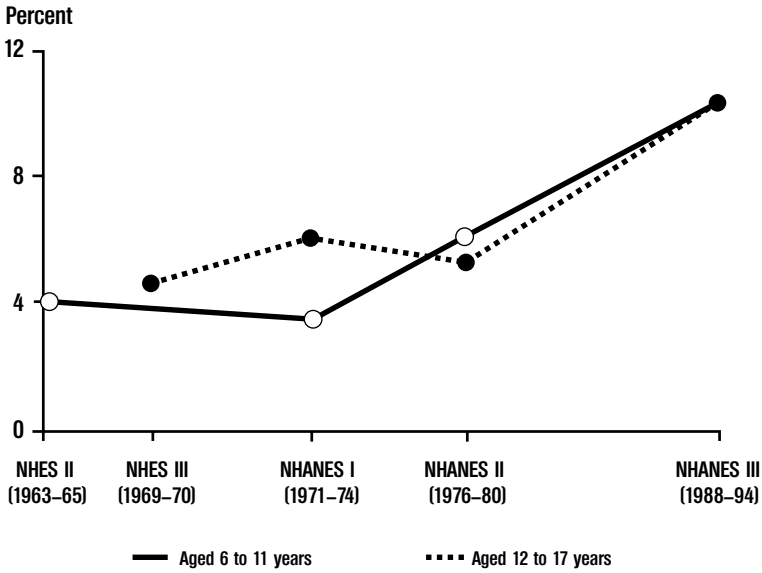
- Employer-sponsored programs can be offered on site or in partnership with community organizations.
- A recent study of worksite health promotion programs found that specific interventions at the work site resulted in employees choosing to reduce the amount of fat calories they consumed and eating more fruits, vegetables, and dietary fiber. (Sorensen, G.; Stoddard, A.; Hunt, M.K.; et al. "The effects of a health promotion-health protection intervention on behavior change: The WellWorks Study." *American Journal of Public Health* 88(11):1685–1690, 1998.)
- Work site health promotion programs may reduce health care costs, including employer costs for insurance programs, disability benefits, and medical expenses. (Goetzel, R.Z.; Jacobson, B.H.; Aldana, S.G.; et al. "Health care costs of worksite health promotion participants and non-participants." *Journal of Occupational and Environmental Medicine* 40(4):341–346, 1998.)

Proportion of Overweight Children and Adolescents* (by age for selected years, United States, 1963–94)



* Overweight is defined as at or above the gender–and age-specific 95th percentile of body mass index (BMI) based on preliminary analysis of data from the revised CDC Growth Charts for the United States.

Source: Adapted from Troiano, R.P., and Felgal, K.M. Data as reported in: "Overweight children and adolescents: Description, epidemiology, and demographics." *Pediatrics* 101:497–504, 1998.

- Primary care providers can screen for age-specific and diagnosis-related nutrition risk factors as a part of routine patient contact.
- Dietary assessment, counseling, and follow-up by physicians and qualified nutrition professionals are effective in reducing patient dietary fat intake and serum cholesterol and have been found to be cost-effective for patients with type 2 diabetes.
- Nutrition services also are a critical component of improved health outcomes for many other diseases and conditions, including obesity, gastrointestinal and hepatic disease, renal disease, cancer, HIV/AIDS, pressure ulcers, burns and trauma, eating disorders, and prenatal care.
- Health care providers and CBOs should develop specific campaigns targeting female, African-American and Hispanic populations.
- A 1997 study that evaluated the cost of covering medical nutrition therapy under Medicare part B projected savings to the program of $11 million in 2001 and $65 million in 2004. (Sheils, J.F.; Rubin, R.; and Stapleton, D.C. "The estimated costs and savings of medical nutrition therapy: The Medicare population." *Journal of the American Dietetic Association* 99(4):428–435, 1999.)
- The United States is committed to increasing food security by working with local leaders as outlined in the U.S. Action Plan on Food Security, through USDA's Community Food Security Initiative, and the Maternal and Child Health Bureau's Healthy Start. (Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau. "Community Outreach, The Healthy Start Initiative: A Community-Driven Approach to Infant Mortality Reduction." Vol. IV. Washington, DC: HRSA, 1996.)

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Local Assets

American Cancer Society
(717) 397-3744 Patient Services

American Heart Association
(717) 393-0725

Area Agency on Aging
(717) 299-7979

Ephrata Wellness Center
(717) 464-5476

Lancaster Regional Medical Center
Diabetes Educator
(717) 291-8194

Lancaster General Hospital
Education and Wellness Center (717) 290-3138
Nutrition Services and Weight Management (717) 290-5923

Parish Resource Center
(717) 299-1113

Samaritan Counseling Center
(717) 560-9969

South Central Regional Activity Network
(717) 290-3202

United Way LINC
(717) 291-LINC

Other Resources

State Health Department
(717) 299-7597

President's Council on Physical Fitness and Sports
(202) 690-9000
http://www.fitness.gov

What You Can Do

Businesses and Institutions

- Examples of possible worksite health promotion programs include weight management classes, physical activity programs, lunchtime seminars, self-help programs, cooking demonstrations and classes, healthy food service and vending machine selections, point-of-purchase nutrition information, and flexible health benefits that include nutrition-related services.
- Study the health care costs reduction, including employer costs for insurance programs, disability benefits, and medical expenses that can be attributed to work site health promotion success.
- Have employees get involved in developing a comprehensive health promotion program in the workplace.
- In addition, employers could reimburse health promotion activities and provide company time for employees to participate in the programs.
- Make some work site programs available to the family members of employees and company retirees as well as current employees.

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- Programs should be offered in a culturally and linguistically competent manner and any educational materials provided should be culturally and linguistically appropriate.
- Develop, along with public education efforts, public programs in a variety of settings (recreation centers, work sites, health care settings, and schools) that address the importance of healthy eating.
- Develop a campaign that links poor levels of physical activity and bad diet to poor health and quality of life standards.
- Give employees healthy, affordable choices in food vending machines.
- Offer healthy cooking classes to support healthy eating campaigns.
- Programs addressing the body image for young women should provide instruction and experiences that increase their confidence and develop acceptance based on health and fitness.
- As purchasers of group health and life insurance plans, employers can design employee benefit packages that include coverage for nutritional counseling and fitness classes.
- Employers can offer reduced insurance premiums and rebates for employees and their families who participate regularly in work site fitness programs or who can document increased fitness.
- School boards can examine food vending contracts to maximize nutritional choices for students and staff.

Individual

- Keep a food diary and assess your eating habits against the ABCs for good health: **A**im for fitness, **B**uild a healthy base, and **C**hoose sensibly.
- Don't wait until the last minute to think about eating. Plan your meals and your family's meals with the ABC's in mind.
- Have you children help plan meals with you and help shop for the foods they have chosen.
- Buy fresh produce whenever possible, and eat it while it is fresh.
- Plant a vegetable garden.
- Become a role model for your own family—choose treats wisely.
- Lobby school boards and legislatures to develop a well-designed health education curriculum that includes developing the knowledge, attitudes, behavioral skills, and confidence needed to adopt and maintain a physically sound body and active lifestyle.
- Work with PTOs to develop an educational campaign linking nutrition to cognitive development and academic achievement.
- Send healthy treats to school for your kids, especially on special occasions.
- Contact your doctor before starting any diet program that requires a move away from the recommended food groups.

Remaining Questions

- What is the role of insurance companies in promoting sound nutrition and a healthy lifestyle?
- How do we encourage medical schools to teach more about nutrition and prevention strategies?
- How do we lobby the government for better food labeling?
- How is local farmland important to our community's food security? What role do the farmer's markets play in maintaining Lancaster's food security?
- How do we reclaim the institution of the evening family meal?
- Is there a way to make fast foods healthier?
- How do we get more restaurants to offer healthier options on their menus?
- Can we stop schools from having our children sell candy and get them to switch to fruit baskets?
- Is there a more effective way to collect data that we can compare with other regions, the state, and the country?

HP 2010 Objectives

Weight Status and Growth

19-1 Healthy weight in adults
19-2 Obesity in adults
19-3 Overweight or obesity in children and adolescents
19-4 Growth retardation in children

Food and Nutrient Consumption

19-5 Fruit intake
19-6 Vegetable intake
19-7 Grain product intake
19-8 Saturated fat intake
19-9 Total fat intake
19-10 Sodium intake
19-11 Calcium intake

Iron Deficiency and Anemia

19-12 Iron deficiency in young children and in females of childbearing age
19-13 Anemia in low-income pregnant females
19-14 Iron deficiency in pregnant females

Schools, Work Sites, and Nutrition Counseling

19-15 Meals and snacks at school
19-16 Work site promotion of nutrition education and weight management
19-17 Nutrition counseling for medical conditions

Food Security

19-18 Food security

Related Objectives from Other Focus Areas

Access to Quality Health Services

1-3 Counseling about health behaviors

Arthritis, Osteoporosis, and Chronic Back Conditions

2-9 Cases of osteoporosis

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Cancer

3-1 Overall cancer deaths
3-3 Breast cancer deaths
3-5 Colorectal cancer deaths
3-10 Provider counseling about cancer prevention

Chronic Kidney Disease

4-3 Counseling for chronic kidney failure care

Diabetes

5-1 Diabetes education
5-2 New cases of diabetes
5-6 Diabetes-related deaths

Educational and Community-Based Programs

7-2 School health education
7-5 Work site health promotion programs
7-6 Participation in employer-sponsored health promotion activities
7-10 Community health promotion programs
7-11 Culturally appropriate and linguistically competent community health promotion programs

Food Safety

10-4 Food allergy deaths
10-5 Consumer food safety practices

Health Communication

11-4 Quality of Internet health information sources

Heart Disease and Stroke

12-1 Coronary heart disease (CHD) deaths
12-7 Stroke deaths
12-9 High blood pressure
12-11 Action to help control blood pressure
12-13 Mean total blood cholesterol levels
12-14 High blood cholesterol levels

Maternal, Infant, and Child Health

16-10 Low birth weight and very low birth weight
16-12 Weight gain during pregnancy
16-15 Spina bifida and other neural tube defects
16-16 Optimum folic acid levels
16-17 Prenatal substance exposure
16-18 Fetal alcohol syndrome
16-19 Breastfeeding

Mental Health and Mental Disorders

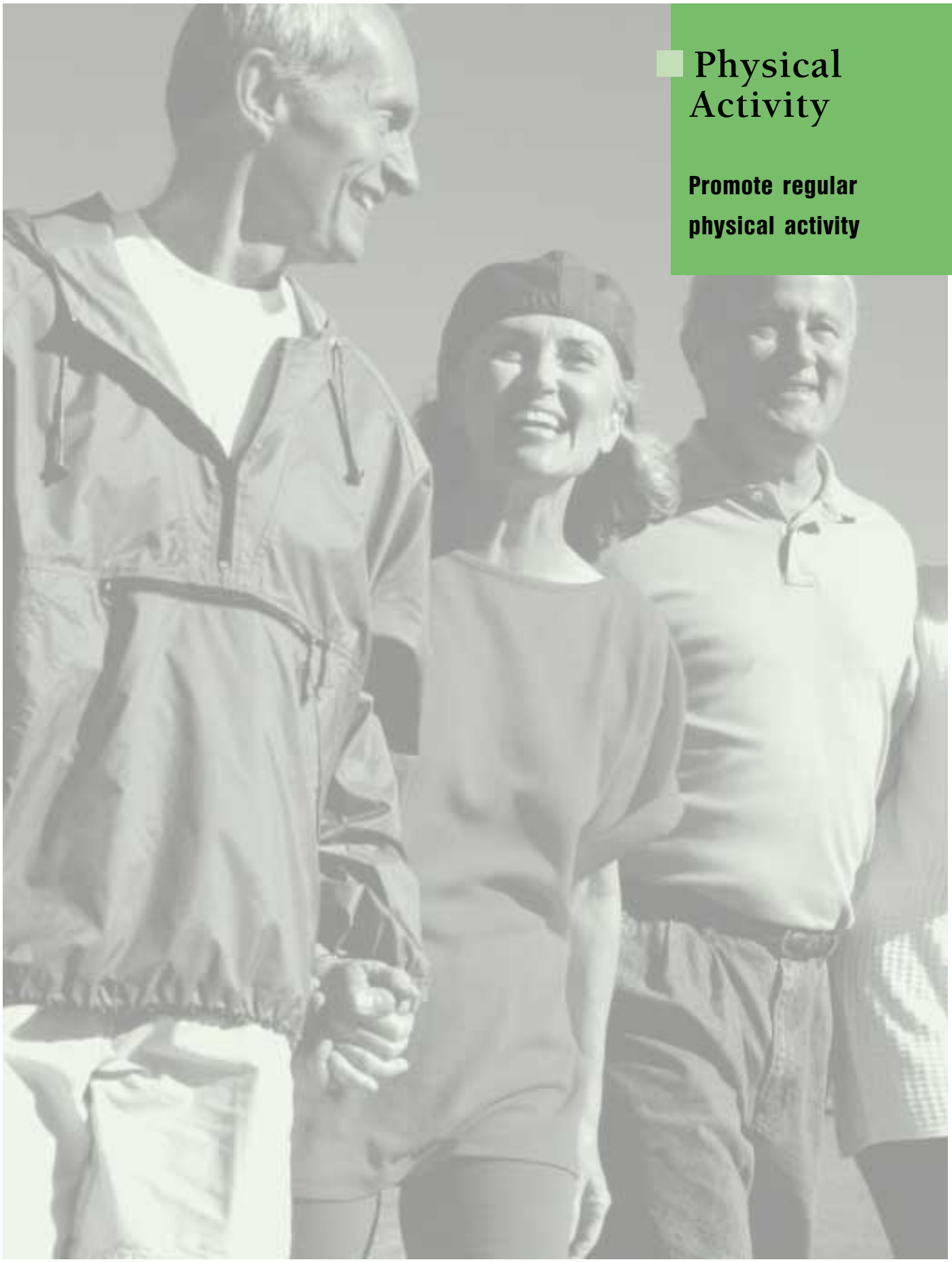
18-5 Eating disorder relapses

Physical Activity and Fitness

22-1 No leisure-time physical activity
22-2 Moderate physical activity
22-3 Vigorous physical activity
22-6 Moderate physical activity in adolescents
22-7 Vigorous physical activity in adolescents
22-9 Daily physical education in schools
22-13 Work site physical activity and fitness

Substance Abuse

26-12 Average annual alcohol consumption



Physical Activity

Promote regular physical activity

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Adult and Adolescent Physical Activity

Goal: Better than the best

HP 2010 Measures and Local Measures

22-2 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Target-setting method: Better than the best
Target: 30 percent
Baseline: 15 percent of adults aged 18 years and older engaged in moderate physical activity for at least 30 minutes five or more days per week in 1997 (age adjusted to the year 2000 standard population).
Data source: National Health Interview Survey (NHIS), CDC, NCHS, BRFSS

22-7 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardio respiratory fitness three or more days per week for 20 or more minutes per occasion.

Target-setting method: Better than the best
Target: 85 percent
Baseline: 65 percent of students in grades 9 through 12 engaged in vigorous physical activity three or more days per week for 20 or more minutes per occasion in 1999.
Data source: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPH, BRFSSP

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Description

Regular and sustained physical activity, whether vigorous or moderate, has documented beneficial effects on cardiovascular functioning, the prevention of osteoporosis, the effects of osteoarthritis, diabetes management, and on mental health conditions such as depression and stress management. Physical activity is also an important element of weight control (being overweight is an additional risk factor for many diseases and conditions). Regular physical activity is associated with lower death rates for adults of any age, even when only moderate levels of physical activity are performed.

This indicator addresses physical activity across the age spectrum. Children who acquire the habit of engaging in regular physical activity tend to maintain the habit throughout their lives. At the same time, a regular program of physical activity has some of its most beneficial effects on conditions faced by older persons. Specific recommendations on the best levels of activity have changed over-time but the idea is to move away from a sedentary life and become more physically active on a regular basis. The Youth Risk Behavior Survey and the Behavioral Risk Factor Surveillance Survey might both be useful in measuring the status of this indicator.

The 1990s brought an historic new perspective to exercise, fitness, and physical activity by shifting the focus from intensive vigorous exercise to a broader range of health-enhancing physical activities. Research has demonstrated that virtually all individuals will benefit from regular physical activity.

Adult Activity

A Surgeon General's report on physical activity and health concluded that moderate physical activity can reduce substantially the risk of developing or dying from heart disease, diabetes, colon cancer, and high blood pressure. Physical activity also may protect against lower back pain and some forms of cancer (e.g., breast cancer), but the evidence is not yet conclusive. Regular exercise has been linked to better mental health, and older citizens who engage in regular physical activity are more mentally alert and independent and report a higher quality of life. On average, physically active people outlive those who are inactive. (U.S. Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, 1996.)

Data

Physical activity plays a significant role in preventing coronary heart disease (CHD), which is the leading cause of death and disability in the United States. Although vigorous physical activity is recommended for improved cardiorespiratory fitness, moderate physical activity also can have significant health benefits, including a decreased risk of CHD. For people who are inactive, even small increases in physical activity are associated with measurable health benefits.

An important but not widely known fact is that the risk posed by physical inactivity is almost as high as cigarette smoking, high blood pressure, and high blood cholesterol. But inactivity is much more prevalent than any of those factors. Physically inactive people are almost twice as likely to develop CHD as persons who engage in regular physical activity. (Kaplan, G.A.; Strawbridge, W.J.; Cohen, R.D.; et al. "Natural history of leisure-time physical activity and its correlates: Associations with mortality from all causes and cardiovascular disease over 28 years." *American Journal of Epidemiology* 144(8): 793–797,1996.)

Regular physical activity is especially important for people who have joint or bone problems and has been shown to improve muscle function, cardiovascular function, and physical performance. However, people with arthritis (20 percent of the adult population) are less active than those without arthritis. People with osteoporosis, a chronic condition affecting more than 25 million people in the United States, may respond positively to regular physical activity, particularly weight-bearing activities, such as walking, and especially when combined with appropriate drug therapy and calcium intake. Increased bone mineral density has been positively associated with aerobic fitness, body composition, and muscular strength.

Adults Aged 18 Years and Older, 1997	22-2 30 Minutes of Activity 5 or More Days per Week	20 Minutes of Activity 3 or More Days per Week*
	Percent	
TOTAL	15	31
Race and ethnicity		
American Indian or Alaska Native	13	25
Asian or Pacific Islander	15	30
Asian	15	30
Native Hawaiian and other Pacific Islander	11	31
Black or African American	10	23
White	15	32
Hispanic or Latino	11	23
Not Hispanic or Latino	15	32
Black or African American	10	22
White	16	33
Gender		
Female	13	30
Male	16	31
Education level (aged 25 years and older)		
Less than 9th grade	7	13
Grades 9 through 11	11	21
High school graduate	14	28
Some college or AA degree	17	34
College graduate or above	17	38
Geographic location		
Urban	15	31
Rural	15	30
Disability status		
Persons with disabilities	12	23
Persons without disabilities	16	33
Select populations		
Age groups 18 to 24 years	17	36
25 to 44 years	15	31
45 to 64 years	14	30
65 to 74 years	16	31
75 years and older	12	23
Persons with arthritis symptoms	15	29
Persons without arthritis symptoms	15	32

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. Note: Age adjusted to the year 2000 standard population. *Data for 20 minutes of activity 3 or more days per week are displayed to further characterize the issue.

(Stenstrom, C.H. "Home exercise in rheumatoid arthritis functional class II: Goal setting versus pain attention." *Journal of Rheumatology* 21(4):627–634, 1994.)

Few people are physically active on a regular basis despite its documented benefits. Only about 23 percent of adults in the United States report regular, vigorous physical activity that involves large muscle groups in dynamic movement for 20 minutes or longer three or more days per week. Only 15 percent of adults report physical activity for five or more days per week for 30 minutes or longer, and another 40 percent do not participate in any regular physical activity.

22-2 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Target: 30 percent
Baseline: 15 percent of adults aged 18 years and older engaged in moderate physical activity for at least 30 minutes five or more days per week in 1997 (age adjusted to the year 2000 standard population).
Target–setting method: Better than the best
Data source: National Health Interview Survey (NHIS), CDC, NCHS

Engaging in moderate physical activity for at least 30 minutes per day will help ensure that sufficient calories are used to provide health benefits. A minimum level of intensity (e.g., a brisk walk for 30 minutes per day) would, for most persons, result in an energy expenditure of about 600 to 1,100 calories per week. If calorie intake remains constant, this expenditure translates into a weight loss of roughly one-sixth to one-third pound per week. Increases in daily activity to ensure a weekly expenditure of 1,000 calories would have significant individual and public health benefit for CHD prevention and deaths from all causes, especially for persons who are sedentary. Furthermore, this level of activity is feasible for most people even though the relative intensity of any activity will vary by age. Starting out slowly and gradually increasing the frequency and duration of physical activity is the key to successful behavior change (HP 2010).

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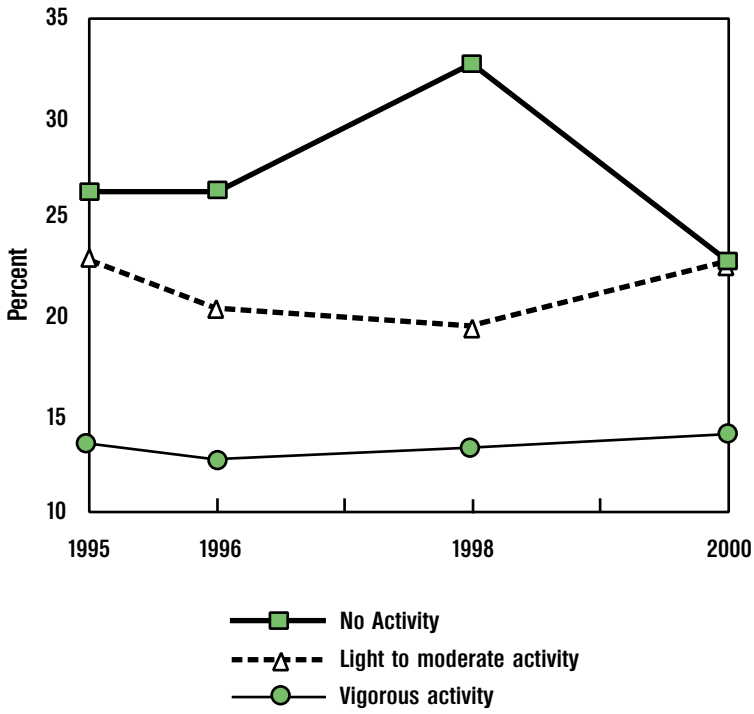
Light to moderate activity is defined as 30 minutes per session five or more times per week. Vigorous activity is defined as that which promotes the development and maintenance of cardiorespiratory fitness 20 or more minutes per session three or more times per week (e.g., aerobics).

Locally, in 2002, we will complete a BRFSS survey that will collect this local data. For now, we can look at the Lancaster Community Indicator Project's August 2000 Quality of Life Survey for physical activity data. Unfortunately it is not collected in the same way, making it difficult to compare to the state's data. In this survey, respondents were asked to choose the statement which best described their habits regarding physical exercise from the following statements:

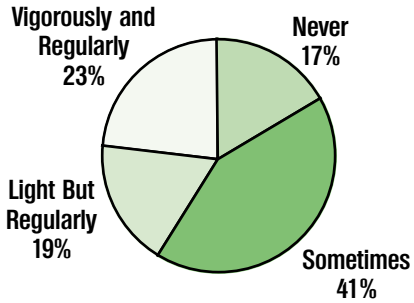
- I currently follow a regular exercise routine which includes vigorous physical activity at least three times per week for 20 minutes or more each session.
- I currently follow a regular exercise routine which includes light physical activity at least three times per week for 20 minutes or more each session.
- I exercise sometimes, but I don't follow a regular routine.
- I don't exercise.

Exercise, Percent by Type
Pennsylvania Adults, 1995, 1996, 1998, and 2000



Source: PA BRFSS, 2000. (http://webserver.health.state.pa.us/health/lib/health/exercise_brfss_2000.pdf)

Lancaster Residents Who Excercise, 2000



Source: Lancaster Community Indicator Project's August 2000 Quality of Life Survey. Reported in LCIP's 2001 Quality of Life Measures Report "Measure Up Lancaster."

Additionally, the Pennsylvania BRFSS collected data about what types of physical activity people took part in. You will find a table showing the percentage of adults who reported taking part in these different types of physical activities in 1996, 1998, and 2000. These will also be collected on the upcoming BRFSS of Lancaster County along with workplace activity.

Nationally, over 75 percent of all trips less than one mile were made by automobile in 1995. In addition, the number of walking trips as a percentage of all trips taken (of any distance) has declined over the years. Walking trips made by adults dropped from 9.3 percent in 1977 to 7.2 percent in 1990 and again to 5.4 percent in 1995. Walking has declined even more sharply for children. Bicycling is another form of transportation that may be used by both children and adults for distances that may not be feasible, practical, or efficient to cover by walking.

Most Frequent Activities in Pennsylvania	1996–PA Adults	1998–PA Adults	2000–PA Adults
Walking	47%	48%	51%
Gardening–Yard Work	9%	6%	8%
Running	4%	6%	7%
Home Exercise	4%		4%
Weightlifting		5%	4%
Aerobics		5%	3%
Bicycling	4%	4%	3%
Golf		4%	3%

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But the environment must provide safe opportunities for physical activities such as walking and bicycling. Sedentary activities such as watching television, playing video games, and using personal computers have contributed to increases in the number of people who are overweight. (Anderson, R.E.; Crespo, C.J.; Bartlett, S.J.; et al. "Relationship of physical activity and television watching with body weight and level of fatness among children: Results from the Third National Health and Nutrition Examination Survey." *Journal of the American Medical Association* 279:938–942, 1998.)

Disparities

Disparities in levels of physical activity exist among population groups.

- Women generally are less active than men at all ages.
- People with lower incomes and less education are typically not as physically active as those with higher incomes and education. African Americans and Hispanics are generally less physically active than whites. Adults in northeastern and southern states tend to be less active than adults in north-central and western states.
- People with disabilities are less physically active than people without disabilities.
- By age 75, one in three men and one in two women engage in no regular physical activity.
- Participation in all types of physical activity declines strikingly as age or grade in school increases.

Youth Activity

Regular physical activity is important throughout life. Good habits are best started early. Parents, educators, and health care providers are role models and should be involved in encouraging physical activity and fitness in children and adolescents, and in providing opportunities for them. One study found that one-quarter of U.S. children spend four hours or more watching television daily (Anderson, R.E.; Crespo, C.J.; Bartlett, S.J.; et al. "Relationship of physical activity and television watching with body weight and level of fatness among children: Results from the Third National Health and Nutrition Examination Survey." *Journal of the American Medical Association* 279:938–942, 1998). A lifestyle that includes regular activity and activity that is adopted early in life may continue into adulthood. Studies found that among children aged 3 to 4 years, those who were less active tended to remain less active after age 3 years than most of their peers (Pate, R.R.; Baranowski, T.; Dowda, M.; et al. "Tracking of physical activity in young children." *Medicine and Science in Sports and Exercise* 28(1):92–96, 1996).

Data

Many children are less physically active than recommended, and physical activity declines during adolescence. In 1999, 65 percent of adolescents engaged in the recommended amount of physical activity. Data demonstrate that major decreases in vigorous physical activity occur during grades 9 through 12.

22-7 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness three or more days per week for 20 or more minutes per occasion.

Target: 85 percent.
Baseline: 65 percent of students in grades 9 through 12 engaged in vigorous physical activity three or more days per week for 20 or more minutes per occasion in 1999.
Target-setting method: Better than the best
Data source: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP

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Disparities

This decrease in physical activity is more profound for girls than for boys, whether the measure is engaging in vigorous physical activity in general or in team sports. Adolescents' interest and participation in physical activity differ by gender. Compared to boys, girls are less likely to participate in team sports but more likely to participate in aerobics or dance. Often girls and boys perceive different benefits from physical activity, with boys viewing such activity as competition and girls as weight management (President's Council on Physical Fitness and Sports. *Physical Activity & Sport in the Lives of Girls*. Washington, DC: The President's Council on Physical Fitness and Sports, 1997).

Currently, the state of Pennsylvania is in the process of accepting new Academic Standards for Health, Safety, and Physical Education proposed by the PA Department of Education. These standards are for all grade levels. The proposed standards will help students to:

- Identify physical activities and participate in them.
- Understand a variety of effects and benefits of regular participation in such activities
- Understand and monitor their body's response to activity, and what factors may affect their body's responses.
- Identify and understand what may influence their preference for certain types of activities throughout their lives.
- Understand how physical activities improve motor skills, and how the degree of improvement and personal differences affect selection in physical activities.
- Understand team or group dynamics and how group interaction can have positive or negative effects on one's choices to participate.

Additionally, as the students move into higher grades, the importance of lifelong physical activity is stressed, and the student is allowed to choose their own activity plan geared towards reaching personal fitness and activity goals while promoting lifelong participation.

There is no requirement for how often students must engage in such activities, or for how long. This is left to the discretion of the schools or districts. While objective 22-7 stresses the importance of vigorous activity for 20 or more minutes three times per week, students may not be participating that often. As we age, HP 2010 urges us to take part in physical activity five times or more per week. If we are not setting the example when they are young, when will we? Or should the difference in weekly activity be encouraged by the parents in order to better promote lifelong fitness? With the growing number of overweight and obese children, adolescents, and adults, it is clear that both parental and school influences are needed.

Students in Grades 9 Through 12, 1999 (unless noted)	Vigorous Physical Activity		
	22-7 Both Genders	Females*	Males*
	Percent		
TOTAL	65	57	72
Race and ethnicity			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DSU	DSU	DSU
Native Hawaiian and other Pacific Islander	DSU	DSU	DSU
Black or African American	56	49	64
White	68	60	75
Hispanic or Latino	61	50	72
Not Hispanic or Latino	65	58	73
Black or African American	56	47	65
White	67	60	75
Parents' education level			
Less than high school	50 (1997)	43 (1997)	60 (1997)
High school graduate	54 (1997)	45 (1997)	62 (1997)
At least some college	68 (1997)	57 (1997)	75 (1997)
Select populations			
Grade Levels			
9th grade	73	68	77
10th grade	65	56	73
11th grade	58	49	67
12th grade	61	52	71

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. *Data for females and males are displayed to further characterize the issue.

Findings suggest that the quantity and, in particular, the quality of school physical education programs have a significant positive effect on the health-related fitness of children and adolescents by increasing their participation in moderate to vigorous activities. Studies have shown that spending 50 percent of physical education class time on physical activity is an ambitious but feasible target. (Sallis, J.F.; McKenzie, T.L.; Alcaraz, J.E.; et al. "The effects of a 2-year physical education program (SPARK) on physical activity and fitness in elementary school students." *American Journal of Public Health* 87(8):1328–1334, 1997.)

Best Researched Practices

- Good quality school physical education ensures a minimum amount of physical activity and provides a forum to teach physical activity strategies and activities that can be continued into adulthood. Being active for at least half of physical education class time on at least half of the school days would provide a substantial portion of the physical activity time recommended for adolescents. (Sallis, J.F., and Patrick, K. "Physical activity guidelines for adolescents: Consensus statement." *Pediatric Exercise Science* 6:302–314, 1994.)

- Health education and other courses can teach that physical activity is an important component of a healthy life. Instruction on physical activity also can be integrated into the lesson plans of other school subjects, such as mathematics, biology, and language arts. Programs that have included classroom instruction in physical activity have been effective in enhancing students' physical activity-related knowledge.

- Daily adaptive physical education programs should be available for children with special needs.

- School physical education requirements are recommended for students in preschool and postsecondary programs (CDC. "Guidelines for school and community programs to promote lifelong physical activity among young people." *Morbidity and Mortality Weekly Report* 46(RR-6):1–36, 1997).

- The President's Council on Physical Fitness and Sports concluded that because boys are more likely than girls to have higher self-esteem and greater physical strength, programs addressing the needs of girls should provide instruction and experiences that increase their confidence and their opportunities to participate in activities, as well as social environments that support involvement in a range of physical activities.

- Public education efforts need to address the specific barriers that inhibit the adoption and maintenance of physical activity by different population groups. Older adults, for example, need information about safe walking routes. Persons with foot problems need to learn about proper foot care and footwear in order to reach appropriate activity levels. People with CHD and other chronic conditions must understand the importance of regular physical activity to maintain physical function.

- Encouraging any type or amount of physical activity in leisure time can provide important health benefits compared to a sedentary lifestyle. Activities that promote strength and flexibility are important because they may protect against disability, enhance functional independence, and encourage regular physical activity participation. These benefits are particularly important for older people—a good quality of life means being functionally independent and being able to perform the activities of daily living.

- The message that a sedentary lifestyle plays a role in both overweight and weight loss needs to be addressed more effectively, as does the role primary care providers can play in counseling individuals to increase their daily activities.

- Data to evaluate access and availability of community fitness facilities is not available.

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American Cancer Society
Patient Services (717) 397-3744

American Heart Association
(717) 393-0725

Area Agency on Aging
(717) 299-7979

Ephrata Area Recreation Center
(717) 738-1167

Ephrata Wellness Center
(717) 464-5476

Hempfield Recreation Commission
(717) 898-3102

Lampeter-Strasburg Recreation Commission
(717) 687-9916

Lancaster General Hospital
Nutrition and Weight Management Services (717) 290-5923
Education and Wellness Center (717) 290-3138
"Over 50 & Fit" (717) 290-3140

Lancaster Recreation Commission
(717) 392-2115

Lancaster Regional Medical Center
Diabetes Educator
(717) 291-8194

Lititz Community Center
(717) 626-5096

Manheim Central Recreation Commission
(717) 664-7506

Manheim Township Parks and Recreation Dept.
(717) 397-4769

Office of Aging
(717) 299-7979

Parish Resource Center
(717) 299-1113

Samaritan Counseling Center
(717) 560-9969

Solanco Area Senior Center
(717) 786-4770

United Way LINC
(717) 291-LINC

YMCA
(717) 397-7474

YWCA
(717) 393-1735

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Other Resources

State Health Department
(717) 299-7597

President's Council on Physical Fitness and Sports
(202) 690-9000
http://www.fitness.gov

What You Can Do

Businesses and Institutions

- Develop, along with public education efforts, public programs in a variety of settings (recreation centers, work sites, health care settings, and schools) need to be developed, evaluated, and shared as potential models. The availability of group activities in the community is important for many.
- Primary care providers must increase their counseling of patients about the need to participate in physical activity.
- Ensure that facilities are accessible to people with disabilities.
- Increasing work site fitness programs.
- Campaign must be expanded on the message that even some activity is better than none.
- Take the time to develop a process (public and private) of evaluating programs' access and quality. The availability of group activities for disabled in the community is important, as are transportation barriers.
- Health care providers and CBOs should develop specific campaigns targeting women, African-American and Hispanic populations (no leisure-time physical activity is higher among women than men, higher among African Americans and Hispanics than whites).
- Programs addressing the needs of girls should provide instruction and experiences that increase their confidence and their opportunities to participate in activities, as well as social environments that support involvement in a range of physical activities.
- A campaign to increase physical activity in the work force should be developed that is community-wide in scope and emphasizes community fitness and health. Track and field (individual sports) should be encouraged as well as team sports (basketball, softball, and volleyball leagues).
- Quantity and quality of school physical education programs must be evaluated with 50 percent of physical education class time on physical activity.
- Provide materials and education to primary care providers so that they can more easily talk about the need to participate in physical activity with their patients as an important way to change their behavior and improve their health status.
- Continue increasing work site fitness programs.
- As purchasers of group health and life insurance plans, employers can design employee benefit packages that include coverage for fitness club membership fees and community-based fitness classes.
- Employers can offer reduced insurance premiums and rebates for employees who participate regularly in work site fitness programs or who can document participation in regular physical activity.
- School boards can make school facilities more available for physical activity programs for the community and particularly for students.

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Individual

- Begin to journal your physical activity and take it seriously as a health risk assessment.
- Recognize that starting out slowly with an activity that is enjoyable and gradually increasing the frequency and duration of the activity is central to the adoption and maintenance of physical activity behavior.
- Join a community effort to support community planning that supports pedestrian and bicycle safety.
- Lobby school boards and legislatures to develop a well-designed health education curriculum that can help students develop the knowledge, attitudes, behavioral skills, and confidence needed to adopt and maintain physically active lifestyles.
- Work with the PTOs to develop an educational campaign highlighting the need for parents and educators to become role models.
- Join a campaign to reinvigorate the Presidential Fitness Awards for students and that promotes of physical activity and fitness in children and adolescents.
- Get off the couch today and start some kind of physical activity.
- Volunteer to coach or referee for a sports team.
- Work with schools and community coalitions and community-based physical activity programs to take maximum advantage of school facilities for the benefit of children and adolescents and the community as a whole.

Remaining Questions

- How can we make physical activity a priority for our policy-makers, employers, and schools?
- How can we change the medical community's focus from a disease model to a preventative model?
- What is the role of insurance companies in promoting physical activities and a healthy lifestyle?
- Is there an effective way to persuade developers to plan for active communities by providing safe roads, trails, and open spaces in their plans? Or must this responsibility fall upon policy-makers to legislate?
- How do we overcome the safety concerns of individuals when it is posed as a barrier to physical activity?
- What are effective strategies to educate people of all ages about finding physical activities to participate in throughout their lives and to help them understand the benefits of such physical activity?
- Once they understand the benefits and importance of physical activity, how can we better motivate people to begin?
- How can we overcome the media images that promise quick fixes in place of real physical activity and positive lifestyle changes?
- What are some ways to get the whole family involved in physical activity to improve the health of adults while showing children the importance of exercise through example?
- What are some other effective ways for parents to teach our children the importance of lifelong fitness without always using a sports team model?
- Is there a more effective way to collect data that we can compare with other regions, the state, and the country?

HP 2010 Objectives

Physical Activity in Adults

22-1 No leisure-time physical activity
22-2 Moderate physical activity
22-3 Vigorous physical activity

Muscular Strength/Endurance and Flexibility

22-4 Muscular strength and endurance
22-5 Flexibility

Physical Activity in Children and Adolescents

22-6 Moderate physical activity in adolescents
22-7 Vigorous physical activity in adolescents
22-8 Physical education requirement in schools
22-9 Daily physical education in schools
22-10 Physical activity in physical education class
22-11 Television viewing

Access

22-12 School physical activity facilities
22-13 Work site physical activity and fitness
22-14 Community walking
22-15 Community bicycling

Related Objectives from Other Focus Areas

Access to Quality Health Services

1-2 Health insurance coverage for clinical preventive services
1-3 Counseling about health behaviors

Arthritis, Osteoporosis, and Chronic Back Conditions

2-2 Activity limitations due to arthritis
2-3 Personal care limitations
2-8 Arthritis education
2-9 Cases of osteoporosis
2-11 Activity limitations due to chronic back conditions

Cancer

3-5 Colorectal cancer deaths
3-7 Prostate cancer deaths
3-9 Sun exposure and skin cancer
3-10 Provider counseling about cancer prevention

Chronic Kidney Disease

4-8 Medical therapy for persons with diabetes and proteinuria

Diabetes

5-1 Diabetes education
5-2 New cases of diabetes
5-3 Overall cases of diagnosed diabetes
5-4 Diagnosis of diabetes
5-5 Diabetes deaths
5-6 Diabetes-related deaths
5-7 Cardiovascular disease deaths in persons with diabetes

Disability and Secondary Conditions

6-2 Feelings and depression among children with disabilities
6-3 Feelings and depression interfering with activities among adults with disabilities
6-4 Social participation among adults with disabilities
6-9 Inclusion of children and youth with disabilities in regular education programs
6-10 Accessibility of health and wellness programs
6-12 Environmental barriers affecting participation in activities
6-13 Surveillance and health promotion programs

Educational and Community-Based Programs

7-2 School health education
7-3 Health-risk behavior information for college and university students
7-5 Work site health promotion programs
7-6 Participation in employer-sponsored health promotion activities
7-7 Patient and family education
7-9 Health care organization sponsor ship of community health promotion activities
7-10 Community health promotion programs
7-11 Culturally appropriate and linguistically competent community health promotion programs
7-12 Older adult participation in community health promotion activities

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Environmental Health
8-1 Harmful air pollutants
8-2 Alternative modes of transportation
8-9 Beach closings
8-20 School policies to protect against environmental hazards

Family Planning
9-11 Pregnancy prevention education

Health Communication
11-1 Households with Internet access
11-4 Quality of Internet health information sources

Heart Disease and Stroke
12-1 Coronary heart disease (CHD) deaths
12-7 Stroke deaths
12-9 High blood pressure
12-10 High blood pressure control
12-11 Action to help control blood pressure
12-13 Mean total blood cholesterol levels
12-14 High blood cholesterol levels
12-16 LDL-cholesterol level in CHD patients

Injury and Violence Prevention
15-1 Nonfatal head injuries
15-2 Nonfatal spinal cord injuries
15-13 Deaths from unintentional injuries
15-14 Nonfatal unintentional injuries
15-16 Pedestrian deaths
15-18 Nonfatal pedestrian injuries
15-21 Motorcycle helmet use
15-23 Bicycle helmet use
15-24 Bicycle helmet laws
15-27 Deaths from falls
15-28 Hip fractures
15-29 Drownings
15-31 Injury protection in school sports

Maternal, Infant, and Child Health
16-3 Adolescent and young adult deaths
16-12 Weight gain during pregnancy

Medical Product Safety
17-2 Linked, automated information systems
17-3 Provider review of medications taken by patients
17-5 Receipt of oral counseling about medications from prescribers and dispensers

Mental Health and Mental Disorders
18-5 Eating disorder relapses
18-7 Treatment for children with mental health problems
18-9 Treatment for adults with mental disorders

Nutrition and Overweight
19-1 Healthy weight in adults
19-2 Obesity in adults
19-3 Overweight or obesity in children and adolescents
19-16 Work site promotion of nutrition education and weight management

Occupational Safety and Health
20-1 Work-related injury deaths
20-2 Work-related injuries
20-3 Overextension or repetitive motion
20-9 Work site stress reduction programs

Public Health Infrastructure
23-2 Public access to information and surveillance data
23-5 Data for Leading Health Indicators, Health Status Indicators, and Priority Data Needs at tribal, state, and local levels
23-17 Population-based prevention research

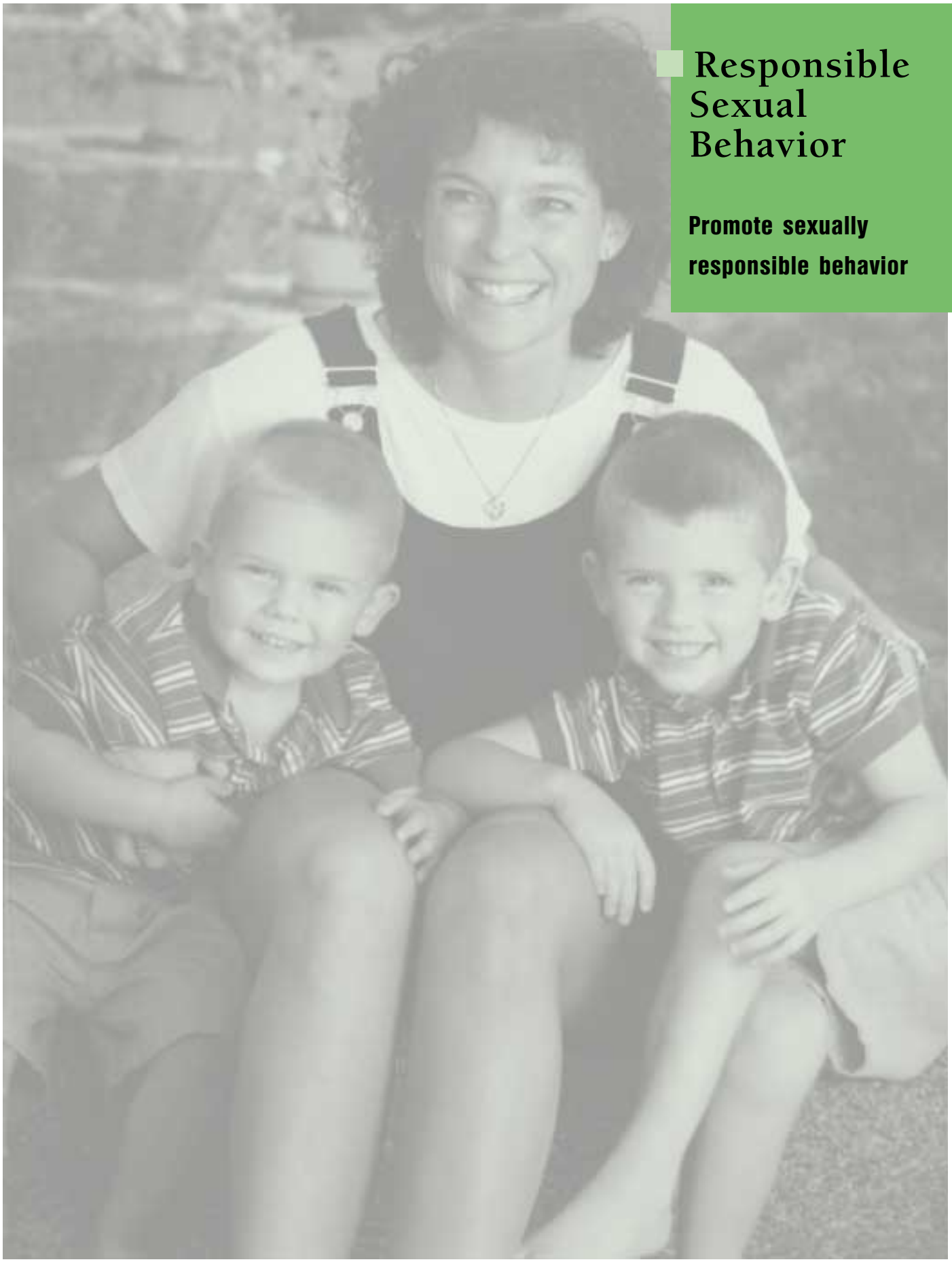
Respiratory Diseases
24-1 Deaths from asthma
24-2 Hospitalizations for asthma
24-3 Hospital emergency department visits for asthma
24-4 Activity limitations
24-5 School or work days lost
24-6 Patient education
24-7 Appropriate asthma care

Sexually Transmitted Diseases
25-11 Responsible adolescent sexual behavior
25-12 Responsible sexual behavior messages on television

Substance Abuse
26-9. Substance-free youth
26-14. Steroid use among adolescents
26-17. Perception of risk associated with substance abuse
26-23. Community partnerships and coalitions

Tobacco Use
27-1 Adult tobacco use
27-2 Adolescent tobacco use
27-3 Initiation of tobacco use
27-4 Age at first tobacco use
27-5 Smoking cessation by adults
27-7 Smoking cessation by adolescents

Vision and Hearing
28-9 Protective eyewear



Responsible Sexual Behavior

Promote sexually responsible behavior

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Teen Pregnancy

Goal: Better than the best

HP 2010 Measures

9-7	Reduce pregnancies among adolescent females.

Target-setting methods: Better than the best
Data sources: Abortion Provider Survey, The Alan Guttmacher Institute; National Vital Statistics System (NVSS), CDC, NCHS; National Survey of Family Growth (NSFG), CDC, NCHS; Abortion Surveillance Data, CDC, NCCDPHP; Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.

Local Measures

9-7	Reduce pregnancies among adolescent females.

Target-setting method: Better than the best
Data Source: Pennsylvania Vital Statistics (PAVS), Dept. of Health; Youth BRFSS.

Sexually Transmitted Diseases and HIV/AIDS

Goal: Better than the best

HP 2010 Measures

13-1	Reduce AIDS among adolescents and adults.
13-5	Reduce the number of cases of HIV infection among adolescents and adults (developmental).
13-14	Reduce deaths from HIV infection.

Target-setting methods: Better than the best
Data sources: HIV/AIDS Surveillance System, CDC NCHSTP; National Survey of Family Growth (NSFG), CDC, NCHS; National Vital Statistics System, CDC, NCHS; National Survey of Family Growth, (NSFG), CDC, NCHS; Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP

Local Measures

13-1	Reduce AIDS among adolescents and adults.
13-5	Reduce the number of cases of HIV infection among adolescents and adults (developmental).
13-14	Reduce deaths from HIV infection.

Target setting methods: Better than the best
Data sources: HIV/AIDS Surveillance System, CDC NCHSTP; National Survey of Family Growth (NSFG), CDC, NCHS; National Vital Statistics System, CDC, NCHS; National Survey of Family Growth, (NSFG), CDC, NCHS; Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP

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HP 2010 Measures

9-11.1 Increase the proportion of young adults who have received formal instruction before turning age 18 years on reproductive health issues, including all of the following topics: birth control methods, safer sex to prevent HIV, prevention of sexually transmitted diseases, and abstinence.

25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

13-6 Increase the proportion of sexually active persons who use condoms.

Target-setting methods: Better than the best
Data sources: Abortion Provider Survey, The Alan Guttmacher Institute; National Vital Statistics System (NVSS), CDC, NCHS; National Survey of Family Growth (NSFG), CDC, NCHS; Abortion Surveillance Data, CDC, NCCDPHP; Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP

Local Measures

9-11.1 Increase the proportion of young adults who have received formal instruction before turning age 18 years on reproductive health issues, including all of the following topics: birth control methods, safer sex to prevent HIV, prevention of sexually transmitted diseases, and abstinence (developmental).

25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

13-6 Increase the proportion of sexually active persons who use condoms.

Target-setting method: Better than the best
Data source: Pennsylvania Vital Statistics (PAVS), Dept. of Health; Youth BRFSS

Responsible Behavior (shared by all areas)

Goal: Better than the best

Description

In the United States, sex and sexuality pervade almost every aspect of our culture.

We seem to be fascinated by sexual matters and, while we see sexuality as a normal part of human functioning, paradoxically we are secretive and extremely private about our sexual behaviors. Talking openly and comfortably about sex is extremely difficult. Yet, we accept the marketing of almost any product in the most overtly sexual manner. In a 1995 study, The ABC's of STDs, it stated that one-fourth of women and one-fifth of men had no knowledge of their partner's sexual history. This is an extremely dangerous practice given current rates of STDs and HIV Infection.

The Institute of Medicine stated in its 1997 study "The Hidden Epidemic: Confronting Sexually Transmitted Diseases," "The secrecy surrounding sexuality impedes sexuality education programs for adolescents, open discussion between parents and their children and between sex partners, balanced messages from mass media, education and counseling activities of health professionals, and community activism regarding STDs."

This statement is also true of our ability to deal with pregnancy and family planning.

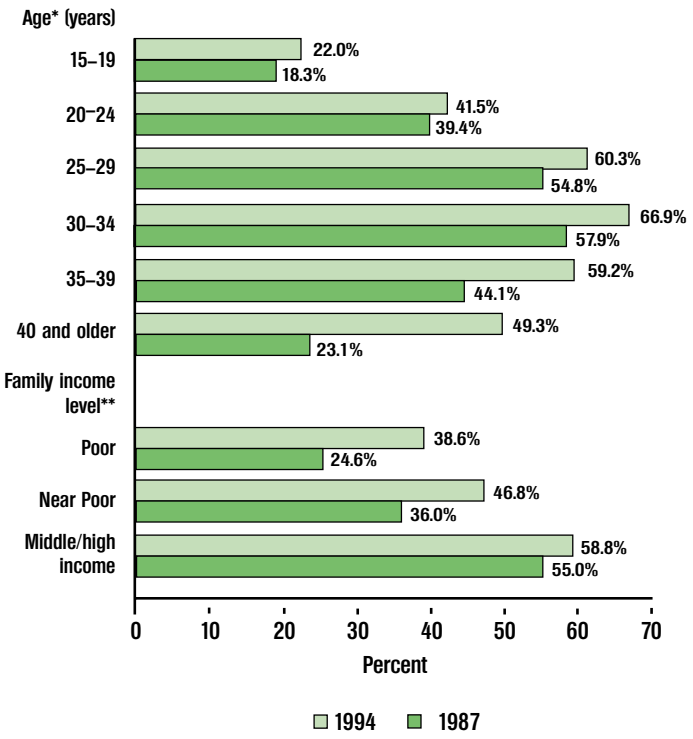
We will address adolescent sexual behavior specifically because they are at higher risk for STDs (including HIV infection) and unintended pregnancy. They experience a disproportionate share of STDs and unintended pregnancies when they engage in sex. Additionally, the younger that a person becomes sexually active the more likely one is to have multiple partners and the less one is likely to have protected sex. The consequences of an unintended pregnancy are compounded for a teen mother.

We will target the AIDS epidemic, as it is the most devastating of sexually transmitted diseases to individuals, families, and communities. Adolescents are also among the fastest-growing population infected with AIDS. Other STDs are highly prevalent within the affected population. Furthermore, risk behaviors, such as drug and alcohol abuse, compound and enhance the problems.

Pregnancy and Teen Pregnancy

The national goal is to achieve 70% planned and wanted pregnancies. Currently 50% of all pregnancies in the U.S. are unintentional. The consequences of unintended pregnancies impact everyone regardless of age and marital status. Risks and costs are social and economic in the form of reduced educational attainment and employment opportunity, greater welfare dependency, and even potential child abuse and neglect. Furthermore, medical risks increase due to lost opportunity to prepare for an optimal pregnancy, increased risk of child and maternal illness, and the likelihood of abortion.

Pregnancies That Were Intended (by age and family income, United States, 1987 to 1994)



Source: *Henshaw, S.K. "Unintended pregnancy in the United States." *Family Planning Perspectives* 30(1):24–29, 46, 1998. **Brown, S.S., and Eisenberg, L. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. Washington, DC., National Academy Press, 1995.

With an unintended pregnancy, a mother is less likely to seek prenatal care in the first trimester and may not seek care at all. She is less likely to breastfeed and more likely to use tobacco, drugs, or alcohol during her pregnancy. Such a child is at greater risk of having a lower birth weight, dying in the first year, being abused, and not receiving sufficient resources for healthy development. (Brown, S.S., and Eisenberg, L., eds. *The Best Intention: Unintended Pregnancy and the Well-Being of Children and Families.* Washington, DC: National Academy Press, 1995).

Induced abortion is another consequence of unintended pregnancy. Although the number of abortions has been declining over the past 15 years, reducing unintended pregnancies will continue to drive that number down. Each year, publicly subsidized family planning services prevent an estimated 1.3 million unintended pregnancies (*Family Planning Perspectives* 29(1):6–14, 1997).

Reducing unintended pregnancies is possible. Unintended pregnancy rates in the United States have been declining. The rates remain highest among teenagers, women aged 40 years or older, and poor and African American women.

- More than 4 in 10 pregnancies to white and Hispanic females are unintended; 7 in 10 pregnancies to African American females are unintended. Unintended pregnancies during contraceptive use are highest among Hispanics and African Americans. And this highly correlates to poverty due to the difficulty of poor women in obtaining and using the more effective contraceptives and gaining access to adequate family planning services.

- Approximately 1 million teenage girls each year in the United States have unintended pregnancies. The cost to U.S. taxpayers for adolescent pregnancy is estimated at between $7 billion and $15 billion a year (Healthy People 2010).

Local Context

It is important to note who is having babies in Lancaster County so that we can put this issue in perspective. We have very high birth rates. The majority of babies are not born to teens. Nor are they born to single mothers. The majority of babies born in Lancaster County are being born to wed mothers. We have lower teen birth rates than our peer counties, the state, and the nation. Pregnancy and birth rates for Lancaster County are higher than

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those for the state as a whole and for most of the surrounding counties. Clearly, we do have many more women having babies overall in Lancaster County, and fewer of them are born to females younger than 18 than in other places.

The overall rate of induced abortion for the county is approximately 9%, with much higher rates in the teen populations. The induced abortion rate is considerably lower than the state (19%) and each peer county. This low rate may reflect the lower rates of pregnancy in Lancaster County's teen residents, but it is believed that our culture and values deter abortion. No abortion services are available in Lancaster County. There may also exist a perceived unavailability of fiscal resources. Despite the low level of induced abortion, at least 10% of the county's pregnancies are deemed unwanted, which again is lower than nationwide (50%). Improved contraceptive or sexual abstinence programs may reduce this number even further as well as spur treatment for sexually transmitted diseases.

Nonetheless, the issues surrounding teen pregnancy and child mothers are so serious that Lancaster must continue to target teen pregnancy and teen birth rates as a priority. Additionally, this issue is one that affects the poor and ethnic/racial minority populations with even greater impact. Teen pregnancy encompasses issues that go beyond a debate on the appropriateness or morality of teens engaging in risky sexual activity. Few believe that such activity is a smart choice. The real dilemma for us as a community comes when we try to deal with the realities of life for the ill-equipped mother and her child or children.

We know that the community is unable socially and financially to support the majority of young parents attempting to deal with the challenges of teen parenting when they are themselves almost children. We know this because statistics show that teen mothers are still more highly at risk for domestic violence, substance abuse, poverty related to underemployment, homelessness, and poor health care coverage. *Only one-third of teen mothers receive a high school diploma*. Her children are more likely to be born with birth defects or at low birth weight. Children are less likely to be immunized or, like their mother, to complete high school. Her children are at a higher risk of being abused or neglected, and of being victims of violence and crime. They are also more likely to become substance abusers, to get in trouble with the law, and finally to become teen parents themselves.

General Fertility Rates (births per 1000 females aged 15–44)

	1996	1997–1999 Average
Lancaster	66.0	67.1
Neighbors	57.9	58.7
Peers	56.4	56.9
State	57.2	57.3

Percent of All Births to Mothers Less than 18 Years Old

	1996	1997–1999 Average
Lancaster	3.4	3.0
Neighbors	3.9	3.5
Peers	4.2	4.2
State	4.2	3.6

Females Aged 15 to 17 Years, 1996	Pregnancy Rate per 1,000
TOTAL	68
Black or African American	124
White	58
Hispanic or Latino	105
Not Hispanic or Latino	62
Black or African American	128
White	44

Data

The teenage pregnancy rate in the United States is much higher than in many other developed countries—twice as high as in England and Wales, France, and Canada and nine times as high as in the Netherlands or Japan. (The Alan Guttmacher Institute. *Sex and America's Teenagers*. New York, NY: the Institute, 1994.) According to the US Department of Health and Human Services, about 80 percent of the children born to unmarried teenagers who dropped out of high school are poor. In contrast, just 8 percent of children born to married high school graduates aged 20 or older are poor.

Finally, all of these issues point to the wear and tear on social and medical systems attempting to deal with a single family with multiple issues. But, most importantly, they are measures of the human suffering and wasted potential of youth in our communities.

9-7 Reduce pregnancies among adolescent females.

Target: 43 pregnancies per 1,000.
Target-setting method: Better than the best

The rates given are the number of pregnancies among females aged 15 to 17 years old divided by the number of adolescent females aged 15 to 17 years. They are presented as pregnancies per 1000 population.

15 to 17 years old	National	State	Lancaster	Neighbors	Peers
1996	68	34.9	26.9	30.6	33.9
1999		30.0	24.1	27.8	31.4

Teen pregnancy rates are lower than the national, state and most reference county rates and the HP 2010 objective target. We did not have local ethnic and racial numbers available for pregnancy.

However, we know that most adolescent childbearing occurs outside marriage, a trend that has increased markedly during the past two decades. In 1997, 78 percent of births to adolescent females (under age 20 years) were out of wedlock, compared to 44 percent two decades earlier (1977). (Ventura, S.J.; Martin, J.A.; Curtin, S.C.; et al. "Births: Final data for 1997." *National Vital Statistics Reports* 47(18), 1999.) The following data is not for pregnancies but for births, and it includes 18 and 19 year olds. It does show a significant local issue of disparity that mirrors national trends. Of all births to Hispanic and African American women of Lancaster County, almost one-third were to unmarried women under 20 years of age.

Birth Rates (per 1000 population*) to Teenage Mothers (aged 15 to 19 years old), by Race and Ethnicity, 1995–1998

Aged 15 to 19 years old	White, non-Hispanic	Black	Hispanic	Total
Lancaster	27.8	103.6	160.2	39.0
Berks	28.3	111.8	210.6	49.1
Chester	16.2	96.4	114.3	25.3
Lehigh	26.2	126.3	211.2	47.2
York	33.1	91.2	145.8	41.3

*Estimated by female population aged 10–14 in 1990 (from 1990 Census); births from CDC Wonder Web site: {([1995+1996+1997+1998]/4)/est. population}1000

This birth rate information indicates that within the black and Hispanic communities, there is a significant pregnancy issue in women under 20. We can assume that the pregnancy rates would be higher than the birth rate for this same group. And if we applied the HP 2010 target (43 pregnancies per 1000), we can conclude that these two groups need prevention services, education, counseling, and support.

9-8 Increase the proportion of adolescents who have never engaged in sexual intercourse.

Target-setting method: Better than the best
Data sources: Females—National Survey of Family Growth (NSFG), CDC, NCHS; Males—National Survey of Adolescent Males (NSAM), Urban Institute
This data is unavailable locally.

- In 1999, 85 percent of adolescents abstained from sexual intercourse or used condoms if they were sexually active.
- This 85 percent includes 50 percent of students in grades 9–12 who were not ever sexually active, 14 percent who were not sexually active in the past three months, and 21 percent who were sexually active but used a condom at the last intercourse.
- Data on males aged 15–19 years will be collected in 2003.

Sources: Centers for Disease Control and Prevention.

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Youth Risk Behavior Surveillance System. 1999. Centers for Disease Control and Prevention, National Center for Health Statistics. National Survey of Family Growth, 1995

The two major health consequences to unprotected sex are STDs including HIV infection and pregnancy. Abstinence is the MOST effective way to avoid both. Condoms cannot prevent all STDs but they should always be used in conjunction with hormonal birth control methods if teens choose to have sex. Hormonal birth control methods cannot prevent STDs or HIV infection. This is as important with the first intercourse as with the last.

Never Engaged in Sexual Intercourse

Adolescents Aged 15 to 17 1995	Females 9-9a	Males 9-9b	2010 Target
Total	62	57	75
Selected Race and Ethnicity			
Black or African American	51	24	
White	63	64	
Hispanic	49	50	
Not Hispanic or Latino	64	57	
Black or African American	52	24	
White	65	65	

9-11.1 Increase the proportion of young adults who have received formal instruction before turning age 18 years on reproductive health issues, including all of the following topics: birth control methods, safer sex to prevent HIV, prevention of sexually transmitted diseases, and abstinence.

Target: 90 percent.
Baseline: 64 percent of females aged 18 to 24 years reported having received formal instruction on all of these reproductive health issues before turning age 18 years in 1995. (Data on males will be available in the future.)
Target-setting method: Better than the best

Local experts agreed with the concept, but the age target was viewed as naïve. Young people receive misinformation and exposure to the sexual messages of the media throughout their lives. Many students are experimenting by age 12, and data shows that almost 20% of young people engage in intercourse before age 15.

Adolescents need to receive reproductive health education long before they begin having sex. Ideally this should be age appropriate and should involve parents, educators, the media, and our churches. But simple biology is not enough. Adolescents need strong reinforcement from parents, schools, media, community, church, and other sources in order to make conscious, informed, and responsible decisions. They need coaching to resist media, cultural, and peer pressure, and this information must be culturally and linguistically appropriate to the students. They need to learn about and experience healthy relationships and accept that caring and affection can be demonstrated in many ways. Community and involved parents help to emphasize the bigger picture and consequences of their choices. Society must be more open to talking about sexuality with our children. They are exposed to frequent sexual messages in the media. Therefore, good education, understanding, and communication with parents are critical to balancing the picture that is being painted by the world around them.

Adolescents Aged 15 to 19 Years, 1995	No Intercourse Before Age 15 Years	
	9-8a Females	9-8b males
	Percent	
TOTAL	81	79
Race and ethnicity		
Black or African American	70	50
White	83	84
Hispanic or Latino	76	73
Not Hispanic or Latino	81	79
Black of African American	69	51
White	83	86

Data sources: Females—National Survey of Family Growth (NSFG), CDC, NCHS; Males—National Survey of Adolescent Males (NSAM), Urban Institute

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Received Reproductive Health Instruction Prior to Age 18 Years Females Aged 18 to 24 Years, 1995			
	18–24 Years	18–19 Years	20–24 Years
Total	65	80	57
Healthy People 2010 Goal	90	90	90
Black or African American	65	81	59
White	64	81	57
Hispanic	56	69	51
Not Hispanic or Latino	65	82	58
Black or African American	66	80	60
White	65	83	58
Family Income Level			
Poor	63	82	56
Near Poor	58	76	52
Middle/High Income	66	81	60
Data source: National Survey of Family Growth, (NSFG), CDC, NCHS			

Experts Say

The 10% improvement stated in the Healthy People 2010 goal may be unrealistic. Teens locally are neither abstaining nor using condoms. A very vocal and politically active segment of our local community does not support teaching these young people about the use of condoms and other safety issues about the choice to be sexually active. They have affected the ability of our local school districts or local organizations to disseminate this information to teens. This puts education squarely in the parents' hands. Research tells us that teaching abstinence as well as the use of condoms must be permitted and practiced. This should be done in concert with working toward enriching and deepening positive experiences in the lives of the community's young through social programs, recreation, and career-building opportunities.

The difficulty with some teens is that having babies as an unmarried teen is acceptable. Their parents were teens when they were born and they see it as the norm. Teen women born into poverty or economically challenged homes often receive no medical care or special attention of any kind until they become pregnant. After pregnancy, medical care is offered and the girls become less invisible to their families. Their personal worth seems enhanced to them. They may have teen friends who already have children. Many young women are engaged in relationships with older men. Families may see the older men as more stable, often a false assumption. Many young women do not see themselves with any other kind of future and have few assets in their lives to shepherd them in a different direction. They are sometimes failing in school or are not supported by their families to pursue an education.

For teens, giving birth to a second child while still a teen further increases risks to her and her children. Preventing second and third births is critical during teen years. Research has shown that such births are associated with physical and mental health problems for the mother and the child (Klerman, L. "A Paper for Program on Preventing Second Births to Teenage Mothers: Demonstration Findings," sponsored by the American Enterprise Institute for Public Policy Research, March 6, 1998).

Researched Best Strategies

"In the past six years there has been both an increase in abstinence among all youth and an increase in condom use among those young people who are sexually active. Research has shown clearly that the most effective school-based programs are comprehensive ones that include a focus on abstinence and condom use. Condom use in sexually active adults has remained steady at about 25 percent" (Healthy People 2010).

The U.S. **Department of Health and Human Services (HHS)** has responded to a call from the President and Congress for a national strategy to prevent out-of-wedlock teen pregnancies and for a directive, under the new welfare law, to assure that at least 25 percent of communities in this country have teen pregnancy prevention programs in place. The national strategy is based on these key principles which should be a part of any local program:

✔ **Parental and Adult Involvement**: Parents and other adult mentors must play key roles in encouraging young people to avoid early pregnancy and to stay in school.

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✔ **Abstinence**: Abstinence and personal responsibility must be primary messages of prevention programs.

✔ **Clear Strategies for the Future**: Young people must be given clear connections and pathways to college or jobs that give them hope and a reason to stay in school and avoid pregnancy.

✔ **Community Involvement**: Public and private sector partners throughout communities, including parents, schools, business, media, health and human services providers, and religious organizations, must work together to develop comprehensive strategies.

✔ **Sustained Commitment**: Real success requires a sustained commitment to the young person over a long period of time.

Experts Say

- Remove obstacles, for county teens, to contraceptive treatment centers.
- Authorize the local school districts to provide contraceptive education in areas where it has previously been disallowed by public mandate.
- Churches must more adequately address sexuality and pregnancy before marriage.
- Churches need to go to teens, or draw in teens, to influence their spiritual development.
- Financial coverage for contraceptives must be found.
- The Assets program or Mentoring programs must grow.
- More community health centers/clinics with an ob/gyn available need to be located in high-risk areas.
- Laws should be changed to encourage single moms to marry, (i.e., remove financial penalty—loss of Medical Assistance).
- Provide more parenting programs for teens to break the cycle and prevent a second birth.
- Prosecute statutory rape.
- Provide more culturally competent services and prevention programs.
- Increase awareness of services among teens, as they are the most common referral source among friends—information cards and posters in restrooms.
- Increase pregnancy prevention programs utilizing teen parents as speakers.
- Provide services within walking distance or located on bus routes.
- Provide timely service and reduced waiting time for teens looking for services.
- Introduce Peter Benson, Ph.D.—Search Institute based programs: 40 developmental assets with outcome-based data. Having these assets within your community decreases the rates of teen pregnancy.
- Introduce Washington State Model: Provides free birth control for teen moms for one or two years to reduce repeat pregnancies.

Sexually Transmitted Diseases (STDs) and HIV/AIDS

Sexually transmitted diseases (STDs), including infection with the human immunodeficiency virus (HIV) that causes AIDS, can result from unprotected sexual behaviors. They are common, costly, and preventable. Sexually transmitted diseases refer to the more than 25 infectious organisms transmitted primarily through sexual activity. Abstinence is the only method for complete protection. Condoms, if used correctly and consistently, can help prevent both unintended pregnancy and STDs.

A 1997 Institute of Medicine (IOM) report characterized STDs as "hidden epidemics of tremendous health and economic consequence in the United States" and stated, "STDs represent a growing threat to the Nation's health and that national action is urgently needed." (Institute of Medicine (IOM). Eng, T.R., and Butler, W.T., eds. *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*. Washington, DC: National Academy Press, 1997).

Women generally suffer more serious STD complications than men, including pelvic inflammatory disease, ectopic pregnancy, infertility, chronic pelvic pain, and cervical cancer from the human papilloma virus. (Cates, W. "Epidemiology and control of sexually transmitted diseases in adolescents." In: Schydlower, M., and Shafer, M., eds. *AIDS and Other Sexually Transmitted Diseases*. Philadelphia, PA: Hanly & Belfus, Inc., 1990, 409–427.) African Americans and Hispanics have higher rates of STDs than whites. The total cost of the most common STDs and their complications is conservatively estimated at $17 billion annually.

Despite the burdens, costs, complications, and preventable nature of STDs, they remain a significant public health problem, largely unrecognized by the public, policy-makers, and public health and health care professionals in the United States. STDs cause many harmful, often irreversible, and costly clinical complications, such as reproductive health problems, fetal and perinatal health problems, and cancer. In addition, studies of the worldwide human immunodeficiency virus (HIV) pandemic link other STDs to a causal chain of events in the sexual transmission of HIV infection.

There are biological and social factors that sustain STD and HIV/AIDS transmission in the United States. Any effective strategy must address them.

Biological factors. STDs are behavior-linked diseases that result from unprotected sex. Several biological factors contribute to their rapid spread.

- ***Asymptomatic nature of STDs***. The majority of STDs either do not produce any symptoms or signs, or they produce symptoms that are so mild that they aren't attended to. Often, a long interval—sometimes years—occurs between acquiring an STD and recognizing a health problem. For example, as many as 85 percent of women and up to 50 percent of men with chlamydia have no symptoms. A person infected with HIV may be asymptomatic and may give the disease to another person. That person may, in turn, be infected for years but be unaware until symptoms manifest themselves and transmit it to yet others. As a result, people frequently do not see a connection between the original point of contact and the resulting health problem and symptoms (Stamm, W., and Homes, K. *Sexually Transmitted Diseases*. 2nd ed. New York, NY: McGraw-Hill, Inc, 1990, 181–193).

- ***Gender and age***. STDs are more difficult to diagnose in women due to the physiology and anatomy of the female reproductive tract. This combination of increased susceptibility and "silent" infection frequently can result in women being unaware of an STD, which results in delayed diagnosis and treatment. Women are at higher risk than men for most STDs, and young women are more susceptible to certain STDs than are older women. The higher risk is partly because the cervix of adolescent females is covered with cells that are especially susceptible to STDs, such as chlamydia. For a variety of behavioral, social, and biological reasons, STDs also disproportionately affect adolescents and young adults (Alan Guttmacher Institute. *Sex and America's Teenagers*. New York, NY: the Institute, 1994).

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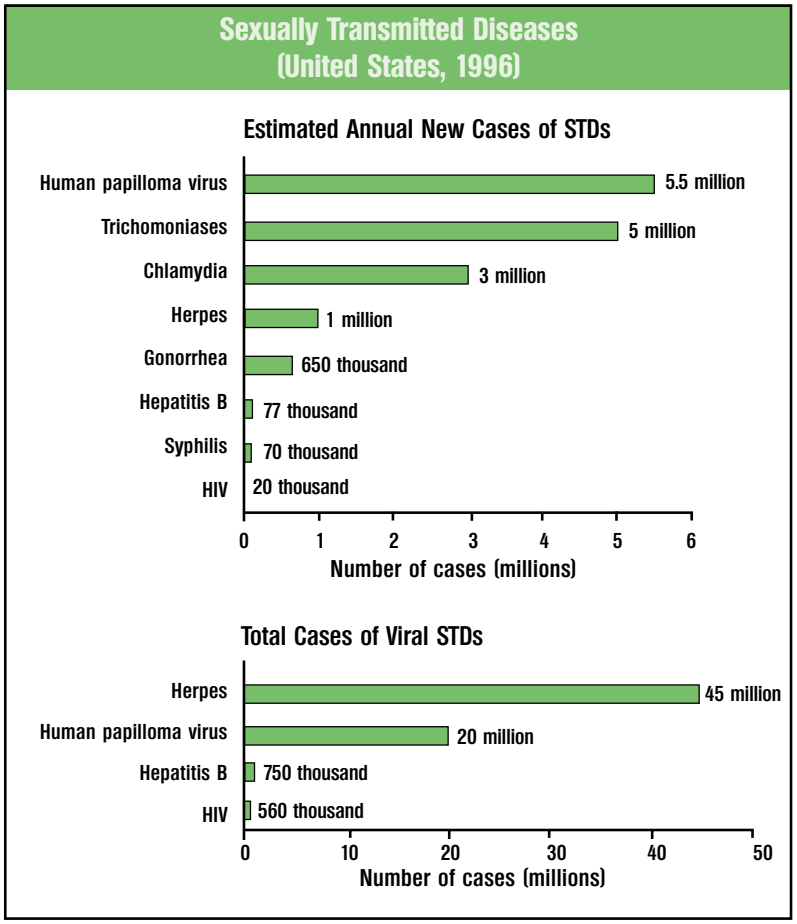
Social and behavioral factors. The spread of STDs is directly affected by social and behavioral factors. Preventive measures sometimes fly in the face of social norms regarding sex and sexuality.

- ***Poverty and marginalization.*** STDs disproportionately affect persons who are in groups where high-risk sexual behavior is common and where access to care or even seeking out health professionals is compromised. Examples include sex workers (people who exchange sex for money, drugs, or goods), teens, runaways, persons in detention, and migrant workers. Without publicly supported STD services, many people lack access to STD care and consequently compromise everyone's health. Studies show that comprehensive screening of incarcerated populations can be done successfully and safely within the criminal justice system. Most STDs respond to treatment.
- ***Access to health care.*** Access to high-quality health care is essential for early detection, treatment, and behavior-change counseling, but groups with the highest rates of STDs often have limited access to health services. This limitation relates to:



Source: American Social Health Association. "Sexually Transmitted Diseases in America: How Many Cases and at What Cost?" Menlo Park, CA: Kaiser Family Foundation, 1998

- ✔ Lacking access to publicly supported STD clinics (present in only 50 percent of U.S. public health jurisdictions).
- ✔ Having no health care coverage.
- ✔ Having coverage that imposes a copayment or deductible.
- ✔ Having coverage that excludes the basic preventive health services that help avert STDs or their complications.

- ***Sexual coercion.*** Sexual violence against women contributes both directly and indirectly to STD transmission. Additionally, many young women do not enter sexual relationships as willing partners. Sexual coercion is a major problem for significant numbers of young women in the United States. Directly, women experiencing sexual violence are less able to protect themselves from STDs or pregnancy. Indirectly, research demonstrates that women with a history of forced sexual intercourse are more likely to have voluntary intercourse at earlier ages—a known risk factor for STDs—than women who are not sexually abused. In 1995, 16 percent of females whose first sexual intercourse took place when they were aged 15 years or under reported that it was not voluntary (Abma, J.; Driscoll, A; and Moore, W.; Family Planning Perspectives 30(1):12–18, 1998). This aspect of adolescent sexual behavior demands increased national and local attention, both for social justice and for health reasons.
- ***Sexual secrecy.*** Secrecy is perhaps the most important social factor contributing to the spread of STDs in the United States. This factor most significantly separates the United States from those industrialized countries with low rates of STDs.

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▪ ***Media*** The entertainment industry, particularly television, bombards us with sexual themes. But very little informed, high-quality STD prevention advice or discussion exists regarding contraception, sexuality, or the risks of early, unprotected sexual behavior. Popular television programs depict as many as 25 instances of sexual behaviors for every one instance of protected behavior or discussion about STDs or pregnancy prevention. Media companies can play an important part in reshaping sexual behaviors and norms in the United States in the next decade.

Data

In 1995, STDs were the most common reportable diseases in the United States (CDC). They accounted for 87% of the top 10 infections most frequently reported to the CDC from State health departments. Each year an estimated 15 million new STD infections occur in the U.S., and nearly 4 million are teenagers. The direct and indirect costs of the major STDs (chlamydia, gonorrhea, AIDS, syphilis, and hepatitis B) are conservatively estimated at $17 billion annually. STD rates exceed those in all other countries of the industrialized world.

In 1997, females aged 15 to 19 years had the highest reported rates of both chlamydia and gonorrhea among women; males aged 20 to 24 years had the highest reported rates of both chlamydia and gonorrhea among men. (CDC, Division of STD Prevention. *Sexually Transmitted Disease Surveillance*, 1997. U.S. Department of Health and Human Services (HHS), Public Health Service (PHS). Atlanta, GA: CDC, September 1998.) Encouraging data is emerging from a new and expanding chlamydia prevention program, suggesting that chlamydia screening is reducing disease burden and preventing complications.

STD Reported Morbidity, Lancaster, State, and National (per 100,000)

	Gonorrhea	Chlamydia	Primary & Secondary Syphilis
Lancaster, 2001	62.68	163.81	0.00
Pennsylvania, 2001	113.16	225.86	0.80
National, 2000	131.6	257.5	2.2

State and Local data is from SE District of Health, and National is from http://www.cdc.gov/std/stats/Tables/2000Table1.htm

Chlamydial infections and gonorrhea that ascend past the cervix into the upper reproductive tract result in pelvic inflammatory disease (PID), among the most serious threats to female reproductive capability. More than 1 million women have an episode of PID annually. (Washington, A.E., and Katz, P. "Cost and payment source for pelvic inflammatory disease." Trends and projections, 1983 through 2000. *Journal of the American Medical Association* 266:2565–2569, 1991.) PID often results in scarring and either complete or partial blockage of the fallopian tubes. As a result, as many as one-quarter of women with acute PID experience serious long-term sequelae, most often an ectopic pregnancy or tubal factor infertility. In 1992, approximately 9 percent of all pregnancy-related deaths were caused by ectopic pregnancy.

Number of Reported Cases, Chlamydia and Gonorrhea, 1997–2001, Lancaster County

	1997	1998	1999	2000	2001
Chlamydia	321	408	846	594	771
Gonorrhea	188	94	250	257	295

Because so many people are already infected, and millions more are infected annually, viral STDs present special challenges for prevention and control. One of the most serious health problems associated with STDs is sexually acquired HIV infection that is helped along by the presence of an inflammatory or ulcerative STD in one or both sex partners.

▪ A nationally representative study showed that genital herpes infection is very common in the United States (Fleming, D.T.; McQuillin, R.E.; et al. {Herpes Simplex Virus Type 2 in the United States, 1976 to 1994." *New England Journal of Medicine* 337:1105–1111, 1997).

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- Nationwide, 45 million persons aged 12 years and older, or one out of five of the total adolescent and adult population, are infected with herpes simplex virus type 2.
- As many as 20 million persons in the United States already are infected with strains of the human papillomavirus, and an estimated 5.5 million new infections occur annually.

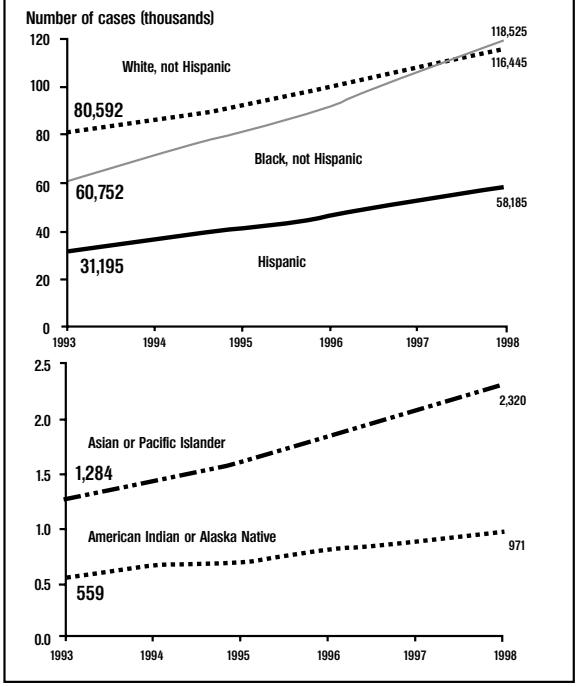
HIV/AIDS

Description

In 1981, a new infectious disease, AIDS, or acquired immunodeficiency syndrome, was identified in the United States. (Centers for Disease Control. "Kaposi's sarcoma and pneumocystis pneumonia among homosexual men—New York City and California." *Morbidity and Mortality Weekly Report* 30(25):305–308, 1981.) Several years later, the causative agent of AIDS—human immunodeficiency virus (HIV)—was discovered. Individuals may carry and transmit the HIV virus and not be symptomatic (AIDS). This discovery coincided with the growing recognition of AIDS in the United States as part of a global infectious disease pandemic.

HIV/AIDS has been reported in almost every racial and ethnic population, every age group, and every socioeconomic group in every state and most large cities in the United States. In fact, there is growing concern over the increase in HIV/AIDS in the senior population due to unprotected sex. The AIDS epidemic is composed of diverse multiple sub epidemics that vary by region and community. By the end of 1998, more than 680,000 cases of AIDS had been reported, and nearly 410,800 people had died from HIV disease or AIDS (CDC).

Persons Living with AIDS (United States, 1996)



Source: CDC. HIVAIDS Surveillance Report. Vol. 11, No. 1, 1999

The lifetime costs of health care associated with HIV, in light of recent advances in diagnostics and therapeutics, have grown from $55,000 to $155,000 or more per person (Sweeney, P.A.; Fleming, P.L.; Karon, J.M.; et al. "A Minimum estimate of the number of living HIV-infected persons confidentially tested in the United States" {Abstract 1-16}. Presented at the Interscience Conference on Antimicrobial Agents and Chemotherapy in Toronto, Canada, September 1997). These costs mean that HIV prevention efforts may be even more cost-effective, and even cost-saving, to society. Prevention efforts include availability of culturally and linguistically appropriate HIV counseling and testing, partner counseling, and referral systems for individuals at high risk for HIV infection; and needle and syringe exchange programs; and information, education, treatment, and counseling for injection drug users.

The true extent of the epidemic remains difficult to assess for several reasons, including the following:

- Because of the long period of time from initial HIV infection to AIDS and because Highly Active Antiretroviral Therapy (HAART) has slowed the progression to AIDS, new cases of AIDS no longer provide accurate information about the current HIV epidemic in the United States.
- Lack of awareness by individuals of their HIV status as well as delays in accessing counseling, testing, and care services may result in no care for the HIV-infected persons until late in the course of their infection.
- Estimates of the number of people infected with HIV in the United States range from 800,000 to 900,000. AIDS is mandated to be a reportable disease. But because of the stigma associated with this illness, required reporting of HIV status has not been

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universally accepted or mandated at either federal or state levels. Recently introduced therapies for HIV/AIDS have reduced illness, disability, and death due to HIV/AIDS; however, access to culturally and linguistically appropriate testing and care may limit progress in this area.

13-1 Reduce AIDS among adolescents and adults.

Target: 1.0 new case per 100,000 persons
Baseline: 19.5 cases of AIDS per 100,000 persons aged 13 years and older in 1998. Data are estimated and adjusted for delays in reporting.
Target-setting method: Better than the best
Data source: HIV/AIDS Surveillance System, CDC, NCHSTP

13-1 AIDS incidence Rate, Persons Aged 13+ (reported cases per 100,000)

County	2010 Goal	1996–00	1995–99	1994–98	1993–97	1992–96
Lancaster	1.0	9.4	10.7	12.2	13.1	14.0
Chester	1.0	5.9	6.9	7.9	8.8	10.3
York	1.0	11.8	11.8	13.4	14.6	15.2
Berks	1.0	15.4	14.4	16.6	17.7	18.1
Dauphin	1.0	27.4	28.0	30.2	29.2	32.5
Lebanon	1.0	9.2	7.8	8.7	9.3	9.8
Lehigh	1.0	18.0	18.3	20.1	21.0	22.4
Northampton	1.0	7.8	8.1	10.2	11.8	13.7
Pennsylvania	1.0	17.5	18.5	19.7	21.5	22.9

Source: PA Dept of Health Web site

The national baseline from 1998 is 19.5, which we are well below, although we are still considerably higher than the goal of 1.0 new cases per 100,000 people.

National Persons Aged 13 Years and Older, 1998	New AIDS Cases		
	13-1 Both Genders	Females	Males
	Rate per 100,000		
Total	19.5	8.8	30.8
Race and ethnicity			
American Indian or Alaska Native	9.4	4.5	14.5
Asian or Pacific Islander	4.3	1.2	7.8
Hispanic or Latino	33.0	13.8	52.2
Black or African American	82.9	48.5	122.9
White	8.5	2.2	15.2

Data source: HIV/AIDS Surveillance System, CDC, NCHSTP.

13-14 Reduce deaths from HIV infection.

Target: 0.7 deaths per 100,000 persons
Baseline: 4.9 deaths from HIV infection per 100,000 persons in 1998 (age adjusted to the year 2000 population)
Target-setting method: Better than the best
Data source: National Vital Statistics System, CDC, NCHS

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Local experts and those who work in the field do not believe that aids deaths are a good indicator for the following reasons.

- On death certificate, families commonly do not write the cause of death as being HIV related for fear of stigma or revealing the loved one's status for insurance claims.
- Individuals who are HIV positive may die from other causes, such as injury, car accidents, or other illnesses that may not be attributable to HIV disease, and, therefore, these deaths would not be reflected in the HRSA statistics.
- It was also noted that AIDS mortality is not an accurate indicator for a community, as it does not reflect the incidence of HIV infection.

According to PA Department of Health Data in 1999, there were seven HIV deaths among Lancaster residents aged 25–44. Of those seven, three were white, four were black, and one was of Hispanic origin. Over a five-year period (1995–1999) there were 64 HIV deaths among those 25–44 in Lancaster, 48 whites and 16 blacks; 23 were of Hispanic origin. The numbers during that time period dramatically declined. For example in 1995, there were 10 Hispanic HIV deaths in this age group, 9 in 1996, 1 in 1997, 2 in 1998, and 1 in 1999.

County	2010 Goal	1996–00	1995–99	1994–98	1993–97	1992-96
Lancaster	0.7	3.3	4.7	5.6	7.0	7.9
Chester	0.7	2.5	3.5	4.1	4.5	5.1
York	0.7	3.8	4.7	6.0	7.0	7.8
Berks	0.7	7.1	9.5	10.6	11.7	11.7
Dauphin	0.7	7.7	9.8	12.3	14.2	14.3
Lebanon	0.7	DSU	DSU	DSU	3.5	4.4
Lehigh	0.7	4.0	5.4	6.5	7.5	8.5
Northampton	0.7	3.3	4.6	5.8	6.1	6.9
Pennsylvania	0.7	5.3	6.8	8.2	9.2	9.9

DSU=Data Statistically Unreliable Source: PA Dept of Health Web site

National Target: 0.7 deaths per 100,000 persons.
Baseline: 4.9 deaths from HIV infection per 100,000 persons in 1998 (age adjusted to the year 2000 population).

National Persons Aged 13 Years and Older, 1998	Death Due to HIV Infection		
	13-1 Both Genders	Females	Males
	Rate per 100,000		
Total	4.9	2.3	7.7
Race and ethnicity			
American Indian or Alaska Native	2.3	DSU	4.0
Asian or Pacific Islander	0.8	DSU	1.4
Hispanic or Latino	6.7	2.8	10.7
Black or African American, non-Hispanic	22.8	12.6	35.1
White, non-Hispanic	2.1	0.5	3.8
Education level (aged 25–64 years)			
Less than high school	17.3	10.6	23.4
High school graduate	11.7	5.6	18.3
At least some college	4.3	1.1	7.5

Data source: HIV/AIDS Surveillance System, CDC, NCHSTP

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Disparity

In the United States, HIV/AIDS remains a significant cause of illness, disability, and death, despite declines in 1996 and 1997. The incidence of HIV/AIDS varies not only by region and community but also may vary by population, risk behavior, and geography. Elimination of disparities in the rate of infection among certain racial and ethnic groups, particularly African American and Hispanic populations, remains a challenge.

The proportion of different population groups affected by HIV/AIDS has changed over time. By 1998, 83 percent of the cumulative AIDS cases had occurred in males, 16 percent in females, and 1 percent in children. Response to the epidemic reflects these changes:

Comparing the 1980s to the 1990s, the proportion of AIDS cases in white men who have sex with men declined, whereas the proportion in females and males in other racial and ethnic populations increased, particularly among African Americans and Hispanics. AIDS cases also appeared to be increasing among injection drug users and their sexual partners.

Increases among women have occurred over time. By the mid-1980s, the majority of AIDS cases had been reported among males, with only 7 percent reported among females in 1983. (CDC. "Current trends update: Acquired immunodeficiency syndrome (AIDS)—United States." *Morbidity and Mortality Weekly Report* 32(52):688–691, 1984.) Reported AIDS cases in females have increased steadily since then and have accounted for nearly 23 percent of the cases reported in 1998. Young heterosexual women, especially minority women, are increasingly acquiring HIV infection and developing AIDS. In 1998, 41 percent of reported AIDS cases in persons aged 13 to 24 years occurred in young women, and more than four of every five AIDS cases reported in women occurred in certain racial and ethnic groups (mostly African American or Hispanic).

- In 1996, for the first time, African Americans accounted for a larger proportion of AIDS cases than whites and this trend has continued.

- In the United States, African Americans and Hispanics have been affected disproportionately by HIV and AIDS, compared to other racial and ethnic groups.

- Although 55 percent of the reported AIDS cases occurred among African Americans and Hispanics, these two population groups represent an estimated 13 percent and 12 percent, respectively, of the total U.S. population. (Centers for Disease Control and Prevention (CDC). *HIV/AIDS Surveillance Report* 10(2), 1998.)

- In 1997, AIDS remained the leading cause of death for all African Americans aged 25 to 44 years—the second leading cause among African American females and the leading cause among African American males. (Hoyert, D.L.; Kochanek, K.D.; and Murphy, S.L. "Births and deaths: Final data for 1997." *National Vital Statistics Report* 47(19). Hyattsville, MD: National Center for Health Statistics, 1999.)

- The AIDS case rate among African Americans in calendar year 1998 was 66.4 per 100,000 persons, or eight times the rate for whites (8.2 per 100,000), and over twice the rate for Hispanics (28.1 per 100,000). (Centers for Disease Control and Prevention (CDC). *HIV/AIDS Surveillance Report* 10(2), 1998.)

- Among women with AIDS, African Americans and Hispanics have been especially affected, accounting for nearly 77 percent of cumulative cases reported among women by 1998. Of the 109,311 AIDS cases in women reported through December 1998, 61,874 cases occurred in African American women and 21,937 occurred in Hispanic women.

This disproportionate impact of HIV/AIDS on African Americans and Hispanics highlights the importance of sustained and culturally effective prevention efforts for these racial and ethnic populations. As important as being mindful of the multiracial and multicultural nature of society are other social and economic factors—such as poverty, underemployment, and poor access to the health care system.

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Local Experts Say

The community needs:

- More integration between HIV and STD services, especially in agencies which provide HIV outreach education and among adolescents.
- More funding to be directed towards HIV/AIDS outreach education and testing.
- More bilingual persons fluent in both Spanish and English to deal with all STDs and HIV/AIDS.
- More attention to transmission issues directly related to drug and alcohol abuse.
- More detailed and accurate statistical gathering procedures: Although, it may be beneficial to look at AIDS mortality, the common concern is addressing the issues of those individuals living with the virus. A more appropriate assessment of those individuals may be achieved through a variety of methods, which include:

  ✔ **Requesting data from HIV/AIDS providers that serve Lancaster County.** Agencies are required by their funding sources to keep accurate data on client's served, and this data would portray a better picture on not only reported AIDS cases, but also numbers on persons living with HIV. One of the recognized limitations of this form of data retrieval would be that clients may utilize more than one agency; however, it would still be useful in a getting a "ball park figure." Another limitation of this would be counting the population of infected individuals who do not access services.

  ✔ **Requesting current HIV/AIDS data from the PA Department of Health's Division of Vital Statistics**. If and when HIV will become a reportable disease, it was agreed that this would provide more accurate information regarding incidence.

  ✔ **Current testing and counseling data and surveying private providers**. This data would be helpful in determining the effectiveness of prevention and outreach efforts on targeted and at-risk populations. This data could be attained through the Division of HIV/AIDS but presents some limitations as well, as it would be data collected only from publicly funded sites. It would not include tests given through private physicians and would represent only about one third of all tests done.

  ✔ **Accurate demographic data**. Aside from actual numbers of HIV infection, in order to have a better understanding of the impact of the disease, all demographic data needs to be presented, i.e., age, race, mode of transmission, income, insurance status, family make up, and gender.

Access to Care

- An entire population of individuals in the community is HIV positive and chooses NOT to access care or services. This may be attributed to several reasons, such as: 1) Individuals feel they may be able to "handle the issues on their own," 2) "Perceived" lack of resources based on economic status, and 3) Individuals may not seek treatment or services out of fear and stigma associated with the disease. Mick Kaufman, of Dr. Kirchner's Comprehensive Care clinic, further illustrated the issue of access to care with the clients they serve. He stated that in looking at the demographics of their patients, they tend to have more Latino patients who are HIV positive, but more African American patients who are clinically diagnosed with AIDS. Several additional reasons for the disparity were suggested: 1) As a result of stigma, individuals wait longer before seeing a physician, thus allowing a more rapid progression of the disease, and 2) individuals may not know their HIV status until they exhibit symptoms of advanced HIV disease.
- Black and Hispanic patients infected with the HIV virus are less likely than whites to participate in clinical studies of new treatments or to receive experimental drugs, according to the first study that has used nationally representative data to examine such disparities. They have fewer options and are less likely to get access to these

experimental medicines, which can be an important component of care. (Allen L. Gifford of the Veterans Affairs San Diego Healthcare System, principal author of the study, published in the May 2, 2002, *New England Journal of Medicine*.)

✔ The researchers found that, in addition to being black or Hispanic, other factors also reduced patients' likelihood of participating in a clinical trial. They included having less than a high school education, belonging to a health maintenance organization, and living eight or more miles from a major research hospital.

✔ Among patients who were enrolled in a clinical trial at the start of the study, blacks were more likely than whites to drop out. In follow-up interviews, 25 percent of blacks reported that they were still enrolled, compared with 53 percent of whites.

✔ Although 24 percent of patients in the study reported that they had taken an experimental drug, an additional 8 percent said they had tried and failed to obtain such drugs. Patients who were white, who were highly educated, or who received their health care close to a research center were more likely than others to receive experimental drugs.

✔ Among patients who sought such medicines, whites received them more often than blacks (77 percent vs. 69 percent), and people with fee-for-service insurance were given the drugs more often than HMO members or uninsured patients.

✔ The same issues and ambiguities exist in regard to Hepatitis. Local providers do not see Hepatitis B as having a significant impact on their clients. An issue of greater concern was hepatitis C. As hepatitis C and HIV are commonly transmitted through the same means, co-infection of the two diseases presents an increasing problem, especially with clients who are HIV positive and those who are taking medication. HAART medication has a high level of toxicity, and if a client has a liver disease such as hepatitis C it exacerbates the liver complications a patient may have. Several providers emphasized this point by stating that they have lost many clients to liver cancer and other problems associated with co-infection of HIV and hepatitis C. Currently hepatitis C is reported only as hepatitis non-A or hepatitis non-B to the State Department of Health, and the Department of Health counts only acute cases and not chronic cases. So again, the community is confronted with the same problems in determining the incidence of disease. Co-infection of HIV and hepatitis poses a real threat to the clients local providers serve and something needs to be done to help those clients.

Best Strategies for Teen Pregnancy, STD's, and HIV/AIDS

Overall behavioral and biomedical strategies for the prevention of unwanted pregnancy, and the prevention of HIV and STD infection overlap.

Behavioral interventions can:

▪ Help persons abstain from sexual intercourse, delay initiation of intercourse, reduce the number of sex partners, and increase the use of effective physical barriers such as condoms, or emerging chemical barriers, such as microbicides.

▪ Enhance prevention strategies for populations that are particularly high risk, such as injection drug users, homeless persons, runaway youth, mentally ill persons, and incarcerated persons. Some of these populations are also difficult to reach.

▪ Help parents become better at imparting information. Currently, a small percentage of adolescents receive prevention information from parents (American Social Health Association. "Teenagers know more than adults about STDs, but knowledge between both groups is low." *STD News* 3:1, 5, 1996).

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- Schools are the main source of STD information for most teenagers, indicating that school-based interventions can play a significant role in informing young people about STD exposure and transmission issues and in motivating them to modify their behaviors. Both school-based health information and school-based health service programs are potentially beneficial to young persons.

- Mass media campaigns have been effective in bringing about significant changes in awareness, attitude, knowledge, and behaviors for other health problems, such as smoking.

Biomedical interventions can affect aspects of transmission and duration factors:

- Vaccines minimize the probability of infection, disease, or both, after exposure (transmission). While vaccines for some STDs are in various stages of development, the only effective and widely available STD vaccine is for hepatitis B. Setting the discovery of a safe and effective HIV vaccine as a reachable goal, as a result of ongoing HIV vaccine testing. The development and testing of candidate microbicides may be important in enhancing prevention efforts until a vaccine is available.

- Correct and consistent condom use decreases STDs.

- Screening and treatment for curable STDs can be cost-effective, or even cost-saving, in altering the period during which infected persons can infect others. For STDs that frequently are asymptomatic, screening and treatment benefit those who are likely to suffer severe complications (especially women) if infections are not detected and treated early. Selective screening for chlamydia in the Pacific Northwest reduced the burden of disease in the screened population by 60 percent in 5 years. (Britton, T.; DeLisle, S.; and Fine, D. "STDs and family planning clinics: A regional program for chlamydia control that works." *American Journal of Gynecological Health* 6:80–87, 1992.) STD screening of specific high-risk populations in nontraditional settings appears to be a promising control strategy that expands access to underserved groups. The success of screening programs will depend on the availability of funds, the willingness of communities and institutions to support them, and the availability of well-trained health care providers and of well-equipped and accessible laboratories.

- Identifying and treating partners of persons with curable STDs to break the chain of transmission in a sexual network always have been integral to organized control programs. New approaches for getting more partners treated are being assessed both in traditional and nontraditional STD treatment settings. With partner treatment, the initially infected person benefits from a reduced risk of reinfection from an untreated partner, and the partner avoids acute infection and its potential complications. Future sex partners are protected by treating partners; thus, this treatment strategy also benefits the community.

- Increasing the number of people who learn their HIV status in order to detect HIV infection when the potential for transmission is greatest and the need for prevention, care, and treatment, including HAART, is greatest.

- Improving access to HAART, thereby reducing deaths and HIV-associated illness and, possibly, infection of others.

Teens

Promoting responsible adolescent sexual behavior targets three protective behaviors that reduce the risk of STDs (including HIV infection) and unintended pregnancy. They are: completely abstaining from sexual intercourse during adolescence (primary abstinence), reverting to abstinence for long periods of time after having had intercourse in the past (secondary abstinence), and at least using condoms (a single method that offers protection against both pregnancy and some STDs) consistently and correctly if regular intercourse is

occurring. Abstaining from sexual intercourse offers maximum protection to adolescents who are generally poorly prepared to deal with the physical and psychological consequences of HIV infection, other STDs, and pregnancy.

Related Data

- Overall, 50 percent of high school youth practice abstinence.
- Abstinence in high school varied by race and ethnicity. The rate was 55 percent among white youth and 29 per cent among African American youth.
- Abstaining from sexual intercourse decreased as young people progressed through high school, from 61 percent of 9th graders to 35 percent among 12th graders.
- At least 39 percent of 9th graders had had intercourse during or before this school year. Among them, 12 percent had not had intercourse in the past three months, 17 percent were currently sexually active and used a condom at last intercourse, and the remaining 10 percent were sexually active and had not used a condom at last intercourse.

This data supports the need for counseling, education, interventions, and service for many young people even before the start of high school.

25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

Target: 95 percent
Baseline: 85 percent of adolescents in grades 9 through 12 abstained from sexual intercourse or used condoms in 1999 (50 percent had never had intercourse; 14 percent had intercourse but not in the past 3 months; and 21 percent currently were sexually active and used a condom at last intercourse).
Target-setting method: 12 percent improvement
Data source: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP

In 1999, 85 percent of high school youth demonstrated at least one of the responsible behaviors. Increasing and maintaining the proportion of youth who exhibit the above protective behaviors reduces the risks of HIV infection, other STDs, and unintended pregnancies for adolescents because the proportion of youth who are currently sexually active and do not use condoms will be reduced.

Young people who have had sexual intercourse in the past but are not currently sexually active need special attention and services. Even if pregnancy were avoided in the past, the same may not be true for STDs. Previously sexually active adolescents need to be educated about this possibility, and medical evaluation and counseling are strongly suggested both to identify treatable conditions and to reinforce abstinence messages. In addition to reinforcing abstinence messages, responsible and influential adults should help young males and females gain easy access to high-quality, confidential, comprehensive reproductive health care in their communities that can help them reduce HIV infection, STD, and pregnancy risk.

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Data for never had intercourse, had intercourse but not in the past three months, and currently sexually active and used a condom at last intercourse are displayed to further characterize the issue.

Students in Grades 9 through 12, 1999	25-11 Abstained from Sexual Intercourse or Used Condom [Column a= b+c+d]	NOT Currently Sexually Active		Currently Sexually Active	
		Never Had Intercourse* [Column b]	No Intercourse in Past three Months [Column c]	Used Condom at Last Intercourse [Column d]	Did Not Use Condom at Last Intercourse [Column e]
		Percent			
TOTAL	85	50	14	21	15
Race and ethnicity					
Black or African American	83	30	17	36	17
White	86	55	13	18	14
Hispanic or Latino	84	46	18	20	16
Not Hispanic or Latino	85	51	13	21	15
Black or African American	84	29	18	37	16
White	85	55	12	18	15
Gender					
Female	81	52	11	18	18
Male	87	48	16	23	13
Grade					
9th	90	61	12	17	10
10th	87	53	14	20	13
11th	84	47	15	22	16
12th	73	35	14	24	27
Number of sex partners (past 3 months)					
None	100	79	21	NA	NA
1	57	NA	NA	57	43
2 to 3	62	NA	NA	62	38
4 or more	60	NA	NA	60	40

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. NA=Not applicable.*

Condoms

Research clearly demonstrates that—despite fears to the contrary—young persons who participate in comprehensive HIV and STD prevention programs that include approaches to ensure access to condoms are no more likely to initiate or increase sexual activity than other young persons (Warren, C.; Santelli, J.; Everett, S; et al. "Sexual Behavior among U.S. high school students, 1990–1995." *Family Planning Perspectives* 30(4):170–172, 1998).

13-6 Increase the proportion of sexually active persons who use condoms.

Objective	Increase in Sexually Active Persons Using Condoms	1995 Baseline	2010 Target
		Percent	
13-6a	Females aged 18 to 44 years	23	50
13-6b	Males aged 18 to 49 years	Developmental	

Target-setting method: Better than the best

Condom use is important to every sexually active individual who has not been in a monogamous relationship or is unsure of the medical and sexual history of their sexual partner. Age does not protect you from STD or AIDS. Recent trends indicate that STD's and HIV infection is increasing among those over 50 and in senior retirement communities. This population is less likely to think of themselves as vulnerable and, of course, unlikely

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Unmarried Females 18 to 44 years, 1995	13-6a Reported Condom Use by Partners* Percent
TOTAL	23
Race and ethnicity	
Black or African American	22
White	23
Hispanic or Latino	17
Aged 18 to 19 years	16
Aged 20 to 24 years	18
Aged 25 to 29 years	19
Aged 30 to 34 years	22
Aged 35 to 44 years	9
Black or African American	22
Aged 18 to 19 years	31
Aged 20 to 24 years	35
Aged 25 to 29 years	23
Aged 30 to 34 years	17
Aged 35 to 44 years	12
White	24
Aged 18 to 19 years	39
Aged 20 to 24 years	29
Aged 25 to 29 years	24
Aged 30 to 34 years	14
Aged 35 to 44 years	18
Family income level	
Poor	16
Near poor	21
Middle/high income	27
Education level (aged 25 to 44 years)	
Less than high school	7
High school	15
At least some college	25
Geographic location	
Urban	24
Rural	18
Sexual orientation	DNC

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable. *Data for both genders and for males currently are not collected.

Data source: National Survey of Family Growth (NSFG), CDC, NCHS

to use condoms for contraceptive reasons. Many individuals, recently single but who had been in long-term relationships, are too willing to assume that those of their own generation have been the same. Naivety and lack of recognition of sexuality in healthy seniors must be overcome (e.g., questions are not asked of and data regarding sexual partners and condom use is not collected in the BRFSS survey of those over 50). Educational and counseling opportunities must be developed.

When used consistently and correctly, latex condoms are highly effective in preventing HIV transmission and some STDs. Increased use of latex condoms is essential for slowing the spread of HIV infection. Carefully designed studies among heterosexual couples in which one partner is HIV positive and the other is not demonstrate that latex condoms provide a high level of protection against HIV (CDC. "HIV counseling and testing in publicly funded sites" *1996 Annual Report*. Atlanta, GA: US Department of Health and Human Services, CDC, 1998).

- Access: The lack of readily accessible condoms may also be a significant barrier to consistent use. Persons in some populations, old and young but especially sexually active young persons, may experience problems in obtaining access to condoms because of several factors, including cost, convenience, and embarrassment. To eliminate this barrier, many local communities actively support programs that make condoms available to populations most vulnerable to HIV infection, including sexually active young persons.

- In addition to access, the correct and consistent use of condoms is an issue for many young females, some of whom are having intercourse with older males. Young females often are limited by intimidation or threats of mistrust by their partners if they suggest condom use. Knowledge of effective negotiating skills is another critical element of increased condom use.

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Family Planning, Sexuality and Pregnancy:

A Women's Concern
(717) 394-1561

Brephos Pregnancy Center
(717) 442-8694

COBYS Family Services
(717) 392-0504

Community Hospital of Lancaster
Center City Family Health
(717) 392-2154

Council on Drug and Alcohol Abuse—Baby Think It Over
(717) 299-2831

Crisis Pregnancy Hotline
(800) 238-4269 (24 hours)

Department of Health "Healthy Baby Line"
1-800-986-BABY (2229)

Destination Graduation (YWCA)
(717) 393-1735

Ephrata Pregnancy Center
(717) 733-9440

Ephrata Community OB/GYN Services:
New Holland (717) 354-9593
Cocalico (717) 335-0066
Akron (717) 859-7820

Family Services—Parenting Program
(717) 397-5241

Girl Power (YWCA)
(717) 393-1735

Girl Scouts—Penn Laurel Council
(717) 397-8115 or (717) 396-9997

Healthy Beginnings Plus Prenatal Care Program
(717) 290-4305

Lancaster County Coalition for the Prevention of Teen Pregnancy
(717) 290-3203

Lancaster County State Health Center
(717) 299-7597

Lancaster General Family Health Center
(717) 290-4950

Lancaster General Women & Babies Hospital
(717) 290-3700

Lancaster Regional Family Health Center
(717) 291-8388

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Lititz Pregnancy Center Hotline
(717) 627-4357

March of Dimes—Storks Nest
(717) 397-6131

McCaskey High School—Pregnancy Program
(717) 291-6211

Mom's House
(717) 396-9130

PA Dept of Health, Information Line
(877) 724-3258

Planned Parenthood of the Susquehanna Valley
(717) 299-2891

Southeast Lancaster Health Services
(717) 299-6371

Urban League of Lancaster County Inc.—
Program for Pregnant and Parenting Teens (School Completion)
(717) 394-1966

Welsh Mountain Medical and Dental Center
(717) 354-4711

HIV/AIDS and STDs:

Arch Street Center, (717) 392-8536

Nuestra Clinica of SACA, (717) 295-7994

The Gathering Place, (717) 295-4630

Project Hope of the Urban League, (717) 394-1966

AIDS Community Alliance, 1-800-867-1550

Comprehensive Care Clinic of LGH, (717) 290-4943

Betty Finney House, (717) 396-8689

Dr. Woodward of Center City Family Health, (717) 392-2154

The American Red Cross, (717) 299-5561

The Hope House, (717) 293-9089

Planned Parenthood, (717) 299-2891

South East Lancaster Health Services, (717) 299-6371

United Way LINK, (717) 291-LINC

■ The Lancaster County State Health Center provides free anonymous and confidential HIV Testing, Counseling and Partner Notification services. The scheduled clinic hours are Tuesday from 12:30 p.m. to 3:30 p.m. by appointment. The State Health Center also assists HIV positive individuals in providing CD 4 and Viral Load tests for the uninsured as well as serving as a liaison by connecting clients with needed case management and medical services.

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Other Resources

Family Planning & Teen Pregnancy Prevention
This site provides links to sites focusing on family planning and teen pregnancy prevention issues. http://www.socio.com/links/family_l.htm

U.S. Department of Health and Human Services
This site provides information on our national strategy and provides descriptions and contact information for programs that have succeeded in reaching targets incorporating the key principles within their approach. http://aspe.os.dhhs.gov/hsp/teenp/intro.htm

CDC National AIDS Hotline
800 342-AIDS (800-342-2437);
http://www.cdc.gov/hiv/hivinfo/nah.htm

CDC National Sexually Transmitted Diseases
(STD) Hotline
800-227-8922
http://www.cdc.gov/nchstp/dstd/dstdp.html

CDC National Prevention Information Network
800-458-5231
http://www.cdcnpin.org

Office of Population Affairs
301-654-6190
http://opa.osophs.dhhs.gov

AIDS Factline
1-800-662-6080
For information about HIV and available services, including viral load testing

Special (HIV/AIDS) Pharmaceutical Benefits Program
1-800-922-9384 for information about obtaining pharmaceutical treatments for HIV disease. For further information call (717)783-0479.

Promising Practices Network on Children, Families, and Communities
Programs that used the Indicator "Increase the percentage of youth who abstain from sexual activity or do not engage in risky sexual behavior" can be found at the following Web site: http://www.promisingpractices.net/benchmark.asp? Benchmark=50

The Proven Programs are:
- Seattle Social Development Project
- Self Center (School-Linked Reproductive Health Services)

Promising Programs are:
- Be Proud! Be Responsible!
- Get Real About AIDS
- Postponing Sexual Involvement/Human Sexuality Educational Series
- Quantum Opportunity Program
- Reducing the Risk
- Teen Outreach Program
- Teen T

What You Can Do

You don't have to be a parent to affect the lives of young people in ways that encourage them to think about their futures positively. It is important that adults are knowledgeable and able to give young people information that is correct or can refer them to credible sources of good information. Most importantly, though, is communicating that you believe in them and their ability to learn how to make good choices.

- Talk to your children early about making smart choices.
- Talk to your children about their sexuality and the pressures they face.

- Build at least one sustained, caring relationship with a child or adolescent.
- Model responsible behavior for young people.
- Volunteer to work in a youth program as a coach, group leader, or tutor.
- Stay involved in your kids lives and help them think about their future positively.
- Help your children succeed in school—show them their education is important to you.
- Talk to your kids about alcohol and drug use. There is a direct relationship between drug and alcohol use and unwanted pregnancies

What Institutions and Businesses Can Do

Schools and Community-Based Organizations

- Increase the proportion of middle, junior high, and senior highs that provide school health education to prevent teen pregnancy, including abstinence and the use of condoms.
- Increase the proportion of middleschools, junior highs, and senior highs that provide information about making good choices and the responsibilities of parenting, such as "Baby Think It Over."
- Increase the proportion of middle, junior high, and senior high students who are successful in school and see themselves going on to viable employment or post-secondary training or education.
- Provide educational opportunities for pregnant teens that include healthy baby and parenting curriculum and that aims at preventing a second pregnancy.

Businesses can:

- Provide open houses to young people so that they can visit your workplaces and talk about career opportunities.
- Sponsor public service announcements about responsible sexual behavior and teen pregnancy when approached by community groups.
- Carefully consider sponsoring events and media presentations that promote positive messages about sexuality and education.
- Help increase the proportion of middle, junior, and high school students engaged in after-school activities, volunteer opportunities or employment (all institutions and businesses).
- Provide mentoring programs for teen mothers such as big brothers/big sisters.
- Consider family-friendly policies that support parents spending time with their children.

Individuals can:

- Learn about sexual issues, health risks, and contraception.
- Teach their children about making decisions at an early age.
- Use information, not just fear, to warn their children about the dangers of risky behavior.
- Be clear about the medical consequences of risky behavior.
- Use condoms, if they are sexually active.
- Talk to their medical practitioner openly about their sexual practices so that the practitioners can help them better understand personal health concerns and risks.

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- Be conscious of the use of sex in marketing and its affect on their attitudes towards sex.
- Talk to their children about how they develop their attitudes towards sex—if you don't someone will.
- Get screened, if they have engaged in risky behavior.
- They believe that if they or their partner are over fifty that they are protected from STD's or HIV. *You are not*.

Questions We Need to Continue Asking

- Why do some communities succeed in keeping their young women in school and focused on the future—what are they doing right?
- How do we get young men to think more carefully about their responsibilities as potential fathers?
- At what age should we begin talking to children about relationships and expectations within different kinds of relationships?
- Are the politics of "Choice" and "Pro-Life" impairing or enhancing our community's ability to deal with this issue from a medical prevention model?
- Since one-half of all teen pregnancies are terminated through abortions, can common ground be found around the issues of prevention and family planning?
- Has reliance solely on the Abstinence curriculum hurt or helped this problem in Lancaster County?

HP 2010 Objectives

Bacterial STD Illness and Disability

25-1 Chlamydia
25-2 Gonorrhea
25-3 Primary and secondary syphilis

Viral STD Illness and Disability

25-4 Genital herpes
25-5 Human papillomavirus infection (STD complications affecting females)
25-6 Pelvic inflammatory disease (PID)
25-7 Fertility problems
25-8 Heterosexually transmitted HIV infection in women (STD complications)

Affecting the Fetus and Newborn

25-9 Congenital syphilis
25-10 Neonatal STDs (personal behaviors)
25-11 Responsible adolescent sexual behavior
25-12 Responsible sexual behavior messages on television

Community Protection Infrastructure

25-13 Hepatitis B vaccine services in STD clinics
25-14 Screening in youth detention facilities and jails
25-15 Contracts to treat nonplan partners of STD patients

Personal Health Services

25-16 Annual screening for genital chlamydia
25-17 Screening of pregnant women
25-18 Compliance with recognized STD treatment standards
25-19 Provider referral services for sex partners

Related Objectives from Other Focus Areas

Access to Quality Health Services

1-3 Counseling about health behaviors
1-7 Core competencies in health provider training

Cancer

3-4 Cervical cancer deaths
3-11 Pap tests

Educational and Community-Based Programs

7-2 School health education

Family Planning

9-8 Abstinence before age 15 years
9-9 Abstinence among adolescents aged 15 to 17 years
9-10 Pregnancy prevention and sexually transmitted disease (STD) protection
9-11 Pregnancy prevention education
9-12 Problems in becoming pregnant and maintaining a pregnancy

HIV

13-5 New HIV cases
13-6 Condom use
13-9 HIV/AIDS, STD, and TB education in state prisons
13-12 Screening for STDs and immunization for hepatitis B

Immunization and Infectious Diseases

14-3 Hepatitis B in adults and high-risk groups
14-28 Hepatitis B vaccination among high-risk groups

Injury and Violence Prevention

15-35 Rape or attempted rape
15-36 Sexual assault other than rape

Maternal, Infant, and Child Health

16-1 Fetal and infant deaths
16-6 Prenatal care
16-10 Low birth weight and very low birth weight
16-11 Pre-term births

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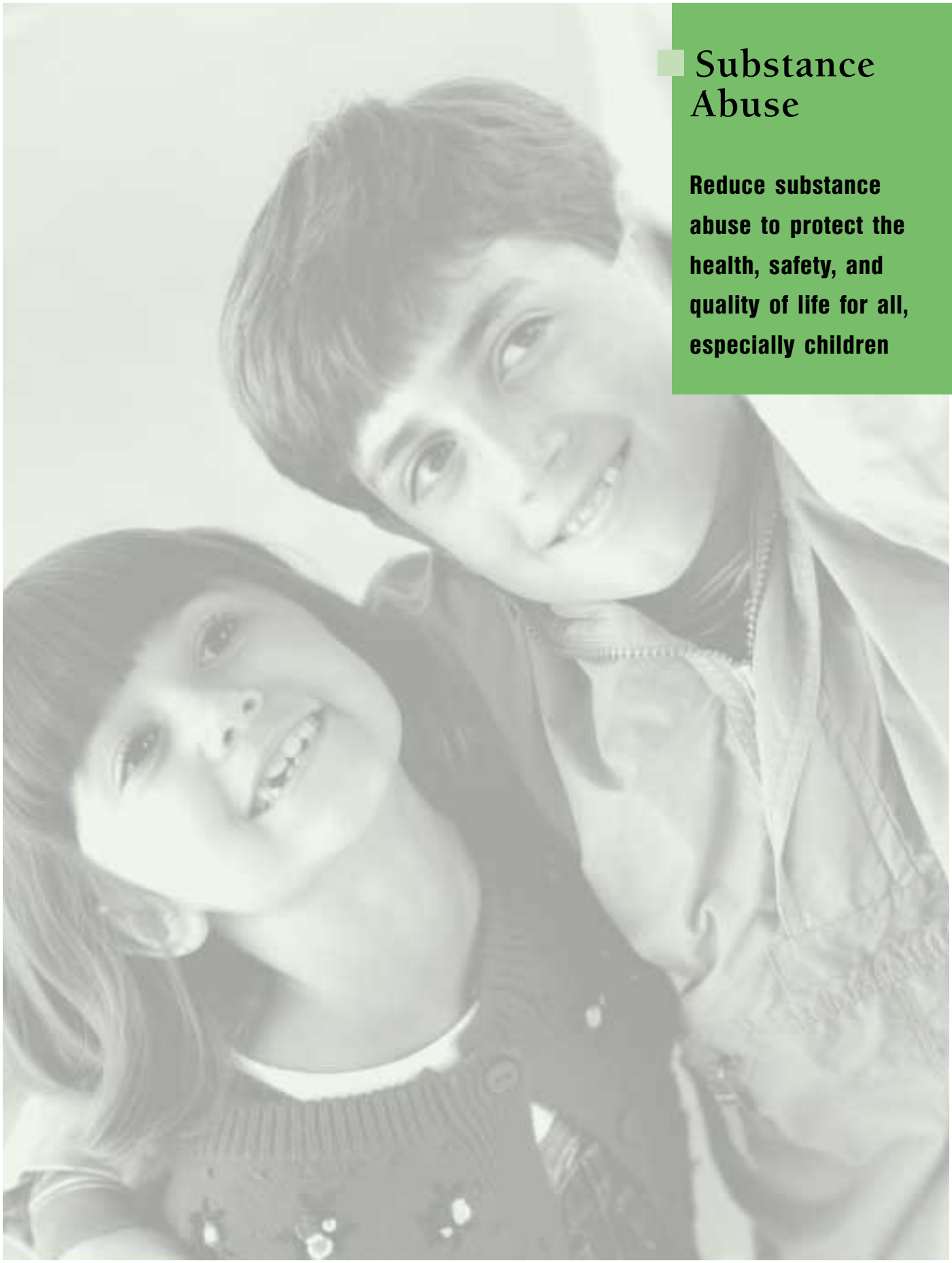

Substance Abuse

Reduce substance abuse to protect the health, safety, and quality of life for all, especially children

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Drug and Alcohol Abuse

Goal: Better than the best

HP 2010 Measures and Local Measures

26-10 Reduce past-month use of illicit substances.

26-10a Increase the proportion of adolescents not using alcohol or any illicit drugs during the past 30 days.

Baseline: 79 percent of adolescents aged 12 to 17 years reported no alcohol or illicit drug use in the past 30 days in 1998.
Target-setting method: Better than the best
Data source: National Household Survey on Drug Abuse (NHSDA), SAMHSA

- Percentage of middle and high school aged youth who have admitted using alcohol within the past 30 days
- Percentage of middle and high school aged youth who have admitted use of an illegal drug or other controlled substance within the past 30 days

Target-setting method: Better than the best
Data source: Pennsylvania Youth Survey (PA Commission of Crime and Delinquency)

26-10c Reduce the proportion of adults using any illicit drug during the past 30 days.

Baseline: 5.8 percent of adults aged 18 years and older used any illicit drug during the past 30 days in 1998.
Target-setting method: Better than the best (consistent with Office of National Drug Control Policy)
Data source: National Household Survey on Drug Abuse (NHSDA), SAMHSA

26-11c Reduce the proportion of adults aged 18 and older who engaged in binge drinking during the past month.

26-11d Reduce the proportion of adolescents aged 12 to 17 who engaged in binge drinking during the past month.

Baseline: Differs with populations
Target-setting method: Better than the best

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Description

Substance abuse and related problems are among the most pervasive and unmanageable of all health and social concerns. There has been a long-term drop in overall use, but many people in the United States still use illicit drugs. Substance abuse correlates with other serious health and social problems. Illicit drug abuse and related acquired immunodeficiency syndrome (AIDS) deaths account for at least another 12,000 deaths. In 1995, the economic cost of alcohol and drug abuse was $276 billion. (Harwood, H.; Fountain, D.; and Livermore, G. *The Economic Costs of Alcohol and Drug Abuse in the United States*, 1992. NIH Pub. No. 98-4327. Rockville, MD: National Institutes of Health (NIH), 1998.) Use of alcohol and illicit drugs increases the risk of heart disease, stroke, hypertension, hepatitis, HIV infection and AIDS, cirrhosis of the liver, and the incidence of rape, STD's, teen pregnancy, and homelessness. About 100,000 deaths in the United States are related to alcohol consumption each year. Alcohol abuse alone is associated with motor vehicle crashes, homicides, suicides, and drowning—leading causes of death among youth. Long-term heavy drinking can lead to heart disease, cancer, alcohol-related liver disease, and pancreatitis (McGinnis, J.M., and Foege, W.H. "Actual causes of death in the United States." *Journal of the American Medical Association* 270:2207–2212, 1993). Alcohol use during pregnancy is known to cause fetal alcohol syndrome, a leading cause of preventable mental retardation.

Alcohol Use

A significant proportion of the population consumes alcohol. Although alcohol problems are diverse and vary along many dimensions, they can be described in part by their duration (acute, intermittent, chronic) and severity (mild, moderate, substantial, severe). (Institute of Medicine. *Broadening the Base of Treatment for Alcohol Problems*. Washington, DC: National Academy Press, 1990.) Light-to-moderate drinking (one to two drinks a day) can have beneficial effects on the heart, particularly among those at greatest risk for heart attacks, such as men over age 45 years and women after menopause (Zakhari, S. "Alcohol and the cardiovascular system: Molecular mechanisms for beneficial and harmful action." *Alcohol Health & Research World* 21(1):21–29, 1997).

Long-term heavy drinking increases a person's risk for high blood pressure, heart rhythm irregularities (arrhythmias), heart muscle disorders (cardiomyopathy), stroke, of developing certain forms of cancer, especially of the esophagus, mouth, throat, and larynx, and increases risk for cirrhosis and other liver disorders. Such drinking also may increase the risk for developing cancer of the colon and rectum (NIAAA. "Alcohol and cancer." *Alcohol Alert*. No. 21. Rockville, MD: NIH, 1993 and NIAAA. *Ninth Special Report to the U.S. Congress on Alcohol and Health From the Secretary of Health and Human Services*. NIH Pub. No. 97-4017. Rockville, MD: NIH, 1997). It also is a factor in homicide, suicide, marital violence, and child abuse and has been associated with high-risk sexual behavior. (Roizen, J. "Issues in the epidemiology of alcohol and violence." In: Martin, S., ed. *Alcohol and Interpersonal Violence: Fostering Multidisciplinary Perspectives*. NIH Pub. No. 93-3496. Rockville, MD: NIH, 1993).

Binge drinking is a national problem. but it is particularly an issue among males and young adults. The National Household Survey on Drug Abuse defines binge drinking as drinking five or more drinks on the same occasion on at least one day in the past 30 days. The Monitoring the Future Study defines binge drinking as drinking five or more drinks on the same occasion during the past two weeks. Although rates of binge drinking don't vary much with educational levels, people with some college were more likely than those with less than a high school education to binge drink. In all age groups, more males than females engaged in binge drinking: among adults, the ratio was two or three to one. Binge drinking among women of childbearing age (defined as 18 to 44 years) is a problem because of the risk for prenatal alcohol exposures.

Approximately half of the pregnancies in the United States are unintended (Henshaw, S.K. "Unintended pregnancy in the United States." *Family Planning Perspectives* 30:24–29, 1998), and most women do not know they are pregnant until after the sixth week of gestation (CDC. Unpublished data, February 1999). Such prenatal alcohol exposures can result in fetal alcohol syndrome and other alcohol-related neurodevelopmental disorders. (CDC. "Alcohol consumption among pregnant and childbearing-aged women," United States, 1991 and 1995. *Morbidity and Mortality Weekly Report* 46:346–350, 1997.)

Alcohol dependence is defined as a maladaptive pattern of alcohol use that leads to clinically significant impairment or distress, as manifested by three or more of the following occurring at any time in the same 12-month period:

- tolerance;
- withdrawal;
- often taking alcohol in larger amounts or over a longer period than was intended;
- persistent desire or unsuccessful efforts to cut down or control alcohol use;
- spending a great deal of time in activities necessary to obtain alcohol or recover from its effects;
- giving up or reducing important social, occupational, or recreational activities because of alcohol use;
- continued alcohol use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.

Adult Use

- Forty-four percent of adults aged 18 years and older (more than 82 million persons) report having consumed 12 or more alcoholic drinks in the past year. (Dawson, D.A.; Grant, B.F.; Chou, S.P.; et al. "Subgroup variation in U.S. drinking patterns: Results of the 1992 National Longitudinal Alcohol Epidemiologic Study." *Journal of Substance Abuse* 7:331–344, 1995).
- Among these current drinkers, 46 percent report having been intoxicated at least once in the past year—nearly 4 percent report having been intoxicated weekly.
- More than 55 percent of current drinkers report having consumed five or more drinks on a single day at least once in the past year—more than 12 percent did so at least once a week.
- Nearly 20 percent of current drinkers report having consumed an average of more than two drinks per day.
- Nearly 10 percent of current drinkers (about 8 million persons) meet diagnostic criteria for alcohol dependence. An additional 7 percent (more than 5.6 million persons) meet diagnostic criteria for alcohol abuse. (National Institute on Alcohol Abuse and Alcoholism (NIAAA). Unpublished analysis of 1992 data.)
- Nearly 15 percent of persons aged 12 years or older reported binge drinking in the past 30 days, with young adults aged 18 to 25 years more likely (27 percent) than all other age groups to have engaged in binge drinking.

Adolescent Use

The adolescent years appear to be the most critical in establishing lifelong patterns of drug and alcohol use. Alcohol use and alcohol-related problems are also common among adolescents. (O'Malley, P.M.; Johnston, L.D.; and Bachman, J.F. "Alcohol use among adolescents." *Alcohol Health & Research World* 22(2):85–93, 1998.) This may be related to the lack of societal stigma associated with alcohol use. In fact, our culture often portrays alcohol as the prescription for stress management and social anxiety. The perception that alcohol use is socially acceptable correlates with the fact that more than 80 percent of youth in the United States consume alcohol before their 21st birthday, whereas the lack of social acceptance of other drugs correlates with comparatively lower rates of use. Studies indicate that school-based programs focused on altering perceived peer-group norms about alcohol use and developing skills in resisting peer pressures to drink reduce alcohol use among participating students. (Shope, J.T.; Copeland, L.A.; Maharg, R.; et al. "Assessment of adolescent refusal skills in an alcohol misuse prevention study." *Health Education Quarterly* 20(3):373-390, 1993.)

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Similarly, widespread societal expectations that young persons will engage in binge drinking may encourage this highly dangerous form of alcohol consumption. (O'Malley, P.M.; Johnston, L.D.; and Bachman, J.F. "Alcohol use among adolescents." *Alcohol Health & Research World* 22(2):85–93, 1998.) The age at which a person starts drinking strongly predicts the development of alcohol abuse and dependency over a lifetime. Persons with a family history of alcoholism have a higher prevalence of lifetime dependence than those without such a history. (Grant, B.F. "The impact of a family history of alcoholism on the relationship between age at onset of alcohol use and DSM-IV alcohol dependence." *Alcohol Health & Research World* 22(2):144–148, 1998.) The messages about harm and risk that they receive are often influenced by family dynamics and denial. Risk and harm messages targeted to youth must therefore take this into account.

- About 40 percent of those who start drinking at age 14 years or under develop alcohol dependence at some point in their lives.
- Of those who start drinking at age 21 years or older, about 10 percent develop alcohol dependence at some point in their lives. (Grant, B.F., and Dawson, D.A. "Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey." *Journal of Substance Abuse* 9:103–110, 1997.)
- More than 11 million children and adolescents under age 18 years have at least one parent who is addicted to alcohol or drugs. (Eigen, L., and Rowden, D.A. "A methodology and current estimate of the number of children of alcoholics in the U.S." *Children of Alcoholics, Selected Readings*. Rockville, MD: National Association of Children of Alcoholics, 1995.)

Illicit Drug Use

An analysis of the epidemiologic evidence reveals that 72 conditions requiring hospitalization are wholly or partially attributable to substance abuse (Merrill, J.; Fox, K.; and Chang, H. *The Cost of Substance Abuse to America's Health Care System: Report 1. Medicaid Costs*. New York, NY: Center on Addiction and Substance Abuse, 1993). For each man, woman, and child in the United States, the annual per person costs associated with the care for patients with substance abuse problems are $1,000. It costs more than $1,000 for every man, woman, and child in the United States to cover the expense of health care, motor vehicle crashes, crime, lost productivity, and other adverse outcomes of alcohol and drug abuse. For the total population, rates of drug-related deaths and drug-abuse-related emergency department (ED) visits have increased.

Drug dependence is a chronic, relapsing disorder. Illicit drug use has been near the present rate of 6 percent since 1980. Men continue to have higher rates of illicit drug use than women have, and rates of illicit drug use in urban areas are higher than in rural areas. Chronic drug use is defined as the use of any heroin or cocaine for more than 10 days in the past month. Drug dependence is defined as a pattern of drug use leading to clinically significant impairment or distress, as manifested by three or more of the following occurring at any time in the same 12-month period:

- tolerance;
- withdrawal;
- use in larger amounts or over a longer period of time than intended;
- persistent desire or unsuccessful efforts to cut down, and spending a great deal of time in activities necessary to obtain drug(s);
- giving up or reducing important social, occupational, or recreational activities;
- continued use despite knowledge of having a persistent or recurrent physical or psychological problem.

Addicted persons frequently engage in self-destructive and criminal behavior. Illegal use of drugs, such as heroin, marijuana, cocaine, and methamphetamine, is associated with serious risks including injury, illness, disability, and death as well as crime victimization, rape, domestic violence, and lost workplace productivity. Drug users and those with whom they have sexual contact run high risks of contracting STD's and human immunodeficiency virus (HIV), hepatitis, and tuberculosis. (Garfien, R.S.; Vlahov, D.; Galai, N.; et al. "Viral infections in short-term injection drug users: The prevalence of the hepatitis C, hepatitis B, human immunodeficiency, and human T-lymphotropic virus." *American Journal of Public Health* 86:655–661, 1996.)

The use of cocaine, nitrates, and other substances can produce cardiac irregularities and heart failure, convulsions, and seizures. Cocaine use temporarily narrows blood vessels in the brain, contributing to the risk of strokes (bleeding within the brain) and cognitive and memory deficits. (Kaufman, M.J.; Levin, J.M.; Ross, M.H.; et al. "Cocaine-induced cerebral vasoconstriction detected in humans with magnetic resonance angiography". *Journal of the American Medical Association* 279:376–380, 1998.) Long-term consequences, such as chronic depression, sexual dysfunction, and psychosis, may result from drug use. Chronic use of hallucinogens and huffing can result in permanent brain damage and symptoms and behaviors that mirror severe mental illness.

Researchers have identified lasting brain and nervous system damage from drugs, including changes in nerve cell structure associated with alcohol and drug dependence. Other research has focused on the long-term effects of alcohol and drug abuse on the immune system as well as the effects of prenatal alcohol and drug exposure on the behavior and development of children.

- In 1998, there were 13.6 million current users of any illicit drug in the total household population aged 12 years and older, representing 6.2 percent of the total population (U.S. Department of Health and Human Services (HHS), Substance Abuse and Mental Health Services Administration (SAMHSA). *1998 National Household Survey on Drug Abuse*. Rockville, MD: SAMHSA, 2000).
- Among persons aged 12 years and older, 35.8 percent have used an illegal drug in their lifetime. Of these, more than 90 percent used marijuana or hashish, and approximately 30 percent tried cocaine.
- Of the estimated 4.4 million chronic drug users in the United States in 1995, 3.6 million were chronic cocaine users (primarily crack cocaine), and 810,000 were chronic heroin users. (Office of National Drug Control Policy (ONDCP). *What America's Users Spend on Illegal Drugs, 1995–1998*. Washington, DC: U.S. Government Printing Office (GPO), 1997.)
- Marijuana is the most commonly used illicit drug, and 60 percent of users abuse marijuana only.
- Relatively rare in 1996, methamphetamine use began spreading in 1997. (Community Epidemiology Work Group. *Epidemiological Trends in Drug Abuse: Advance Report*. Rockville, MD: NIDA, 1998.)

Adolescent Use

Youth marijuana use has been associated with a number of dangerous behaviors. Adolescents aged 12 to 17 years who smoke marijuana were more than twice as likely to cut class, steal, attack persons, and destroy property than those who did not smoke marijuana. (HHS, SAMHSA. A*nalyses of Substance Abuse and Treatment Need Issues.* Rockville, MD: SAMHSA, 1997.) Drug and alcohol use by youth also is associated with other forms of unhealthy and unproductive behavior, including delinquency and high-risk sexual activity. Some of these persons with a predisposition to substance addiction can be identified by their behavior problems at the time of their entry into elementary school. (Shedler, J., and Block, J.

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"Adolescent drug use and psychological health: A longitudinal inquiry." *American Psychologist* 45(5):612–630, 1990.) Such youth tend to use substances at a young age and exhibit sensation-seeking (or "novelty-seeking") behaviors. These youth benefit from more intensive preventive interventions, including family therapy and parent training programs. (Kumpfer, K.L. "Prevention of alcohol and drug abuse: A critical review of risk factors and prevention strategies." In: Shaffer, D.; Philips, I.; and Enzer, N.; eds. *Prevention of Mental Disorders, Alcohol and Other Drug Use in Children and Adolescents*. Office for Substance Abuse Prevention (OSAP), Monograph 2. DHHS Pub. No. (ADM) 92–1646. Rockville, MD: OSAP, 1992, 309–371.)

- Drug use among adolescents aged 12 to 17 years doubled between 1992 and 1997, from 5.3 percent to 11.4 percent.
- Nearly 1 million youth aged 16 to 18 years (11 percent of the total) have reported driving in the past year at least once within two hours of using an illegal drug (most often marijuana). (HHS. "Driving After Drug or Alcohol Use: Findings from the 1996 National Household Survey on Drug Abuse." Rockville, MD: SAMHSA, 1998.)
- Average age of first use of harmful substances by adolescents aged 12 to 17 years has increased. In addition, past-month use of alcohol by adolescents aged 12 to 17 years has declined, as has steroid use by high school seniors.
- Past-month use of marijuana and cigarettes among adolescents aged 12 to 17 years has increased since 1994.
- Among high school seniors, both perception of harm and perception of social disapproval of substance abuse have declined.

Data

We do not have local data that is exactly comparable to the national data used by HP 2010. For instance, locally we have percentages of 6th, 8th, and 10th grade students, rather than the percentage use of all adolescents aged 12–17 who abstained from using alcohol or illicit drugs in the past 30 days. Additionally, there is not statewide data to compare to the local and national data.

Pennsylvania Youth Survey

The Pennsylvania Youth Survey, which measured levels of substance use and related risk factors among middle school and high school students, was conducted in Lancaster County during April and May 2000. A total of 6,404 students in 6th through 12th grade, from seven public school districts and three private schools participated. This is not considered a good enough sampling by local experts, who would like to do a survey more in line with the National Youth Survey or *National Household Survey on Drug Abuse*. However, it is difficult to get school districts to agree to yet another survey, or even one.

Percentage of Students Who Did Not Report Using Substances Over the Past 30 Days

	Lancaster 6th Grade, 2000 Lancaster	Lancaster 8th Grade	Lancaster 10th Grade	National Baseline, 1998 Aged 12–17	HP 2010 Goal for Adolescents Aged 12–17
Alcohol	88%	76%	61%	81%	89% (for Alcohol and illicit drugs combined)
Any Illicit Drug	96%	91%	87%	90%	
Marijuana	99%	93%	80%	91.7%	99.3%

The survey was conducted for the Pennsylvania Department of Education by Developmental Research and Programs (DRP), Seattle, Washington. Participation by Pennsylvania schools was voluntary. The Lancaster County Drug and Alcohol Commission offered grants of up to $1,000 per district to assist schools in paying for the cost of the survey. A grant was also given to I.U. 13 to assist non-public schools that wished to participate.

HP Goals

The first goal of the 1999 National Drug Control Strategy is to "educate and enable America's youth to reject illegal drugs as well as alcohol and tobacco." (ONDCP. *The National Drug Control Strategy*: 1999. Washington, DC: GPO, 1999.) In response to this goal, specific targets for the reduction of drug use among adolescents aged 12 to 17 years have been established under the Youth Substance Abuse Prevention Initiative (YSAPI). These targets, which have a baseline of 1996 and goals for the year 2002 (7 years), are as follows:

Reverse the upward trend and reduce past-month use of marijuana among adolescents aged 12 to 17 years by 20 percent (1996 baseline: 7.1 percent; target: 5.7 percent in 2002). Reduce past-month use of any illicit drugs among adolescents aged 12 to 17 years by 20 percent (1996 baseline: 9.0 percent; target: 7.2 percent in 2002).

Reduce past-month use of alcohol among adolescents aged 12 to 17 years by 10 percent (1996 baseline: 18.8 percent; target: 16.9 percent in 2002).

26-10a Increase the proportion of adolescents not using alcohol or any illicit drugs during the past 30 days.

Target: 89 percent
Baseline: 79 percent of adolescents aged 12 to 17 years reported no alcohol or illicit drug use in the past 30 days in 1998.
Target-setting method: Better than the best
Data source: National Household Survey on Drug Abuse (NHSDA), SAMHSA

Adolescents Aged 12 to 17 Years, 1998	26-10a No Alcohol or Illicit Drug Use in Past 30 Days	No Alcohol Use in Past 30 Days	No Illicit Drug Use in Past 30 Days
	Percent		
TOTAL	79	81	90
Race and ethnicity			
American Indian or Alaska Native	72	76	87
Asian or Pacific Islander	87	89	94
Asian	DNC	DNC	DNC
Native Hawaiian and other Pacific Islander	DNC	DNC	DNC
Black or African American	82	87	90
White	77	79	90
Hispanic or Latino	79	81	90
Not Hispanic or Latino	79	81	90
Black or African American	82	87	90
White	77	79	90
Gender			
Female	79	81	91
Male	78	81	90
Family income level			
Poor	75	79	84
Near poor	80	84	89
Middle/high income	79	81	91
Sexual orientation	DNC	DNC	DNC

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.
*Data for no alcohol use and no illicit drug use are displayed to further characterize the issue.

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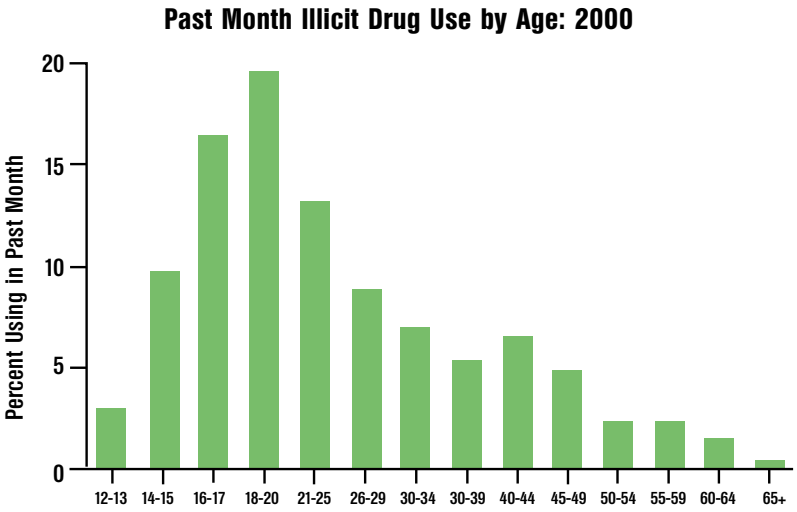
26-10c Reduce the proportion of adults using any illicit drug during the past 30 days.

Target: 2.0 percent
Baseline: 5.8 percent of adults aged 18 years and older used any illicit drug during the past 30 days in 1998.
Target setting method: Better than the best (consistent with Office of National Drug Control Policy)
Data source: National Household Survey on Drug Abuse (NHSDA), SAMHSA



Source: SAMHSA, Summary of Findings from the 2000 National Household Survey on Drug Abuse

Adults Aged 18 Years and Older, 1998	26-10c Illicit Drug Use in Past 30 Days
	Percent
TOTAL	5.8
Race and ethnicity	
American Indian or Alaska Native	8.4
Asian or Pacific Islander	2.5
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	8.2
White	5.6
Hispanic or Latino	5.5
Not Hispanic or Latino	5.8
Black or African American	8.0
White	5.7
Gender	
Female	4.0
Male	7.8
Education level	
Less than high school	6.6
High school graduate	6.2
At least some college	5.3
Sexual orientation	DNC

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.

Past-month use of any illicit drug and marijuana was about the same in 1997 as in 1996 and most of the 1990s for adults aged 18 years and older. (HHS, SAMHSA. *National Household Survey on Drug Abuse: Population Estimates 1996*. Rockville, MD: SAMHSA, 1997.) However, young adults aged 18 to 25 years continued to be the age group with the highest rates of use. In 1998, past-month use of drugs decreased among adolescents aged 12 to 17 years. However, the 1998 rates of past month use of any illicit drug (9.9 percent) and marijuana (8.3 percent) were significantly higher than the 1997 rates of use by this age group (11.4 percent and 9.4 percent, respectively). Furthermore, past-month use of illicit drugs by youths was significantly higher in 1997 than at any time during the four years between 1991 and 1994. Past-month use of alcohol was about the same in 1998 as in 1997.

Target and baseline:

Objective	Reduction in Adults and Adolescents Engaging in Binge Drinking During Past Month	1998 Baseline	2010 Target
		Percent	
26-11c	Adults aged 18 years and older	16.6	6.0
26-11d	Adolescents aged 12 to 17 years	7.7	2.0

Target-setting method: Better than the best
Data source: National Household Survey on Drug Abuse (NHSDA), SAMHSA

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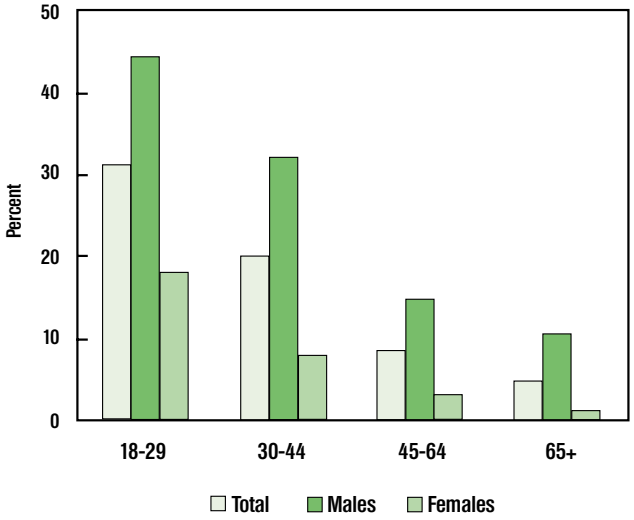
Binge Drinking Percent by Age and Sex
Pennsylvania Adults, 1999



Source: PABRFSS, 1999. http://www.health.state.pa.us/pdf/hpa/stats/risks/1999/alchol.pdf

Select Age Groups, 1998	Engaged in Binge Drinking During Past Month	
	26-11c Adults Aged 18 Years and Older	26-11d Adolescents Aged 12 to 17 Years
	Percent	
TOTAL	16.6	7.7
Race and ethnicity		
American Indian or Alaska Native	DSU	11.1
Asian or Pacific Islander	10.1	2.4
Asian	DNC	DNC
Native Hawaiian and other Pacific Islander	DNC	DNC
Black or African American	13.3	3.2
White	17.2	6.8
Hispanic or Latino	17.2	6.3
Not Hispanic or Latino	16.5	7.9
Black or African American	12.7	2.9
White	17.3	9.3
Gender		
Female	8.8	6.6
Male	25.0	8.7
Family income level		
Poor	20.2	8.7
Near poor	14.5	5.3
Middle/high income	16.7	8.0
Sexual orientation	DNC	DNC

DNA=Data have not been analyzed. DNC=Data are not collected.
DSU=Data are statistically unreliable.

For this measure, adults reporting binge drinking over the past 30 days, we have national HP 2010 measures and we have state data from the BRFSS. However, at this point we do not have local data. Local data from the Lancaster-wide BRFSS will be available in 2003.

Adults Aged 18 Years and Older Who Report Binge Drinking in the Past 30 Days				
PA 1996	PA 1997	PA 1999	HP 2010 Baseline, 1998	HP 2010 Goal
16%	14%	16%	16.6%	6.0%

Disparities

Substance abuse affects all racial, cultural, and economic groups. Alcohol is the most commonly used substance, regardless of race or ethnicity, and there are far more persons who smoke cigarettes than persons who use illicit drugs.

Usage rates for an array of substances reveal that for adolescents aged 12 to 17 years:

- Whites and Hispanics are more likely than African Americans to use alcohol.
- Whites are more likely than African Americans and Hispanics to use tobacco.
- Whites and Hispanics are more likely than African Americans to use illicit drugs.

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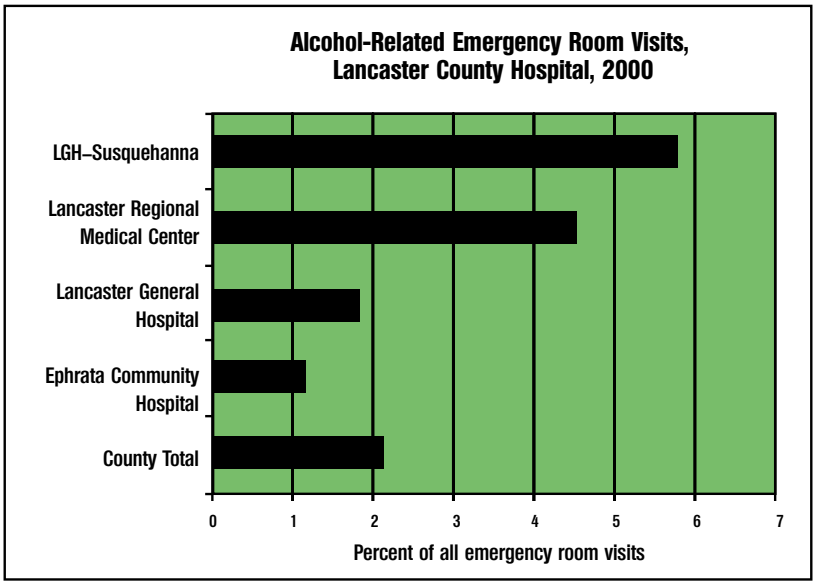
Substance Use in the Past Year, 1998						
	White, Not Hispanic		Hispanic		African American, Not Hispanic	
Substance	All Ages	Aged 12 to 17 Years	All Ages	Aged 12 to 17 Years	All Ages	Aged 12 to 17 Years
	Percent					
Alcohol	67.8	35.1	58.5	29.4	50.4	22.3
Cigarette	30.8	26.9	29.6	20.4	31.2	16.2
Any illicit drug	10.4	16.9	10.5	17.4	13.0	14.0
Marijuana	8.4	14.6	8.2	14.4	10.6	12.1
Cocaine	1.7	1.9	2.3	2.5	1.9	DSU
Inhalants	1.0	3.4	0.9	2.8	0.3	1.0
Heroin	0.1	DSU	0.1	DSU	0.2	DSU

DSU=Data are statistically unreliable.
Source: National Household Survey on Drug Abuse: Population Estimates 1998, SAMHSA.

- Older adolescents and adults with co-occurring substance abuse and mental health disorders need explicit and appropriate treatment for their disorders.
- The population aged 65 years and older faces risks for alcohol-related problems, although this group consumes comparatively low amounts of alcoholic beverages. (Dufour, M., and Fuller, R.K. "Alcohol in the elderly." *Annual Review of Medicine* 46:123–132, 1995.) Adverse alcohol-drug interaction can put older people in the hospital, since many take multiple medications. In addition, many cases of memory deficits and dementia now are understood to result from alcoholism.

Alcohol problems, drug problems, and suicide attempts frequently cause ER visits. ERs are strategically well positioned to ensure appropriate referrals for follow-up care, but underlying behavioral risk factors must be identified and appropriate follow-up services must be available. The effectiveness of ED interventions for these risk factors is determined by how well the affected patients are evaluated and treated in the ED and by the extent of communication and coordination with other settings and organizations in the community. (U.S. Consumer Product Safety Commission (CPSC), Division of Hazard and Injury Data Systems. *Hospital-Based Pediatric Emergency Resource Survey*. Bethesda, MD: CPSC, 1997.)

Lancaster Community Indicator Project has attempted to gather data on alcohol related ER visits but are changing the methodology for collection of information in 2003. The current data is shown in the chart at right.



Source: Each county hospital provided individual data to be included in the Lancaster Community Indicators Project Quality of Life Measures, 2001. "Measure Up Lancaster."
Note: Data is for admissions that are specifically alcohol related and does not include any admissions where alcohol may have been a contributing factor (i.e., accidental injuries, automobile accidents, etc.). Also, each individual hospital may have used varying definitions of what constitutes an alcohol-related admission. Data for Community Hospital of Lancaster was not available. LGH–Susquehanna houses a detox unit.

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Researched Best Practices

The effective prevention and treatment of substance abuse requires that all abused substances be targeted—from tobacco and alcohol to marijuana and other illicit drugs. Tobacco use prevention and cessation programs are equally important parts of a comprehensive substance abuse prevention program. Community-wide cooperation must increase between government, employers, the faith community, and other organizations in the private and nonprofit sectors to meet the wide range of service needs. Findings suggest that having community partnerships in place for sustained periods of time produces significant results in decreasing alcohol and drug use in males. Literature shows that having "buy-in" from local participants greatly enhances the success of any endeavor. Studies also show that changing norms is extremely effective in reducing substance abuse and related problems. (HHS. *The National Structured Evaluation of Alcohol and Other Drug Abuse Prevention*. Rockville, MD: HHS, 1994.)

We must directly apply all that we have learned through prevention and treatment research. Communities must develop adaptations of research-proven programs for specific racial and ethnic populations and field test them with process and outcome evaluations. Communities must commit to providing services where they are needed most critically. Gaps in substance abuse treatment capacity must be identified and implemented by every level of government and community. That means that communities must be honest as they assess local programs culturally, linguistically, and for age-appropriate content and service; job training and employment; parenting training; general education; more behavioral research; and programs for women, dually diagnosed patients, and persons with learning disabilities are critical to closing the revolving door of relapse and rehabilitation and/or incarceration.

Particular attention must be given to young persons under age 18 years who have an addicted parent because these youth are at increased risk for substance abuse. Because alcoholism and drug abuse continue to affect lesbians, gay men, and transgendered persons at two to three times the rate of the general population, programs that address the special risks and requirements of these population groups also are needed. (McKirnan, D.J., and Peterson, P.L. "Alcohol and drug use among homosexual men and women: Epidemiology and population characteristics." *Addictive Behaviors* 14:545–553, 1989.)

Prevention

The targets that resulted from the 1999 National Drug Control Strategy to educate and enable America's youth to reject illegal drugs as well as alcohol and tobacco were used as the basis for identifying Healthy People 2010 objectives. This approach includes focusing on mobilizing and leveraging resources, raising public awareness, and countering pro-use messages in order to:

- Increase the involvement of parents and parent groups at the local level.
- Increase the number of adult volunteers involved in drug prevention at the local level .
- Change attitudes among youth from "everyone's using drugs" to "everyone has better things to do."
- Increase the proportion of youth participating in positive skill-building activities.

Adopting an approach to youth substance abuse prevention that has many components may increase the long-term effectiveness of efforts. Studies indicate that making youth and others aware of the health, social, and legal consequences associated with drug abuse has an impact on use. Core strategies for preventing substance abuse among youth include:

- raising awareness of dangers and consequences;
- educating and training parents and others;
- strengthening families;
- providing alternative activities after school hours;
- building skills (education and life) and in doing so, building confidence;

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- mobilizing and empowering communities;
- employing environmental and community-wide approaches to supporting good choices.

Scientific research has identified many opportunities to prevent alcohol-related problems. To address the problem of binge drinking and reduce access to alcohol by underaged persons, several additional policies and strategies may be effective, including:

- Tougher state restrictions and penalties for alcoholic beverage retailers to ensure compliance with the minimum purchase age. Passage of higher minimum purchase ages for alcoholic beverages during the mid-1980s reduced, but did not eliminate, underaged drinking. (O'Malley, P.M., and Wagenaar, A.C. "Effects of minimum drinking age laws on alcohol use, related behaviors and traffic crash involvement among American youth: 1976–1987." *Journal of Studies on Alcohol* 52(5):478–491, 1991.)
- Restrictions on the sale of alcoholic beverages at recreational facilities and entertainment events where minors are present.
- Improved enforcement of state laws prohibiting distribution of alcoholic beverages to anyone under age 21 years and more severe penalties to discourage distribution to underaged persons.
- Implementation of server training and standards for responsible hospitality. (Holder, H.D., and Wagenaar, A.C. "Mandated server training and reduced alcohol-involved traffic crashes: A time series analysis of the Oregon experience." *Accident Analysis and Prevention* 26:89–97, 1994.) States could require periodic server training or use the regulatory authority of alcohol distribution licensing to mandate a minimal level of training for individual servers.
- Institution of a requirement that college students reporting to student health services following a binge drinking incident receive an alcohol screening that would identify the likelihood of a health risk. An alcohol screening would provide student health services with the information needed to assess the student's drinking and refer the student to an appropriate intervention.
- Restrictions on marketing to underaged populations, including limiting advertisements and promotions. Although alcohol advertising has been found to have little or no effect on overall consumption, this strategy may reduce the demand that results in illicit purchase or binge consumption. (Saffer, H. "Alcohol advertising and alcohol consumption: Econometric studies." In: Martin, S.E., and Mail, P., eds. *The Effects of the Mass Media on the Use and Abuse of Alcohol*. NIAAA Research Monograph No. 28. NIH Publication No. 95–3743. Bethesda, MD: NIH, 1995.)
- Higher prices for alcoholic beverages are associated with reductions in the probability of frequent beer consumption by young persons and in the probability of adults drinking five or more drinks on a single occasion. (Coate, D., and Grossman, M. "Effects of alcoholic beverage prices and legal drinking ages on youth alcohol use." *Journal of Law and Economics* 31:145–171, 1988.)

Treatment

Research has confirmed that treatment can help end dependence on addictive drugs and reduce the consequences of addictive drug use on society. While no single approach for substance abuse and addiction treatment exists, comprehensive and carefully tailored treatment works. (HHS. *The National Structured Evaluation of Alcohol and Other Drug Abuse Prevention*. Rockville, MD: HHS, 1994.)

It is estimated that 5.3 million persons are most in need of treatment for the use of illicit drugs (ONDCP. *The National Drug Control Strategy, 1999: A Ten Year Plan*. Washington, DC: GPO, 1999). The treatment gap is the difference between the number of persons who need treatment for the use of illicit drugs and the number of persons who are receiving treatment in a given year. Clinically appropriate and effective treatment for alcohol problems is

limited. The size of the gap is not well defined. Despite the widely acknowledged problem of drug abuse in the United States, accepted estimates of the number of persons who need treatment and the number who receive treatment are not available. National efforts are under way to estimate better the size of the gaps, to develop strategies to expand capacity, and to eliminate barriers to access for those in need. These strategies involve seeking changes in financial barriers created by funding constraints and inadequate health and disability insurance coverage (Buck, J.A., and Umland, B. "Covering mental health and substance abuse services." *Health Affairs* 16:120–126, 1997) and improvements in gender-specific and culturally appropriate treatment methods.

Wide variability exists among jurisdictions in total treatment capacity and in how that capacity is distributed among settings and modalities. Increasing the availability of treatment is critical because of the pervasive impact these problems have on all aspects of society. Strategies to be employed here are similar to those needed to improve access to appropriate primary, rehabilitative, and long-term care through addressing the many barriers that exist at multiple levels. Key barriers include:

- Lack of knowledge or skepticism on the part of patient about the effectiveness of treatment.
- Lack of money or insurance coverage to pay for treatment.
- Lack of trained personnel.
- Stigma (the stigma attached to substance abuse increases the unmanageability and severity of the problem. The hiding of substance abuse, for example, can prevent persons from seeking and continuing treatment and from having a productive attitude toward treatment).
- Lack of health and disability insurance coverage.
- Inadequate reimbursement for clinically necessary services through public funding mechanisms such as the Substance Abuse Prevention and Treatment Services Block Grant and Medicaid. (Sing, M.; Hik, S; Smolkin, S.; et al. *The Costs and Effects of Parity for Mental Health and Substance Abuse Benefits*. Rockville, MD: SAMHSA, 1998.)
- Inappropriate settings and unavailabilty of care for dually diagnosed patients (research confirms that a substantial number of frequent users of cocaine, heroin, and illicit drugs other than marijuana have co-occurring chronic mental health disorders).
- Lack of real treatment options for the incarcerated (compounding the issue has been the criminalization of addiction as well as the sale of illegal addictive substances. Much attention has been focused on the link between substance abuse and criminality, in part because of the large increase in the number of individuals incarcerated for drug-related offenses, such as possession, trafficking, and crimes of violence. In general, criminal offenders frequently have high occurrences of a substance abuse history, may or may not have previously received treatment, and without treatment have a greater likelihood of committing a criminal offense).

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Alcohol and Drug Treatment Referral
Intervention/Rapid Detox
(800) 996-3784
Toll Free (800) 454-8966

Alcohol Hotline
(800) 252-6465

Assessment and Referral Center
(800) 555-2911

Cocaine Hotline
(800) 667-HELP

The Council on Drug and Alcohol Abuse
(717) 299-2831

Dept. of Veterans Affairs Medical Centers
(800) 409-8771

Lancaster County Drug and Alcohol Commission
(717) 299-8023

National Clearinghouse for A&D Information
(800) 729-6686

National Helpline
(800) 667-HELP (24 hours)

PA Dept of Health, Research & Information Clearinghouse
(800) 582-7746

United Way LINC
(717) 291-LINC

Salud Hispana
(717) 396-1155

Outpatient Counseling

Family Service
(717) 397-5241

HSA Counseling, Inc.
(717) 394-5334

Lancaster Clinical Counseling Associates
(717) 299-0131

Lancaster Freedom Center
(717) 397-9118

Management & Professional Services Corporation
(MAPS Behavioral Health)
(717) 390-0353

Naaman Center
(717) 367-9115 or 1-888-243-4316
http://www.naamancenter.com

Nuestra Clinica—SACA D&A Program
(717) 293-4150

PA Counseling Services—Lancaster City
(717) 397-8081

T.W. Ponessa and Assoc. Counseling Services, Inc.
(717) 560-9717

Susquehanna Addictions Center
Lancaster General Hospital—Susquehanna Division
(717) 684-2841 or 1-800-242-2333

Water Street Rescue Mission
(717) 393-7709

Women for Sobriety
(215) 536-8026

Inpatient Help

DARS Supervised Independent Living Program
(717) 393-1796

The Gate House for Men
(717) 626-9524

The Gate House for Women
(717) 285-2300

Immediate and Emergency Help Crisis Intervention Service
(717) 394-2631

Hopeline
(717) 393-HOPE

Lancaster Hogar Crea
(717) 397-8633

Manos (DARS)
(717) 393-0573

Nuestra Clinica Residential
414-1435 or 1-888-344-0630

Susquehanna Addictions Center
LGH—Susquehanna Division
(717) 684-2841 or 1-800-242-2333

Vantage/Gaudenzia, Inc
(717) 291-1020

White Deer Run of Lancaster
(717) 396-0650

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Support Groups

Adult Children of Alcoholics, ACOA
(717) 393-7767

Al-Anon/Alateen
Meets Daily—(717) 393-7767

Alcoholics Anonymous, AA
Meets Daily—(717) 394-3238

Cocaine Anonymous
(800) 482-0983

Narcotics Anonymous, NA
Meets Daily—(717) 393-4546

Nar-Anon Family Group
Meets twice a week—(717) 738-3074

Steps to Freedom (Recovery)
Thursday evenings, 7–9 p.m.—(717) 656-4271

Additional Resources

National Clearinghouse for Alcohol and Drug Information, Substance Abuse and Mental Health Services Administration (SAMHSA)
800-729-6686; 800-487-4889 (TDD);
http://www.health.org/

National Institute on Drug Abuse, NIH
http://www.nida.nih.gov/

National Institute on Alcohol Abuse and Alcoholism, NIH
201-443-3860;
http://www.niaaa.nih.gov/

Preparing for the Drug Free Years
http://www.promisingpractices.net/program.asp?programid=91
The primary goal of PDFY is to increase family involvement that is rewarding and enhances parent-child bonds. The program is offered in a series of sessions, each designed to focus on one of five areas. The program was pilot-tested in ten Seattle public schools and among participating students, 52 percent were minorities, 48 percent were from low-income families, and 39 percent were from single-parent homes. The evaluation studies looked at 209 families in the central Midwest, where the families were predominantly white. It has been used to train more than 120,000 urban, suburban, and rural families in several states. The program begins with increasing parents' knowledge of the risk factors associated with drug abuse. It then focuses on teaching parents the skills that help mitigate these risk factors, such as how to clearly communicate expectations for behavior, how to reduce family conflict, and how to encourage the expression of positive feelings and love. One of the sessions teaches both parents and children various ways to resist peer and social pressures to engage in inappropriate behavior.

What You Can Do

Businesses and Institutions

- Provide Employee Assistance Programs (EAP) to your employees.
- Educate your employees, including supervisors, to recognize signs of substance abuse.
- Implement comprehensive programs to include policy, education, training, testing, and access to treatment for your employees.
- Help employees to understand the effects of drug and alcohol abuse on their employment status, absentee rate, and likelihood of being involved in a workplace accident.
- Provide information to your employees about the long-term effects of drugs and alcohol on their physical health, mental health, and family life.
- Make materials on help and community available in places that are private and non-threatening for employees.

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- Provide health insurance that includes treatment options for employees and family members.
- Guarantee your employees that your HR department is vigilant regarding matters of confidentiality.
- Encourage primary care physicians and facilities to learn how to screen for signs of substance abuse. Provide opportunities for patients to talk about family members about whom they are concerned.

Schools

- Provide information to parents from elementary school years onward about helping children make decisions.
- Provide after-school programs from elementary through high school.
- Implement curriculums in schools that encourage the idea that drugging is not cool.
- Get students involved in developing and disseminating anti-drug campaigns.
- Open school buildings to the community to provide lots of recreational opportunities in the community as an alternative to "getting high."

Individuals

- If you are abusing drugs or alcohol, seek help—no one can "get clean and sober" without help.
- Be a resource to friends, family members, or coworkers who are dealing with substance abuse issues.
- Provide support to those dealing with recovery.
- If you or your loved one is affected by addiction or addicted, contact a support group (AA, Al-anon, Nar-anon).
- Think about the ramifications of privatizing the PA State Liquor Store system and the increased advertising of alcohol use that privatization will bring. Contact your state legislator with your opinion and ideas.
- Act as a positive role model to young people. Set a good example and speak with them about the risks and consequences of substance abuse.
- Be thoughtful about the messages you give your children about the use of alcohol and drugs and the role they play in your daily life.
- Never drive drunk and never let a friend drive drunk.
- If you suspect that a friend or family member is struggling with substance abuse issues, speak to them about it.
- Ask your children where they are going and who they will be with. Be a parent—not a friend.

Additional Questions

- What are effective strategies for reaching our youth and preventing them from abusing alcohol or using illicit drugs now and as they grow older?
- How do we enlist the aid of school districts and parents in allowing Youth surveys that must be conducted to gather community information about personal drug and alcohol use?
- How can we do a better job of treating substance abuse issues when individuals enter the justice system?
- How does a community organize all of the different interest groups to put together a community-wide campaign promoting alternative activities for young people.
- What steps do we need to take to implement a comprehensive state and local program which addresses education, health, law enforcement, corrections, welfare, and treatment?

All Substance Use and Abuse Objectives

Adverse Consequences of Substance Use and Abuse

26-1 Motor vehicle crash deaths and injuries
26-2 Cirrhosis deaths
26-3 Drug-induced deaths
26-4 Drug-related hospital emergency department visits
26-5 Alcohol-related hospital emergency department visits
26-6 Adolescents riding with a driver who has been drinking
26-7 Alcohol- and drug-related violence
26-8 Lost productivity

Substance Use and Abuse

26-9 Substance-free youth
26-10 Adolescent and adult use of illicit substances
26-11 Binge drinking
26-12 Average annual alcohol consumption
26-13 Low-risk drinking among adults
26-14 Steroid use among adolescents
26-15 Inhalant use among adolescents

Risk of Substance Use and Abuse

26-16 Peer disapproval of substance abuse
26-17 Perception of risk associated with substance abuse

Treatment for Substance Abuse

26-18 Treatment gap for illicit drugs
26-19 Treatment in correctional institutions
26-20 Treatment for injection drug use
26-21 Treatment gap for problem alcohol us

State and Local Efforts

26-22 Hospital emergency department referrals
26-23 Community partnerships and coalitions
26-24 Administrative license revocation laws
26-25 Blood alcohol concentration (BAC) levels for motor vehicle drivers

Related Objectives from Other Focus Areas

Access to Quality Health Services

1-1 Persons with health insurance
1-2 Health insurance coverage for clinical preventive services
1-3 Counseling about health behaviors
1-4 Source of ongoing care
1-5 Usual primary care provider
1-6 Difficulties or delays in obtaining needed health care
1-7 Core competencies in health provider training
1-8 Racial and ethnic representation in the health professions
1-10 Delay or difficulty in getting emergency care
1-11 Rapid pre-hospital emergency care
1-12 Single toll-free number for poison control centers
1-13 Trauma care systems
1-11 Special needs of children

Cancer

3-10 Provider counseling about cancer prevention

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Disability and Secondary Conditions

6-2 Feelings and depression among children with disabilities

Educational and Community-Based Programs

7-1 High school completion
7-2 School health education
7-3 Health-risk behavior information for college and university students
7-4 School nurse-to-student ratio
7-5 Work site health promotion programs
7-6 Participation in employer-sponsored health promotion activities
7-7 Patient and family education
7-8 Satisfaction with patient education
7-9 Health care organization sponsorship of community health promotion activities
7-10 Community health promotion programs
7-11 Culturally appropriate and linguistically competent community health promotion programs
7-12 Older adult participation in community health promotion activities

Family Planning

9-8 Abstinence before age 15 years
9-9 Abstinence among adolescents aged 15 to 17 years
9-10 Pregnancy prevention and sexually transmitted disease (STD) protection
9-11 Pregnancy prevention education
9-12 Problems in becoming pregnant and maintaining a pregnancy

HIV

13-3 AIDS among persons who inject drugs
13-4 AIDS among men who have sex with men and who inject drugs
13-8 HIV counseling and education for persons in substance abuse treatment
13-12 Screening for STDs and immunization for hepatitis B
13-13 Treatment according to guidelines

Immunization and Infectious Diseases

14-28 Hepatitis B vaccination among high-risk groups

Injury and Violence Prevention

15-12 Emergency department visits
15-13 Deaths from unintentional injuries
15-14 Nonfatal unintentional injuries
15-15 Deaths from motor vehicle crashes
15-16 Pedestrian deaths
15-17 Nonfatal motor vehicle injuries
15-18 Nonfatal pedestrian injuries
15-29 Drownings
15-32 Homicides
15-37 Physical assaults

Maternal, Infant, and Child Health

16-17 Prenatal substance exposure
16-18 Fetal alcohol syndrome

Medical Product Safety

17-3 Provider review of medications taken by patients

Mental Health and Mental Disorders

18-6 Primary care screening and assessment
18-10 Treatment for co-occurring disorders
18-13 State plans addressing cultural competence

Public Health Infrastructure

23-2 Public access to information and surveillance data
23-3 Use of geocoding in health data systems
23-4 Data for all population groups
23-5 Data for Leading Health Indicators, Health Status Indicators, and Priority Data Needs at tribal, state, and local levels
23-6 National tracking of Healthy People 2010 objectives
23-7 Timely release of data on objectives
23-8 Competencies for public health workers
23-9 Training in essential public health services
23-10 Continuing education and training by public health agencies
23-11 Performance standards for essential public health services
23-12 Health improvement plans
23-14 Access to epidemiology services
23-15 Model statutes related to essential public health services
23-16 Data on public health expenditures
23-17 Population-based prevention research

Sexually Transmitted Diseases

25-11 Responsible adolescent sexual behavior
25-12 Responsible sexual behavior messages on television
25-13 Hepatitis B vaccine services in STD clinics
25-14 Screening in youth detention facilities and jails

Tobacco Use

27-1 Adult tobacco use
27-2 Adolescent tobacco use
27-3 Initiation of tobacco use
27-4 Age at first tobacco use
27-5 Smoking cessation by adults
27-6 Smoking cessation during pregnancy
27-7 Smoking cessation by adolescents
27-8 Insurance coverage of cessation treatment
27-9 Exposure to tobacco smoke at home among children
27-10 Exposure to environmental tobacco smoke
27-11 Smoke-free and tobacco-free schools
27-12 Work site smoking policies
27-13 Smoke-free indoor air laws
27-14 Enforcement of illegal tobacco sales to minors laws
27-15 Retail license suspension for sales to minors
27-16 Tobacco advertising and promotion targeting adolescents and young adults
27-17 Adolescent disapproval of smoking
27-18 Tobacco control programs
27-19 Preemptive tobacco control laws
27-20 Tobacco product regulation
27-21 Tobacco tax

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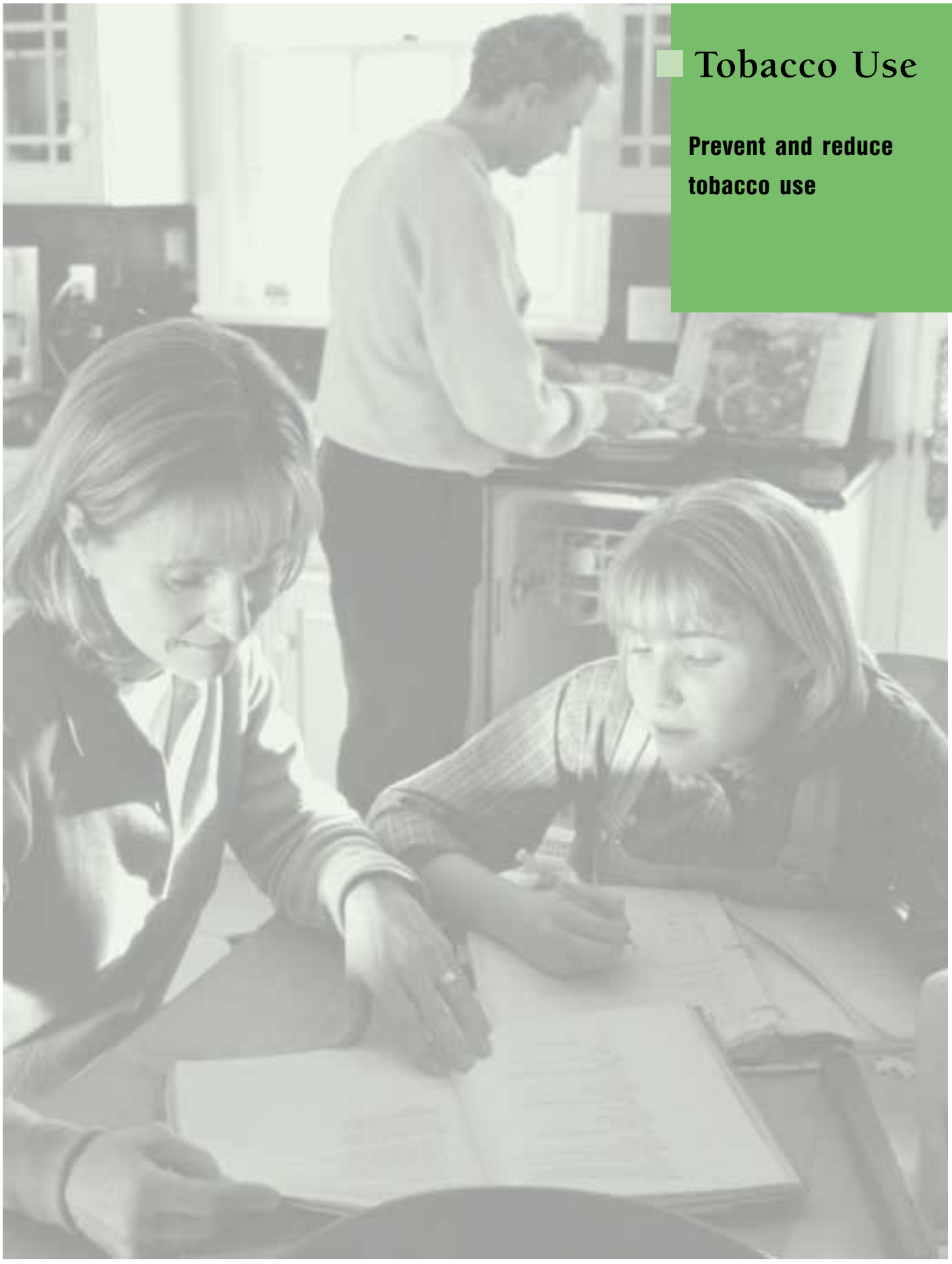

Tobacco Use

Prevent and reduce tobacco use

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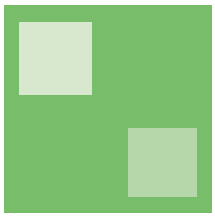

Adolescent and Adult Tobacco Use

Goal: Better than the best

HP 2010 Measures and Local Measures

27-2b	**Reductions in tobacco use by students in grades 9 through 12.**

Target-setting method: Better than the best
Data source: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP, PA DOH

27-1a	**Reductions in tobacco use by adults aged 18 years and older.**

Target-setting method: Better than the best
Data source: National Health Interview Survey (NHIS), CDC, NCHS, BRFSS

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Description

Cigarette smoking is the single most preventable cause of disease and death in the United States. Smoking results in more deaths each year in the United States than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires—combined. Scientific knowledge about the health effects of tobacco use has increased greatly since the first Surgeon General's report on tobacco was released in 1964. Cigarette smoking causes heart disease, respiratory ailments, poor pregnancy outcomes, oral health problems, and several kinds of cancer (lung, larynx, esophagus, pharynx, mouth, and bladder), and chronic lung disease. Cigarette smoking also contributes to cancer of the pancreas, kidney, and cervix. (U.S. Environmental Protection Agency (EPA). *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. EPA Pub. No. EPA/600/6-90/006F. Washington, DC: EPA, 1992.) Smoking during pregnancy can result in miscarriages, premature delivery, lower birth weight babies, and sudden infant death syndrome. (F DiFranza, J.R., and Lew, R.A. "Effect of maternal cigarette smoking on pregnancy complications and sudden infant death syndrome." *Journal of Family Practice* 40(4):385–394, 1995.) Fires caused by smoking result in personal injury, death, and environmental damage.

Environmental tobacco smoke (ETS) or secondhand smoke, increases the risk of heart disease and significant lung conditions, especially asthma and bronchitis in children (Glantz, S.A., and Parmely, W.W. "Passive smoking and heart disease: Mechanism and risk." *Journal of the American Medical Association* 273:1047–1053, 1995). Asthma and other respiratory conditions often are triggered or worsened by tobacco smoke. ETS is responsible for an estimated 3,000 lung cancer deaths each year among adult nonsmokers. Studies also have found that secondhand smoke exposure causes heart disease among adults. Data reported from a study of the U.S. population, aged 4 years and older, indicated that among tobacco nonusers, 88 percent had detectable levels of serum cotinine, a biological marker for exposure to secondhand smoke. (Pirkle, J.L.; Flegal, K.M.; Bernet, J.T.; et al. "Exposure of the U.S. population to environmental tobacco smoke." *Journal of the American Medical Association* 275:1233–1240, 1996.) Both home and workplace environments have contributed to the widespread exposure to secondhand smoke. (CDC. "State-specific prevalence of cigarette smoking among adults, and children's and adolescents' exposure to environmental tobacco smoke—United States." *Morbidity and Mortality Weekly Report* 46:1038–1043, 1997.)

Other forms of tobacco are not safe alternatives to smoking cigarettes. Use of spit tobacco causes a number of serious oral health problems, including cancer of the mouth and gum, periodontitis, and tooth loss. Cigar use causes cancer of the larynx, mouth, esophagus, and lung.

Relevant Facts

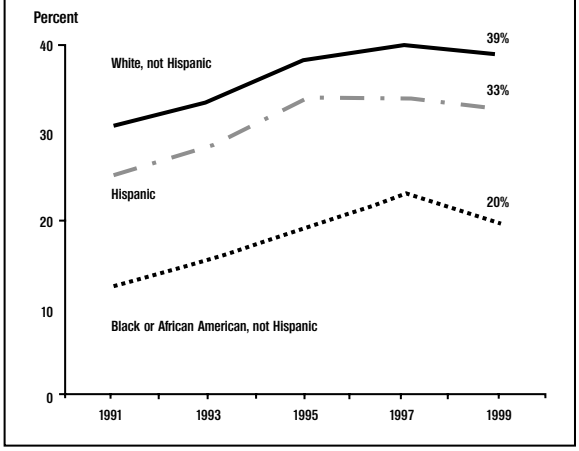
- Tobacco use is responsible for more than 430,000 deaths per year among adults in the United States, representing more than 5 million years of potential life lost. (CDC. "Cigarette smoking-attributable mortality and years of potential life lost—United States, 1984." *Morbidity and Mortality Weekly Report* 46(20):444–451, 1997.)
- If current tobacco use patterns persist in the United States, an estimated 5 million persons under age 18 years will die prematurely from a smoking-related disease.
- Direct medical costs related to smoking total at least $50 billion per year. (CDC. "Medical-care expenditures attributable to cigarette smoking—United States, 1993." *Morbidity and Mortality Weekly Report* 43(26):469–472, 1994.)
- Researchers have identified more than 4,000 chemicals in tobacco smoke; of these, at least 43 cause cancer in humans and animals.
- Each year, because of exposure to secondhand smoke, an estimated 3,000 nonsmokers die of lung cancer, and 150,000 to 300,000 infants and children under age 18 months experience lower respiratory tract infections. (U.S. Environmental Protection Agency (EPA). *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. EPA Pub. No. EPA/600/6–90/006F. Washington, DC: EPA, 1992.)

▪ Smoking among adults declined steadily from the mid-1960s through the 1980s. However, smoking among adults appears to have leveled off in the 1990s. The rate of smoking among adults in 1997 was 25 percent.

Youth Tobacco Use

Overwhelming evidence indicates that nicotine found in tobacco is addictive and that addiction occurs in most smokers during adolescence. Youth are put at increased risk of starting to use tobacco products due to socio-demographic, environmental, and personal factors. Socio-demographic risk factors include coming from a low-income family or other substance abuse issues in the home. Environmental risk factors include access to and availability of tobacco products, cigarette advertising and promotion practices, the price of tobacco products, perceptions that tobacco use is normal, peers' and siblings' use and approval, and lack of parental involvement. Personal risk factors include low self-image and low self-esteem, the belief that tobacco use provides a benefit, and the lack of ability to refuse offers to use tobacco. (HHS. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta, GA: HHS, PHS, CDC, NCCDPHP, OSH, 1994.)

Adolescent Cigarette Use
(Adolescents in grades 9 through 12 by race and ethnicity, United States, 1991, 1993, 1995, 1997, 1999)



Source: CDC, NCCDPHP. Youth Risk Behavior Surveillance System (YRBSS), 1991, 1993, 1995, 1997, 1999.

One proposed indicator focuses in particular on school-age students for two reasons. First, school age is when most people first try tobacco products and when addictions to tobacco products are often established. Second, although there has been steady progress in reducing the rates of tobacco use among adults, we have not been as successful when it comes to cutting down on the level of use in youth, particularly for adolescent females and some racial and ethnic minority groups. A wide variety of strategies address not only the prevention of tobacco use among youth but also improvements in the rates at which youthful smokers quit. Furthermore, tobacco use may increase the probability that an adolescent will use other drugs.

Adult Use

Among adults in the United States who have ever smoked daily, 82 percent tried their first cigarette before age 18 years, and 53 percent became daily smokers before age 18 years. Among students who were high school seniors during 1976–86, 44 percent of daily smokers believed that in five years they would not be smoking. Follow up studies, however, indicated that five to six years later, 73 percent of these persons remained daily smokers. Consequently, preventing tobacco use among youth has emerged as a major focus of tobacco control efforts. (HHS. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta, GA: HHS, PHS, CDC, NCCDPHP, OSH, 1994.)

Smoking During Pregnancy

Tobacco use during pregnancy is known to contribute to complications, low birth weight, and infant mortality, as well as negatively affecting children's health and development after birth. Evidence is accumulating that shows maternal tobacco use is associated with mental retardation and birth defects such as oral clefts. Direct medical costs related to smoking during pregnancy are approximately $1.4 billion per year. (CDC. "Medical-care expenditures attributable to cigarette smoking during pregnancy—United States, 1995." Morbidity and *Mortality Weekly Report* 46:1048–1050, 1997.)

Fortunately, throughout the 1990's, the percentage of women who smoked during pregnancy declined every year. There are disparities among which women are more likely to smoke while pregnant based on race or ethnicity, age, and education.

▪ Between 1990 and 1999, American Indian women were the most likely to smoke during pregnancy, and reported the least improvement. Non-Hispanic white women

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were second most likely, followed by non-Hispanic Black women. Hispanic women and Asians and Pacific Islanders were the least likely.

- From 1990–1994, women aged 20–24 were most likely to smoke while pregnant. But since 1996, the rate has been highest among teenagers.
- Among teenage mothers, non-Hispanic whites reported the highest incidence of smoking throughout the 1990s.
- Smoking rates were highest among women with only 9–11 years of education, whereas women with four or more years of college were least likely. While only 3.7% of Hispanic women overall reported smoking in 1999, nearly half of Hispanic women completing only 9–11 years of education reported smoking in the same year.

Among teens, throughout the 1990s, the smoking rate decreased significantly, but during the second half of the decade, 22 states, including Pennsylvania, showed significant increases of smoking among pregnant women. While the overall decrease among all women shows that education has worked, the increase in the latter portion of the decade show that we must continue to spread the message. Additionally, women who quit smoking during pregnancy are likely to resume smoking within one year of delivery. For those who wait to quit until seeking prenatal care, it may be too late, as damage to the fetus may already have occurred. (National Vital Statistics Reports, Volume 49, Number 7, *Smoking during pregnancy in the 1990s* T.J. Matthews, M.S.; Division of Vital Statistics, August 28, 2001).

Data

National and state data has been collected via telephone and written surveys. These are the Adult (BRFSS) Behavioral Risk Factor Surveillance Survey (phone) and the Youth BRFSS, which is usually conducted by schools in written form. National data has numbers broken down into sub-sets that are unavailable locally. We could assume that we would break out in the same proportions, but we prefer not to do that. Local data is sometimes available through national and state sources that have used these tools, but not consistently. Schools, for example, are not mandated to perform these surveys and so they are not done consistently through all counties' districts. The PA Department of Health is starting a new process for collecting data from schools. Local experts do not believe it will yield results that are any better than past measures. And because schools are doing those surveys, they are not inclined to do a locally generated survey even if it might yield data that would be valid and could be compared to national data sets. LHC will be conducting the BRFSS in Lancaster County and the data will be available in 2003.

National Youth Risk Behavior Surveillance Survey revealed that past-month smoking among 9th to 12th graders rose from 28 percent in 1991 to 36 percent in 1997.

Youth Use

27-2b	Reduction in tobacco use by students in grades 9 through 12.			
	Target and baseline:			
Objective 27-2b	Students in grades 9 through 12 who smoked cigarettes in the past month	2010 Target 16	National Baseline (1999) 35	PA 2001 27.2

In Lancaster, we have data from the year 2000 for 6th, 8th, and 10th grade students who reported using cigarettes in the last 30 days. Healthy People collects for 9th–12th, but breaks it down by grade, so we can compare the smoking habits of our 10th grade students to 10th grade students across the nation.

Reported Using Cigarettes in the Last 30 Days				
Data Source	**6th Grade**	**8th Grade**	**10th Grade**	**12th Grade**
Lancaster County, 2000–PA Youth Survey, Pennsylvania Commission of Crime and Delinquency	5%	15%	26%	
United States, 1999–Healthy People 2010 Baseline Data			35%	43%

Students in Grades 9 Through 12, 1999 (unless noted)	Current Cigarette Smoking (smoking cigarettes on 1 or more of the 30 days preceeding the survey)		
	27-2b Both Genders	Females*	Males*
	Percent		
TOTAL	35	35	35
Race and ethnicity			
American Indian or Alaska Native	DSU	DSU	DSU
Asian or Pacific Islander	DSU	DSU	DSU
Asian	DSU	DSU	DSU
Native Hawaiian and other Pacific Islander	DSU	DSU	DSU
Black or African American	20	19	22
White	39	40	38
Hispanic or Latino	33	32	34
Not Hispanic or Latino	35	35	35
Black or African American	20	18	22
White	39	39	38
Parents' education level			
Less than high school	39 (1997)	37 (1997)	43 (1997)
High school graduate	40 (1997)	39 (1997)	41 (1997)
At least some college	35 (1997)	33 (1997) 3	7 (1997)
Sexual orientation	DNC	DNC	DNC
Selection populations			
9th grade	28	29	26
10th grade	35	36	34
11th grade	36	36	36
12th grade	43	41	46

DNA=Data have not been analyzed. DNC=Data are not collected. DSU=Data are statistically unreliable.
*Data for females and males are displayed to further characterize the issue.

Related Objective

27-2a Reduce use of tobacco products in adolescents.

Measure: Reduction in tobacco use by students in grades 9 through 12

Students in Grades 9 through 12, 1999 (unless noted)	Current Cigarette Smoking (smoking cigarettes on 1 or more of the 30 days preceeding the survey)		
	27-2b Both Genders	Females*	Males*
		Percent	
TOTAL	40	37	44

*Data for females and males are displayed to further characterize the issue.

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Adult Use

Target and baseline:

Objective	Reduction in tobacco use by adults aged 18 years and older	1998 Baseline*	2010 Target
		Percent	
27-1a	Cigarette smoking	24	12
27-1b	Spit tobacco	2.6	0.4
27-1c	Cigars	2.5	1.2
27-1d	Other products (developmental)		

*Age adjusted to the year 2000 standard population

Target-setting method: Better than the best

Data source: National Health Interview Survey (NHIS), CDC, NCHS

An adult BRFSS survey will be administered in Lancaster County in 2002. This should give us a clearer picture of local tobacco use. Until this survey is completed, we can glean a fair picture by using statewide HP 2010 data and the statewide BRFSS.

PA HP 2010 Data (age-adjusted to 2000 standard population)

Objective	Percentage of adults who:	2010 Goal	PA 2001	PA 2000	PA 1999	PA 1998	PA 1997
27-1a	Smoke cigarettes	12	25	25	24	24	25

PA 2000 BRFSS Data, Tobacco Use

	Current Smokers %	Former Smokers %
All Adults	24	25
Male	25	28
Female	23	22
18–29	34	10
30–44	29	19
45–64	24	29
65+	9	40

** Denominator is current smokers who smoke everyday.

Disparities

- Men are more likely to smoke than women (26 percent compared to 22 percent).
- Disparities in tobacco use exist among certain racial and ethnic populations. American Indians or Alaska Natives (35 percent) are more likely to smoke than other racial and ethnic groups, with considerable variations in percentages by tribe.
- Hispanics (18 percent) and Asians or Pacific Islanders (13 percent) are less likely to smoke than other groups. Regional and local data, however, reveal much higher smoking levels among specific population groups of Hispanics and Asians or Pacific Islanders. Smoking levels among Vietnamese and Korean Asian Americans are higher than previously reported, according to a 1997 multilingual survey (HHS. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians, and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General*. Atlanta, GA: HHS, PHS, CDC, NCCDPHP, OSH, 1998).
- Studies have found higher levels of cigarette use among gay men and lesbians than among heterosexuals. Gay men and lesbians with higher education levels are less likely to use cigarettes as frequently as those with lower levels of education (Skinner, W.F. "The prevalence and demographic predictors of illicit and licit drug use among lesbians and gay men." *American Journal of Public Health* 84(8):1307–1310, 1994.)

- Persons with 9 to 11 years of education (38 percent) have significantly higher levels of smoking than individuals with 8 years or less of education or 12 years or more. Individuals with 16 or more years of education have the lowest smoking rates (11 percent). Individuals who are poor are significantly more likely to smoke than individuals of middle or high income (34 percent compared to 21 percent). (CDC, NCHS. *National Health Interview Survey*. Unpublished data, 1998.)
- Data reveal high levels of tobacco use among college students. In 1995, 29 percent of college students smoked in the previous month (28 percent of females and 30 percent of males). Five percent of college students used spit tobacco in the previous month (0.3 percent of females and 12 percent of males). (CDC. "Youth Risk Behavior Surveillance: National College Health Risk Behavior Survey—United States, 1995." *Morbidity and Mortality Weekly Report* 46(SS-6):1–56, 1997.) This is higher than adult smoking rates of all adults.
- Among adolescents, smoking rates differ between whites and African Americans. By the late 1980s, smoking rates among white teens were more than triple those of African American teens. In recent years, smoking has started to increase among African American male teens, but African American female teens continue to have lower smoking rates. In 1997, 40 percent of white high school females were smokers, compared to 17 percent of African American high school females. (CDC. "Tobacco use among high school students—United States, 1997." *Morbidity and Mortality Weekly Report* 47:229–233, 1998.)

Best Researched Practices

The goals of comprehensive tobacco prevention and reduction efforts include:

- Preventing people from starting to use tobacco.
- Helping people quit using tobacco.
- Reducing exposure to secondhand smoke.
- Identifying and eliminating disparities in tobacco use among population groups.

To address these goals, the following strategies are used to build capacity to implement and support tobacco use prevention and control interventions:

- A focus on change in social norms and environments that support tobacco use.
- Policy and regulatory strategies.
- Community participation.
- Establishment of public and private partnerships.
- Strategic use of media.
- Development of local programs.
- Coordination of statewide and local activities.
- Linkage of school-based activities to community activities.
- Use of data collection and evaluation techniques to monitor program impact.

As education programs for school-aged youth are developed and proven effective in preventing initiation and in cessation, these programs should be included in quality health education curricula at each grade level. Education should aim to prevent initiation among youth, provide knowledge about effective cessation methods, and increase understanding of the health effects of tobacco use.

The importance of these various strategies has been demonstrated in a number of states, such as Arizona, California, Florida, Massachusetts, and Oregon. Community research studies and evidence from California, Florida, Massachusetts, and Oregon have shown that comprehensive programs can be effective in reducing average cigarette consumption per person. Both California and Massachusetts increased cigarette excise taxes and designated a por-

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tion of the revenues for comprehensive tobacco control programs. **Data from these states indicate that (1) increasing excise taxes on cigarettes is one of the most cost-effective short-term strategies to reduce tobacco consumption among adults and to prevent initiation among youth; and (2) the ability to sustain lower consumption increases when the tax increase is combined with an antismoking campaign.** As with almost all consumer products, the demand for cigarettes decreases as price increases. An increase in the excise tax on tobacco products would reduce rates of use of both cigarettes and spit tobacco among adults and youth. Economists agree that a 10 percent increase in the price of cigarettes will reduce overall smoking among adults by approximately 4 percent. Data suggest that the prevention effect on youth would be at least as large, if not larger.

A 1989 report predicted that for every 10 percent increase in the price of cigarettes, there would be a 7.6 to 12 percent decrease in teen smoking participation rates (i.e., whether teens smoke at all). The report concluded that among teens smoking participation responds strongly to price, and that excise taxes and aggressive educational efforts combined were the most effect smoking-cessation strategy. (CDC. "Cigarette smoking before and after an excise tax increase and an antismoking campaign." *Morbidity and Mortality Weekly Report* 45:966–970, 1996.) Studies conducted since the release of this report reinforce and support these conclusions. Data also indicate that earmarking funds from an excise tax increase for tobacco prevention and control programs increases both public support for the proposed tax and the public health impact of the price increase.

Recent data from Florida indicates that past-month smoking decreased significantly among public middle school students (19 percent to 15 percent) and high school students (27 percent to 25 percent) from 1998 to 1999 following implementation of a comprehensive program to prevent and reduce tobacco use among youth in that state. (CDC. "Tobacco use among middle and high school students—Florida, 1998 and 1999." *Morbidity and Mortality Weekly Report* 48:248–253, 1999.) In the Minnesota Heart Health Program, smoking rates were reduced by approximately 40 percent in the intervention community with a combined school-based curriculum, community-based activities, and mass media intervention (Perry, C.L.; Kelder, S.H.; Murray, D.M.; et al. "Community-wide smoking prevention: Long-term outcomes of the Minnesota Heart Health Program and the Class of 1989 Study." *American Journal of Public Health* 82(9):1210–1216, 1992). Furthermore, a preliminary report on the effectiveness of the American Stop Smoking Intervention Study (ASSIST) indicated that in 1993–94, per capita cigarette consumption was 7 percent less in the 17 ASSIST states than in the remaining states (excluding California).

In these and other states, tobacco control programs are supported through funding from the federal government, private foundations, state tobacco taxes, state lawsuit settlements, and other sources. These programs address issues such as reducing exposure to secondhand smoke, restricting minors' access to tobacco, treating nicotine addiction, limiting the impact of tobacco advertising, increasing the price of tobacco products, and directly regulating the product (e.g., requiring product ingredient reporting). Tobacco control programs and materials should be culturally and linguistically appropriate.

Effective prevention approaches for reducing tobacco use among adolescents include school-based prevention programs as an integral part of community-wide strategies that address the overall social context of tobacco use. School-based tobacco prevention programs identify the social influences that promote tobacco use among youth and teach skills to resist these influences. Such programs have demonstrated consistent and significant reductions or delays in adolescent smoking. **The effects dissipate over time if they are not followed by additional educational interventions or linkages to community programs.** Studies have shown that the effectiveness of school-based tobacco prevention programs appears to be strengthened by booster sessions or further application of the programs and community-wide programs involving parents, school policies, mass media, youth access, and community organizations. Limiting the appeal of tobacco products to young people involves both restricting tobacco advertising and promotions and countering the ability of pro-tobacco messages to reach large segments of the population quickly and efficiently. Because of their appeal, the

mass media can serve as a powerful tool for tobacco control. Television and radio stations, magazines, and other media can deliver information and educational messages directly to targeted audiences, build public support for tobacco control programs and policies, reinforce social norms supporting the nonuse of tobacco, and counteract the pro-use messages and images of tobacco marketing and public relations campaigns.

Local Assets

American Cancer Society
Lancaster County Unit
(717) 397-3744

American Lung Association of Pennsylvania
(717) 397-5203

Ephrata Community Hospital
Smokeless: Individual Smoking Cessation Counseling
(717) 738-6186

Freedom From Smoking
(717) 733-0405

Hempfield Counseling Associates
Tobacco Awareness & Cessation
(717) 898-9127

Lancaster General Hospital
Individual Smoking Cessation Counseling (717) 290-3138
Freedom From Smoking (717) 290-3143

Lancaster Regional Medical Center
Individual Smoking Cessation Counseling (717) 291-8377
Freedom from Smoking (717) 291-8377

Nicotine Anonymous Support Group
(717) 898-8571

St. Joseph Health Ministries
Lung Cancer Community
(717) 239-1196

United Way LINC
(717) 291-LINC

Additional Resources

Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC
800-CDC-1311;
http://www.cdc.gov/tobacco/

Cancer Information Service, NIH
800-4-CANCER;
http://cis.nci.nih.gov/

American Lung Association
http://www.lungusa.org

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Proven Programs
http://www.promisingpractices.net/benchmark.asp?benchmarkid=4

Big Brothers Big Sisters of America
Life Skills Training
Prenatal and Infancy Nurse Home Visitation Program
Project ALERT
Project Northland
Project STAR/Midwestern Prevention Project
Seattle Social Development Project

Promising Programs
Athletes Training and Learning to Avoid Steroids
CASASTART
Creating Lasting Family Connections
Know Your Body
Preparing for the Drug Free Years

What You Can Do

Business and Institutions

- Provide working smoking cessation programs through the workplace.
- Provide educational materials for workers to share with their family.
- Do anti-smoking campaigns that address personal and insurance costs as well as quality of life issues.
- Support the excise tax on tobacco products.
- Understand your own business costs related to smoking.
- Develop smoke-free workplace policies.
- Build incentives (fun or economic) into smoking cessation campaigns.
- Contribute to community coalitions looking for media sponsors for PR campaigns.
- As a retailer, do not sell single cigarettes out of the packet and always ask for ID.
- Lobby the state legislature for a comprehensive approach to tobacco–use cessation from the health care cost impact perspective—it's good for business.
- Sponsor "How to Talk to Your Kids" workshops for your employees.
- Get serious about secondhand smoke policies and provide statistics.
- Consider supporting and encouraging restaurants and bars that are or wish to become non-smoking establishments.

Individuals

- Smoke less, or better yet, quit.
- Accept help when quitting—join support groups, get a patch, see your doctor, do what you must to support a healthy lifestyle.
- Don't smoke around children or non-smokers.
- Patronize no smoking establishments such as bars and restaurants.
- Lobby for state supported comprehensive smoking cessation programs like those in successful states such as MA, MN, FL and CA.
- Exercise more.
- Begin talking to your kids at a very early age about smoking.
- Talk to your kids about advertising and the message they are receiving when they see people smoking in the movies, on TV or in the media.

- Don't let others smoke in your home if you are maintaining a non-smoking environment for your children.
- Lobby against corner stores selling cigarettes out of the packet—per cigarette.
- Be prepared with information on **all** tobacco products.
- Do not smoke while you are pregnant.
- Express support for friends and family members who are trying to quit.

Remaining Questions

- How can we get the entire community involved locally to better motivate people to quit smoking?
- How can we prevent young people from trying tobacco and becoming addicted?
- What other types of positive incentives or support can we as institutions and employers offer to those trying to quit?
- What tools might we develop to help reach pregnant women, especially teens, who are still smoking?
- How can we keep women who quit while pregnant from beginning again after delivery?
- Are there new ways we can work together to provide more smoking cessation programs, particularly for young people?
- How can we as a community prevent non-smokers from being subjected to environmental tobacco smoke (secondhand smoke)?

Related Objectives from Other Focus Areas

Tobacco Use in Population Groups

27-1 Adult tobacco use
27-2 Adolescent tobacco use
27-3 Initiation of tobacco use
27-4 Age at first tobacco use

Cessation and Treatment

27-5 Smoking cessation by adults
27-6 Smoking cessation during pregnancy
27-7 Smoking cessation by adolescents
27-8 Insurance coverage of cessation treatment

Exposure to Secondhand Smoke

27-9 Exposure to tobacco smoke at home among children
27-10 Exposure to environmental tobacco smoke
27-11 Smoke-free and tobacco-free schools
27-12 Work site smoking policies
27-13 Smoke-free indoor air laws

Social and Environmental Changes

27-14 Enforcement of illegal tobacco sales to minors laws
27-15 Retail license suspension for sales to minors
27-16 Tobacco advertising and promotion targeting adolescents and young adults
27-17 Adolescent disapproval of smoking
27-18 Tobacco control programs
27-19 Preemptive tobacco control laws
27-20 Tobacco product regulation
27-21 Tobacco tax

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All Tobacco-Use Objectives

Access to Quality Health Services

1-2 Health insurance coverage for clinical preventive services
1-3 Counseling about health behaviors

Cancer

3-1 Overall cancer deaths
3-2 Lung cancer deaths
3-4 Cervical cancer deaths
3-6 Oropharyngeal cancer deaths

Educational and Community-Based Programs

7-5 Work site health promotion programs
7-6 Participation in employer-sponsored health promotion activities
7-10 Community health promotion programs
7-11 Culturally appropriate and linguistically competent community health promotion programs
7-12 Older adult participation in community health promotion activities

Environmental Health

8-18 Homes tested for radon
8-19 Radon-resistant new home construction
8-29 Global burden of disease

Heart Disease and Stroke

12-1. Coronary heart disease (CHD) deaths
12-7. Stroke deaths

Maternal, Infant, and Child Health

16-1 Fetal and infant deaths
16-6 Prenatal care
16-10 Low birth weight and very low birth weight
16-11 Preterm births
16-17 Prenatal substance exposure

Oral Health

21-6 Early detection of oral and pharyngeal cancers
21-7 Annual examinations for oral and pharyngeal cancers

Public Health Infrastructure

23-4 Data for all population groups
23-5 Data for Leading Health Indicators, Health Status Indicators, and Priority Data Needs at tribal, state, and local levels

Respiratory Diseases

24-1 Deaths from asthma
24-2 Hospitalizations for asthma
24-3 Hospital emergency department visits for asthma

Substance Abuse

26-9 Substance-free youth
26-16 Peer disapproval of substance abuse
26-17 Perception of risk associated with substance abuse

LHC Action Team
Lancaster Health Improvement Partnership

Definition of Health—A state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity (World Health Organization).

Mission—To direct/manage the SHIP process in Lancaster County by setting community health priorities based on data analysis of community health and quality of life indicators.

Goals

1. Maintain representation on the State SHIP Committee
   - Set a two year length of service
   - Those currently serving will continue for two years
2. Establish and sustain a community collaborative.
3. Plan a Needs Assessment Process
   - Analysis of community health and quality of life indicators (HP 2010, LCIP Indicators, BRFSS, HRSA, PA Vital Statistics Data)
   - Inventory strengths and ID Gaps—to build on strengths
   - Identify Community Health Priorities
4. Develop and publicize health improvement strategies
   - Media involvement
5. Provide a community health priority review process for DOH contractees in Lancaster County.
6. Support and advocate for local health initiatives that fit within our priorities but that may not be supported by State and Federal plans.
7. Identify resources that address the priorities we have identified in the health improvement plan.

Action Team Participants:

Alice Yoder, Chair—Lancaster General Hospital
Phyllis Boyd—IU#13
Lisa Riffanacht—Special Kids Network
Ayesha Jafri—Lancaster Medical Society
Jim Kelly—Southeast Lancaster Health Services
Phyllis Campbell—Urban League
Donna Carr—Community Hospital of Lancaster
Carol Marsh—United Way of Lancaster County
Sean Flaherty—Franklin & Marshall College
Jonathan Fox—Human Relation Commission
Maureen Gallo—Lancaster Regional Medical Center
Kay Moyer—PA Department of Health

Appendix A

Team mission and goals

Pat Kadel—Lancaster County Planning Commission
Rick Kastner—Lancaster County Drug Commission
William Lafferty—Ephrata Community Hospital
Lilia Nice—Lancaster Healthy Communities
Audrey Atkins—Office of Representative Tom Creighton
Danielle Gentile, Jamie Brightbill—Franklin & Marshall Fellow and LHC staff
Phyllis Campbell—Urban League of Lancaster
Flor Sherbahn—Salud Hispana
Jennifer Thompson —St. Joseph Health Ministries
Terri Trimble—Welsh Mountain Health and Dental Services
Kim Wittle—Lancaster Council of Churches
Mike Sturla—State Representative (96th)

Additional thanks to:

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Rebecca Rolnick, Katie Covello—Franklin & Marshall Fellows and LHC Staff
Kathie Benjamin—Southeast Lancaster Health Services
Jackie Burch—Lancaster County Office of the Aging
Susan Eckert, Barbara Guider—United Way
Claudia Gazsi—Lancaster Community Indicator Project, Lebanon Valley College
Leslie Hyson—Human Relation Commission
Stephen Fuhs—PA Department of Health
Cass Kennedy—Southeast AHEC
Mac Stacks—Community Action Program
Diane Tannenhill—Lancaster Community Indicator Project
Veronica Urdaneta—Epidemiologist
Monica Witmer—Lancaster Newspapers
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Appendix B

Definitions of determinants of health

Biology refers to the individual's genetic makeup (those factors with which he or she is born), family history (which may suggest risk for disease), and the physical and mental health problems acquired during life. Aging, diet, physical activity, smoking, stress, alcohol or illicit drug abuse, injury or violence, or an infectious or toxic agent may result in illness or disability and can produce a "new" biology for the individual.

Behaviors are individual responses or reactions to internal stimuli and external conditions. Behaviors can have a reciprocal relationship to biology; in other words, each can react to the other. For example, smoking (behavior) can alter the cells in the lung and result in shortness of breath, emphysema, or cancer (biology) that then may lead an individual to stop smoking (behavior). Similarly, a family history that includes heart disease (biology) may motivate an individual to develop good eating habits, avoid tobacco, and maintain an active lifestyle (behaviors), which may prevent his or her own development of heart disease (biology).

Personal choices and the social and physical environments surrounding individuals can shape behaviors. The social and physical environments include all factors that affect the life of individuals, positively or negatively, many of which may not be under their immediate or direct control.

Social environment includes interactions with family, friends, coworkers, and others in the community. It also encompasses social institutions, such as law enforcement, the workplace, places of worship, and schools. Housing, public transportation, and the presence or absence of violence in the community are among other components of the social environment. The social environment has a profound effect on individual health, as well as on the health of the larger community, and is unique because of cultural customs; language; and personal, religious, or spiritual beliefs. At the same time, individuals and their behaviors contribute to the quality of the social environment.

Physical environment can be thought of as that which can be seen, touched, heard, smelled, and tasted. However, the physical environment also contains less tangible elements, such as radiation and ozone. The physical environment can harm individual and community health, especially when individuals and communities are exposed to toxic substances, irritants, infectious agents, and physical hazards in homes, schools, and work sites. The physical environment also can promote good health, for example, by providing clean and safe places for people to work, exercise, and play.

Policies and interventions can have a powerful and positive effect on the health of individuals and the community. Examples include health promotion campaigns to prevent smoking; policies mandating child restraints and safety belt use in automobiles; disease prevention services, such as immunization of children, adolescents, and adults; and clinical services, such as enhanced mental health care. Policies and interventions that promote individual and community health may be implemented by a variety of agencies, such as transportation, education, energy, housing, labor, justice, and other venues, or through places of worship, community-based organizations, civic groups, and businesses.

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The 467 Healthy People 2010 objectives are being tracked by 190 data sources. A major data source is defined as a data system responsible for tracking five or more Healthy People 2010 objectives. There are 23 data systems that meet these criteria. More than three-fifths (286) of the objectives are tracked with data from these sources.

Appendix C

Definitions of determinants of health

Number of Objectives Tracked by Healthy People 2010 Major Data Sources

Data Sources	Number of Objectives Tracked
National Health Interview Survey (NHIS)	67
National Health and Nutrition Examination Survey (NHANES)	35
National Vital Statistics System—Mortality (NVSS-M)	32
National Survey of Family Growth (NSFG)	14
National Hospital Discharge Survey (NHDS)	11
Youth Risk Behavior Surveillance System (YRBSS)	11
HIV/AIDS Surveillance System	10
Behavioral Risk Factor Surveillance System (BRFSS)	9
National Household Survey on Drug Abuse (NHSDA)	8
School Health Policies and Programs Study (SHPPS)	8
National Vital Statistics System—Natality (NVSS-N)	8
National Profile of Local Health Departments (NPLHD)	8
National Ambulatory Medical Care Survey (NAMCS)	7
United States Renal Data System (USRDS)	7
STD Surveillance System (STDSS)	7
Medical Expenditure Panel Survey (MEPS)	6
National Hospital Ambulatory Medical Care Survey (NHAMCS)	6
Continuing Survey of Food Intake by Individuals (CSFII)	6
National Crime Victimization Survey (NCVS)	6
1999 National Worksite Health Promotion Survey (NWHPS)	5
State Tobacco Activities Tracking and Evaluation System (STATES) National Notifiable Disease Surveillance System (NNDSS)	5
Monitoring the Future Study (MTF)	5

Behavioral Risk Factor Surveillance System (BRFSS) is sponsored by U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). It is a telephone interview done annually since 1984. It consists of a core of questions asked in all states, standardized optional questions on selected topics that are administered at the state's discretion, a rotating core of questions asked every other year in all states, and state-added questions developed to address state-specific needs. Questions cover behavioral risk factors (e.g., alcohol and tobacco use), preventive health measures, HIV/AIDS, health status, limitation of activity, and health care access and utilization.

Appendix D Baselines for age-adjusted mortality objectives

Baselines for Age-Adjusted Mortality Objectives Using Rates Age Adjusted to 1940 and to 2000 Standards: United States, 1998

Objective Number	Short Objective Text	Total Population		Male		Female		White		Black or African American		American Indian or Alaska Native		Asian or Pacific Islander		Hispanic or Latino[1]	
		1940	2000	1940	2000	1940	2000	1940	2000	1940	2000	1940	2000	1940	2000	1940	2000
3.1	All cancer	123.6	202.4	147.7	252.4	105.5	169.2	121.0	199.3	161.2	255.1	83.4	129.3	74.81	24.2	76.1	123.7
3.2	Lung cancer	37.0	57.6	49.5	79.9	27.0	41.5	36.8	57.5	44.6	66.7	25.1	38.2	17.2	29.3	13.6	22.7
3.3	Female breast cancer	18.8	27.9	...	...	18.8	27.9	18.3	27.3	25.3	35.7	10.3	14.2	9.8	13.1	12.1	16.8
3.4	Cervical cancer	2.3	3.0	...	...	2.3	3.0	2.1	2.7	4.4	6.0	1.7	2.5	2.2	3.3	2.5	3.3
3.5	Colorectal cancer	11.8	21.2	14.3	25.4	9.9	18.2	11.5	20.8	16.5	28.2	8.2	13.3	7.8	13.7	7.4	12.8
3.6	Oropharyngeal cancer	2.0	3.0	3.1	4.5	1.1	1.7	1.8	2.8	3.3	4.5	1.4	2.1	1.5	2.2	1.2	1.8
3.7	Prostate cancer	13.2	32.0	13.2	32.0	...	...	12.0	29.4	30.3	68.7	7.4	15.9	4.7	12.4	9.0	20.9
3.8	Melanoma	1.9	2.8	2.7	4.1	1.2	1.8	2.2	3.1	0.3	0.5	*	*	0.2	0.3	0.5	0.8
5.5	Diabetes-related[2]	40.7	75.2	47.2	87.1	35.6	66.7	37.0	69.8	76.3	129.9	66.4	106.5	30.7	61.6	48.3	86.3
12.1	Coronary heart disease	96.8	208.3	131.8	264.9	68.0	165.2	94.1	206.0	133.2	252.0	70.1	126.2	53.6	123.3	68.3	144.7
12.7	Stroke	25.1	59.6	26.6	60.1	23.6	58.3	23.3	57.6	41.4	80.3	19.6	37.7	22.7	50.6	19.0	39.2
13.14	HIV infection	4.6	4.9	7.2	7.7	2.2	2.3	2.6	2.7	20.6	22.1	2.2	2.3	0.8	0.8	6.2	6.7
15.3	Firearm-related injuries	11.3	11.3	19.6	20.1	3.3	3.3	9.5	10.0	22.7	20.3	12.0	11.3	4.4	4.2	10.4	9.7
15.8	Poisoning	6.3	6.8	9.0	9.6	3.8	4.1	6.5	6.9	7.3	7.9	7.9	8.1	1.5	1.6	5.6	5.9
15.9	Suffocation	3.5	4.1	5.2	6.0	1.8	2.4	3.5	4.1	3.5	4.2	7.2	7.6	2.9	3.5	2.8	3.1
15.13	Unintentional injuries	29.3	35.0	42.1	49.4	17.1	22.1	29.1	34.8	34.3	39.5	54.9	59.9	14.0	17.6	27.4	30.2
15.15a	Motor vehicle crashes	15.2	15.6	20.9	21.6	9.6	10.1	15.2	15.6	16.2	16.8	30.3	30.4	8.5	9.3	14.6	14.7
15.25	Fire	1.0	1.2	1.3	1.6	0.8	0.9	0.8	1.0	2.4	3.0	1.8	2.1	0.2	0.3	0.7	0.9
15.27	Falls	2.3	4.7	3.4	6.4	1.4	3.5	2.4	4.9	1.9	3.1	3.1	4.4	1.5	3.4	2.2	3.7
15.29	Drowning	1.6	1.6	2.7	2.7	0.6	0.6	1.5	1.5	2.4	2.3	3.0	3.1	1.5	1.5	1.6	1.5
15.32	Homicide	7.1	6.5	11.0	10.0	3.2	3.1	4.3	4.0	24.8	22.6	9.5	9.1	3.6	3.5	9.7	8.8
18.1	Suicide	10.4	11.3	17.2	19.2	4.0	4.3	11.2	12.2	5.9	5.8	13.4	12.6	5.9	6.6	6.0	6.3
24.10	Chronic obstructive pulmonary deaths (aged 45 years and older)	78.1	119.4	95.4	153.7	66.2	98.8	81.0	124.3	61.3	85.3	57.3	79.6	26.8	48.6	30.4	52.5
26.2	Cirrhosis	7.2	9.5	10.3	13.4	4.4	6.0	7.1	9.4	8.0	9.9	22.0	25.9	2.4	3.5	11.7	15.4
26.3	Drug-induced	5.9	6.3	8.2	8.6	3.6	3.9	5.8	6.1	8.1	8.8	6.7	7.0	1.2	1.2	5.9	6.2

...Not applicable. *Data are unreliable. Based on fewer than 20 deaths. [1] Hispanic origin can be of any race. [2] 1997 data using any mention of diabetes on the death certificate.

Appendix E

Glossary

Access: According to the Institute of Medicine, "The timely use of personal health services to achieve the best possible health outcomes. This definition includes both the use and effectiveness of health services. The concept of access also encompasses physical accessibility of facilities.

Activities of daily living (ADL): Personal care activities, such as bathing, dressing, eating, and getting around (with special equipment, if needed) inside the home.

Acute care facility: A health facility that provides care on a short-term basis. Included are community hospitals with an average length of stay of less than 30 days for all patients.

Aerobic: Conditions or processes that occur in the presence of, or requiring, oxygen.

Age adjustment: Using the direct method, is the application of age-specific rates in a population of interest to a standardized age distribution in order to eliminate differences in observed rates that result from age differences in the population composition. This adjustment is usually done when comparing two or more populations (such as race/ethnic groups) at one point in time or one population at two or more points in time. For some population groups, the age-adjusted rates are considerably different than crude rates. This happens because the population distribution of the group is quite different from the distribution of the standard population, which, for most objectives, is based on the projected year 2000 population for the entire United States. For example, for the Hispanic population (especially Mexican Americans) the age-adjusted rates for many outcomes and behaviors that are generally more frequent among the older population are considerably higher than the crude rates. This occurs because the Hispanic population has a much younger age distribution than the standard population.

AIDS: Acquired immunodeficiency syndrome, the most severe phase of infection with the human immunodeficiency virus (HIV). Persons infected with HIV are said to have AIDS when they get certain opportunistic infections or when their CD4+ cell count drops below 200.

Alcohol abuse: A maladaptive pattern of alcohol use that leads to clinically significant impairment or distress, as manifested by one or more of the following occurring within a 12-month period: recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home; recurrent alcohol use in physically hazardous situations; recurrent alcohol-related legal problems; continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol. In the literature on economic costs, alcohol abuse means any cost-generating aspect of alcohol consumption; this definition differs from the clinical use of the term, which involves specific diagnostic outcomes.

Alcohol dependence: A maladaptive pattern of alcohol use that leads to clinically significant impairment or distress, as manifested by three or more of the following occurring at any time in the same 12-month period: tolerance; withdrawal; often taking alcohol in larger amounts or over a longer period than was intended; persistent desire or unsuccessful efforts to cut down or control alcohol use; spending a great deal of time in activities necessary to obtain alcohol or recover from its effects; giving up or reducing important social, occupational, or recreational activities because of alcohol use; continued alcohol use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.

Alcohol-related crash: A motor vehicle crash in which either a driver or a nonmotorist (usually a pedestrian) had a measurable or estimated BAC of 0.01 grams per deciliter (g/dL) or above.

Angina (angina pectoris): A pain or discomfort in the chest that occurs when some part of the heart does not receive enough blood. Angina is a common symptom of coronary heart disease. It often recurs in a regular or characteristic pattern. However, it may first appear as a very severe episode or as frequently recurring bouts. When an established stable pattern of angina changes sharply—for example, it may be provoked by far less exercise than in the past, or
it may appear at rest—it is referred to as unstable angina.

Angioplasty: A nonsurgical procedure used to treat blockages in blood vessels, particularly the coronary arteries that feed the heart. Also known as percutaneous transluminal coronary angioplasty (PTCA). An inflatable balloon or other device on a thin tube (catheter), fed through blood vessels to the point of blockage, is used to open the artery.

Annual vehicle miles: The distance traveled by a passenger vehicle over a given interval of time.

Anticoagulants: Drugs that delay the clotting (coagulation) of blood. When a blood vessel is plugged up by a clot and an anticoagulant is given, it tends to prevent new clots from forming or the existing clot from enlarging. An anticoagulant does not dissolve an existing blood clot.

Anxiety disorders: Anxiety disorders have multiple physical and psychological symptoms, but all have in common feelings of apprehension, tension, or uneasiness. Among the anxiety disorders are panic disorder, agoraphobia, obsessive-compulsive disorder, post-traumatic stress disorder, and generalized anxiety disorder.

Arrhythmia: A change in the regular beat or rhythm of the heart. The heart may seem to skip a beat, or beat irregularly, or beat very fast or very slowly.

Asymptomatic: Without symptoms. This term may apply either to healthy persons or to persons with preclinical (prior to clinical diagnosis) disease in whom symptoms are not yet apparent.

Atherosclerosis: A type of hardening of the arteries in which cholesterol and other substances in the blood are deposited in the walls of arteries, including the coronary arteries that supply blood to the heart. In time, narrowing of the coronary arteries by atherosclerosis may reduce the flow of oxygen-rich blood to the heart.

Atrial fibrillation (AF): The most common sustained irregular heart rhythm encountered in clinical practice. AF occurs when the two small upper chambers of the heart (the atria) quiver instead of beating effectively and blood cannot be pumped completely out of them when the heart beats, allowing the blood to pool and clot. If a piece of the blood clot in the atria becomes lodged in an artery in the brain, a stroke may result. AF is a risk factor for stroke and heart failure.

Baseline: Accurate, quantitative data at a stated point in time that marks the beginning of a trend.

Benchmark: An accurate data point that is used as a reference for comparative purposes.

Binge drinking: The National Household Survey on Drug Abuse defines binge drinking as drinking five or more drinks on the same occasion on at least one day in the past 30 days. The Monitoring the Future Study defines binge drinking as drinking five or more drinks on the same occasion during the past two weeks.

Blood alcohol concentration (BAC): The amount of alcohol in the bloodstream measured as a percentage, by weight, of alcohol in the blood in grams per deciliter (g/dL). Legal intoxication has been defined by states to occur at ranges from as low as 0.05 g/dL to as high as 0.10 g/dL.

Blood pressure: The force of the blood pushing against the walls of arteries. Blood pressure is given as two numbers that measure systolic pressure (the first number, which measures the pressure while the heart is contracting) and diastolic pressure (the second number, which measures the pressure when the heart is resting between beats). Blood pressures of 140/90 mmHg or above are considered high, while blood pressures in the range of 130–139/85–89 are high normal. Less than 130/85 mmHg is normal.

Body composition: The relative amount of body weight that is fat and nonfat.

Body mass index (BMI): Weight (in kilograms) divided by the square of height (in meters), or weight (in pounds) divided by the square of height (in inches) times 704.5. Because it is readily calculated, BMI is the measurement of choice as an indicator of healthy weight, overweight, and obesity.

Cancer screening: Checking for changes in tissue, cells, or fluids that may indicate the possibility of cancer when there are no symptoms.

Cancer: A term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissue and can spread through the bloodstream and lymphatic system to other parts of the body.

Carcinoma: Cancer that begins in the epithelial tissue that lines or covers an organ.

Cardiorespiratory function: A health-related component of physical fitness that relates to the ability of the circulatory and respiratory systems to supply oxygen during physical activity.

Cardiovascular disease (CVD): Includes a variety of diseases of the heart and blood vessels: coronary heart disease (coronary artery disease, ischemic heart disease), stroke (brain attack), high blood pressure (hypertension), rheumatic heart disease, congestive heart failure, and peripheral artery disease.

Case management: Practice in which the service recipient is a partner in his or her recovery and self-management. Cerebrovascular disease affects the blood vessels supplying blood to the brain. Stroke occurs when a blood vessel bringing oxygen and nutrients to the brain bursts or is clogged by a blood clot. Because of this rupture or blockage, part of the brain does not get the flow of blood it needs, and nerve cells in the affected area die. Small stroke-like events, such as transient ischemic attacks (TIAs), which resolve in a day or less, are symptoms of cerebrovascular disease.

Cholesterol: A waxy substance that circulates in the bloodstream. When the level of cholesterol in the blood is too high, some of the cholesterol is deposited in the walls of the blood vessels. Over time, these deposits can build up until they narrow the blood vessels, causing atherosclerosis, which reduces the blood flow. The higher the blood cholesterol level, the greater is the risk of getting heart disease. Blood cholesterol levels of less than 200 mg/dL are considered desirable. Levels of 240 mg/dL or above are considered high and require further testing and possible intervention. Levels of 200–239 mg/dL are considered borderline. Lowering blood cholesterol reduces the risk of heart disease.

Chronic drug use: Use of any heroin or cocaine more than 10 days in the past month.

Clinical care: The provision of health care services to individual patients by trained health care professionals.

Collaborating: Exchanging information, modifying activities, sharing resources and enhancing the capacity of another for mutual benefit and to achieve a common purpose.

Colonoscopy: An examination of the rectum and entire colon using a lighted instrument called a colonoscope. A colonoscope allows the physician to remove polyps or other abnormal tissue for examination under a microscope.

Community capacity: The characteristics of communities that affect their ability to identify, mobilize, and address social and public health problems.

Community health planning or community health improvement process: Helps a community mobilize to collect and use local data; set health priorities; and design, implement, and evaluate comprehensive programs that address community health and quality of life issues.

Community health promotion program: Includes all of the following: (1) community participation with representation from at least three of the following community sectors: government, education, business, faith organizations, health care, media, voluntary agencies, and the public; (2) community assessment, guided by a community assessment and planning model, to determine community health problems, resources, perceptions, and priorities for action; (3) targeted and measurable objectives to address at least one of the following: health outcomes, risk factors, public awareness, services, and protection; (4) comprehensive, multifaceted, culturally relevant interventions that have multiple targets for change; and (5) monitoring and evaluation processes to determine whether the objectives are reached.

Community water system: A public water system that provides water to at least 15 service connections used by year-round residents or that regularly serves at least 25 year-round residents.

Community-based program: A planned, coordinated, ongoing effort operated by a community that characteristically includes multiple interventions intended to improve the health status of members of the community.

Comparability: The extent to which an indicator measures the same thing across time or space, segments of a community or multiple communities.

Comprehensive primary care: All aspects of routine health care (preventive, diagnostic, and therapeutic) delivered by a trained health care provider.

Comprehensive work site health promotion programs: Refers to programs that contain the following elements: (1) health education that focuses on skill development and lifestyle behavior change in addition to information dissemination and awareness building, preferably tailored to employees' interests and needs; (2) supportive social and physical work environments, including established norms for healthy behavior and policies that promote health and reduce the risk of disease, such as work site smoking policies, healthy nutrition alternatives in the cafeteria and vending services, and opportunities for

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obtaining regular physical activity; (3) integration of the worksite program into the organization's administrative structure; (4) related programs, such as employee assistance programs; and (5) screening programs, preferably linked to medical care service delivery to ensure follow-up and appropriate treatment as necessary and to encourage adherence. Optimally, these efforts should be part of a comprehensive occupational health and safety program.

Congestive heart failure (or heart failure): A condition in which the heart cannot pump enough blood to meet the needs of the body's other organs. Heart failure can result from narrowed arteries that supply blood to the heart muscle and from other factors. As the flow of blood out of the heart slows, blood returning to the heart through the veins backs up, causing congestion in the tissues. Often swelling (edema) results, most commonly in the legs and ankles, but possibly in other parts of the body as well. Sometimes fluid collects in the lungs and interferes with breathing, causing shortness of breath, especially when a person is lying down.

Consumption: The amount of tobacco products consumed or used by the population. Consumption usually is measured in units, such as the number of cigarettes smoked or pounds of spit tobacco used over a given period of time.

Continuum of care: The array of health services and care settings that address health promotion; disease prevention; and the diagnosis, treatment, management, and rehabilitation of disease, injury, and disability. Included are primary care and specialized clinical services provided in community and primary care settings, hospitals, trauma centers, and rehabilitation and long-term care facilities.

Contraception (birth control): The means of pregnancy prevention. Methods include permanent methods (vasectomy for men and tubal ligation for women) and temporary methods (e.g., hormonal implant, injectable, birth control pill, emergency contraceptive pills, intrauterine device, diaphragm, female condom, male condom, spermicidal foam/cream/jelly, sponge, cervical cap, abstinence, natural family planning, calendar rhythm, and withdrawal).

Co-occurring disorders: The simultaneous presence of two or more disorders, such as the coexistence of a mental health disorder and substance abuse problem.

Co-occurring/comorbidity: In general, the existence of two or more illnesses—whether physical or mental—at the same time in a single individual. In this chapter, comorbidity specifically means the existence of a mental illness and a substance abuse disorder or a mental and a physical illness in the same person at the same time.

Coronary angiography (or arteriography) is used to explore coronary arteries and show blockages caused by atherosclerosis.

Coronary heart disease (CHD): A condition in which the flow of blood to the heart muscle is reduced. Like any muscle, the heart needs a constant supply of oxygen and nutrients that are carried to it by the blood in the coronary arteries. When the coronary arteries become narrowed or clogged, they cannot supply enough blood to the heart. If not enough oxygen-carrying blood reaches the heart, the heart may respond with pain called angina. The pain usually is felt in the chest or sometimes in the left arm or shoulder. When the blood supply is cut off completely, the result is a heart attack. The part of the heart muscle that does not receive oxygen begins to die, and some of the heart muscle is permanently damaged.

Cost-effective: Indicates that the cost of a particular intervention compares favorably to life-saving interventions associated with other diseases.

Cost-saving: Indicates that a particular intervention averts health care costs in excess of the cost of the intervention.

Credibility: Trustworthy and reliable data.

Cultural competence: A group of skills, attitudes, and knowledge that allows persons, organizations, and systems to work effectively with diverse racial, ethnic, and social groups.

Culturally appropriate: Refers to an unbiased attitude and organizational policy that values cultural diversity in the population served. Reflects an understanding of diverse attitudes, beliefs, behaviors, practices, and communication patterns that could be attributed to race, ethnicity, religion, socioeconomic status, historical and social context, physical or mental ability, age, gender, sexual orientation, or generational and acculturation status. Includes an awareness that cultural differences may affect health and the effectiveness of health care delivery. Knowledge of disease prevalence in specific cultural populations, whether defined by race, ethnicity, socioeconomic status, physical or mental ability, gender, sexual orientation, age, disability, or habits.

Current drinkers: Persons who have consumed at least 12 drinks of any kind of alcohol in the past year.

Depression: A state of low mood that is described differently by people who experience it. Commonly described are feelings of sadness, despair, emptiness, or loss of interest or pleasure in nearly all things. Depression also can be experienced in other disorders such as bipolar disorder (manic-depressive disorder).

Diagnosable mental illness: Includes all people with a mental illness in a specified population group, whether or not they have received a formal diagnosis from a medical or mental health professional.

Digital rectal exam (DRE): A test in which the health care provider inserts a lubricated, gloved finger into the rectum to feel for abnormal areas.

Drug dependence: A pattern of drug use leading to clinically significant impairment or distress, as manifested by three or more of the following occurring at any time in the same 12-month period: tolerance; withdrawal; use in larger amounts or over a longer period of time than intended; persistent desire or unsuccessful efforts to cut down; spending a great deal of time in activities necessary to obtain drug(s); giving up or reducing important social, occupational, or recreational activities; continued use despite knowledge of having a persistent or recurrent physical or psychological problem.

Electrocardiogram (ECG or EKG); is a graphic record of electrical activity in the heart as it beats. This test can detect areas of damage, inadequate blood flow, or heart enlargement.

Emergency services: Health care services that are or appear to be needed immediately because of injury or sudden illness that threatens serious impairment of any bodily function or serious dysfunction of any bodily part or organ.

Emerging infectious diseases: Diseases of infectious origin whose occurrence in humans has increased within the past two decades or threatens to increase in the near future. Recognition of an emerging disease occurs because the disease is present in the population for the first time, the disease has been detected for the first time, or links between an infectious agent and a chronic disease or syndrome have only recently been identified.

Environmental epidemiology: The study of the effect on human health of physical, biological, and chemical factors in the external environment. Can include examining specific populations or communities exposed to different ambient environments to clarify the rela-

tionship between physical, biological, or chemical factors and human health.

Environmental hazards: Situations or conditions in which something in the environment, such as radiation, a chemical, or other pollutant, can cause human illness or injury.

Environmental tobacco smoke: Smoke given off by cigarettes, pipes, or cigars to which nonsmokers can be exposed.

Epidemic: The occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy.

Evaluation: The comparison of an object of interest against a standard of acceptability.

Evidence based: Empirical proof that accurately validates professional guidance or recommendations or illustrates how an approach has been used successfully in the past.

Excess deaths: The statistically significant difference between the number of deaths expected and the number that actually occurred.

Exercise (exercise training): Planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness.

Family planning: The process of establishing the preferred number and spacing of one's children, selecting the means to achieve the goals, and effectively using that means.

Fecal occult blood test (FOBT): A test to check for small amounts of hidden blood in stool.

Federal Title X Family Planning Program: A program created in 1970 as Title X at the Public Health Service Act. The program provides grants for the provision of family planning information and services.

Fertility problems: Refers to the standard medical definitions of infertility (have not used contraception and have not become pregnant for 12 months or more) or impaired fecundity (women reporting no sterilizing operation and classified as finding it difficult or impossible to get pregnant or carry a baby to term).

Greenhouse gas (GHG): A gas that absorbs radiation of specific wave lengths within the infrared spectrum of radiation released by the earth's surface and clouds so that part of the absorbed energy is trapped and the earth's surface warms up. Water vapor, carbon dioxide, nitrous oxide, methane, and ozone are the primary greenhouse gases in the earth's atmosphere.

HAART (highly active antiretroviral therapy): Aggressive anti-HIV treatment usually including a combination of drugs called protease inhibitors and reverse transcriptase inhibitors whose purpose is to reduce viral load infection to undetectable levels.

Hazardous substances: Any substance that possesses properties that can cause harm to human health and ecologic systems. A subset of these substances, toxics, or toxicants are substances not produced by a living organism that can cause harm to human health and ecologic systems.

HazDat: A scientific database maintained by the Agency for Toxic Substances and Disease Registry. Provides access to information on the release of hazardous substances from Superfund sites or from emergency events and on the effects of hazardous substances on health.

HDL (high-density lipoprotein) cholesterol: The so-called good cholesterol. Cholesterol travels in the blood combined with protein in packages called lipoproteins. HDL is thought to carry cholesterol away from other parts of the body back to the liver for removal from the body. A low level of HDL increases the risk for CHD, whereas a high HDL level helps protect against CHD.

Health insurance: Any type of third party payment, reimbursement, or financial coverage for an agreed-upon set of health care services. Includes private insurance obtained through employment or purchased directly by the consumer, or health insurance provided through publicly funded programs, including Medicare, Medicaid, CHAMPUS/CHAMPVA, or other public hospital or physician programs.

Health literacy: The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.

Health outcomes: The results or consequences of a process of care. Health outcomes may include satisfaction with care as well as the use of health care resources. Included are clinical outcomes, such as changes in health status and changes in the length and quality of life as a result of detecting or treating disease.

Health promotion: Any planned combination of educational, political, regulatory, and organizational supports for actions and conditions of living conducive to the health of individuals, groups, or communities.

Health: A state of physical, mental, and social well-being, and not merely the absence of disease and infirmity.

Healthy community: A community that is continuously creating and improving those physical and social environments and expanding those community resources that enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential.

Healthy public policy: Characterized by an explicit concern for health and equity in all areas of policy and by an accountability for health impact. The main aim of healthy public policy is to create a supportive environment to enable people to lead healthy lives by making healthy choices possible and easier for citizens. It makes social and physical environments health enhancing.

Heart attack (or acute myocardial infarction): Occurs when a coronary artery becomes completely blocked, usually by a blood clot (thrombus), resulting in lack of blood flow to the heart muscle and therefore loss of needed oxygen. As a result, part of the heart muscle dies (infarcts). The blood clot usually forms over the site of a cholesterol-rich narrowing (or plaque) that has burst or ruptured.

Heart disease: The leading cause of death and a common cause of illness and disability in the United States. Coronary heart disease and ischemic heart disease are specific names for the principal form of heart disease, which is the result of atherosclerosis, or the buildup of cholesterol deposits in the coronary arteries that feed the heart.

High blood pressure: A systolic blood pressure of 140 mmHg or greater or a diastolic pressure of 90 mmHg or greater. With high blood pressure, the heart has to work harder, resulting in an increased risk of a heart attack, stroke, heart failure, kidney and eye problems, and peripheral vascular disease.

High school completion rate (graduation rate): Refers to the percentage of persons aged 18 to 24 years who are not currently enrolled in high school and who report that they have received a high school diploma or the equivalent, such as a General Education Development certificate.

HIV (human immunodeficiency virus): A virus that infects and takes over certain cells of the immune system that are important in fighting disease.

HIV antiretrovirals: Drugs, such as zidovudine (AZT) and saquinavir, designed to attack HIV and prevent it from multiplying.

Homeless person: A person who lacks housing. The definition also includes a person living in transitional housing or a person who spends most nights in a supervised public or private facility providing temporary living quarters.

Household lead dust: Very fine particles containing lead that are usually caused by the deterioration of lead paint.

Index: A weighted combination of two or more indicators, designed to be a summary indicator that shows the general trend of a system. By combining a collection of indicators into an index, general trends can be depicted.

Indoor air quality (IAQ): The overall state of the air inside a building as reflected by the presence of pollutants, such as dust, fungi, animal dander, volatile organic compounds, carbon monoxide, and lead.

Infectious agents: Any organism, such as a virus, parasite, or bacterium, that is capable of invading the body, multiplying, and causing disease.

Infertility: Failure to conceive a pregnancy after 12 months of unprotected intercourse.

Inhalants: Fumes or gases from common household substances, such as glues, aerosols, butane, and solvents, that are inhaled to produce a high.

Injury: Unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical, or chemical energy or from the absence of such essentials as heat or oxygen.

Integrated Risk Information System (IRIS): This database, maintained by EPA, contains information on health hazards from over 5,000 substances.

Intimate partner violence: Actual or threatened physical or sexual violence or psychological and emotional abuse by an intimate partner.

Intimate partner(s): Refers to spouses, ex-spouses, boyfriends, girlfriends, and former boyfriends and girlfriends (includes same-sex partners). Intimate partners may or may not be cohabitating and need not be engaging in sexual activities.

Juvenile justice facility: Includes detention centers, shelters, reception or diagnostic centers, training schools, ranches, forestry camps or farms, halfway houses and group homes, and residential treatment centers for young offenders.

Latent TB infection: The state of being infected with the organism mycobacterium tuberculosis, but without signs or symptoms of active TB disease.

LDL (low-density lipoprotein): The so-called bad cholesterol. LDL contains most of the cholesterol in the blood and carries it to the tissues and organs of the body, including the arteries. Cholesterol from LDL is the main source of damaging buildup and blockage in the arteries. The higher the level of LDL in the blood, the greater is the risk for CHD.

Malignant: Cancerous.

Managed care organizations (MCOs): Refers to systems that integrate the financing and delivery of health care services to covered individuals by means of arrangements with selected providers to furnish health care services to members. Managed care includes health maintenance organizations, preferred provider organizations, and point-of-service plans.

Managed care: According to the Institute of Medicine, "a set of techniques used by or on behalf of purchasers of health care benefits to manage health care costs by influencing patient care decisionmaking through case-by-case assessments of the appropriateness of care prior to its provision."

Mental health services: Diagnostic, treatment, and preventive care that helps improve how persons with mental illness feel both physically and emotionally, as well as how they interact with other persons. These services also help persons who have a strong risk of developing a mental illness.

Mental illness: The term that refers collectively to all diagnosable mental disorders. Mental disorders are health conditions characterized by alterations in thinking, mood, or behavior (or some combination thereof) that are all mediated by the brain and associated with distress or impaired functioning, or both. Mental disorders spawn a host of human problems that may include personal distress, impaired functioning and disability, pain, or death. These disorders can occur in men and women of any age and in all racial and ethnic groups. They can be the result of family history, genetics, or other biological, environmental, social, or behavioral factors that occur alone or in combination.

Moderate physical activity: Activities that use large muscle groups and are at least equivalent to brisk walking. In addition to walking, activities may include swimming, cycling, dancing, gardening and yardwork, and various domestic and occupational activities.

Multiple sex partners: More than one partner in the prior six months.

National Ambient Air Quality Standards (NAAQS): Standards set by EPA for the level of common air pollutants allowed by the Clean Air Act.

National Notifiable Disease Surveillance System (NNDSS): Tracking system that state health departments use to report cases of selected diseases to CDC. (See Reportable disease).

NCUTLO: National Committee on Uniform Traffic Laws and Ordinances.

Nicotine dependency: Highly controlled or compulsive use, use despite harmful effects, withdrawal upon cessation of use, and recurrent drug craving.

Nonattainment area: A locality where air pollution levels persistently exceed EPA's National Ambient Air Quality Standards.

Nonpoint source: The source of runoff water coming from an area such as a yard, parking lot, pasture, or other urban or agricultural area.

Notifiable condition: A disease or risk factor that is reported to the Centers for Disease Control and Prevention by the states and the District of Columbia.

Nuclear scanning: Used to show heart damage and expose problems in the heart's pumping action. A scanning camera shows nuclear material taken up by the heart (healthy areas) and not taken up (damaged areas).

Objective: A defined result. Objectives can be considered intermediate or programmatic. They do not always reflect the ultimate change sought.

Opportunistic infections: Infections that take advantage of the opportunity offered when a person's immune system has been weakened by HIV infection. At least 25 medical conditions, including bac-

terial, fungal, and viral infections and certain types of cancer, are associated with HIV infection.

Ozone: Ozone occurs naturally in the stratosphere and provides a protective layer high above the earth. At ground-level, however, ambient ozone is the prime ingredient of smog. Ambient ozone refers to ozone in the troposphere—the air that people breathe—which is different from ozone in the stratosphere, the hole in the ozone layer. Ozone is not emitted directly into the air but is formed readily in the atmosphere, usually during hot summer weather, from volatile organic compounds emitted by motor vehicles, chemical plants, refineries, factories, consumer and commercial products, other industrial sources, trees, and from nitrogen oxides emitted by motor vehicles, power plants, and other sources of combustion. Changing weather patterns contribute to yearly differences in ozone concentrations from city to city.

Pandemic: An epidemic over a large area or country.

Pap (Papanicolaou) test: Microscopic examination of cells collected from the cervix. The Pap test is used to detect cancer, changes in the cervix that may lead to cancer, and noncancerous conditions, such as infection or inflammation.

Parity/mental health parity: Equivalent benefits and restrictions in insurance coverage for mental health services and for other health services.

Particulate matter: General term used for a mixture of solid particles and liquid droplets found in the air. These particles, which come in a wide range of sizes, originate from "built" and natural sources. Fine particles (PM2.5) result from fuel combustion from motor vehicles, power generation, and industrial facilities, as well as from residential fireplaces and wood stoves. Coarse particles (PM10) generally are emitted from other sources, such as vehicles traveling on unpaved roads, materials handling, and crushing and grinding operations, as well as windblown dust.

Patient barriers: Any mental, physical, or psychosocial condition that prevents an individual from accessing needed health care. Examples include attitudes or biases, mental disorders or illnesses, behavioral disorders, physical limitations, cultural or linguistic factors, sexual orientation, and financial constraints.

Patient day: A day or part of a day for which a patient was hospitalized.

Per capita water use: The average amount of water used per person during a standard period, generally per day. In the United States, this measure usually is reported in gallons per day.

Physical activity: Bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure.

Physical fitness: A set of attributes that persons have or achieve that relates to the ability to perform physical activity. Performance-related components of fitness include agility, balance, coordination, power, and speed. Health-related components of physical fitness include body composition, cardiorespiratory function, flexibility, and muscular strength/endurance.

Point source: The source of water coming from a specific location, such as a drain pipe from a wastewater treatment plant or an industrial plant.

Precision: The fineness of a measurement.

Premature death: A death that occurs earlier than the life expectancy for most members of the population.

Prevalence: A proportion of persons in a population who are infected, at a specified point in time or over a specified period of time, with HIV.

Primary care provider: A physician who specializes in general and family practice, general internal medicine, or general pediatrics, or a nonphysician health care provider, such as a nurse practitioner, physician assistant, or certified nurse midwife.

Primary care: According to the Institute of Medicine, "The provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.

Primary enforcement: A stipulation of a safety belt use law that allows law enforcement officials to stop a driver solely on the basis of a safety belt law violation.

Primary prevention: Health care services, medical tests, counseling, and health education and other actions designed to prevent the onset of a targeted condition. Routine immunization of healthy individuals is an example of primary prevention.

Prophylactic: Something that guards against or prevents disease.

Prophylaxis: Measures designed to prevent the spread of disease and preserve health; protective or preventive treatment.

Provider barriers: Any mental, physical, psychosocial, or environmental condition that prevents or discourages health care providers from offering preventive services. Examples of provider barriers include a poor practice environment, lack of knowledge, and lack of efficacy studies.

Provider referral: Formerly called contact tracing, the process whereby health department personnel directly and confidentially notify the sex partners of infected individuals about their exposure to a sexually transmitted disease for the purposes of education, counseling, and referral to health care services.

PSA (prostate-specific antigen) test: A test that measures the level of an enzyme (PSA) in the blood that increases due to diseases of the prostate gland, including prostate cancer.

Quality of life: An expression that, in general, connotes an overall sense of well-being when applied to an individual and a pleasant and supportive environment when applied to a community. On the individual level, health-related quality of life (HRQOL) has a strong relationship to a person's health perceptions and ability to function. On the community level, HRQOL can be viewed as including all aspects of community life that have a direct and quantifiable influence on the physical and mental health of its members.

Quality: Simply stated, it is doing the right thing, for the right patient, at the right time, with the right outcome.

Rape: Forced sexual intercourse, including both psychological coercion and physical force. Forced sexual intercourse means vaginal, anal, or oral penetration by the offender(s) and includes incidents of penetration by a foreign object. Also included are attempted rapes, male and female victims, and heterosexual and homosexual rape.

Registry of Toxic Effects of Chemical Substances (RTECS®): Maintained by the National Institute for Occupational Safety and Health, this database contains information on the toxic effects of chemical substances. The list of substances includes drugs, food additives, preservatives, ores, pesticides, dyes, detergents, lubricants, soaps, plastics, extracts from plant and animal sources, plants or animals that are toxic by contact or consumption, and industrial intermediates and waste products from production processes.

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Reportable disease: A disease for which there are legal requirements for reporting and notification to public health authorities. In the United States, requirements for reporting diseases are mandated by state laws or regulations, and the list of reportable diseases in each state differs.

Resilience: Manifested competence in the context of significant challenges to adaptation or development.

Risk factor: Something that increases a person's chance of developing a disease.

Schizophrenia: A mental disorder lasting for at least six months, including at least one month with two or more active-phase symptoms. Active-phase symptoms include delusions, hallucinations, disorganized speech, and grossly disorganized or catatonic behavior. Schizophrenia is accompanied by marked impairment in social or occupational functioning.

School health education: Any combination of learning experiences organized in the school setting to predispose, enable, and reinforce behavior conducive to health or to prepare school-aged children to be able to cope with the challenges to their health in the years ahead.

Screening for mental health problems: A brief formal or informal assessment to identify persons who have mental health problems or are likely to develop such problems. The screening process helps determine whether a person has a problem and, if so, the most appropriate mental health services for that person.

Secondary enforcement: A stipulation of a safety belt use law that allows law enforcement officials to address a safety belt use law violation only after a driver has been stopped for some other purpose.

Secondary prevention: Measures such as health care services designed to identify or treat individuals who have a disease or risk factors for a disease but who are not yet experiencing symptoms of the disease. Pap tests and high blood pressure screening are examples of secondary prevention.

Secondhand smoke: A mixture of the smoke exhaled by smokers and the smoke that comes from the burning end of the tobacco product.

Sedentary: Denotes a person who is relatively inactive and has a lifestyle characterized by a lot of sitting.

Serious emotional disturbance (SED): A diagnosable mental disorder found in persons from birth to age 18 years that is so severe and long-lasting that it seriously interferes with functioning in family, school, community, or other major life activities.

Serious mental illness (SMI): A diagnosable mental disorder found in persons aged 18 years and older that is so long-lasting and severe that it seriously interferes with a person's ability to take part in major life activities.

Seronegative: Indicates that a person's blood lacks antibodies to a specific infectious agent, such as HIV.

Seropositive: Indicates that a person's blood contains antibodies to infections, such as HIV.

Serostatus: The result of a blood test for the antibodies that the immune system creates to fight specific diseases.

Serum cotinine: A biological marker for tobacco use and exposure to environmental tobacco smoke measured in the blood. Cotinine is a breakdown product of nicotine.

Sexual assault: A wide range of victimizations separate from rape and attempted rape. Included are attacks or attempted attacks of unwanted sexual contact between the victim and the offender that may or may not involve force and includes grabbing or fondling. Verbal threats also are included.

Sigmoidoscopy: A procedure in which the physician or health care provider looks inside the rectum and the lower part of the colon (sigmoid colon) through a flexible lighted tube. During the procedure, the physician or health care provider may collect samples of tissues or cells for closer examination.

Social capital: The process and conditions among people and organizations that lead to accomplishing a goal of mutual social benefit, usually characterized by four interrelated constructs: trust, cooperation, civic engagement, and reciprocity.

Stress test: Records the heart beat while exercising and is done because some problems only show up when the heart is working hard. These tests are not completely reliable because of false positives and false negatives.

Stroke: A form of cerebrovascular disease that affects the arteries of the central nervous system. A stroke occurs when blood vessels bringing oxygen and nutrients to the brain burst or become clogged by a blood clot or some other particle. Because of this rupture or blockage, part of the brain does not get the flow of blood it needs. Deprived of oxygen, nerve cells in the affected area of the brain cannot function and die within minutes. When nerve cells cannot function, the part of the body controlled by these cells cannot function either.

Subepidemic: The morbidity that occurs within a proportion of the population infected by the epidemic.

Substance abuse: The problematic consumption or illicit use of alcoholic beverages, tobacco products, and drugs, including misuse of prescription drugs.

Surveys: Methods of polling a group or population to estimate norms and distribution of characteristics from a sample, using observations, questionnaires, or interviews.

System barriers: Conditions within a health care system that prevent people from accessing needed services or prevent health care providers from delivering those services. System barriers include physical, cultural, linguistic, and financial barriers as well as the availability of health care facilities or providers with special skills, such as eye, ear, nose, and throat specialists.

Tertiary prevention: Preventive health care measures or services that are part of the treatment and management of persons with clinical illnesses. Examples of tertiary prevention include cholesterol reduction in patients with coronary heart disease and insulin therapy to prevent complications of diabetes.

Toxic Release Inventory (TRI): EPA's list of more that 600 designated chemicals that threaten health and the environment. Authorized under the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986, this system requires manufacturers to report releases of these chemicals to EPA and State governments. EPA compiles the data in an online, publicly accessible national computerized database.

TOXLINE: A collection of online information on drugs and other chemicals maintained by the National Library of Medicine.

Transit: Represents what used to be called "mass transit." The 1990 Nationwide Personal Transportation Survey (NPTS/U.S. Department of Transportation) included the following modes in its transit count: bus, subway, or elevated rail; commuter rail; streetcar; and trolley. The 1995 NPTS characterizes a "trip" as travel to a destination (e.g., work site). Travel to work, for instance, that includes two stops along the way (trip chains) would constitute three "trips."

Trauma registry: A collection of data on patients who receive hospital care for certain types of injuries, such as blunt or penetrating trauma or burns. Such collections are designed primarily to ensure quality care in individual institutions and trauma systems but also provide useful data for the surveillance of injury and death.

Universal preventive interventions: Interventions targeted to the public or a whole population group that have not been identified on the basis of individual risk. The intervention is desirable for everyone in that group. Universal interventions have advantages in terms of cost and overall effectiveness for large populations.

Urban sprawl: Unplanned and inefficient development of open land.

Usual source of care: A particular doctor's office, clinic, health center, or other health care facility to which an individual usually would go to obtain health care services. Having a usual source of care is associated with improved access to preventive services and follow-up care.

Vaccine Adverse Event Reporting System (VAERS): A passive surveillance system that monitors vaccine safety by collecting and analyzing reports of adverse events following immunization from vaccine manufacturers, private practitioners, state and local public health clinics, parents, and individuals who receive vaccines. CDC and the Food and Drug Administration work together to implement VAERS.

Vaccines: Biological substances used to stimulate the development of antibodies and thus confer active immunity against a specific disease or number of diseases.

Validity: How well an indicator represents what one intends to measure. It is similar to accuracy, but refers to the relation between the measurement and its underlying concept.

Vector-borne diseases: Illnesses that are transmitted to people by organisms, such as insects.

Vigorous physical activity: Rhythmic, repetitive physical activities that use large muscle groups at 70 percent or more of maximum heart rate for age. An exercise heart rate of 70 percent of maximum heart rate for age is about 60 percent of maximal cardiorespiratory capacity and is sufficient for cardiorespiratory conditioning. Maximum heart rate equals roughly 220 beats per minute minus age. Examples of vigorous physical activities include jogging/running, lap swimming, cycling, aerobic dancing, skating, rowing, jumping rope, cross-country skiing, hiking/backpacking, racquet sports, and competitive group sports (for example, soccer and basketball).

Violence: The intentional use of physical force or power, threatened or actual, against another person or against oneself or against a group of people, that results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation.

Viral STDs: Refer to the sexually transmitted viral infections—HIV infection, genital herpes, and HPV infection. Initial infections with these organisms may be asymptomatic or may cause only mild symptoms. Hepatitis B virus and hepatitis C virus can be transmitted through sexual activity.

Vulnerable and at-risk populations: High-risk groups of people who have multiple health and social needs. Examples include pregnant women, people with human immunodeficiency virus infection, substance abusers, migrant farm workers, homeless people, poor people, infants and children, elderly people, people with disabilities, people with mental illness or mental health problems or disorders, and people from certain ethnic or racial groups who do not have the same access to quality health care services as other populations.

Water-borne disease outbreaks: Includes only outbreaks from infectious agents and chemical poisoning incidents in which two or more people experience a similar illness after consumption or use of water intended for drinking and epidemiologic evidence implicates water as the source of illness. The stipulation that at least two people be ill is waived for single cases of laboratory-confirmed, primary amebic meningoencephalitis and for single cases of chemical poisoning if water-quality data indicate contamination by the chemical.

Years of potential life lost (YPLL): A statistical measure used to determine premature death. YPLL is calculated by subtracting an individual's age at death from a predetermined life expectancy. The Centers for Disease Control and Prevention generally uses 75 years of age for this purpose (e.g., a person who died at aged 35 years would have a YPLL of 40).

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Community Hospital of Lancaster
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Franklin & Marshall College
Human Relations Commission
Lancaster Community Indicator Project
Lancaster Council of Churches
Lancaster County Chamber of Commerce and Industry
Lancaster County Drug and Alcohol Commission
Lancaster County Planning Commission
Lancaster General Hospital
Lancaster Lebanon IU#13
Lancaster Medical Society
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Southeast Lancaster Health Services
Special Kids Network
St. Joseph Health Ministries
United Way of Lancaster County
Urban League of Lancaster
Welsh Mountain Health and Dental Services

FRANKLIN & MARSHALL

Lancaster General Hospital

DEPARTMENT OF HEALTH
…in pursuit of good health

St. Joseph Health Ministries

Executive Summary

Lancaster Healthy Communities and SHIP

In 1999, Lancaster Healthy Communities was chosen as one of the seven original pilot partners by the Pennsylvania Department of Health in developing a State Health Improvement Plan (SHIP). This new State Health Planning strategy focused on developing local health priorities that the state and federal government would then incorporate into their own policy and funding strategies. In 2000, LHC convened local partners to begin a data-driven, evidence-based preliminary analysis of the health status of Lancaster County using Healthy People 2010 as a lynchpin to federal and state objectives. The goal was to set forth a local health improvement plan that would focus attention on maintaining strategies that were working and highlighting areas that needed community attention. Our local effort is now known as the Lancaster Health Improvement Partnership (LHIP).

What We Studied and Why

We looked at data from Health Resources and Services Administration (HRSA), The Department of Health, The State of the Child, and the Behavioral Risk Factor Surveillance Survey. We compared local results with the objectives found in the national health plan (Healthy People 2010), national and state trends, and with geographically adjacent and demographically peer counties in Pennsylvania (as defined by HRSA). We determined the areas needing further research and we asked experts to join in our analysis. Often we were motivated to look at additional data sources because of the sheer lack of reliable local data and information on an issue. We had an epidemiologist evaluate our work. The epidemiologist looked at data reviewed by LHC and supplemented it with information from Healthy People 2010 (HP 2010), the PA Behavioral Risk Surveillance System, the U.S. Census, the PA Health Care Containment Council (PHC4), and the PA Department of Health's Health Statistics. The reference counties referred to in this report include Chester, York, Berks, Dauphin, Lebanon, Lehigh, and Northampton counties. As a result, other areas of concern were then highlighted for deeper investigation. The criteria we used to choose our indicators and specific measures is available in the introduction to the full report.

We chose indicators based on leading indicators proposed by HP 2010 and the National Institute of Medicine study groups that put together the original lists from which the HP 2010 indicators were chosen. We believe leading indicators are useful because they help us to focus attention on a small number of key health and social issues. In that way we can motivate actions that work to change the basic factors that really impact and influence our personal and community health. And by having a wide variety of agencies, organizations, diverse populations groups, and community institutions focusing on a small number of indicators, we not only have a greater impact on the community-selected issues but also, by acting together, we reinforce a strong community identity.

Focus Areas	Goals
Access to Health Care	Increase access to quality health care
Environmental Quality	Promote healthy environments
Immunization	Prevent infectious disease through immunization
Injury and Violence	Promote safety and reduce violence
Mental Health	Promote mental health and well-being
Nutrition and Overweight	Promote healthier weight and good nutrition
Physical Activity	Promote regular physical activity
Responsible Sexual Behavior	Promote responsible sexual behavior
Substance Abuse	Prevent and reduce substance abuse
Tobacco Use	Prevent and reduce tobacco use

We looked at the 467 target objectives that measured various aspects of the focus areas set by HP 2010 to help gauge our performance but also to set our own standards.

We diverged from HP 2010 by including Heart Disease and Stroke, Cancer Prevention and Screening, and Cognitive Development. Local data strongly supported that additional attention be paid to these areas to improve local health status.

Cancer	Reduce the number of new cancer cases as well as the illness, disability, and death caused by cancer.
Cognitive Development	Promote a physical and emotional environment that provides for greatest possible intellectual development in infants and growing children.
Heart Disease and Stroke	Improve cardiovascular health and quality of life through the prevention, detection, and treatment of risk factors for heart disease and stroke.

How Are We Doing in Lancaster County

Lancaster County is fortunate to be among the wealthiest and healthiest counties in the state. That means that we do pretty well when we analyze our general health status. We often rank below our peer counties in both incidence and mortality, but there are pockets of problems. These problems are often related to access—systemic, economic and cultural—but not exclusively. We must each take responsibility for lifestyle choices that affect our short, and long-term personal health.

The first issue is wrapped up with the general state of health care across the United States and Pennsylvania specifically. The shortage of health care professionals (nurses, dentists, specialists, psychiatrists) is hampering our community's ability to deliver what we know is the best care and treatment for our community. Lack of tort reform and inadequate reimbursement for services are eating at the economic sustainability of health care systems and impacting the ability of physicians to practice medicine in Pennsylvania. Managed care has restricted the amount of time physicians spend with each patient. This adds up to precious little time being spent on prevention and education, which were to be the hallmarks of the HMO's strong primary care system. The start-up and roll-out of the Health Choices (managed care program) for the Lancaster County Medicaid population is progressing. We will be able to provide some analysis of its effectiveness in maintaining access to services in our next report.

Additionally, our lack of good health surveillance systems and consistent equivalent data collection across provider networks hampers the development of real safety nets and standardized protocols that would be vital in times of emergency such as bio-terrorist attack. Often it is difficult to analyze what the exact rates are for target populations because local data is not collected in a uniform and comparable manner or the information is not broken down in small enough data bits to allow for proper analysis. For example, previous Behavioral Risk Factor Surveillance Surveys (that tell us about people's behaviors related to prevention and intervention) were based on such a small sample of Lancaster County residents that it was not statistically reliable. This lack of data makes it difficult to clearly identify causes for disparities in health outcomes, let alone address them in a focused and scientific manner.

Finally, stronger prevention and education support networks are critical to improving the community's and individuals' health. It is important that we find the resources to continue ongoing prevention work and build on the successes we have achieved. We cannot be complaisant in the face of the changing health care system and market place. We have to demand that prevention and education be given their due when budgets are being decided. The long-term positive effects will be reflected not only on the bottom lines of businesses and the health care systems but in the better quality of life that will be enjoyed by individuals who are healthier and live more productive lives.

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Access to Care

▲ Health care systems in the county are abundant and costs for hospital and nursing home stays are lower than the state's average. Community/migrant health centers are available.

▼ Health care professionals and specialists (particularly psychiatrists and dentists) are needed to serve everyone. There are very few minority professionals practicing in Lancaster County.

▼ As in other PA counties, specialists have be closing practices due to malpractice insurance costs and the inability to provide good care under the current reimbursement structures.

▲ Overall poverty levels in Lancaster County are below the national, state, and most reference counties.

▼ Poverty rates for African Americans and Hispanics are much higher than for majority population, and poverty is a major risk factor for all health conditions.

▼ Medicaid in PA does not provide preventive dental care—only emergency dental services.

▼ The insured rate is higher than most referent counties, though it is slightly lower than the statewide rate. The HP 2010 objective calls for 100% health care insurance coverage. The percentage of jobs in the county offering health care benefits is decreasing.

▼ High school graduation rates are lower than the state average, lower than reference areas, and worse than HP 2010 goals.

▼ Drop-out rates for minority individuals was much higher than for whites and above HP2010 goals.

Recommendations

■ Advocate for a myriad of reforms that will stabilize malpractice insurance costs.

■ Develop a community coalition that will develop a plan to recruit identified professionals to Lancaster County.

■ Work with the Business Group on Health and government entities to challenge insurance providers to develop products that include prevention, mental health, dental, eye care, and pharmaceutical coverage at a reasonable cost.

■ Continue to support and grow Healthy Beginnings Plus and Nurse Practitioner Partnership programs so that all mothers under 20 receive support through the first two years of their baby's life.

■ Continue to support efforts at every level to provide all children with 100% access to health care services and an ongoing source of primary care.

■ Support the new local initiatives by Welsh Mountain Dental and Medical Clinic and Lancaster Community Health Plan to increase access to quality oral health services for all in need of services.

■ Continue to support school districts' efforts to increase graduation and literacy rates.

Cancer

▲ The overall cancer mortality rate (age-adjusted—116/100,000) is lower than that of the state overall, most referent areas, and the HP 2010 objective of 159/100,000.

▲ All cancer rates are below the state and local rates.

▼ Bladder and kidney cancer rates seem to be elevated above many of the reference counties.

▼ The death rate from breast cancer, however, is higher than the state, each surrounding county, and considerably higher than the HP 2010 objective of 22.2/100,000 women.

▼ The incidence rate for colon cancer is lower than the state and referenced counties but the mortality rates for men and women are higher than our peer and neighboring counties and the HP 2010 objective. We are slightly lower in incidence and mortality rates than the state. Colorectal cancers are the second leading cause of cancer deaths in Lancaster County.

▶Though lung cancer is the third leading cause of death from cancer in Lancaster County, the death rate is below the state and local level but higher than the HP 2010 objective.

Recommendations

- Work with the local chapter of the American Cancer Society to improve community outreach efforts about prevention and early detection of cancer in the minority communities.
- Establish study groups that will analyze incidence and mortality rates for breast and colorectal cancers, develop strategies to address the disparities, and work to implement the plan.
- Support efforts to combine the local Cancer Registry data with GIS mapping capabilities.
- Develop a prevention campaign that emphasizes diet and exercise.

Cognitive Development

▼ The rate of early prenatal care in Lancaster County is lower than the average for the state and most reference counties, and considerably lower than the Healthy People 2010 objective of 90%.

▼ Breakdown by race and ethnicity indicates that all groups are below the HP 2010 objective for early prenatal care but only Caucasians are below the state average for their ethnic group.

▲ Rates of low birth weight births, very low birth weight births, and premature births in Lancaster County are lower than the rates for the state and most reference counties. In fact, the rates are at or below the HP 2010 objectives.

▼ Infant mortality, while lower than the state average, is higher than much of the reference counties and considerably higher than the HP 2010 objectives for both white and black infants.

▼ The rate of eligible children enrolled in Head Start is lower than state average and most referenced counties.

▼ The regulated childcare spaces per 100 children under 14 who are in need is lower than the state average and referenced counties.

Recommendations

- Continue supporting and growing more outreach efforts that encourage early and ongoing women's health care and pregnancy care.
- Regularly review the findings of the Child Death Review Team and encourage them to investigate infant mortality data in Lancaster County.
- Support the United Way of Lancaster County initiative—Success By Six—to increase quality childcare and health care options for children and their families.

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Environmental Quality

▲ Wildlife-associated infections (Lyme disease and rabies) are below the state rate and the HP 2010 objectives.

▼ Rates of infection from contaminated food and water (campylobacter, giardiasis, hepatitis A, salmonellosis, and shigellosis) are elevated over the state average and most referent counties and worse than HP 2010 objectives.

▼ The rate for hepatitis A is below the HP 2010 objective; the rates for campylobacter and salmonellosis are higher than the HP 2010 objective and higher than reference counties. While these infections are generally self-limiting, serious morbidity is possible for residents of advanced age, the very young, and those who are otherwise immuno-suppressed.

▼ Lancaster County has been regularly classified by EPA as a non-attainment area, since 1997, for poor air quality, which means that we fail to meet the HP 2010 objective.

Recommendations

■ Infection linked to food and water contamination suggests close examination of the county's food, water, and sewage systems. On-lot systems should be part of this study.

■ Support the efforts of the Susquehanna Valley Ozone Action Partnership to reduce air pollution through a variety of activities and educational efforts.

■ Advocate for transportation, road, and community plans that support individuals' efforts to car pool, bus, bike, or walk to work, school, shop or for recreation, thereby reducing vehicle miles traveled by families and individuals.

■ Support an effort to study the effects of commercial and home use of pesticides and herbicides on county watersheds.

Heart Disease and Stroke

▶ Heart disease is the overall leading cause of death in Lancaster County. While the death rate is lower than the state rate and the rates for most reference counties, at 200.2/ 100,000 residents, it is well above the HP 2010 objective of 166/100,000 residents.

▼ Black males and females in Lancaster County have much higher age-adjusted mortality rates due to CHD than whites in Lancaster County. The rates here are higher than state and national rates.

▼ Death from stroke in Lancaster County is reported at 59.8/100,000 residents, which is lower than the state and a few reference counties. It is above the HP 2010 objectiv,e which stands at 48/100,000.

Recommendations

■ Convene a group to study the mortality rates for heart disease and stroke for Lancaster County.

■ Support the efforts of the local chapters of the American Heart Association and Stroke Association to raise awareness of the risk factors and early signs of stroke and heart attack.

■ Continue to support workplace and neighborhood efforts to develop safe places for people of all ages to walk, exercise, and be physically active.

■ Advocate for changes in pharmaceutical coverage so that medications that prevent heart disease and stroke are available to those at risk.

Immunization

▲ Average annual rates of infectious diseases in Lancaster County are generally low, but a few diseases stand out as above average for the state or region or are diseases which could be prevented through vaccination.

▶Other vaccine preventable diseases, including measles, pertussis, congenital rubella, and H. flu, are either not reported or reported at a very low level, generally below the state and referent county rates. However, since these diseases are vaccine preventable, reported rates should essentially be zero.

▲ Deaths from pneumonia and influenza are lower than the state average and three of the reference counties.

▲ The tuberculosis rate is below the state and most referent county rates, though slightly elevated over the HP 2010 objectives there are indications, however, that non-symptomatic TB may be on the rise.

Recommendations

■ Vaccination programs could eliminate most morbidity from hepatitis A and B, influenza, pneumococcal disease, H. flu, and pertussis. Community outreach programs that are culturally sensitive should be financially supported wherever possible.

■ Hospitals should consider using ER's as a place to increase vaccination rates for all populations.

■ Support a community effort to collect information on immunization compliance at every age level and in private schools.

■ A plan to quickly and systematically immunize all in the community should be developed as part of emergency planning for bio-terrorist attack.

Injury and Violence

▼ The rate of unintentional injury in Lancaster County is lower than the overall state rate, but is higher than the reference counties and the HP 2010 objective.

▼ Unintentional injury rates for those 25–44 are higher in Lancaster County than for our peers, the state, and HP 2010 objectives.

▲ Mortality from motor vehicles is lower in Lancaster County than the state overall and also for most reference counties.

▼ The rate of hospitalization from motor vehicle accidents is higher in Lancaster County than most referent counties, indicating a high incidence of severe motor vehicle accidents. The age group with highest rate of hospitalization from motor vehicle accidents is the 15–34 age group.

▼ The rate of overall child (1–19 years of age) death is higher than the state average and the rate for much of the reference area.

▲ The rate of overall child (1–19 years of age) death for African American and Hispanic children is lower than the state average.

▲ Violence in the form of homicide is below the average for the state, most reference counties, and the HP 2010 objective.

Recommendations

■ Data must be collected that separates occupational and non-occupational injuries. In order to target prevention efforts, the nature of injuries must be known. This is very important if we are to do prevention work within specific age groups.

■ Emergency department (ED) patient records and hospital discharge systems are an important source of public health surveillance, and we need to begin collecting data from pre-emergency room sources (EMT). Because of the volume and case mix of patients they treat, EDs are well positioned to provide data on cause and severity of injuries.

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■ Primary care physicians can be instrumental in screening for family violence issues that range from child and spousal abuse to elder abuse. Training and efficient tools must be shared with physicians to maximize the limited time they have with patients.

■ Develop and implement anti-violence curriculum that can be used with pre-K and kindergarten students. Strategies for reducing violence should begin early in life, before violent beliefs and behavioral patterns can be adopted.

■ Violence prevention programs for youth need to focus on strategies that reduce involvement in physical fighting and bullying. Entire communities must be prepared to establish and maintain behavior standards that discourage violence everywhere.

■ Respite care and respite opportunities for families in crisis, mediation services and training, shelters for runaway teens, drug and alcohol prevention, and intervention programs are all in short supply, but they are very effective ways to mitigate community
violence.

Mental Health

There is no way to accurately *count* those suffering from mental illnesses locally. Accurate accounting of the incidence of illness locally may enable our community to calculate its impact on productivity, which may, in turn, help to build our political and societal will to deal with mental illness more effectively. We may then be able to adequately recruit and train enough professionals to deal with the challenges our families, businesses, and communities face. All but one item below is a general statement that pertains to Lancaster County as well as the nation.

▲ The rate of suicide was less than the state average and all other reference counties, yet it was higher than the HP 2010 objective.

▼ Lancaster County has few psychiatrists and fewer child psychiatrists. Psychologists are also in high demand. Waiting lists are long, and many psychotropic prescriptions are written by family physicians without psychiatric consultation.

▼ Close to six percent of the adult U.S. population use the general medical sector for mental health care, with an average of about four mental health visits per year—far lower than the average of 14 visits per year found in the specialty medical sector. (Regier, D.A.; Narrow, W.; Rae, D.S.; et al. "The de facto U.S. mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services." *Archives of General Psychiatry* 50:85–94, 1993.)

▼ In 1998, the Mental Health Parity Act (P.L. 104–204) was implemented to help increase access to care. (The term "parity" or "mental health parity" refers generally to insurance coverage for mental health services that includes the same benefits and restrictions as coverage for other health services.) Although the Federal Mental Health Parity Act is quite limited in reducing insurance coverage discrepancies between physical and mental disorders, 53 percent of the U.S. population is now covered by state mental health parity laws.

Recommendations

■ Provide efficient screening tools and training opportunities for Primary Care Practioners on mental health issues.

■ Survey the number of Primary Care Practitioners who attended training on mental health issues, psychotropic meds, and systemwide mental health referrals.

■ Track the number of bicultural/bilingual mental health professionals.

■ Implement a mandatory process at Barnes Hall and within Juvenile Probation and Parole to increase the number of juveniles in the juvenile justice system being screened for mental health problems, drug and alcohol abuse, and learning disabilities to 100%.

■ Support a community coalition to develop a plan to prioritize the most critical mental health issues in Lancaster County, including the coordination of services.

■ Work with business groups to increase percentage of employers who provide health insurance and who have some kind of Employee Assistance Program or contracted service for such.

Responsible Sexual Behavior

▲ The rates of sexually transmitted infections (syphilis, chlamydia, and gonorrhea) are below the state average and generally lower than the referent counties.

▼ Rates for both AIDS and STD's are higher than the HP 2010 goals. The AIDS rate is lower than the state average and many of the referent counties. Since HIV infection is not reportable, it is difficult to determine the significance of HIV in the county. However, available incidence data for STD's and AIDS/HIV in the minority community suggests a great disparity in all rates.

▼ The rate of hepatitis B infection is above both the state average and that for referent areas and higher than HP 2010 objectives.

▲ The overall rate of induced abortion for the county is approximately 9%. The induced abortion rate is considerably lower than the state (19%) and each reference county.

▼ Despite the low level of induced abortion, at least 10% of the county's pregnancies are deemed unwanted.

▼ Teen pregnancy rates are lower than the state, most reference county rates, and the HP 2010 objective. But given the risks associated with teen motherhood—for themselves and their children—this should be even better.

▼ Of all births to Hispanic and African American women of Lancaster County, almost one-third were to unmarried women under 20 years of age.

Recommendations

■ Develop more programs that help parents become better at imparting information.

■ As the main source of STD information for most teenagers, school-based interventions should be developed to inform young people about STD exposure and transmission issues and to motivate them to modify their behaviors.

■ Investigate combining school-based health information and school-based health service programs as a prevention and intervention strategy.

■ Mass media campaigns have been effective in bringing about significant changes in awareness, attitude, knowledge, and behaviors for other health problems, such as smoking. Consider a campaign around responsible sexual behavior.

■ Introduce Peter Benson, Ph.D., Search Institute–based programs: 40 developmental assets with outcome-based data. Having these assets within your community decreases the rates of teen pregnancy.

■ More community health centers/clinics with women's health practitioners and services need to be located in high-risk areas. Provide services within walking distance or on bus routes.

■ Provide more parenting programs for teens to break the cycle and prevent a second birth.

■ Prosecute statutory rape.

■ Provide timely service and reduced waiting time for teens that are looking for services.

■ More integration between HIV and STD services, especially in agencies which provide HIV outreach education and among adolescents.

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■ Increase the numbers of bilingual persons fluent in both Spanish and English to deal with all STDs and HIV/AIDS.

■ Develop more detailed and accurate statistical gathering procedures. Although it may be beneficial to look at AIDS mortality, the common concern is addressing the issues of those individuals living with the virus.

Next year LHIP will release a report based on a Behavioral Risk Factor Surveillance Survey that was conducted in Lancaster County in 2002. That report will have a great deal of data related to the following Leading Health Indicators. We did not feel that the samples of Lancaster County that had been done in the past were significant enough to provide accurate data. Therefore, we did not use past BRFSS data for Lancaster County in this report. We look forward to bringing you those results and having more pointed recommendations at that time.

Nutrition and Overweight

▼ The proportion of adults defined as obese by a BMI of 30 or greater has increased from 14.5 percent to 22.5 percent.

▼ A similar increase in overweight and obesity also has been observed in children above age 6 years in both genders and in all population groups.

▼ Children who eat poorly, but are not overweight, are at risk for being overweight as an adult and also of developing diseases associated with a high-fat, high-caloric diet.

Recommendations

■ A concerted public effort will be needed to prevent further increases of overweight and obesity. LHIP will convene an action group around the issues of Nutrition and Overweight and Physical Activity to begin assessing local data and developing a campaign strategy to highlight the importance of these behaviors to fundamental health risks.

■ Health care providers, health plans, and managed care organizations need to be alert to the development of overweight and obesity in their clients and should provide information concerning the associated risks.

■ Health care professionals as well as those training to be primary care physicians need more training related to diet, nutrition, and exercise.

■ Preventive counseling related to diet and nutrition must be reimbursable for consumers and physicians.

■ Over the years, the recognition of the consequences of food insecurity (limited access to safe, nutritious food) has led to the development of national measures and surveys to accessibility to fresh food, hunger, and the ability to assess disparities. Lancaster County should begin developing such measures locally.

Physical Activity

▲ The state of Pennsylvania is in the process of accepting new Academic Standards for Health, Safety, and Physical Education proposed by the PA Department of Education. These standards are for all grade levels.

▼ Data to evaluate access and availability of community fitness facilities are not available.

▼ People with mental/physical disabilities are less physically active than people without disabilities.

▼ By age 75, one in three men and one in two women engage in no regular physical activity.

Recommendations

- Daily, adaptive physical education programs should be available for children with special needs.
- Lobby school boards and legislatures to develop a well-designed health education curriculum that can help students develop the knowledge, attitudes, behavioral skills, and confidence needed to adopt and maintain physically active lifestyles.
- Work with the PTOs to develop an educational campaign highlighting the need for parents and educators to become role models.
- Develop a campaign to reinvigorate the Presidential Fitness Awards for students and the promotion of physical activity and fitness in children and adolescents.
- Primary care providers must increase their counseling of patients about the need to participate in physical activity.
- Ensure that facilities are accessible to people with disabilities.
- Increase work site fitness programs.
- Develop a campaign to increase physical activity in the work force that is community-wide in scope and emphasizes community fitness and health.

Substance Abuse

The Pennsylvania Youth Survey, which measured levels of substance use and related risk factors among middle school and high school students, was conducted in Lancaster County during April and May 2000. A total of 6,404 students in 6th through 12th grade from seven public school districts and three private schools participated. (This is not considered a good enough sampling by local experts, who would like to do a survey more in line with the National Youth Survey or National Household Survey on Drug Abuse.) However, it is difficult to get school districts to agree to yet another survey or even to one survey. BRFSS should help us gather more information on adult use.

▼ 12% of 6th graders (Lancaster) reported using alcohol over the past 30 days, which is worse than the HP 2010 goal of 11% for all 12 to 17 year olds for all illicit drugs.

▼ 24% of 8th graders (Lancaster) reported using alcohol over the past 30 days, which is worse than the HP 2010 goal of 11% for all 12 to 17 year olds for all illicit drugs and worse than the national baseline of 19%.

▼ 39% of 10th graders (Lancaster) reported using alcohol over the past 30 days, which is worse than the HP 2010 goal of 11% for all 12 to 17 year olds for all illicit drugs and is worse than the national baseline of 19%.

▲ 4% of 6th graders (Lancaster) reported using any illicit drugs over the past 30 days, which is better than the HP 2010 goal of 11% for all 12 to 17 year olds.

▶ 9% of 8th graders (Lancaster) reported using any illicit drugs over the past 30 days, which is better than the HP 2010 goal of 11% for all 12 to 17 year olds.

▼ 13% of 10th graders (Lancaster) reported using any illicit drugs over the past 30 days, which is better than the HP 2010 goal of 11% for all 12 to 17 year olds and worse than the national baseline of 10%.

▶ 6th and 8th grade marijuana use was better than the baseline of 8.3% but worse than the goal of .7% admitting to using marijuana.

▼ 20% of 10th graders reported using marijuana over the past 30 days, which is worse than the national baseline rate and the HP 2010 goal.

▼ PA binge drinking in adults is higher than national rates and above HP 2010 goals.

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Recommendations

- States could require periodic server training or use the regulatory authority of alcohol distribution licensing to mandate a minimal level of training for individual servers.
- Colleges should institute a requirement that college students reporting to student health services following a binge drinking incident receive an alcohol screening that would identify the likelihood of a health risk.
- The state of Pennsylvania should continue to restrict all marketing to underage populations, including limiting advertisements and promotions. Although alcohol advertising has been found to have little or no affect on overall consumption, this strategy may reduce the demand that results in illicit purchase or binge consumption.
- Advocate for a medical approach to substance abuse treatment that includes adequate reimbursement for clinically necessary services through funding mechanisms such as the Substance Abuse Prevention and Treatment Services Block Grant and Medicaid or private insurers.
- Develop more appropriate settings and care for dually-diagnosed patients.

Tobacco Use

▼ The smoking rate for Pennsylvania is about twice the HP 2010 goal.

▲ Hispanics (18 percent) and Asians or Pacific Islanders (13 percent) are less likely to smoke than other groups.

▼ Persons with 9 to 11 years of education (38 percent) have significantly higher levels of smoking than individuals with 8 years or less of education or 12 years or more. Individuals with 16 or more years of education have the lowest smoking rates (11 percent).

▼ Individuals who are poor are significantly more likely to smoke than individuals of middle or high income (34 percent compared to 21 percent).

▼ National data reveals high levels of tobacco use among college students. In 1995, 29 percent of college students smoked in the previous month (28 percent of females and 30 percent of males).

▼ By the late 1980s, smoking rates among white teens were more than triple those of African American teens. In recent years, smoking has started to increase among African American male teens. In 1997, 40 percent of white high school females were smokers.

▲ African American female teens continue to have lower smoking rates than all peer groups (17 percent of African American high school females).

Recommendations

- Support the ongoing efforts of the Tobacco Free Coalition of Lancaster County.
- Work with business groups to increase smoking cessation programs through the workplace.
- Develop an anti-smoking campaign that addresses personal and insurance costs as well as quality of life issues.
- Support the excise tax on tobacco products.
- Encourage local colleges to aggressively market smoking cessation programs.
- Lobby the state legislature for a comprehensive approach to tobacco use cessation from the health care cost impact perspective—it's good for business.
- Support and encourage restaurants and bars that are or wish to become non-smoking establishments.
- Support the elimination of "preemption" by the state that was added by the state legislature in 1988 as part of the PA State Indoor Air Act.

Next Steps

LHIP is convening four work groups to begin new efforts or to determine how we can best support current initiatives: Cancer, Mental Health, Physical Activity and Weight, and Stroke. The nature of our work with each of these groups will be determined by the current capacity of the community to respond to the target issue.

Additionally, we will be analyzing the data from the Lancaster County 2002 BRFSS that we commissioned and preparing a report for the community. Again, we will compare ourselves with state and national data. We will convene appropriate experts from the community to discuss how the behaviors that were reported affect or can affect the design of health improvement programming. We will also work on charting trends for some of the data we have already collected in this report.

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