

INTRODUCTION TO SHIP

CHAPTER 7
HOW PREVENTION MAKES
ECONOMIC SENSE



Chapter
7

How Prevention Makes Economic Cents

WHY PREVENTION?

When health is measured by the length of life or by the quality of that life we cannot afford to ignore the urgency of prevention. According to the Centers for Disease Control and Prevention, our nation spends more on health care than any other country in the world. Much of the expenditures in health care in both the U.S. and Pennsylvania can be attributed to the diagnosis and treatment of chronic diseases and conditions such as diabetes, obesity, cardiovascular disease and asthma. A much smaller amount is spent on preventing these conditions. Expenditures for healthcare continue to rise each year. However, a much smaller amount of dollars go towards prevention. There is accumulating evidence that much of the morbidity and mortality associated with conditions such as diabetes, obesity, and cardiovascular disease may be preventable. This chapter attempts to demonstrate how prevention costs outweigh the costs of continued treatment.

In 2003 for both Pennsylvania and the U.S., the three leading causes of death were heart disease, cancer and stroke according to Pennsylvania Vital Statistics. In the U.S. for example, the cost of cardiovascular diseases and stroke, the first and third leading causes of death, in 2005 is estimated to be \$393.5 billion, according to the American Heart Association and the National Heart, Lung, and Blood Institute (NHLBI). This figure includes both direct and indirect costs. Direct costs include the cost of physicians and other professionals, hospital and nursing home services, the cost of medications, home health care and other medical durables. Indirect costs include lost productivity that results from illness and death.

The economic burden of cancer, the second leading cause of death, is the economic cost to the nation associated with expenditures on cancer preventive, screening and treatment services, the economic cost associated with time and effort spent by patients and their families undergoing cancer treatment and the economic cost associated with lost productivity due to cancer-related disability and premature death. According to the National Institutes of Health, cancers cost the United States more than \$189.8 billion in 2004. This amount includes over \$69.4 billion in direct medical costs and more than \$120 billion in lost productivity.¹

"So many of our health problems can be avoided through diet, exercise and making sure we take care of ourselves. By promoting healthy lifestyles, we can improve the quality of life for all Americans, and reduce health care costs dramatically."

Tommy G. Thompson,
Secretary, DHHS

Chronic disease risk factors also place huge economic demands on our nation.

Direct medical expenditures attributed to smoking total more than \$75 billion per year. In addition, smoking costs an estimated \$80 billion per year in lost productivity. According to Campaign for Tobacco Free Kids, Tables 7-1 and 7-2 show the toll of tobacco in Pennsylvania.

Table 7-1

Smoking-Caused Monetary Costs in Pennsylvania²	
Annual health care costs in Pennsylvania directly caused by smoking	\$4.78 billion
Portion covered by the state Medicaid program	\$1.50 billion
Residents' state & federal tax burden from smoking-caused government expenditures	\$638 per household
Smoking-caused productivity losses in Pennsylvania	\$4.42 billion

Amounts do not include health costs caused by exposure to secondhand smoke, smoking-caused fires, spit tobacco use, or cigar and pipe smoking. Other non-health costs from tobacco use include residential and commercial property losses from smoking-caused fires (more than \$500 million per year nationwide); extra cleaning and maintenance costs made necessary by tobacco smoke and litter (about \$4+ billion nationwide for commercial establishments alone); and additional productivity losses from smoking-caused work absences, smoking breaks, and on-the-job performance declines and early termination of employment caused by smoking-caused disability or illness (dollar amount listed above is just from productive work lives shortened by smoking-caused death).

- Nationwide, youth smoking has declined since 1997, but remains at high levels.
- The 2004 National Youth Tobacco Survey (YTS) found that 21.7% of U.S. high school kids smoke and 9.9% of high school males use spit tobacco.

Other risk factors such as dietary factors and sedentary patterns are together accountable for multiple deaths each year. In 2000, health care costs associated with physical inactivity were more than \$76 billion in U.S. dollars. Each year, over \$33 billion in U.S. dollars in medical costs and \$9 billion in U.S. dollars in lost productivity due are due to heart disease, cancer, stroke, and diabetes are attributed to poor nutrition.⁴

Through a comprehensive, coordinated and community-based approach these risk factors, which are embodied in the Healthy People 2010 leading health indicators, can be addressed for the overall health of the community and ultimately the state.

Recently, public and private efforts and programs are increasingly designed to promote healthy behaviors. Employers are becoming more aware that overweight and obesity, lack of physical activity, and tobacco use are adversely affecting the health and productivity of their employees and ultimately, the businesses' bottom line. As a result, innovative employers are providing their employees with a variety of work-site-based health promotion and disease prevention programs. These programs have been shown to improve employee health, increase productivity and yield a significant return on investment for the employer. For example, a recent review of health promotion and disease management programs found a significant return on investment for these programs, with benefit-to-cost ratios, ranging from \$1.49 to \$4.91 (median of \$3.14) in benefits for every dollar spent on the program.⁵ Several major companies with award-winning

Table 7-2

Tobacco's Use in Pennsylvania³	
High school students who smoke	23.1%
Kids (under 18) who become new daily smokers each year	25,000
Kids now under 18 and alive in Pennsylvania who will ultimately die prematurely from smoking	299,800
Adults in Pennsylvania who smoke	22.7%
Adults who die each year from their own smoking	20,000
Annual health care costs in Pennsylvania directly caused by smoking	\$4.78 billion

cost-saving health promotion disease prevention programs are summarized in the U.S. Department of Health and Human Services *Prevention Makes Common "Cents"* and they include the following programs:

- Motorola's wellness program, which saved the company \$3.93 for every \$1 invested.
- Northeast Utilities WellAware Program, which in its first 24 months reduced lifestyle and behavioral claims by \$1,400,000.
- Caterpillar's Healthy Balance program, which is projected to result in long-term savings of \$700 million by 2015.
- Johnson & Johnson's Health and Wellness Program, which has produced average annual health care savings of \$224.66 per employee.

As of April 2006, these programs are still being implemented and information is still available on their perspective websites.

The Pennsylvania Employees Benefit Trust Fund who administers health care benefits to eligible Commonwealth of Pennsylvania employees, retirees and their dependents, has begun a health promotion program called **Get Healthy**. This is a voluntary health management program. The goal is to provide employees with information and resources they can use to manage their health care, maintain good health and get the best value from their medical plan. As of 2006 this program is still in its startup phase; however it is a good example of a prevention program that focuses on increasing quality and years of healthy life.

The Economic Impact of a Healthy Health Workforce

In Pennsylvania, the health services sector is the largest employer, accounting for 589,400 jobs or 10.3 percent of all employment in the Commonwealth in 2000. The health services sector is projected to remain the largest employer, growing to 642,560 jobs or 10.7 percent in 2010.⁶ This increase of 53,160 jobs between 2000 and 2010 is the second highest increase in number of new jobs after the projected increase of 57,360 business services sector jobs. Such an increase is likely to require an in-migration of employees and their families to the sites where these jobs are, and this will have its own positive economic benefits. In order to prevent death and disease and increase the quality of life, a healthy health professional workforce is needed. As citizens of Pennsylvania are living longer lives, the care for those individuals must come from well-trained and highly skilled health professionals.

Currently, a series of Special Reports on the Health Workforce are released under the auspices of the State Health Improvement Plan, which provide lawmakers, researchers, academics, and state agencies with objective, factual data concerning the characteristics of various health professional populations in the Commonwealth. Since 2002, the Department has released reports on the following components of the health workforce:

- ✓ Registered Nurses
- ✓ Licensed Practical Nurses
- ✓ Nursing Education Programs
- ✓ Physicians (MDs and DOs)
- ✓ Dentists
- ✓ Dental Hygienists

All of these reports are available for downloading on the Department's web site, www.health.state.pa.us under the State Health Improvement Plan (SHIP) section.

Future Directions

Research designs have yet to compare community health outcomes between communities with a community health improvement partnership and communities without a community partnership. Preliminary outcomes from the Coalition for Drug-Free Greater Cincinnati, however, suggest that the presence of a community coalition, collaborative, or partnership does influence positive health outcomes. From 1993 to 2000 among 7th to 12th graders there was a 41% *decrease* in marijuana use in the region where a coalition existed, but a 33% *increase* in marijuana use in the same region where a coalition did not exist. Similarly, from 1993 to 2000 among 7th to 12th graders, there was a 23 % *decrease* in alcohol where a coalition existed, but alcohol use remained constant where a coalition did not exist.⁷

Conclusions

Community health can impact economic development by:

Providing employment to the residents of an area, as well as being a potential employer to persons who would relocate in the area to obtain employment.

Raising the purchasing power of the clients these efforts serve by reducing or removing the need for more purchasing expense health care and by increasing the quality of life of those clients so that they may pursue interests that they would not have been otherwise able to pursue.

Increasing the productivity of the workforce by reducing or removing conditions that would otherwise impact on that productivity. This, in turn, makes that workforce more attractive to businesses considering relocation.

Expanding community building initiatives that build upon existing community resources and assets and increase the ability of residents to solve local problems through strategic partnerships.

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- ¹ Center for Disease Control, available online at www.cdc.gov/cancer/minorityawareness/overview.htm Accessed December 16, 2005.
 - ² Campaign for Tobacco-free Kids, available online at: <http://www.tobaccofreekids.org/reports/settlements/toll.php?StateID=PA>
 - ³ Campaign for Tobacco-free Kids, available online at: <http://www.tobaccofreekids.org/reports/settlements/toll.php?StateID=PA>
 - ⁴ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, The Power of Prevention; Reducing the Health and Economic Burden of Chronic Disease, April 2003
 - ⁵ U.S. Department of Health and Human Services, Prevention Makes Common "Cents", September 2003, <http://aspe.hhs.gov/health/prevention/prevention.pdf>
 - ⁶ Pennsylvania Department of Labor and Industry; Long-Term Industry Employment Projections.
 - ⁷ The Drug-Free Communities Program Works: Successes Fact Sheet. Accessed online at http://cadca.org/CoalitionResources/PP-Documents/DFC_OverviewofCoalitionOutcomes3.pdf on 01/03/05.