

Healthy New Jersey 2010

A HEALTH AGENDA FOR THE FIRST
DECADE OF THE NEW MILLENNIUM

Volume I

Who We Are

Overall Health Status

Access To Health Care

Fundamentals Of Good Health

Donald T. DiFrancesco
Acting Governor



Christine Grant
Commissioner

This edition supersedes the October 1999 Draft. It includes additional objectives and updated data. Baseline data in this edition are based on availability as of March 1, 2001.

Healthy New Jersey 2010 is available online at the Department of Health and Senior Services' Web site at <http://www.state.nj.us/health/chs>.

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Healthy New Jersey 2010

Volume I:

Introduction

Who We Are-New Jersey Compared to the Nation

New Jersey's Public Health Agenda

- < Overall Health Status
- < Access to Health Care
- < Fundamentals of Good Health



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CHRISTINE GRANT, ID, MBA
Commissioner

June 2001

Dear Colleague:

It is my pleasure to present this edition of *Healthy New Jersey 2010*, the final and updated version of the 1999 draft document. This report outlines an agenda to build a healthier New Jersey, an agenda to shape our present and sustain our future.

During the 20th century, the health and life expectancy of persons residing in New Jersey improved dramatically. But in measures of health status experienced by racial and ethnic minority populations, there remain unacceptable disparities. During the public comment phase for the 1999 draft document, we heard from many organizations and individuals deeply concerned with our decision to present indicators with two benchmarks: a target to reduce disparities and a preferred 2010 endpoint at which disparities are eliminated. After long consideration, we have kept the two benchmarks. They represent our challenge. The State's acceptance of this terminology and establishment of two benchmarks cannot be construed as complacency or acceptance of the existing conditions.

Our goals are to eliminate health disparities and increase the quality and years of life, but articulating the goals is only the first step. The challenge and responsibility to achieve these goals starts now and will only happen if we act to identify new strategies and to accept shared responsibility and accountability.

Our next step is to implement public health promotion and prevention efforts. We look forward to working in partnership with you as we move forward to achieve these goals in this decade.

Sincerely,

Christine Grant
Commissioner



NEW JERSEY
Many Faces. One Family.

Acknowledgments

The original draft was prepared by an Inter-Departmental Work Group. Their knowledge and expertise were fundamental to the development of the draft and final publication, *Healthy New Jersey 2010*. The members of that work group are listed in Appendix H. This report was prepared only with the assistance of many people. Many members of the programmatic staff of the participating agencies provided critical assistance in providing updated data, details of program activities and in responding to questions.

Additional information and comments came from three public meetings and written comments, during which the Department of Health and Senior Services heard from many individuals, organizations and institutions involved in health promotion and prevention efforts. Among those sharing their experience and knowledge were Lowell Arye, Executive Director, Alliance for the Betterment of Citizens with Disabilities; Evelyn Dries, Vice President of Prevention & Detection, American Cancer Society; Charles Dennis, MD, Founding President, Heritage Affiliate, American Heart Association; Margorie Bromberg, Senior Director, Programs and Services, American Lung Association of NJ; Thomas Baffuto, Executive Director, The ARC of NJ; Beverly Roberts, Program Director, The ARC of NJ, Mainstreaming Medical Care; Carol Kester Bjornsen; Ruth S. Gubernick, MPH, LINCS Coordinator, Camden County Department of Health and Human Services; Nancy Ann Corbett, EdD, NP-C, Family Nurse Practitioner; Dr. Mary B. Todd, Deputy Director, Cancer Institute of NJ; Violet Padaychi Cherry, ACSW, LSW (NJ), MPH, CHES, Director of Health Services/Health Officer, Englewood Department of Health; Anita Leone, Executive Director, Family Planning Association of NJ; Lauren Agoratus, Family Voices/National Family Caregivers, SPAN; Susan E. Counsell, Prevention Education Coordinator, Spina Bifida Association of NJ for the Folic Acid Coalition of NJ and Tracey Reed, Director of Program Services, March of Dimes for the Folic Acid Coalition of NJ; Bob Friant, Gluckshaw; Beverly Henderson, RN, Director, Medical Associates of Essex; Marianne McEvoy, MPA, RN, Public Health Nursing Supervisor and Mary Zetterstrom, BSN, RN, Public Health Nurse Coordinator, County of Hunterdon, Department of Health; Jaspreet Kaur, MD, Medical Director, Khaleidoscope Health Care; Kem Louie, Ph.D., C.S., F.A.A.N.; Dorothy Leung Blakeslee and Noreen P. White, Municipal Advisory Partners, Inc.; Susan Lachenmayer, State Public Policy Coordinator, NJ Alzheimer's Association State Public Policy Coalition; Carol Wolff, Camden AHEC, Sally Henry, Garden AHEC and Cynthia Robbilar, Shore AHEC, NJ Area Health Education Centers; Mark Guarino, President, NJ Association of County Health Officers; Debra L. Wentz, Ph.D., Executive Director, NJ Association of Mental Health Agencies, Inc.; Alicia Dermer, MD, IBCLC, President-Elect, NJ Breastfeeding Task Force; Ann M. Wilson, D.S.W., Director, NJ Coalition for Prevention of Developmental Disabilities; Jack Terhune, Commissioner, NJ Dept. of Corrections; Karen M. Ensel, R.D., F.A.D.A., President, NJ Dietetic Association; Fred Patterson, Chair, Governor's Council on the Prevention of Mental Retardation and Developmental Disabilities; Frank A. Grisi, Health Officer, President, NJ Health Officers Association; NJ Hospital Association; Valerie Sellers, NJ Hospital Association; Clement R. Ferdinando, 2nd Vice President, NJ Public Health Association; Barbara DeMarco Reiche, Public Affairs Counsel, NJ Speech-Language-Hearing Association; Dr. Barbara J. Bohny, RN, CS, Chair Elect, Congress on Practice, NJ State Nurses Association; Kiameesha Evans, CHES, MPH(c), Coordinator, NJ Women and AIDS Network; Herbert W. Roeschke, Health Officer, Borough of North Plainfield; Kathryn Aveni, RNC, MPH, Nursing Coordinator (Quality Assurance), Northern NJ Maternal and Child Health Consortium; Jacqueline Spencer, Program Coordinator, Ilise Zimmerman, Executive Director, Northern NJ Maternal/Child Health Consortium; Yvonne Wesley, RN, Ph.D.(c), Director of Research and Development, Northern NJ Maternal and Child Health Consortium; Susan Walsh, MD, FACP, Medical Director, Plainfield Health Center, Julane Miller-Armbrister, CEO/President Plainfield Health Center, Chair, NJ Primary Care Association, Advisory Commission NJDHSS OMH; Sharon Rose Powell, Ed.D., President, Princeton Center for

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Healthy New Jersey 2010
A Health Agenda for the First Decade of the New Millennium

Table of Contents

VOLUME I	<u>Page</u>
I. Introduction 1	
II. Who We Are - New Jersey Compared to the Nation	9
III. New Jersey's Public Health Agenda	15
1. Overall Health Status	17
2. Access to Health Care	23
3. Fundamentals of Good Health	
3A. Environmental Health	37
3B. Healthy Mothers and Young Children	47
3C. Healthy Behaviors - Adolescents	65
3D. Healthy Behaviors - Adults	79
3E. Occupational Health and Safety	89
3F. Unintentional Injury	95
3G. Preserving Good Health for Seniors	103
 VOLUME II	
4. Preventing and Reducing Major Diseases	
4A. Heart Disease and Stroke	117
4B. Diabetes	123
4C. Cancer	133
4D. HIV/AIDS	147
4E. Mental Health	155
4F. Addictions	165
4G. Asthma	171
4H. Infectious Diseases	177
4I. Sexually Transmitted Diseases	181
5. Strengthening Public Health Capacity	187

Table of Contents (Continued)

VOLUME II (Continued)	<u>Page</u>
IV. Appendices	
A. Abbreviations and Acronyms	A-1
B. Definitions	B-1
C. Data Precision	C-1
D. Rates and Ratios	D-1
E. Statistical Methodology	E-1
F. New Jersey Health Plan Employer Data and Information Set	F-1
G. ICD-9 Codes for Cause-Specific Healthy New Jersey 2010 Mortality Objectives	G-1
H. Healthy New Jersey 2010 Inter-Departmental Steering Committee Members	H-1
V. Tracking Healthy New Jersey 2010	
Part A: General Data Issues	
1. Target Setting and Assessing Progress for Measurable Objectives	Tracking-1
2. Developmental Objectives	Tracking-3
3. Population Estimates	Tracking-5
4. Age Standardization	Tracking-9
5. Changes in Reporting of Cause of Death Data	Tracking-17
6. Changes in Categorization of Race and Ethnicity	Tracking-19
Part B: Major Data Sources	
1. Description of Major Data Sources	Tracking-25
2. Healthy New Jersey 2010 Health Measures by Data Source	Tracking-27
3. Healthy New Jersey 2010 Data Sources by Number of Objectives Tracked	Tracking-33
4. Profile of Major Data Sets	Tracking-35

Healthy New Jersey 2010

Volume 1:

Introduction

SECTION 1

INTRODUCTION

Healthy New Jersey 2010 is a public health agenda for the state. It provides a systematic approach to monitoring and tracking health promotion and disease prevention objectives in five major areas:

(1) Overall Health Status; (2) Access to Health Care; (3) Fundamentals of Good Health; (4) Preventing and Reducing Major Diseases; and (5) Strengthening Public Health Capacity.

Background

In adopting a public health agenda, the New Jersey Department of Health and Senior Services (NJ DHSS) follows the example set by the U.S. Department of Health and Human Services' Healthy People initiative. In 1979, the first set of national objectives was published. In 1991, the first set of objectives for this state was published in *Healthy New Jersey 2000: A Public Health Agenda for the 1990s*.

Healthy New Jersey 2000 not only defined a comprehensive set of goals for preventing disease and improving the health of the state's residents over the decade, but also for the first time, identified very specific targets for improvement, as well as indicators to measure progress toward meeting these targets.

Interim reviews evaluating progress toward achieving goals have enabled the state to assess the likelihood of achieving its health targets for the year 2000.¹ Because of the length of time required to collect, process and analyze health indicator data, final measures for *Healthy New Jersey 2000* will not be available for two to three years after the close of the calendar year 2000.

In preparing the *Healthy New Jersey 2010* draft, the NJDHSS formed an Inter-Departmental Steering Committee, conducted focus groups and a public opinion survey, and reviewed the Federal government's 1998 *Healthy People 2010 Objectives: Draft for Public Comment*. The final version of the state's report, *Healthy New Jersey 2010*, prepared by the Inter-Departmental Steering Committee, incorporates additional objectives suggested during the public comment period and identifies future developmental opportunities.

Healthy New Jersey 2010 Goals

Healthy New Jersey 2010 adopts the overarching goals as well as much of the framework of the federal document, *Healthy People 2010*. By the year 2010, New Jersey will endeavor to increase the quality and length of healthy life; and eliminate disparities in health outcomes based on race and/or ethnicity.

To assess progress toward better quality of life for New Jersey residents, a number of objectives are included which address this area directly: life expectancy and quality of life as measured by the percent of persons reporting good, very good or excellent health and the percentage who were able to perform usual activities during the past 30 days because of good physical or mental health. In addition, many of the objectives in *Healthy New Jersey 2010* have effects which, directly or indirectly, impact on quality of life.

There are substantial differences in health status within and among different populations in New Jersey. Health disparities result from a combination of factors including education, environment, gender, genetic susceptibilities, income and other socioeconomic factors, and personal behavior. *Healthy New Jersey 2010* addresses preventable health disparities by focusing on health outcomes in racial and/or ethnic groups as a proxy measure for these other factors. Working towards reducing and ultimately eliminating disparities will require collaboration among a wide array of groups and individuals and comprehensive strategies for these efforts.

Development of Measurable Indicators

For most objectives, *Healthy New Jersey 2010* lists a baseline rate and two outcomes: the projected target and the preferred 2010 endpoint. Based on trend data, current scientific knowledge and available resources, the projected target represents an ambitious but achievable level and in some objectives eliminates health disparities between racial groups. The preferred 2010 endpoint nearly always eliminates the health disparities between racial groups and is more ambitious for all groups. The use of dual targets does not compromise efforts that address “equal access to comprehensive, culturally competent, community-based health care systems that are committed to serving the needs of the individual and promoting community health.”²

Some objectives are labeled “developmental” and do not have targets. A developmental objective is one for which New Jersey does not currently have data, but for which a tracking system is due to be developed within the next few years.

Partnerships

Community partnerships are essential for success in eliminating disparities in health outcomes and increasing quality and length of life. *Healthy New Jersey 2010* provides a common resource to advance public health in this state through health promotion and disease prevention activities. It is through partnerships and planning that the state will be able to reach the preferred endpoints.

Opportunities exist for partnerships. The next stage of the Healthy New Jersey 2010 process will be to bring together community partners, particularly those representing minority populations, to discuss strategies to implement activities at the state and local level that will allow the state to meet its goals.

Accountability

Healthy New Jersey 2010 is primarily focused on identifying quantifiable, measurable objectives for assessing New Jersey’s progress towards its health goals, not on tactics or issues of resource allocation. NJDHSS’ administrative responsibility is to collect, analyze, and publicize the data specific to each objective. A substantial number of objectives will be updated annually, as part of the New Jersey Health Statistics reports.³ At least two comprehensive updates on the progress on every objective will be published during the coming decade.

NJDHSS programmatic activities are summarized at the end of every chapter. As partners in the Healthy New Jersey 2010 process, state agencies will use progress data as one component of ongoing evaluations state agencies use to assess the effectiveness of their programs.

Healthy New Jersey 2010 is intended to inspire and focus the efforts of individuals, groups and communities throughout the state. It is a tool for all entities that influence community health—from other government agencies to businesses to not-for-profit organizations to the general citizenry.⁴ Responsibility for achieving the ambitious goals and objectives is shared among many.

Data

Healthy New Jersey 2010 primarily uses population-based state data and state surveys as sources of measurement of progress. Several data sources suggested during the comment period were not used as they rely on national surveys or are state-based but are not currently available. Only data sources with specific targets for data availability early in the decade were considered adequate as a basis for developmental objectives. In the process of preparing *Healthy New Jersey 2010*, NJDHSS recognizes several limitations on available data.

- Overall Health Status

There has been considerable effort (particularly on the national level) toward developing more sophisticated measures of quality of life, including Years of Healthy Life, Health-Adjusted Life Expectancy, Quality-Adjusted Life Expectancy and Disability-Adjusted Life years. Some of these newer measures require validation and new data sources which must be identified before they can be implemented on the state level. Within the next three years, NJ DHSS will review and report on the reliability of new or additional data sources to identify methods to expand and enhance the ability to measure quality of life through use of some or all of these measures.

- Changing Standards

Beginning with data year 1999, the U.S. Department of Health and Human Services is using a new standard population based on the year 2000 population for age standardization (age-adjustment). Because the baseline year for many of the objectives in *Healthy New Jersey 2010* is 1998, changing to the new standard population will occur in the first update which has implications for the interpretation of mortality trends and comparisons. A more detailed discussion of age standardization is included in the Technical Notes Section.

A second major change is in the method of classification of cause of death. Specific causes of death in *Healthy New Jersey 2010* are classified according to the World Health Organization's Ninth Revision of the International Classification of Diseases (ICD-9). Beginning with the data year 1999, the Tenth Revision will be used. The 1998 baselines used in *Healthy New Jersey 2010* may need to be revised and may not be comparable with data from earlier years. A more detailed discussion of ICD-10 is included in the Technical Notes Section.

- Race and Ethnicity Data

A number of objectives lack baseline data for the American Indian and Alaska Native and Asian or Pacific Islander population and for Hispanic ethnicity.

Due to the size of the American Indian and Alaska Native and Asian or Pacific Islander populations in New Jersey, these groups are not adequately represented in health-related data such as the Behavioral Risk Factor Surveillance Survey (BRFSS) and possibly are underestimated on death certificates. The problem of inadequate representation across diverse populations creates severe limitations on the reliability of these data and their current use in developing baseline statistics.

Health surveillance systems in other states and localities also experience problems in collecting complete and accurate data on ethnicity, making it difficult to make reliable reports on the health of the Hispanic population.

The following abbreviations, consistent with *Healthy People 2010*, will be used throughout this report to identify and categorize areas of data insufficiency:

DSU = Data are statistically unreliable. The data set produces the figure, but the number of respondents is too small to be valid, the proportion of respondents with missing information is too large, or the survey does not have representative data for certain populations.

DNA = Data have not been analyzed. The data set produces the figure, but new methodologies need to be identified to set targets.

N/A = Data are not yet available.

NJDHSS' efforts to improve its ability to report on racial and ethnic differences include increasing the size of the BRFSS sample and evaluating the quality of reporting mechanisms on major data sets. A concerted effort will be made to improve reporting of race and ethnicity in conjunction with statewide implementation of an electronic death certificate.

- Youth Risk Behavior Study (YRBS)

The YRBS has not been consistently representative and has not been cited in *Healthy New Jersey 2010* to support various adolescent health objectives. State agencies are currently discussing ways to collaborate to enhance data collection and improve representation.

- Early Intervention/Children with Special Health Care Needs

Currently there is no population-based source for objectives related to children with special health needs. The NJDHSS Maternal and Child Health program is developing an Early Intervention Data System which may provide a foundation to develop additional measurable objectives for this population.

- Developmental Data Sources

Data sets that are under development or funded for development are used to support several Healthy New Jersey 2010 objectives. Consistent with Healthy People 2010, if the data source is not developed within four years, then the objective will be revised or eliminated from 2010 measures.

NJDHSS is committed to identifying sources or appropriate methodologies to create reliable baseline data for all population groups. NJDHSS intends to research and report on the reliability of additional data sources for the first update of *Healthy New Jersey 2010*.

ENDNOTES

- ¹ New Jersey Department of Health and Senior Services. *Update Healthy New Jersey 2000—A Mid Course Review*. (1999).
- ² U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 Vols. Washington, DC: U.S. Government Printing Office, November 2000.
- ³ For example, New Jersey Department of Health and Senior Services. *New Jersey Health Statistics 1998*.
<<http://www.state.nj.us/health/chs/stats98/hs.htm>>
- ⁴ U.S. Department of Health and Human Services. *Healthy People 2010 Toolkit*.
<<http://www.health.gov/healthypeople/state/toolkit/partners.htm>>

Healthy New Jersey 2010

Volume 1:

Who We Are-New Jersey Compared to the Nation

SECTION II

WHO WE ARE - NEW JERSEY COMPARED TO THE NATION

New Jersey is a geographically small, but heavily populated state. Its population of over eight million people makes it the ninth largest state, with approximately three percent of the total national population.¹ New Jersey is the most urbanized state, but has no single very large city. Only three municipalities have more than 100,000 residents. According to the 2000 Census, New Jersey is the most densely populated state, with 1,134 persons per square mile. The state's population is projected to grow steadily, but slowly, and is projected to add more than 1.4 million people between 1998 and 2025.²

Based on the 2000 census, 72.6 percent of the population were white, 13.6 percent were black, 5.7 percent were Asian and Pacific Islander and 0.2 percent were American Indian or Alaska Native. Another 5.4 percent of the population reported they were "some other race" and 2.5 percent said they were members of two or more races. Approximately 13.3 percent of the population were Hispanic of any race. Compared to most other states, New Jersey is considerably more racially and ethnically diverse.

Population estimates from the 2000 Census show that persons of Hispanic origin (of any race) accounted for approximately 55.4 percent of New Jersey's total population growth from 1990 through 2000. The Hispanic population grew 48.4 percent over the period, far outpacing the 4.2 percent growth rate in the non-Hispanic population. For the first time, there were estimated to be more than one million Hispanic residents in the state as of 1998. Hispanics represented 9.7 percent of New Jersey's population in 1990 and 13.3 percent in 2000. New Jersey had the seventh highest number of Hispanics in the nation, according to 1999 estimates.

Among racial groups, the fastest growth rate in the state was in Asian or Pacific Islanders, which increased by 72.5 percent from 1990 to 2000. This was a continuation of the high growth rate among this population during the 1980s. With an estimated population of 469,435 persons of Asian or Pacific Islander background, New Jersey ranked fifth nationally in numbers of Asian or Pacific Islander residents in 1999. New Jersey's 5.7 percent of total population was the highest proportion of Asian or Pacific Islanders outside the nation's West Coast. Only three western states (Hawaii 63.4%, California 12.1%, and Washington 5.8%) had higher proportions of Asian or Pacific Islanders.

From 1990 to 2000, the black population in New Jersey increased by 5.8 percent. The percentage of blacks in the state's population was 13.6 in 2000. New Jersey's black population ranked thirteenth nationally in 1999 with an estimated population of 1,197,430.

The American Indian and Alaska Native population is estimated to have grown by 42.3 percent in the state between 1990 and 2000. The most recent estimate is that there are 22,625 residents of American Indian/Alaska Native background in the state, representing 0.2 percent of the total population. New Jersey ranked 24th nationally in terms of the American Indian and Alaska Native population in 1999.

Who We Are - New Jersey Compared to the Nation

New Jersey's white population (including both Hispanics and non-Hispanics) decreased by 4.3 percent between 1990 and 2000. There was a net loss of 168,178 non-Hispanic whites in the state during the ten years. However, New Jersey still had the ninth highest white population among the fifty states in 1999 with a population of 6,453,922.

New Jersey's population is also older than the national average, with a median age in 1999 of 37.0 as compared to 35.5 for the nation. The percentage of population aged 65 and older is 13.6 percent in New Jersey and 12.7 percent in the nation as a whole. Similar to the national trend, the oldest age group (85 years and over) is growing at the fastest rate. This group grew by 43.1 percent in New Jersey and 38.1 percent in the nation from 1990 to 1999.³

Historically, both agriculture and manufacturing were prominent in the Garden state. In recent decades, the state has lost manufacturing jobs to other states and overseas competitors. During the second half of the twentieth century, much of the state's farmland has been converted to residential and commercial development. As a result, the state's economy has diversified. According to recent projections, New Jersey's employment growth is projected to occur exclusively in the service-producing industries: transportation, communications, utilities; wholesale and retail trade; finance/insurance/real estate; business and health services; government and public education. The service sector (business and health services) is projected to account for almost 67 percent of the service sector job growth and nearly half of the total employment growth in New Jersey. It is expected the projected growth in health services will be in the non-hospital setting making home health care, nursing care facilities and outpatient services an increasing larger component of the health care services industry.⁴

From 1998 through 2000 New Jersey's total unemployment rate ranged from 3.8 percent to 4.5 percent. Since the beginning of 2000, the rate has been equal to or below the U.S. rate, which was 4.1 percent in May.⁵

New Jersey ranks second in the nation in per capita income and in median household income.⁶ It follows then that the percentage of New Jersey's population living in poverty is much lower than in the nation. In 1999, 7.8 percent of New Jerseyans had incomes below the poverty level, compared to 11.8 percent nationally. Fewer school-aged children live in poverty in New Jersey, 10.9 percent compared to 15.9 percent nationally.⁷

Adult New Jerseyans also exceed national estimates of average educational attainment. In 1999, 87.4 percent of state residents 25 and over had completed high school, compared to 83.4 percent nationally, and 30.5 percent had completed a bachelor's degree or more, compared to 25.2 percent nationally.⁸

Annual reports prepared by the New Jersey Department of Health and Senior Services and by the Centers for Disease Control, *New Jersey 2001 State Health Profile*, allow a comparison of the health status of New Jersey and the United States.⁹

Heart disease, cancer, and stroke, in that order, were the leading causes of death in 1998 in both New Jersey and the nation. New Jersey's age-adjusted mortality rates were slightly lower than the national averages for all three leading causes. In both New Jersey and the nation, age-adjusted death rates in 1997 from these three causes were substantially higher for blacks. As in the total population, New Jersey's mortality rates for blacks due to heart disease and stroke were noticeably lower than the national rates for blacks, whereas cancer mortality rates were only slightly lower.

For a number of specific health indicators, New Jersey differs from the nation as a whole. New Jersey has a lower rate of premature death than the nation as a whole, and the leading causes of premature death are different. HIV infection is a greater cause of premature death in New Jersey, while heart disease, unintentional injury, suicide and homicide have lower rates of premature death than the nation as a whole.

Overall infant mortality in 1998 was lower in New Jersey than for the nation, but the mortality rate for Hispanic infants in the state was higher than for that group nationally.

In 1998 New Jersey had a lower death rate for homicide for all populations than the nation as a whole, and also a lower motor vehicle death rate. New Jersey also had a lower than average rate of traumatic occupational fatalities, but somewhat higher than average occupational lung disease death rate.

In 1999, 3.5 percent of New Jersey adults reported that their daily activities were limited due to poor mental or physical health. This can be compared to the median of 3.0 percent for all states.

In the area of infectious disease, New Jersey's experience varies considerably from the national average. Reported rates of sexually transmitted disease were much lower in New Jersey in 1998 than in the U.S.: 153/100,000 versus 251/100,000 for chlamydia; 97/100,000 versus 131/100,000 for gonorrhea; and 0.8/100,000 versus 2.5/100,000 for primary and secondary syphilis. On the other hand as of December 1999, the estimated rate of adults/adolescents living with AIDS was disproportionately high: 217.4/100,000 in New Jersey versus 141/100,000 in the U.S. Tuberculosis rates in 1999 were also higher in New Jersey: 7.0/100,000 versus 6.4/100,000 nationally.

A 1999 survey of adults indicates that a lower percentage of seniors aged 65 and over in New Jersey report having received vaccinations to prevent influenza (65.3 percent) versus 67.4 percent nationwide. The same survey indicated approximately the same percentage of New Jerseyans (55.1 percent) had a pneumococcal vaccination compared to 54.9 percent nationwide.

In 1998, 29.6 percent of New Jerseyans lived in counties that did not meet the federal Environmental Protection Agency standards for air quality, as compared to the national average of 40.6 percent.

Finally, in terms of the prevalence of healthy behaviors, in 1999 more adult New Jerseyans (32.6 percent) report they are physically inactive compared to the median of all states (27.7 percent). On the other hand, they are less likely to be overweight (54.5 percent versus 56.2 percent), and less likely to smoke (20.6 percent versus 22.6 percent).

ENDNOTES

- ¹ US Bureau of the Census, Population Estimates Program, Population Division. *State Rankings of Population Change and Demographic Components of Population, Period July 1, 1998 to July 1, 1999*. Washington, DC: the Bureau, 1999.
- ² US Bureau of the Census, Population Division, Population Paper Listing #47. *State Population Rankings Summary, New Jersey's Population Projections: 1995 to 2025*.
- ³ Wu, Sen-Yuan. *New Jersey Economic Indicators*. Trenton, NJ: New Jersey Department of Labor (DOL), Division of Labor and Demographic Research, 2000.
- ⁴ New Jersey DOL. *Projections 2008 New Jersey Employment in the 21st Century Volume 1 Industry and Occupational Employment Projections for New Jersey 1998 to 2008 Part A (State Projections)*. Trenton, NJ: New Jersey DOL, Division of Labor Market and Demographic Research, July, 2000.
- ⁵ New Jersey DOL. *New Jersey Unemployment Rate Held at 3.8 Percent in May*, June 13, 2000. [Press Release]
- ⁶ US Bureau of Census. *Money Income in the United States. Current Population Reports, Consumer Income, 1998*. Washington, DC: The Bureau, 1999.
- ⁷ Centers for Disease Control and Prevention. *New Jersey 2001 State Health Profile*. Atlanta, GA: US Department of Health and Human Services, CDC, 2001.
- ⁸ Centers for Disease Control and Prevention. *New Jersey 2001 State Health Profile*. Atlanta, GA: US Department of Health and Human Services, CDC, 2001.
- ⁹ Centers for Disease Control and Prevention. *New Jersey 2001 State Health Profile*. Atlanta, GA: US Department of Health and Human Services, CDC, 2001.

Healthy New Jersey 2010

Volume 1:

New Jersey's Public Health Agenda
< Overall Health Status

One of the two major goals of *Healthy New Jersey 2010* is to increase the quality and length of healthy life. As described in *Healthy People 2010*, “general quality of life encompasses all aspects of life, including health, recreation, culture, rights, values, beliefs, aspirations, and the conditions that support a life containing these elements.”¹ Health is also broadly defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”²

Quality of life may mean different things to different people; however, for the national Healthy People project, the federal government proposes to measure progress toward this goal by tracing indicators of the nation’s mortality and life expectancy; health-related quality of life; and combined or summary measures of a population’s morbidity and mortality. New Jersey’s 2010 objectives make use of the first two types of indicators, tracking two self-reports of health status, years of potential life lost, and life expectancy at birth.

Self reports of health status are based on responses to a state-based telephone survey. Data for calculating years of potential life lost and life expectancy at birth are obtained from death certificates and population estimates. Use of telephone surveys and these summary measures may not accurately reflect health status in smaller populations.³ Due to the small size of New Jersey’s Asian or Pacific Islander population, further analysis is necessary in order to develop targets to measure the health status of this population.

I. Overall Health Status

2010 Objectives

1. Objective: Reduce the years of potential life lost (YPLL) per 100,000 population under 65 years of age to:

4,000.0 for the total population
3,191.5 for whites
6,383.3 for blacks
3,191.5 for Hispanics

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	4,153.5	4,000.0	-3.7	3,191.5	-23.2
White	3,487.1	3,191.5	-8.5	3,191.5	-8.5
Black	7,749.5	6,383.3	-17.6	3,191.5	-58.8
Asian/Pacific Islander	1,533.8	DNA			
Hispanic	3,202.7	3,191.5	-0.3	3,191.5	-0.3

DNA = Data not analyzed

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

Years of Potential Life Lost (YPLL) is a measure of premature mortality. The YPLL rate represents the sum of all the years of life not lived to a defined upper limit applied to the population at risk. Major contributors to YPLL in New Jersey are cancer, injuries, HIV infection and heart disease. The YPLL rate has been decreasing moderately over the past ten years in both the total and minority populations. Projected future decreases in deaths from HIV infection are expected to accelerate the rate of decrease in the YPLL rate.

There were a total of 306 deaths before age 65 with a race classification of Asian or Pacific Islander. Using this figure results in an Asian or Pacific Islander baseline rate of 1,533.8 which is well below the Preferred 2010 Endpoint of 3,191.5. Yet due to the small sample size, possible under-reporting on death certificates and aggregation across diverse sub-populations, this baseline may not accurately reflect the actual health status of this population. Additional analysis is necessary to accurately set targets for this and other indicators.

2. **Objective:** Increase life expectancy at birth, in years to:

80.5 for the total population
81.0 for whites
76.5 for blacks

<u>Populations</u>	<u>1996-1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	77.2	80.5	+4.3	81.0	+4.9
White	78.1	81.0	+3.7	81.0	+3.7
Black	71.6	76.5	+6.8	81.0	+13.1
Asian/Pacific Islander	DSU				
Hispanic	DSU				

DSU = Data are statistically unreliable

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

Although year-to-year improvements in life expectancy are very small, the overall trend for both white and minority populations has been an increasing one over the past decade. However a wide gap remains between white and black life expectancy, reflecting the major white/black disparities existing in health status, outcomes and access.

3. **Objective:** Increase the percentage of persons 18 years of age and over reporting good, very good or excellent general health to:

90.0 percent for the total population
90.0 percent for non-Hispanic whites
84.7 percent for non-Hispanic blacks
90.0 percent for Hispanics

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	87.3	90.0	+3.1	90.0	+3.1
White non-Hispanic	88.3	90.0	+1.9	90.0	+1.9
Black non-Hispanic	82.3*	84.7	+2.9	90.0	+9.4
Asian/Pacific Islander	DSU				
Hispanic	85.6*	90.0	+5.1	90.0	+5.1

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of more than two percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System.

This objective is an overall “self-rated health” measure. This measure’s importance, according to the National Center for Health Statistics, is due to its potential policy value for community mobilization around health issues. It is considered to be a good proxy index for chronic health

I. Overall Health Status

conditions in populations. The Institute of Medicine has recommended the percentage of adults reporting good to excellent health be used as one of 25 Community Health Profile Indicators.

4. **Objective:** Increase days able to do usual activities during the past 30 days, due to good physical or mental health, among persons 18 and over to **28.7**.

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	28.2	28.7	+1.8
White non-Hispanic	28.2	28.7	+1.8
Black non-Hispanic	27.5*	28.7	+4.4
Asian/Pacific Islander	DSU		
Hispanic	28.7*	28.7	+0.0
Adults 65+	27.2	28.7	+5.5

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of more than two percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System.

This objective is a measure of adult “ability days,” one of the three key indicators of population health defined in *Healthy People 2010*. This measure is useful, not only due to universal availability among all states, affording comparability of health status, but also as a measure of Health-Related Quality of Life. Disparities in “ability days” are found in the black non-Hispanic population and among the elderly.

Discussion

During the twentieth century the life expectancy of Americans increased dramatically. Much of the progress has resulted from success in controlling infectious diseases, through adoption of sound public health preventive practices, such as protecting the quality of drinking water, disposing of waste in a sanitary fashion, and introducing widespread immunizations against once lethal and crippling diseases, such as polio. Advances in medical treatment have also contributed to significant reduction in the mortality and morbidity of major diseases, such as coronary heart disease. Life expectancy continues to grow: an American baby born in 1979 was expected to live 73.7 years.² In 1998, the average life expectancy at birth was 76.7 years. In New Jersey, life expectancy for infants born from 1995 through 1998 was 77.2 years, greater than the national average. Substantial gaps in life expectancy persist between whites and blacks in New Jersey, as in the nation. If New Jerseyans are successful in closing the gaps identified in many of the subsequent 2010 objectives, the result should be a considerable gain in the life expectancy for blacks, narrowing the gap.

Another mortality measure, years of potential life lost (YPLL), makes the sources of the gaps much clearer. YPLL measures premature mortality, or the difference between 65 and the age at death of someone who dies before age 65. Although the premature death rate in New Jersey is lower than in the nation as a whole, there are still too many of these preventable deaths, and the gap between

YPLL for the white and black populations is very large. The major contributors to YPLL in New Jersey are cancer, injuries, HIV/AIDS, and heart disease, all areas in which there are disparities in white/black mortality rates. New Jersey's goal is to reduce, and eventually eliminate, the racial and ethnic disparities that contribute to premature death.

Increasingly, people are concerned not only with extending life, but in living longer lives unhampered by pain or disability. The state relies on the Behavioral Risk Factor Surveillance System (BRFSS) to measure key indicators related to quality of life and health status. According to New Jersey's BRFSS, in 1999 over eighty-seven percent of New Jersey adults considered their health to be good, very good, or excellent. Once again, however, there are disparities, with only eighty-two percent of blacks and eighty-five percent of Hispanics reporting their health as good, very good or excellent.

Another measure of health-related quality of life is the number of days during a month when individuals are able, due to good physical and mental health, to perform their usual activities. This measure of "ability days" is also, conversely, a measure of disability. New Jersey adults as a whole report a high number of "ability days" per month, 28.2 out of thirty. But both blacks and seniors lag behind the population as a whole. The target for 2010 is to eliminate these disparities while increasing ability days for all.

BRFSS measures outcomes related to health promotion and prevention. Due to the small size of the survey, smaller population groups or individuals with disabilities will not be adequately represented. Beginning in 1999, the NJDHSS increased the size of the total BRFSS sample which should provide opportunities for more precise measurement of health-related quality of life indicators for all populations.

For all of these indicators, progress on the specific objectives in the following chapters should translate into less disease and disability overall, with resulting improvement in health-related quality of life.

ENDNOTES

- ¹ U.S. Department of Health and Human Services, *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 Vols. Washington, DC: U.S. Government Printing Office, November 2000. Vol 1: p.10.
- ² World Health Organization (WHO). *Health for All in the 21st Century*. Geneva: Switzerland: WHO, 1998.
- ³ Rosenberg HM, Maurer JD, Sorlie PD, Johnson NJ, et al. *Quality of Death Rates By Race and Hispanic Origin: A Summary of Current Research, 1999*. National Center for Health Statistics. Vital Health Stat 2(128), 1999.

Healthy New Jersey 2010

Volume I:

New Jersey's Public Health Agenda
< Access to Health Care

Appropriate health care access is defined by the Institute of Medicine as “the timely use of personal health services to achieve the best possible outcomes.”¹ The uninsured are significantly more likely to be in fair or poor health, to have unmet medical needs or surgical care, not to have had a physician or other health professional visit, and to lack satisfaction in quality of care received.² Most Americans have either public or private health insurance, but the number and percentage of those without insurance had steadily risen over the past decade until declining slightly to an estimated 42.6 million or 15.5 percent of all Americans in 1999.³ In New Jersey, there were 1.1 million uninsured people in 1999, 13.4 percent of the population.⁴

Since almost all Americans over age 65 are covered by insurance, chiefly the federal government’s Medicare program, lack of insurance is primarily a problem for those under age 65, especially the working poor and their families. Nationally, 17.4 percent of the non-elderly population was uninsured in 1999. New Jersey’s experience follows this national trend: in 1999 almost all of the 1.1 million uninsured people were under age 65, and constituted 15.0 percent of the non-elderly population.⁵

Nationally the trend for people under age 65 over the last decade has been a discouraging one, as the number of uninsured has grown steadily, from 30.7 million in 1987 to 42.1 million in 1999.⁶ In New Jersey, the percentage of the population in this age group without insurance grew from 9.0 percent in 1987 to 15.0 percent in 1999.⁷ It is particularly disturbing that this trend has occurred during one of the longest and strongest periods of economic growth in the nation’s history. If this trend persists, it has been predicted that 20 percent of all people under age 65 nationally will have no health insurance by the year 2009.⁸

People 18 to 24 years old were more likely than other groups to lack coverage. In 1999, 29.0 percent were without coverage nationally. New Jersey residents 19 to 24 years old had the highest rate of uninsured of any age group; 24.7 percent of this group had no health insurance in 1999.⁹

In New Jersey, the rate of uninsured for Hispanics is higher than that of non-Hispanic whites, 28.9 percent as compared to 11.5 percent respectively. This is consistent with national rates; 33.4 percent of Hispanics are uninsured as compared with 11.0 percent of white non-Hispanics.^{10,11}

Nationally, the foreign-born population was more likely to be without health insurance than natives, 33.4 percent compared with 13.5 percent in 1998.¹²

Lack of health insurance is strongly associated with lack of access to health care services, particularly preventive and primary care. Year 2010 objectives measure not only the extent of health insurance but also access to primary care and oral health care.

2. Access Health Care

2010 Objectives

1. **Objective:** Reduce the percentage of children under age 19 without any health insurance during the past year to **5.0 percent**.

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All children under 19	10.1	5.0	-50.5	4.0	-60.4
White non-Hispanic	8.1	5.0	-38.3	4.0	-50.6
Black non-Hispanic	10.0	5.0	-50.0	4.0	-60.0
Asian/Pacific Islander non-Hispanic	13.6	5.0	-63.2	4.0	-70.6
Hispanic	19.6	5.0	-74.5	4.0	-79.6

Source: United States Department of Commerce, Bureau of the Census

In 1998, New Jersey took the first step in ensuring that all children in the state have access to health insurance through implementation of NJ KidCare, which is a program to provide subsidized coverage to uninsured children living in families at or below 350 percent of the federal poverty level. As of April, 2001, approximately 76,000 eligible children were enrolled, with the numbers steadily increasing each month. The state continues to market the program aggressively to eligible families, as well as expand employer involvement, until affordable health insurance is available to virtually all children in the state. However, evidence suggests that not all families will take up an offer of insurance even when it is affordable. The preferred endpoint presumes, therefore, that some children will remain uninsured.

2. **Objective:** Reduce the percentage of uninsured workers 19 through 64 years of age with children under 18 to:

10.0 percent for the total population
9.0 percent for non-Hispanic whites
11.0 percent for non-Hispanic blacks
13.0 percent for Hispanics

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	12.8	10.0	-21.9	2.0	-84.4
White non-Hispanic	10.0	9.0	-10.0	2.0	-80.0
Black non-Hispanic	13.3	11.0	-17.3	2.0	-85.0
Asian/Pacific Islander non-Hispanic	8.9	DNA		2.0	
Hispanic	29.2	13.0	-55.5	2.0	-93.2

DNA = Data not analyzed

Source: United States Department of Commerce, Bureau of the Census

Because of the coverage of the elderly population by Medicare and the provision of health care coverage to the very poor through Medicaid, the primary uninsured group is the working age population and their families, many of whom do not have insurance at their place of employment. The percentage of this population who reported no health insurance coverage in the entire year prior to the survey had been increasing in recent years but declined slightly or remained stable between 1998 and 1999 for all groups except Hispanics.

A new initiative, NJ FamilyCare, will provide free or low-cost health insurance to uninsured parents and caretakers of children with income up to 200 percent of the federal poverty level and other uninsured adults with income up to 100 percent of the federal poverty level.

3. **Objective:** Increase the percentage of adults who report they have a source of primary care to:

89.0 percent for all adults
 90.0 percent for non-Hispanic whites
 88.0 percent for non-Hispanic blacks
 82.0 percent for Hispanics

<u>Populations</u>	<u>1996 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total adults	83.2	89.0	+7.0	95.0	+14.2
White non-Hispanic	84.9	90.0	+6.0	95.0	+11.9
Black non-Hispanic	80.8*	88.0	+8.9	95.0	+17.6
Asian/Pacific Islander	DSU				
Hispanic	73.9*	82.0	+11.0	95.0	+28.6

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of more than 2.0 percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System.

Source of primary care is self-reported through BRFSS. Data for prior years have tended to fluctuate, without indicating a clear pattern. This may be due to relatively small sample sizes. Getting additional years of data will be helpful in identifying trends and disparities.

2. Access Health Care

4. **Objective:** Increase the proportion of adults aged 18 and older[#] who visit a dentist or dental clinic each year to 80.0 percent.

<u>Populations</u>	<u>1996-1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total Population	73.4	80.0	+9.0
White non-Hispanic	75.9	80.0	+5.4
Black non-Hispanic	62.2	80.0	+28.6
Asian/Pacific Islander	DSU		
Hispanic	66.0*	80.0	+21.2

DSU = Data are statistically unreliable.

#Total population = dentate population + edentulous patients.

*Estimate has a relatively large standard error of more than 2.0 percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System

Oral health care is an essential component of total health care. Oral health includes prevention or elimination of a number of diseases and conditions that occur in the mouth, such as dental caries and gum diseases, birth defects such as cleft lip and palate, and oral and throat cancers. Regular dental visits provide an opportunity for early diagnosis, prevention, and treatment, as well as oral hygiene education. Studies have shown vulnerable populations, including minorities, the disabled and the elderly have higher levels of unmet dental health needs.

- 5a. **Objective:** Reduce the hospital admission rate for Ambulatory Care Sensitive diagnoses of persons under age 65 per 1,000 population to:

13.0 for all persons under 65
12.0 for non-Hispanic whites
20.0 for non-Hispanic blacks
14.0 for Hispanics

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total under 65	15.5	13.0	-16.1	12.0	-22.6
White non-Hispanic	12.4	12.0	-3.2	12.0	-3.2
Black non-Hispanic	29.6	20.0	-32.4	12.0	-59.5
Asian/Pacific Islander	DSU				
Hispanic	15.0	14.0	-6.7	12.0	-20.0

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Division of Health Care Systems Analysis

- 5b. Objective:** Reduce the hospital admission rate for Ambulatory Care Sensitive diagnoses of children under age five per 1,000 population to **21.0**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total under 5	30.9	21.0	-25.6
White non-Hispanic	21.4	21.0	-1.9
Black non-Hispanic	51.9	21.0	-55.7
Asian/Pacific Islander	DSU		
Hispanic	37.8	21.0	-39.2

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Division of Health Care Systems Analysis

Ambulatory Care Sensitive (ACS) conditions are those for which timely and effective primary care could have reduced the risk of hospitalization. In some cases, this care could prevent the onset of an illness or condition; in others it could help control an acute episode or manage a chronic condition. Hospitalization rates for ACS conditions provide an indication of how well New Jerseyans are accessing primary care. Differential targets are set for young children and adults because a higher rate of hospitalization for ACS conditions is experienced by young children.

Discussion

Since the end of the Second World War, the majority of Americans under age 65 have received their health insurance through an employer, either their own or that of a family member. However, the percentage of people with employer-sponsored health insurance (ESHI) has been declining. In 1987, 69.2 percent of those under age 65 had ESHI. By 1997, however, this number had declined to 64.2 percent.¹¹ Because employers offer, and employees accept, health insurance coverage on a voluntary basis, it is not surprising that employment-based health insurance in the United States has never been universal. Traditionally, small employers, particularly those with fewer than 25 employees, have been less likely to offer health insurance than their larger counterparts. Typically, they cite the cost of such insurance as a major barrier. But in the past decade, other factors have come into play. It appears that the primary reason for the decline in ESHI is not that more employers are dropping coverage altogether, but that fewer employees are signing up for coverage with their employers. As health insurance costs have risen since 1987, many employers have responded by asking their employees to share a larger part of the cost than in the past. In 1996, employees had to contribute an average of \$1,615 per year, or about 30 percent of the total premium for family coverage.¹⁴ Smaller employers have been particularly likely to shift more premium cost to employees. It has been reported that in 1998, employees in businesses with fewer than 200 employees paid an average 44 percent of the premium for family coverage, compared to 34 percent in 1988. This translates into an increase in the annual out-of-pocket expense for employees of \$500 - \$1,000.¹⁵ It should not be a surprise that many employees, particularly those with lower incomes, decide that they cannot afford to pay for the health insurance their employer offers.

2. Access Health Care

The public opinion survey conducted as part of the process of developing New Jersey's year 2010 agenda indicated that the public sees health insurance and access to health care as the second leading health care issue facing New Jersey. The surveyed group also felt overwhelmingly that state government has an important role to play in addressing this issue. They did not seem to think the federal government had as important a role. In fact, states can do a lot – but it is also true that federal law greatly limits the impact of state actions. For example, under federal law, if an employer chooses to provide health insurance to employees on a self-insured basis, then that health insurance plan is exempt from any state laws governing benefits, exclusion of coverage due to pre-existing health conditions, consumer rights under managed care, etc. There are no exact data on the numbers of New Jerseyans insured under such exempt plans, but it has been estimated to be half of all insured workers and their families. For this and other reasons, comprehensive solutions to the problem of declining health insurance will require the cooperation and participation of the federal government.

States like New Jersey have been very active in developing strategies that show the way for other states and the federal government. For example, in 1993 New Jersey implemented comprehensive reforms in the health insurance markets for individuals and small employers – including measures such as guaranteed issue and renewal of policies; limitations on pre-existing conditions exclusions; standard benefit packages; and limits on the types of factors that can be used as a basis for charging different premiums to different groups. This law created a level playing field in these markets and ensures that insurance will be available to individuals and employers who want to purchase it. Several years later, the federal government adopted a law with some of these measures that applies to employers of all sizes, including those exempt from New Jersey regulation.

New Jersey and the federal government have joined as partners in NJ KidCare (now NJ FamilyCare) as well. This program, started in 1998, provides comprehensive and affordable health insurance to eligible uninsured children. In July, 1999, eligibility was expanded to include children in families with incomes up to 350 percent of the federal poverty level, with a sliding scale for premiums ranging from \$15/family/month to \$100/family/month. The length of time these children must have been uninsured in order to be eligible was also reduced, from twelve months to six months. In addition, the application forms have been simplified and enrollment can be accomplished by mail. As of April 2001, approximately 76,000 previously uninsured children had been enrolled.

In the course of developing NJ KidCare, the state learned that many poor children who are eligible for free health insurance under the state's Medicaid program are not enrolled in it. The aggressive marketing and outreach programs designed to enroll children in NJ FamilyCare are also being used to increase the number of children enrolled in Medicaid.

If all children who are eligible for NJ FamilyCare or Medicaid enroll in these programs, then the percentage of children who are uninsured should drop to four percent, the preferred 2010 endpoint. Setting the year 2010 target for uninsured children at five percent is extremely ambitious, because it presumes very high enrollment of eligible children. Enrollment rates are rarely this high in practice, but New Jersey will use continuous, aggressive marketing of NJ FamilyCare to convince parents to enroll their eligible children. About half of ineligible children live in families with incomes over 350 percent of poverty; subsidized insurance is not appropriate for this group, although consideration will be given to allowing them to purchase coverage through NJ FamilyCare at full cost. The other half of ineligible children experience only temporary gaps in their insurance coverage, usually as a result of a change in a parent's employment.

NJ FamilyCare is a health insurance program for kids, low and moderate income parents and childless adults in New Jersey. Initial outreach efforts focused on eligible parents/caretakers of the children presently enrolled through NJ KidCare.

If employer-sponsored health insurance continues to decline, however, NJ FamilyCare will not be able to reduce the overall number of uninsured children in the state. For this reason, New Jersey wants to support, not compete with, employer-sponsored health insurance.

To date, the federal government has not chosen to partner with states in a flexible approach to subsidizing employer-sponsored health insurance for low-income uninsured workers. It is obviously preferable to insure whole families, rather than children only. Objective 2 in this section focuses on the insurance status of working parents, and calls for a reduction of more than twenty percent in the percentage of this group that is uninsured. Among the Hispanic population, the reduction would be more than fifty percent. Given the current trend in the opposite direction, this too is a very ambitious target.

Recently enacted state legislation implementing the federal “Ticket to Work” program will enable low and moderate income people with disabilities to return to work or enter the workplace and earn up to 250 percent of the federal poverty level without losing Medicaid health coverage.

In addition to exploring ways to make health insurance more affordable and accessible, New Jersey continues to be at the forefront of states that support a health care safety net. All New Jersey hospitals are required to provide needed care to patients, regardless of their ability to pay for this care. In return for hospitals’ fulfilling this obligation, in 1999 the state continued its long-standing practice of contributing to the cost of this charity care, providing \$520 million in charity care and hospital relief support to hospitals, as well as almost \$11 million to health centers that provide preventive and primary care to the uninsured. In addition, every hospital that provided more than a threshold amount of charity care received a subsidy for at least a portion of its charity care. This supplemental subsidy totals \$36.2 million in FY01. NJ FamilyCare, which is targeted to much of the population that currently gets charity care, should reduce the gap between the amount of charity care hospitals provide and state subsidies.

Financial access to health care is a necessary, but not sufficient condition to assuring genuine access to care. There are many barriers besides cost to access. Physicians or clinics may not be located in places where people can reach them easily, particularly people who lack private transportation. Office or clinic hours may not be convenient for people who are working or going to school. Translation services may not be available. A lack of culturally competent care is of particular importance to eliminating health disparities. New Jersey is a highly diverse state, and growing more so every year. It is important that all health care providers understand and value the cultures of their patients, in order to better serve their health needs. In addition, increasing the numbers of members of racial and ethnic minorities who pursue health careers should contribute to increasing the availability of culturally competent care. As part of its campaign to eliminate disparities in black infant mortality, NJDHSS is working with partners to develop a standard curriculum that would enhance the cultural competency of providers working with black women. This may prove to be a model that could be expanded to other cultural groups and providers.

2. Access Health Care

Access to oral health care is a key indicator to reaching goals related to general health and well-being. Recent reports from the U.S. General Accounting Office indicate low-income populations had a disproportionate level of dental disease.¹⁶ Additional data are necessary to accurately measure access to dental services by minorities, low-income populations and children. In the next two years, additional indicators may be available based on the Maternal Child Health Care Performance measures in the area of oral health including access to regional dental programs by pre-school and school age children.

Expanded insurance, as well as increased availability of culturally competent care, should, by 2010, improve New Jersey's performance on the access to care indicators.

ENDNOTES

- ¹ Institute of Medicine (IOM). In: Millman M., ed. *Access to Health Care in America*. Washington, DC: National Academy Press, 1993, cited by James Gail R, Ph.D., M.S., et al. (1999) Surveillance for Use of Preventative Health-Care Services by Older Adults, 1995-1997. *Morbidity and Mortality Weekly Report* 48(SS08): 51-88, 1999.
- ² Holahan, J. and Brennan, J. *Who are the Adult Uninsured?* The Urban Institute, New Federalism, National Survey of America's Families. Series B, No. B-14.
- ³ *Health Insurance Coverage: 1999*. Washington, DC: the Bureau, 1999, Table B.
- ⁴ New Jersey data from the *Current Population Survey*. Washington, DC: the Bureau, (March 2000).
- ⁵ *Health Insurance Coverage Status and Type of Coverage by State - Persons under 65: 1987-1998*. Washington, DC: the Bureau, Health Insurance Historical Table 6.
- ⁶ *Health Insurance Coverage Status and Type of Coverage by State - Persons under 65: 1987-1998*. Washington, DC: the Bureau, Health Insurance Historical Table 6.
- ⁷ *Health Insurance Coverage Status and Type of Coverage by State - Persons under 65: 1987-1998*. Health Insurance Historical Table 6.
- ⁸ Findlay S. and Miller J. *Down a dangerous path: The Erosion of Health Insurance Coverage in the United States* National Coalition on Health Care, May 1999.
- ⁹ New Jersey data from the *Current Population Survey*, Washington, DC: the Bureau, March 2000.
- ¹⁰ New Jersey data from the *Current Population Survey*, Washington, DC: the Bureau, March 2000.
- ¹¹ *Health Insurance Coverage: 1999*. Washington, DC: the Bureau, Table B.
- ¹² *Health Insurance Coverage: 1999*. Washington, DC: the Bureau, Table B.
- ¹³ Findlay and Miller.
- ¹⁴ O'Brien, Ellen, & Feder, J. *How well does the employment-based health insurance system work for low-income families?* (1998, September). The Kaiser Commission on Medicaid and the Uninsured.
- ¹⁵ Findlay and Miller.
- ¹⁶ United States General Accounting Office. *Oral Health in Low-Income Populations*. GAO/HES-00-72. April 2000.

Healthy New Jersey 2010

Volume I:

< Fundamentals of Good Health

3. Fundamentals of Good Health

3A. Environmental Health

According to the World Health Organization, “environmental health comprises those aspects of human health, diseases, and injury that are determined or influenced by factors in the environment. This includes the study of both the direct pathological effects of various chemical, physical, and biological agents, as well as the effects on health of the broad physical and social environment, which includes housing, urban development, land-use and transportation, industry and agriculture.”¹

Exposure to toxic agents in our homes, air, water and soil can have devastating effects on human health, the food chain and the areas where people work and enjoy the pleasures nature has to offer. Assessment of key environmental indicators and appropriate actions to mitigate environmental concerns are vital to the protection of the public's health.

Over the last quarter century, substantial gains in environmental protection have been made in reducing air and water pollution and improving the safety of drinking water. In addition, in many areas where environmental hazards to human health have been identified, remedial actions have either been completed or are underway.

The year 2010 environmental health objectives for which the New Jersey Department of Environmental Protection (NJDEP) has primary responsibility have been developed to complement the objectives and indicators in that agency's Performance Partnership Agreement with the U.S. Environmental Protection Agency (EPA). The objectives reflect several environmental priorities for the State, including conforming to federal and state air quality and drinking water standards. Due to the adverse health impacts associated with exposure to lead and radon, objectives will also track attempts to increase the number of inspections of homes for lead content and radon. Objectives related to NJDHSS focus on activities to evaluate hazardous waste sites for environmental hazards and public health implications, and to reduce children's exposure to lead. The two agencies collaborate to reduce beach closings due to elevated bacteriological levels. NJDHSS will also enhance its efforts to protect the safety of the food supply by increasing retailers' compliance with standards for handling food.

2010 Objectives

- 1. Objective:** Maintain at **zero** the number of unhealthful days throughout the state, as determined by the National Ambient Air Quality Standards, attributable to carbon monoxide, coarse particulate matter (PM-10), lead, sulfur dioxide and nitrogen dioxide.

<u>Chemicals</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>
Carbon monoxide	0	0	N/A*
Particulate matter	0	0	N/A
Lead	0	0	N/A
Sulfur dioxide	0	0	N/A
Nitrogen dioxide	0	0	N/A

*Not Applicable

Source: New Jersey Department of Environmental Protection

3A. Environmental Health

In July 1997 new national air quality standards were set for five particulate matters (particles less than 2.5 microns in diameter or PM-2.5). Fine particles have been found to increase rates of morbidity and mortality in sensitive individuals. Monitoring for PM-2.5 was initiated in 1999 and three years of data are required to determine if the standards are being met. Data from that first year indicate that the more urbanized parts of the state are not likely to meet the standard.

2. **Objective:** Reduce the number of unhealthful days attributable to ozone to **zero**.

<u>Chemicals</u>	2000		<u>Percent Change</u>
	<u>Baseline Data</u>	<u>Target</u>	
Ozone			
One Hour Standard	4	0	-100.0
Eight Hour Standard	19	0	-100.0

In addition to being associated with respiratory illnesses, episodes of high or prolonged air pollution are associated with increases in mortality. Continued progress in control of stationary and mobile source emissions is necessary to reduce levels of ozone to below the current one-hour standard.

Source: New Jersey Department of Environmental Protection.

- 3a. **Objective:** Increase the percentage of homes in New Jersey that have ever been tested for radon to **30 percent**.

	1996		<u>Percent Change</u>
	<u>Baseline Data</u>	<u>Target</u>	
All homes	10.0%	30.0%	+200.0

Source: New Jersey Department of Environmental Protection.

- 3b. **Objective:** Increase the percentage of homes testing above 4 picocuries per liter of radon that have been mitigated to **40.0 percent**.

	1998		<u>Percent Change</u>
	<u>Baseline Data</u>	<u>Target</u>	
Homes tested > 4 picocuries and mitigated	34.0%	40.0%	+17.6

Source: New Jersey Department of Environmental Protection.

Radon is a naturally occurring radioactive gas and is a common indoor air pollutant. Exposure to radon gas at levels found in some homes has been associated with an increase in the risk of lung cancer.

4. **Objective:** Increase the percentage of community water systems in compliance with all current state and federal drinking water requirements for water quality to **100 percent**:

<u>Sub-Objectives</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>
Chemical standards	93	100.0	+7.5
Radiological standards	98	100.0	+2.0
Microbiological standards	97	100.0	+3.1

*Not Available

Source: New Jersey Department of Environmental Protection.

Drinking water is a direct route of possible exposure to chemical, radiological, and micro-biological contaminants. Poor microbiological quality may result in waterborne infectious disease outbreaks and long-term exposure to chemical and radiological contaminants may pose risks of other adverse health effects.

5. **Objective:** Reduce the annual number of ocean and tidal water beach closings due to elevated bacteriological levels to **30**.

	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>
Beach closings	39	30	-23.1

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

Coastal Cooperative Monitoring Program data are collected by local health departments for beaches and other bathing areas. There are multiple health hazards associated with ocean and tidal water bathing, such as poor bathing water quality, which can be avoided through adequate prevention activities.

6. **Objective:** Increase the cumulative number of public health assessments of hazardous waste sites to **300**.

	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>
Sites Evaluated	180	300	+66.7

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

3A. Environmental Health

Human exposure to contaminants from hazardous waste sites may result in a variety of adverse health effects. Since each site is unique, comprehensive, site-specific public health evaluations are needed to characterize the risk and prioritize the need for follow-up investigations and clean-up. As of 1998, NJDHSS had completed 180 such assessments and plans to increase the cumulative number of assessments to 300 by 2010.

7. **Objective (Developmental):** Increase the percentage of residential lead evaluation/risk assessments conducted that meet performance standards to **90.0 percent**.

	2001		
	<u>Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>
Residential lead evaluations/risk assessments		90.0%	

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

The proper identification of lead based paint and lead paint hazards is a critical step in the prevention of childhood lead poisoning. Assessments of residential hazards should meet performance standards which reflect the state of the science and are found in state regulation.

8. **Objective (Developmental):** Reduce the percentage of initial inspections of retail food establishments where deficiencies are noted to:

_____ percent for improper food holding temperatures
_____ percent for inadequate cooking
_____ percent for poor personal hygiene
_____ percent for contaminated equipment
_____ percent for receipt of food from unsafe sources

	2002		
<u>Areas</u>	<u>Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>
Improper food holding temperatures			
Inadequate cooking			
Poor personal hygiene			
Contaminated equipment			
Receipt of food from unsafe sources			

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

Every year people are made ill by foodborne diseases. Attention needs to be focused on changing behaviors and practices of retail food establishment operators that are directly related to reducing foodborne illness. The category of deficiencies entitled “receipt of food from unsafe sources” includes retail food establishments receiving unregulated home prepared foods, shellfish from non-certified sources, handling unregulated game meat, and receiving low acid and acidified canned food from facilities that are not under regulatory control. Since wholesale food establishments are under regulatory controls, increasing inspections of these types of establishments would not achieve a reduction of retail food establishments from handling foods from unsafe sources. Regulatory and educational efforts of local health departments will focus on intervention activities which will change behaviors and practices.

Discussion

Air Quality

The air in New Jersey is affected by many naturally occurring and manmade pollutants, and air quality in the state varies significantly depending on location, time and weather conditions. Trend data indicate that, over the past 30 years, air quality in New Jersey has improved. Yet ozone and high levels of other air pollutants in certain areas of the state remain a concern. High or prolonged levels of air pollution are associated with increases in morbidity and mortality from respiratory illnesses, such as asthma and lung cancer. Continued progress in controlling both stationary and mobile sources of air pollution locally and in other states is necessary to maintain and improve air quality in New Jersey. NJDEP is working to attain all National Ambient Air Quality Standards established by the EPA throughout the entire state. The State expects to achieve the ozone standard by 2005 for southern New Jersey and by 2007 for the northern portion of the state. To meet these objectives, NJDEP is working with border states to control “transported air pollution,” i.e. pollution transported from other states via prevailing winds. NJDEP is also working to reduce pollution from mobile sources like cars, trucks and buses, as well as stationary sources like factories. Finally, NJDEP will continue to monitor and identify air pollutants and their sources, using continuous air monitoring stations located throughout the state.

A natural source of air pollution that can pose a risk to health is radon. Radon, a decay product of uranium, is a naturally occurring radioactive gas that is found in soil everywhere, but in varying concentrations. Radon gas can enter buildings through cracks and other openings, and may build up to high concentrations indoors. The decay products of radon can damage lung tissue and increase the risk of lung cancer. Indoor radon is the second leading cause of lung cancer after cigarette smoking.

Data on radon levels measured throughout New Jersey were used to assign a radon tier rating to each municipality in the state.

- # Tier 1, or high radon potential areas, have at least twenty-five homes that have been tested, with twenty-five percent or more of these homes having radon concentrations greater than or equal to 4 picocuries per liter of air (4pCi/l).
- # Tier 2, or moderate radon potential areas, have had at least twenty-five homes tested, with five to twenty-four percent of them having radon concentrations greater than or equal to 4 pCi/l.
- # Tier 3, or low radon potential areas, have had at least twenty-five homes tested, with less than five percent of them having radon concentrations greater than or equal to 4 pCi/l.

3A. Environmental Health

New Jersey has also modified its building code to address radon hazards. The Uniform Construction Code requires that new residential and educational buildings located in Tier 1 areas incorporate radon resistant construction to inhibit the entry of radon and simplify the later installation of a subslab radon mitigation system, if needed.

EPA and NJDEP recommend that all residents test their homes for radon and take corrective action if the radon levels are 4 pCi/l or greater. Techniques are available which allow the reduction of radon concentration in buildings. Homeowners can purchase test devices at hardware stores, home centers, and local health departments for \$20 to \$35. Testing can also be performed by businesses that are certified by NJDEP. Mitigation system costs may range from \$500 to \$2,000. Contractors must be certified by NJDEP to perform the mitigation work.

NJDEP uses multiple strategies to increase radon testing and mitigation in New Jersey. It operates a radon information hotline, provides information packets to the public, operates an extensive radon outreach program, operates a testers' and mitigators' certification program, and provides testing in high radon areas (100 pCi/l or more).

As of 1996, approximately ten percent of homes in New Jersey had been tested for radon. About 50,000 radon screening tests are conducted per year, with approximately 400,000 tests conducted since 1991, when the mandatory radon testing certification program was introduced. The number of mitigations gradually increased from 1,783 per year in 1992, to 2,600 in 1996. In the past few years, mitigations have leveled off at approximately 2,300 per year.

Water Quality

Drinking water of high quality is absolutely essential to public health. In addition, New Jersey's surface waters provide habitat and food for numerous species of wildlife, and are an important source of food for people. Over 173 million pounds of fish and 75 million pounds of shellfish are harvested from New Jersey's coastal waters each year. This represents not only a food resource, but also an important economic asset, New Jersey's fishing industry. Tourism in New Jersey's coastal counties, a twelve billion dollar annual industry, represents an even bigger economic asset, one which is very dependent on clean water and beaches. Water quality-related year 2010 objectives are directed toward improving drinking water quality, as well as reducing ocean and tidal water beach closings.

Approximately 1.2 billion gallons of potable, i.e. suitable for drinking, water are used in New Jersey each day. About eighty-seven percent of potable water is delivered by utilities, i.e., "public" water systems; the rest comes from private wells serving individual properties. There are approximately 400,000 private wells in New Jersey. Microbiological and chemical contaminants in water are a major health concern. Poor microbiologic quality may result in waterborne infectious disease outbreaks, while chemical contaminants may cause a variety of other adverse health effects. Both "point" sources of pollution, such as underground storage tanks, and "non-point" sources, such as fertilizers and pesticides, can contaminate groundwater. To monitor for contaminants and ensure compliance with state and federal drinking water standards, NJDEP has established drinking water standards for public water systems. NJDEP monitors drinking water for almost ninety contaminants, with special emphasis on twenty-six volatile organic chemicals, many of which are known or suspected to cause cancer in humans. NJDEP requires testing of public water systems for the twenty-six volatile organic chemicals, and has developed maximum contaminant levels for water systems that serve residents. In 1995, eighty-seven percent of public water systems met drinking water standards for Synthetic Organic Compounds (SOCs), Inorganic Compounds (IOCs), Volatile

Organic Compounds (VOCs), lead and copper, as well as the surface water treatment rule. Likewise in that year, ninety-eight percent met microbiological standards.

In addition to setting standards for public water systems, the state also requires that, when a private well is drilled, it be tested for microbiological contaminants as well as some chemicals. Some counties and local health departments also require testing of private wells when a property is sold.

NJDEP will be developing programs with a focus on increasing consumer awareness of drinking water quality, consumer confidence in reports, and publishing an annual report on the quality of water in New Jersey.

There are 127 miles of Atlantic Ocean coastline in New Jersey, most of which are used for recreational bathing. Additional bathing areas are located in the Sandy Hook and Raritan Bays, the barrier island bays, and estuaries. In New Jersey, local health departments and NJDEP monitor all recreational bathing beaches. NJDEP conducts daily visual inspections by helicopter of all coastal waters for floating debris, algae blooms and illegal discharges. Floating debris or “floatables” include improperly disposed sanitary waste products and blooms. Algae blooms may cause bather rashes, irritated skin, and other conditions, such as ear infections, fever, and eye related disorders. If algae blooms or floatables are observed, local health departments assess conditions for potential impacts to bathers. Starting in May and ending in September, local health departments test ocean water weekly for fecal coliform bacteria, another indicator of water quality. If analysis of ocean water indicates algae, fecal coliform and/or floatables in significant concentrations, local health departments close the beach to recreational bathing.

In addition to monitoring beaches, the State works to prevent the pollution that can cause beach closings. Local health departments aggressively monitor sources of waste water discharges and non-point source pollution that can lead to beach closings, and reach out to responsible parties to reduce this pollution. These efforts should enable the State to reach its year 2010 target.

Hazardous Waste Sites

New Jersey is the most densely populated state in the nation, and also has the highest number of identified contaminated waste sites per capita. Thus, New Jersey is faced with a continuous and unique challenge in identifying the public health implications of human exposure to hazardous waste sites. The Federal government currently includes 110 New Jersey hazardous waste sites on its National Priority List (NPL). The number of sites on the list can change from year to year, as remediated sites are removed and newly designated sites are added. In addition, NJDEP, in cooperation with EPA, is currently managing the investigation and remediation of several thousand other New Jersey sites known to be contaminated. Some of these sites are candidates for the NPL.

Sites that are on the NPL, and those being considered for the NPL, are the highest priority for assessing potential public health implications. With support from the federal Agency for Toxic Substances and Diseases Registry (ATSDR), NJDHSS conducts health assessments of New Jersey NPL and non-NPL sites. As part of a hazardous waste site health assessment, NJDHSS collects environmental data, identifies human exposures to contaminants, develops health advisories, if necessary, and identifies populations living or working near hazardous sites for further health studies or educational programs, if appropriate. As of 1998, 180 NPL and non-NPL sites had been assessed. The year 2010 objective is to increase to 300 the total number of sites that will have been evaluated for public health implications.

3A. Environmental Health

Lead Exposure

In the United States, children's average blood lead levels have significantly decreased since the 1970s. This reduction is primarily the result of the phase-out of lead in gasoline and paint, and reductions in other sources and pathways of exposure. However, lead continues to be one of the most critical environmental threats to children's health. Exposure to lead can cause many adverse health effects, including delayed growth, brain and nervous system damage, headaches, hyperactivity, muscle and joint pain, and reproductive abnormalities in both men and women. Lead-based paint and lead in dust from lead-based paint remain the major sources of childhood exposure in the United States today. Over eighty-five percent of New Jersey housing built before 1978 contains lead-based paint.

Prevention strategies include the inspection of homes occupied by children to determine their risk of exposure to lead paint hazards. A nationwide public education campaign was launched by the federal government in 1997 to inform parents of the hazards associated with disturbing lead-based paint that is already in place in their homes. Currently, federal legislation requires that buyers of property and prospective tenants be informed prior to buying or renting a home or apartment if there is lead-based paint present. This same legislation gives the buyer or tenant the option to have an inspection and risk assessment done. In New Jersey, NJDHSS requires individuals who inspect homes for lead and conduct risk assessments to be certified by the Department, to ensure use of safe, accepted practices. NJDHSS will be proposing regulations dealing with the work practices required to identify lead on any building surface as well as establishing guidelines for assessing the risk posed by any lead detected. The Department will aggressively enforce these quality standards for inspections and risk assessments. On-site inspections and oversight will allow the Department to educate inspectors whose work is observed to fall below the standards. The result of these new regulatory standards should be an improvement in the quality of lead inspections and risk assessments.

Food Safety

Infectious foodborne diseases are increasing globally, threatening public health and contributing significantly to the escalating cost of health care. Estimates indicate that nationwide, between 6.5 and 33 million illnesses and 9,000 deaths are associated each year with pathogenic microorganisms in food. Foodborne disease is a result of improper food handling practices that cause contamination. It can, therefore, be significantly reduced if food is handled properly. Foods must be stored in a way that keeps pathogenic microorganisms from multiplying, and adequately cooked to destroy pathogens. Steps must be taken to prevent raw foods from contaminating those that are ready to eat. Additionally, people who handle food must employ good personal hygiene practices to prevent contamination, such as proper hand washing and minimizing direct manual contact with foods. When safe food handling practices break down, foodborne illnesses are likely to occur.

NJDHSS has established a developmental year 2010 objective tracking the prevalence of major risk factors in New Jersey retail food establishments. Risk factors include improper food holding temperatures, inadequate cooking, poor personal hygiene, contaminated equipment, and receipt of food from unsafe sources. The risk factors were selected based upon Centers for Disease Control and Prevention data that indicate that these categories of deficiencies are the major causative factor of food borne illness attributable to retail food operations. This objective will complement the adoption and implementation of the U.S. Food and Drug Administration (FDA) model food code, scheduled for 2001. The FDA model food code has been revised recently to address these risk

factors. The database NJDHSS is developing will include data from on-site inspections of retail food establishments performed by local health departments.

The federal Healthy People 2010 plan contains an objective addressing safe food handling by consumers by increasing the proportion of consumers who practice each of four critical food handling behaviors. The FDA has conducted a food safety survey, set baseline data, and has developed an educational initiative and is disseminating information cooperatively through a food safety education coalition. The NJDHSS has participated in the first phase of this initiative with the “Fight Bac” campaign in which information was disseminated to local health departments and supermarkets through the New Jersey Food Council.

RELATED OBJECTIVES

III. 3E. Objective 2 - Reduce the number of workers per million with occupational lead exposure.

III. 3E. Objective 3 - Increase the percentage of health care facilities protecting workers by instituting effective latex-sensitization prevention practices.

ENDNOTE

¹ World Health Organization (WHO). *Indicators for Policy and Decision Making in Environmental Health*. (Draft). Geneva, Switzerland: WHO, 1997.

3. Fundamentals of Good Health

3B. Healthy Mothers and Young Children

Improving the health of pregnant women and young children lays the foundation for a long and healthy life. Infant mortality is a key indicator of overall health status in a society, since these deaths are largely preventable. In the United States and New Jersey, infant mortality rates for whites are much lower than rates for minorities, especially blacks. This disparity is one of the reasons why the United States ranks 26th in infant mortality among industrialized nations, despite our wealth and advanced health care system.

The strongest predictor of infant survival and subsequent quality of life is infant birth weight. The most important risk factors for low birthweight and other poor birth outcomes are lack of early and adequate prenatal care, and inadequate nutrition during the prenatal period. Early enrollment into prenatal care provides the best opportunity to identify and address behavioral practices and other maternal factors that contribute to poor pregnancy outcomes. Use of tobacco and alcohol during pregnancy also increases the risk of poor birth outcomes and long-term disabilities for children. Accordingly, New Jersey's year 2010 objectives measure not only infant mortality, but also Sudden Infant Death Syndrome, access to prenatal care, enrollment in programs to improve nutrition, abstinence from tobacco and alcohol during pregnancy, breastfeeding rates, and the prevalence of low birthweight infants.

Over the past several decades, cumulative research has consistently demonstrated numerous advantages of breastfeeding, which include nutritional, immunological, and developmental as well as many other short- and long-term health benefits for the infant and mother. In addition, advantages have been demonstrated for the family, society, economy, environment, health care system and workplace. Maximum benefits occur when breastfeeding is exclusive of any other feeds during the first six months of life, and continues with the introduction of solid foods, up to and beyond the first year of life.

Prior to widespread immunization efforts in the United States, infectious diseases killed or disabled thousands of children each year. With the introduction of vaccines for many of these childhood diseases, the death toll dropped dramatically. While all states now have immunization requirements for children entering day care and school, all children, and particularly young children who have not been fully immunized, remain vulnerable to outbreaks of vaccine-preventable infectious diseases. There are, therefore, three year 2010 objectives related to appropriate immunizations.

Lead poisoning resulting from exposure to lead in their environment can have devastating consequences for the development of young children. When detected early, lead poisoning can be treated effectively, and affected children's environments can be made safer. By the year 2010 New Jersey expects to substantially increase the percentage of young children who have been screened for lead poisoning, as well as reduce the percentage of those tested whose blood lead levels exceed acceptable standards.

Technological advances have made it possible to detect hearing problems in infants younger than one month of age. Undetected hearing problems can have serious, negative effects on a child's academic and social-emotional development. Year 2010 objectives were developed, therefore, to significantly increase the percentage of newborns tested, and to increase the percentage of those testing positive for problems who are followed up and provided appropriate services.

The foundation for healthy behaviors is laid when children are young. Year 2010 objectives will also track the implementation and progress of fourth graders in mastering the state's new Core Curriculum Standards for comprehensive health and physical education.

3B. Healthy Mothers and Young Children

2010 Objectives

1. **Objective:** Reduce the rate of infant deaths per 1,000 live births to:

4.3 for all infants
4.3 for non-Hispanic white infants
8.0 for non-Hispanic black infants
4.3 for Hispanic infants

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	6.3	4.3	-31.7	4.0	-36.5
White non-Hispanic	4.7	4.3	-8.5	4.0	-14.9
Black non-Hispanic	13.5	8.0	-40.7	4.0	-70.4
Asian/Pacific Islanders	3.8	DNA			
Hispanic	5.8	4.3	-25.9	4.0	-31.0

DNA = Data Not Analyzed

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

The number and rate of infant deaths have declined over the past two decades. Despite the overall decline, a major disparity exists between the black and white infant mortality rates. In 1998, the black non-Hispanic infant mortality rate was 2.9 times the white non-Hispanic rate. Infant mortality is an important indicator of the health status of mothers and infants.

2. **Objective:** Reduce the rate of infant deaths per 1,000 live births due to Sudden Infant Death Syndrome (SIDS) to:

0.2 total population
0.7 black non-Hispanic

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	0.3	0.2	-33.3	0.2	-33.3
White non-Hispanic	DSU				
Black non-Hispanic	1.1	0.7	-36.4	0.2	-71.4
Asian/Pacific Islander non-Hispanic	DSU				
Hispanic	0.2	DNA			

DSU = Data are statistically unreliable.

DNA = Data not analyzed.

3B. Healthy Mothers and Young Children

SIDS is one of the leading causes of infant mortality between one month and one year of life. Smoking during pregnancy or around the infant, a belly down sleep position, soft bedding and overheating are considered the leading risk factors.

3. **Objective:** Reduce the percentage of infants with birth weight less than 2,500 grams to:

6.0 percent of all infants
6.0 percent of non-Hispanic white infants
7.5 percent of non-Hispanic black infants
6.0 percent of non-Hispanic Asian Pacific Islanders infants
6.0 percent of Hispanic infants

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	7.8	6.0	-23.1	5.0	-35.9
White non-Hispanic	6.4	6.0	-6.3	5.0	-21.9
Black non-Hispanic	13.9	7.5	-46.0	5.0	-64.0
Asian/Pacific Islander non-Hispanic	7.9	6.0	-24.1	5.0	-36.7
Hispanic	7.3	6.0	-17.8	5.0	-31.5

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

In spite of the overall decline in infant mortality, the percentage of newborns with low birth weight (under 2,500 grams or 5 lbs. 8 ozs.) has continued to rise since 1988, suggesting that lack of adequate prenatal care continues to be a problem. Black non-Hispanic infants are at much higher risk of being born at low birth weights than infants in other race/ethnicity groups.

Low birth weight infants are at substantially greater risk of experiencing long-term developmental and neurological disabilities, including cerebral palsy, mental retardation, and vision and hearing impairments.

4. **Objective:** Reduce the percentage of infants with birth weight less than 1,500 grams to:

1.0 percent of all infants
1.0 percent of non-Hispanic white infants
2.0 percent of non-Hispanic black infants
1.0 percent of Hispanic infants

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	1.6	1.0	-37.5	0.7	-56.3
White non-Hispanic	1.1	1.0	-9.1	0.7	-36.4
Black non-Hispanic	3.6	2.0	-44.4	0.7	-80.6
Asian/Pacific Islanders	1.2	DNA			
Hispanic	1.4	1.0	-28.6	0.7	-50.0

3B. Healthy Mothers and Young Children

DNA = Data Not Analyzed

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

The percentage of very low birth weight infants (under 1,500 grams or 3 lbs. 5 ozs.) has also increased over the past decade. As with low birth weight babies, their survival is largely attributable to advances in neonatology. Very low birth weight is often associated with pre-term births. Primary risk factors are prior pre-term births or spontaneous abortions, low pre-pregnancy weight, cigarette use, and drug abuse.

5. **Objective:** Increase the percentage of live births whose mothers received prenatal care in the first trimester to **85.0 percent**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	74.4	85.0	+14.2	100.0	+34.4
White non-Hispanic	83.3	85.0	+2.0	100.0	+20.0
Black non-Hispanic	59.8	85.0	+42.1	100.0	+67.2
Asian/Pacific Islanders	79.7	85.0	+6.6	100.0	+25.5
Hispanic	68.2	85.0	+24.6	100.0	+46.6

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

In 1998, almost three-quarters of mothers began prenatal care in the first trimester of pregnancy. Black and Hispanic mothers were less likely than whites to obtain early prenatal care. Caution should be exercised in drawing conclusions from these data, since a relatively large percentage of birth records include no information on the receipt of prenatal care.

6. **Objective:** Decrease the percentage of live births whose mothers received no prenatal care to:

0.75 percent for all live births
0.25 percent for non-Hispanic whites
2.80 percent for non-Hispanic blacks
0.75 percent for Hispanics

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	1.0	0.75	-25.0	0.25	-75.0
White non-Hispanic	0.3	0.25	-28.6	0.25	-28.6
Black non-Hispanic	3.9	2.80	-28.2	0.25	-93.6
Asian/Pacific Islanders	0.2	DNA			
Hispanic	0.8	0.75	-6.3	0.25	-68.8

DNA = Data Not Analyzed

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

3B. Healthy Mothers and Young Children

Receiving no prenatal care has even more serious consequences than receiving care late in pregnancy. No prenatal care is more likely to be associated with low birth weight and other negative outcomes. Black non-Hispanic mothers are most likely to receive no prenatal care, compared to non-Hispanic white and Hispanic mothers. Caution should be exercised in drawing conclusions from these data, since a relatively large percentage of birth records include no information on the receipt of prenatal care.

7. **Objective:** To increase the proportion of mothers who breastfeed their babies at hospital discharge to at least **75.0 percent**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	58.6	75.0	+28.0
White non-Hispanic	63.4	75.0	+18.3
Black non-Hispanic	38.0	75.0	+97.4
Asian/Pacific Islanders non-Hispanic	74.6	75.0	+0.5
Hispanic	57.5	75.0	+30.4

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

Human milk is widely acknowledged to be the most complete form of nutrition for infants, with a range of benefits for infants' health, growth, immunity, and development. The benefits of breastfeeding include decreased incidence or severity of diarrhea, respiratory infections, and ear infections, among others, and reduced cost to the family.¹

8. **Objective:** To increase the proportion of breastfeeding women whose infants are breastfed exclusively at hospital discharge to **90.0 percent**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	42.3	90.0	+112.8
White non-Hispanic	52.0	90.0	+73.1
Black non-Hispanic	22.4	90.0	+301.8
Asian/Pacific Islanders non-Hispanic	48.3	90.0	+86.3
Hispanic	29.4	90.0	+206.1

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

Research shows that a significant proportion of women who begin breastfeeding give up in the first few weeks, and those who supplement early on will be more likely to wean. Unnecessary supplementation and those who supplement early on will be more likely to wean. Unnecessary supplementation may impair immune functions, maternal-infant bonding, milk supply, newborn digestion, alter infant bowel flora, sensitize the infant to allergens and may cause nipple preference.

3B. Healthy Mothers and Young Children

While medical indication for supplementing the breastfed infant exists, all too often breastfeeding infants are supplemented without clear indication. It is important, therefore, to protect the exclusivity of breastfeeding.

- 9a. **Objective:** Increase the percentage of women who abstain from alcohol during pregnancy to:

95.0 percent for all mothers of newborns
95.0 percent for non-Hispanic whites
95.0 percent for non-Hispanic blacks
99.0 percent for Hispanics

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	93.1	95.0	+2.0	99.0	+6.3
White non-Hispanic	94.4	95.0	+0.6	99.0	+4.9
Black non-Hispanic	94.1	95.0	+1.0	99.0	+5.2
Asian/Pacific Islander	98.3	DNA			
Hispanic	98.1	99.0	+0.9	99.0	+0.9

DNA = Data Not Analyzed

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

Alcohol in the mothers' blood crosses the placenta freely and enters the embryo or fetus through the umbilical cord. Fetal Alcohol Syndrome (FAS) is caused by a woman's use of alcohol during pregnancy and is characterized by growth retardation, facial abnormalities, and central nervous system dysfunction.

- 9b. **Objective:** Increase the percentage of women who abstain from any tobacco product during pregnancy to:

89.0 percent for all mothers of newborns
89.0 percent for non-Hispanic whites
89.0 percent for non-Hispanic blacks
95.0 percent for Hispanics

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	84.3	89.0	+5.6	95.0	+12.7
White non-Hispanic	84.0	89.0	+6.0	95.0	+13.1
Black non-Hispanic	82.9	89.0	+7.4	95.0	+14.6
Asian/Pacific Islander	97.2	DNA			
Hispanic	92.7	95.0	+2.5	95.0	+2.5

DNA = Data Not Analyzed

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

3B. Healthy Mothers and Young Children

The percentage of women who said they abstained from alcohol and tobacco, respectively, during pregnancy increased from 1989, when the information was first required to be reported on the birth certificate, through 1994. After that, the percentages appear to have decreased. This may be due, in part, to the introduction of the Electronic Birth Certificate in 1995, which may have led to improved reporting of tobacco and alcohol use. Hispanic women report higher levels of abstinence from both alcohol and tobacco during pregnancy than non-Hispanic black and white women.

10. **Objective:** Increase the percentage of the eligible population served by the Women, Infants and Children Program (WIC) to **83.0 percent**.

<u>Population</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Eligible WIC population served	62.0	83.0	+33.9	100.0	+61.3

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

The Women, Infants, and Children (WIC) Program is designed to improve the health of low-income pregnant women and their infants and children, through supplemental nutrition and nutrition education and referral to other appropriate services. WIC has been demonstrated to improve birth outcomes for enrolled women. WIC has made substantial progress over the past decade in increasing the percentage of the eligible population enrolled in the program.

11. **Objective:** Increase the percentage of two year old children receiving DTaP, polio, MMR, Hib and hepatitis B vaccines, separately and as part of the 4-3-1 series, to **90.0 percent**.

<u>Populations</u>	<u>Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All children ≤ 2	(1998) 85.0	90.0	+5.9
MCO enrollees ≤ 2	(1999) 66.2	90.0	+36.0

Source: United States Department of Health and Human Services, Centers for Disease Control and Prevention, and the New Jersey Department of Health and Senior Services, Division of Health Care Systems Analysis

It is recommended that all children receive the following immunizations by age two: diphtheria/tetanus/acellular pertussis (DTaP); polio; measles/mumps/rubella (MMR); Haemophilus Influenzae type b (Hib); and hepatitis B. The 4-3-1 series consists of four doses of the DTaP vaccine; three doses of the polio vaccine; and one dose of the MMR vaccine.

The estimate of the percentage of all New Jersey children immunized is collected from CDC surveys, while the percentage of managed care organization (MCO) enrollees is collected from a sample of commercial managed care plan enrollee records on care provided by MCOs. The records are assessed in accordance with the HEDIS standard for immunization of young children, which is more stringent than CDC's definitions, thereby producing lower immunization rates than CDC's surveys.

3B. Healthy Mothers and Young Children

- 12. Objective:** Increase the percentage of newborns enrolled in the New Jersey Immunization Information System to **95.0 percent**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	40.8	95.0	+132.8
White non-Hispanic	41.3	95.0	+130.0
Black non-Hispanic	39.3	95.0	+141.7
Asian/Pacific Islander non-Hispanic	35.4	95.0	+168.4
Hispanic	40.6	95.0	+134.0

Source: New Jersey Department of Health and Senior Services, Communicable Disease Services

Enrollment and participation in a statewide immunization registry is a high priority because it offers medical providers and parents a way to ensure adequate record keeping and permits electronic reminder and recall activities to keep children on schedule for immunizations.

- 13. Objective:** Reduce the number of cases of indigenous measles to **zero**.

<u>Population</u>	<u>1995-1999 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Entire population	4	0	-100.0

Source: New Jersey Department of Health and Senior Services, Communicable Disease Services

After experiencing major outbreaks of measles in 1986 and 1991, incidence of the disease has greatly decreased. No cases of measles occurred in New Jersey in 1999 or 2000. Measles is a severely infectious disease with the potential for epidemics; however, it can be prevented through immunization.

- 14. Objective (Developmental):** Increase the percentage of children screened for lead poisoning by two years of age to **85.0 percent**.

<u>Population</u>	<u>FY 2000 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Children $\leq$ 2 years	33.0	85.0	157.6

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

Lead poisoning is a preventable disease which may have long term or permanent effects on children. Lead can cause high blood pressure, kidney damage, negative effects on the nervous system and can damage the reproductive system. It is especially harmful to the developing brain of fetuses and young children. Therefore, early detection will limit lead's effects on a child. Comprehensive data collection began in 1999.

3B. Healthy Mothers and Young Children

15. **Objective (Developmental):** Reduce the percentage of tested children whose initial blood lead level is $\geq 10\text{Fg/dL}$ by **50.0 percent**.

<u>Population</u>	<u>FY 2000 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Children tested	5.0	2.5	-50.0

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

16. **Objective:** Increase the percentage of newborns screened with state of the art tools to detect hearing loss prior to discharge from the birthing facility or by one month of age to **90.0 percent**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	30.2	90.0	+198.0	100.0	+231.1
White non-Hispanic	34.2	90.0	+163.2	100.0	+192.4
Black non-Hispanic	28.3	90.0	+218.0	100.0	+253.4
Asian/Pacific Islander non-Hispanic	31.0	90.0	+190.3	100.0	+222.6
Hispanic	19.9	90.0	+352.3	100.0	+402.5

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

Children with hearing loss/deafness are generally identified between 24 and 30 months of age and thus miss the critical years for language development and opportunity for intervention.

17. **Objective (Developmental):** Increase the percentage of infants receiving diagnostic follow-up after a positive screening for hearing loss by three months of age to **90.0 percent**.

<u>Populations</u>	<u>2002 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total		90.0			
White non-Hispanic		90.0			
Black non-Hispanic		90.0			
Asian/Pacific Islander		90.0			
Hispanic		90.0			

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

Early detection with state of the art tools and early intervention can substantially reduce developmental delays and academic difficulties that can result when hearing loss is undiagnosed.

3B. Healthy Mothers and Young Children

- 18. Objective (Developmental):** Increase the enrollment of infants diagnosed with hearing loss/deafness in appropriate intervention services by six months of age to **90.0 percent**.

<u>Populations</u>	<u>2002 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total infants with diagnosed hearing loss		90.0			
White non-Hispanic		90.0			
Black non-Hispanic		90.0			
Asian/Pacific Islander		90.0			
Hispanic		90.0			

Source: New Jersey Department of Health and Senior Services, Division of Family Health Services

New data support the clinical impression that early identification and intervention in the first six months of life yield language and cognitive development commensurate with normally-hearing peers. Implementation of universal newborn hearing screening programs and early intervention can dramatically improve academic and social-emotional outcomes. Data will not be available until 2003.

- 19. Objective (Developmental):** Increase the percentage of fourth grade public school students who pass the comprehensive health and physical education portion of the Elementary School Proficiency Assessment (ESPA) to _____ **percent**.

<u>Population</u>	<u>2003 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Fourth grade public school students					

Source: New Jersey Department of Education, Division of Academic Programs and Standards

The Comprehensive Health and Physical Education Core Curriculum Content Standards address a wide range of health promotion issues, including violence prevention, nutrition, substance abuse and sexuality issues, in addition to fitness and movement.

Discussion

Healthy Babies

Infant mortality is an important predictor of the well-being not only of pregnant women, and their infants, but of health in a society as a whole, since infant mortality is generally associated with overall socioeconomic conditions and quality of life, including access to good health care. While the overall infant mortality rate in the United States was at a record low of 7.2 deaths per 1000 live births in both 1997 and 1998, the U.S. ranked only 26th in infant mortality among industrialized nations in 1996, the most recent year the rankings were available.² Low birthweight is one of the primary causes of infant mortality. Even when low birthweight infants survive, they are at much greater risk for long-term disabilities, such as cerebral palsy, mental retardation, vision and hearing impairments, etc. The intensive costs of treating these infants are also significant. It has been

estimated that the average extra cost of treating each low birthweight baby during the first year of life is \$15,000.³

To a large extent, infant mortality is preventable, assuming all pregnant women receive early and appropriate prenatal care. Over the past two decades in New Jersey, infant mortality has generally declined in all populations. It is particularly disturbing that the infant mortality rate for black infants in 1998, 13.5/1,000, was almost three times that of whites, 4.7/1,000, and more than twice as high as that for Hispanics, 5.8/1,000. This is a national as well as a New Jersey problem, which requires concerted action.

Overall, nearly three-quarters of women in New Jersey and nationwide receive first trimester prenatal care. Here too there are significant discrepancies between whites, blacks and Hispanics. In 1998, 83.3 percent of non-Hispanic white women giving birth had received early prenatal care, compared to 68.2 percent of Hispanic women and 59.8 percent of non-Hispanic black women.

Similar disparities are observed in the percentage of infants with low birthweight, i.e. weight below 2,500 grams at birth. In 1998, 6.4 percent of non-Hispanic white infants were low birthweight, compared to 7.3 percent of Hispanic infants, and 13.9 percent of non-Hispanic black infants.

NJDHSS has taken a number of steps over the years to reduce infant mortality. It created a regionalized system in which the highest-risk pregnancies and the smallest newborns are cared for in specialized hospitals in each of seven regions, while less complex cases are handled in community hospital settings. Seven Maternal and Child Health Consortia involving a wide variety of partners have been formed statewide, and are charged with planning, coordinating and assuring the quality of services to mothers and children in their respective regions.

Low birthweight is the risk factor most closely associated with neonatal mortality. With advances in reproductive and medical technologies, the causes of the low birthweight phenomenon have become increasingly complex. Low birthweight is associated primarily with inadequate prenatal care as well as poor nutrition and the use of certain drugs, such as tobacco, alcohol and crack cocaine, during pregnancy. Increasingly, however, medical advances have allowed very small infants born prematurely for a variety of reasons to survive. Additionally, more women take fertility drugs, which have tended to result in multiple birth. This contributes to the increase in the percentage of infants who are low birthweight. NJDHSS is currently assessing the extent to which multiple births have affected low birthweight rates in the state. Despite these confounding factors, however, risk factors related to nutrition including the use of food supplements such as folic acid, prenatal care and the prevention of drug use remain the primary focus of efforts to eliminate disparities in birthweight and related birth outcomes.

Women least likely to receive adequate prenatal care include pregnant adolescents, black women and low-income women.⁴ Factors that have been identified as playing a role in inadequate prenatal care include financial barriers, lack of available health care providers, especially culturally competent ones, lack of transportation and child care, and a feeling of powerlessness to control the outcome of a pregnancy.⁵ New Jersey's Medicaid program extends coverage to pregnant women with incomes up to 185 percent of poverty, and includes transportation services among the covered benefits. For pregnant immigrant women who, according to federal rules, may no longer participate in the Medicaid program, New Jersey provides coverage at state expense so long as they are in the country legally. In principle, then, there should not be significant financial barriers to most pregnant women in New Jersey getting adequate prenatal care. NJDHSS is working to overcome the other barriers as well. For example, the Department has worked with the Maternal and Child Health Consortia and the March of Dimes to develop programs to train future parents in "preconception"

3B. Healthy Mothers and Young Children

health. It has been shown that such training improves the likelihood of women seeking and complying with medical advice when pregnant. Given that many pregnancies are unplanned, preconception counseling is crucial for assuring that healthy maternal behaviors are already in place.

Despite these comprehensive efforts, black infants in particular continue to be at greater risk of dying, of being born with low birthweight, and of having health problems. To address the persistent disparity in birth outcomes between black infants and the total population, in 1996 NJDHSS convened a Blue Ribbon Panel on Black Infant Mortality. The panel concluded that the causes of higher black infant mortality are complex, interactive, and not fully understood. It highlighted several areas for action, however, including raising public awareness of the higher rate of death among black infants. In 1999, NJDHSS launched a two-year, one million dollar public awareness campaign, *Black Infants Better Survival* (BIBS). The BIBS campaign combines paid advertising and public relations activities. It also includes a targeted component to provide information on their increased risk of infant mortality to black women of childbearing age and their families. As part of the campaign, a toll-free number - 1-888-414-BIBS - has been established to answer questions and refer callers to low-cost or free medical care in their areas. BIBS also has its own Web site, www.state.nj.us/health/bibs. New Jersey is the first state in the nation to spearhead a major media effort around the issue of black infant mortality.

A second major area for action highlighted by the Blue Ribbon Panel is assuring that black women have access to health care providers who are culturally competent both before and during pregnancy. Culturally competent providers have knowledge and skills that promote an understanding and appreciation of cultural similarities and differences within and between groups.⁶ A primary care provider who is culturally competent can play an essential role in positively influencing women's health behaviors and in identifying medical conditions that require specialized management during pregnancy. Additionally, when financial barriers are removed and culturally competent providers are available, women may be more likely to seek prenatal care in a timely fashion. NJDHSS provided train-the-trainer programs in 1999 to grantee agencies that required all participating organizations implement cultural competency training and awareness with their respective agencies. Presentations have been made to the Public Health Council on NJDHSS efforts addressing cultural competency and diversity. NJDHSS is also working with a number of partners to develop a standard curriculum that would enhance the cultural competency of providers working with black women.

Use of tobacco during pregnancy is associated with low birth weight, spontaneous abortion, and sudden infant death syndrome, while heavy alcohol use is associated with Fetal Alcohol Syndrome. Even moderate alcohol use has some effect on the likelihood of premature delivery. In both the United States and New Jersey, the percentage of mothers of newborns who report that they have abstained from the use of tobacco and alcohol during pregnancy has increased steadily. In New Jersey, Hispanic mothers display the healthiest behaviors in this regard. However, underreporting of Fetal Alcohol Syndrome (FAS) continues to be an issue. To improve prenatal care services to prevent FAS, the NJDHSS is collaborating with NJ DHS. A FAS Task Force has been convened to assess and make recommendations regarding FAS prevention. FAS risk reduction specialists screen, assess and refer perinatal clients for all substances including drugs, alcohol and tobacco. NJDHSS supports addiction treatment and FAS prevention services for high-risk pregnant women, and expects to see further reductions in use of drugs by pregnant women.

The Women, Infants, and Children (WIC) program is a central component of New Jersey's strategy to improve birth outcomes. It is recognized as a model for conducting successful outreach to minorities throughout New Jersey. WIC provides food supplementation, as well as counseling on nutrition and other health-related issues to low-income pregnant women and children. A 1997 comparison of women enrolled only in Medicaid with those also enrolled in WIC showed that the

WIC Medicaid group had better birth outcomes, lower medical costs for delivery of infants, and were more likely to receive prenatal care. This positive impact was noted for black WIC enrollees as well. New Jersey's WIC program will continue its efforts to enroll eligible women, and is also actively helping uninsured children to enroll in NJ FamilyCare, New Jersey's comprehensive health insurance program for children and families.

Breastfeeding

Breastfeeding is an important contributor to health and nutrition yet, in 1998, only 58.6 percent of New Jersey infants were breastfed in the 24 hours prior to hospital discharge. Black non-Hispanic infants were least likely to be breastfed (38.0%). Exclusive breastfeeding rates were even lower, at 42.3% for all infants, and 22.4% for Black non-Hispanic infants. Overall breastfeeding rates in New Jersey are lower than national rates and even when mothers initiate breastfeeding, fifty percent stop within the first fourteen days. A national average for exclusive breastfeeding rates at hospital discharge thus far does not exist. New Jersey has taken a leading role in tracking exclusive breastfeeding rates at hospital discharge.

To increase the initiation of breastfeeding to the target of seventy-five percent, initiatives in the areas of education, research, health care, community and workplace needs to be supported.⁷ Implementing the "Ten Steps for Successful Breastfeeding" has recently been demonstrated to increase duration and exclusivity of breastfeeding and should become standard practice in deliver hospitals.⁸

The American Academy of Pediatrics recommends human milk for all infants, including premature and sick infants except when the infant has galactosemia, or when the mother uses illegal drugs, has untreated active tuberculosis, or is infected with the human immunodeficiency virus. Infants should be breastfed as soon as possible after birth, usually within the first hour. They should be breastfed whenever they show signs of hunger and not given supplements without medical indication. A pediatrician or other knowledgeable health care practitioner should see breastfeeding mothers and their infants when the newborn is two to four days of age. The Academy recommends exclusive breastfeeding for approximately the first six months with the gradual introduction of iron-enriched solid foods in the second half of the first year complementing the human milk diet. Breastfeeding is recommended for at least twelve months and thereafter as long as mutually desired.⁹

Maternal Mortality

NJDHSS is implementing a statewide multidisciplinary Maternal Mortality Review System which will identify and investigate maternal deaths, discuss each case in a multidisciplinary process, disseminate findings, and provide recommendations for preventing future deaths. Through these activities, the Maternal Mortality Review System will provide more accurate data on which to base future state objectives for the reduction of maternal mortality.

Sudden Infant Death Syndrome (SIDS)

With the advent of the National Institute of Health's Back-to-Sleep campaign in 1994 following the 1992 recommendations of the American Academy of Pediatrics, the incidence of SIDS declined nationally. In New Jersey, the SIDS Center of New Jersey (SCNJ) launched several risk reduction campaigns to promote supine sleep, a smoke-free environment for pregnant women and infants and the use of firm bedding. In addition, the SCNJ launched an urban initiative to address the disproportionate representation of African-American infants in the SIDS population, a difference found nationally as well as in New Jersey. In 1993, prior to the onset of these campaigns, the

3B. Healthy Mothers and Young Children

incidence of SIDS in New Jersey was 0.8/1,000 live births. In 1998, the incidence dropped to 0.3/1,000 live births. Since the onset of risk reduction campaigns directed to the African-American communities the incidence has dropped from 2.1/1,000 live black births in 1993, to 1.1/1,000 live black births in 1998. The initiatives continue to be applied along with new programs.

Through the implementation of the SIDS Assistant Act in 1988, through an Interagency Agreement with Saint Peter's University Hospital and UMDNJ/Robert Wood Johnson Medical School, the SCNJ not only provides educational and support services to families and individuals affected by SIDS, but has been important in tracking statewide SIDS statistics. As a result of their findings, they have implemented initiatives to address identified problem issues. Their activities involve collaboration with the Black Infant Mortality Review Panel, other UMDNJ black infant mortality issues, the MCH Consortia, and participation with fetal-infant mortality review and child death review programs.

Immunization

Vaccine-preventable diseases, i.e. those diseases which can be prevented by using biological substances to create an immune response in a person, have been nearly eradicated in New Jersey. In 1998, New Jersey recorded a total of 110 cases of vaccine-preventable diseases. In that same year, approximately eighty-five percent of New Jersey's two-year olds received age-appropriate immunizations, but the remaining fifteen percent of New Jersey toddlers did not receive one or more doses of diphtheria, tetanus, pertussis, polio, measles, mumps or rubella vaccine. Maintenance of high immunization coverage levels in early childhood is the best way to prevent the spread of vaccine-preventable diseases among children, adolescents and adults. Approximately eighty percent of all routinely recommended vaccines are supposed to be administered to children by the time they reach two years of age. To prevent the spread of diseases, at least ninety percent of two year olds need to receive all recommended doses of five routinely recommended vaccines: DTaP, Polio, MMR, Hib and hepatitis B. Year 2010 objectives will measure not only the State's progress in reaching this immunization coverage level, but also declines in the number of measles cases and success in web-enabling the electronic registry to support immunization.

Vaccines are by far the most effective and inexpensive methods for preventing and controlling communicable diseases. Vaccines against such diseases as measles, poliomyelitis, diphtheria, and pertussis were accepted without question as safe and cost-effective when epidemics of these diseases were rampant. More recently, the success of the vaccines has caused many individuals to question the safety and need to continue to immunize children against these diseases. However, these diseases have not been eradicated from the world, and the use of these vaccines cannot diminish without risking the return of epidemics.

Young children who have not been immunized remain particularly vulnerable to infectious diseases. Measles provides a good example. For the period 1986 through 1993, New Jersey ranked fifth highest in the nation in the number of measles cases occurring per 100,000 population. By 1996, however, New Jersey had reached its highest two-year old immunization coverage rates ever, and the fewest number of measles cases in its history. Further progress must be made to ensure that preschool-age children are protected against diseases.

NJDHSS has launched a number of cooperative efforts to screen preschool-aged children for their immunization status, directly immunize them or refer them for immunization as needed, and track the ongoing immunization status of children. One of the most ambitious and promising initiatives is the development of an electronic immunization registry that not only tracks immunization for all children enrolled, but also supports pediatricians and other providers in their efforts to improve the

immunization rates of children in their practices. The registry can produce reminder/recall notices to participating providers and their patients when a child is due or overdue for an immunization. The system also allows providers to assess the effectiveness of their practices in immunizing children. Beginning in 1995, this registry system was piloted in Camden, where it has already had a major impact in raising immunization rates. It has now been deployed in each county of the State. Additionally, new parents are being offered the option of enrolling their infants automatically in the registry, as part of the process of filing a birth certificate. The electronic registry is now being web-enabled.

In January, 1998 regulations took effect implementing a 1996 law requiring all health insurers and managed care plans subject to New Jersey law to provide full coverage for childhood immunizations. For some parents the cost of vaccines can be a substantial barrier to getting their children immunized. This law helps to mitigate that problem. Furthermore, New Jersey Vaccines for Children, a federally funded program, provides vaccines at no cost to children who are uninsured or enrolled in Medicaid or NJ FamilyCare. Currently there are more than 1,800 physicians in private practice as well as 150 health clinics participating in the Vaccines for Children Program, and the State is continuing to expand the number of participants.

Starting in 1997, NJDHSS has issued annual performance reports for commercial managed care plans in New Jersey, including a measure of their success in providing all age-appropriate immunizations to enrolled children two years of age and under. In the November, 1998 performance report, plans on average had fully immunized sixty-seven percent of enrolled children age two and under.¹⁰ When weighted to reflect the varying size of enrollments in each of the plans assessed, this translates to 65.6 percent of children in commercial managed care having been immunized. One plan achieved an eighty-three percent immunization rate. Looking forward, all plans have been challenged not only to match this rate, but also improve upon it.

Other New Jersey immunization initiatives are also underway. In the greater Newark area, where immunization levels are lower than the statewide averages for New Jersey children, NJDHSS is participating in the Partnership to Immunize Newark Kids, a public-private program of comprehensive education, outreach and assessment for both parents and health care providers that will also expand use of the electronic immunization registry.

Special collaborations with other programs that target areas of health need throughout the State, such as the WIC program and publicly funded community health centers, are also underway to improve immunization rates. In addition, the increased enrollment of low income and uninsured children in Medicaid and NJ FamilyCare plans emphasizing preventive health services should help increase immunization rates.

Lead Poisoning

Childhood lead poisoning is one of the most common pediatric health problems in the United States today, despite the fact that it is preventable. Children are exposed to lead from different sources, such as paint, air, dust, soil and food. Lead may no longer be used in paint in New Jersey, but older housing stock is likely to have lead-based paint. Lead is most hazardous to children under the age of six, because it affects their still-developing nervous systems. One- and two-year-olds are most vulnerable, because of their tendency to put their hands in their mouths frequently. Large amounts of lead in a child's blood can cause brain damage, mental retardation, behavior problems and developmental delays, anemia, liver and kidney damage, and other physical and mental problems. Symptoms are nonspecific, allowing a silent progression of the disease. Severe cases can even result in death.

3B. Healthy Mothers and Young Children

In the near future the number of children screened for blood lead levels will increase, due to a new law calling for providers to screen all children, with their parents' consent. Laboratories are required to report the results of lead screenings to NJDHSS, which refers positive results to local health agencies for follow-up in accordance with Chapter XIII of the NJ Sanitary Code. Follow-up includes environmental inspection to identify lead hazards, and if found, then to order abatement of the lead hazard and home visits by public health nurses to educate the parents and assist them in obtaining needed services. A new electronic reporting system which went into effect in 1999 should improve the state's ability to track lead poisoning and take appropriate action. State law requires medical providers who provide care to children under six years of age to perform lead screening. Critical to the system's success, however, is an increase in screening. Compliance with the screening law will be an activity pursued by NJDHSS to achieve its objectives. A health care professional education campaign is being implemented in partnership with the state Medicaid and NJ FamilyCare programs, the New Jersey chapters of the American Academy of Pediatrics and the American Academy of Family Physicians, and the Maternal and Child Health Consortia to promote awareness of the need to conduct lead screening of young children.

Newborn Screening

New Jersey law and rules require that all newborns be tested for four metabolic disorders, unless the parent objects. Current data indicate a nearly 100 percent compliance rate with this mandate. Recently NJDHSS formed a Newborn Screening Advisory Panel to review the state's current program and review possible expansion of the program to test for additional disorders and other issues related to carrying out a program or testing and follow-up. A report is to be issued at the completion of the panel's review.

Newborn Screening for Hearing Loss

Undetected hearing loss can lead to impaired development of speech, language, and social and emotional skills. The implications of late identification and intervention for academic achievement, job training and employment have been well documented. Unfortunately, the average age for identifying hearing loss/deafness nationally is between 24 and 30 months of age.

Prior to May, 2000, New Jersey rules required all birthing facilities to assess newborns for specified hearing risk factors, and request that at-risk children be screened. On May 14, 2000, Universal Newborn Hearing Screening required that by January 1, 2002, all newborns be given an electrophysiological screening either prior to discharge from the hospital or by one month of age. Currently half of New Jersey's seventy birthing facilities use new electrophysiological measures to provide objective, efficient and reliable newborn hearing screening. These measures of auditory brainstem response (ABR) or otoacoustic emissions (OAE) make it possible to identify hearing loss in any infant before three months of age and to intervene by six months. NJDHSS is now developing ways to track how well infants who exhibit hearing loss are provided with appropriate and timely follow-up services.

Special Child Health Services Registry

Children with birth defects and infants diagnosed by age one with FAS are required to be reported to the Special Child Health Services Registry. Although no similar requirement exists for children with other special need conditions, medical personnel are encouraged to report them to the Registry as well. Children who are registered are linked to special child health case management. Follow-up information, including developmental status on each registered child is not routinely maintained,

however. The Birth Defects Monitoring Program has collaborated with the Governor's Council on Prevention of Mental Retardation and Developmental Disabilities on several projects. Opportunities exist in future reports to develop measures for children with special health needs.

Oral Health Care

NJDHSS supports a Preventive Dental Health Program which provides support for three regional dental coordinators to implement a school-based fluoride mouth rinse program targeted at schools with the greatest need. The regional coordinators also provide oral health education throughout the state. A Maternal and Child Health Block Grant Performance measure is to determine the percent of third grade children who have received protective sealants on at least one permanent molar tooth. A study to collect baseline data on this performance measure is in the planning stages and may be helpful in developing additional 2010 measures.

Comprehensive Health and Physical Education

In May 1996, the New Jersey State Board of Education adopted the k-12 Core Curriculum Content Standards in seven content areas and five cross-content workplace readiness areas. The Core Curriculum Content Standards in Comprehensive Health and Physical Education lay the groundwork for a rigorous instructional program that addresses many of the critical health needs of New Jersey's students.

Over the next five years, meaningful assessment tools will be developed and implemented that accurately reflect student achievement of the comprehensive health and physical education standards. New Jersey will be one of the first states to assess student achievement in this area. The Elementary School Proficiency Assessment (ESPA) will be administered to students at the beginning of fifth grade and assess knowledge and skills learned in grades k-4. Once this test is in use, a baseline will be developed in 2003 and a year 2010 target set for percentage of children who demonstrate proficiency in health and physical education knowledge and skills.

RELATED OBJECTIVES

- II. 2 Objective 1 - Reduce the percentage of children under age 19 without any health insurance during the past year.
- II. 2 Objective 2 - Reduce the percentage of uninsured workers 19 through 64 years of age with children under 18.
- II. 2 Objective 3 - Increase the percentage of adults who report they have a source of primary care.
- II. 2 Objective 5B - Reduce the hospital admission rate for children for Ambulatory Care Sensitive diagnoses.
- III. 4D Objective 6 - Reduce the percentage of HIV-positive readings in mothers of newborns.
- III. 4G Objective 3 - Reduce the annual asthma hospital admission rate for children under age five.
- III. 4I Objective 5 - Reduce the incidence of congenital syphilis.

ENDNOTES

- ¹ US Department of Health and Human Services (HHS). *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. Washington, DC: U.S. Government Printing Office, November 2000. Vol. II:16-7.
- ² National Center for Health Statistics. *Health, United States 2000*. Hyattsville, MD: HHS, 2000.
- ³ U.S. HHS, Centers for Disease Control and Prevention. *An Ounce of Prevention, What Are The Returns*. HHS, 1999, p.13.
- ⁴ Ventura, S., et al. *Report of Final Natality Statistics*, 1995.
- ⁵ Shino, R., et al. Ethnic Difference in Birthweight: The Roles of Lifestyle and Other Factors. *Am J of Public Health*, 87:787-793, 1997.
- ⁶ Federal Register, Vol. 62, n.255, p. 62319-20.
- ⁷ U.S. Department of Health and Human Services (HHS). *Blueprint for Action on Breastfeeding*. Washington, DC: HHS, Office on Women's Health, 2000.
- ⁸ Kramer MS, et al. Promotion of breastfeeding intervention trial. *JAMA* 285(4):413-420, 2001 and World Health Organization (WHO). *Protecting, promoting and supporting breast-feeding: the special role of maternity services*. Geneva, Switzerland: WHO, 1989.
- ⁹ American Academy of Pediatrics. Breastfeeding and the use of human milk. *Pediatrics* 100(6):1035-1039, 1997.
- ¹⁰ It should be noted that the managed care report card used the HEDIS measure of immunization, which is more stringent than that used by CDC. HEDIS looks at immunization records for children 24 months and younger, while CDC's data are based on children 35 months of age and younger. Differences between the two indicators are to be expected and go beyond the fact that one measures commercially insured populations only.

3. Fundamentals of Good Health

3C. Healthy Behaviors - Adolescents

Adolescence is the period when a person transitions from childhood towards adulthood. This period is usually characterized by challenges involving a changing and developing body, innumerable pressures from peers, and changes in the relationships of adolescents with the adults in their lives. There are more than one million adolescents in New Jersey ages 10 through 19 who are making decisions regarding a whole host of behaviors that can improve their health or, conversely, increase their risk for health problems.

There is clear evidence that risky behavior in adolescence can result in poor health outcomes:

- Teenage mothers have higher percentages of low birth weight infants than the total population (9.9% vs. 7.8% in 1998), lower percentages of first trimester prenatal care (53.8% vs. 74.4%), and higher percentages of no prenatal care (2.0% vs. 1.0%),
- # Of the individuals in the United States who ever smoked daily, eighty-two percent tried their first cigarette before age 18, and fifty-three percent became daily smokers before age 18;
- # Homicide is the second leading cause of death among adolescents aged 15 through 19 in New Jersey;
- # Substance use by adolescents has been linked to numerous problems, including delinquency, poor academic achievement and school failure, violence/crime and serious family and interpersonal problems. Research has shown that the earlier the initiation of substance use, the more likely the individual will become an adult heavy user.

Traditionally, the family is the social institution that fosters the adolescent's sense of community values. Most families still perform that function successfully, but changes in social structure, such as the entry of women into the workforce, the increase of divorces and single-parent households, and the dispersal of the extended family, have challenged families' abilities to provide the guidance and supervision that young people need. Adolescents, particularly economically disadvantaged urban minority and rural youth, can become isolated in subcultures. These groups can promote risk-taking behaviors that result in a disproportionate number of health problems. Communities, churches, schools and other groups in society can help families reinforce among adolescents values and behaviors that promote healthful rather than risky behaviors.

The state offers a number of programs to support families and other societal institutions in their efforts to guide young people. Adolescent youths are a difficult audience to reach effectively. The state will continue to invest in the most promising strategies to encourage adolescents to engage in healthy behaviors. The year 2010 objectives track physical fitness and health education in schools, births to teens, use of tobacco and other drugs, and violent death rates for adolescents. These objectives will provide an indication of changes in the levels of some of the riskiest behaviors among adolescents.

3C. Healthy Behaviors - Adolescents

2010 Objectives

1. **Objective (Developmental):** Increase the percentage of public school students who pass the comprehensive health and physical education portion of the Grade Eight Proficiency Assessment (GEPA) to _____ percent.

<u>Population</u>	<u>2003 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Eighth grade public school students					

Source: New Jersey Department of Education, Division of Academic Programs and Standards

It is important to monitor the success rate of students who pass the comprehensive health and physical education portion of the mandatory statewide Proficiency Assessment at intervals throughout the elementary, middle and high school continuum. Students build on acquired knowledge and skills and learn how to apply them to real-life situations as they occur. The GEPA will be field tested in Spring 2001 and 2002 and operational in 2003.

2. **Objective (Developmental):** Increase the percentage of eleventh grade public school students who pass the comprehensive health and physical education portion of the High School Proficiency Assessment (HSPA) to _____ percent.

<u>Population</u>	<u>2004 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Eleventh grade public school students					

Source: New Jersey Department of Education, Division of Academic Programs and Standards

Encouraging the implementation of high-quality health and physical education programs will enhance students' knowledge about health promotion and disease prevention; interpersonal, personal, and life skills (e.g. conflict management strategies); substance abuse; human sexuality and family life; movement; and fitness. These critical issues of adolescence are key elements of the standards. The HSPA will follow the GEPA in development and be fully operational in 2005.

3. **Objective:** Reduce the percentage of middle school students who have used cigarettes in the past 30 days to:

10.0 percent for all middle school students
 10.0 percent for all white non-Hispanic middle school students
 7.0 percent for all black non-Hispanic middle school students
 10.0 percent for all Hispanic middle school students

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All middle school students	13	10.0	-23.1	6.0	-53.8
White non-Hispanic	14	10.0	-28.6	6.0	-57.1
Black non-Hispanic	8	7.0	-12.5	6.0	-25.0
Asian/Pacific Islander	N/A				
Hispanic	13	10.0	-23.1	6.0	-53.8

N/A = Not Available

Source: New Jersey Department of Health and Senior Services, Division of Addiction Services

Through research and study, it is well known that tobacco use and addiction usually take root in adolescence. The literature also shows that tobacco use increases the probability of use of other drugs. Preventing tobacco use among youth has become a major focus of tobacco control efforts both nationally and in New Jersey. The New Jersey Middle School Survey on Substance Abuse, which includes students in public, private and parochial schools was conducted in 1995 and 1999. A dramatic decrease in recent cigarette use was reported in all race/ethnicity groups. New Jersey has recently conducted a survey titled the 1999 New Jersey Youth Tobacco Survey (YTS) focusing exclusively on tobacco-related knowledge, attitudes and behaviors of middle and high school students. Data from this survey and subsequent YTS may be used as a substitute source for revising and tracking year 2010 adolescent tobacco objectives.

4. **Objective:** Reduce the percentage of public high school students who say they are currently smoking to:

26.0 percent for all high school students
 26.0 percent for white non-Hispanic high school students
 15.0 percent for black non-Hispanic high school students
 26.0 percent for all Hispanic high school students

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total high school students	36.6	26.0	-29.0	15.0	-59.0
White non-Hispanic	43.4	26.0	-40.1	15.0	-65.4
Black non-Hispanic	19.7	15.0	-23.9	15.0	-23.9
Asian/Pacific Islander	N/A				
Hispanic	32.3	26.0	-19.5	15.0	-53.6

3C. Healthy Behaviors - Adolescents

N/A = Not Available

Source: New Jersey Department of Law and Public Safety, Division of Criminal Justice

The estimated percent of tenth through twelfth grade students who report that they currently smoke is provided by surveys conducted every three years by the New Jersey Department of Law and Public Safety (NJLPS). Currently smoking is defined in this survey as smoking at any frequency: on occasion; half pack or less a day; half to one pack a day; or more than one pack a day. The surveys have been conducted since 1980 by NJLPS and the estimated percentage of high school smokers has tended to fluctuate from one survey to the next. The results from the most recent survey year (1998) indicate a decline in self-reported smoking prevalence in all race/ethnicity subgroups since the previous survey in 1995. By race/ethnicity, the highest reported percentage of current smokers is among white non-Hispanic youths. Data from the 1999 and subsequent New Jersey Youth Tobacco Surveys which include students in public, private, parochial and vocational high schools may also be substituted for the NJLPS survey for revising objectives and tracking progress on high school tobacco usage.

5. **Objective:** Decrease the percentage of middle school students who have used alcohol in the past 30 days to:

20.0 percent for all middle school students
20.0 percent for all white non-Hispanic middle school students
15.0 percent for all black non-Hispanic middle school students
20.0 percent for all Hispanic middle school students

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All middle school students	25	20.0	-20.0	15.0	-40.0
White non-Hispanic	27	20.0	-25.9	15.0	-44.4
Black non-Hispanic	16	15.0	-6.3	15.0	-6.3
Asian/Pacific Islander	N/A				
Hispanic	26	20.0	-23.1	15.0	-42.3

N/A = Not Available

Source: New Jersey Department of Health and Senior Services, Division of Addiction Services

Estimates of alcohol use among middle school students in the state are available from surveys conducted in 1995 and 1999. Reported use in the past 30 days declined among all race/ethnicity groups between the two surveys. The surveys encompass students in public, private and parochial middle schools. It is expected that this survey will be repeated at regular intervals over the coming decade.

6. **Objective:** Decrease the percentage of middle school students who have used marijuana in the past 30 days to 5.0.

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All middle school students	7	5.0	-28.6	4.0	-42.9
White non-Hispanic	7	5.0	-28.6	4.0	-42.9
Black non-Hispanic	7	5.0	-28.6	4.0	-42.9
Hispanic	6	5.0	-16.7	4.0	-33.3

Source: New Jersey Department of Health and Senior Services, Division of Addiction Services

The source of estimates for the percentage of middle school students (public, private or parochial) who say they used marijuana in the 30 days prior to the interview is the 1999 Middle School Survey on Substance Abuse. Reported use of marijuana decreased in all race/ethnicity groups since the prior survey in 1995, particularly among black non-Hispanic youths. It is expected that the survey will be repeated at regular intervals during the coming decade.

7. **Objective:** Decrease the percentage of middle school students who have used inhalants in the past 30 days to:

2.0 percent for all middle school students
 2.0 percent for white non-Hispanic middle school students
 1.5 percent for black non-Hispanic middle school students
 2.0 percent for Hispanic middle school students

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All middle school students	3	2.0	-33.3	1.0	-66.7
White non-Hispanic	4	2.0	-50.0	1.0	-75.0
Black non-Hispanic	2	1.5	-25.0	1.0	-50.0
Hispanic	3	2.0	-33.3	1.0	-66.7

Source: New Jersey Department of Health and Senior Services, Division of Addiction Services

Although the percentage of middle school students who say they have used inhalants in the 30 days prior to the survey is low, the serious consequences of the use of inhalants make it imperative to include this objective. Inhalant use is most prevalent among the youngest population attracted to drug experimentation and use; more than any for other substance, use/experimentation appears to have been established before the seventh grade. Subsequent reports will provide updated prevalence estimates and an indication of trends in usage.

3C. Healthy Behaviors - Adolescents

8. **Objective:** Decrease the percentage of public high school sophomores, juniors and seniors who have used the following substances in the past 30 days to:

37.0 percent for alcohol
11.0 percent for marijuana
2.0 percent for cocaine
3.8 percent for inhalants

<u>Substances</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Alcohol	48.0	37.0	-22.9	25.0	-47.9
Marijuana	21.5	11.0	-48.8	9.0	-58.1
Cocaine	2.7	2.0	-25.9	1.0	-63.0
Inhalants	5.0	3.8	-24.0	2.5	-50.0

Source: New Jersey Department of Law and Public Safety, Division of Criminal Justice

The self-reported use of alcohol, marijuana and cocaine among public high school students each declined during the 1980s; however survey results from 1995 showed sharp increases in the use of each of these during the 30 days prior to interview. The most recent results from the 1998 survey indicated a slight increase in alcohol use, but decreases in use in the past 30 days of the other three substances. Inhalant use is not only extremely risky behavior, but is also likely to begin at early ages for those who use or experiment with this drug. The source of estimates of drug prevalence in high school students is the Department of Law and Public Safety's survey which is conducted every three years. It is anticipated that this survey will be conducted regularly over the coming decade.

- 9a. **Objective:** Reduce the total number of births per 1,000 females aged 10 through 14 to:

0.5 for all females 10-14 years
1.5 for non-Hispanic black females 10-14 years
1.0 for Hispanic females 10-14 years

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	0.6	0.5	-16.7	0.0	-100.0
White non-Hispanic	DSU				
Black non-Hispanic	2.3	1.5	-34.8	0.0	-100.0
Asian/Pacific Islander	DSU				
Hispanic	1.3	1.0	-23.1	0.0	-100.0

DSU = Data Statistically Unreliable

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

There is widespread consensus that births to pre-teens and very young teens are risky for both mother and baby. Infants born to females under the age of 15 are more likely to suffer from

low birth weight, neonatal mortality, and sudden infant death syndrome. They may be at greater risk of child abuse, neglect and behavioral and educational problems in later years. Teenage mothers are also at greater risk for reduced educational attainment, fewer employment opportunities and increased likelihood of welfare dependency. Fortunately, these rates have been on the decline in recent years.

- 9b. Objective:** Reduce the total number of births per 1,000 females aged 15 through 17 to:

18.2 for all females 15-17 years
5.5 for white non-Hispanic females 15-17 years
35.0 for black non-Hispanic females 15-17 years
30.0 for Hispanic females 15-17 years

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	20.1	18.2	-9.5	5.5	-72.6
White non-Hispanic	6.2	5.5	-11.3	5.5	-11.3
Black non-Hispanic	53.3	35.0	-34.3	5.5	-89.7
Asian/Pacific Islander	DSU				
Hispanic	47.2	30.0	-36.4	5.5	-88.4

DSU = Data are statistically unreliable

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

The birth rate among 15 through 17 year old females, while substantially higher than that for 10 through 14 year olds, has been decreasing for most of the 1990s. However, births to teens of this age are still a serious problem, as these young mothers are less likely to have a successful birth outcome, and are more likely to be at risk themselves for poor health and lower levels of education and income.

- 9c. Objective:** Reduce the total number of births per 1,000 females aged 18 through 19 to:

40.0 for all females 18-19 years
20.0 for white non-Hispanic females 18-19 years
75.0 for black non-Hispanic females 18-19 years
75.0 for Hispanic females 18-19 years

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	56.5	40.0	-29.2	20.0	-64.6
White non-Hispanic	24.0	20.0	-16.7	20.0	-16.7
Black non-Hispanic	122.9	75.0	-39.0	20.0	-83.7
Asian/Pacific Islander	13.2	DNA			
Hispanic	116.6	75.0	-35.7	20.0	-82.6

DNA = Data not analyzed

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

3C. Healthy Behaviors - Adolescents

Culturally and legally 18 and 19 year olds are considered adults. However, these teens still have many of the same health, educational, and social problems of younger adolescents, and often are not prepared for motherhood.

10. **Objective:** Reduce the death rate from homicide among 15 through 19 year old males per 100,000 population to:

12.0 for all males 15-19 years
4.0 for white non-Hispanic males 15-19 years
37.0 for black non-Hispanic males 15-19 years
12.0 for Hispanic males 15-19 years

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total Males 15-19	13.9	12.0	-13.7	4.0	-71.2
White non-Hispanic	4.8	4.0	-16.7	4.0	-16.7
Black non-Hispanic	50.2	37.0	-26.3	4.0	-89.2
Asian/Pacific Islander non-Hispanic	DSU				
Hispanic	17.0	12.0	-29.4	4.0	-76.5

DSU = Data are statistically unreliable

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

Homicide is a leading cause of mortality among young males 15 through 19 years of age. Homicide rates in this age group have fluctuated widely over the past 10 years, so that no clear overall trend can be discerned. However, the disparities by race and ethnicity are particularly pronounced and have persisted. For black males in this age group, it is the leading cause of death. The targets have been set to narrow the gaps in rate by race.

11. **Objective:** Reduce the death rate from homicide due to firearms among 15 through 19 year old males per 100,000 population to:

7.0 for all males 15-19 years
3.0 for white non-Hispanic males 15-19 years
25.0 for black non-Hispanic males 15-19 years
5.0 for Hispanic males 15-19 years

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total Males 15-19	9.8	7.0	-28.6	3.0	-69.4
White non-Hispanic	3.6	3.0	-16.7	3.0	-16.7
Black non-Hispanic	38.8	25.0	-35.6	3.0	-92.3
Asian/Pacific Islander non-Hispanic	DSU				
Hispanic	7.3	5.0	-31.5	3.0	-58.9

DSU = Data are statistically unreliable

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

A large proportion of homicides in the 15 through 19 year old population are effected through the use of firearms. As with all homicides in this age group, the differentials in rates by race are large and, as with the prior objective, the targets are set to narrow these gaps.

Discussion

Adolescent health programs in New Jersey have been evolving over the past decade from a focus on adolescent pregnancy to address a broader range of the challenges adolescents face as they become adults. To address the myriad issues confronting adolescents today, NJDHSS supports an integrated, community-based approach that focuses on substituting positive behaviors for risk-taking ones. Formation of Community Partnerships for Healthy Adolescents is a first step in developing integrated prevention programs for adolescents at the community level. NJDHSS funds partnership programs in ten communities with a high proportion of at-risk youth. These partnerships are developing strategies to address adolescent behaviors that may lead to adverse outcomes, such as injuries, both intentional and unintentional.

Comprehensive Health and Physical Education

Since schools harness the attention of adolescents for at least six to eight hours per day, they can be an effective vehicle for promoting health-related knowledge and skills. Under New Jersey's new Core Curriculum Standards, adolescents in grades eight and eleven will be tested on their knowledge and skills in a wide range of areas, including personal and interpersonal skills, such as conflict management, that can reduce levels of violence. Similarly, the new standards also address substance abuse, including use of tobacco as well as other types of substances. Human sexuality and family life are also addressed which should have a positive impact on teen pregnancy. The new standards will address nutrition, wellness, and also continue to promote physical fitness and movement. Currently, there is no data source for information on either body mass index or aerobic activity levels for adolescents. Vigorous physical activity decreases among adolescents nationally around grades nine through twelve. Lack of physical activity has been identified as a risk factor for many health problems. In summary, programs and activities developed as a result of the new standards will encourage adolescents to embrace healthy behaviors while avoiding risky ones.

Tobacco Use

Implementing effective prevention strategies for adolescents is critical to reduce the likelihood of their becoming regular cigarette smokers. In 1998, almost thirty-seven percent of high school students in New Jersey reported that they were currently smoking. Of the individuals in the United States who ever smoked daily, eighty-two percent tried their first cigarette before age 18, and fifty-three percent became daily smokers before age 18. It is now well established that smoking causes heart disease; cancers of the lung, larynx, esophagus, pharynx, mouth, and bladder; and chronic lung disease.

As a result of the settlement by New Jersey and forty-five other states with the tobacco industry, New Jersey anticipates receiving approximately \$7.6 billion over the next twenty-five years. Of the first scheduled payment of approximately \$93 million, the state has committed approximately \$30 million to a comprehensive program to reduce tobacco use, building on current smaller initiatives. Elements of the tobacco control program include a media campaign directed primarily at youth; community-based programs to discourage smoking and exposure to second-hand smoke through

3C. Healthy Behaviors - Adolescents

both public policies and community consensus; programs for school-aged youths; and programs to help tobacco-addicted youth, as well as adults, stop smoking. These programs build on earlier state initiatives, including a more modest youth anti-tobacco awareness media campaign launched in 1997 that employed print, radio, TV and Internet outlets.

Teenage tobacco use has proven to be especially sensitive to tobacco price increases. In January, 1998, New Jersey significantly increased its cigarette excise tax, from \$0.40 to \$0.80 per pack. It was expected that this measure would help reduce teen smoking. One year after the tax had been enacted, the volume of cigarettes sold in New Jersey had declined by 11.8 percent. While direct data on the impact on teen smoking are not available, evidence suggests teens were more affected by this price increase than adults. At the end of 1998, there were further large price increases, as tobacco manufacturers adjusted their prices to reflect the cost of the tobacco settlement. This should further reduce teen tobacco consumption. In addition, for several years the state has also stepped up its enforcement of tobacco age-of-sale laws, greatly increasing retailer compliance with prohibitions against sales of tobacco products to minors.

The percentage of students who smoked in 1998 indicate a decline in smoking prevalence from 1995. New Jersey's expanded tobacco control program should positively change use of tobacco by adolescents in the future. New Jersey is one of 12 states awarded a three year grant by the American Legacy Foundation to expand the state's youth movement against tobacco. The \$2.2 million award will build on the state's youth summit through a series of regional mini-conferences.

Other Substance Abuse

Substance use and abuse among adolescents is a serious public health problem. It has been linked to numerous problems, including delinquency, poor academic achievement and school failure, violence/crime, and serious family and interpersonal problems. Research has shown that the earlier the initiation of substance use, the more likely the individual will become an adult heavy user. Preventing drug and alcohol use among young people is critical in terms of preventing lifelong dependency and the societal and economic costs associated with it. According to a report from the Institute for Health Policy at Brandeis University, each year over 12,000 people die nationwide from illicit drug abuse and acquired immunodeficiency syndrome (AIDS), which is increasingly associated with injecting drug users. Beyond the suffering caused by drug use, there is also an economic cost to society, estimated to be close to \$1,000 for every man, woman, and child.

In October 1996, NJDHSS published the first comprehensive report on substance abuse among seventh and eighth grade students statewide, the 1995 New Jersey Middle School Survey on Substance Abuse. The survey was repeated, in slightly modified form, in 1999. Overall, New Jersey student use of the most common substances including alcohol, tobacco, marijuana, and inhalants, was at levels that are similar to current national trends. Alcohol was the substance most widely used by middle school students, with 53% (48% in grade 7 and 57% in grade 8) reporting use at some time in their lives. Past 30 day use of alcohol stood at 25% (5% lower than 1995) and lifetime cigarette smoking stood at 38%, compared to 40% in 1995.

In 1997, NJDHSS began fostering peer leadership programs in middle schools, to begin encouraging adolescents at an early school age to avoid substance use. The program focuses on tobacco, alcohol and other drugs and employs the principle that peers are more effective than adults in convincing adolescents that they should avoid experimentation with these drugs. As of December, 1998, seventy-four schools had participated in the program, and over 900 adolescents had been trained as peer leaders.

Data on drug and alcohol use by older students are available from a survey conducted every three years by the Department of Law and Public Safety. The 1998 survey report, *Drug and Alcohol Use among New Jersey High School Students* stated that 48.0 percent of high school sophomores, juniors and seniors had used alcohol in the past thirty days, a slight increase since the 1995 survey. This compared to 21.5 percent who had used marijuana a slight decrease since the 1995 survey. One in twenty high school students reported use of inhalants in the 30 days prior to the survey and 2.7 percent said they had used cocaine during that period.

Demand for alcohol and drug treatment services for adolescents has been increasing. Currently, NJDHSS funds and reserves 289 short- and long-term residential treatment beds for juveniles, including seventy-five that are reserved for patients referred through the New Jersey Juvenile Justice Commission. In 1999, the latest year for which data are available, 3,164 persons under age 18 were admitted to those New Jersey alcohol and substance abuse treatment programs that are included in the NJDHSS Alcohol and Drug Abuse Data System. These adolescents represent 5.7 percent of all such treatment admissions statewide. Among adolescents admitted, about three-fifths (2,157) were admitted with marijuana as the primary substance of abuse, while over one out five (609) had alcohol as the primary substance. Seven percent (225) or about one out of fourteen was admitted for heroin dependence, and 3.5 percent (110), or about one out of every twenty-eight was admitted with cocaine as the primary drug. Males were three times as likely to be admitted for treatment as females.

NJDHSS is aware that adolescent residential treatment is particularly hard to find in the southern portion of the State. During 1999, NJDHSS reserved an additional seven residential beds from a licensed treatment facility in southern New Jersey, in addition to a continuum of outpatient aftercare and case management services. In 2000, a \$2 million dollar expansion in substance abuse treatment services supported long-term residential care, short-term residential care and sub-acute detoxification treatment in eight southern counties. In addition, some funding is used to expand outpatient services. In addition, since 1986, NJDHSS has provided funding to the twenty-one county-based alcoholism and drug abuse authorities to provide inpatient and outpatient aftercare and support services for substance abusing youth.

In sum, the data collected since 1992 indicate that use of alcohol and illegal drugs among New Jersey adolescents has generally fluctuated lower but has been sustained at relatively high levels. The largest population of adult substance abusers consists of individuals who initiated the use of alcohol and tobacco during adolescence, followed by a progression to alcohol abuse or illicit drug use.

Teen Pregnancy

In 1998, 8,809 New Jersey adolescents aged 10 through 19 gave birth. Although this represents a major decline from earlier in the decade, it is still too high. For pre-adolescents and adolescents, bearing a child is associated with poor outcomes for both the mother and the child. Teenage mothers are less likely to finish high school or go on to college, have fewer job opportunities, are more likely to need welfare assistance, and are at greater risk for poor health. Moreover, teenage mothers have higher percentages of low birth weight infants, lower percentages of first trimester prenatal care, and higher percentages of no prenatal care. Adolescents are also less likely to seek out prenatal care, yet prenatal care remains the most effective way to promote the birth of a healthy child.

Reducing teen pregnancies is a priority issue for the state. Teen birth rates have been declining both in New Jersey and nationwide. However, a significant disparity in the teen birth rate still persists between minority females and the total population. In 1998, the birth rate per 1000 females aged 15

3C. Healthy Behaviors - Adolescents

through 17 was 53.3 for non-Hispanic black females and 47.2 for Hispanic females, compared to 6.2 for non-Hispanic white females. Closing this gap between the birth rates is as much a priority issue for the state as is reducing the overall birth rate to teenagers.

There are significant racial and ethnic differences among adolescent mothers. Black teenage mothers have higher percentages of low birthweight infants than do white teen mothers, are more likely to be unmarried, and have lower percentages of first trimester prenatal care than do white teen mothers. Hispanic teenagers have outcomes similar to or slightly better than white teenage mothers.

A wide variety of programs have been developed to address different aspects of teen pregnancy, including some which reinforce the values of abstinence as well as family planning services. The federally funded Abstinence Only Program was recently implemented and provides funds to ten sites to promote sexual abstinence among adolescents aged ten to fourteen years. The goals of the program are to enhance the young adolescent's ability to postpone initiation of sexual activity, to provide parents and families an opportunity for skills training in parent/child communication, and to reduce the number of teen pregnancies and births.

For teens who do become parents, both mothers and fathers, a variety of education and support programs are offered. For example, using federal and state funds the state supports seventeen family planning agencies with over sixty clinical sites. These agencies provide comprehensive reproductive health services to more than 25,000 adolescents each year. Family planning agencies also provide community education and outreach to the adolescent population. Educational activities focus on pregnancy prevention strategies that encourage family communication, promoting self-esteem, postponing sexual activity and promoting effective contraception.

The School-Based Youth Services Program has also played an integral role in promoting teen pregnancy prevention. In addition, because of the connection between teen pregnancy and welfare, the state has made funds available from the welfare program for teen pregnancy prevention.

Adolescent parenting projects, two in Newark and one in Bridgeton serving Cumberland County, use home visiting to promote the physical and psychosocial health of low income adolescent parents and their infants. The programs serve over 200 pregnant or parenting teens with a primary goal of preventing repeat pregnancies. The program also seeks to prevent second pregnancies within two years, prevent child abuse and neglect, assist the adolescent to complete high school or meet GED requirements, and link the adolescents to primary care providers to ensure that both the teen and the infant receive preventive and primary health care.

An Advisory Council on Adolescent Pregnancy was convened by the State in April 1999. The Council's responsibilities include developing policy proposals to prevent adolescent pregnancy, reduce out-of-wedlock births among adolescents, and improve services to at-risk, pregnant and parenting adolescents. The Council is also responsible for developing a coordinated and comprehensive approach among public and private groups to address adolescent pregnancy, as well as promoting community input, communication and education on this issue.

Parents Anonymous of New Jersey operates a hotline (1-800 THE KIDS) to prevent child abuse and neglect. The organization was recently awarded additional state support to provide teenagers who think they may be pregnant with confidential counseling and referral services. State staff provide technical assistance to hotline volunteers and resource information to link teens with local community resources.

Violence

Violence among adolescents, particularly young black males, is a major concern. It is more than a little alarming that homicide is the second leading cause of death among all adolescents aged 15 through 19 in New Jersey, and is the leading cause of death among black males in this age group. The disparity in homicide for the black population compared to that of the white population is particularly disturbing. The homicide rate for 15 to 19 year old non-Hispanic black males was 50.2 per 100,000 in 1998, more than ten times higher than the rate for non-Hispanic white males, 4.8 per 100,000.

Limited employment opportunities, lack of community-sponsored after school-activities for adolescents, dysfunctional family environments, and risk-taking behaviors are some of the factors associated with violence.

The Violence Institute at the University of Medicine and Dentistry of New Jersey (UMDNJ) serves as a state resource on violence. Established in 1997 to promote effective strategies to reduce violence, the Institute is developing a comprehensive database related to violence in New Jersey. This will allow subtler ways of assessing trends in violence than measures such as homicide rates can. The Institute is also currently working on over fifty violence-related projects in New Jersey. These include completion and dissemination of a guide on how to identify adolescents who may harm themselves, and assisting six school districts in developing comprehensive violence prevention programs. Two other innovative programs designed to reduce violence involving minority males are the Sankofa and Self projects. The projects are designed and managed by UMDNJ, with funding support from NJDHSS.

Sankofa is a six-week program involving life skills training for young males at risk. Parents are involved as well, and receive training in how to recognize violence-related behaviors and to improve their ability to communicate with their children. The Self project is a school-based project for black students and parents focusing on their culture and heritage. It stresses that the black experience has had a positive impact on their lives and on others. Problem-solving skills are included in the training, to give students the tools to evaluate and control their actions. The goal of the program is to enable students to resolve conflicts in an effective and non-violent manner. Other school-based programs include Partnerships for Preventing Violence. This project is an innovative, nationwide three-year program begun in 1998 to train professionals on methods of using school-based programs to prevent violence. Training was provided via satellite by the Harvard School of Public Health, the Prevention Institute, and the Center for Violence and Injury Prevention. NJDHSS supported broadcasts at strategic locations throughout the state. Among those who received the training were school administrators, teachers, public health professionals, physicians, juvenile justice professionals, and police departments. Approximately 200 individuals attended each of the nine broadcasts.

Several of the Community Partnerships for Healthy Adolescents mentioned earlier have also focused their efforts on youth violence prevention and conflict resolution.

The School Based Youth Services Program sponsors SAVVY (Students Against Violence and Victimization of Youth) in a number of high schools. SAVVY educates students about violence and gives them a sense of empowerment. Students learn alternative ways of dealing with potentially violent situations, resulting in positively altering the climate of the school.

Finally, the Violence Institute and a number of co-sponsors including the Departments of Law and Public Safety, Education and Health and Senior Services sponsored a Youth Summit on Violence, held in November, 2000. Approximately four hundred adolescents from all twenty-one counties in New Jersey discussed the causes of youth-to-youth violence.

RELATED OBJECTIVES

- II. 2 Objective 1 - Reduce the percentage of children without health insurance.
- III. 3F Objective 1b - Reduce the death rate from motor vehicle-related injuries among youth aged 15 through 19.
- III. 3F Objective 5 - Reduce the incidence of traumatic brain injuries in males aged 15 through 24
- III. 4D Objective 5 - Reduce the incidence of HIV disease among adolescents/young adults aged 13 through 24.
- III. 4E Objective 2 - Reduce the death rate from suicide for males aged 15 through 19.
- III. 4E Objective 4 - Reduce the annual percentage of short-term readmissions to youth with Serious Emotional Disturbance to inpatient hospitalization in Children's Crisis Intervention Services.
- III. 4E Objective 5 - Increase the percentage of site reviews of youth programs which include parent participation.
- III. 4F Objective 4 - Reduce the death rate due to alcohol-related motor vehicle injuries among persons aged 15 through 24.
- III. 4I Objective 1 - Reduce the rate of chlamydia trachomatis infections among females aged 15 through 19.
- III. 4I Objective 2 - Reduce the prevalence of chlamydia trachomatis infections among person 15 through 24 .
- III 4I Objective 3 - Reduce the incidence of gonorrhea for all persons and females aged 15 through 19 years.

Healthy behaviors that provide a foundation for long life and well-being should be established during childhood and adolescence, and then maintained during adulthood. It is also possible to reap significant health benefits from positive changes in behavior by adults. Healthy behaviors that are key for adults include maintaining a healthy diet and weight, physical activity, moderation in the use of alcohol, and abstinence from tobacco and other addictive substances. Although violent behavior is predominately a problem among younger people, it is also a major concern for young adults, particularly minority males.

According to the Centers for Disease Control and Prevention (CDC), dietary factors are linked to four of the ten leading causes of death, i.e. coronary heart disease, some cancers, stroke and Type 2 diabetes mellitus. For example, roughly eighty percent of those with Type 2 diabetes are obese at the time of diagnosis. Higher intake of fruits and vegetables has been associated with reduced risk for some types of cancer, and may also have a protective effect against coronary heart disease that is independent of their role in replacing high-fat foods in the diet. Once-common nutrient deficiencies have been replaced in the present-day American population with excesses and imbalances in some food components, resulting in increases in the number of persons classified as overweight. This situation is exacerbated by the sedentary lifestyle of a growing percentage of the population. With the recent change in definition of overweight to encompass a Body Mass Index (BMI) of 25.0 or more for both males and females, over half of the United States adult population is now considered overweight.

For fully half of their lifetimes, reproductive health care is a necessity for women. From early teenage years through menopause, reproductive health care or family planning is likely to be the major, and often, the only, regular medical attention women will receive. Health care professionals agree that a large majority of women who seek health care, as many as two-thirds, do so to obtain reproductive health services. Although no specific objectives are included in this chapter, there is an extended discussion of family planning services. Relevant objectives may be found in the sections “Fundamentals of Good Health” and “Preventing and Reducing Major Diseases”.

Violent behavior poses significant risks to health, particularly among young black males. In New Jersey in 1998, black males were almost nine times as likely as white males to die as a result of homicide.

Objectives concerning diet, physical activity, obesity, and homicide have been chosen for monitoring healthy behaviors for adults. Relevant objectives may also be found in the chapters on mental health and addictions.

3D. Healthy Behaviors - Adults

2010 Objectives

1. **Objective:** Increase the percentage of persons aged 18 and over eating at least five daily servings of fruits and vegetables (including legumes) to **35.0 percent**.

<u>Populations</u>	<u>1996-1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	26.7	35.0	+31.1	50.0	+87.3
White non-Hispanic	28.0	35.0	+25.0	50.0	+78.6
Black non-Hispanic	21.0*	35.0	+66.7	50.0	+138.1
Asian/Pacific Islander	DSU				
Hispanic	22.5*	35.0	+55.6	50.0	+122.2

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of one and one-half to two percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System

Estimates from BRFSS of the average daily consumption of fruits and vegetables are available for New Jersey residents for each year beginning with 1991. During these years, there has been no major change in the average reported by survey respondents. Targets are set to substantially increase the percentage of the population who consume the recommended five servings of fruits and vegetables, and also to narrow the gaps on reported consumption by race and ethnicity.

2. **Objective:** Reduce the percentage of persons aged 18 and over who are overweight but not obese to:

27.6 percent for all adults
28.1 percent for non-Hispanic whites
28.4 percent for non-Hispanic blacks
32.4 percent for Hispanics
36.6 percent for males
25.1 percent for females

<u>Populations</u>	<u>1996-1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	36.7	27.6	-24.8	25.0	-31.9
White non-Hispanic	36.3	28.1	-22.6	25.0	-31.1
Black non-Hispanic	38.3	28.4	-25.8	25.0	-34.7
Asian/Pacific Islander	DSU				
Hispanic	41.5	32.4	-21.9	25.0	-39.8
Male	45.6	36.6	-19.7	25.0	-45.2
Female	28.2	25.1	-11.0	25.0	-11.3

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System

Large disparities exist for overweight prevalence (defined as BMI greater than or equal to 25.0 but less than 30.0) among racial and ethnic populations, and by gender.

3. Objective: Reduce the percentage of persons aged 18 and over who are obese to:

12.0 percent for all adults
12.0 percent for non-Hispanic whites
15.0 percent for non-Hispanic blacks
12.0 percent for Hispanics
14.0 percent for males
12.0 percent for females

<u>Populations</u>	<u>1996-1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	15.5	12.0	-22.6	12.0	-22.6
White non-Hispanic	14.7	12.0	-18.4	12.0	-18.4
Black non-Hispanic	24.1	15.0	-37.8	12.0	-50.2
Asian/Pacific Islander	DSU				
Hispanic	16.0*	12.0	-25.0	12.0	-25.0
Male	16.7	14.0	-16.2	12.0	-28.1
Female	14.4	12.0	-16.7	12.0	-16.7

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of one and one-half to two percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System

Obesity is defined as a BMI of 30.0 or greater. Obesity is less prevalent than overweight in the adult population, but the health risks are proportionately greater. Obesity has also been associated with an increased risk of certain cancers and with other disorders such as cholelithiasis, obstructive sleep apnea, venous thromboembolism and osteoarthritis. Though less pronounced than with the overweight population, disparities in proportions of obese persons exist among racial and ethnic populations, and by gender.

3D. Healthy Behaviors - Adults

4. **Objective:** Increase the percentage of persons aged 18 and over who participated in frequent, leisure time physical activity during the past month to **42.5 percent**.

<u>Populations</u>	<u>1996-1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total	36.9	42.5	+15.2	50.0	+35.5
White non-Hispanic	38.9	42.5	+9.3	50.0	+28.5
Black non-Hispanic	30.4	42.5	+39.8	50.0	+64.5
Asian/Pacific Islander	DSU				
Hispanic	31.2*	42.5	+36.2	50.0	+60.3
Adults 65+	28.6	42.5	+48.6	50.0	+74.8

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of one to two percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System

Maintenance of a physically active lifestyle is recognized in public health as one of the essential features of a healthy life. While it has long been known that physical activity can prevent heart disease, newer studies suggest that, on average, physically active persons outlive those who are inactive. However, only a relatively small proportion of adults report that they participate regularly in vigorous physical activity, and there has not been any measurable change in this percentage since it was first estimated for New Jerseyans in the early 1990s from BRFSS. This is another health behavior in which race and ethnicity differentials are reported and, for this objective, an age-based differential as well.

5. **Objective:** Reduce homicide deaths among 20 through 34 year olds per 100,000 population to:

6.2 for all 20-34 year olds
29.0 for black males
5.5 for black females
4.1 for white males

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total population 20-34	7.5	6.2	-17.3	4.0	-46.7
Black males aged 20-34	44.0	29.0	-34.1	4.0	-90.9
Black females aged 20- 34	7.8	5.5	-29.5	4.0	-48.7
White males aged 20-34	5.0	4.1	-18.0	4.0	-20.0
Asian/Pacific Islander 20-34	DSU				
Hispanic males aged 20-34	DSU				

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

The young adult population, 20 through 34 years of age, is particularly susceptible to death from homicide. In the U.S., the homicide death rates are known to be especially high in black and Hispanic populations in this age group (the New Jersey Hispanic rates are not available). Although total homicide rates are decreasing in the nation as a whole, the decreases in the young adult population have not been as dramatic.

3D. Healthy Behaviors - Adults

6. **Objective:** Reduce the death rate from homicide due to firearms among 20 through 34 year old males per 100,000 population to:

6.6 for all males 20-34 years old
1.5 for white non-Hispanic males
27.0 for black non-Hispanic males

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total males 20-34	8.2	6.6	-19.5	1.5	-81.7
White non-Hispanic males 20-34	1.6	1.5	-6.3	1.5	-6.3
Black non-Hispanic males 20-34	39.1	27.0	-30.9	1.5	-96.2
Asian/Pacific Islander males 20-34	DSU				
Hispanic males 20-34	DSU				

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

A large proportion of the homicides in the 20 through 34 year old age group are effected through use of firearms. The rates of homicide caused by firearms in this age group are particularly high among males and, of these, black males have the highest homicide rates. Targets have been set to reduce the major disparities in firearm-related homicide existing among males of the various race and ethnicity groups.

Discussion

Poor dietary habits and low levels of physical activity are leading causes of morbidity and mortality throughout the United States. Nationally, it has been estimated that approximately fifteen percent of all deaths are related to physical activity patterns and dietary factors.

Reproductive Health Care for Women

The Institute of Medicine has stated that: "Family planning services have a unique impact in that they enable people to exercise control over their lives in one of the most fundamental respects. With that control comes lower rates of welfare dependency, lower rates of abortion and sexually transmissible diseases, greater education achievement, reduced likelihood of substance abuse, significantly diminished chances of low birthweight and substantially reduced risks of infant mortality."¹

The Centers for Disease Control and Prevention has stated that access to family planning and contraceptive services has altered social and economic roles of women. Family planning has provided health benefits such as smaller family size and longer interval between the birth of children, increased opportunities for preconceptional counseling and screening, fewer infant, child and maternal deaths, and the use of barrier contraceptives to prevent pregnancy and the transmission of human immunodeficiency virus and other sexually transmitted diseases (STDs)²

Despite the availability of publicly funded and private reproductive health services for women, half of all pregnancies in the United States are unintended.³ In New Jersey, there are approximately 1.9 million women of reproductive age, 1.1 million of whom need contraceptive services and supplies. Of the 1.1 million, the Alan Guttmacher Institute has estimated that 413,000 or thirty-seven percent need publicly supported family planning services.

Through its network of seventeen family agencies, the state supports increased access to reproductive health care and family planning services, particularly for high risk women. While women of all socioeconomic levels experience unintended pregnancies, those most likely to do so include women under age 20 and poor and African American women.⁴ Through the publicly funded family planning clinics, high-risk women receive a comprehensive care system that offers a wide range of health care and education services, including testing and treatment for STDs, screening for gynecological infection and cancer, breast and pelvic examinations, colposcopy and cryotherapy, preconceptional risk assessment and care, pregnancy testing, maternity care, including prenatal and postnatal care, contraceptive services and supplies, voluntary sterilization, and education and counseling about the reproductive system, menstrual disorders, menopause and infertility.

In addition, family planning practitioners are oriented toward the complete well being of the person and the prevention of other diseases through health screening such as blood pressure, Pap tests, breast exams, blood tests, immunizations, medical history taking and physical examinations.

It is anticipated that the network of publicly funded family planning providers who provide reproductive health care and contraceptive services to high risk women in the state will reach and serve the disadvantaged women who most need this care, and by doing so, reduce the number of unintended pregnancies among this vulnerable population.

Diet

In 1995, the U.S Departments of Agriculture (USDA) and Health and Human Services (HHS) in their report on *Dietary Guidelines for Americans* noted, “. . .to stay healthy, one should eat a variety of foods; maintain or improve one’s weight by balancing food intake with physical activity; choose a diet that is plentiful in grain products, vegetables, and, fruits, moderate in salt, sodium, and sugars, and low in fat, particularly saturated fat, and cholesterol; and, if consuming alcoholic beverages, do so in moderation.”⁵ The USDA recommends a daily intake of at least six servings of grains, three servings of vegetables and two servings each of fruit, milk and meat. Yet studies show that Americans increasingly eat foods high in fat content, are gaining weight, and are exercising less than ever before.

In New Jersey, there has been little noticeable improvement in the proportion of adults eating at least five servings of fruits and vegetables per day. In 1996 through 1998 only twenty-seven percent of the population reported consuming five servings per day. While New Jersey’s record is somewhat better than the national average of twenty-two percent in 1994, it is still alarmingly low.

A small joint pilot project between NJDHSS and the New Jersey Department of Agriculture, the Senior Farmers Market Initiative, is underway for older adults in four municipalities, Jersey City, Paterson, Trenton, and Bridgeton. This program provides seniors in those communities with vouchers to purchase fresh fruits and vegetables at local farmers markets during the summer.

3D. Healthy Behaviors - Adults

While government can track dietary behaviors and promote eating a balanced diet, the final responsibility for improving eating habits lies with individuals, supported by their families, communities and health care providers.

Fitness

Lack of physical activity has been identified as a risk factor for coronary heart disease, colon cancer, non-insulin dependent diabetes, hypertension, osteoporosis and osteoporotic fractures, obesity, and symptoms of depression and anxiety, among other health problems.

In 1996 through 1998, only thirty-seven percent of adults in New Jersey reported engaging in leisure time physical activity for at least thirty minutes, three or more times per week. Overall, there has been little change in the proportion of physically active adults since NJDHSS began collecting these data in 1991. Levels of physical activity vary according to race and ethnicity, age, level of education, and income. Adults who are white, have more than twelve years of education, and have higher income levels are more likely to exercise. Younger adults are also more likely to exercise. Once again, beyond tracking fitness-related behaviors and promoting physical fitness in the schools, the state's role is relatively limited.

Overweight

Increasing prevalence of obesity is one outcome of unhealthy diets and lack of exercise. In the period 1996 through 1999, thirty-seven percent of New Jersey adults were overweight, and another fifteen percent were obese. Roughly one-third of obese adults in New Jersey report they are trying to control their weight by reducing their intake of calories and/or fat; about two percent are using physical activity alone to control weight, and approximately forty-nine percent are using both methods. However, one-fourth are not trying to control their weight at all. Moreover, the increase in obesity in the population nationally would suggest those who are trying to control their weight have not been successful.

Physicians can be effective in motivating their patients to try to lose weight. Of obese individuals advised by a doctor to lose weight, over two-thirds report they are actually trying to do so. It is also interesting that, in 1994, only one-third of obese individuals surveyed reported having been advised by a physician to lose weight. Physicians may underestimate their ability to influence their adult patients' behaviors with respect to diet, exercise, and use of alcohol and addictive substances. Physicians should be encouraged to stress the modification of these behavioral risks in their discussions with their patients.

Violence

Violence is viewed by many people as primarily an issue for the criminal justice system in the State. Yet violence is also a public health issue, resulting in injury and death. In 1997, 370 people died in New Jersey as a result of homicide, with 191 of these deaths involving a firearm. By national standards, New Jersey's homicide rate is not high. However, in New Jersey as elsewhere, there is a significant disparity in the racial impact of violence. Among young black males in New Jersey, homicide is the leading cause of death. The homicide rate among young black males is almost nine times as high as the rate for young white males. Although women, both black and white, are much less likely to be victims of homicide than black males, a large disparity persists between black and white women as well. The causes of violence are complex, and there is no single strategy that can address this issue. All groups in a community must work together to promote the reduction of violence. State efforts and the initiatives of the Violence Institute are focused on adolescents.

Hopefully, strategies to reduce violence and promote alternative means to cope with stress and conflict among adolescents will carry over and have a positive impact among young adults as well.

RELATED OBJECTIVES

- III. 3B Objective 5 - Increase the percentage of live births whose mothers received prenatal care in the first trimester.
- IV. 3B Objective 6 - Decrease the percentage of live births whose mother received no prenatal care.
- III. 3C Objective 9a-c - Reduce the total number of births per 1,000 females.
- III. 3E Objective 5 - Reduce the incidence of work-related musculoskeletal injuries experienced by employed older workers diagnosed with osteoporosis.
- III. 3F Objective 1B - Reduce the death rate from motor vehicle-related injuries among young adults 20-24.
- III. 3F Objective 2 - Increase the percentage of persons 18 and over who use seat belts in automobiles.
- III. 3G Objective 3 - Increase the percentage of persons 65 and over who have received pneumococcal vaccinations.
- III. 3G Objective 4 - Increase the percentage of persons aged 65 and over who have received influenza vaccinations in the previous 12 months.
- III. 4A Objective 3 - Increase the percentage of persons aged 18 and over who have had their blood cholesterol checked by a health professional within the past five years.
- III. 4B Objective 3 - Increase the percentage of persons age 18 and over who have been screened for diabetes during the past year.
- III 4B Objective 4 - Increase the percentage of persons aged 18 and over with diagnosed diabetes who have been told they have high blood pressure and are currently taking medication for high blood pressure.
- III 4B Objective 5 - Increase the percentage of persons 18 and over with diagnosed diabetes who have had a dilated eye exam within the past year.
- III 4B Objective 7 - Decrease the incidence of end-stage renal disease due to diabetes per 1,000 persons aged 18 and over with diagnosed persons.
- III 4B Objective 8 - Increase the percentage of persons 18 and over with diagnosed diabetes who reported having a glycosylated hemoglobin measurement at least once a year.

3D. Healthy Behaviors - Adults

- III. 4C Objective 2 - Increase the percentage of females aged 40 and over who received a clinical breast examination and mammogram within the past two years.
- III. 4C Objective 5 - Increase the percentage of women aged 18 and over with intact cervix uteri who had a Pap test within the past two years.
- III 4C Objective 10 - Increase the proportion of people aged 50 or older who have received a fecal occult blood test within the past year and/or have ever undergone sigmoidoscopy.
- III 4D Objective 2 - Reduce the incidence of HIV disease among females aged 15 through 44.
- III 4D Objective 3 - Reduce the incidence of HIV disease among males aged 15 through 44.
- III 4D Objective 4 - Reduce the rate per 100,000 population of newly diagnosed HIV infections among persons at least 50 years of age.
- III 4D Objective 8 - Reduce the death rate from HIV infection among 25-44 year olds.
- III. 4E Objective 2 - Reduce the death rate from suicide.
- III. 4F Objective 5 - Reduce the prevalence of cigarette smoking among the population aged 18 and over.
- III. 4F Objective 6 - Decrease the percentage of persons aged 18 years and older who consumed five or more alcoholic drinks per occasion one or more times during the past month.
- III. 4I Objective 1-2 - Reduce the rate of chlamydia trachomatis infections.
- III 4I Objective 3 - Reduce the incidence of gonorrhea per 100,000 population.
- III 4I Objective 4 - Reduce the incidence of primary and secondary syphilis per 100,000 population.
- III 4I Objective 5 - Reduce the incidence of congenital syphilis per 100,000 population.

ENDNOTE

- ¹ Brown SS and Eisenberg L, eds. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. Washington, DC: National Academy Press, 1995.
- ² Centers for Disease Control and Prevention. Family Planning. *Morbidity and Mortality Weekly Report* 48 (47):1073-1081, 1999.
- ³ National Center for Health Statistics. *Healthy People 2000 Review*. Hyattsville, MD: Public Health Service, 1997.
- ⁴ Brown SS and Eisenberg L, eds. *The Best Intentions: Unintended Pregnancy and the Well-being of Children and Families*. Washington, DC: National Academy Press, 1995.
- ⁵ President's Council on Physical Fitness and Sports. Washington, DC: The President's Council on Physical Fitness and Sports, 1995.

3. Fundamentals of Good Health

3E. Occupational Health and Safety

The International Labor Organization, an agency of the United Nations, defines occupational health as, ...”the promotion and maintenance of the highest degree of physical, mental, and social well-being of workers in all occupations; the prevention among workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health...”. Occupational illnesses and injuries are costly yet largely preventable. In 1992, the cost of occupational illnesses and injuries was reported to exceed \$171 billion in the United States.¹ A study conducted by the Mount Sinai School of Medicine for NJDHSS estimated the economic cost of occupational disease in New Jersey, including direct and indirect costs, was approximately \$672 million in 1992. In that year, it was estimated that occupational exposures resulted in between 1,870 to 3,088 deaths in New Jersey. Disease estimates ranged from approximately 12,000 to 18,891 cases.² Many, if not all, of these cases of disease and death were preventable. New Jersey’s goal is to reduce or eliminate occupational illness, injury and death to the extent possible by employing preventive measures.

Year 2010 objectives for occupational safety and health focus on emerging problems as well as areas of highest risk where there are baseline data, specific expertise and ongoing related activity: reducing deaths from work-related injuries in the construction industry; reducing the number of workers with high blood lead levels; reducing the prevalence of latex allergy in healthcare workers; and increasing hepatitis B vaccination levels for persons at occupational risk of infection.

2010 Objectives

1. **Objective:** Reduce the death rate from work-related injuries in the construction industry per 100,000 construction workers to **9.7**.

<u>Populations</u>	<u>1996-1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All construction workers	11.4	9.7	-14.9

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

Construction workers are defined as individuals who are employed in companies with a Standard Industrial Classifications (SIC) 15-17. The rate of fatalities among New Jersey construction workers was four times greater than the rate for all fatal occupational injuries in 1998. Therefore, prevention of construction worker deaths remains a high priority in New Jersey.

2. **Objective:** Reduce the number of workers per million with occupational lead exposure causing blood lead level concentrations ≥ 25 Fg/dL of whole blood to **70**.

<u>Population</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
All workers	129	70	-45.7	0	-100.0

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

3E. Occupational Health and Safety

Lead has adverse health effects on the central and peripheral nervous, hematologic, cardiovascular, renal, and reproductive systems. The number of New Jersey workers with elevated blood lead levels has declined in recent years. Nevertheless, exposure to lead continues to be a hazard in diverse work settings, such as manufacturing, metal recycling, remodeling, and construction.

3. **Objective (Developmental):** Increase the percentage of health care facilities protecting workers by instituting effective latex-sensitization prevention practices to **90 percent**.

	<u>2001 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Health care facilities		90.0		100.0	

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

Latex sensitization allergy has emerged as an occupational health problem. Exposure primarily occurs from use of latex gloves and other medical products. Symptoms from exposure to latex may be severe and may result in serious health problems. Baseline data will be collected in 2001.

4. **Objective (Developmental):** Increase hepatitis B vaccination levels among New Jersey public employees at occupational risk of infection through exposure to blood to **90 percent**.

<u>Populations</u>	<u>2001 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Public health care/ public safety employees		90.0		100.0	

Source: New Jersey Department of Health and Senior Services, Division of Environmental and Occupational Health Services

A safe and effective vaccine to prevent hepatitis B infection has been available since 1982. To prevent hepatitis B, vaccinations should be offered to all public employees who have occupational exposure to blood and other potentially infectious materials, i.e., health care and public safety workers. The Public Employees Occupational Safety and Health Program has adopted the federal Occupational Safety and Health Administration Bloodborne Pathogens Standard, which requires that the vaccinations be offered. A baseline survey will be conducted in 2001.

5. **Objective (Developmental):** Reduce the incidence of work-related musculoskeletal injuries experienced by employed older workers diagnosed with osteoporosis by **50 percent**.

<u>Populations</u>	<u>2001 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Older Workers			-50.0

Source: New Jersey Department of Health and Senior Services, Division of Epidemiology, Environmental and Occupational Health

As the population ages and an increasing number of people continue to work in their late 50's, 60's, and 70's, increases in occupational morbidity and mortality are expected. Underlying health conditions, such as osteoporosis, may put people at increased risk and susceptibility to injury.

Discussion

Regulatory responsibility for occupational health and safety resides within the federal Occupational Safety and Health Administration (OSHA), but states also have an important supportive role to play.

Fatal Injuries

Occupational fatalities are largely preventable through a combination of engineering controls at the workplace, employer and employee training, and enforcement of health and safety standards, as well as a proactive approach to safety.

Fatal occupational injuries are not random events and should not be considered “part of the job.” NJDHSS maintains a surveillance database of all work-related fatal injuries, which is part of a national surveillance system, the Census of Fatal Occupational Injuries. The database provides information on the number and types of fatal injuries, and allows the identification of injury trends.

NJDHSS uses these surveillance data to target efforts in preventing occupational fatalities under a cooperative agreement with the National Institute for Occupational Safety and Health. In 1999, there were 103 work-related injury deaths in New Jersey. Twenty-five percent of these 103 fatal injuries occurred in the construction industry. NJDHSS attention has, therefore, focused on the construction industry. Once a hazard or fatality trend in a particular construction incident has been identified, the Department distributes “hazard alerts” discussing the cause as well as the recommended solution(s) to the appropriate construction industry trade associations, employers, and labor unions. Continued collaboration with industry and labor to track fatalities, identify and publicize hazards, and adopt safety measures is necessary to reduce the numbers of fatalities in construction and help New Jersey to achieve its year 2010 target.

Lead Exposure

New Jersey and the nation have made considerable progress in removing lead from many products, such as gasoline and paint. However, lead continues to be an important material for many industries. Exposure to lead can damage the central and peripheral nervous, hematologic, cardiovascular, renal and reproductive systems. As a result, NJDHSS continues to monitor potential exposure to lead in the workplace by identifying adults with blood lead levels greater than or equal to 25Fg/dL.

3E. Occupational Health and Safety

(micrograms per deciliter of whole blood). All New Jersey clinical laboratories must report the results of all blood lead tests to NJDHSS, and physicians must report all cases of lead toxicity they diagnose. NJDHSS uses these reports to follow up with the individual, his/her employer and physician. Individuals are interviewed to identify the source of their lead exposure, and to ensure that they are aware of the lead hazard. Employers are interviewed to identify the sources of lead exposure and assess employer's awareness of the lead hazard and compliance with the federal OSHA lead standards. Educational materials are provided to employees, employers, and physicians. Advice on how to manage lead toxicity is also given to physicians, other health-care providers and individuals. Additionally, NJDHSS is implementing, in collaboration with industry, labor, local health departments and federal agencies, a special project targeting high-risk workers. Risk factors among workers with elevated blood lead levels that persist are identified, and corrective strategies are recommended. Finally, NJDHSS is introducing electronic reporting of all blood lead laboratory reports via the Internet. This will allow a more timely and complete picture of occupational lead exposure, aiding in quicker identification and reduction of sources of lead exposure in New Jersey.

Latex Sensitization

The widespread use of gloves made of natural rubber latex (NRL) in health care settings has proven effective in preventing transmission of many infectious diseases. Unfortunately, this widespread use has also contributed to the sensitization to NRL allergens of one to six percent in the general population, and a higher sensitization of health care workers. NJDHSS established a Latex Allergy Task Force with representatives from medical and dental professional associations, medical schools, health care facilities, industry, and affected workers to address the many health issues concerning health care workers exposed to latex-containing products. Among the objectives of the Task Force was the development of guidelines for latex sensitization management and proper selection of gloves in health care facilities. The guidelines were distributed to approximately 2,000 health care facilities, including hospitals, nursing homes, TB clinics and other healthcare providers. Additionally, NJDHSS is developing and distributing other relevant information and is assisting in conducting educational seminars for health care facilities. Department staff also provide consultations to affected workers and health care facilities.

Recently, a survey was conducted to evaluate operational practices in New Jersey health care facilities concerning latex. Results of the survey will enable NJDHSS to focus its latex allergy educational efforts on areas in which health care facilities may need assistance to improve their preventive efforts. Periodic re-surveys will aid in assessing the effectiveness of the latex allergy initiative as well as measure progress towards the year 2010 target.

Hepatitis B

Hepatitis B virus (HBV) is a potentially life-threatening bloodborne pathogen. Hepatitis B is a serious concern for workers occupationally exposed to blood that contains this pathogen. It is estimated that more than one hundred thousand public employees in New Jersey, including health-care workers, emergency medical service responders, firefighters, and police officers are potentially exposed to the bloodborne Hepatitis B virus. In response to this potential hazard, New Jersey adopted by regulation the OSHA Bloodborne Pathogens Standard, which is enforced under the New Jersey Public Employees Occupational Safety and Health (PEOSH) Act. The regulation, in part, requires public employers to offer the hepatitis B vaccine to all potentially exposed employees. All employees at risk would benefit from hepatitis B vaccine coverage; however, employees have the right to refuse the vaccine.

A safe and effective vaccine to prevent hepatitis B infection has been available since 1982. This vaccine stimulates active immunity against hepatitis B infection and provides over ninety percent protection for seven or more years. Immunization should complement standard procedures for infection control. New Jersey has established the Hepatitis B Inoculation Fund, to help local governments cover the cost of providing vaccinations to their firefighters, first responders, and other at-risk personnel. Municipalities can apply for reimbursement up to \$5,000 for the cost of inoculations.

There are a number of strategies NJDHSS will pursue to raise hepatitis vaccination levels to one hundred percent among New Jersey public employees at risk. It will survey at-risk public sector employers and employees in order to establish a baseline indicating how many public employees have received or been offered the hepatitis B immunization. Educational materials and seminars on the Bloodborne Pathogens Standard and the importance of hepatitis B immunization will be provided to health care and public safety workers and their employers. NJDHSS plans to partner with local health departments, the Firemen's Mutual Benevolent Association (FMBA), the International Association of Firefighters (IAFF), and the First Aid Council in its educational efforts. Periodic follow-up surveys will be conducted to evaluate program effectiveness.

Older Workers

The American population is aging. The percentage of the population aged 65 and older increased from 9.8 percent (19.9 million) in 1970 to 12.7 percent (33.9 million) in 1996. The median age of the population has also increased and according to the U.S. Census Bureau projections, these increases will continue for the foreseeable future.

With the expected increases in the older population, there is also an expected increase of older workers in the labor force. There is a need for comprehensive demographic information regarding the older worker population in New Jersey. NJDHSS plans to develop a report, which would profile the demographics of older workers in New Jersey, the incidence of injuries, and illnesses experienced by older workers, and characterize the industries/occupations employing older workers. This information should be useful to encourage other organizations and researchers to study the area of occupational health and safety as it relates to older workers.

In some cases, methods are available to help employers improve the workplace environment for older workers, but are not being fully utilized. In other cases, new methods and changes in the design of job tasks need to be identified and implemented. Underlying health conditions such as osteoporosis may put people at increased risk and susceptibility to injury.

Other Occupational Health and Safety Efforts

NJDHSS carries out occupational health and safety activities not directly linked to the year 2010 objectives. For example, NJDHSS is responsible for enforcing occupational health regulations for public employees within New Jersey, as well as educating public employees about workplace health.

NJDHSS recognizes that many potentially toxic agents may be produced and used in the workplace through manufacturing or other processes. These agents may adversely affect the health of workers, as well as their families. While other state and federal agencies exercise regulatory oversight on the handling of these toxic agents, NJDHSS focuses on development of educational materials about these agents for workers under New Jersey's Worker and Community Right-to-Know Act. This law requires public and private employers to provide information about hazardous substances at their

3E. Occupational Health and Safety

workplaces. The law is designed to inform employees about hazardous substances at their workplaces, assist emergency personnel in responding to fires or spills, and provide data to the public on hazardous chemicals used and stored. NJDHSS has developed over 1,149 Hazardous Substance Fact Sheets that provide relevant health hazard, medical, and personal protection information for each substance. Fact Sheets are also being translated into Spanish. The Hazardous Substance Fact Sheets are available on the NJDHSS Web site. NJDHSS has also released a bilingual Public Service Announcement in both video and audio formats to local television and radio stations. It is designed to encourage the public and emergency responders, such as local police and fire agencies, to make use of the information generated under the Right-to-Know Law.

The NJDHSS Cancer Registry is in the process of evaluating the quantity of collected information concerning work relatedness of cancer cases in the Registry. In addition, the NJDHSS is in the process of developing a trauma registry and an injury surveillance report that will include information on the work relatedness of injuries. Also, proposed regulations will require hospitals to expand the list of poisonings to include those coded with specific external cause of injury codes.

ENDNOTES

¹ Leigh, J.P., Markowitz, S.B., Fahs, M., Shin, C., & Landrigan, P. *Occupational injury and illness in the United States: Estimates of costs, morbidity, and mortality*. Archives of Internal Medicine 157: 1557-1568, 1997.

² Markowitz, S.B., Fahs, M., Shin, C., & Landrigan, P. *Estimates of Occupational Disease and Its Cost in New Jersey*. Mount Sinai School of Medicine, June, 1997.

On a daily basis, 270 Americans, including six New Jerseyans, die from unintentional injuries they have sustained. In New Jersey, unintentional injuries are the leading cause of death for residents aged one through forty-four years, and the seventh leading cause of death overall. It has been estimated that over \$800 million is spent annually on hospitalizations that result from injuries in New Jersey. Other health care costs, as well as the indirect costs associated with lost productivity and premature death, raise the economic toll of unintentional injuries substantially higher.

Motor vehicle injuries, drug poisonings (including drug overdoses), and falls are major sources of deaths from unintentional injuries. Seldom completely random or inevitable, most injuries are preventable. Serious injuries can lead not only to death, but also to long-lasting health problems and reduction in the quality of life of many victims and their families. Risk factors that result in injuries can be found in the behavior of individuals as well as in the structure of their environments, and can be mitigated in a variety of ways. Injuries can be either purposeful (intentional) or those that occur without purposeful intent, i.e. unintentional injuries. Purposeful injuries leading to death, i.e., suicide and homicide, are addressed in chapters 3C, 3D, and 4E, concerning healthy behaviors by both adolescents and adults.

Year 2010 objectives track deaths due to motor vehicle-related injuries and falls, as well as seat belt usage, a very effective preventive measure. There is also an objective tracking the incidence of traumatic brain injury, one of the most serious consequences of an injury.

2010 Objectives

- 1a. Objective:** Reduce the age-adjusted death rate from motor vehicle-related injuries per 100,000 standard population to **8.0**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total age-adjusted	8.9	8.0	-10.1
White age-adjusted	8.7	8.0	-8.0
Black age-adjusted	11.8	8.0	-32.2
Asian/Pacific Islander age-adjusted	DSU		
Hispanic age-adjusted	DSU		

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

The motor vehicle-related death rate in the total population has declined for more than twenty years among New Jerseyans. The rate of motor vehicle-related fatalities among New Jerseyans is lower than that in the rest of the country. However, the targets have been set to reduce the rate even further and to eliminate the existing disparity among racial and ethnic groups.

3F. Unintentional Injury

- 1b. Objective:** Reduce the death rate from motor vehicle-related injuries per 100,000 population among high risk groups to **13.5**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Youth aged 15-19	16.2	13.5	-16.7
Young adults 20-24	18.6	13.5	-27.4
Adults aged 70+	20.6	13.5	-34.5

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

Motor vehicle-related injury death rates have been declining for more than two decades among all age groups in New Jersey other than the elderly. The highest rate of these deaths in every year but one since 1984 has been in the age group 70 and over, however, the death rate in this age group has also shown a recent decline. The second highest rates are in the category of the newest drivers (15 through 19 year olds) and young adults (20 through 24 year olds). Targets have been set to improve and equalize the rates in each of these high-risk groups.

- 2. Objective:** Increase the percentage of persons 18 and over who use seat belts in automobiles to **85 percent**.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target/Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Observed	63.0	85.0	+34.9
Self-reported			
Total	71.0	85.0	+19.7
White non-Hispanic	71.8	85.0	+18.4
Black non-Hispanic	64.2*	85.0	+32.4
Asian/Pacific Islander	DSU		
Hispanic	63.7*	85.0	+33.4

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of more than two percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System; New Jersey Department of Law and Public Safety, Division of Highway Traffic Safety

One of the best methods for preventing motor vehicle-related deaths is the use of seat belts. Because of the suspected tendency of respondents to overstate the use of seat belts, both observational and self-reported seat belt use measures are employed to monitor this objective. The observational data are provided from State Police road stops, and self-reported data are from BRFSS. Targets have been set to improve the lower usage rates overall and, in particular, those reported by black and Hispanic respondents.

3. **Objective:** Reduce the motor vehicle traffic-related death rate per 100,000 population among high risk groups of pedestrians to:

4.9 for all persons 65 and older, except
3.9 for females aged 65-84

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total 65+	5.5	4.9	-10.9	3.9	-29.1
White 65+	5.2	4.9	-5.8	3.9	-25.0
Black 65+	7.3	4.9	-32.9	3.9	-46.6
Asian/Pacific Islander aged 65-84	DSU				
Males aged 65-84	6.8	4.9	-27.9	3.9	-42.6
Females aged 65-84	4.2	3.9	-7.1	3.9	-7.1
Males 85+	DSU				
Females 85+	6.6	4.9	-25.8	3.9	-40.9

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

Data from the federal Fatal Accident Reporting System (FARS) indicate that New Jersey has the second highest percentage of motor vehicle-related deaths occurring to pedestrians when compared to other states. Only New York State has a higher percentage of motor vehicle-related deaths in this category. The population at highest risk of pedestrian deaths is the elderly. Males 85 and over are particularly susceptible to injury and death as pedestrian, however the numbers are too small in any year to calculate stable rates. Targets in other groups have been set to virtually eliminate disparities by race and age.

4. **Objective:** Reduce the death rate per 100,000 population from falls of persons aged 65 and over to:

12.0 for persons aged 65-84 years
105.0 for persons aged 85+ years

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Persons aged 65-84	16.2	12.0	-25.9	12.0	-25.9
Persons aged 85+	124.6	105.0	-15.7	100.0	-19.7

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics,
Multiple cause-of-death file

3F. Unintentional Injury

Deaths from falls are the second-leading cause of unintentional injury deaths among the elderly, after motor vehicle-related fatalities. Of all deaths of New Jerseyans from falls, approximately seventy percent occur among persons 65 and over. However, the risk of death from falls is much greater among the population 85 and over than among persons aged 65 through 84: the death rate is about eight times as high in the older age group. Although exhibiting considerable fluctuation, the death rate among the “young elderly” has declined slightly over the past ten years, but the rate among the 85 and over group has not decreased. Persons 85 and over are more susceptible to medical complications following a fall, and therefore are less likely to survive their injuries.

5. **Objective:** Reduce the incidence rate of traumatic brain injuries per 100,000 population to:

100.0 for the total population, age-adjusted
85.0 for whites, age-adjusted
120.0 for blacks, age-adjusted, males 15-24 and males and females 65-84
500.0 for males $\geq$ 85
315.0 for females $\geq$ 85

<u>Populations</u>	<u>1997 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total age adjusted	110.2	100.0	-9.3	85.0	-22.9
White age-adjusted	96.3	85.0	-11.7	85.0	-11.7
Black age-adjusted	146.8	120.0	-18.3	85.0	-42.1
Asian/Pacific Islander age-adjusted	DSU				
Hispanic age-adjusted	DSU				
Males aged 15-24	236.6	120.0	-49.3	85.0	-64.1
Males aged 65-84	213.1	120.0	-43.7	85.0	-60.1
Males 85+	718.9	500.0	-30.4	170.0	-76.4
Females aged 65-84	151.5	120.0	-20.8	85.0	-43.9
Females 85+	489.9	315.0	-35.7	170.0	-65.3

DSU = Data are statistically unreliable.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics

Annually about 10,000 New Jerseyans suffer a traumatic brain injury (TBI) requiring hospitalization and/or resulting in death. There are major disparities within race/ethnicity groups and by sex and by age. The highest rates are experienced by blacks, young males and older persons. Blacks experience particularly high rates of TBIs from assaults, compared to whites. The rates of TBIs from assaults in this population is second only to motor vehicle related injuries. Major causes of TBIs are motor vehicle-related in the young, and falls in the elderly population. Because of the susceptibility to medical complications in the oldest age groups and the associated negative implications for survival from TBIs, differential targets by age group have been set.

Discussion

Injuries have always been a major public health concern. The improvement in surveillance and epidemiological analysis of trends in injuries has enhanced the ability to identify opportunities to reduce the death and disability toll injuries impose. Injury prevention is a multidisciplinary effort cutting across many fields, including transportation, engineering, public health, education, law and law enforcement, and fire safety. In the United States, deaths from injuries have been declining during the past fifteen years. This reflects major successes from use of some key injury prevention devices including bicycle helmets, automotive seat belts, airbags and child safety restraints, smoke and carbon monoxide detectors, child-resistant medicine containers, and window bars or other child barriers.

Motor Vehicle Injuries

With the country's reliance on the automobile, it is no surprise that motor vehicle injuries now predominate. Injuries related to use of motor vehicles, including motorcycles, can be decreased through use of the following measures: reducing alcohol and drug consumption; using helmets, seat belts and child restraints; adopting and enforcing rigorous motor vehicle operator and traffic safety laws; improving roadway design, signs and lighting; organizing fast and expert emergency assistance teams and procedures for bringing injured people to hospitals equipped to handle their level of trauma; and alerting the public to hazardous weather conditions. Through use of these measures, motor vehicle deaths in New Jersey have declined over the past decade for the population as a whole, and for youth. The trend in death rates for the elderly, however, is uncertain and this rate remains a source of concern.

Seat belts are the single most effective way to reduce fatalities and injuries in a motor vehicle collision. In 1996, The National Highway Traffic Safety Administration estimated over 20,000 lives would have been saved if all occupants of a vehicle involved in a crash had been wearing seat belts. According to the New Jersey Department of Law and Public Safety, New Jersey's seat belt law is estimated to have prevented approximately 1,071 fatalities between 1985 and 1998. The New Jersey Department of Law and Public Safety's (NJDLPS) latest observational survey of seat belt usage, undertaken in 1998, revealed an increase from levels observed in 1996. The statewide observed usage rate of sixty-three percent represented one of the highest rates seen since the inception of the seat belt use law in March, 1985. NJDHSS tracks self-reported seat belt use among New Jersey residents 18 years of age and over. Since 1991, the percentage of adults reporting always using a seat belt when riding or driving in a car has been increasing, but in 1998 remained below the year 2000 target of seventy-five percent. On May 1, 2000, lack of seat belt use in a driver or front seat passengers of an automobile became a primary offense in New Jersey. It is expected that enforcement of this new law will lead to increased use of seat belts. The 2010 target has been set at eighty-five percent for both observed and self-reported seat belt usage.

Reducing fatalities and injuries involving pedestrians in New Jersey is challenging, given the fact that this is the most densely populated state in the nation. Pedestrian fatalities occur for a variety of reasons, including errors in judgment by pedestrians and motorists, as well as vehicle mechanical failures, and shortcomings in traffic engineering. High-risk groups include the elderly and young children. According to the NJDLPS, pedestrian-related injuries are particularly prevalent in cities. Ten of the most populated cities in New Jersey, which represent fifteen percent of the state's population, account for forty-six percent of pedestrian-related injuries. The New Jersey Department of Transportation, the Automobile Association of America (AAA), and the New Jersey Safety Council all have projects underway to reduce pedestrian injuries associated with motor vehicles.

3F. Unintentional Injury

NJDLPS has planned or implemented a number of interventions, including comprehensive pedestrian safety programs in Jersey City and Elizabeth, and a pedestrian safety enforcement program in Trenton that disseminates informational brochures as well as issues summonses for pedestrian and motor vehicle violations. NJDLPS also monitors pedestrian walkways on New Jersey roads to identify high hazard areas.

Falls

According to the National Center for Health Statistics, in 1998, falls among people aged 65 through 74 were the second leading cause of injury deaths in this age group, and the leading cause of injury death for people 75 and older. The experience in New Jersey is similar. In 1998, falls were the second leading cause of unintentional injury deaths among seniors. Falls account for eighty-seven percent of fractures among the elderly and represent the most common injury requiring admission to a hospital among this age group. Hip fractures are a particular risk associated with falls among seniors. Hip fractures are painful, require substantial rehabilitation periods for older adults, and can reduce their quality of life. Given New Jersey's growing elderly population, the impact on the quality of life and the costs associated with treatment of falls, one year 2010 objective focuses on reducing deaths from falls among seniors. An objective in Chapter 3G, Preserving Good Health for Seniors, addresses reduction of the hospitalization rate for hip fractures among older adults.

NJDHSS activities which address falls center on surveillance and promoting awareness of osteoporosis. Osteoporosis is primarily a disease of the elderly, resulting in the loss of bone mass. Because osteoporosis makes bones more brittle, and therefore more prone to break as a result of a fall, this is an important area for intervention. Osteoporosis prevention efforts focus on educating adolescents on the need for healthy diets to avoid osteoporosis, as well as the "Healthy Bones" program for seniors. An exercise and educational program, "Healthy Bones" was developed for older women at risk for osteoporosis. Finally, NJDHSS also promotes awareness of measures that can be taken to reduce the risk of falls, including the installation of handrails, non-slip surfaces, adequate lighting, and floors that are even and free of objects.

Spinal Cord Injury

In 1999, the Spinal Cord Research Act was passed creating the New Jersey State Commission on Spinal Cord Research which established a research fund and registry. The Spinal Cord Registry will provide a new source of injury data for nonfatal spinal cord injuries.

Traumatic Brain Injury

Serious traumatic brain injury (TBI) is an event leading to either hospitalization or death with injury to the brain as the sole or contributory cause. TBI can result from a number of causes, including but not limited to falls, motor vehicle and bicycle accidents, and intentional injuries. In 1997, the latest year for which data are available, there were 9,484 TBI incidents in New Jersey. The leading cause of TBI was motor vehicle-related injury, followed by falls. The typical person who suffered TBI was hospitalized for seven days, costing approximately \$20,347 per hospitalization. TBI disproportionately affects young and elderly males. Incidence is highest among those aged 15 through 24 and the elderly aged 75 and older. In 1998, an Advisory Council on Traumatic Brain Injury was established by New Jersey's governor. One of its responsibilities is to encourage and stimulate research and TBI prevention actions.

New Jersey has implemented a number of measures that can reduce the incidence of TBI, as well as other injuries. In 1985, the state enacted a seat belt law and in 2000 made lack of a seat belt a primary offense. In 1992, New Jersey passed legislation requiring children aged 14 years and under to wear a helmet when riding a bike. Bicycle helmet use and enforcement of bicycle helmet laws are critical, particularly in view of the correlation of resulting injuries with head trauma. There is no valid data source to measure helmet use at this time. The New Jersey Department of Law and Public Safety's Comprehensive Traffic Safety Program funds programs in six counties to educate kids on the importance of using helmets while cycling.

RELATED OBJECTIVES

- III. 3E Objective 1 - Reduce the death rate from work-related injuries in the construction industry.
- III. 3G Objective 5 - Reduce the statewide incidence of falls per 100 person years in long-term care facilities.
- III. 3G Objective 8 - Reduce the annual hospitalization rate for hip fractures among older adults (65 and over).
- III. 4F Objective 4 - Reduce the death rate due to alcohol-related motor vehicle injuries.

3. Fundamentals of Good Health

3G. Preserving Good Health for Seniors

America is a graying society, with a growing percent of the population aged 65 or over. In 1998, this age group accounted for 12.7 percent of the U.S. population. Seniors are an even larger presence in New Jersey, where 13.6 percent of the population was 65 or older in 1998.¹

Among seniors, the fastest growing segment of the population is people 85 years and older. Between 1990 and 2010 the size of this cohort is expected to grow by fifty-three percent in New Jersey.² When the “baby boomers,” the large cohort of individuals born between 1945 and 1964, begin to reach retirement age in 2010, these trends will accelerate.

There are profound social, economic and health implications for society in this aging trend. The health implications are very stark: as people age, they tend to require more, and more intensive, health care services. Seniors account for nearly one-third of national health care expenditures.³ They are also more likely to have chronic health problems that limit their ability to perform the routine activities of daily living. If they live alone and are without supports, they may prove incapable of taking care of themselves, and may need to be placed in a long-term care facility. National data indicate that, in 1995, four percent of the population 65 and over lived in nursing homes. However, it has also been estimated that as many as fifteen percent of those living in nursing homes do not need this intensive level of care and could, with the right supports, continue to live in their communities.⁴

Nursing home care is not only very expensive, but also less desirable to many seniors than alternatives that allow them to retain their independence. Over the past five years New Jersey has been promoting strategies to help seniors stay healthy, and to provide them with a greater range of choices when they need assistance. For those seniors for whom nursing home placement is appropriate, NJDHSS is committed to assuring high quality care. Year 2010 objectives will track implementation of preventive health measures, expansion of publicly-funded alternatives to nursing home care, and indicators of nursing home quality. There are also numerous 2010 objectives in other chapters related to nutrition, exercise and social isolation for which specific targets have been set to improve the health of seniors.

2010 Objectives

1. **Objective (Developmental):** Decrease the ratio of public spending on nursing homes to public spending on Home and Community Based Services (HCBS) to:

<u>Measure</u>	<u>Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Spending ratio					

Source: New Jersey Department of Health and Senior Services, Division of Consumer Support

New Jersey has received national distinction for taking strong measures to offer an integrated continuum of long-term care choices. For many seniors, aging in place, supported by home and community-based services when needed, is the preferred choice. Over the next decade increasingly more public spending should support HCBS, compared to traditional nursing home care. Baseline data and appropriate target ratios will be developed early in the next decade.

3G. Preserving Good Health for Seniors

2. **Objective:** Reduce the percentage of non-institutionalized persons aged 65 years and over reporting fair or poor health status to **26.8 percent**.

<u>Population</u>	<u>1996-1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Non-institutionalized adults 65+	27.0	26.8	-0.7	19.4	-28.1

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System

While extending years of life is a major focus in public health, the quality of life during those years is also very important. The percentage is based on responses to the BRFSS question “Would you say that in general your health is: excellent, very good, good, fair, or poor?”

3. **Objective:** Increase the percentage of persons 65 and over who have ever received a pneumococcal vaccination to:

60.0 percent for total and non-Hispanic non-institutionalized persons
70.0 percent for Hispanic non-institutionalized persons
80.0 percent for institutionalized persons

<u>Populations</u>	<u>1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Non-institutionalized:					
Total	55.1*	60.0	+8.9	90.0	+63.3
White non-Hispanic	56.1*	60.0	+7.0	90.0	+60.4
Black non-Hispanic	42.1**	60.0	+42.5	90.0	+113.8
Asian/Pacific Islander	DSU				
Hispanic	66.9**	70.0		90.0	+34.5
Institutionalized Total	N/A	80.0		90.0	

N/A = Not Available

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of more than two percent.

**Estimate has a relatively large standard error of more than 2.5 percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System and the Division of Long Term Care Systems

For the non-institutionalized population, estimates are derived from BRFSS. Pneumonia and influenza together constitute the fifth-leading cause of death among New Jersey residents; almost ninety percent of these deaths occur in persons aged 65 and over. High death rates from pneumonia persist despite the existence of an effective vaccine against pneumococcus. (Note that not all pneumonia is caused by pneumococcus.). Relatively low rates of pneumococcal vaccination, particularly among the black non-Hispanic population, are related to the high volume of deaths. Persons living in institutional settings are at particularly high risk. The CDC’s Advisory Committee on Immunization Practices recommends that persons 65 and over have at least one lifetime dose of pneumococcal vaccine. Approximately half of

3G. Preserving Good Health for Seniors

these deaths could potentially be prevented through the use of this vaccine. Collection of vaccination data for the institutionalized population is still developmental.

4. **Objective:** Increase the percentage of persons aged 65 and over who have received influenza vaccinations in the previous 12 months to:

70.0 percent for non-institutionalized persons

80.0 percent for institutionalized persons

<u>Populations</u>	<u>1997-1999 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Non-institutionalized:					
Total	64.3	70.0	+8.9	90.0	+40.0
White non-Hispanic	65.3	70.0	+7.2	90.0	+37.8
Black non-Hispanic	52.2*	70.0	+34.1	90.0	+72.4
Asian/Pacific Islander	DSU				
Hispanic	67.2*	70.0	+4.2	90.0	+33.9
Institutionalized Total	N/A	80.0		90.0	

N/A = Not Available

DSU = Data are statistically unreliable.

*Estimate has a relatively large standard error of more than 2.5 percent.

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, Behavioral Risk Factor Surveillance System, and Division of Long Term Care Systems

For the non-institutionalized population, percentages are derived from BRFSS. Annual vaccination against influenza is reported at a higher level than lifetime pneumococcal vaccination, although disparities exist by race. Influenza vaccine can prevent up to sixty percent of hospitalizations and eighty percent of influenza-related complications among the elderly. Targets are set to reach a large percentage of the non-institutionalized population and an even larger proportion of institutionalized elderly persons with yearly vaccination. Collection of vaccination data for the institutionalized population is still in the developmental stage.

5. **Objective (Developmental):** Reduce the statewide incidence of falls per 100 person years in long-term care facilities to:

<u>Population</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Long-term care facility residents				13.7	

Source: New Jersey Department of Health and Senior Services, Division of Long Term Care Systems Development and Quality

3G. Preserving Good Health for Seniors

The Minimum Data Set (MDS) will be used to track improvement in quality in New Jersey's long-term care facilities. This consists of a set of indicators of nursing home quality required to be collected by the federal government. Data should be available beginning in 2001 for the year 1998.

6. **Objective (Developmental):** Reduce the statewide average prevalence of decubitus ulcers (excluding Stage I) in long-term care facilities to _____ percent.

<u>Population</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Long-term care facility residents				5.0	

Source: New Jersey Department of Health and Senior Services, Division of Long Term Care Systems

Pressure ulcers (decubiti) have long been recognized as a serious quality of care problem in nursing homes. Since the prevention of pressure ulcers depends on close observation and good nursing care, measuring the prevalence of decubiti could serve as a proxy for the overall quality of care provided to nursing home residents. MDS data are expected to be available for analysis in 2001.

7. **Objective (Developmental):** Reduce the statewide average percentage of residents in long-term care facilities using nine or more different medications to _____ percent.

<u>Populations</u>	<u>1998 Baseline Data</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Long-term care facility residents				5.0	

Source: New Jersey Department of Health and Senior Services, Division of Long Term Care Systems

Polypharmacy, the administration of many drugs together, often occurs in the long-term care population due to receipt of treatments from multiple care providers who use drug therapy to address a combination of chronic physical and mental conditions. Interactions between these medications may have serious consequences. The selection of nine or more medications is consistent with the Minimum Data Set Quality Indicators used on a national basis. No database is available to extend this objective to the non-institutionalized population. MDS data will be available in 2001.

8. **Objective:** Reduce the annual hospitalization rate for hip fractures among older adults (65 and over) per 100,000 population.

<u>Populations</u>	<u>1998 Baseline</u>	<u>Target</u>	<u>Percent Change</u>	<u>Preferred 2010 Endpoint</u>	<u>Percent Change</u>
Total					
65 and over	694.8	555.0	-20.1	521.0	-25.0
65-84 years	460.8	368.0	-20.1	345.0	-25.1
85 and over	2,474.8	1,980.0	-20.0	1,856.0	-25.0
Males					
65 and over	380.3	304.0	-20.1	285.0	-25.1
65-84 years	278.3	222.0	-20.2	209.0	-24.9
85 and over	1,513.9	1,211.0	-20.0	1,135.0	-25.0
Females					
65 and over	908.9	727.0	-20.0	682.0	-25.0
65-84 years	593.3	475.0	-19.9	445.0	-25.0
85 and over	2,863.4	2,291.0	-20.0	2,148.0	-25.0
White, non-Hispanics					
65 and over	747.6	598.0	-20.0	561.0	-25.0
Black, non-Hispanics					
65 and over	286.6	229.0	-20.1	215.0	-25.0
Hispanics 65 and over	263.2	210.0	-20.2	197.0	-25.2

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, and the Division of Health Care Systems Analysis.

The Council of State and Territorial Health Epidemiologists (CSTE) indicates that 80-90% of hip fractures are associated with osteoporosis and that 90 percent of all hip and spine fractures among elderly white women should be attributed to osteoporosis.

The annual hospitalization rates for hip fracture are derived from UB-92 hospital discharge data. Since there are few surveillance sources to directly estimate the incidence or burden of osteoporosis in the United States, hip fracture hospitalizations are considered to be one important proxy measure for the presence of osteoporosis, as well as a major consequence. Because most hip fractures linked to osteoporosis occur in older people, it is recommended that the indicator be limited to hospitalizations among persons 65 and older. Hip fractures are clearly related to female gender, increasing age and white race. Women aged 65 and older have the highest rate of hip fractures.

Discussion

Promoting Choice and Coordination of Services

In 1996, New Jersey consolidated all state services for seniors in one agency, the Department of Health and Senior Services. New Jersey was the first state in the nation to create one cabinet-level agency to house all senior services. The state undertook this consolidation to ensure greater continuity and coordination of services for older New Jerseyans.

3G. Preserving Good Health for Seniors

In August of 1996, NJDHSS took the first step to deliver on the promise of this new approach to senior services, launching New Jersey EASE (Easy Access, Single Entry). The aim of this program is to create one easily accessible point of entry in each county for all services available to seniors. Furthermore, the philosophy of NJ EASE is to promote informed personal choices by seniors and their families.

Currently, NJ EASE has been implemented in all twenty-one counties. Counties implementing NJ EASE develop a core set of services to assist older consumers and their family members. These services include information and assistance, outreach, benefits screening and counseling, comprehensive assessment, service planning and care management. To provide these services in a professional and equitable fashion, each county develops protocols to guide service delivery, uses a uniform assessment tool, and employs the same computer software for eligibility screening, care management tracking, resource directories and electronic mail. Extensive training is provided by NJDHSS to all county staff providing core services. Actual delivery of services varies from county to county, reflecting the unique structure and strengths of each county.

Since 1998 the NJ EASE program has been enhanced in the following ways:

- # *National toll-free telephone access* - A national toll-free telephone number (1-877-222-3737) was established for seniors to enable them or their caregivers to dial one number nationally, and reach their county's NJ EASE services at no cost.
- # *Integration of Care Management* - The NJ EASE sites have begun to provide care management services for consumers receiving home care under the State Medicaid program, in addition to non-Medicaid services. This promotes the integration and more efficient use of both Medicaid and non-Medicaid services, including informal services to meet the needs of low-income consumers.
- # *Community Choice Counseling Programs* - To assist consumers and their families in making decisions about discharge plans from hospitals and nursing homes, NJDHSS-trained counselors offer advice about long-term care home and community-based options and assist with relocation from the institution to the community.
- # *Expanded Home and Community-Base Care Alternatives* - Between 1999-2003, the State of New Jersey has committed 60 million new dollars (state and federal) to increase community-based service options for seniors. These programs will expand the range of in-home services available, offer sliding-scale in-home services and facilitate reimbursement for services by informal caregivers. These initiatives will be coordinated by NJ EASE care managers and will cover all twenty-one counties.

Although New Jersey, like all other states, currently spends the great majority of its long-term care dollars on nursing home care, NJDHSS expects there to be a more appropriate balance between nursing home care and community-based alternatives. A developmental 2010 objective will track progress on this front.

The NJDHSS is conducting a five year study to run through 2004 to evaluate the impact adult day care and other respite services have on persons with dementia and their primary family caregivers. This study is one of the recommendations made by the New Jersey Advisory Council on Elder Care.

Promoting Wellness

New models suggest that successful aging is contingent upon three elements: avoiding disease and disability, sustaining high cognitive and physical function, and active engagement with life. The three major elements are dependent. This new model broadens the reach of health promotion in aging to entail more than just disease prevention.

In New Jersey most older adults are well and reside in the community. With age, however, the incidence of disability and chronic illness increases. Eleven percent of New Jerseyans between the ages of 60 and 74 have problems with mobility. This number increases to twenty-five percent for the 75 to 84 cohort, and to thirty-nine percent for those persons over age 85.⁵

To a great extent, functional disability determines the degree to which an individual can be self-sufficient, and the amount and type of assistance an individual needs to remain in the community.

According to 1996 through 1999 BRFSS data, 27.0 percent of non-institutionalized New Jersey adults over the age of 65 rated their health as “fair” or “poor”. This percentage reflects an increase over 1993, when the response to this question was 25 percent. BRFSS data from 1997 revealed that 40.1 percent of the state’s residents 65 and over have been told by their physician that their cholesterol level is high. Further, according to BRFSS 1997, forty-six percent of the elderly population have also been told by a doctor, nurse or other health professional that they have high blood pressure. These factors, as well as cigarette smoking, sedentary lifestyle and diabetes mellitus, are risks linked to the incidence of cardiovascular disease, the leading cause of death of the 65 and over population. While cardiovascular deaths, including diseases of the heart and cerebrovascular diseases, have been declining for adults over the last decade, the cardiovascular death rate remains substantially higher for individuals 65 and over. Concerted efforts to address the major risk factors leading to cardiovascular diseases across the life span, as well as targeting “wellness” programs to older adults who can still benefit from appropriate preventive actions, can reduce the impact of these diseases on seniors.

Older adults have shown that they are amenable to modifying their risk factors if information is presented to them in an appropriate manner. Research among the elderly has shown that health promotion interventions can be effectively carried out in such areas as smoking cessation; promoting age-appropriate screenings and immunizations; physical activity; nutrition; stress reduction; injury prevention; substance abuse/misuse, etc. Efforts such as these can postpone or prevent disease and disability, maintain and improve health status, prevent unnecessary hospitalizations, contain costs, and enhance independence and the quality of life of older adults.

NJDHSS, through its Senior Wellness initiatives, has launched osteoporosis prevention initiatives. In 1997, legislation established an Osteoporosis Prevention and Education Program within NJDHSS. Initiatives in the area of osteoporosis date back to 1991, however, when the Department was awarded a CDC grant for this purpose. Early activities included the development of a surveillance system to collect baseline data on the prevalence of osteoporosis in New Jersey, the printing of an osteoporosis resource manual for service providers, an education intervention program for consumers and health care providers, and the development of a Best Bones merit badge for Girl Scouts in New Jersey.

State funds have been used to include older adult activities. Current initiatives include Project Healthy Bones (a peer-led exercise and education program), training on fall prevention, the development of a network of osteoporosis support groups, education on assistive devices, and the

3G. Preserving Good Health for Seniors

implementation of a public education program, Strong Bones for a Lifetime, held at New Jersey malls during May, 1999. In June, 1999, NJDHSS collaborated with the New Jersey Society of Public Health Educators (NJ SOPHE) to obtain a grant from the Osteoporosis Business Coalition to target Project Healthy Bones to African-American and Hispanic communities. In 2001, the NJDHSS is again collaborating with NJ SOPHE to develop a program to educate older adults on osteoporosis and provide strategies for fall prevention. The NJDHSS has also provided osteoporosis education to health professionals including initiatives targeting physicians, pharmacists, nurses and registered dietitians.

According to the New Jersey BRFSS data reported by CDC, 12.3 percent of New Jersey residents have chronic joint symptoms associated with arthritis, i.e. symptoms present on most days for at least one month. Prevalence of arthritis increases with age. Twenty-seven percent of people aged 65 to 79 report chronic joint symptoms; forty-two percent reported pain, aching, stiffness or swelling in the previous twelve months.⁶ The Arthritis Quality of Life Initiative Act provides funding to make arthritis a public health priority for the State. Two Regional Arthritis Centers, each providing an array of education, outreach and direct services were established through this legislation. Since the early 1990s, NJDHSS and the Arthritis Foundation - New Jersey Chapter have collaborated on a number of projects and will continue to work together in the future. Examples of work completed via collaboration with the Arthritis Foundation include publication of an Arthritis Resource Directory, professional education programs and training for home health aides and exercise program leaders

In the United States, more than ninety percent of deaths attributable to influenza occur among persons aged 65 or older.⁷ Influenza vaccinations among the elderly have been shown to reduce the mortality and hospital admission rates due to influenza by sixty to seventy percent.⁸

Streptococcus pneumoniae is the most common cause of community-acquired pneumonia and the second most common cause of bacterial meningitis in the United States.⁹ This type of infection frequently results in hospitalization and/or death. Therefore, it is recommended that individuals who are age 65 and older should be vaccinated.

Since 1998, NJDHSS has played a lead role in a statewide adult immunization campaign, collaborating with organizations such as the New Jersey Peer Review Organization (NJPRO), local health agencies, the provider community, long-term care facilities and hospitals to increase the influenza and pneumococcal vaccination rates among seniors statewide. This program was initiated to promote progress toward the federal *Healthy People 2000* objective to vaccinate sixty percent of community-dwelling elderly. Despite improvements in recent years, particularly with pneumococcal vaccine, New Jersey still has a long way to go to achieve the original year 2000 objective.

Since 1998 NJDHSS has adopted regulations requiring nursing homes to offer these two immunizations to all residents, and for hospitals to offer them to seniors who have been admitted for treatment. These measures, in combination with continued education and outreach, should improve coverage rates by 2010.

Nursing Home Quality

For those individuals and their families choosing institutional long-term care services, NJDHSS launched the Nursing Home Quality Partnership Project during 1997. This is a multi-year demonstration project to improve the health status and quality of life of individuals residing in nursing facilities. Funded by the Robert Wood Johnson Foundation, the project includes twenty volunteer facilities representing a cross-section of facilities in New Jersey based on size, sponsorship

and geography. With supplemental state funding, ten additional non-volunteer facilities have been added to the project. The project has several major objectives:

- # To transform the relationship between NJDHSS and its long-term care providers in such a way that, through a working partnership, the care provided to nursing facility residents may be measurably improved.
- # To ensure that providers have the necessary skills, tools, and understanding to use Continuous Quality Improvement (CQI) techniques effectively as a means to establish a vigorous system for self-improvement in the clinical environment and psycho-social areas.
- # To establish an electronic system for nursing homes to report to the State the Minimum Data Set (MDS) specified by the federal government, as well as additional data related to residents' rights and quality of life.
- # To develop a timely process for NJDHSS analysis and reporting - to facilities and the public - on nursing facility performance on MDS measures.

These objectives are being met through a combination of data collection and direct intervention by staff of clinical specialists well qualified in gerontology and education. The project facilities have been provided with numerous educational offerings in the use of quality indicators, the tools and techniques of Continuous Quality Improvement, and leadership skills. Project staff provide onsite help and opportunities to share and compare experiences. Organizational and external environmental characteristics are being monitored to identify differences in the success of interventions in different project facilities.

If successful in promoting quality of care that exceeds expected standards, the process can be expanded to a larger universe of long term care facilities, raising the bar of accepted quality standards.

In 1998 for the first time NJDHSS began publishing, via its Web site, the results of inspections of all the State's nursing facilities. As measures of facility performance become more sophisticated, these reports should prove even more useful to seniors and their families as they explore their nursing facility options.

Pressure ulcers, commonly known as pressure sores and/or decubitus ulcers (decubiti), are a frequent reason for long-term care placement and remain a problem in that setting. A pressure ulcer is a "lesion caused by unrelieved pressure resulting in damage of underlying tissue."¹⁰ The elderly are particularly prone to pressure sores due to the physiologic changes associated with aging. Research has shown that pressure ulcers increase in frequency with length of stay in a long-term care setting. Serious coexisting illnesses are common.

Another nursing home quality initiative started in 1998 is the Pressure Sore Prevention Initiative, conducted jointly in New Jersey, Pennsylvania and Rhode Island. Ten nursing homes in each state with residents at a high risk of pressure sore development, based on clinical assessment using MDS data, were provided with the latest in risk identification, pressure sore prevention techniques and onsite training and assistance. Through the skills learned, these facilities were able to significantly reduce the development of new pressure sores and effectively treat the over thirty percent of residents admitted with pressure sores. A final report is in preparation, so that the results can be shared with other nursing homes to improve care.

3G. Preserving Good Health for Seniors

As electronic reporting and analysis of MDS data become available, objectives related to falls and polypharmacy in nursing homes will also be developed. As discussed in the chapter on injury, falls are a leading cause of hospitalization, chronic disability and death among the elderly. In the comparatively controlled environment of nursing homes, it should be possible to prevent falls.

Attention to reducing adverse effects of medication can significantly improve the care of an older patient in a long-term care facility. Age-related physiologic changes and decline in organ function may account for many adverse drug reactions. Aging commonly results in increased adipose (fat) tissue, decreased lean body mass and a reduction in total body water. These changes can prolong the duration of tissue drug levels, resulting in toxic effects. Although changes related to aging contribute to adverse drug reactions, the likelihood of seniors having an adverse drug reaction is also due to their increased exposure to medications.¹¹ Reducing the number of medications prescribed decreases the likelihood of adverse drug reactions.¹²

RELATED OBJECTIVES

- I. 1 Objective 4 - Increase days able to do usual activities during the past 30 days, due to good physical or mental health for adults aged 65 and over.
- III. 3D Objective 4 - Increase the percentage of persons aged 65 and over who participated in frequent, leisure time physical activity during the past month.
- III 3E Objective 5 - Reduce the incidence of work-related musculoskeletal injuries experienced by employed older workers diagnosed with osteoporosis.
- III. 3F Objective 1b - Reduce the death rate from motor vehicle-related injuries for adults aged 70 and over.
- III. 3F Objective 3 - Reduce the motor vehicle traffic-related death rate for pedestrians aged 65 and over.
- III. 3F Objective 4 - Reduce the death rate from falls of persons aged 65 and over.
- III. 3F Objective 5 - Reduce the incidence rate of traumatic brain injuries for persons aged 65 and over.
- III. 4A Objective 1c - Reduce the death rate from coronary heart disease among persons 65 years of age and over.
- III 4A Objective 2c - Reduce the death rate from cerebrovascular diseases among persons 65 years of age and over.
- IV. 4B Objective 3 - Increase the percentage of persons aged 65 and over who have been screened for diabetes for the past three years.
- IV. 4C Objective 1 - Reduce the death rate from breast cancer for females aged 65 and over.
- IV. 4C Objective 2 - Increase the percentage of females aged 65 and over who received a clinical breast examination and a mammogram within the past two years.

3G. Preserving Good Health for Seniors

- IV. 4C Objective 3 - Increase the percentage of female breast cancers diagnosed in women aged 65 and over in early stages.
- IV. 4C Objective 4 - Reduce the death rate from cervical cancer for women aged 65 and over.
- IV. 4C Objective 5 - Increase the percentage of women aged 65 and over with intact cervix uteri who had a Pap test within the past two years.
- IV. 4C Objective 8 - Reduce the death rate from colorectal cancer for persons aged 65 and over.
- IV. 4C Objective 10 - Increase people aged 65 or older who have received a fecal occult blood test within the past year and/or have ever undergone sigmoidoscopy.
- IV. 4C Objective 11 - Reduce the death rate from lung cancer for persons aged 65 and over.
- IV. 4E Objective 1 - Increase the average number of days during the past thirty days when mental health was reported to be good for persons aged 65 and over.
- IV. 4E Objective 2 - Reduce the death rate from suicide for white males aged 65 and over.
- IV. 4F Objective 5 - Reduce the prevalence of cigarette smoking among the population aged 65 and over.

ENDNOTES

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- ¹¹ Reichel, p. 750.
- ¹² Lamy, P.P. Adverse Drug Effects. *Clinical Geriatric Medicine*, 6:293-307, 1990.

