HEALTHY MAINE 2000

A HEALTH AGENDA FOR THE DECADE

MAINE'S HEALTH OBJECTIVES FOR THE YEAR 2000
PRIORITY AREAS: HIGHLIGHTS

Healthy Maine 2000:
A Health Agenda for the Decade

Maine's Health Objectives for the Year 2000

A Cooperative Project Coordinated by the
Maine Department of Human Services, Bureau of Health
and Involving State and Community Health Agencies Throughout Maine

Lani Graham, MD, MPH
Director, Bureau of Health

Table of Contents

ACKNOWLEDGEMENTS

The Bureau of Health is grateful for the involvement and support of many individuals, whose names are too numerous to mention, who contributed to the Healthy Maine 2000 Project. Some of the collaborating agencies are listed at the end of this document. However this is by no means meant to be a complete list. We hope and trust these individuals will continue their close collaboration with the Department of Human Services and other State agencies, voluntary organizations, private organizations, and others as we all work together to implement the objectives and monitor our progress during the decade.

We would also particularly like to acknowledge the work of Deborah Deatrick, N. Warren Bartlett, and Alison Donta who were the timeless editors of this document, and Karen Knox-Damren whose professional and persistent work on the computer brought the document into existence.

LANI GRAHAM, MD, MPH
SEPTEMBER 1993

HEALTHY MAINE 2000: INTRODUCTION

Maine is blessed with an abundance of natural resources, but our most important resource is the health and well-being of our citizens. The public's health is linked directly to quality of life and has a significant effect on our overall economic prosperity.

Many Mainers have realized improvements in their health during the past decade. Despite these advances, significant challenges remain. In 1991, 13% of Maine children lived in families with incomes below the Federal poverty level. Economic hardship often results in a lack of access to primary care, poor nutrition, and a host of other problems that disproportionately affect children. Examples of other major public health challenges include the relatively high rates of cervical cancer, tobacco related diseases, and unintentional injuries, including occupational injury. The latter continues to be one of our most persistent problems, resulting in high workers compensation costs.

As we approach the next century, the demands of society, the realities of depleting world and local resources, and the changing nature of health problems and issues will force us to fundamentally restructure our concept of health. Society has already begun to shift toward this end: the demand for cigarettes has dropped among certain groups, physical activity is viewed as a legitimate part of our daily routines, and health screenings have become, for many Americans, an annual ritual.

These changes, principally in individual lifestyle choices, are not yet possible for all Americans, however. Barriers include a lack of adequate health insurance coverage, lack of education, or the failure of our families, workplaces, and communities to value health and to translate those values into action. Our concept of health in the Year 2000 will surely demand that the public, providers, business, educational institutions, and governments must work collaboratively in new and creative ways if we are to achieve health for all in the next century.

HEALTHY MAINE 2000: A HEALTH AGENDA FOR THE DECADE is a broad-based initiative organized by the Bureau of Health, Maine Department of Human Services. The Office of Substance Abuse Prevention and the Maine Department of Mental Health and Mental Retardation are major collaborators. These agencies, aided by numerous individuals and organizations throughout the state, have developed objectives for Maine in thirteen priority areas. HEALTHY MAINE 2000 is intended to serve as a blueprint for improvements in thirteen priority areas:

- maternal and child health
- injury prevention and control
- chronic disease prevention and control
- human immunodeficiency virus (HIV/AIDS)
- teen and young adult health
- immunization and infectious diseases
- tobacco prevention and control
- oral health
- cancer prevention and control
- mental health
- substance abuse
- occupational health
- environmental health

The framework for developing this report began in late 1989 when the Bureau of Health assembled twenty-one teams of Maine people concerned about public health to review and comment on the priority areas and objectives presented in a draft version of the Federal health objectives.

HEALTHY MAINE 2000: A HEALTH AGENDA FOR THE DECADE builds on the landmark report issued by the US Public Health Service in 1990 called "Healthy People 2000: Goals and Objectives for the Nation." This report contained measurable disease prevention and health promotion objectives for the nation as a whole. "Healthy People 2000" served as a model for the development of this publication and for the process of setting priorities and assessing progress in the state of Maine.

ORGANIZATION OF HEALTHY MAINE 2000

For each priority area included in HEALTHY MAINE 2000: A HEALTH AGENDA FOR THE DECADE, a narrative "snapshot" provides historical and current statistics, major trends, populations affected, and the most significant challenges to be addressed before the Year 2000. A single goal is proposed in each of the thirteen areas as well as objectives in one or more of the following categories:

- Health status
- Surveillance and monitoring
- Services and protection
- Professional awareness
- Public awareness
- Risk reduction

Key strategies to meet each objective are also suggested. The broad range of these strategies illustrates the extent of activity needed in the public and private sectors if the objectives are to be achieved. A list of potential collaborating agencies is included at the end of the document. This list is not intended to be exhaustive, but is intended to provide an indication of the scope of the necessary organizational support which is the cornerstone of this effort. A final section in each priority area describes the potential benefit of achieving the objectives, in terms of economic savings, quality of life improvements, or gains in life expectancies, where these estimates are possible. In many of the priority areas, the dearth of hard data needed to estimate potential benefits represents a high priority objective for the immediate future.

Tracking the Objectives

Follow-up and assessment is one of the most critical aspects of the Healthy Maine 2000 objectives. Each objective included in this document has been analyzed to determine what data are needed to adequately track progress. Where needed data are not available, the strategies recommended include efforts to identify or establish data sources. In cases where federal or state data is available, those sources are noted. Baseline data collection or analysis is a high priority in several areas.

A mid-course evaluation of the extent to which the Healthy Maine 2000 Objectives have been met is planned by the Bureau of Health in 1995.

Healthy Maine 2000: Highlights of the Health Agenda

Healthy Maine 2000: A Health Agenda for the Decade, Priority Areas: Highlights provides an overview of each of the thirteen priority areas. One lead objective has been identified for each area, supported by a brief outline of the most critical national and state statistics, an overview of the major strategies to meet the objective, and a summary of significant benefits to be achieved by reaching the objective.

The function of the lead objective is to identify those actions that should receive the highest priority, and is intended to identify those efforts which are most pressing and amenable to intervention. Lead objectives included in this volume are:

- Reduce the infant mortality rate to 6 deaths per 1,000;
- Reduce unintentional injury mortality by 15% to 34 deaths per 100,000;
- Reduce the mortality of cardiac and cerebrovascular disease by reducing coronary heart disease deaths to no more than 100 per 100,000 and stroke deaths to no more than 20 per 100,000;
- Decrease the incidence of AIDS cases to no more than 3.0 per 100,000;
- Reduce the pregnancy rate of 10-14 year olds to 0 per 1,000 females, the pregnancy rate of 15-17 year olds to 35 per 1,000, and the pregnancy rate of 18 and 19 year olds to 100 per 1,000;
- Increase to 90%, the proportion of children under age 2 who have completed the basic immunization series.

- Reduce the prevalence of cigarette smoking to no more than 15 percent among Maine citizens age 20 and older, and totally eliminate involuntary exposure to environmental tobacco smoke;

- Decrease, to 10%, the proportion of Maine's citizens who have lost most or all of their natural teeth by the age of 25 and to 33% for the 45 to 54 age group;

- Reverse the rise in cancer deaths to achieve a rate of no more than 130 deaths per 100,000;

- Increase, to at least 50%, the proportion of persons with serious mental illness and mental disorders using community mental health services;

- Reduce deaths caused by alcohol-related motor vehicle crashes by 10% from current figures of 82 persons per year;

- Reduce work-related injuries and illnesses by 50%; and

- Reduce exposure to hazardous chemicals and radiation in the environment.

Summary

The priorities set forth in this document represent the beginning of a process which must involve many individuals and organizations. Solving the health problems of today and preventing the health problems of tomorrow will require the combined efforts and energy of all.

The Maine Bureau of Health has collaborated with the Office of Substance Abuse, the Department of Mental Health and Mental Retardation, and a wide array of health providers, voluntary agencies, and citizen groups to develop the objectives and strategies that are included in this publication. All data for the charts and graphs were supplied by the Office of Data, Research and Vital Statistics and all rates are expressed as per 100,000 Maine residents unless otherwise indicated.

The Bureau of Health welcomes comments and inquiries about the Healthy Maine 2000 initiative. Please contact Lani Graham, Director, Bureau of Health, Maine Department of Human Services, State House Station 11, Augusta, Maine 04333.

HEALTHY MAINE 2000: A HEALTH AGENDA FOR THE DECADE

PRIORITY AREA CONTACTS: BUREAU OF HEALTH
MAINE DEPARTMENT OF HUMAN SERVICES

MATERNAL AND CHILD HEALTH

Lead: *Rachel Curtis*, Director, Women's and Children's Preventable Services, Division of Maternal and Child Health

Kathleen Jewett, Consultant, Division of Public Health Nursing

Zsolt Koppanyi, Director, Division of Maternal and Child Health

INJURY PREVENTION AND CONTROL

Lead: *Cheryl DiCara*, Director of Injury Prevention and Control

Zsolt Koppanyi, Director, Division of Maternal and Child Health

CHRONIC DISEASE PREVENTION AND CONTROL

Lead: *Patricia Jones*, Director, Cardiovascular Disease Program

Maryann Zaremba, Director, Diabetes Control Project

Randy Schwartz, Director, Division of Health Promotion and Education

HUMAN IMMUNODEFICIENCY VIRUS (HIV/AIDS)

Lead: *Steve Fleming*, Office on AIDS

Craig Schuler, Office on AIDS

Greg Bogdan, Director, Division of Disease Control

TEEN AND YOUNG ADULT HEALTH

Lead: *DeEtte Hall*, Director, Teen and Young Adult Health

Gloria Leach , Teen and Young Adult Health

Zsolt Koppanyi, Director, Division of Maternal and Child Health

Immunization and Infectious Diseases

Lead: *Geoff Beckett*, Assistant State Epidemiologist

Greg Bogdan, Director, Division of Disease Control

Joan Blossom, Tuberculosis Program

Eleanor Bruce, Director, Division of Public Health Nursing

Melinda Mailhot, Immunization Program

Dawne Rekas, Program Manager, STD Program

Tobacco Prevention and Control

Lead: *Randy Schwartz*, Director, Division of Health Promotion and Education

Pat Jones, Director, Cardiovascular Disease Program

Oral Health

Lead: *Judy Feinstein*, Assistant Director, Division of Dental Health

Debra Andrews, Division of Dental Health

Cancer Prevention and Control

Lead: *Sandra Hoover*, ASSIST Project Director

Melanie Lanctot, Director, Maine Cancer Registry Program

Greg Bogdan, Director, Division of Disease Control

Randy Schwartz, Director, Division of Health Promotion and Education

Mental Health

Lead: *Julita Klavins*, Bureau of Mental Health and Mental Retardation

Substance Abuse

Lead: *Mel Tremper*, Office of Substance Abuse

Marlene McMullen Pelsor, Director, Office of Substance Abuse

Occupational Health

Lead: *Rhonda Webber*, Planning and Research Associate, Occupational Health Program

Steve Shannon, Director, Occupational Health Program

Greg Bogdan, Director, Division of Disease Control

Environmental Health

Lead: *Catherine Zeeman*, Assistant Toxicologist, Division of Disease Control

Greg Bogdan, Director, Division of Disease Control

Philip Haines, Director, Health and Environmental Testing Laboratory

Wallace Hinckley, Assistant Director, Division of Health Engineering

Donald Hoxie, Director, Division of Health Engineering

Others

Vital Statistics: *Ellen Naor,* Director, Office of Data, Research and Vital Statistics

Helen Zidowecki, Office of Rural Health

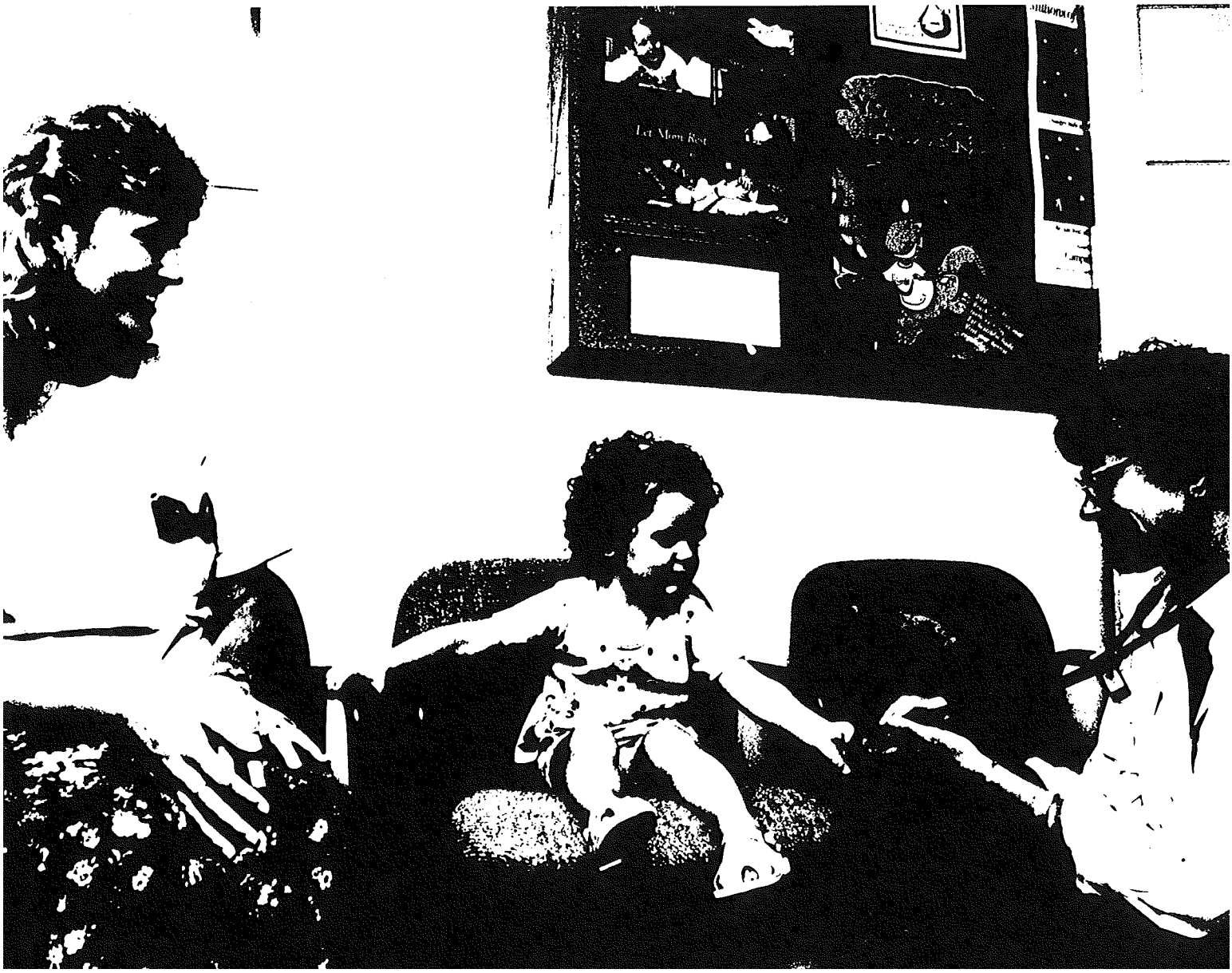
Health Planning: *Stephan LaForge,* Director, Division of Health Planning

Department of Education:

Cynthia Flye, School Health Education Consultant, Division of Curriculum

Katherine Wilbur, School Health Education Consultant, Division of Curriculum

Maternal and Child Health



PRIORITY AREA: MATERNAL AND CHILD HEALTH

GOAL:	Improve the health status of women, infants, and children.
LEAD OBJECTIVE:	Reduce the infant mortality rate to 6 deaths per 1,000 live births (Maine baseline: 7 deaths per 1,000 in 1989[1]; U.S. baseline: 10.1 deaths per 1,000 in 1988[2]).

Improving the health status of women, infants and children continues to be a challenge in Maine. In 1989, there were 17,469 births in the State[1]. The infant mortality rate has not decreased since 1989. This fact, combined with new data on increasing numbers of mothers at risk, is ample evidence that Maine must continue to focus on health needs of mothers and infants.

- First trimester - 81% of mothers (1989) received prenatal care[1].

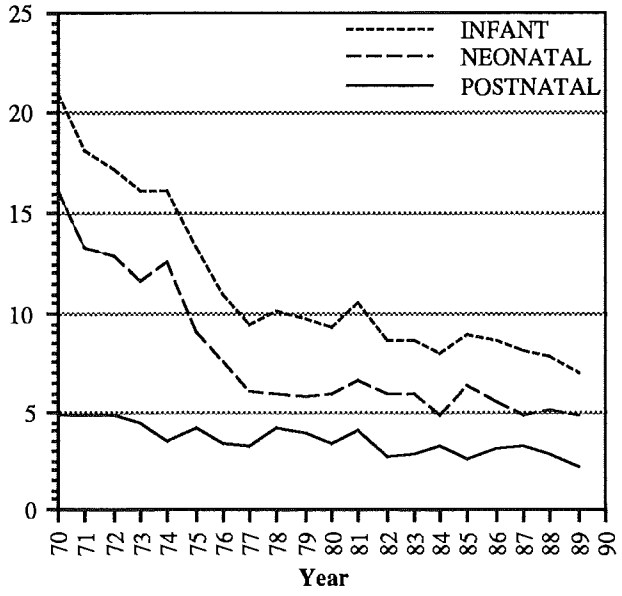
- Pre-term labor - 5.4% of mothers delivered at less than 37 weeks gestation[1].

- Nutrition - "snapshot" survey of WIC clients in June, 1990 showed 2,192 women receive services; 51% were inadequately nourished; and 30% of these women were outside weight parameters[3].

- Smoking - PRAMS data showed 40% of all mothers smoked before pregnancy and 57% of all mothers delivering low birth weight infants smoked[4].

- Substance abuse - data are lacking, although health professionals caring for pregnant women view this as a concern.

Neonatal, Postnatal and Infant Death Rates Per 1,000 Live Births, 1970-1990



In 1991, there were an estimated 346,300 children in Maine[5]. More than thirteen percent were expected to live in families with income below the Federal poverty level. Health indicators such as immunizations (97% of school age children are immunized[6]) and height to weight measurements (90% within normal limits[7]) seem to imply we are doing a good job. However, close examination of services, access to services, and review of data indicate care is inconsistent. There is no "seamless web" that assures children ages 0-21 will receive preventive care, primary care, acute care, and assistance with special health needs. In many instances, a child may only receive a portion of care that is needed.

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Develop integrated data systems to track health indicators that measure childrens' health status.

Services and Protection

- Improve linkage of services to children.
- Continue to increase access to a system of health maintenance services for children.

Professional Awareness

- Increase education and awareness of prevention of preterm labor among health professionals and pregnant women.
- Increase education for health professionals on the importance of utilizing every visit as an opportunity for health screening and illness prevention.

Public Awareness

- Increase education for families and general public to develop skills in advocating for their children's health care needs.

Risk Reduction

- Conduct intensive individualized education to eliminate risk factors for poor outcomes among pregnant women (such as smoking cessation in pregnancy and substance abuse in pregnancy).

Potential benefits of reaching Year 2000 goal

- Health status for infants, women and children will be improved.

- Health costs to families, employers, and taxpayers will be reduced.

- Human and health care resources will be used more effectively to address priority needs.

REFERENCES

1. Maine Office of Data, Research and Vital Statistics. Maine Vital Statistics Report, 1989. Augusta, Maine 1989.

2. Maine Office of Data, Research and Vital Statistics. Maine Vital Statistics Report, 1988. Augusta, Maine 1988.

3. Maine Bureau of Health, Division of Maternal and Child Health. WIC Program Gelco Report. Augusta, Maine June 1990.

4. PRAMS Survey data, 1989.

5. Maine Office of Data, Research and Vital Statistics. Maine Estimated Populations, 1990. Augusta, Maine 1990.

6. Maine Bureau of Health Immunization Program. Annual Immunization Assessment Report, 1990. Augusta, Maine, 1990.

7. Maine Bureau of Health, Division of Maternal and Child Health Program. Unpublished data, Augusta, Maine 1989.

Injury Prevention and Control

PRIORITY AREA: INJURY PREVENTION AND CONTROL

GOAL: Reduce the rate of injuries to Maine residents.

LEAD OBJECTIVE: Reduce unintentional injury mortality by 15% to 34 deaths per 100,000 (Maine baseline: 40 in 1988[1]; U.S. baseline: 34.5 in 1987[2]).

Injuries are both predictable and preventable. The task of injury control is to prevent injuries from occurring and to minimize the consequences when they do occur.

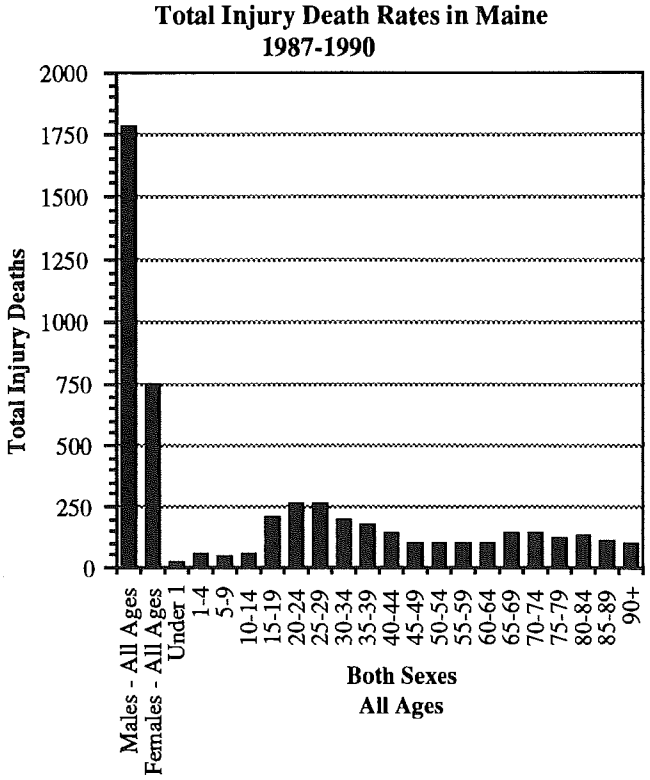
Approximately 150,000 Americans die each year as a result of injuries[3]. Maine deaths from injuries average about 650 annually[4].

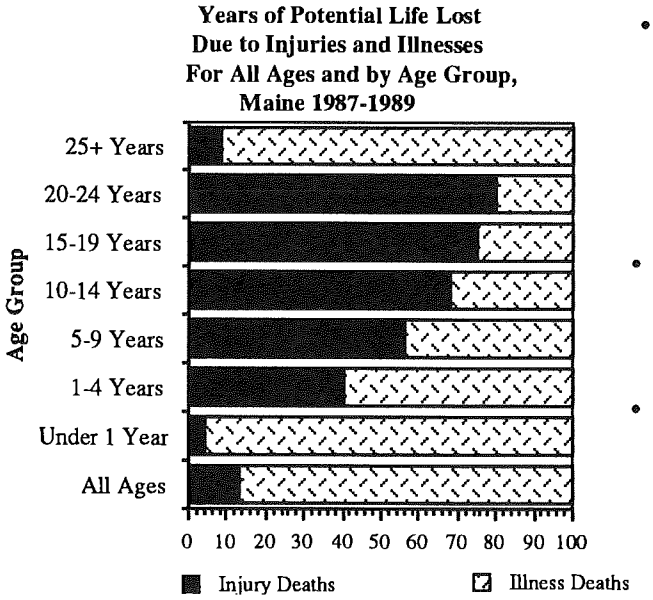
Injuries are the leading cause of death for persons aged 1-34 and the fifth leading cause of death for all ages in Maine[5].

- Approximately 2/3 of injury deaths are unintentional[3]. These deaths result primarily from motor vehicle-related causes, residential fires, falls, drowning, and poisoning.

- The remaining 1/3 of injury deaths are intentional[3]. These are deaths inflicted with the intent to harm oneself or others (suicide and homicide).

- Non-fatal injuries create a huge problem in terms of lost productivity, medical care costs, and long term disability. Injury is the third leading cause of hospitalization for all ages in Maine. The cost of hospitalizations due to injuries totaled $187 million in 1989 in Maine.[6]



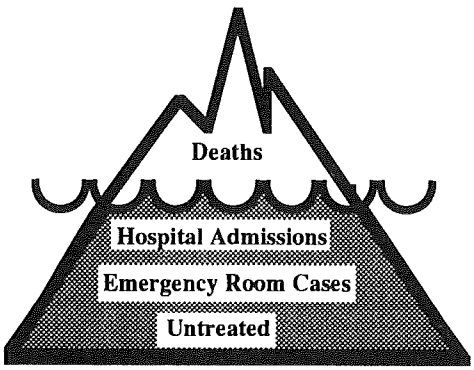


- The injury death rate is highest among the elderly population. However, unlike cancer, heart disease, and other chronic conditions, injuries disproportionately strike the young[7].
- Nearly 70% of all child deaths between the ages of 1-19 result from injuries[4].
- The effect of premature mortality is measured in years of potential life lost (YPLL). Injuries are responsible for more years of potential life lost than any other cause[7].

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

A comprehensive approach to injury control requires interdisciplinary collaboration and a combination of strategies:

Surveillance



The Injury Iceberg

- Review existing data sources to identify those most useful in monitoring the patterns of injury in Maine.
- Implement strategies to improve the quality of injury morbidity data.
- Implement a surveillance system which utilizes suitable mortality and morbidity injury data.
- Analyze and use data to monitor injury incidence, risk factors and trends, and to evaluate the effectiveness of interventions.
- Establish baseline data to measure public knowledge, attitudes, and behavior with regard to effective injury prevention strategies.

- Establish baseline data to measure professionals' knowledge, practices, and resource needs for effective injury prevention.

- Report results of data surveillance to raise awareness and to encourage injury prevention initiatives.

Services and Protection

- Develop and implement injury control activities targeted at high risk groups.

- Enact and enforce laws which maintain health and promote safety.

- Continue to develop and provide high quality trauma services.

- Incorporate injury prevention into school health education curricula.

Professional Awareness

- Establish and increase ongoing collaboration between public health, public safety, education and mental health professionals towards injury prevention and control objectives.

- Expand available resources to increase awareness of injury control issues among primary medical care providers, health educators, policymakers, and other professionals.

- Provide injury prevention and control education to professionals from multiple disciplines.

Public Awareness

- Increase targeted public education activities utilizing baseline data and surveillance system data.

- Increase the availability of quality public education resource materials and promote their use.

- Utilize media strategies to increase public awareness.

Risk Reduction

- Promote the increased use of protective equipment among individuals at risk of injury.

- Limit exposure to injury hazards through support of technological improvements.

- Reduce the rate of injuries involving the use/abuse of alcohol and drugs.

- Support educational strategies which promote safe behaviors.

POTENTIAL BENEFITS OF REACHING YEAR 2000 GOAL

- Productivity losses from injuries are far greater than from any other cause. Injury deaths are estimated to represent 34 potential years of life lost per death with a productivity loss of more than $300,000 per death[8]. Additional non-medical costs associated with injuries include worker's compensation, lost wages, insurance administration, property loss, and legal costs.

- A 15% reduction in deaths and hospitalizations from injuries represents about 100 Maine lives saved and 3300 fewer hospitalizations annually. This, in turn, represents a projected savings of approximately $58 million in 1991 dollars[8].

REFERENCES

1. Maine Office of Data, Research and Vital Statistics. Maine Vital Statistics, 1988. Augusta, Maine, 1988.

2. National Center for Health Statistics. National Vital Statistics, 1987. Atlanta, Georgia, 1987.

3. Baker, SP, O'Neill, B, Ginsburg, MT, Li, G. The Injury Fact Book. Oxford University Press, 1992.

4. Maine Office of Data, Research and Vital Statistics. Maine Vital Statistics (1979-1988 average). Augusta, Maine.

5. Maine Office of Data, Research and Vital Statistics. Maine Vital Statistics, 1990. Augusta, Maine, 1990.

6. Maine Health Care Finance Commission. Statewide uniform hospital discharge data set, 1987-1990.

7. The National Committee for Injury Prevention and Control. Injury Prevention: Meeting the Challenge. Oxford University Press, 1989.

8. Rice, DP, EJ Mackenzie. Cost of Injury in the United States, A Report to Congress. San Francisco, CA: Institute for Health & Aging, University of California and Injury Prevention Center, The Johns Hopkins University, 1989.

Chronic Disease Prevention and Control

PRIORITY AREA: CHRONIC DISEASE PREVENTION AND CONTROL

GOAL: Reduce morbidity and mortality from heart disease, stroke and other chronic conditions.

LEAD OBJECTIVE: Reduce the mortality of cardiac and cerebrovascular disease by reducing coronary heart disease deaths to no more than 100 per 100,000 (Maine age-adjusted base line: 131 per 100,000 in 1987[1]; U.S. baseline: 135 per 100,000 in 1987[2]) and stroke deaths to no more than 20 per 100,000 (Maine age-adjusted baseline: 25.4 per 100,000[1]; U.S. Age-adjusted baseline: 30.3 per 100,000 in 1987[2]). Age-adjusted based on 1940 U.S. population.

As the population of the nation grows older and the impact of infectious disease is reduced, the problems posed by chronic and disabling conditions will command increasing attention. These diseases are responsible for the largest proportion of health care costs, as well as the leading causes of morbidity and mortality.

- Heart disease is the leading cause of deaths and disabilities in Maine. Maine ranks 11th in the nation for risk of heart disease. In 1990, 3,700 deaths were due to heart disease with approximately 585 of those deaths occurring before age 65[3]. In that same year there were 40,525 years of potential life lost due to heart disease[3]. Hospital costs for heart disease alone were $171 million dollars in 1989, representing one fourth of all hospital costs[4].

- Stroke is the third leading cause of death in Maine. It is a major cause of morbidity. In 1990, 716 people died of stroke and many more suffered disabilities due to non-fatal stroke[3].

- Diabetes mellitus is the seventh leading cause of death in Maine[3]. Estimated prevalence rate for diabetes in Maine ranges from 2.6%[5] to 8.0%[6], or between 32-98,000 Maine residents.

- Chronic complications of diabetes account for more than half of the hospitalization days for persons with diabetes[7]. Each year in the United States, medical expenses and lost worker productivity related to diabetes cost over $25.7 billion, or nearly 4% of total health care costs[8,9]. In 1990, the direct and indirect cost of diabetes in Maine was about $119,000,000[8].

- Approximately 50% of all nontraumatic amputations in the U.S. are performed among people with diabetes[10]. In 1990, Maine hospital discharge data revealed 262 surgical amputations associated with diabetes. Each hospitalization averaged a cost of $16,500 and totalled $4 million. It is estimated that 50% of the amputations occurring among persons with diabetes could be prevented by reducing risk factors for amputations and improving foot care[11,12].

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Develop unduplicated hospital discharge data to track morbidity for chronic diseases.

- Monitor (annually) hospital discharge data for nontraumatic lower extremity amputations related to diabetes.

- Maintain the Behavioral Risk Factor Survey and expand it as needed.

- Develop a state-specific Health and Nutrition Examination Survey.

Services and Protection

- Increase the availability of organized community-based cardiovascular disease risk reduction programs so that at least 50 percent of the population has access to these services. These services should include blood pressure/cholesterol screenings and other CVD risk reduction activities.

- Increase access to health care to assess patients and monitor blood pressure and cholesterol.

- Increase access to early treatment for blood pressure and cholesterol control.

- Improve assessment and treatment of women with cardiovascular disease.

- Increase physician referrals of persons with diabetes to comprehensive outpatient diabetes education programs.

- Develop laws related to Environmental Tobacco Smoke (ETS) (See Tobacco Section).

Professional Awareness

- Conduct professional education programs to improve the prevention, recognition and management of these chronic diseases.

- Promote the adoption of standards of care for the prevention of complications associated with chronic diseases.

Public Awareness

- Increase public awareness of these chronic diseases through statewide media campaigns, comprehensive school health education, worksite health promotion programs, and community based programs.

- Promote the use of health education materials which detail proper self-care guidelines among individuals with chronic diseases.

- Promote awareness of risk factors for developing non-insulin-dependent diabetes mellitus (Type II).

Risk Reduction

- Increase the number of people who quit smoking, maintain ideal weight, and exercise regularly to control their risks for these chronic diseases.

POTENTIAL BENEFITS OF REACHING THE YEAR 2000 GOAL

- Coronary heart disease will be reduced by 10% if these goals are reached. Cost savings could be as much as 201 million dollars for a ten year period for hospital costs alone[13] (savings estimated by utilizing 10% of heart disease hospital costs for 1990 and multiplying by 10).

- Diabetes-related lower extremity amputations will be reduced with quality of life improved for individuals with diabetes, work potential enhanced, and related-hospitalization costs reduced by approximately $2.5 million[11,12].

REFERENCES

1. Department of Human Services. Maine Vital Statistics Annual Statistical Report for Calendar Year 1987. Augusta, Maine, 1988.

2. U.S. Department of Health and Human Services. Healthy People 2000: National health Promotion and Disease Prevention Objectives, Conference Ed. 1990 (PHS).

3. Department of Human Services. Maine Vital Statistics Annual Statistical Report for Calendar Year 1990. Augusta, Maine, 1992.

4. Maine Health Care Finance Commission. Unpublished Report. Augusta, Maine, 1989.

5. U.S. Department of Health and Human Services, Public Health Services, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation. Diabetes Surveillance, 1991. Atlanta, Georgia, 1993.

6. Department of Human Services. Maine Behavioral Risk Factor Survey 1987-1988. Augusta, Maine, April 1990.

7. U.S. Department of Health and Human Services. Economic Cost of Diabetes Mellitus - Minnesota, 1988. MMWR (PHS) 4/1991; 40(14): 229-231.

8. U.S. Department of Health and Human Services, Public Health Services, Centers for Disease Control, National Center for Health Statistics. Health United States 1991. May 1992.

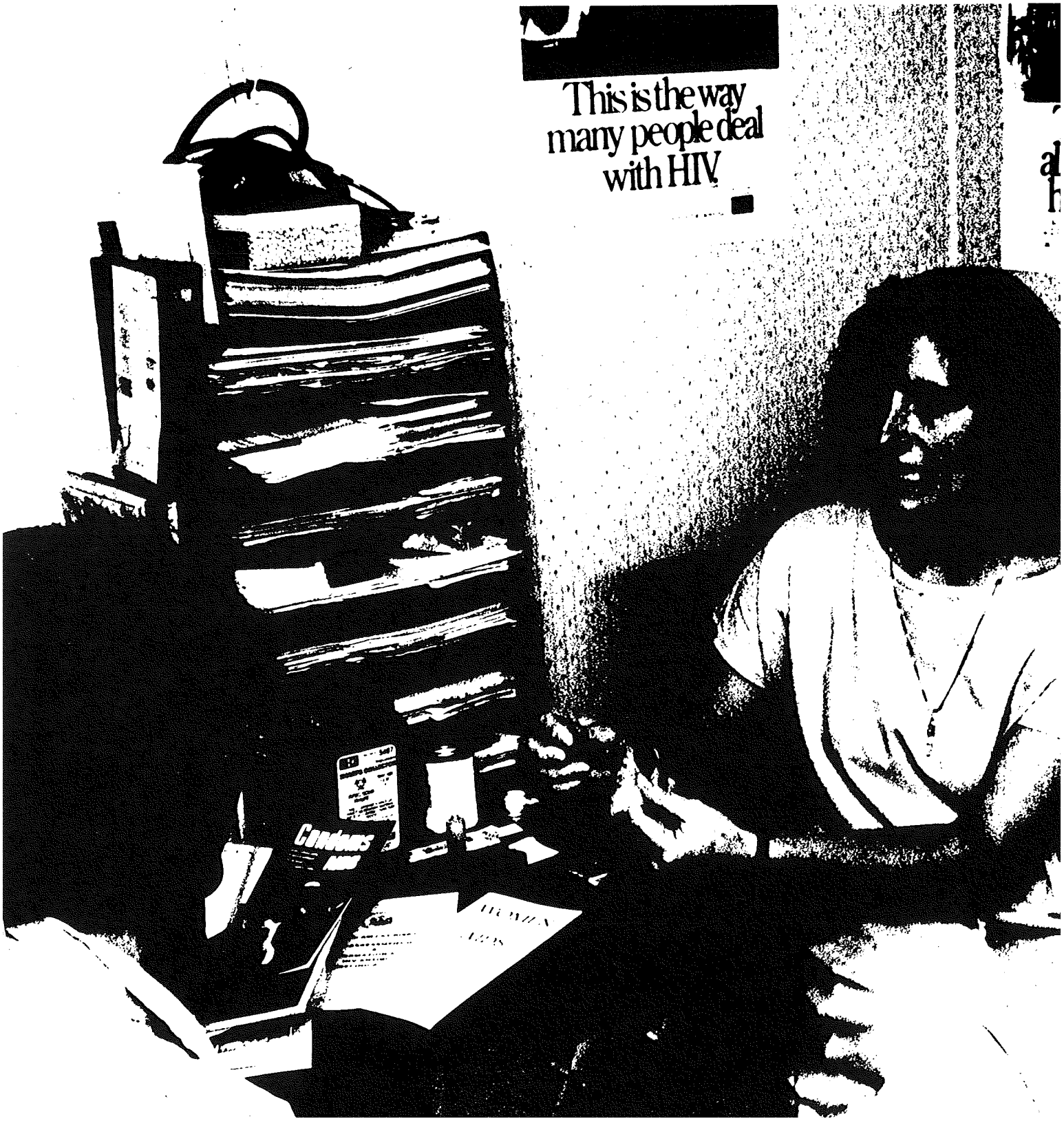
9. U.S. Department of Health & Human Services, Public Health Services, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation. Diabetes in the United States: A Strategy for Prevention. Atlanta, Georgia, 1993.

10. Levin, M.E. and L.W. O'Neal (eds). The Diabetic Foot. Missouri: The C.V. Mosby Company, 1988.

11. U.S. Department of Health and Human Services, Public Health Services. The National Long-Range Plan to Combat Diabetes, 1987. National Institutes of Health Publication No. 87-1587, September 1987.

12. U.S. Department of Health and Human Services, Public Health Services, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation. The Prevention and Treatment of Complications of Diabetes Mellitus: A Guide for Primary Care Practitioners. Atlanta, Georgia, April 1991.

13. Maine Health Care Finance Commission. 1990 Hospital Cost Figures for Heart Disease. Unpublished data. Augusta, Maine. 1991.


This is the way
many people deal
with HIV.

PRIORITY AREA: HIV INFECTION AND AIDS

GOAL:	Prevent HIV infection and reduce associated morbidity and mortality.
Lead Objective	Decrease the incidence of AIDS cases to no more than 3.0 per 100,000 (Maine baseline: 4.8 cases per 100,000 population, for cases reported January 1991 through December 1991[1]).

In June of 1981, the Centers for Disease Control publication Morbidity and Mortality Weekly Report documented the appearance of what we now know as HIV Disease[2]. There were fewer than 100 AIDS-related deaths that year nationwide.

Since that time, HIV Infection has become a worldwide pandemic, resulting in the illness and death of hundreds of thousands of people.

We have learned that HIV Infection is preventable, by and large, and yet it continues to spread throughout our state, nation, and planet.

- As many as one million people in the U.S. may be infected with HIV[3].
- In Maine, 1,500 to 2,500 people may be living with HIV Infection, many unknowingly[1].
- In the early 1990's the epidemic in Maine broadened its scope as increasing numbers of women and rural residents were diagnosed with AIDS.
- By 1991, AIDS had become the 5th leading cause of death for young adult men in Maine[4].

- During the second decade of the epidemic, many more Maine citizens and residents may acquire HIV, develop symptomatic HIV infection, be diagnosed with AIDS, and eventually die.

- The Bureau of Health estimates that as many as 1,200 Mainers may have developed illness associated with advanced HIV disease by the end of the decade[1].

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Provide clear guidance to the professional community regarding case definition of AIDS and reporting responsibilities.

- Maintain favorable relationships with the professional community.

- Improve physician reporting and active surveillance for AIDS and HIV infection. Monitor trends and distribution of HIV infection and AIDS.

- Conduct on-going seroprevalence studies among focal populations (such as injecting drug users, men who have sex with men, and newborns).

Services and Protection

- Assure access to anonymous HIV antibody counseling and testing for all who desire it.

- Ensure that screening tests and procedures continue to meet high quality standards.

- Maintain the strict confidentiality of Bureau of Health records.

- Provide partner notification services to those with HIV infection.

- Conduct regular quality assurance evaluations of publicly-funded HIV test sites and counselors.

- Continue investigation and follow-up for all reported instances of HIV non-compliant behavior.

Professional Awareness

- Participate in and continue to support medical provider training programs through workshops, conferences, newsletters, and special meetings.

- Promote the use of Universal Precautions for infectious disease control.

- Promote development of and dissemination of Standards of Care for early effective treatment of HIV Infection.

- Provide and support HIV prevention education to various other professional groups via workshops, meetings, mini residencies, conferences, and special meetings.

- Provide technical assistance to professionals and agencies regarding policies and procedures concerning HIV disease.

- Maintain the training and certification of HIV Antibody Test Counselors.

Public Awareness

- Maintain Public Service Announcements on radio and television concerning HIV and AIDS.

- Promote and support use of informational resources such as the Maine AIDS Hotline and National AIDS Hotline.

- Promote opportunities for public awareness such as World AIDS Day and National Condom Awareness Week.

- Distribute HIV prevention materials to the general public which highlight risk reduction and encourage active participation in HIV prevention.

- Educate the general public concerning any new developments regarding HIV using various methods.

- Provide support for HIV prevention programming as part of comprehensive, sequential health education curricula in schools.

- Support community-based providers of HIV prevention programs and coordinated prevention efforts among community-based providers, state agencies, employers, religious groups, and civic organizations.

Risk Reduction

- Promote and support culturally appropriate, research-based risk reduction programs which specifically target those whose behavior or personal circumstances may place them at increased risk of HIV infection.

- Encourage risk reducing changes in sexual behavior including abstinence, mutual monogamy between uninfected partners, correct and consistent condom use, and low to no risk sexual activities.

- Encourage risk reduction measures among injecting drug users and other high risk substance abusers including substance abuse treatment, not sharing needles, and consistent, thorough cleaning of injecting equipment.

- Assure access to free and/or low-cost condoms, water-based lubricants and spermicides, latex squares, clean needles, substance abuse treatment, HIV Antibody Counseling and Testing, and Family Planning services.

- Provide training opportunities for HIV prevention educators on relevant topics.

Potential benefits of reaching Year 2000 goal

- A dramatic reduction in human suffering and premature death.

- Associated reduction in health care costs (for example reduction of 20 patients with AIDS per year will save an estimated $102,000 per patient [lifetime average cost] for a total of $2,040,000 per year in direct care costs alone[5]).

- Reduction in incidence of associated sexually transmitted diseases and unwanted pregnancies.

- Associated increase in productivity of individuals whose lives would have been shortened by HIV infection and AIDS. A reduction in AIDS cases in the Year 2000 by 20 cases/year could result in a savings of approximately 500 years of productivity[1] (based on the mean age at death of 40 among people with AIDS in Maine during 1990, and a workspan upper limit of 65 years), or 25 years per person.

REFERENCES

1. Maine Bureau of Health, Office on AIDS Surveillance Program. Unpublished data, 1992.

2. U.S. Centers for Disease Control. Prievmocystis-pneumonia- Los Angeles. Morbidity and Mortality Weekly Report, 30: 250-252, 1981.

3. U.S. Centers for Disease Control. Projections of the Number of Persons Diagnosed with AIDS and the Number of Immunosuppressed HIV-Infected Persons - United States, 1992-1994. Morbidity and Mortality Weekly Report, 41: 1-23, 1992.

4. Maine Office of Data, Research and Vital Statistics. Maine Vital Statistics, 1992. Augusta, Maine. 1992.

5. U.S. Department of Health and Human Services, Agency for Health Care Policy and Research. Research Activities, 155, July 1992.

Priority Area: Teen and Young Adult Health

Goal: Improve the health of teens and young adults and improve access to preventive and primary health care services.

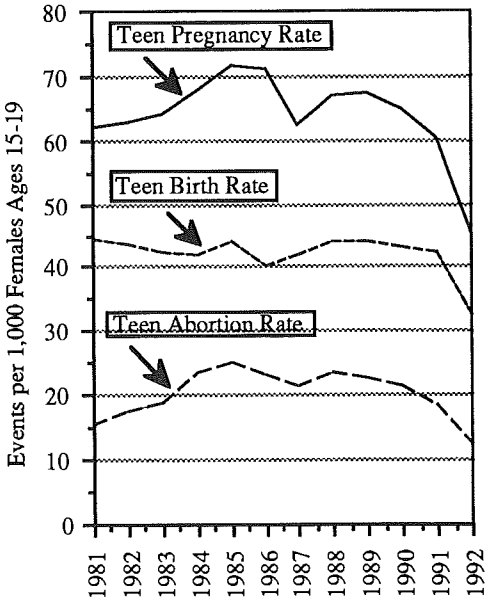
Lead Objective: Reduce the pregnancy rate of 10-14 year olds to 0 per 1000 females, the pregnancy rate of 15-17 year olds to 35 per 1000 females and the pregnancy rate of 18 and 19 year olds to a rate of 95 per 1000 females (Maine baseline: 0.9 per 1000 for 10-14 year olds, 36.6 per 1000 for 15-17 year olds and 95.3 per 1000 for 18 and 19 year olds in 1991[1]; U.S. baseline: 71.1 per 1000 for 15-17 year olds and 166 per 1000 for 18 and 19 year olds in 1985[2]).

The teen population is a population at risk. Regardless of other events in the life of a teenager, the growth, development, stress, and experimentation that constitutes "normal" adolescence put teens at risk for various health and emotional problems. Health services that are specifically designed to serve the needs of this population are, unfortunately, rare.

Many Maine adolescents and young adults experience adverse health consequences.

- In 1991, 2,635 teens experienced pregnancy (about one teen in sixteen)[1]. Of these teens, 1,819 gave birth. In 1985, Maine's adolescent birth rate was the highest among the New England States[2].
- In 1991, thirty-six point five percent (36.5%) of all births in Maine[1] and 55.8% of births to teens were a result of an unintended pregnancy[1,3].
- Injuries were the cause of 83% of all deaths in 15-19 year olds, 1979-1988[1].

Teen Pregnancy Rates By Outcome 1981-1992 Calendar Year



- Nationally, 14% of adolescents aged 10-18 years and 26% of young adults aged 19-24 years have no health insurance[4]. In Maine, 13% of children are not covered by health insurance as of 1991[5].

- In 1992, about 40% of 8th-10th graders and 60% of 11th and 12th graders reported using alcohol within the last 30 days[6].

- In 1991, the Maine Youth HIV Risk Behavior Survey reported that 58% of students in 9th-12th grade had experienced sexual intercourse[7]. National statistics reflect a median of 56%[7].

- In 1991, 15% of 11th and 12th grade adolescents reported smoking at least 1/2 pack of cigarettes per day, 8.9% of 8th and 10th graders reported smoking at least 1/2 pack per day[8].

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Conduct a comprehensive health survey of adolescents including access to preventive and treatment services.

Services and Protection

- Increase the accessibility of health services for teens by increasing the number of school-based clinics.

- Develop local primary prevention programs targeted for at-risk teens.

- Increase the proportion of pregnant teens receiving prenatal care in the first trimester.

- Increase the numbers of women under 150% poverty level and teens receiving family planning services.

Professional Awareness

- Continue the statewide Advisory Council on Adolescent Health.

- Increase professional awareness of special health needs of adolescents.

Public Awareness

- Assure comprehensive school health education in grades kindergarten through 12.

Risk Reduction

- Reduce the percentage of 12th grade students who smoke and/or abuse substances.

POTENTIAL BENEFITS OF REACHING YEAR 2000 GOAL

- It is estimated that family planning reproductive health care services avert 6,078 pregnancies per year. Of those pregnancies averted, 4,722 unwanted births are averted (about a third of those to teens), 1,253 abortions are averted, and 103 miscarriages[9]. Of the 4,722 estimated births, about one fourth (1,180) would have required taxpayer assistance, such as Medicaid, food stamps, and AFDC. This represents an estimated $9 million annual savings for the State of Maine. Significant additional dollars are also saved through early detection and treatment of cervical and breast cancer and detection and treatment of sexually transmitted diseases[9].

- Healthy teens, those who are not abusing substances, those who are not pregnant or parenting, and those who are not ill, depressed, abused, or violent are more likely to attain their full potential as fully functioning and productive adults. Healthy adolescents are less likely to experience school failure, to require support for their social and health needs, and to experience health problems.

- Primary prevention and early intervention services will reduce the impact of health problems, will increase successful school experience, and will reduce the social burden on public resources.

REFERENCES

1. Maine Department of Human Services. Maine Vital Statistics Annual Statistical Report for Calendar Year 1989. Augusta, Maine, 1990.

2. Charles Stewart Mott Foundation. Vital Statistics and Facts at a Glance, 1991.

3. Maine Office of Data, Research and Vital Statistics. PRAMS statistics of unintended births plus abortions. Augusta, Maine 1991.

4. University of California, San Francisco, Institute For Health Policy Studies. Health Insurance Coverage of Adolescents and Young Adults. San Francisco, California. 1991.

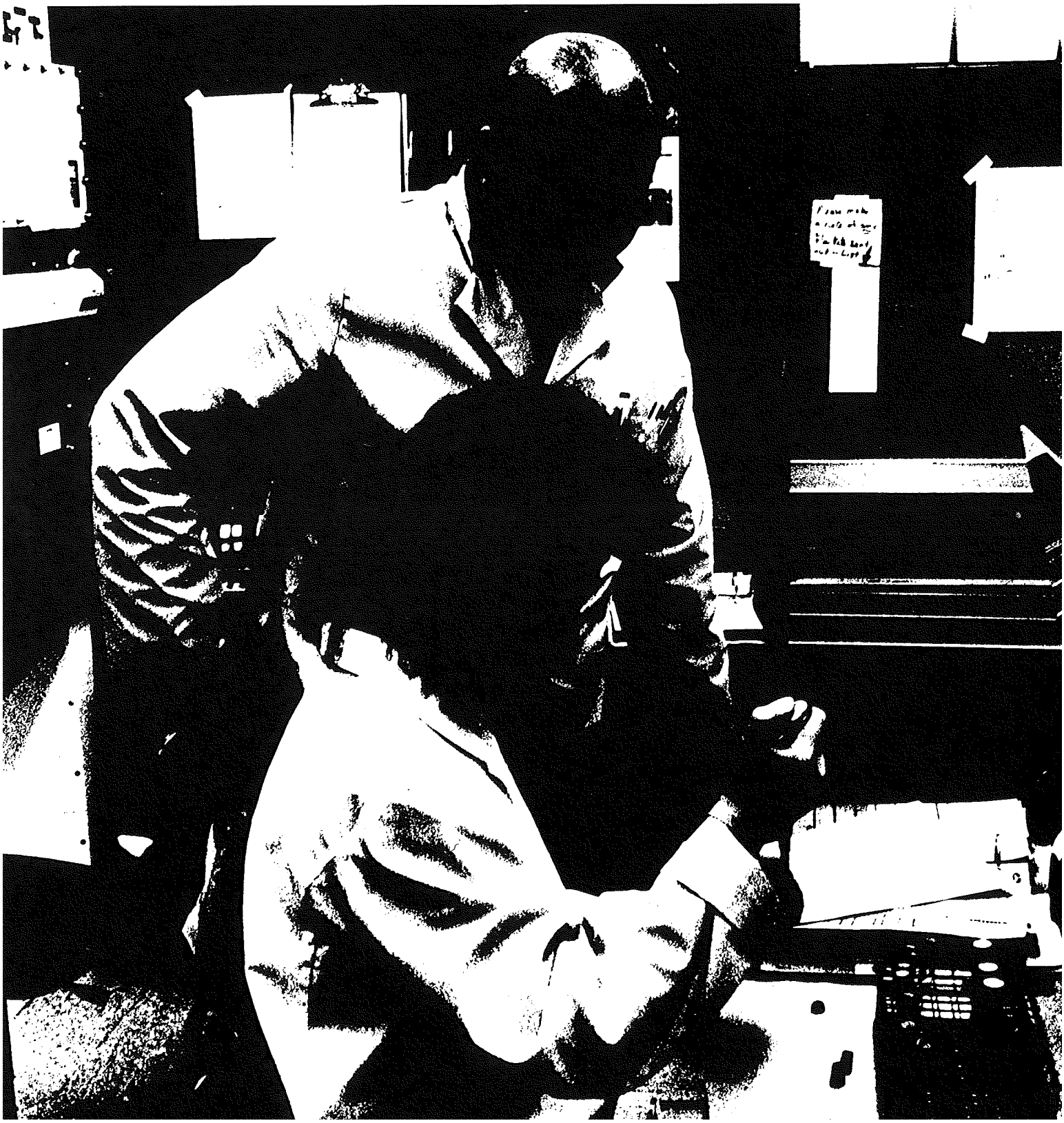
5. American Medical Association, Profiles of Adolescent Health: America's Adolescents How Healthy Are They?. Chicago, Illinois, 1990.

6. Maine Department of Education. Maine Drug and Alcohol Assessment. Augusta, Maine 1988.

7. Maine Department of Education. School Administrative Unit Survey of AIDS/HIV Education, 1989-90. Augusta, Maine 1990.

8. Maine Lung Association of Maine/American Heart Association, Maine Affiliate/American Cancer Society, Maine Division, Inc. Maine Youth Tobacco Use Survey. November 14, 1989.

9. Family Planning Association. Program Data: Market Penetration Levels by Agency. Augusta, Maine, 1990.



PRIORITY AREA: IMMUNIZATION AND INFECTIOUS DISEASE

GOAL: Prevent infectious diseases among Maine citizens.

LEAD OBJECTIVES:

- Increase, to 90%, the proportion of children under age 2 who have completed the basic immunization series (Maine baseline: 65% in 1990[1]).
- Reduce the incidence of hepatitis B in Maine to 12 cases per 100,000 or less (Maine baseline: 17 cases per 100,000 in 1990[2,3]).
- Reduce the incidence of Tuberculosis in Maine to 2.0 cases per 100,000 or less (Maine baseline: 3.7 cases per 100,000 in 1990[2]).
- Reduce the incidence of gonorrhea to 10 cases per 100,000 or less (Maine baseline: 17.6 per 100,000 in 1990[2]).

Despite the tremendous social and technological advances of this century, preventable infectious diseases are still an important cause of human suffering and premature death. In Maine, all segments of the population are affected to some degree:

- Maine infants, children, and young adults continue to acquire diseases such as measles and pertussis that can easily be prevented with appropriate vaccination. During 1990, 30 confirmed cases of measles and 19 cases of pertussis were diagnosed[2].

- Among the elderly and chronically ill, many deaths and prolonged hospitalizations from complications of influenza are avoidable with annual immunization. The elderly are also at greatest risk from the increasing incidence of Salmonella enteritidis infections in the northeastern United States.

- Hepatitis B and a variety of sexually transmitted diseases, many with long term or permanent complications, continue to appear in epidemic form among adolescents and young adults. A 1989 a Maine Bureau of Health survey revealed that almost 10% of young women seeking family planning services in Maine had asymptomatic Chlamydia infection[4].

- Tuberculosis, only recently thought to be nearing eradication, is now on the increase again in both Maine and the United States as a whole. Multi-drug resistant strains of tuberculosis are being identified with alarming frequency and further compromise the ability to treat and prevent this disease.

The prevention and control of all these communicable diseases and others may be accomplished through the proper application of basic public health strategies: vaccination, promotion of hygiene, early recognition and treatment, and education.

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Provide clear guidance to the professional community regarding case definitions and reporting responsibilities.

- Improve physician reporting and active surveillance for hepatitis B cases.

- Implement a rigorous laboratory and physician visitation program to assure timely reporting of infectious diseases of public health importance.

Services and Protection

- Provide adequate quantities of childhood vaccines to public and private community health agencies, schools, and physicians.

- Maintain access to appropriate treatment and clinical services for sexually transmitted diseases and tuberculosis.

Professional Awareness

- Provide updates on infectious disease issues of public health importance to medical providers through newsletters.

- Collaborate to develop protocols for the early identification and treatment of those at high risk for tuberculosis and market these protocols to the medical community.

Public Awareness

- Educate the general public, as well as the medical community, about new vaccines and changes in the immunization schedule.

- Distribute information on infectious disease prevention techniques that can be undertaken by the public, such as safe sexual practices, the use of proper cooking and foodhandling methods to prevent foodborne diseases, and general hygiene.

- Promote comprehensive school health education.

Risk Reduction

- Promote hepatitis B vaccination for infants, sexually active persons, and others at risk.

- Institute early and aggressive follow-up of all sexually transmitted diseases to prevent secondary spread.

- Promote pneumococcal vaccination and annual influenza vaccination for persons over 65 years of age and for persons with certain chronic diseases.

POTENTIAL BENEFITS OF REACHING YEAR 2000 GOAL

- Each dollar spent on measles vaccination is estimated to save $10 in medical costs expended on disease treatment of affected children and adolescents[5].

- Reduction in rates of gonorrhea to 10 per 100,000 will result in a reduction of at least $70,000 of annual hospitalization costs for Gonococcal pelvic inflammatory disease and will decrease rates of ectopic pregnancy and infertility[6].

- Reducing the annual incidence of hepatitis B by 100 cases will prevent 5 - 10 adult cases of chronic hepatitis B infection and 2-3 cases of hepatitis B-related cirrhosis[3]. Such a reduction will also help to prevent the suffering and high costs incurred by chronic disease that results from perinatal and early childhood hepatitis B infection. The estimate of direct and indirect national costs of hepatitis B is greater than $500 million annually[7], but this expense could be lowered through the reduction of hepatitis B cases.

- Reduction in the rate of tuberculosis cases to 2.1 per 100,000 from the current rates will result in direct hospitalization cost savings of greater than $175,000 per year[8].

REFERENCES

1. Maine Immunization Program. Retrospective Enterer Survey Report - School Year 1990-1991. Augusta, Maine 1991.

2. Maine Bureau of Health. Morbidity Data. Augusta, Maine 1990.

3. Centers for Disease Control. Protection Against Viral Hepatitis. MMWR, 1990; 39/No. RR-2:1-26.

4. Maine Bureau of Health. Sexually Transmitted Disease Program. Informal survey data. Augusta, Maine 1989.

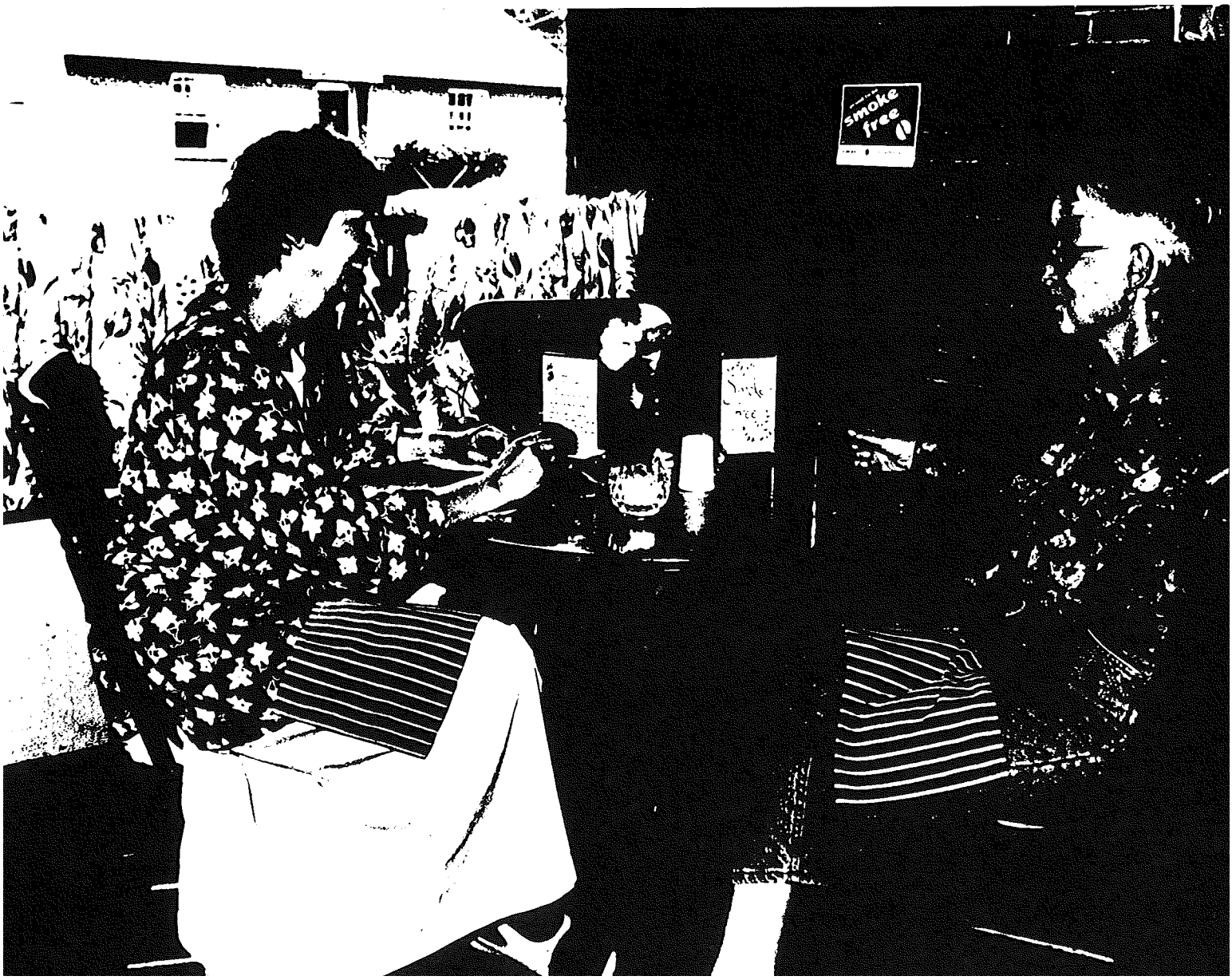
5. Willems JS, Sanders CR. Cost Effectiveness and Cost-Benefit Analysis of Vaccines. Journal of Infectious Diseases, 1981; 144: 486-493.

6. U.S. Centers for Disease Control. Pelvic Inflammatory Disease: Guidelines for Prevention and Management. MMWR 1990; 40/NO. RR-5:1-25.

7. U.S. Department of Health and Human Services. Healthy People 2000. National Health Promotion and Disease Prevention Objectives. Washington, DC 1990.

8. U.S. Centers for Disease Control. A Strategic Plan for Elimination of Tuberculosis in the United States. MMWR 1990; 38/NO. 5-3: 1-25.

Tobacco Prevention and Control



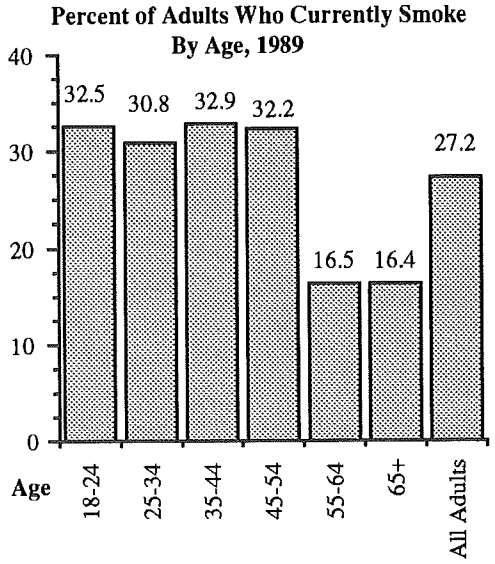
PRIORITY AREA: TOBACCO PREVENTION AND CONTROL

GOAL: Reduce death and disability due to tobacco use among Maine citizens and eliminate involuntary public exposure to environmental tobacco smoke.

LEAD OBJECTIVE: Reduce the prevalence of cigarette smoking to no more than 15 percent among Maine citizens age 20 and older, and totally eliminate public involuntary exposure to environmental tobacco smoke.

Tobacco use is the single most preventable cause of death and disease in the United States and in Maine, accounting for one of every six deaths[1]. Tobacco use is a major risk factor for heart disease, chronic bronchitis and emphysema, and cancers of the lung, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder. Involuntary smoking also causes disease, including lung cancer in healthy nonsmokers, severe respiratory problems in young children, and growth retardation of unborn infants.

- The prevalence of smoking in Maine is 27% for persons age 18 and older[2]. The prevalence of smokers age 18-34 in Maine ranks third highest in the Nation, surpassed only by Tennessee and Kentucky. The proportion of persons aged 18-34 in Maine who ever smoked (53.1%) ranks highest in the U.S.[3]



- Tobacco use is responsible for over 2,285 deaths annually in Maine. Smoking related illnesses cost the state over $273 million annually. Twenty-one percent of all deaths are attributable to smoking[4]. Maine has the sixth highest smoking attributable mortality rate in the Nation[5].

- In 1989, 23.1% of high school seniors in Maine were current smokers. In 1987, smokeless tobacco was used by 7.8% of ninth grade boys and 8.3% of twelfth grade boys. Of those who used smokeless tobacco, 45% also smoked cigarettes[6].

- Smoking prevalence among low-income pregnant women is higher than that of pregnant women in general and of the female population (18.2% of 1988 Maine Birth Certificates reported maternal use of tobacco during pregnancy; 27.2% of women in Maine are current smokers; 42.9% of WIC participants smoked during pregnancy in 1988)[2,7,8].

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Monitor tobacco use by teens through the Maine Tri-Agency Youth Tobacco Survey.

- Update data on smoking attributable mortality, morbidity and economic costs as new Smoking Attributable Morbidity, Mortality and Economic Costs (SAMMEC) software upgrades are issued by CDC.

- Monitor tobacco use by adults through the Behavioral Risk Factor Surveillance System.

- Conduct special studies regarding smoking prevalence, cessation, and policy implementation.

- Monitor trends in tobacco-related diseases such as emphysema, other chronic lung diseases, lung cancer, and heart disease.

Services and Protection

- Increased availability and access to cessation services.

- Restriction of access to tobacco by minors including banning of sales of cigarettes in vending machines.

- Implementation and enforcement of a comprehensive clean indoor air act including smoke-free policies at all worksites.

Professional Awareness

- Train health care providers in all delivery settings to provide clinical interventions to prevent tobacco use, promote smoking cessation, and discourage smokeless tobacco use.

- Increase health professional awareness regarding the role of health professionals in advocating tobacco-free public policies.

- Promote the understanding of tobacco use as an addiction, and provide training in treatment of that addiction.

Public Awareness

- Increase public education to support a smoke-free environment.

- Reduce the initiation of smoking by children through comprehensive youth prevention programs.

- Increase public education and media support for tobacco prevention and develop a counter-advertising campaign to deglamorize tobacco use.

Risk Reduction

- Integration of tobacco prevention education into comprehensive school health education programs.

- Increase cessation services provided to pregnant women.

POTENTIAL BENEFITS OF REACHING YEAR 2000 GOALS

- Smoking is the leading preventable cause of death and disease in Maine[1]. Implementation of a comprehensive and intensive tobacco prevention and control program will significantly reduce the death, disease and associated costs of heart disease, cancer, chronic lung disease, stroke and low-birth weight infants in Maine.

- Reducing the number of current smokers and decreasing the number of places where Maine citizens are involuntarily exposed to environmental tobacco smoke will reduce the adverse health effects of secondhand smoke to children and to those with pre-existing health conditions.

- Decrease in cancer deaths up to 20%, potentially saving lives in Maine annually and reducing suffering due to cancer[9].

- Reduction of chronic lung disease deaths and suffering.

- Reduction in the tremendous costs of over 250 million dollars caused by smoking to the health care system, to business, and to the state's economy[9].

- Although meeting the Year 2000 Objectives would reduce the number of deaths due to smoking by over 100 per year in the Year 2000, it will take some time before there is a greater reduction in smoking attributable deaths. This is because as more current smokers become former smokers, there is still the latent effect of smoking-related diseases twenty years later.

References

1. Office on Smoking and Health. Reducing the Health Consequences of Smoking: 25 Years of Progress. A Report of the Surgeon General. DHHS Pub. No. (CDC) 89-8411. Washington, DC. U.S. Department of Health and Human Services, 1989.

2. Maine Department of Human Services, Division of Health Promotion and Education. Behavioral Risk Factor Surveillance System. Augusta, Maine, 1990.

3. U.S.Centers for Disease Control. Cigarette Smoking - Behavioral Risk Factor Surveillance System, 1988. Morbidity and Mortality Weekly Reports. 38:845-8. 1989.

4. Maine Department of Human Services, Division of Health Promotion and Education. Smoking-Attributable Deaths and Economic Costs in Maine, 1991. Augusta, Maine, 1991.

5. U.S.Centers for Disease Control. State-Specific Estimates of Smoking-Attributable Mortality and Years of Potential Life Lost, 1985. Morbidity and Mortality Weekly Report. 1988; 37: 689-93. 1988.

6. American Lung Association of Maine, American Cancer Society, Maine Division, American Heart Association, Maine Affiliate. Tri-Agency Youth Tobacco Survey. 1987 and 1989.

7. Maine Department of Human Services. Pregnancy Risk Assessment Monitoring System. Augusta, Maine, 1988.

8. Maine Department of Human Services, Division of Maternal and Child Health. WIC Program Management Information system. Augusta, Maine, 1988.

9. Maine Department of Human Services, Division of Health Promotion and Education and Office of Data, Research and Vital Statistics. Smoking Attributable Mortality, Morbidity and Economic Costs, Maine 1990. Augusta, Maine, 1993.

Oral Health


Give a Kid a
Healthy Smile...
Use Fluoride
Strategies
MATHEMATICS

PRIORITY AREA: ORAL HEALTH

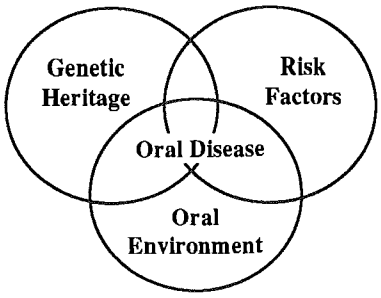
GOAL: Improve the oral health of Maine citizens.

LEAD OBJECTIVE: Decrease to 10% the proportion of Maine's citizens who have lost most or all of their natural teeth by the age of 25 and to 33% for the 45 to 54 age group (Maine baseline: 16% of 25 year olds; 39% of 45 to 54 year olds and 57.5% of 65 years and older in 1990[1]; U.S. baseline: 0.21% of employed 25-29 year olds were edentulous in 1985, 5.28% of employed 45-54 year olds had lost all their teeth in 1985[2]).

Oral health, the focus of the overall goal and this objective, implies optimal function and appearance as well as absence of active disease. Oral health refers to the entire mouth, not just the teeth, and is an integral component of general health. Oral disease is not one entity, but multiple diseases or conditions caused by different risk factors and changes in the oral environment. Common oral diseases include dental caries (dental decay), periodontal diseases (gum disease), and oral cancer. Other oral conditions include malocclusion, congenital defects such as cleft palate, or oral injuries.

- In 1985, by 5th grade, 8 of 10 Maine children had experienced dental decay in either their primary or permanent teeth[3]. Although at least 50% of the state's children receive the benefits of topical fluorides[4], use of dental sealants is highly variable across the state.

- In 1987 Maine had the 7th highest mortality rate in the nation for oral cancer[5]; 75% of all oral cancers are due to excessive use of tobacco and alcohol[6].



Factors Contributing to Oral Disease

- In 1989, in some areas of the state, over 20% of 9th grade boys used smokeless tobacco at least weekly[7]; its use leads to significant oral lesions (including oral cancer) and nicotine addiction.

- Many elderly Maine citizens, particularly those without teeth or with dentures, have not had oral examinations by a health professional for 15 to 35 years[8]; they are at high risk for late diagnosis of oral diseases, thus creating a poor prognosis for treatment or cure.

- Only 43% of adults in Maine are covered by Medicaid or any type of private health insurance that includes dental benefits[1]. Adult dental benefits under Medicaid are extremely limited.

- Oral injuries continue to occur in sports, motor vehicle and bicycle accidents, and occupational accidents; in 1989, 740 workers reported mouth or jaw injuries; 94 of those workers had "lost work time" (absent from work one or more days after the day of the accident)[9].

Interdisciplinary and multi-agency efforts to reduce or eliminate risk factors for the public can make prevention of most oral diseases and maintenance of the public's oral health a reality. Twelve oral health objectives for Maine were chosen to benefit all age groups. They address the problems of dental decay, oral cancer, smokeless tobacco, oral injuries, detection of disease and delivery of care. The selection of these objectives as priorities does not diminish or ignore the existence and importance of other oral problems.

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Refine reporting techniques for oral cancer incidence and mortality to the Maine Cancer Registry.

- Monitor appropriate use of fluorides in drinking water and supplement programs.

- Develop a surveillance system for oral injuries.

- Conduct ongoing surveys to document changes in oral health status.

Services and Protection

- Create statewide screening/referral networks for oral problems.

- Develop more cost-effective dental care delivery systems and financing mechanisms that reach underserved populations.

- Improve access to affordable, high quality dental care.

- Develop policies and legislation to prevent oral injuries.

Professional Awareness

- Implement educational efforts through newsletters and continuing education courses.

- Integrate assessment of and counseling for risk factors for oral diseases and conditions into clinical protocols for dental and medical care.

Public Awareness

- Increase the public's knowledge of their own oral status through promotion of self-exams and professional exams.

- Improve preventive oral health habits such as toothbrushing/flossing, use of fluorides, and nutritious eating habits via statewide health promotion efforts.

Risk Reduction

- Increase use of sealants in children at risk for dental caries.

- Reduce risk factors for oral diseases through provision and promotion of accepted preventive methods such as water fluoridation.

- Continue to integrate dental health education into comprehensive school health education.

- Promote prevention and cessation of tobacco use .

POTENTIAL BENEFITS OF REACHING YEAR 2000 GOAL

- Currently, the majority of squamous cell oral cancers are diagnosed only when symptoms become apparent. Through programs to detect and treat asymptomatic lesions, 5 year survival rates could be improved from 51% to 75%[10].

- A 9% increase in the proportion of children who are caries-free would result in at least 1477 children not needing an average of 2 dental fillings each, thus saving over $44,310 in private or public expenditures and resulting in fewer teeth lost as adults[11].

- An injury to the front of the mouth involving 2 teeth averages $1,400 per person. Prevention of even 4 injuries per year would result in a savings of $5,600[11].

- Dental disease results in an average of 2.1 school days per child lost due to acute dental conditions and an average of 4.3 workdays lost for adults ages 18 - 24[12]. Reductions in dental disease would result in less sick time and less income lost due to sickness or expenditures for dental-related illnesses.

References

1. Maine Department of Human Services, Bureau of Health, Division of Health Promotion and Education. Behavioral Risk Factor Surveillance System Survey. Augusta, Maine. 1990.

2. National Institute of Dental Research. Oral Health of United States Adults. The National Survey of Oral Health in U.S. Employed Adults and Seniors: 1985-1986. NIH Publication No. 87-2868. Bethesda, MD; U.S. Department of Health and Human Services. Augusta, Maine. 1987.

3. Maine Department of Human Services, Office of Dental Health. Survey of the Oral Health of Maine's Fifth Grade Public School Children. Augusta, Maine. 1985.

4. Maine Department of Human Services, Bureau of Health, Office of Dental Health. Unpublished data from the School Dental Health Education Program (grant application, consent form and parent surveys). Augusta, Maine. 1990.

5. U.S. Centers for Disease Control. Deaths from Oral Cavity and Pharyngeal Cancer - United States, 1987. MMWR 39:457-460, 1990.

6. Bot, WJ, McLaughlin, JK, Winn, DM, et al. Smoking and drinking in relation to oral and pharyngeal cancer. Cancer Research 48:3282-3287, 1988.

7. Maine Affiliates of American Heart Association, American Lung Association and American Cancer Society. Maine Youth Tobacco Use Survey, 1987.

8. Maine Department of Human Services, Bureau of Health, Office of Dental Health. Unpublished data from a pilot study of Maine's elderl.y. Augusta, Maine. 1990.

9. Maine Department of Labor, Bureau of Labor Standards. Characteristics of Work - Related Injuries and Illnesses in Maine. Augusta, Maine. 1989.

11. U.S. Centers for Disease Control and National Institutes of Health. Cancers of the Oral Cavity and Pharynx: A Statistics Review Monograph, 1973-1987. U.S. Department of Health and Human Services, 1991.

12. Maine Department of Human Services, Bureau of Health, Division of Dental Health. Cost figures based on an informal survey of usual and customary fees of Maine dentists. Augusta, Maine. 1991.

13. National Center for Health Statistics. Current Estimates from the National Health Interview Survey, 1989, Series 10, No. 176, DHHS Publication No. (PHS) 90-1504, Vital and Health Statistics. Hyattsville, MD: U.S. Department of Health and Human Services, 1990.

Priority Area: Cancer Prevention and Control

Goal: Reduce cancer morbidity and mortality.

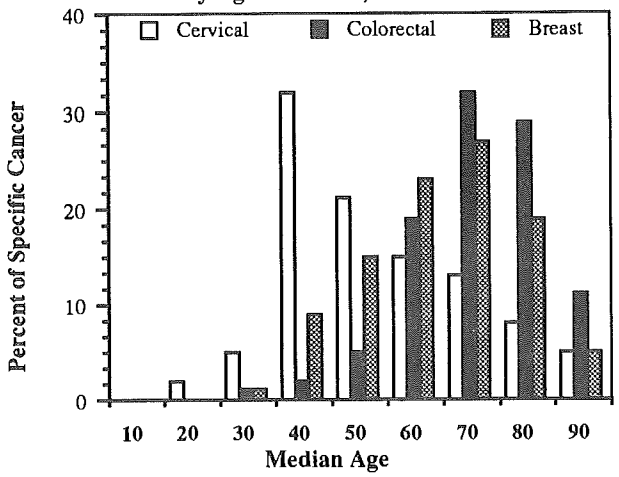
Lead Objective: Reverse the rise in cancer deaths to achieve a rate of no more than 130 deaths per 100,000 (Maine age-adjusted baseline: 137 per 100,000 in 1987[1]; U.S. age-adjusted baseline: 133 per 100,000 in 1987[2]). Age-adjusted based on the 1940 U.S. population.

Cancer takes the lives of nearly one out of four (25%) Maine residents[3]. Cancer is responsible for 11 percent of the total costs of disease in the United States and 18 percent of the total costs of premature death[4]. While the overall goal is to reduce total cancer mortality and morbidity, breast, cervical, and colorectal cancers are targeted as high priorities in Maine. Early detection of these cancers increases survival. Primary prevention programs can reduce the risks of developing cancer by promoting public and professional awareness of risk factors and identifying strategies to facilitate healthy behaviors. Other cancers are addressed in the chapters on tobacco, environmental health, oral health, occupational health and safety, and human immunodeficiency virus.

- The average years of life lost per death are 18.9 (female breast cancer), 18.7 (cervical cancer) and 13.9 (colorectal cancer)[5]. These figures reflect the relatively earlier ages at which breast and cervical cancers strike.

- In 1988, 820 Maine women were diagnosed with breast cancer and 229 died of the disease[1].

Proportion of Year 2000 Cancer Sites by Age for Maine, 1988



Source: Maine Cancer Registry, Maine Department of Human Services

- In 1980-1987, Maine had the third highest age-adjusted death rate for cervical cancer nationally for the white population[6].

- In 1983-1988, 409 Maine women developed invasive cervical cancer and 172 women died of the disease[1].

- In Maine, colorectal cancers were among the most frequently diagnosed cancers between 1983-1988 (17% of total cancer), behind lung and prostate cancer among men and breast cancer among women[1].

- From 1983 - 1988, 4,661 Maine residents were diagnosed as having colorectal cancer and 2,108 died as a result of that cancer[1].

Strategies to accomplish the objective

Surveillance

- Collect periodic data on knowledge, attitudes, and behavior of Maine women concerning cervical and breast cancer screening and follow-up. The Maine Behavioral Risk Factor Survey currently collects data on behavior only.

- Assess the quality and quantity of the data received by the Maine Cancer Registry including stage of disease at diagnosis.

- Link cancer incidence and mortality records.

- Assess hospital discharge data and correlate with cancer registry.

Services and Protection

- Early detection through increasing adherence to screening recommendations and assuring access to needed screening services.

- Ensure that screening tests and procedures meet quality standards.

Professional Awareness

- Promote physician and technologist education concerning nationally accepted guidelines for cancer screening and follow-up.

- Provide training in the implementation of these guidelines and patient counseling concerning cancer risks.

Public Awareness

- Promote awareness of risk factors (such as family history, exposure to sun, tobacco use, or an unhealthy diet), and the benefits of screening and healthy behaviors by:

  - Providing comprehensive school health education;
  - Involving members of target groups in community education and support programs through community-based health promotion programs;
  - Increasing coordination among government, voluntary organizations, employers, religious organizations and citizen groups to develop and implement strategies.

Risk Reduction

- Promote the reduction of dietary fat consumption and an increase in the consumption of fiber and complex carbohydrates.

- Assist Maine people to reduce the use of tobacco.

- Promote the use of condoms to protect against Human Papilloma Virus, HIV, Hepatitis B and other infectious agents associated with the development of cancer.

Potential benefits of reaching Year 2000 goal

- Reduce deaths due to breast cancer in the Year 2000 from the 240 deaths expected if current trends continue to 204, saving the lives of 36 women in that year alone[5].

- Reduce deaths due to cervical cancer in the Year 2000 from the 30 deaths expected if current trends continue to 14, saving the lives of 16 women in that year alone[5].

- Reduce deaths due to colorectal cancer in the Year 2000 from the 368 expected deaths if current trends continue to 337, saving the lives of 31 persons in that year alone[5].

- Costs for cancer treatment are high. For example, it is estimated that cervical cancer treatment for the first year alone is $28,000 per patient[7]. Yet cervical cancer is a preventable disease. These costs, not to mention the cost of lost economic productivity, are avoidable. Furthermore, cancers detected in Stage I (early detection) will result in significant costs savings in treatment and fewer lost work days and other associated secondary costs. Studies have shown that early detection screening mammography demonstrated a 25 percent reduction in mortality from breast cancer with a cost per year of life saved estimated to be $3,400.[8] Early detection of cervical cancer using pap tests in elderly women saved $5,907 and 3.7 years of life per 100 pap tests.[7]

References

1. Maine Department of Human Services, Maine Cancer Registry Program. 1988 Cancer Registry Annual Report. Augusta, Maine. 1988.

2. National Vital Statistics System, NCHS, CDC, PHS, DHHS. National Health Interview Survey (NHIS), National Center of Health Statistics (NCHS), Centers for Disease Control (CDC), Public Health Service (PHS), U.S. Department of Health and Human Services (DHHS), Hyattsville, MD, 1988.

3. American Cancer Society. Cancer Facts and Figures 1989. 1991 New York: The Society.

4. Hodgson, TA and Rice, DP. Economic impact of cancer in the United States. In: Schottenfeld, D, (ed.) Cancer Epidemiology and Prevention. Chapter 13. In press.

5. Maine Office of Research, Data and Vital Statistics. Maine Vital Statistics, 1990, Augusta, Maine. 1990.

6. U.S. Centers for Disease Control, Black-White Differences in Cervical Cancer Mortality - United States, 1980-1987; MMWR 39:245-248, 1989.

7. Mandelblatt, Jeanne S, and Marianne C. Fahs. The cost-effectiveness of Cervical Cancer Screening in Low-income Elderly Women. JAMA, April 22/29, 1988. Vol. 259, No. 16. (Cited in Prevention Pays, Florida State Health Office, 1993)

8. Anderson, I, Knut A, Janson I, et al. Mammographic Screening and Mortality from Breast Cancer, the Malmo Screening Trial. British Medical Journal, 1988, 297; 943-948. (Cited in Prevention Pays, Florida State Health Office, 1993.)

PRIORITY AREA: MENTAL HEALTH

GOAL:	Reduce the disruptive and debilitating effects of serious emotional disturbances in youth and serious mental illness and mental disorders in adults in Maine.
LEAD OBJECTIVE:	Increase to at least 50% the proportion of persons with serious mental illness and mental disorders using community mental health services.

While a complete understanding of the causes of serious mental illnesses, such as schizophrenia, bipolar disorder, and depression is lacking, these causes likely involve a combination of factors. These factors include genetic factors, environmental conditions, and neurochemistry or a chemical imbalance in parts of the brain that control perception, thinking, emotion, and energy level. Serious mental illness among adults includes the major mental illnesses noted above and other serious mental disorders, such as anxiety disorders and some personality disorders, accompanied by significant functional impairments. Serious emotional disturbances among youth may include the presence of other disabilities in addition to severe emotional problems, conduct disorders, and early onset of illnesses such as schizophrenia and mood disorders (manic-depression, depression, dysthymia).

Adults with serious mental illness may often be unable to cope with the basic activities of daily living. They may share a need for psychiatric treatment, for training and assistance in activities of daily living, development of vocational skills, and assistance in identifying and obtaining essential services such as income maintenance, housing and other community support services. Their lives are often further complicated by the use of alcohol and other drugs, especially among younger adults. Multiple problems are also often evident among youth with serious emotional disturbances: substance abuse, criminal justice involvement, severe medical problems, suicide, elevated school drop-out rates, etc. Child abuse and neglect or spouse abuse, major structural changes in the family, and environmental stressors such as poverty and unemployment are also frequent.

A mental health system should make community services and supports available and accessible while actively involving the individual and family (as appropriate). Such a system has the following characteristics: individualized services, availability of a comprehensive range of services and supports, flexibility in service provision, coordination of needed services and supports, locally

relevant services, long-term continuity and commitment to the individual and family, and involvement of the child or adult and their families in policy, planning, and program development. In effect, this system of services and supports for rehabilitation and treatment is person-centered, is outreach-oriented, is consistent and comprehensive, and provides long-term continuity of services.

- Recent national studies have shown that approximately 19% of the population will have a diagnosable mental disorder serious enough to warrant mental health intervention[1].

- For those adults with serious mental illness and significant functional impairments, conservative projections, based on the Department of Mental Health and Mental Retardation's 1990 mental health census, estimate a population of 9,913. As many as 700 individuals require hospitalization on any given day, and more than 5,000 receive therapeutic, medical, and supportive services from the mental health system.[2]

- Approximately 14,000 children, ages 6-20, have severe emotional disturbance, while an additional 8,000 from birth to 5 years have developmental or emotional/behavioral disabilities and severe developmental delays.[3]

- One-third of those diagnosed as having schizophrenia and hospitalized will recover completely, one-third will improve but need occasional hospitalization during relapse, and one-third will remain unimproved.[4]

- As with other chronic illness such as diabetes, mental illnesses can be successfully treated and managed, in most instances with a combination of medication, to reduce symptoms and prevent relapse and rehabilitative services which improve social and vocational functioning.

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Establish a management information system with the capacity to provide, track, and analyze financial, individual, service, and human resource data.

- Establish baseline data for mental illnesses and disorders.

Services and Protection

- Assure individualized support planning processes statewide based fully on the individual/family choice and preference.

- Increase flexibility of funding in order to enable individualization of services.

- Develop models of mental health services appropriate to rural areas.

- Promote the continuing development of consumer, peer, and family support network and involvement in the planning and development of policy and programs.

- Promote development of local psychiatric involuntary inpatient capacity.

- Establish standards of one community support worker/case manager to 15-25 consumers.

- Increase collaborative efforts between mental health agencies and public and private housing entities in order to provide integrated community living options.

- Develop mechanisms for increasing the affordability and availability of housing for persons with serious mental illness who have low and very low incomes.

- Increase consumer/family-directed and consumer/family-run mental health programs.

- Increase consumer vocational opportunities within the service systems.

- Emphasize development of vocational opportunities in integrated community settings.

Professional Awareness

- Provide educational opportunities for health care and service professionals regarding serious emotional disturbances in youth and mental illnesses and mental disorders in adults, community services, psychiatric crises, and medications.

- Provide training and information to health and service providers regarding concurrent serious emotional disturbance/mental illness and substance abuse, as well as other concurrent special needs (deafness, mental retardation, etc.).

Public Awareness

- Develop an ongoing public awareness, education, anti-stigma campaign regarding mental illnesses, serious emotional disturbances, and mental disorders.

- Involve consumers (both youth and adult) and family members, and incorporate special population groups, in public education efforts.

- Educate and provide information to community employers and landlords/housing developers regarding mental illness and mental disorders.

- Establish a statewide mental health advisory council.

Risk Reduction

- Establish statewide coordination and protocols with the health, education, human services, labor, and correctional systems for the early identification, assessment of, and involvement with children with serious emotional disturbances and adults with serious mental illness.

- Expand research and evaluation capacity in order to identify effective services, programs, processes, etc.

- Develop the capacity of the management information system to correlate human resource and consumer need information.

Potential benefits of reaching Year 2000 goal

- Increased productivity of individuals with serious mental illness.

- Decreased stress, financial costs, family caregiver absenteeism, and disruption for families and friends.

- Decreased family caregiver absenteeism, criminal justice, special education, and related service and system costs to communities.

- Decreased use of acute care services.

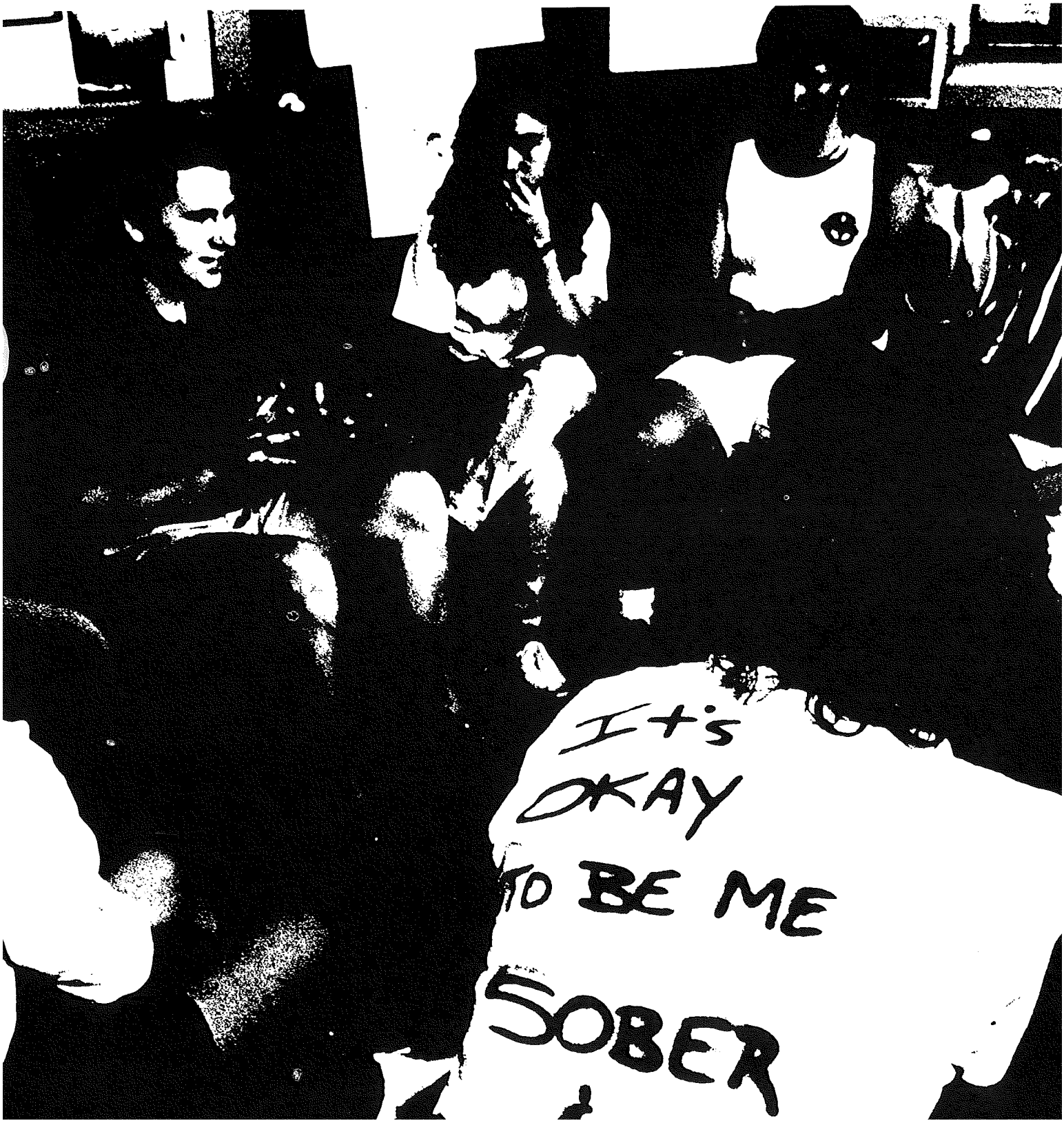
References

1. National Institute of Mental Health, U.S. Department of Health and Human Services. Epidemiologic Catchment Area Study. Rockville, MD., 1984.

2. Maine Department of Mental Health and Mental Retardation. Mental Health Client Census. Augusta, Maine. 1990.

3. Maine Department of Mental Health and Mental Retardation. Bureau of Children with Special Needs, Biennial Plan: 1993-94. Augusta, Maine. 1993.

4. Torrey, E Fuller. Surviving Schizophrenia: A Family Manual. New York: Harper Collins, 1988.


It's
OKAY
TO BE ME
SOBER

PRIORITY AREA: SUBSTANCE ABUSE

GOAL: Reduce morbidity and mortality related to alcohol and drug use through change in the social and cultural climate.

LEAD OBJECTIVE: Reduce fatality rate of alcohol-related motor vehicle crashes by 10% from current three year average (1990-1992) of 1.79 per 100 million vehicle miles[1].

The most significant factor affecting alcohol and drug use is the social and cultural climate. In recent years, public attitudes toward drinking and driving, for example, have changed dramatically. These attitude changes have led to legislative and policy changes at all levels of government.

While these problems can affect all segments of society in Maine, certain populations are particularly vulnerable to the serious consequences of alcohol and other drugs. Rates of alcohol-related problems are significantly higher for homeless individuals in Maine than for the general population, for example.

- Ten percent of all fatalities are alcohol-related[1].
- Alcohol is implicated in nearly one-third of all suicides[2] and 50% of all homicides[3].
- Victims in 65% of all drownings are intoxicated[2].
- Approximately 38,000 Maine adolescents are at risk of alcohol and drug problems, school failure, unwanted pregnancy, and/or delinquency.

The combination of increased public resolve, advanced scientific understanding, and the progress to date will assist efforts to make further progress by the Year 2000.

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Utilize information from surveys conducted by the Division of Drug and Alcohol Services in the Maine Department of Education to monitor the objectives.

- Develop a mechanism to obtain and analyze information from hospital discharge data, emergency medical services data, the Bureau of Highway Safety, the Office of Data, Research, and Vital Statistics, and others.

Services and Protection

- Convene interested parties to provide input into the design and implementation of a comprehensive plan for access to treatment services by underserved people.

- Establish a curriculum review committee, jointly with the Department of Education, local school district personnel, and other state and national agencies, to identify strengths and weaknesses in curricula which will be shared with local districts.

- Analyze Maine's Alcohol and Drug Abuse programs to assess duplication and gaps in services.

- Develop a plan for implementing necessary regulatory and legislative changes required to improve Maine's Driver Education Evaluation Program.

Professional Awareness

- Provide experts to the state's residency programs to educate newly hired physicians about drug and alcohol use.

- Disseminate appropriate screening tools for physicians to use in the detection of abuse of alcohol or other drugs.

Public Awareness

- Provide educational messages to teens using vehicles such as locally produced teen magazines and newsletters.

- Disseminate information on model school policies related to drug and alcohol use.

- Develop a plan with the Bureau of Alcoholic Beverages to recognize and discourage promotion targeting young audiences.

- Alcohol and other drug abuse is related to many social problems in Maine. Alcohol and drug abusers comprise a large majority of the criminal justice population.

- Health problems associated with alcohol and drug use exact a significant financial toll among the state's residents, in terms of disease, days lost from work, and death. However, investment in prevention programs can have major cost benefits. For example, it is estimated that for every dollar employers spend on employee assistance programs, $4 in employee benefits are achieved[3].

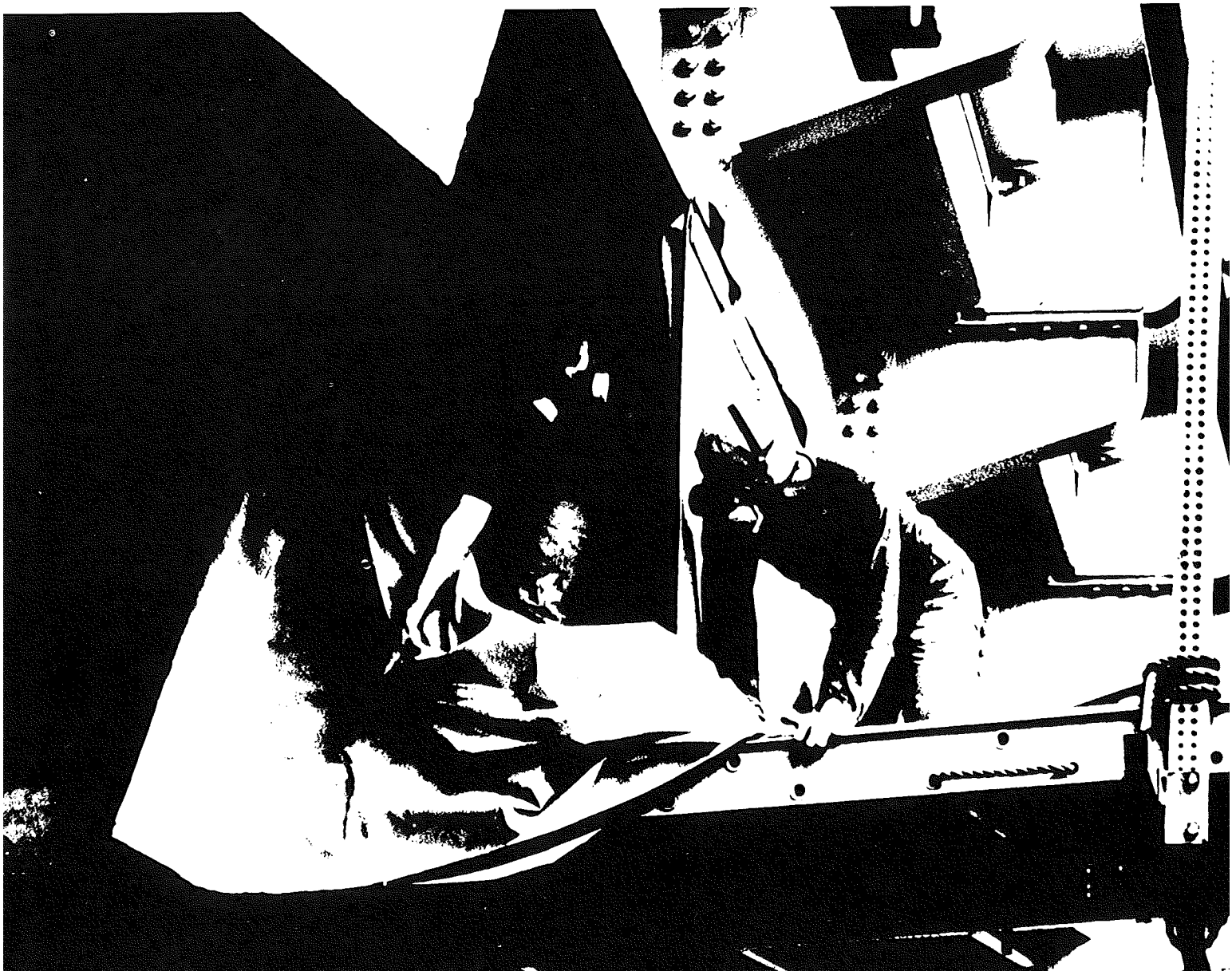
- Reducing the incidence of alcohol and other drug abuse will not only benefit the many individuals who avoid these problems but will produce direct and indirect social and economic benefits for the state as a whole.

REFERENCES

1. Maine Bureau of Highway Safety. Maine Highway Facts. Augusta, Maine. 1992.

2. U.S. Department of Health and Human Services. Alcohol Drug Abuse and Mental Health Association. Seventh special report to the US Congress on Alcohol and Health. (ADM 281-88-0002).

3. U.S. Department of Health and Human Services. Alcohol Drug Abuse and Mental Health Association. Sixth Special Report to the U.S. Congress on Alcohol and Health. (ADM 281-85-0009).



PRIORITY AREA: OCCUPATIONAL HEALTH AND SAFETY

GOAL:	Reduce morbidity and mortality among Maine's citizens from work-related injuries and illnesses.
LEAD OBJECTIVE:	Reduce work-related injuries and illnesses by 50% (Maine baseline: 14.3 cases of work-related injuries and illnesses per 100 workers per year in 1988[1]; U.S. Baseline: 8.6 per 100[1]).

Occupational safety and health is a major problem area in Maine. According to data from the U.S. Occupational Safety and Health Administration, Maine's rates of work-related injuries, illnesses, and fatalities are all among the highest in the nation — even after adjusting for Maine's hazardous industry mix[1]. The lives and families of Maine workers are being severely disrupted by work-related injuries and illnesses, and individuals with important skills are being lost to the workplace daily. As a result, Maine businesses have the economic burden of paying among the highest workers' compensation premiums in the nation.

- In 1990, there were 61 reported work-related fatalities[2].

- Maine has the highest injury and illness rate of all reporting states, and the highest lost workday rate of reporting states[1].

- Thirty-two percent of the 80,349 cases reported to the Workers' Compensation Commission in 1989 were disabling[1].

- Thirty-four percent of all work-related injuries and illnesses occurred in the 25 - 34 year old age group[2].

- 25,000 Maine businesses paid a total of over $280,000,000 in workers' compensation premiums during 1989[3].

- One in eight workers suffered a recordable occupational illness or injury in Maine's private sector in 1989[1].

The achievement of the Year 2000 goals in Occupational Safety and Health will take a major commitment in time, energy and resources. Success will only come with the cooperative efforts of workers, employers, and the communities involved, but the significant benefits to Maine's people will be well worth a maximal effort.

Strategies to accomplish the objective

Surveillance

- Review the existing data sources (Workers' Compensation, OSHA Surveys, Occupation Disease Reporting System, etc.) to increase reliability and usability of findings.

- Identify risk factor and trends in injuries and illnesses from existing data sources, particularly targeting Fatalities and Cumulative Trauma disorders.

- Develop new surveillance systems to gather information on illnesses and injuries for groups and conditions that are not currently being monitored.

- Establish a statutory basis for the institution of occupational injury surveillance comparable to that existing for occupational illness surveillance.

- Analyze and use data to perform appropriate follow-up and develop prevention strategies.

- Issue timely reports of surveillance results to promote intervention activities and provide educational feedback.

Services and Protection

- Support the development of an infrastructure in Maine by coordinating active involvement of all agencies and groups involved in occupational safety and health.

- Develop curricula within the state educational system to train industrial hygienists, safety inspectors, occupational health nurses, and others to create expertise in safety and preventive services.

- Develop, expand, and institute protocols to follow-up on designated injury and illness reports.

Professional Awareness

- Facilitate education of the health care community on the recognition and treatment of occupational illnesses and injuries to ensure that problems and related causes are identified early and managed according to the highest standards.

- Expand the resources available to provide professional consultation and offer educational programs in occupational safety and health issues to health care providers.

Public Awareness

- Focus public attention on the problems resulting from and ways to prevent occupational injuries and illnesses by participating in public forums, presentations, conferences, and other arenas to educate the public on occupational health and safety issues.

- Increase training and awareness programs for workers, managers, and business owners.

- Increase opportunities in the educational system to incorporate occupational safety and health issues.

- Issue an annual report compiling information detailing the state of occupational health in Maine.

Risk Reduction

- Support the introduction and expansion of toxic use reduction programs and better engineering controls to ensure lower worker exposures.

- Work with industries and businesses to implement programs aimed at improving work-station design, engineering controls, and better monitoring of toxic exposures.

- Institute hazard evaluations and screening for targeted conditions in high risk occupations and industries to develop and institute preventive measures.

- Evaluate factors associated with occupational fatalities to promote preventive interventions.

POTENTIAL BENEFITS OF REACHING YEAR 2000 GOAL

- 31 fewer work-related deaths would occur per year[2].

- 26,500 fewer injury and illness cases would occur per year[1].

- 13,650 fewer lost-time injury and illness cases would occur per year[1].

- 278,095 fewer lost workdays due to work-related injuries and illness would occur per year[1].

- 1500 fewer cumulative trauma disorder cases would occur per year[1].

- If all these accomplishments were achieved, over $25,000,000 in workers' compensation and related medical payments would be saved per year[4].

References

1. Bureau of Labor Standards. Occupational Injuries and Illnesses in Maine - 1989. Augusta, Maine: Maine Department of Labor, January 1991. BLS 627.

2. Bureau of Labor Standards. Characteristics of Work-Related Injuries and Illnesses in Maine - 1990. Augusta, Maine: Maine Department of Labor, January 1992. BLS 635.

3. Maine Bureau of Insurance, Department of Professional and Finance Regulation. Analysis of Insurance Company Annual Statements. Augusta, Maine. 1989.

4. Maine Bureau of Insurance, Department of Professional and Finance Regulation. Extrapolation from June 1985 - May 1986 data on medical and total payments paid to Maine workers. Augusta, Maine. 1986.

Environmental Health

PRIORITY AREA: ENVIRONMENTAL HEALTH

GOAL:	Enhance the safety of the environment and reduce adverse effects on the health of Maine citizens.
LEAD OBJECTIVE:	Reduce exposure to hazardous chemicals and radiation in the environment.

For decades, Maine's efforts to recognize and address environmental risks to health focused on the safety of food and water supplies, sewage disposal, and elimination of vector-borne diseases. As success was achieved in these areas, the effect of hazardous chemicals in the environment became more evident. While the traditional emphasis on sanitation and food supply protection must remain part of the infrastructure of public health, synthetic and naturally-occurring chemicals and radionuclides in the home, workplace, and ambient environment must also be addressed as part of overall public health concerns.

- According to the Public Health Service, as many as 3 million American children in 1984 had blood lead levels greater than 15 µg/dl, which is now thought sufficient to cause IQ deficits[1].

- Since 1986, Maine has had three major disease outbreaks caused by organisms only recently found to be resistant to standard disinfection methods for surface drinking water supplies. In some communities, chemical contamination of groundwater based systems has required that corrective action be taken to meet federal drinking water standards[2].

- In 1988, regulated sources emitted about 2.7 billion pounds of toxic air pollutants into the atmosphere, contributing to between 300 and 1500 cancer deaths annually in the United States[3]. Air pollutants in Maine may have contributed to certain non-cancer chronic conditions that were linked, in turn, with about 24,000 hospitalizations and 3,000 deaths[4]. Although present both indoors and outdoors, certain pollutants are often more concentrated in indoor air due to production and use of common consumer products[5].

- Preliminary surveys suggest that the air in up to one in three homes in Maine may have elevated screening levels of radon. This naturally occurring gas is considered a major cause of respiratory cancers[6].

- As of 1990, the U.S. Environmental Protection Agency recognized eight sites in Maine containing hazardous wastes sufficient to pose significant health threats to exposed individuals. About 60 sites are considered potentially hazardous by the Maine Department of Environmental Protection[7].

- As of 1992, portions of six rivers qualify for health advisories due to unsafe levels of dioxins, PCBs, and metals accumulated in the tissues of fish and shellfish taken from those waters[8].

STRATEGIES TO ACCOMPLISH THE OBJECTIVE

Surveillance

- Expand existing programs to screen blood levels in children to include more individuals.

- Expand existing programs to screen radon levels in homes to include more individuals.

- Ensure screening for unsafe levels of chemicals in the air of homes, offices, and public buildings implicated as sources of health problems.

- Establish sentinel programs to scan for hazardous substances in the ambient environment.

- Establish centralized databases containing results of screens and environmental monitoring.

- Expand, to add new contaminants, the existing centralized database containing results of public drinking supply water monitoring.

- Enhance reporting of diseases and conditions related to environmental contaminants in public areas, the workplace, and homes.

- Maintain continuing sentinel disease surveillance programs to track both chronic and acute environmental diseases.

- Maintain a database of electric and magnetic field measurements conducted by the utilities.

- Expand the existing database of inspections of licensed eating and lodging facilities.

- Continue to document the extent of on-site malfunctioning septic systems in Maine and modify the minimum state code to response to the problem.

- Develop a centralized database on animal rabies cases and tie the database into the state GIS system.

Services and Protection

- Increase availability of environmental testing services to the public.

- Assure the quality of all screening and remediation programs.

- Establish laws pertaining to remediation of rental housing with structure-related contamination by hazardous substances.

- Reduce opportunities for food-borne disease outbreaks by improving enforcement of rules, promoting increased training of food service managers, and continued implementation of licensing and regulatory programs.

- Protect the public from unnecessary exposure to non-ionizing radiation by identifying the sources of exposure and developing guidelines and rules to prevent or control such exposures.

Professional Awareness

- Develop continuing education programs on environmental health for physicians at all levels of training and in practice.

- Assist health care providers in identifying linkages between disease occurrences and environmental contaminants.

Public Awareness

- Educate the public about risks of hazardous substances commonly found in the home, workplace and environment.

- Educate the public about resources for information on the health effects of chemicals, availability of testing, and mechanisms for remediation.

Risk Reduction

- Limit exposure to hazardous substances by developing standards for emissions and discharges by regulated sources into the environment.

- Develop guidelines for use as benchmarks to ensure protection of public health in remediation plans for contaminated sites and buildings.

- Assure quality of health risk assessments used to determine remediation of contaminated sites.

- A lessening of the risk of overt toxicity and IQ deficits from elevated blood lead levels in children. Costs for treatment and supplemental education will be reduced and educational performance enhanced.

- A reduction in the incidence of radon caused lung cancers by up to 9 cases per year.

- A reduction in the incidence of morbidity and mortality from chronic respiratory diseases, such as asthma, linked with exposure to air pollutants.

- A reduction in absenteeism from work and lost productivity in general due to acute illness caused by contaminated air in the home, public buildings, and the workplace.

- A reduction in the incidence of chronic health problems due to uncertain diagnoses and unsuccessful treatment.

- Prevention of illness outbreaks from substances that have reached unsafe levels in plants and animals consumed by humans.

- Prevention of the loss of valuable aquatic and marine food resources due to chemical contamination.

- A reduction in the potential for spreading contamination and exposure to hazardous substances at uncontrolled sites.

REFERENCES

1. U.S. Public Health Service. Healthy people 2000: National health promotion and disease prevention objectives. Washington, DC: U.S. Department of Health and Human Services, Public Health Service. 1990.

2. Breau, D, Personal Communication, Maine Drinking Water Program. Augusta, Maine. 1992.

3. U.S. Environmental Protection Agency. Toxics in the community, national and local perspectives: The 1988 Toxics Release Inventory Report. September, 1990. U.S. EPA Office of pesticides and toxic substances. EPA 560/4-90-017.

4. Maine Health Care Finance Commission/Maine Department of Human Services. Maine chronic and sentinel disease surveillance project, 1988 report. Augusta, Maine, 1990.

5. Wallace, Lance A, Pellizzari, ED, Hartwell, TD, Sparacino, C, Whitmore, R, Sheldon, L, Zelon, H and Perritt, R. 1987. The TEAM study: Personal exposures to toxic substances in air, drinking water, and breath of 400 residents of New Jersey, North Carolina, and North Dakota. Environmental Research 43(2):290-307.

6. U.S. Environmental Protection Agency. Survey results and recommendations (on radon survey). Press release. October 18, 1989.

7. National Governors Association. Restrictions imposed on contaminated sites: A status of state actions. NGA/ Center for Policy Research. Washington, DC, 1990.

8. Frakes, RA. Health-based water quality criteria for 2,3,7,8-Tetrachlorodibenxo-p-dioxin (TCDD). Maine Department of Human Services. Augusta, Maine. 1990.

COLLABORATING AGENCIES/ORGANIZATIONS

- Academy of Sports Dentistry
- Acadia Institute
- Agency for Toxic Substances and Disease Registry
- Alliance for the Mentally Ill of Maine and member chapters statewide
- American Academy of Pediatrics (Maine Chapter)
- American Automobile Association
- American Cancer Society, Maine Division, Inc.
- American Diabetes Association - Maine Affiliate
- American Heart Association - Maine Affiliate
- American Lung Association of Maine
- Area Agencies on Aging
- Area Health Education Consortium (AHEC)
- Area IV Mental Health Services Coalition
- Aroostook County Action Program's Dental Program
- Aroostook Medical Center
- Aroostook Mental Health Center
- Association of Local Air Pollution Control Officials
- Atrium House
- Bureau of Employee Health
- Cancer Prevention and Control Advisory Committee
- Cancer registrars of Maine
- Catholic Charities of Maine Dental Clinics
- Center for Community Dental Health, Portland, ME
- Center for Occupational Health and Safety
- Central Maine Indian Association
- Citizens Interest Group
- City of Bangor Childrens' Dental Clinic
- City of Portland, Public Health Division
- Coalition for Maine's Children
- Community Health and Counseling Services
- Community Health Education programs
- Counseling Services, Inc.
- County medical associations.
- Creative Health Foundation

- Creative Work Systems
- Day Care Providers
- Day One
- Department of Administration
- Department of Education
- Department of Human Services, Bureau of Elder and Adult Services
- Department of Human Services, Bureau of Income Maintenance
- Department of Human Services, Bureau of Medical Services
- Department of Human Services, Bureau of Rehabilitation
- Department of Human Services, Office of Data, Research and Vital Statistics
- Department of Public Safety
- Downeast Association of Physician Assistants
- Education Development Center
- Emergency Medical Services
- Families United, Incorporated (FYI)
- Family Planning Association of Maine
- Goodwill Industries
- Holy Innocents
- Home Counselors, Inc.
- Ingraham Volunteers, Inc.
- Jackson Brook Institute
- Kennebec Mental Health Center
- Kennebec Valley Medical Center
- Libraries
- Local public safety officials
- Local School Systems
- Maine Affiliate of the Association of Diabetes Educators
- Maine AFL/CIO
- Maine AIDS Alliance and member organizations
- Maine Ambulatory Care Coalition
- Maine Association for Medical Technology
- Maine Association of Alcohol and Drug Abuse Counselors
- Maine Association of Health, Physical Education, and Dance
- Maine Association of Infectious Disease Control Practitioners
- Maine Association of Substance Abuse Programs
- Maine Attorney General's Office

- Maine Audubon Society
- Maine Boy and Girl Camp Owners Association
- Maine Cardiovascular Health Council
- Maine Chamber of Commerce and Industry
- Maine Coaches' Association
- Maine Coalition for Safe Kids
- Maine Coalition on Smoking OR Health
- Maine College Health Association
- Maine Consortium for Health Professions Education
- Maine Dairy and Nutrition Council
- Maine Dental Assistants' Association
- Maine Dental Association
- Maine Dental Hygienists' Association
- Maine Department of Agriculture, Food and Rural Resources
- Maine Department of Conservation
- Maine Department of Corrections
- Maine Department of Environmental Protection
- Maine Department of Inland Fish and Wildlife
- Maine Department of Labor
- Maine Department of Marine Resources
- Maine Dietetic Association
- Maine Emergency Management Agency
- Maine Farm Bureau Association
- Maine Head Injury Foundation
- Maine Health Care Finance Commission
- Maine Hospital Association
- Maine Human Rights Commission
- Maine Innkeepers Association
- Maine Labor Group on Health
- Maine Medical Association
- Maine Nutrition Council
- Maine Occupational Health Nurses Association
- Maine Osteopathic Association
- Maine Peoples' Alliance
- Maine Pharmacy Association

- Maine Plumber's Examining Board
- Maine Poison Control Center
- Maine Prevention Network
- Maine Public Health Association
- Maine Public Utilities Commission
- Maine Restaurant Association
- Maine Rural Water
- Maine Safety Council
- Maine School Health Education Coalition
- Maine Site Evaluator's Association
- Maine State Housing Authority
- Maine State Legislature
- Maine State Nurses Association
- Maine Teacher's Association
- Maine Technical Colleges
- Maine Vocational & Technical School Association
- Maine Water Utilities Associations
- Maine Well Drillers Licensing Board
- Medical Care Development
- MidCoast Mental Health Center
- Motivational Services, Inc.
- National Council on Alcoholism and Other Drug Dependence - Maine
- National Institute of Occupational Safety and Health
- Natural Resources Council of Maine
- New Beginnings
- New England Institute on Addiction Studies
- New England Network to Prevent Childhood Injuries
- North American Family Institute
- Northeast States for Coordinated Air Use Management
- Opportunity Housing
- Parent/Teacher Associations
- Peer Facilitator Training Network
- Penobscot Valley Health Association
- Pine Tree Legal Association
- Planned Approach to Community Health (PATCH) Programs
- Planned Parenthood of Northern New England

- Portland Coalition for the Psychiatrically Labeled
- Portland Help
- Private practitioners
- Public Information Clearing House
- Regional Health Association
- Rumford Group Home
- Rural Partners
- Shalom House
- Shoreline Community Mental Health Services
- Spurwink
- St. Michael Center
- State and Territorial Air Pollution Administrators
- State and territorial health information offices
- Survivors, Inc.
- Sweetser
- Tri-County Mental Health Services
- U.S. Centers for Disease Control and Prevention
- U.S. Consumer Product Safety Commission
- U.S. Department of Agriculture
- U.S. Environmental Protection Agency
- U.S. Food and Drug Administration
- U.S. Nuclear Regulatory Commission
- University College/Dental Hygiene Program
- University Cooperative Extension Services
- University of Maine
- University of Maine at Farmington/Health Education Program
- University of New England
- Washington County Child and Youth Board
- Washington County Psychotherapy Associates
- Westbrook College/Dental Hygiene Program
- Workers' Compensation Commission
- YMCA/YWCA
- York County Shelters, Inc.
- Youth Alternatives of Southern Maine
- Youth and Family Services

Maine Department of Human Services
Bureau of Health
State House Station 11
Augusta, Maine 04333
(207) 287-3201

This printing of this document was supported through Preventive Health and Health Services Block Grant funding
Appropriation Number
015-10A-2612-012