Note: The Public Health Improvement Plan (PHIP) for Maine is the result of discussions and activities that took place from June 1999 through June 2001. Not all participants agree with all findings and recommendations. A significant challenge in publishing a document such as this, is attempting to document the status of the discussion at a specific point in time, when in-fact the discussion continues.

The PHIP describes a vision to be accomplished over the next 10 years and as the status of public health "on the ground" changes, the PHIP will need to be revised and updated. It is our hope that the dialogue that began with Maine Turning Point and resulted in the PHIP will continue. Implementation and undertaking changes described herein, as well as the revised vision that is bound to emerge in the years ahead, is and will always be the responsibility of a wide range of individuals, organizations, and government agencies.

The Status of Public Health in Maine in 2000

Chronic Disease Epidemic and Health Status Indicators

Health Problems in Maine have changed a great deal over the past one hundred years. In 1900 most deaths were due to infectious disease, tuberculosis in particular. Today, after overcoming many (but not all) communicable diseases and greatly extending life expectancy, society and public health face a different set of problems. In 2000, three-quarters of Maine deaths can be attributed to four chronic diseases: cancer, cardiovascular disease, chronic lung diseases and diabetes.

Unlike the situation facing Maine citizens in 1900, who did not have access to antibiotics to combat infectious diseases, we know how to reduce the incidence and progression of our major chronic diseases. We need to a) promote healthy lifestyles, b) identify health problems as early as possible in individuals and prevent them from progressing further, and when that is not possible to c) take steps to avoid unnecessary or premature disability, dependency and death.

Maine Turning Point adopted the World Health Organization's definition of health, "A state of complete well-being, physical, social and mental, not merely the absence of disease or infirmity."

In addition to the chronic disease epidemic, there are a number of additional health problems of significant concern in Maine. Our efforts to assess the situation in Maine and devise a public health improvement plan is not limited to any one type of disease. Indeed, if our recommendations are to improve the health of Maine residents, then the infrastructure we propose to develop must serve all health concerns. Recently the United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) identified 10 Leading Health Indicators (LHI). Using these as a report card that examines health data that fall within the LHI categories, states have a consistent basis upon which to measure the overall health of their residents and to consider the health of their residents in comparison to those in other states. Here are some examples:

DHHS 10 Leading Health Indicators	Maine[1]	US[2]	ME vs. US
Access to Health Care: Uninsured Children (1999)	6.7%	13.9%	Better
Environmental Quality: Proportion of population living in areas that exceed recommended Ozone levels (1998)	68%	43%	Better

[1] Healthy Maine 2001: A Report Card on Maine's Leading Health Indicators, Maine DHS Bureau of Health
[2] Ibid, and www.cdc.gov data files on Leading Health Indicators obtained April 2001.

DHHS 10 Leading Health Indicators	Maine	US	ME vs. US
Immunization: Adults age 65+ who have had a flu shot within 12 months (1999)	73.7%	67.4%	Better
Injury and Violence: alcohol-related traffic fatalities (1995-1999 five year average)	33.3%	39.5%[3]	Better
Mental Health: Proportion of Maine's adult behavioral health clients with Medicaid insurance treated for depression (1999)	17.2%	[4]	
Overweight and Obesity: Proportion of adults at an unhealthy weight (1998)	55.8%	54.6%	Worse
Physical Activity: Percentage of Adults who do not regularly exercise (1998)	76%	64%	Worse
Responsible Sexual Behavior: Proportion of sexually active high school students using a condom at last intercourse (1999)	53.5%	58%	Worse
Substance Abuse: * Adults 18 and older who report having 5 or more drinks on an occasion, one or more times in the last month (1999) * High school students using marijuana in the last 30 days (1997)	14.8% 30%	14.9% 26%	Same Worse
Tobacco Use: * Cigarette smoking adults age 18-24 in 1998 * Per capita rates of tobacco consumption (# of packs sold) 1999	37% 114.0	27.9% 103.5	Worse Worse

Role of Public Health in responding to health status

What is the role of the *public health* in responding to health status? Over time some consensus has developed. Most publications and practitioners agree that *public health* has a broad scope, can be approached from a variety of angles, and includes a wide range of categorical health concerns. What is implicit but not always obvious to those outside public health circles, is that public health looks at populations. The population perspective is what unifies such varying concerns and responses. While health care is focused on diagnosing and responding to the health concerns of individuals, *public health* exists to *fulfill society's interest in assuring conditions in which people can be healthy."*[5] That is, public health seeks to assess, and responds to, the health concerns of communities. The community may be defined as a town, a county, an ethnic group within a specific geographic region, a state, or a nation. Regardless of the definition, it is the emphasis on groups of persons rather than individuals that distinguishes *PUBLIC* health.

[3] National Center for Statistics and Analysis, http://www.nhtsa.dot.gov/people/ncsa/

[4] We were unable to identify a corresponding number for the nation as a whole.

[5] The Future of Public Health, Institute of Medicine, National Academy Press, Washington, D.C. 1988, p7.

What then is a Public Health System? What does "the system" do? What are the component parts? How do they function? What is the impact?

The essence of public health is organized community efforts aimed at the prevention of disease and promotion of health.[6] The definition of public health assumes that communities are prepared to and have the capacity to, prevent disease and promote health. In many places this takes the form of local or county health departments that are funded with state, local, and federal funds. The existence of these organizations provides a vehicle for organizing community efforts as well as playing a direct role in prevention and promotion.

In it's sentinel study, published in 1988, the Institute of Medicine (IOM) established standard definitions of public health, identified the functions of public health, and described the role of state and federal government as well as the responsibilities of localities. This has become a universal public health sourcebook that guides public health practitioners. For example, IOM clearly delineates the role of government in public health as "assessment, policy development, and assurance."[7] [8]

Assessment—The regular collection, analysis and sharing of information about health conditions, risks, and resources in a community.
Policy Development—The process whereby public health agencies evaluate and determine health needs and the best ways to address them.
Assurance—Making sure that needed health services and functions are available.

Role of Localities
The IOM identified roles of state government and community organizations in shaping, funding, and supporting public health efforts have not yet been consistently adopted across the United States. The "public health system" is different in every state. Some, even among those with similar sub-state infrastructure, describe the scope of work differently and do not necessarily respond to similar levels of external expectations. The role and expectations of localities, as laid out in the IOM report, states that: *Because of great diversity in size, powers, and capacities of local governments, generalizations must be made with caution. Nevertheless,* no citizen from any community, no matter how small or remote, should be without identifiable and realistic access to the benefits of public health protection, which is possible only through a local component of the public health delivery system.

The committee recommends the following functions for local public health units:

- *assessment, monitoring, and surveillance of local heath problems and needs and of resources for dealing with them;*
- *policy development and leadership that foster local involvement and a sense of ownership, that emphasize local needs, and that advocate equitable distribution of public resources and complementary private activities commensurate with community needs; and*

[6] United States Institute of Medicine
[7] Ibid, pp 7-10, -156
[8] See PHIP Chapter 1 for a details regarding the role of state government in public health.

- *assurance that high-quality services, including personal health services, needed for the protection of public health in the community are available and accessible to all persons;*
- *assurance that the community receives proper consideration in the allocation of federal and state an well as local resources for public health; and*
- *assurance that the community is informed about how to obtain public health, including personal health services, or how to comply with public health requirements.*[9]

Maine Turning Point started with a review of the public health structures in Maine. This assessment set the tone for the remainder of our work and this report's emphasis on public health infrastructure. We found that Maine, New Hampshire, and Alaska are the only states that do not have sub-state mechanisms for providing essential public health services. Limited capacity and infrastructure at the local level reduce our ability to respond to health status concerns and limits some residents' access to essential public health services.

Essential Public Health Services

1. Monitor health status to identify community health problems
2. Diagnose and investigate health problems and health hazards in the community
3. Inform, educate, and empower people about health issues
4. Mobilize community partnerships to identify and solve health problems
5. Develop policies and plans that support individual and community health efforts
6. Enforce laws and regulations that protect health and ensure safety
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure a competent public health and personal health care workforce
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services
10. Research for new insights and innovative solutions to health problems

The Public Health System in Maine

Maine does not have a consistent local public health structure that covers the state. A substantial health department in Portland and more limited city agencies serving Lewiston-Auburn and Bangor are the only public health agencies at the municipal level. In addition there are about twenty *Healthy Community* groups or coalitions sprinkled around the state, at varying levels of activity and focus; during 2000 only twenty percent of the groups were funded through the state Bureau of Health with funds from the federal Centers for Disease Control block grant. The bulk of responsibility for public health across Maine therefore rests with the state agency. In addition, Maine's low wage levels and limited access to public health training create significant concerns regarding the public health workforce and our ability to provide essential public health services throughout Maine.

In Maine the lack of a consistent public health infrastructure across the state has contributed to a number of systemic deficiencies.

There is very little *strategic planning* at the local level related to health promotion and disease prevention. Many local organizations do participate in program implementation, but their involvement is in response to a state request for proposals (which in turn in are often in response to a federal funding initiative). The RFP is also usually categorical, i.e. relating to a single or few health issue(s) and is unlikely to build a basic public health-oriented

[9] Op. Cit. The Future of Public Health pgs 9-10.

infrastructure that can assist the community to respond to continually evolving sets of issues. This reactive and "top-down" model of planning means that local needs, preferences and resources are under-realized. In fact, many areas, especially those with more rural populations, do not even have local organizations to respond to the RFPs. These communities do not have the opportunity to be reactive because they do not have anyone to watch for potential new resources. The result is that a few areas with effective organizers and grant-writers have a disproportionate share of the limited federal and state resources for the full range of public health services.

This is not a problem that affects all public health issues equally. Some public health concerns are best planned for at a state level. Other issues are not. For example, reducing the currently high level of tobacco addiction requires a broad-based local effort involving many institutions including schools, churches and other faith organizations, hospitals, medical practices and health centers, Healthy Community coalitions and groups, merchants, local government and police.

Despite serious staff shortages (currently there are no health planners on staff) the Maine DHS Bureau of Health has been making a serious effort to enhance the evaluation process at the state level. Their staff and a contractor have developed a report card that shows Maine's situation over time. The most serious omission in evaluation is at the local level where evaluation is not usually attempted.

There is insufficient *coordination and collaboration.* This is a serious deficiency especially at the local level. At the state level progress has been made. A *Children's Cabinet* has been established for example, involving the leadership from six different agencies including human services, education, medical services and public safety. Mental Health services are now coordinated regionally. A similar sub-state mechanism that cuts across public health issues *and age groups*, (including, for example, education, substance abuse, mental health, aging, youth), however, does not exist.

The need for coordination and collaboration is especially acute at the local level. Recently the Bureau of Health and the Department of Education received a grant from the Centers for Disease Control and Prevention to initiate steps to coordinate activities around school health issues. Three positions have been funded by the grant in the two agencies. This is a step in the right direction. It does not, however, provide a vehicle at the local or regional level to implement their recommendations.

Primary prevention—Actions taken to reduce susceptibility or exposure to health problems
Secondary prevention—Detection and treatment of disease in early stages
Tertiary prevention—Alleviation of the effects of disease and injury

Without an integrating organizational structure at the local level Maine is left with a parallel series of categorical programs. These so-called "silos" are wasteful in a state with limited resources. Substantial gains should be expected as related programs (e.g. community health and aging) are linked at the regional or local level, i.e. as closely as possible to the persons served.

Coordination is also a problem between traditional public health organizations and clinical or medical care professions and organizations. Effective public health services require coordinated population-based and individual interventions for optimal effectiveness across the age spectrum. There are efficient and

effective strategies for both high- and low-risk individuals. Clinicians need to be collaborators with their counterparts initiating community-based public health programs, and vice-versa. Strong leadership from both medical and non-medical constituencies are necessary to develop and implement this kind of coordination, and is, unfortunately, rarely found.

The Fund for a Healthy Maine (FHM) — the fund into which the tobacco settlement funds were place — prompted creation of new structures that present new opportunities for addressing some of the structural deficits, especially those of collaboration and cooperation. The DHS Bureau of Health, in moving its share of the FHM moneys out to community-based organizations, designed the Request for Proposals (RFP) in a manner that fostered the creating of 30 Public Health Service Areas (PHSA). Each PHSA was required to form a coalition of local individual and population health service providers as well as community leaders from a diverse array of perspectives. These coalitions are currently focused on the Community and School tobacco prevention program. They could, with technical assistance from the state and general political support evolve into coalitions with a broad health focus that perform the convening and coordinating function identified in the Executive Summary as MTP's Primary Recommendation. Were this to happen, the PHSA coalitions may have an important role in the development of Health District Coalitions.

There is a relative lack of information being applied to decision-making, especially at the local level. Health indicator and service data are essential to effective *planning*, *monitoring and evaluation activities* relating to community health. Again with a few exceptions, there are very few organizations below the state level tracking indicators such as behavior risk factors (including tobacco addiction) that are so critical to responding to Maine's public health problems.

Only recently have local groups, specifically several of the major health systems, planned to expand surveillance of important health indicators to the county level. And they of course are only responsible for a subset of the entire county population. Ongoing monitoring of program effectiveness is critical to maintaining political and financial support, as well as to priority setting and management.

Monitoring is as important or more important for individual prevention services. As patient needs have shifted, health care providers have developed monitoring systems to meet this demand. These relatively new systems, which extensively utilize nurses and other non-physician medical personnel, as well as software, are not found evenly across Maine, or the U.S. for that matter. They are being developed by provider as well as payer pioneers and need to be evaluated as well as disseminated and replicated when found effective.

A great deal of data is in fact generated in Maine by federal, state and local (including school) information sources that could be applied for public health purposes. The problem is that while data is collected and stored, only rarely is it effectively put to use. It has not been routinely broken down for county, hospital service area (HSA) or community level utilization. And it has not often been put into a form that facilitates analysis and application for decision-making.

There is the relative lack of *accountability*, an issue that links planning, coordination and evaluation. We are currently functioning without a public health system that holds individuals or organizations accountable for improved health status. State funding does

require outcomes. However, the funding periods are frequently so short (e.g. one to three years) that it is difficult to link specific activities with changes in changes in health status (which may not be evident for 5-10 years). We need both, people and institutions, who/that are responsible for achieving objectives, no matter how diverse the strategies or measurement processes.

We need to create a system whereby local leaders are given the opportunity to assume accountability for defined public health responsibilities. This is essential to creating ongoing feedback loops that could lead to continual, locally tailored and measurable improvements. Again, there is tremendous potential for new Health District Coalitions to have a substantial impact on the need for local accountability.

There is concern with regard to the *public health workforce*, in brief, the lack of important concepts and skills that are needed statewide to successfully respond to important issues. Infrastructure and workforce issues are intertwined. Without a permanent infrastructure in place at the local level many public health professionals are unlikely to find either sufficient support for their activities or job security. Categorical projects have usually been funded for a very limited duration. Many capable individuals are unlikely to be recruited into this situation, and even if found are likely to leave at the earliest opportunity. Individual and institutional memories are sacrificed, as well as skills, leading to a continual "reinventing of the wheel." We need to foster development of a well-trained and competitively compensated public health workforce to deliver services at the state and local levels.

An important component of both infrastructure and workforce concerns is the involvement of clinical care providers in population-based activities and the integration of population focused public health concerns into the individual care environment. Nationally it is clear that people are more likely to receive better and more appropriate health care when their provider has been trained in public health as well as health care skills. Locally, we need to build on the efforts of our Public Health Nurses and pediatricians to expand the range and number of clinical providers who have the benefit of public health training. Local leadership from clinicians is essential to this process. We also need to increase clinical participation in public health coalitions and projects at the community level.

Other Considerations

Planning processes like Turning Point inevitably focus on problems because it is by addressing and resolving problems that progress is made. Project planners are also aware, however of the many positive aspects found in Maine's current public health activities.

Maine has:

a) strong municipal governments,

b) many cost-effective non-profit organizations operating at either or both the state and local levels in capacities that would be filled by government agencies in other states,

c) a number of very capable and willing public health leaders in both government and non-governmental organizations, and

d) many committed volunteers and staff members throughout the state working hard on public health goals despite very low or non-existent compensation.

In addition, Maine has the opportunity created by the lack of a rigid system at the local level that could stymie creative efforts to meet the public health needs of the twenty-first century.

Past successes can suggest a path to improvement in other areas. Twenty years ago Maine had one of the highest rates of teenage pregnancy in the nation. Many people thought that the problem was intractable given socioeconomic factors such as a large low-income population (Maine ranks thirty-sixth nationally in per capita income) and the state's relatively small percentage of teens advancing to college. However, a comprehensive approach to the issue was stimulated by federal legislation and funding, maintained through a State commitment to long-term funding and policy support. A system of regional and local family planning agencies and clinics was implemented across the state that used both population-based and clinical prevention strategies. The result is that Maine now has one of the lowest teenage pregnancy rates in the nation. Maine has proven itself to be effective in other areas as well. The state now, for example, has one of the highest child immunization rates in the nation and an extremely low infant mortality rate.

Key principles applied to the MTP process

As Maine Turning Point searched for a model for a statewide public health system and potential methods to enhance the various components, project participants were asked to keep in mind the following considerations:

1. Financial resources are limited and must be spent in the most *cost-effective* manner possible. In terms of infrastructure this translates into a requirement that *we not seek a new bureaucracy*. Maine should not develop municipal or county health departments across the state, the most common locally based models found across the country. Instead our state must seek a unique Maine solution that takes advantage of institutions already working within the state.

2. The constraints on resources apply to the state level also. The Governor and legislature will not support a substantially enlarged bureaucracy at the state level. The system must be designed to be as *self-corrective* as possible (goals-indicators-evaluation-strategic planning). This is not to deny that some limited planning and technical assistance will be required no matter what model is finally selected.

3. The new model must be structured to substantially enhance *community involvement and leadership* in public health initiatives. Evidence from across the country indicates that improvements in the health of communities require the broad participation of citizens who live where the programs are implemented. They must own both the problems and the solutions. Optimally, local government will be involved. The new model must also pay attention to incentives for time-intensive involvement, such as the opportunity for local or state recognition and participation in professional training programs.

4. The new model must be *truly statewide in scope*. We have scattered examples of successful and sustainable community-based programs in Maine. What we are lacking is an infrastructure that covers the state and that enables areas currently without such initiatives to gain from the successes and failures of others. All Maine residents deserve equal and reasonable access to public health services.

5. The new model must take into account that there are *differences in local governance, public health needs and resources and population preferences* across the state. A "cookie cutter" approach will not work in Maine.

6. The new model must be a true *government collaboration with the local providers of public health services*. The locally based effort needs to take into account current as well as potential contributions of the private sector in order to make it as cost-effective as possible. Private organizations, just like local leaders, will also need incentives that lead to their ongoing "buy-in." The private sector includes both purchasers of care, i.e. businesses, as well as providers of care, hospitals, medical practices and health centers and providers of essential public health services.

7. The new model must lead to the *effective collaboration* of *medical care* organizations and professionals (e.g. hospitals, health centers and medical practices) and *traditional public health* organizations (e.g. community coalitions, state agencies and local health departments). Greater gains in health status can be expected from improvements across the full spectrum of health promotion and prevention strategies.

8. The new model must reflect the *wide scope of public health issues*, from chronic disease to domestic violence and environmental health threats. The new model, however, must also start with a reasonably focused agenda. Growth will add organizational complexity, and therefore should be pursued in a step-wise fashion.

9. The new model must take into account that *public health action at the local level must involve many organizations*. The model must be capable of facilitating the many public agencies involved (e.g. from the Bureau of Health to the Office of

On February 1, 2000, Governor Angus King appointed the Year 2000 Blue Ribbon Commission on Health Care by Executive Order to identify the cost elements of Maine's health care system, determine the current allocation of costs and cost shifting in the health care delivery system, recommend potential strategies for stabilizing overall health care costs, and identify payment options for health care services. Their findings were published in the November 2000 report: The Cost of Health Care in Maine: An analysis of health care costs, factors, that contribute to rising costs, and some potential approaches to stabilize costs.

The commission found that:

a) the health care delivery and financing system is inefficient, unreasonably complicated, and unfair;
b) people in Maine are not as healthy as they could be, and efforts to improve health status are inadequate; and
c) many people in Maine are unable to obtain health care of the type and quality that they need.

They recommended the following approaches to deal with these problems:

Health Status—
- Encourage Healthy Communities
- Establish network of public health physicians
- Improve youth health

Public Policy—
- Create a Maine Health Policy Council
- Improve information for consumers and policy makers

Efficiency and Quality—
- Improve medical records
- Improve clinical information
- Improve administrative efficiencies

Access—
- Change Medicare reimbursement policies
- Expand coverage among individuals, small groups
- Encourage private market coverage
- Create a mutual heath insurance fund
- Universal, catastrophic coverage
- Expand health care insurance for all children
- Expand Medicaid coverage to poor adults
- Advocate for a national financing system

Substance Abuse) as well as private organizations, including the following:

- School systems;
- Hospitals and health systems;
- Managed care organizations;
- Medical practices and community health centers;
- Family planning agencies;
- Non-Profit organizations (e.g. lung, cancer, …);
- Public health nursing;
- Tribal health programs; and
- Area Agencies on Aging;
- Economic development organizations;
- Local police departments;
- Faith communities;
- Environmental health organizations;
- Municipal governments;
- Colleges and universities;
- advocacy groups.

Limitations of the MTP process and scope

While MTP made every effort to be inclusive of individuals and organizations representing a wide variety of perspectives, most of the participants have some pre-existing link to individual or population health.

It was beyond the scope of MTP to measure and assess the impact of privately funded public health initiatives or services, such as those funded by the United Way or private foundations.

This process has focused on systemic issues and is thus conceptual and general in many areas. We have not focused on disease or population specific issues such as dental health or women's health. Instead we have attempted to develop a framework for approaching the delivery of public health services that will, we hope, be a viable infrastructure for a wide range of categorical programs and concerns. In addition, there are important details which we have not yet been able to address. As is the nature of a statewide dialogue and planning process – there are also several newly emerging issues that will need to be incorporated and which will likely result in changes to the plan in the months and years ahead.

The Department of Mental Health Mental Retardation and Substance Abuse Services (DMHMRSAS) recently undertook a major and statewide reorganization of individual services and service delivery systems. Consequently, MTP specifically did not craft recommendations for changes to that system. Rather, we made every effort to benefit from their examination of the local population-based issues and problems, and attempted to devise a broad public health infrastructure response that would be capable of addressing chronic diseases and other public health concerns while working in concert with the new DMHMRSAS individual service system.

State agency staff participation was actively solicited. We benefited from significant cooperation from several state agencies. In addition, there was significant participation by a small number of DHS Bureau of Health staff and more limited participation from staff at the Department of Education, DMHMRSAS, and the Department of Labor Occupational Health and Safety Division. The projected benefited significantly from the balance brought to the discussions by State agency staff and representatives from local community organizations.