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.

Report from the Work Group on Workforce and Training

Summary Recommendation:

The Work Group has grouped strategies for strengthening Maine's public health workforce through education and training into four topical areas summarized by the following statements:

A. Maine employers and public health professional organizations should adopt policies that improve access to public health training for their employees.
B. Maine should develop a life-long learning system on public health topics that is accessible statewide and is based upon explicit public health competencies.
C. Public health training programs in Maine should be evaluated for effectiveness.
D. The State should survey the active clinical workforce and use the data to project need.

Implementation Steps:

A: Maine employers and public health professional organizations should adopt policies that improve access to public health training for their employees.

Strategies:

- Review national consensus documents in order to adopt and promote a scheme of training curricula and competencies necessary for public health workers to provide essential health services.
- Identify, disseminate, and promote adoption of model personnel policies that will improve the competency of public health workers in Maine.
- Provide the technical equipment and expertise to make distance education feasible and accessible for public health service providers.

B: Maine should develop a life-long learning system on public health topics that is accessible statewide and is based upon explicit public health competencies.

Strategies:

- Convene a consensus forum for public health education and continuing education providers in Maine. Participants should identify and endorse curricula and course content components that will provide appropriate public health skills. Participants should also identify strategies for implementing curricula changes necessary at their institutions.
- Create a masters level program in Public Health (MPH) that is accessible (cost/location) to Maine residents.

- Create a public health certificate program that is accessible (cost/location) to Maine residents
- Whenever possible, program-funding contracts should include resources to provide on-going training in public health for the staff of grantee organizations.
- Identify and seek financing for public health training from federal, state, and private sources.
- Enhance the availability and use of distance learning technology for public health training and education purposes.
- Explore the potential for a loan repayment program for MPH education similar to that now available for physician education.

C: Public health training programs in Maine should be evaluated for effectiveness.
Strategy:

- Design and identify funding for evaluating the quality of public health continuing education and other public health training programs in Maine.

D: The State should survey the active clinical workforce and use the data to project need.
Strategy:

- Monitor the active clinical workforce composition and use the data to project need.

Work Group Process

The MTP Public Health Workforce and Training Work Group convened for the purpose of assessing state and community needs for education and training related to public health skills and leadership. The group reviewed relevant documents published on this topic by national organizations such as the Institute of Medicine and sponsored efforts published by Roz Lasker,[1] the University of Washington, and others.

The Workforce and Training Work Group 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," and agreed that the Institute of Medicine's (IOM's) definition of public health provided a consistent framework for deliberations. The IOM has stated that, "The substance of public health is organized community efforts aimed at the prevention of disease and promotion of health.[2]"

The primary focus of this Work Group's activity has been the part of the public health workforce that provides <u>non-clinical</u> public health services. Though the Work Group conducted key informant interviews to discuss healthcare workforce and data issues, (the results of that process are included in this report) the Work Group on Public Health in the Context of Clinical Care undertook most of the investigation focused on individuals who provide clinical public health services.

In this document, the term "clinician" refers to an individual who provides a health service. The professions that are implied in our use of the term include, at a minimum: nurses, nurse practitioners, physicians, physician assistants, dentists and dental hygienists, providers of mental

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[1]Lasker, R., et. al., "Medicine & Public Health: The Power of Collaboration," The New York Academy of Medicine, New York, 1997, pp 7-14.
[2] Institute of Medicine (U.S.) Committee for the Study of the Future of Public Health, <u>The Future of Public Health</u>, C 1988 National Academy of Sciences.

health services, along with many other providers of clinical care. The intention is to be inclusive of the widest possible range of individuals involved in clinical care.

To gather data on the status of the public health workforce in Maine, members of the Work Group conducted a scan of continuing education opportunities on public health topics, conducted key informant interviews to discuss healthcare workforce and data issues, and surveyed individuals who provide public health services.

The Public Health Workforce: Who We Are and What We Do

A competent public health workforce is defined as one that is capable of performing the 10 Essential Public Health Services (henceforth referred to as "public health skills").[3] These public health skills have been outlined in a series of conference documents and studies, nearly 40 in all. We drew upon Healthy People 2010, Objective 23-8 as a general guide for our efforts.

> *Healthy People 2010, Objective 23-8:*
> *Competent leaders, policy developers, planners, epidemiologists, funders, evaluators, laboratory staff, and others are necessary for a strong public health infrastructure. The workforce needs to know how to use information technology effectively for networking, communication, and access to information. A skilled workforce must be culturally and linguistically competent to understand the needs of and deliver services to select populations, and to have sensitivity to diverse populations. Finally, technical competency in such areas as biostatistics, environmental and occupational health, the social and behavioral aspects of health and disease, and the practice of prevention in clinical medicine should be developed in the workforce.*

Nationally, public health workers "come from commonly identified health professions, from many technical backgrounds, or have been trained on the job. Entry to this workforce may require advanced education and board certification in a specialty requiring a dozen years of advanced education, or a high school diploma and a willingness to learn."[4] The working definition employed by the Work Group to profile public health workers in Maine included "everyone who provides a service described in the 10 Essential Public Health Services." This includes individuals working in occupational safety and health, clinical care, mental health, environmental health, public health nursing, and a wide variety of social services.

Although the primary focus of the Work Group's activity has been the non-clinical public health service providers, the clinical professions were included in the largest component of the work group's activity – the Public Health Skill and Training Needs Assessment survey.

Surveys and Resulting Data - Purpose and Intentions

An estimated 80% of the workforce nationally has no formal training in public health. Many of the work group participants believed that the figure is at least that or more in Maine and that the problem is particularly acute in Maine's most rural areas.

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[3] Public Health Service. *The Public Health Workforce: An Agenda for the 21st Century*. Washington DC: U.S. Department of Health and Human Services, 1997.
Gebbie, Kristine M.; Hwang, Inseon. *Preparing Currently Employed Public Health Professionals for Changes in the Health System.* Columbia University School of Nursing Center for Health Policy and Health Services Research. New York, 1998.
[4] The Public Health Workforce: Enumeration 2000, U.S. Dept. of Health and Human Services, Health Resources and Services Administration, December 2000.

Significant proportions of the individuals who are providing public health services do not think of themselves as part of the public health system. For example, we discovered that a large number of individuals who provide occupational safety and health services in Maine may think of themselves as health care providers or as members of the "Labor" field but do not think of themselves as part of the public health system.[5]

Survey of Individual Public Health Workers

In the spring of 2000, the Maine Turning Point Workforce Work Group developed the Public Health Skill and Training Needs Assessment (PTNA) survey to obtain input from individual public health workers for the purpose of creating a profile of the current public health workforce in Maine. The PTNA survey was adapted from a survey developed by the Northwest Center for Public Health Practice at the University of Washington with only a few minor changes. The survey was sent electronically to the Maine Bureau of Health staff, mailed to numerous agencies and coalitions, and distributed at appropriate meetings. Additional effort was made during the summer to obtain input from dental health workers, occupational health workers, tribal public health service providers, and those working with the elderly.

While the Work Group cannot definitively estimate the size of the public health workforce in Maine, we distributed the survey far beyond the boundaries of what might traditionally be considered the public health workforce in an effort to locate and receive responses from every possible member of the public health workforce. The survey was a one-time mailing without follow-up.

In total, Maine Turning Point distributed the PTNA survey by mail to 2,200 individuals and to another 300-500 via email. A total of 774 persons responded, representing all 16 counties. The lowest response by county came from Piscataquis and Sagadahoc (n=9 in each), with the highest number of respondents from Kennebec County (n=156).[6] We estimate that overall, 3,000 surveys were distributed, with a corresponding response rate of 26%.

The majority of the respondents were over 40 years of age (41-50 years: 43.44%; 51-65 years: 33.77%), Caucasian (96.4%), and female (78.44%). Most do not speak a foreign language (80.43%), but those who do speak French (n=81), Spanish (n=38), German (n=13), or Other (n=22).

Of the respondents, 40.25% indicated they were employed as Clinicians or Clinical Consultants, 16.03% as Managers, 15.93% as Administrators, and 12.11% as Community Organizers or Health Educators. The remaining 15.68% of the respondents indicated one of 11 other categories including an "Other" category (Figure 1). Voluntary and non-profit organizations employ the largest number of Managers, Administrators, and Community Health Specialists, with hospitals being the largest employers of Clinicians.[7]

[5] Interviews and personal communications, spring and summer 2000.
[6] Most state agencies and the central offices for many state government functions are located in Kennebec County.
[7] In this document, the term "clinician" refers to an individual who provides a health service. The professions that are implied in our use of this term include, at a minimum: nurses, physicians, dentists and dental hygienists, providers of mental health services, and advance practice care providers (such as physician assistants and nurse practitioners) along with the many other providers of clinical care. The intention is to be inclusive of the widest possible range of individuals involved in clinical care.

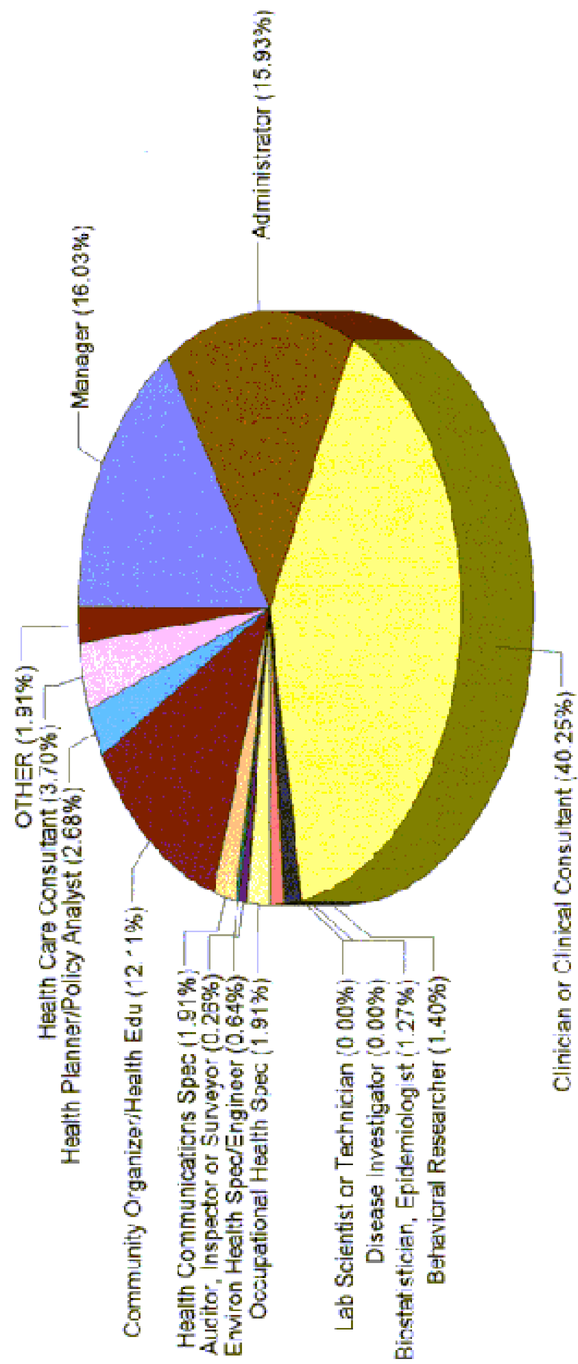

Figure 1. Profile and Training Needs Assessment Occupational Categories.

Within the Bureau of Health, there are more Managers and Clinicians employed than any other category. It is possible that a significant proportion of the clinical providers at the Bureau of Health who responded to the survey are Public Health Nurses.

The PTNA survey results indicated that Administrators were more likely than any other job category to have a Masters degree or higher at 61%. Clinicians were least likely to have a Masters degree or higher. Fewer than half of all Managers and Community Health Specialists held a Masters or Doctorate degree. Of all Managers or Community Health Specialists who said they held a Masters degree, 25 were MS in public health and two indicated that they held an MPH.

Among all 774 respondents, the list of degrees and certificates held included 98 masters degrees and 42 health education certificates or degrees. Some respondents may hold more than one degree or certificate:

Masters Level – All : N=98 – Public Health Related: N=50	**#**	**Certificate or Degree in Public Health Education: N=42**	**#**
MS Public Health	25	CHES (Community Health Ed. Specialist)	21
MA Public Administration	13	Certified Health Educator, K-12	15
MA Health Care Administration	7	Masters – Community Health Promotion	3
MA Community Health Promotion	3	Ph.D. Health Education	2
MPH	2	Dental Health Education	1

Respondents were asked to identify which training topic would make the most positive difference in their ability to perform their job currently and which would make the most positive difference in the future. Respondents were asked to select from 23 different training topics. While the most frequently selected topics for current jobs often reflected job duties, the ability to mobilize and involve the community was seen as important for the future in three out of the top four job categories.

The 15 most beneficial training topics listed by score for all job categories were:

1. Health Promotion Disease Prevention
2. Interpersonal Communication
3. Group Facilitation
4. Community/Program Planning
5. Community Involvement/Mobilization
6. Electronic Communication
7. Participatory Teaching/Training Skills
8. Written Communication
9. Quality Improvement and Assurance Strategies
10. Best Practice – Clinical Skills
11. Overview of the Public/Community Health System
12. Data Analysis and Statistics
13. Legislative and/or Policy Planning and Advocacy
14. Health and Risk Communication Strategies
15. Cross-Cultural and Cross-Age Communication

Respondents were given the same series of training topics and asked how great a benefit additional training in that area would be (on a scale of 1 to 7—no benefit to very great benefit). The top scores differed somewhat between job categories, but the top 15 topics were similar. Managers rated data analysis and statistics as more beneficial than did respondents from other job categories. Administrators listed mediation and negotiation in their top five. Clinicians indicated that best practice in clinical skills was their number one need and Community Health Specialists included written communication among the training topics that they felt would be most beneficial.

When asked what mode of delivery for training was preferred, the majority of respondents indicated that they preferred on-site training. Computer-

based training was only listed as the preferred or most preferred mode of delivery by 23% of the Managers, 32% of the Administrators, 26% of the clinicians, 26% of the Community Health Specialists, and 39% of all others. Satellite Downlink Conference was the least preferred mode of delivery for training among all job groupings.

Conclusions

Data from our survey of clinical and non-clinical public health service providers in Maine, along with anecdotal information collected from key informants, suggest that there are wide variations in the public health background, skills, and training of individuals and organizations that are providing public health services. Many organizations that provide public health services in Maine have not actively adopted public health competency criteria for their public health service workers. There do not appear to be adequate resources for or incentives for public health service providers to participate in training and continuing education in public health topics.

A. Recommendation: Maine employers and public health professional associations (e.g. Maine Public Health Association, School Nurses, etc.) should adopt policies to improve access to public health training and improve the ability of workers to provide public health services effectively.

Strategies:

- Review national consensus documents in order to adopt and promote a scheme of training curricula and competencies necessary for public health workers to provide essential health services.
- Identify, disseminate, and promote adoption of model personnel policies that will improve the competency of public health workers in Maine.
- Provide the technical equipment and expertise to make distance education feasible and accessible for public health service providers.

Indicators or Measures of Success:

1. Number of professionals associations that adopt competency standards.
2. Availability of model personnel policies for health care system, community non-profit, and other employers of public health workers.
3. Number of employers who adopt and implement model policies.

Survey of Public Health Agencies, Professional Organizations, Universities, and Technical Colleges

The Continuing Education Needs Assessment (CENA) survey was developed to assess the continuing health education programs currently being provided in Maine. Questionnaires were mailed to educational, professional, state, hospital, mental health, rural health, veterans', and non-profit organizations. Through this effort the work group hoped to present an accurate picture of existing continuing health professions education in Maine as well as to identify current or future needs.[8] Of the 250 surveys distributed, only 43 were completed

[8] Continuing health professions education is defined as 'a planned and structured learning activity with specific learning objectives designed for (physical and mental) health and/or social service workers, which is intended to enhance skills and to obtain/maintain professional licensure or certification by providing unitized documentation formatted as CEUs, CMEs, contact hours, credits, certificates, or the like.'

and returned (17% response rate). A follow-up mailing to 16 technical colleges and universities resulted in four additional responses. The results of these additional four surveys are not included in the data presented below.

Because of the low number of responses, the data could not be used to support any type of statistical conclusions. It can, however, be used to indicate certain gaps or trends. In concert with the Profile and Training Needs Assessment, the CENA results help provide a more complete picture of workforce needs in the state.

All of the CENA Survey respondents were non-profit organizations. Hospitals (n=13) and professional associations (n=11) represented the majority of the survey respondents (55.8%).

The survey queried organizations as to whether they had provided continuing education opportunities for health and human service professionals in the last 12 months, whether they offered education programs specifically in the area of public health, to whom their continuing education trainings were available, how they were supported (financially), where the funding came from, what disciplines or job categories were targeted for training, what formats were used, if they used a standard measure for training and if so, what type, and whether the organization collaborated or cooperated with others to provide training.

The CENA survey results indicated that 39 of the 43 respondents provide continuing education. Of these, 31 respondent organizations stated that they provide continuing education specifically in the area of public health. Most indicated that continuing education opportunities are open to the staff of other agencies (60.78%), while others have trainings only for internal staff (27.45%), members (1.96%), or only to health care providers (1.96%).

Most of the responding organizations collaborate with others to provide continuing education programs (77.78%) and many do not charge a fee to participants (28.85%). However, most programs provided by CENA respondents are funded through a fee for service (48.08%), or by vendors or commercial enterprises (7.69%), grants (3.85%), dues (1.92%), state and federal agencies (1.92%), or other sources (7.69%).

Survey respondent organizations are most likely to target the following occupations for continuing education programs: Physicians (15.29%), Nurses (14.7%), Administrators (10.58%), LPNs/NAs (10%), and Social Workers (10%). These programs are most often presented as half/full-day workshops (24.58%), multi-day workshops (20.34%), and breakfast/lunch/dinner programs (17.8%) with CEU/CMEs as the most frequently used measurement tool (52.73%) followed by Contact Hours (34.55%).

Summary

The CENA survey respondent organizations do not appear to target training to non-clinical public health service providers. The hospitals and professional associations which made up the majority of respondents believe that they are providing training in public health topics to a variety of clinicians. Future investigations may want to identify the public health topics being taught to clinicians. In addition, there appears to be a need for additional research on the training topics, as well as the number and variety of organizations providing training in public health topics to current members of the non-clinical public health work force.

Conclusion

Our survey of organizations providing continuing education in Maine, along with data from our Skills and Training Needs Assessment Survey suggest that there are significant gaps in the availability and accessibility of needed job-related training and continuing education. Maine does not have an integrated delivery system for life-long learning for public health.

B. Recommendation: Develop an integrated life-long learning system for public health that is accessible statewide and is based upon explicit public health competencies.

Strategies:

- Convene a consensus forum for public health education and continuing education providers in Maine. Participants should identify and endorse curricula and course content components that will provide appropriate public health skills. Participants should also identify strategies for implementing curricula changes necessary at their institutions.
- Create a masters level program in Public Health (MPH) that is accessible (cost/location) to Maine residents.
- Create a public health certificate program that is accessible (cost/location) to Maine residents
- Whenever possible, program contracts should include resources to provide on-going training in public health for the staff of grantee organizations.
- Identify and seek financing for public health training from federal, state, and private sources.
- Enhance the availability and use of distance learning technology for public health training and education purposes.
- Explore the potential for a loan repayment program for MPH education similar to that now available for physician education.

Indicators or Measures of Success:

1. Statewide system established
2. MPH program established; number of enrollees and graduates
3. Certificate program established; number of enrollees and graduates
4. State expenditures for training; number of courses provided participants
5. Number of education or training programs offered with distance learning technology
6. Loan repayment program established; number of individuals utilizing fund
7. Number of Health District coalition staff and volunteers enrolled in training programs

Conclusion: Maine does not appear to have a uniform approach and commitment to evaluation of training initiatives.

C. Recommendation: Public health training programs in Maine should be evaluated for effectiveness.
Strategy: Design and identify funding for evaluating the quality of public health continuing education and other public health training programs in Maine.

Indicators or Measures of Success:
1. Evaluation process developed.
2. Proposals developed
3. Funding obtained
4. Evaluations conducted

Clinical Workforce Issues

In Maine, public health nurses, private practice physicians, and a wide variety of other clinical care providers play an important role in public health. In addition to being providers of care for accidents, illness and disease, clinicians have an important role in health promotion and disease prevention through clinical risk reduction strategies, health education, and public leadership on health issues. There are important opportunities for clinicians to have an impact on the health of their entire patient population and their community as a whole (i.e. public health). For example, the primary sources of information about health care issues for most Maine voters are Family/Friends (20.8%) and the Family Doctor (20.5%).[9]

1995 Maine Health Care Reform Commission Report: Summary of Recommendations Related to Health Workforce in Maine

1. The Department of Health and Human Services should convene a workforce forum.
2. The Workforce Forum would serve as a clearinghouse of information, creating a single access point for anyone interested in workforce issues.
3. Develop an inventory of present health workforce and education programs in the state.
4. Develop research and analytic methods for understanding population-based needs on an ongoing basis.
5. Consider the usefulness of forming a "federation" of licensing boards to facilitate communication across medical disciplines.
6. Provide a foundation for assisting stakeholders to make appropriate decisions about the best use of health care personnel in Maine and the need for health education.

In 1995, the Health Care Reform Commission made several recommendations directly related to the healthcare workforce that have implications for addressing public health problems. Key informant interviews suggest that few of the Health Care Reform Commission recommendations have been implemented and many issues remain.

[9] Data from the Maine Turning Point Community Health & Well-Being Survey, Winter 2000, survey of 605 Maine voters, margin on error 4.0% at the 95% confidence interval.

While the many participants in the Workforce Work Group believe that there would be an important role for centralized health workforce planning that exceeds the current capacity, there does not appear to be a consensus within state government or the private sector with regard to the potential value of undertaking centralized health workforce planning of the nature envisioned in the 1995 Commission report.

One area in which this debate plays out is that of data regarding clinical care providers who are licensed by the state. During the mid-1970's federal funds supported data collection and analysis of 13 clinical professions. The data was collected through surveys that were included in license renewal mailings undertaking by the licensure boards. In the early 1980's the federal funds were withdrawn nationwide. Despite the lack of funding Maine continued to do what surveys it could, including 1987 and 1990 surveys of registered nurses and licensed practical nurses.[10]

Currently the state surveys physicians on a biennial basis and dentists and dental hygienists every four years. For other professions, such as social workers and dietitians, the state is generally limited to collecting and reporting on the number of licensed providers without the benefit of surveys to collect additional details.

The kinds of data that advocates of an expanded centralized planning function seek, which they do not feel is currently available, includes data on characteristics such as:

- number or proportion of licensed providers who work full-time vs. part-time, vs. inactive (to help identify areas where there may be excess capacity or a need for additional capacity);
- settings in which the providers are employed (private practice, hospital, etc.)
- counties in which providers work (for example, in 1999 there were 56 certified nurse midwives in Maine[11], but we do not know the geographic areas they serve or the number of women they serve)
- number of providers who are graduates of Maine-based training programs vs. those who work in Maine but came here from other places (to help identify where our training programs are helping to meet an existing need and where we might want to expand or develop local training programs to meet needs that are not currently being filled by existing programs);
- number of providers, by county or other geographic delineation, who currently accept Medicaid patients, etc.

The Bureau of Health estimates that it costs approximately $50,000 <u>per profession</u> to undertake and analyze the results from surveys that could provide additional data regarding the breadth and scope of activity of members of the surveyed profession.[12] It will be extremely difficult to obtain financial support for expanded surveying and data collection for licensed clinical professionals until and unless there develops a stronger consensus on the need for and value of centralized state workforce planning.

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[10] Warren Bartlett, memo dated June 14, 2001.
[11] Maine Health 2000: A Health Planning Resource, Maine DHS Bureau of Health, Section III page 111.
[12] Warren Bartlett, op cit.

Another area that drew attention in the 1995 Commission report and MTP's key informant interviews was that of the Commission's recommendation regarding a workforce forum. Public Law 1996, Chapter 653, Part C, Section C-3, requires the Bureau of Health to convene a health workforce forum annually. However, the legislature has never provided funds to support such a forum.

The Office of Rural Health has been assigned responsibility for providing the forum and has done so, without the benefit of dedicated funding for this purpose, in the context of the Maine Rural Health Association annual meeting. Several key informants and work group participants acknowledged the Bureau's efforts in this area. They, like the Bureau itself, recognize that important work envisioned in the Commission Report is not currently but could be accomplished if there were dedicated resources available to carryout the full vision that upon which this mandate is predicated.

Barriers to Collection of Adequate Workforce Data:

1. Licensing boards are limited in their ability collect data on the clinical workforce;
2. In some quarters there is a perceived lack of leadership from state government with regard to health workforce planning and medically underserved areas (see above regarding lack of consensus);
3. The Bureau of Health has collected data when possible but the legislature does not provide funding that would make it possible for BoH and the licensure boards to collect, analyze, and publish clinical workforce data on a range of professions at regular intervals.

Conclusion: Without better data, it will not be possible to forecast and respond to clinical care workforce needs. If a consensus develops that supports enhancing the state's role in undertaking centralized health workforce planning, expanded data collection, similar to or even beyond that which is currently undertaken periodically for physicians and dental health providers, would need to be collected on an additional ten to twelve clinical occupations.

D. Recommendation: There should be surveys of the active clinical care workforce and that data should be used to project workforce needs and develop public policy responses as needed.

Strategy: Monitor the active clinical workforce composition and use the data to project need.

A Closer Look: In order for this monitoring to be possible, the Bureau of Health would need additional resources (financial and human) in order to coordinate with the Licensing Boards to collect and disseminate a broader range of data to improve knowledge and understanding of the characteristics of those members of the clinical care workforce whose professions are licensed (e.g. working part-time vs. full time, etc.) as well as to develop public policy related to clinical workforce training, retention, and availability.

Indicators or Measures of Success

1. Financial support for and collection of a broader range of data
2. Availability of that data to public health advocates and others
3. More in-depth analysis of workforce issues and development of appropriate policy responses.

What's Next?

The Maine Center for Public Health (MCPH) has volunteered to take on responsibility for follow-up and implementation of the recommendations of the Workforce and Training Work Group. Toward this end, they have convened the Public Health Education and Training Committee, chaired by Lisa Miller, Senior Program Officer, The Bingham Program. If you are interested in being a part of this ongoing process to improve public health in the state of Maine, please call MCPH at 207-629-9272.