

Who Will Keep the Public Healthy? Workshop Summary

Lyla Hernandez Editor, Committee on Educating Public Health Professionals for the 21st Century

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Who Will Keep the Public Healthy?

Workshop Summary

Committee on Educating Public Health Professionals for the 21st Century
Board on Health Promotion and Disease Prevention

Lyla Hernandez, *Editor*

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

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—Goethe



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REVIEWERS

This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the NRC's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We wish to thank the following individuals for their review of this report:

Michael Eriksen, Sc.D., Professor and Director, Institute of Public Health, Georgia State University

William C. Livingood, Ph.D., Director, Institute for Health, Policy & Evaluation Research, Duval County Health Department

Sheila M. Smythe, M.S., Executive Vice President and Dean, School of Public Health, New York Medical College

Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the report nor did they see the final draft of the report before its release. Responsibility for the final content of this report rests entirely with the authoring committee and the institution.

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We wish to express appreciation to the workshop presenters, Kristine Gebbie, Dr.P.H., R.N., J. Michael McGinnis, M.D., and Linda Rosenstock, M.D., M.P.H., for providing an excellent overview of: the recommendations of the report *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*; the importance of public health professional education, and for a discussion of the issues and questions surrounding the implementation of those recommendations. Finally, our thanks go to all those who took time from their busy schedules to attend the workshop and contribute to the discussion.

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Introduction

In a world where public health threats range from AIDS and bioterrorism to an epidemic of obesity, the need for an effective public health system is as urgent as it has ever been. The extent to which we are able to address the complex challenges of the 21st century and make additional improvements in the health of the public depends, in large part, upon the quality and preparedness of our public health workforce. This workforce, in turn, is dependent upon the relevance and quality of public health education and training. In March, 2001 the Robert Wood Johnson Foundation asked the Institute of Medicine to examine the education of public health professionals and develop recommendations for how public health education, training, and research could be strengthened to meet the needs of future public health professionals to improve population-level health.

In response, the IOM convened the Committee on Educating Public Health professionals for the 21st Century. (Please see [Appendix A](#) for a list of committee members.) During the course of the one-year study the committee held five meetings (four included public information-gathering sessions); reviewed and analyzed key literature; and abstracted, analyzed, and synthesized data from catalogs, web sites, and survey responses of accredited schools of public health. The committee report, released November 4, 2002 puts forth a framework and recommendations for education that are directed toward preparing public health professionals to meet the challenges of the 21st century. Because numerous institutions and agencies play important roles in public health education, training, research, and leadership development, the report addresses its recommendations to schools of public health, degree-granting programs in public health, medical schools, schools of nursing, other professional schools (e.g., law), and local, state, and federal public health agencies. The committee report presents conclusions and recommendations for each of these institutional settings that are directed toward improving the future of public health professional education in the United States.

Following the release of the report, a great deal of discussion was generated about what needed to be done to follow through on the report's recommendations. Since numerous stakeholders were involved there was a call for collaborative discussion. Therefore, the Robert Wood Johnson Foundation asked the IOM to hold a workshop of stakeholders to foster joint discussion among the academic and practice communities.

The workshop was held May 22, 2003. Over 100 representatives of the public health practice and academic communities attended. The morning session included a presentation from the sponsor describing why they chose to fund the study on educating public health professionals. This was followed by a presentation summarizing the report

recommendations and another presentation outlining some questions and issues relevant to implementing the recommendations. Participants then divided into small groups to discuss the report, addressing such questions as, “are the recommendations feasible,” what will it take to implement the recommendations,” and “what should be the next steps in implementation?” The following is a summary of that workshop.

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Workshop Presentations

GENESIS OF THE STUDY

Dr. Michael McGinnis addressed why The Robert Wood Johnson Foundation chose to commission a report on public health professional education, described the importance of the report to the future of public health, and identified challenges associated with implementing the report recommendations. He stated that the increasing demands placed on public health, coupled with the need for official agencies to meet these demands in the face of eroding support for public health, necessitate development of more effective ways of addressing the issues confronting public health. The RWJ Foundation decided it was important to engage and stimulate a debate that would lead to productive action, and that an important part of this debate was an examination of issues related to educating public health professionals for the 21st century.

Public health education faces challenges, according to Dr. McGinnis. First, public health must attract the best and the brightest to careers in public health. Second, these individuals must be provided with cutting edge education in order to assure that they are equipped in the best possible fashion to do the job that needs to be done. Meeting the challenges, educated public health professionals will help transform the public health landscape.

Dr. McGinnis believes that the report, *Who Will Keep the Public Healthy?* provides the vision necessary to address public health challenges squarely. This vision emphasizes the importance of an ecological approach that addresses the full range of the determinants of health in a seamless fashion. Such an approach enables public health to take advantage of the emerging sciences such as genetics, information technology, and communication sciences, highlights the importance of the social determinants of health, and focuses on the importance of a transdisciplinary approach.

The size of the vision, according to Dr. McGinnis, is indicated by the fact that the report was not limited to education in the traditional domains of public health. It is a report that addresses a wide range of fields as it looks at the emerging and important disciplines that need to be embraced in our efforts to train the public health workforce (e.g., molecular biology, sociology, communications). It is a report that is not limited to schools and programs of public health. It acknowledges the importance of other schools (e.g., medicine, nursing, and law) to educating the public health workforce in the 21st century. It further points out that agencies in which public health is practiced are a fundamental part of and integral to the public health education experience.

There are number of issues that need to be addressed as we consider implementation if, as Dr. McGinnis asserts should be done, we take seriously the Flexner model or

analogy. At the turn of the last century the Flexner report, which revolutionized the education and practice of medicine, looked at least at three dimensions: the science, the standards, and the models. The analogy applies to challenges in implementing the report recommendations for public health education. With respect to science, the report has highlighted the need to better characterize the nature of the scientific disciplines that are important to educating public health professionals. With respect to standards, the report points out that we need to better define the core competencies of the masters of public health, and even to consider credentialing. The implementation challenge for standards is to obtain a balance. While a goal is to increase the standards and define the competencies in a fashion that will elevate the profession, it is important not to establish barriers to entry that will deter participation by other professionals who are fundamentally important to our public health progress. Dr. McGinnis states that standards development is key, but must be acted upon in a careful fashion.

The notion of models is also key: teaching models, leadership models, and practice models. One of the challenges is to develop teaching and curricular models that will cut across disciplines. Further, models that better engage the public health practice community as a part of the educational process are necessary. The notion of a teaching public health agency and models of excellence for teaching public health agencies is a key challenge.

Finally, according to Dr. McGinnis, an implicit but important challenge is the need to better communicate what public health is to the broader public. Public health will only attract the best and brightest if there is a genuine understanding on the part of the public about what public health is. Public health must create the demand for a public health workforce; a workforce that is well supported by the public it serves. Public health professionals must reach out to the community with a communication strategy that will help enhance the awareness, understanding, and support for what public health is and what it can accomplish.

REPORT RECOMMENDATIONS

Dr. Kristine Gebbie, co-chair of the authoring committee, provided an overview of the report recommendations. (Please see [Appendix B](#) for a copy of the slides used during Dr. Gebbie's presentation.) The study charge was to develop a framework for how education, training, and research can be strengthened to meet the needs of the future public health professionals. The report defines a public health professional as “a person educated in public health or a related discipline who is employed to improve health through a population focus.” Dr. Gebbie described the two key parts of this definition. First is the notion that a public health professional is someone who is educated in public health or is considering the health of populations. Public health professionals receive education and training in a wide range of disciplines and come from a variety of professions. The definition includes both those with a public health degree, as well as those who come to work in public health through another discipline, for example a mental health worker in a public health agency who has a population focus but no formal public health degree.

The second part of the definition concerns what the kind of work the professional is employed to do. Not everyone who receives an education from a school or program of public health, or who has the MPH, goes to work in traditional public health settings or in public health. Many go to work in hospitals or other settings with an individual care focus. There are also individuals who work in locations other than a official public health departments (e.g., a voluntary agency such as the march of Dimes or Mothers Against Drunk Driving) who are engaged in work to improve the health of the public. Therefore, no matter where one works, the kind of work one does must be aimed at improving population health in order to be termed a public health professional.

A public health professional, therefore, must meet both parts of the definition. That is he or she must be educated in public health or a related discipline AND must be employed to improve health through a population focus.

Dr. Gebbie described the challenges to public health in the 21st century as outlined in the report (globalization, advances in scientific and medical technologies, and demographic transformations) and stated that the report recommended an ecological model of health to address these challenges. An ecological model of health, emphasizes the linkages and relationships among multiple determinants of health. Further, the report concluded that the ecological model must be central to the education of public health professionals. Dr. Gebbie described how the report recommended that the ecological model should be included in schools and graduate programs of public health as well as in medical schools, nursing schools, other schools (e.g., law and urban planning). Additionally it should be integrated into primary, secondary, and post secondary education in the United States.

Another recommendation of the report concerns voluntary certification of competence in the ecological approach to health for new MPH graduates. Dr. Gebbie stated that if there is certification, then schools and programs will teach to the level of certification, thereby establishing across all schools a core content. Further, certification is a way for employers to understand that they are hiring someone with a particular level of knowledge.

Dr. Gebbie described the eight new content areas recommended in the report: informatics, genomics, communication, cultural competence, community-based participatory research, global health, policy and law, and public health ethics. She then described the role of schools of public health in educating public health professionals as delineated in the report. Schools have a primary responsibility for education. They are also a focal point for public health research, and they must become policy contributors. Schools currently vary in their commitment to life-long learning. According to Dr. Gebbie, schools have depended on the programmatic continuing education that came with grants, providing education at a program level for the existing workforce and that needs to change. Other responsibilities discussed in the report and highlighted by Dr. Gebbie included the need to work collaboratively with other professional schools, to engage the community, to prepare individuals for leadership roles, and to expand practice opportunities that are supervised by faculty who have practical experience.

Graduate programs in public health, stated Dr. Gebbie, were viewed in the report with the same serious consideration as schools of public health since they must address the same challenges as best they can with their smaller base of resources. While programs in public health generally do not have the same breadth or depth of activity as

school of public health, if programs are going to offer the MPH, they have the same obligation to tackle the core curricular areas as do the schools.

Dr. Gebbie described how the report recommends that: all medical students should receive an orientation to public health thinking; nursing student placement in appropriate public health sites is a critical issue; almost any school in the modern academic setting has a need and a reason to think about public health; and undergraduate public health should be provided as a science elective.

Finally, Dr. Gebbie discussed the way in which the committee report described the public health agency role in educating public health professionals. These agencies must be actively engaged in assessing their own workforce, in developing plans for improving workforce training, and in working with schools and programs to develop improved training. Agencies must look at job descriptions and appointment criteria in order to ensure that those in leadership positions have an appropriate background in the ecological approach to health, either when they start their positions, or shortly thereafter. Finally, while federal agencies are an important contributor to many achievements in public health education, increasing attention and support must be devoted to this area, both for education and training, and for research, particularly research within the framework of the ecological model and health systems research.

Dr. Gebbie ended her presentation by stating that workforce makes all the difference in how effective the public health enterprise will be. With the report recommendations, a firm grounding in the ecological model, attention to the curriculum, attention to the way we build research, and attention to the bridges across what have been barriers, we can have the kind of workforce that will keep the public healthy for the next century.

QUESTIONS AND ISSUES

Dr. Linda Rosenstock, co-chair of the IOM Committee on Educating Public Health Professionals for the 21st Century, next presented some questions and issues, developed in conversations with members of both the academic and practice communities, that workshop participants might consider as they discuss the report recommendations. (Please see [Appendix C](#) for a copy of the slides used during this presentation.) First is the idea that we are talking about two different public health workforces: the current workforce and the future workforce. How separate should these two workforces be and how different might our approaches to education be for these two groups?

As the report recommendations are reviewed, Dr. Rosenstock pointed out that implementing some of them will be fairly easy to achieve, requiring little will or action; others, however are more difficult. Some say that obtaining funding is the most difficult factor; that if we have funding, we can do anything we want. But in this complex world sometimes finding the willingness, the collaborative spirit, and the ability of partners to come together may be as challenging as finding the money. Therefore, Dr. Rosenstock suggested that one thing the small groups may wish to consider when thinking about implementation is which of these recommendations can be implemented now without much collaboration or funding support, which require both collaboration and funding support, and which might require more of one than another.

One of the facts conveyed in the report is that only 1 percent to 2 percent of the US health care budget is spent on population health and prevention efforts. There is a comparable imbalance between the biomedical research investment and investment in population health research of traditional types. The report is recommending a further shift in research to one that is transdisciplinary in nature, embedded within the ecological model, and inclusive of community participation. The question then becomes, if we want to make that shift, where might the funding support be found?

Dr. Rosenstock pointed out that major barriers to implementing the recommendations include lack of funding, lack of incentives to change, and the need to overcome inertia. These barriers certainly apply to changing curricula. Schools and programs of public health, medical schools and nursing schools currently have very full curricula. To this packed curriculum (to which faculty are wedded), the report is asking schools to introduce eight new areas. How can this be accomplished? Public health partners need to think about how we start teaching using a competency-based approach to cover a large number of issues, including the recommended eight content areas.

Also related to the eight new areas is the need to establish relationships with the professional and practice communities that are associated with these areas, whether they be law or communications or informatics. The question before us is how do we engage some of these groups, professional associations, and practice communities to help us develop competency-based learning in our schools and programs of public health.

Certification is another issue addressed by Dr. Rosenstock. The committee, in its report, attempted to acknowledge that the public health workforce is outstanding. This workforce faces incredible challenges with ever eroding support and it has done a remarkable job. The tension for the committee, asserts Dr. Rosenstock, was in recognizing the contributions of the people who are functioning now, versus what the workforce needs to be able to do in the future. Therefore, the committee recommended a voluntary MPH credential in the ecological model. It was believed that this is a way of assuring the “raising of the bar,” a way of demonstrating credibility to the outside world. The committee believed a way to begin is to focus on the future MPH graduates and this area is ripe for more discussion in this workshop and elsewhere.

Dr. Rosenstock emphasized that the report challenges public health to think big and to think broadly about education; to think about public health education as relevant in K-12 and undergraduate levels for two reasons. First, public health is important, it is a part of national security. Second, providing public health throughout the educational system is an attractive way to open a pipeline that will attract the best and brightest to public health.

When thinking about collaboration, Dr. Rosenstock urged participants to think about what the Flexner report did for medical education. It placed in primary importance the idea that practice opportunities were part of the mentoring faculty responsibilities for physicians in training. An analogous step for public health is to tie in the practice opportunities for our students. Yet we also must be sensitive to the public health funding realities, particularly in local health departments. To build practice relationships will require support and resources for the practice community as well as academia. Further, the academic community must recognize these difficulties. Dr. Rosenstock reported that one emerging idea emerged is to think about creating academic health departments that formalize the relationships between academia and practice in such a way so as to create

something analogous in nature to a teaching hospital. Demonstration programs could be launched with some creative funding partnerships and best practices could be developed.

In conclusion, Dr. Rosenstock hoped that her presentation would provide some questions and issues the small groups would find worth pursuing but, if not, she welcomed the groups to tackle anything in or related to the report that the groups deem worthwhile.

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

Dr. Maureen Lichtveld asked to share the CDC perspective on workforce development with the workshop participants. She was pleased to see that many of the efforts of CDC are reflected in the report including the areas of leadership development, competency development, strategic planning, and performance standards. CDC continues to work on issues of needs assessment, leadership development, and faculty exchanges. Of the report's recommendations for funding, Dr. Lichtveld pointed out that two were specific to CDC and that CDC is working with its partners and others in academia and practice to expand the area of peer reviewed, investigator-initiated research. She stated that they will also be significantly increasing the kind of population-based, ecological research the report recommended.

Dr. Lichtveld stated that CDC will continue to support incentives, including the issues of certification and credentialing. CDC also plans to intensify its efforts to foster linkages between public health and medicine, according to Dr. Lichtveld. Further, it will convene the annual "Calloway" meeting in January 2004 to talk about implementing plans for workforce development. What emerges from this workshop discussing the IOM report will form an important part of the January discussions. Lastly, Dr. Lichtveld stated that CDC will continue to support the Public Health Workforce Collaborative, staffed by ASTHO, to foster workforce development.

GROUP PRESENTATIONS

Following the general plenary session, participants divided into six smaller groups for discussion. A member of the IOM committee authoring the report was present as a resource in each group. Discussion was to focus on the report recommendations and each group was asked to prepare a summary of their discussion and a list of "next steps" necessary for further dissemination and implementation of the report recommendations. The following is a report of the small group presentations and of the general discussion occurring after the small group reports.

Group 1

The presenter for Group 1 was Christopher Atchison of the University of Iowa. Mr. Atchison stated that his group focused part of their discussion on marketing and advocacy, specifically the need to establish a dissemination system, including the following suggestions.

- Include public health in programs such as Kids Into Health Careers.
- Train school counselors to understand public health as a career opportunity.
- Identify and study successful modes of teaching to competency
- Develop competencies that are scientifically and legally defensible.
- Implement and assess the effectiveness of competencies in training programs
- Develop a non-governmental competency council for coordination.
- Establish a council of graduate and continuing public health education.
- Develop a fact sheet and worksheet supporting dissemination on the web and using other modalities
- Convene workshops to explore implementation with local practice and academic organizations
- Develop supportive information, e.g., examples of success, cost-benefit analyses.
- Promote governmental public health practice in academic programs.

Another general area of group discussion included promoting the concept of academic health agencies. Mr. Atchison reported that Group 1 believes it important to define and clarify the academic public health agency model, identify and recognize existing academic public health agencies, convene a best practices conference, and fund initiation and refinement of these agencies. Group discussion of incentives generated the following suggestions:

- Use existing cooperative agreement language (e.g., CDC and HRSA efforts) and Request for Proposals (such as used in the Healthy People process) to promote the report recommendations.
- Create a nationally standardized voluntary certification program such as Public Health Ready is establishing.
- Link education to human resource requirements. For example Michigan has evidently tied some of its workforce positions to competencies.
- Identify other structural incentives
- Expand prevention block grants to include training programs that promote the ecological view
- Strengthen accrediting language to promote practice-based teaching
- Expand existing leadership development programs to include the IOM recommendations and focus these programs on community and emerging leaders.

Group 2

The discussion summary of Group 2 was presented by Virginia McCoy from Florida International University. Dr. McCoy reported that discussion in her group focused on some of the same issues as that of Group 1. One of the areas touched upon is to collect and highlight existing academic/practice partnerships as a tool for integrating academic schools and programs and practice concerns. A central area of discussion for the group concerned competencies. Dr. McCoy reported that Group 2 identified suggestions for action at the national level.

- What lessons have we learned from worthwhile practicums? How can we make them more efficient and effective by working in partnership between academic schools and programs and practice settings?
- Universities need to place greater emphasis on practice and there needs to be greater communication between faculty and preceptors.
- Practice partners at the national level (including national associations) can model what should be done at the local level in terms of partnerships.
- Establishing academic health departments is a national priority and we should explore existing models.
- Need to develop tools (e.g., model syllabi) to facilitate incorporating the eight new content areas into existing core curricula or competencies. These new areas could be incorporated into existing course work
- How can we work with national organizations, for example with APHA to help develop attention to the public health aspects of the eight new areas? Perhaps these new core areas could be integrated into current organizational sections, or APHA could hold national meetings that bring groups together to talk about integrating the areas.
- Need to increase the visibility of public health.
- Need to develop systematic efforts to encourage, measure, and acknowledge implementation of the IOM report recommendations. It is important to acknowledge the schools and programs that have implemented portions of these.
- A key priority should be to identify, validate, and measure competencies.
- It may be worthwhile to establish 2 or 3 model programs that would embody the principles of the IOM report and then learn from these experiences.

Group 3

Cindy Parker from Johns Hopkins University presented the discussion summary of Group 3. She stated that that the group determined the IOM recommendations for eight new content areas can be carried out without development of eight independent courses by using a modular content or integrative approach although some schools or programs might choose to provide further depth in one or more areas. Further, the group believes that in order for this process to work well, innovative collaborations will be necessary. Collaborations (at the national, regional, and local levels) to plan, integrate, and implement these eight areas would need to include representatives from the community, academia, media, business, government agencies, and medical delivery systems.

Currently, in the opinion of Group 3, each health department in the U.S. serves a specific population, provides a unique set of services, and addresses a unique set of problems. However, the group believes that some standardization is desirable so that there is a new vision for health departments, a vision that can be stated as, "If you've seen one health department, you've seen the core of all health departments." The group believes that credentialing will probably play a large role in that standardization process, outlining some caveats:

- The process should be developed with input from a broad base of stakeholders including the community, academia, media, business, government agencies, and the medical delivery system.

- There are some basic facts to keep in mind about the public health workforce.
- There are about 500,000 members of the current public health workforce
- 25% of these workers will be retiring soon
- public health schools and programs currently produce about 5,500 graduates per year
- only about 10% of these graduates join the governmental public health workforce.
- Whatever credentialing process is developed should not compromise the replenishment of the public health workforce.
- So as not to lose or devalue the importance of public health experience in the current workforce, practitioners who can provide evidence of competency, in lieu of academic achievement, should be “grandfathered” in as these practitioners retire, replacements would come through the credentialing process.

Finally, Dr. Parker stated that Group 3 believes it to be important to acknowledge the efforts of some schools and programs that have already started to implement the report recommendations. There needs to be a mechanism developed for sharing such experiences and best practices.

Group 4

Mark Becker of the University of Minnesota summarized the discussion of Group 4. Dr. Becker stated that now is the time for change since public health is at the top of the national agenda. He stated Group 4 focused its suggestions on 3 areas: promoting diffusion and adoption of the report and its recommendations; competency areas and the areas of knowledge and expertise as discussed in the report; and broadening the dissemination of public health education and knowledge. Suggestions related to promoting diffusion and adoption of the report include:

- There needs to be an ecological or multi-layered approach to diffusion, including highlighting and disseminating best practices. Specific examples of things to share include examples of problem-based learning and problem based learning in teams.
- The ability to synthesize or bring together different disciplines is fundamental to the ecological approach. Whether synthesis is taking place in capstone experiences or the development of models of education, these should be shared.
- Engage the internal and external stakeholders around discussion of the report and its recommendations. Such stakeholders include faculty students, alumni, and the employers who are hiring graduates. Employers include health departments, the corporate sector and the NGOs.
- Use the Building Bridges program to facilitate bringing public health education and practice together.
- Recognize that there are other drivers to implementation, e.g. accreditation and the economy.

Dr. Becker reported that Group 4 had several suggestions in the area of competencies.

- the cultural competence area needs more work. Further, the group was not sure that competence was the right word—maybe cultural awareness would be a better term.
- As we add the 8 areas to the traditional 5 areas, several questions need to be raised. For example, what is the goal of the changes. Are we attempting to create a program in public health education where one size fits all? Or should we be looking at training, educating, and preparing a population of public health professionals? Do we want homogeneity or do we want a population of public health workers who are prepared to do the necessary work? This is fundamental to thinking about accreditation.

Dissemination and knowledge was the final set of issues discussed by Group 4. Dr Becker reported suggestions for facilitating public health education across the spectrum.

- Public health education in K-12 be made a national priority by APHA, in partnership with CDC, NIH, and other relevant groups. Lessons could be learned from the American Statistical Association which, approximately 20 years ago, made the incorporation of statistics into K-12 education a national priority and statistics is now taught at the elementary level.
- Foundation funding should be identified for a national report or a national meeting on public health education in undergraduate programs.
- ASPH and the American Association of Medical Colleges (AAMC) meet to discuss where public health education fits with medical education. Specifically, should public health education be a prerequisite for medical education as is the case for organic chemistry, or is it part of the medical curriculum?

Dr. Becker then added that he believes it important that we stop referring to the activities aimed at changing public health education as a call for a Flexner-like effort, stating that medical education and public health education are fundamentally different. Medical education is about issuing one type of credential for practicing physicians, that is, generating an M.D. Public health education is really much more like engineering schools or business schools. That is, in public health education we are training individuals that are going to work much more broadly than in state and local health departments or in CDC. Therefore, our efforts are not comparable to those undertaken by Flexner in the early 20th century.

Group 5

Deborah Klein Walker of the Massachusetts Department of Public Health presented the summary of Group 5's discussion. She began by saying that everyone in the group applauded the report, liked the definition of a public health professional and liked the ecological model. Members of the group see this report as a call for a paradigm shift toward healthier communities and an ecological approach. It was suggested that a conceptual brainstorming group be formed to identify how we are going to measure forward progress, stating that if we do not attend to the paradigm shift in public health and identify who will lead those efforts, we will not really achieve all that is possible.

In examining what might be done to foster dissemination and implementation of the report recommendations, the group brainstormed short- and long-term suggestions. The group identified six suggestions for activity in the short term.

- Identify best practices and models
- There is a huge lack of coordination which would be reduced if there were public health practice coordinators in schools, programs, and departments of public health. Leadership at the national level is important (e.g., from SAMSHA, CDC, and HRSA) and there needs to be a communication strategy that links the stakeholders and keeps them informed of activities and achievements.
- Further work must be done on enumerating the public health workforce, identifying workers beyond the core professions.
- We need to maintain a comprehensive inventory of all the things that are going on.
- If we are improving our educational practicums, what does this mean for the faculty in academia, what does it mean for those in public health settings? There are many issues surrounding the creation of an award system so that faculty and practitioners who engage in this important work are taken seriously within their institutional setting. We need to create and share the mechanisms of reward for supervision of practicums.

Long term ideas and suggestions of the group included:

- Formation of a think tank to develop a consensus on approach to community-based research. As applications are made for funding of such research, it would be useful to have successful models for reference.
- Must develop a consensus on what we mean by an ecological model.
- Need to develop a core mantra for public health professionals to explain what a public health professional is or does.
- Need to develop a plan for transdisciplinary recruitment of professions that weren't even mentioned in the report, for example, psychology and sociology.
- In thinking about introducing public health education into elementary schools we might explore some of the models that have been used in the hard sciences. We must also work with the Department of Education and others to accomplish this goal.
- Challenge every school of public health to make sure there are undergraduate courses in their universities. In the longer-term plan we must also think about community colleges.

Suggestions for structural changes included:

- Creation of incentives for faculty to become involved in practice activities and research.
- Creation of incentives for faculty to prepare themselves to participate in and supervise practice activities, e.g., faculty may need to take courses or be credentialed as knowledgeable to undertake these activities.
- Development of definitions for equal partnership in community-based research. What does it mean to conduct research in partnership with communities? It is more than just having an MOU. Perhaps it means having a Principal Investigator (PI) from academia and a PI from the health department.
- Creation of an Institute of Public Health to foster public health systems research.
- Realignment of Council on Education for Public Health (CEPH) requirements for accreditation to complement the IOM report recommendations.

Group 6

Tim Stephens of the Association of State and Territorial Health Officials presented the discussion and suggestions of Group 6. He reported that this group examined “the who and the how, the current versus the future, agencies and systems, the continuum of education and training,” and the groups that need to be brought together to further dissemination and implementation of the recommendations. Members of Group 6 identified the ecological model as a key contribution of the report. Further, Mr. Stephens reported that improving education for public health is dependent upon developing a vision for the future of the public health system. The current system is in need of change and we need a vision of what the new system should be before changing education and training.

Mr. Stephens stated that, to some extent, Group 6 takes issue with some of the suggestions of the other groups. For example, it is not the sense of the group that partners in the private sector need to be brought to the table to determine what they need. The private sector has been well served by schools of public health. The governmental public health agencies, however, are not reaping the benefits of education in the schools. Additionally, the group believes that understanding the human resources systems, the salary structures and the incentives in governmental public health needs to be undertaken concurrently with understanding what needs to be done educationally. Individual incentives and upward mobility in state and local public health are important and the group suggests:

- Loan forgiveness programs for people working in state and local public health agencies
- Funding for provision of practical experience and participation in supervision of those activities.

Until we broaden the definition of public health and link it to practice rather than to disciplines, it will be problematic to move forward. Mr. Stephens suggested a need to redefine the profession of public health. Organizational commitments discussed among group members included:

- A participant from the University of Texas discussed convening within its community a group, with representation similar to that at the IOM workshop, to discuss the report and identify meaningful issues related to their specific services.
- A participant from the W.K. Kellogg Foundation described Kellogg's efforts at increasing diversity of the workforce, indicating that diversity needed to be infused into all areas so that public health practice and scholarship reflect the communities they serve.
- A participant from HRS A indicated a desire to hear from the community about what is the profession of public health—is it a field, is it a movement, is it a set of disciplines that are a constellation?
- A participant from the Council on Linkages said the Council is committed to reviewing the core public health competencies in 2004 and to exploring how specific competencies can be taught. The Council will also work on public health systems research and will serve as a forum around further discussion of what is the public health profession.

CONCLUSION

The discussion and suggestions generated in this one-day workshop serve as an important base of information for those engaged in efforts to implement the recommendations of the report *Who Will Keep the Public Healthy?* The report provides a framework for public health education, and, as Dr. McGinnis states, the vision necessary to address public health challenges squarely. This framework requires the collaborative effort of individuals from diverse perspective—perspectives that are represented by the workshop participants themselves including academia, governmental public health agencies, the community, foundations, associations, and other interested stakeholders.

Effective public health action depends upon a competent, well-trained public health workforce. Such a workforce is in the best interest of all those who are interested in keeping the public healthy.

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Appendix A

COMMITTEE ON EDUCATING PUBLIC HEALTH PROFESSIONALS FOR THE 21ST CENTURY

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Appendix B



Who Will Keep the Public Healthy?

Educating Public Health Professionals for the 21st Century


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Study Charge

- To develop a framework for how education, training, and research can be strengthened to meet the needs of future public health professionals to improve population health.


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Who is a public health professional?

- A public health professional is a person educated in public health or a related discipline who is employed to improve health through a population focus.


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21st Century Public Health Challenges Include:

- Globalization
- Advances in scientific and medical technologies
- Demographic transformations


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Globalization

- “The process of increasing economic, political, and social interdependence and global integration that takes place as capital, traded good, persons, concepts, images, and values diffuse across state boundaries.” (Yack and Bettcher, 1998)

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Effects of Globalization

- Increased travel, trade, economic growth, and diffusion of technology accompanied by negative social and environmental conditions, greater disparity between rich and poor, environmental degradation, and food security issues

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Effects of Globalization (cont.)

- Emerging and re-emerging diseases (e.g., HIV/AIDS, TB, hepatitis B, malaria, cholera, diphtheria, and Ebola)
- Distribution of products associated with major health risks (e.g., alcohol and tobacco)

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Effects of Advances in Scientific and Medical Technologies

- Advances bring ethical, legal, and social questions, for example:
 - Increasing need for surveillance data raises issues of confidentiality
 - Increasing use of genomics brings need to ensure individuals with certain genetic traits and predispositions are not discriminated against in workplace or obtaining insurance

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Science & Medical Technologies (cont.)

- Communication technology offers wider dissemination of health information but requires response to misleading or incorrect information spread through use of these technologies
- Biomedical research led to health improvements but need research on social and behavioral factors since about 50% of mortality due to these factors.

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Effects of Demographic Transitions

- Aging of the Population
 - Brings increase in multiple chronic diseases, geriatric conditions, and mental health conditions
- Increasing diversity of the population
 - large racial and ethnic health disparities.

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Addressing the Challenges: An Ecological Model of Health

- An Ecological Model:
 - multiple determinants of health
 - linkages and relationships among determinants are emphasized

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Ecological View of Health

- A perspective that involves knowledge of the ecological model of determinants of health and an attempt to understand a specific problem or situation in terms of that model

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Ecological Approach to Health

- An approach in which multiple strategies are developed to impact determinants of health relevant to the desired health outcomes

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Recommendation

- Schools of public health should emphasize the importance and centrality of the ecological approach and have a primary role in influencing the incorporation of this ecological view, as well as a population focus, into all health professional education and practice.
- Doctoral research training in public health should include an understanding of the multiple determinants of health within the ecological model.

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Recommendation

- Graduate MPH programs in public health should emphasize the importance and centrality of the ecological approach.
- A significant proportion of medical school graduates should be fully trained in the ecological approach to public health at the MPH level

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Recommendations

- Undergraduate nursing schools should be encouraged to assure that curricula are designed to develop an understanding of the ecological model of health and core competencies in population-focused practice.
- Recommend integration of ecological view of health into primary, secondary, and post secondary education in the United States.

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Recommendation

- The committee recommends the development of a *voluntary* certification of competence in the ecological approach to public health as a mechanism for encouraging the development of the skill level of new MPH graduates

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Education in Graduate Programs and Schools of Public Health

- Eight new content areas needed
 - Informatics
 - Communication
 - Community-based participatory research (CBPR)
 - Global health
 - Ethics
 - Genomics
 - Cultural competency
 - Policy and law

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**These build on the existing
CORE**

- Biostatistics
- epidemiology
- social and behavioral sciences
- environmental sciences
- health services management

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Public Health Informatics

- Public health informatics is the systematic application of information, computer science, and technology to public health practice and learning (Yasnoff, et al., 2000)

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Genomics

- Public health education programs and schools must provide their students with a framework for understanding the importance of genomics to public health and with the ability to apply genomics to basic public health sciences

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Communication

- Public health communication involves a translation process that begins with the basic science of what is known about a health topic. From the science, public health professionals derive messages about attitudes and behaviors the public should adopt, together with policies that organizations and government should enact to support population health.

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Cultural Competence

- Cultural competence is a systematic process, the purpose of which is to increase public health practitioners' cultural awareness, knowledge of self and others, communication skills, attitudes, and behaviors.

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**Community-Based
Participatory Research**

- Community-based participatory research is "a partnership approach to research that equitably involves community members, organizational representatives, and researchers in all aspects of the research process" (Israel, et al. 2001)

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Global Health Issues

- awareness of cultural and traditional beliefs among immigrant populations in the US
- poverty-associated conditions,
- variance in environmental and occupational health and safety standards,
- global environmental changes leading to such things as depletion of freshwater supplies and loss of arable lands
- re-emerging infections

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Policy and Law

- “Policy development involves serving the public interest in the development of comprehensive public health outcomes by promoting the use of the scientific knowledge base in decision making and by leading in developing public health policy.”
(Turnock,2001)

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Ethics: Seven Areas for Education

- Values and beliefs inherent in a public health perspective
- Ethical principles that follow from the values and beliefs
- Public health mandates and powers
- Ethical tensions within public health
- Historical ethical failures

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Ethics: Seven Areas for Education (cont.)

- History and purposes of research ethics
- Application of ethics to specific topics such as informatics and genomics (Thomas, IOM commissioned paper)

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Recommendation

- For each of the eight emerging content areas, the committee recommends that:
 - competencies be identified
 - each area be included in graduate level public health education
 - continuing development and creation of new knowledge be pursued
 - opportunity for specialization be offered.

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Schools of Public Health Six Major Responsibilities

- Educate the educators, practitioners, and researchers as well as to prepare public health leaders and managers
- Serve as a focal point for multi-school transdisciplinary research as well as traditional public health research to improve the health of the public
- Contribute to policy that advances the health of the public

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Responsibilities (cont.)

- Work collaboratively with other professional schools to assure quality public health content in their programs
- Assure access to life-long learning for the public health workforce
- Engage actively with various communities to improve the public's health.

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Schools of Public Health Recommendation for Education

- Schools should embrace as a primary educational mission the preparation of individuals for positions of senior responsibility in public health practice, research and training.

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Schools of Public Health Recommendation for Education

- There should be a significant expansion of *supervised* practice opportunities and sites (e.g., community-based public health programs, delivery systems, and health agencies). Such field work must be organized and supervised by faculty who have appropriate practical experience.

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Research in Schools of Public Health

- Striking change will be move from research dominated by single disciplines or a small number of disciplines to *transdisciplinary* research

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Research in Schools of Public Health

- *Transdisciplinary* research involves broadly constituted teams of researchers that work across disciplines in the development of the research questions to be addressed.
- *Transdisciplinary* research implies the conception of research questions that transcend the individual departments or specialized knowledge bases typically because they are intended to solve applied public health research questions that are, by definition, beyond the purview of the individual disciplines.


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Schools of Public Health Recommendation for Research

- Schools of public health should reevaluate their research portfolios as plans are developed for curricular and faculty reform. To foster the envisioned transdisciplinary research, schools may need to establish new relationships with other health science schools, community organizations, health agencies, and groups within their region.

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Schools of Public Health Recommendation for Policy



- The committee recommends that schools:
 - enhance faculty involvement in policy development and implementation for relevant issues
 - provide increased academic recognition and reward for policy-related activities
 - play a leadership role in public policy discussions about the future of the US health care system, including its relation to population health

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Schools of Public Health Recommendation for Policy



- Schools of public health should
 - enhance dissemination of scientific findings and knowledge to broad audiences, including encouraging the translation of these findings into policy recommendations and implementation
 - actively engage with other parts of the academic enterprise that participate in policy activities

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Schools of Public Health Recommendation for Academic Collaboration



- Schools should embrace the large number of programs in public-health-related fields that have developed within medical schools and schools of nursing and initiate and foster scientific and educational collaborations

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Schools of Public Health Recommendation for Academic Collaboration



- Schools should actively seek opportunities for collaboration in education, research, and faculty development with other academic schools and departments, to increase the number of graduates in health and related disciplines who have had an introduction to public health content and interdisciplinary practice, and to foster research across disciplines.

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Schools of Public Health Recommendation for Access to Life-Long Learning



- Schools of public health should fulfill their responsibility for assuring access to life-long learning opportunities for several disparate groups including:
 - public health professionals
 - other members of the public health workforce
 - other health professionals who participate in public health activities.

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Schools of Public Health Recommendation for Community Collaboration



- Schools of public health should
 - position themselves as active participants in community-based research, learning, and service
 - collaborate with other academic units to provide transdisciplinary approaches to active community involvement to improve population health
 - provide students with didactic and practical training in community-based public health activities, including policy development and implementation

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**Schools of Public Health
Recommendation for Community
Collaboration**

- Community-based organizations should have enhanced presence in schools' advisory, planning, and teaching activities

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**Schools of Public Health
Recommendation for
Faculty**

- There should be major changes in criteria used to hire and promote school of public health faculty. Criteria should reward experiential excellence in the classroom and the practical training of practitioners.

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**Graduate Programs in
Public Health--
Recommendation**

- Graduate programs should institute curricular changes that:
 - address the eight critical areas of informatics, genomics, communication, cultural competency, community-based participatory research, global health, policy and law, and ethics.

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**Medical Schools--
Recommendation**

- The committee strongly recommends that
 - all medical students receive *basic* public health training in the population-based prevention approaches to health
 - serious efforts be undertaken by academic health centers to provide joint classes and clinical training in public health and medicine

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**Medical Schools--
Recommendation**

- When a school of public health is not available to collaborate in teaching the ecological approach to medical students, medical schools should partner with accredited programs in public health for public health education.

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**Schools of Nursing
Recommendation**

- The public health community should offer assistance in identifying the appropriate level and type of position for nursing graduates

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Schools of Nursing Recommendation

- The public health community should be attentive to the need for student clinical experience, should collaborate in making appropriate sites available, and should consider ways to assure that nursing education does not occur in a vacuum apart from the full range of professionals practicing in public health.

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Schools of Nursing Recommendation

- Schools of nursing that offer master's degree programs in public health nursing should be encouraged to partner with schools of public health to assure that current thinking about public health is integrated into the nursing curricula content, and to facilitate development of interdisciplinary skills and capacities.

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Other Schools

- Creating the conditions in which Americans can be healthy requires the informed collaboration of planners, executives, and lawyers, to name just a few. The committee believes that public health is an essential part of training citizens, and that it is immediately pertinent to a number of professions.

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Other Schools Recommendation

- All undergraduates should have access to education in public health.

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Local, State, and Federal Public Health Agencies-- Recommendation

- Should
 - actively assess the public health workforce development needs, including needs of both those who work in official public health agencies and those who engage in public health activities in other organizations

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Local, State, and Federal Public Health Agencies-- Recommendation

- Should
 - Develop plans, in partnership with schools of public health and accredited public health programs for assuring that public health education and training needs are addressed
 - develop incentives to encourage continuing education and degree program learning
 - engage in faculty and staff exchanges and collaborations with schools of public health and accredited public health education programs

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Local, State, and Federal Public Health Agencies-- Recommendation

- **Should**
 - assure that those in public health leadership and management positions within federal, state, and local public health agencies are public health professionals with MPH level education or experience in the ecological approach to public health.

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Federal Public Health Agencies-- Recommendation

- **Should provide increased funding to**
 - develop competencies and curriculum in emerging areas of practice
 - fund degree-oriented public health fellowship programs
 - provide incentives for developing academic/practice partnerships

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Federal Public Health Agencies-- Recommendation

- support increased participation of public health professionals in the education and training activities of schools and programs of public health; especially, but not solely, practitioners from local and state public health agencies

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Federal Public Health Agencies-- Recommendation

- improve practice experiences for public health students through support for increased numbers and types of agencies and organizations that would serve as sites for practice rotations

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Funding Recommendations

- There should be a significant increase in public health research support (i.e., population health, primary prevention, community-based, and public health systems research) with emphasis on transdisciplinary efforts.

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Funding Recommendations

- AHRQ should spearhead a new effort in public health systems research
- NIH should launch a new series of faculty development awards (“K” awards) for population health and related areas

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Funding Recommendations




- CDC should redirect current extramural research to increase peer reviewed investigator-initiated awards in population health, prevention, community-based and public policy research.
- CDC should reallocate a significant portion of current categorical public health research funding to competitive extramural grants in the above areas.

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Conclusion



- We need well educated public health professionals to effectively shape the programs and policies that will improve population health. If we lose sight of who will keep the public healthy, we will have lost an opportunity to improve the public's health during the 21st century.

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Appendix C

Institute of Medicine

- *Who Will Keep the Public Healthy?: Educating Public Health Professionals for the 21st Century*

- Dissemination Workshop
- May 22, 2003

Questions and Issues

- The following questions and issues were developed from conversations with individuals from state, local and federal public health agencies, schools and programs of public health, and national groups and associations

General Questions and Issues

- There are actually two workforces, the one currently employed and the future workforce. How do the report recommendations apply to these two distinct groups?

General

- Which, if any, of the report recommendations can be implemented without significant outside support, either in terms of partnerships or funding or both?

General

- What is each organization willing to commit to do to foster implementation of the recommendations. What would they need in order to make this happen?

General

- In terms of research, the vast majority of funding is targeted to the biomedical model. Where can one go for funding of research based on the ecological model?

General

- The three major barriers to implementing the report recommendations appear to be funding, incentives to change, and inertia of current practice. How do we address these barriers?

Curricular Issues

- Given the already full curriculum in schools and programs, how can the eight new content areas be added?
- Can we expect both schools and programs to integrate all of the content areas, some of them, or include them in a core competency?

Curricular

- How do competencies for the recommended eight new areas fit in to the existing educational framework?
- How do we address these competencies for the existing workforce, particularly those of immediate importance such as informatics and genomics?

Curricular

- There is a bi-directional component to public health professional training. One direction provides programs for those already in the workforce who want more training, the other provides education to future workers. To what extent might or should these training experiences be integrated as opposed to being separate tracks?

Curricular

- How do we encourage the necessary cultural shift in academia that would place high priority on practice activities and practice research?

Curricular

- What are the factors that would encourage voluntary certification at the MPH level? Who should be involved in planning for this certification?

Curricular

- How and when do we involve other communities (e.g., practice, communications, informatics, genomics) in developing curricula and competencies?

Curricular

- What groups should be involved to promote developing curricula for K-12 and for undergraduate work in public health?
- What are some examples where such curriculum development has been done?
- Can we engage science and social science teachers to show them how to apply public health to what they are teaching?

Collaboration Issues

- How do we bridge the gulf between practice and academia so that we can work cooperatively with each other? Can we use principles learned in community-based participatory research to achieve greater cooperation?
- How can we overcome the major communication problems between academia and practice

Collaboration

- What does local public health want and expect from academic public health?
- Is local public health willing to participate with schools and programs and, if so, in what ways?

Collaboration

- Local public health agencies work at the margin in terms of funding and resources. What can be done to obtain necessary resources and encourage new momentum?

Collaboaration

- Could we establish academic health departments (similar to the teaching hospital concept)? This might also help address the problem of faculty incentives to participate in practice activities.

Collaboration

- Could we try to find funding to create in 2 or 3 places, the model recommended in the report? This would provide important information about feasibility and difficulties.

Collaboration

- Public health is broader than the activities of public health agencies. Several of the recommendations can be achieved only if various organizations and institutions cooperate. How can we foster this cooperation?
- Could we initiate a conversation with all the stakeholders mentioned in *The Future of the Public's Health*?

Collaboration

- Public health and medicine must work together yet there is a schism between the two communities. Should we be attempting to provide all medical students with public health education or should we be focusing on those medical students who are interested in public health?

Collaboration

- How can we work with the agencies that accredit various involved organizations and institutions?
- How do we engage private practitioners in public health?

Conclusion

- What are the next steps we need to take to implement the report recommendations?

Appendix D

Who Will Keep the Public Healthy?
Educating Public Health Professionals for the 21st Century
Workshop Agenda
May 22, 2003

On May 22, 2003 in Washington, DC the Institute of Medicine is holding a workshop to explore the recently released report, *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*. Representatives of the public health practice and academic communities will join to review and discuss how to proceed to implement the recommendations of this report.

9:00	Welcome and Introduction Patricia Wahl, University of Washington
9:15	Genesis of the Idea Michael McGinnis, RWJ Foundation (sponsor)
9:30	Review of report recommendations Kristine Gebbie, Committee Co-chair
10:15	Review of implementation questions and issues. Linda Rosenstock, Committee Co-chair
11:00	BREAK and convene in small groups for discussion—The focus of small group discussion will be to examine how best to proceed with implementing the report recommendations. The list of issues/facilitating factors/barriers may be used to stimulate or guide discussion. Each group will be asked to develop a list of “next steps in implementation” and to be prepared to briefly summarize their discussion. At least one member of the IOM committee will be present in each group to offer clarification or explication of recommendations as needed.
LUNCH	
3:00	Reconvene in plenary session—Susan Allen, Moderator Each group will report on its discussion and list of next steps
4:15	General Discussion
4:45	Closing comments and Adjourn

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Appendix E

“Who Will Keep the Public Healthy?” Workshop Attendees May 22, 2003

**denotes Committee Member*
***denotes Sponsor Representation*

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Judith Baigis
Georgetown University
R.Palmer Beasley
University of Texas
Georges C.Benjamin
American Public Health Association
Ron Bialek
Public Health Foundation
Michael Bisesi
Medical College of Ohio
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University of California, Berkeley
Jacalyn Bryan
The Association of State and Territorial Health Officials
Melisa Byrd
National Governors Association
Jung H.Cho
Camden County Department of Health
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University of Iowa
Karlene Baddy
American Public Health Association
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University of Minnesota
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Michigan Department of Community Health
C.Perry Brown
Institute of Public Health
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National Library of Medicine
Margaret Cotroneo
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Montgomery Department of Health and Human Services
Yanira Cruz
Hispanic-Serving Health Professions School, Inc.
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Georgetown University
Joyce Essien
Emory University
Dabney Evans
Emory University
Michael P.Fierro
National Governors Association
*Kristine Gebbie
Columbia University
Roberta Gianfortoni
Harvard University
Elizabeth Gulitz
University of South Florida
Stacia Hall
Association of Teachers of Preventive Medicine
Tracey Hartman
Georgetown University
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American Public Health Association
Harold Cox
Cambridge Health Department
Dorothy A.Cumby
State Governmental Public Health
Michael Eriksen
Georgia State University
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Council on Education for Public Health
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National Association of County and City Health Officials
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*Alan Guttmacher
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The Robert Wood Johnson Foundation
Karen Helsing
Association of Schools of Public Health

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National Association of Local Boards of Health
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Missouri Department of Health and Senior Services
Robert R.Jacobs
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Pfizer Global Pharmaceuticals
Nancy J.Kennedy
Center for Substance Abuse Prevention
Laura Rasar King
Council on Education for Public Health
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Virginia C.Kennedy
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Mickey Richie
California Department Health Services
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James Simpson
Department of Health and Human Services
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H. Virginia McCoy
Florida International University
Angela Mickalide
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Lori Mulligan
George Washington University
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Health Resources and Services Administrations
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