STRATEGIES FOR ADDRESSING PRIORITY INFORMATION PROBLEMS IN HEALTH POLICY AND PUBLIC HEALTH

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The purpose of the forum, *Accessing Useful Information: Challenges in Health Policy and Public Health*, was not only to draw attention to current information needs in these fields, but also to identify existing resources for addressing these needs and to stimulate further constructive action. Toward that end, the New York Academy of Medicine and the National Library of Medicine cosponsored a strategy session immediately following the forum, which brought together representatives of a broad range of public agencies and private organizations related to health policy, public health, library science, and informatics.* Building on the groundwork laid at the forum, this group worked to set priorities for problems that affect the retrieval and quality of information in health policy and public health and to identify concrete strategies for addressing high-priority problems.

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*These organizations included the Agency for Health Care Policy and Research, the American Medical Association, the American Public Health Association, the Association for Health Services Research, the Association of Schools of Public Health, the Association of State and Territorial Health Officials, the Centers for Disease Control and Prevention, the Coalition for Networked Information, Grantmakers in Health, the Health Resources and Services Administration, the IBM Foundation, the Indiana University School of Library and Information Science, the Informatics Department at Columbia University, the Information for State Health Policy Program, the National Association of County and City Health Officials, the National Institutes of Health, the National Library of Medicine, the National Network of Libraries of Medicine, The New York Academy of Medicine, the New York City Department of Health, the New York State Department of Health, the Public Health Foundation, the Rand Corporation, the University of California at San Francisco Health Policy Institute, and the University of North Carolina School of Public Health.

The ideas that emerged from this session provide insights on how a broad range of groups—working individually and collaboratively—can improve information access in health policy and public health. In particular, the recommendations will be used to inform future activities of the National Library of Medicine (NLM) and the National Network of Libraries of Medicine (NN/LM).

CONTEXT FOR NEXT STEPS

Although assessments of public health and health policy information needs have begun only recently, the forum clearly documented that enough is known to take action now, and that, indeed, much activity is already under way. The papers by Humphreys and Ross (presented in this issue of the *Journal of Urban Health*) describe the central roles that NLM and the Centers for Disease Control and Prevention (CDC) have been playing in these arenas. Of particular note are the NN/LM outreach programs targeting professionals in public health and health policy; the work of the National Information Center on Health Services Research and Health Care Technology (NICHSR) to improve the coverage of public health and health policy in NLM's collection, on-line databases, and Unified Medical Language System Metathesaurus; the Partners in Information Access for Public Health Professionals initiative, which focuses on training, the development of Web-based tools, and Internet connections; and CDC's Information Network for Public Health Officials and Guide to Community Preventive Services projects. In many of these activities, NLM and CDC are collaborating with a number of other government agencies and professional associations. Independently, *all* of the organizations with representatives that participated in the strategy session are involved in efforts to assess training and information needs, provide training, and/or develop new information resources for their members or constituencies.

Considering this state of affairs, the participants in the strategy session sought to complement current activities by identifying high-priority problems that are not being addressed adequately at the present time and for which concerted action could make a meaningful difference. The strategic plan that follows is based on the views presented and discussed at the session, but has not been formally reviewed and adopted by the organizations represented. It provides a road map that shows how access to useful public health and health policy information can be improved in the near term. Although unstated, it assumes that vigorous efforts to connect all public health and health policy professionals to the Internet are essential and will continue.

STRATEGIC PLAN

GOAL I: *Support problem definition and problem solving in the public health and health policy communities by more effectively synthesizing, sifting, and structuring information to meet the needs of various audiences.*

The participants in the strategy session perceived the current presentation and organization of public health and health policy information to be a major problem that hinders the effective use of available information by many professionals in the field. To address this problem, two approaches were suggested. The first approach (Strategies I-1 through I-3) focuses on the published literature in public health and health policy, seeking to make it more useful to practicing professionals. The second approach (Strategies I-4 and I-5) focuses on the electronic organization of diverse types of documents and information resources, seeking to improve awareness of, and access to, such information by the public health and health policy communities.

(I-1) Promote the use of structured abstracts in the public health and health policy literature.

- Review models for structured abstracts in the public health and health policy literature.
- Identify public health and health policy journals that use these abstracts and characterize the extent to which structured abstracts are currently being used.
- Convene editors of public health and health policy journals, as well as readers of these journals, to develop "best models" for abstracts for different types of studies, reviews, and reports.
- Through this group, promote adoption of best model abstracts in the traditional public health and health policy literature and explore where abstracts would be useful and feasible in the grey literature (e.g., in technical reports).

(I-2) Encourage the production of expert syntheses in public health and health policy (e.g., reviews, evidence-based reports, best practices) that include the grey literature and that respond to information needs of different types of professionals in practice.

- Identify the current status of expert syntheses in public health and health policy, including the extent to which they are being done, how they are being disseminated, and the methodologies that are being used to generate them.
- Encourage research to advance the state of knowledge about effective

ways to evaluate and synthesize knowledge in public health and health policy.

(I-3) Improve quality cues for electronic public health and health policy information.*

- Ensure that professionals and organizations in public health and health policy are involved in current standardization activities related to public use data sets and electronic publishing on the World Wide Web.
- If needed, supplement current efforts to improve the description and quality cues of public use data sets through a process involving data set producers and users.

(I-4) Use the Internet to promote awareness of available information resources among professionals in public health and health policy arenas.

- Explore the extent to which public health and health policy Web sites incorporate annotated lists of, and links to, other potentially relevant electronic information resources and publicize the models they use to do so.
- Involve the public health and health policy communities in testing prototypes of Internet-based inventories of statistical data sets being developed by NLM† and other groups. Refine these electronic inventories based on their input.
- Promote awareness among public health and health policy professionals of inventories of informatics training opportunities.

(I-5) Assess the applicability and usefulness to public health and health policy professionals of existing Web-based models for (1) gathering, classifying, and searching for available information; (2) networking and communicating with peers, policymakers, and the public; and (3) registering new information.

- Review existing Web-based systems for organizing electronic information‡ to identify potentially applicable models.

*Strategy I-1 addresses quality cues in the print literature.

†NICHSR is currently developing the Web-based "Database of Health Services Research Tools," which will include information on data sets.

‡Include in this review systems developed by NLM, CDC, the Agency for Health Care Policy and Research, the National Institutes of Health, the Information Network for Public Health Officials projects, The New York Academy of Medicine, the Public Health Foundation, Grantmakers in Health, as well as groups in other disciplines, such as the Committee on Professional Associations for Federal Statistics and the Special Interest Group for Computer Human Interface of the Association for Computer Machinery.

- Convene small, structured meetings of professionals in public health and/or health policy who are working around common themes (e.g., health objectives that are high priorities in many states and localities) to evaluate critically the usefulness of selected models and to provide feedback to librarians and informatics specialists about what works and what would make the models better.
- Disseminate widely what is learned about existing Web-based systems for organizing electronic information, including problems and features that public health and health policy professionals find useful.
- Develop and test models for organizing electronic information in public health and health policy, including evaluations of whether public health and health policy professionals make more use of information provided through such systems and whether doing so enables them to do their work better.

GOAL II: *Train the public health and health policy workforce to use information resources effectively and provide them with the support of skilled librarians and information specialists.*

Another high priority identified by strategy session participants is related to information services training and librarian support, without which public health and health policy professionals are unable to take advantage of emerging information resources. The group suggested that training to address this problem be targeted at four groups: students in public health and health policy degree programs (Strategy II-1), practicing public health and health policy professionals in the field (Strategy II-2), public health and health policy professionals seeking advanced informatics degrees (Strategy II-3), and health sciences librarians (Strategy II-4).

(II-1) Include basic training in information services and information technology in all public health and health policy degree programs.

- Identify the extent to which academic associations in public health and health policy have identified core informatics competencies that should be taught in public health and health policy degree programs and the extent to which the needed courses and training programs are currently being integrated into these curricula.*

*NLM and CDC currently have plans to work with the Association for Health Services Research, the Association of Schools of Public Health, the Association of Teachers of Preventive Medicine, the Public Health and Health Administration Section of the Medical Library Association, and other relevant organizations to determine the extent to which basic training in information services and information technology currently is provided in public health and health policy degree programs.

- Define or refine core informatics competencies in public health and health policy through a process involving academia, professional associations, practitioners, and medical librarians.
 - Encourage the integration of information services and technology throughout the curriculum, providing assignments that test students' abilities to retrieve and judge the quality of electronic information that is related directly to public health and health policy problems.
 - Involve medical librarians in curriculum development and training.
- (II-2) Expand the availability of useful information services, information technology, and informatics training for working public health and health policy professionals and link these professionals to expert information services.*
- Review the content and effectiveness of current informatics training programs for public health and health policy professionals in the field and develop curricula to address identified gaps.
 - Use association meetings, leadership institutes, regional workshops, and distance learning programs to provide training to professionals working in state and local health departments, voluntary health organizations, and boards of health, as well as to national, state, and local policymakers and their staffs.
 - As information needs are identified in the course of needs assessments or research, link public health and health policy professionals to educational opportunities that train them in ways to meet those needs (e.g., through a Web-based inventory of training opportunities).
- (II-3) Increase the pool of public health and health policy practitioners and researchers with advanced academic training in informatics.†
- Define the content of a core curriculum in advanced informatics training for professionals in health services research and public health.
 - Assess availability and gaps in this core curriculum among existing course offerings.

*In conjunction with the Partners in Information Access for Public Health Professionals initiative, NLM expects to fund 8–10 new NN/LM outreach projects targeted to public health professionals in late 1998/early 1999. This is in addition to outreach and training efforts directed toward the health services research and health policy communities. NLM's NICHSR collaborates with the Association for Health Services Research in some of these outreach efforts.

†NLM and the Agency for Health Care Policy and Research currently are planning an invitational workshop to explore opportunities for productive educational and research collaboration among training programs in medical informatics, health services research,

- Encourage the development, as needed, of course offerings to fill identified gaps and develop or expand good programs.
- Fund additional advanced informatics training fellowships targeted to public health and health policy professionals.

(II-4) Train health sciences librarians to provide better service to professionals in public health and health policy by giving them broader exposure to the way these professionals use information to identify and solve problems.*

GOAL III. *Garner support for a sustainable public health/health policy information infrastructure.*

Ultimately, meeting the information needs of the public health and health policy communities depends on making a strong case for investing in the required infrastructure: computers, software, Internet connections, specialized knowledge bases and search engines, syntheses of information, workforce training, and linkages to expert information services. To garner such support, participants at the session suggested several approaches: sharing tactics that work (Strategy III-1), making policymakers and their staffs constituents of this infrastructure (Strategy III-2), and building cross-sectoral coalitions (Strategy III-3).

(III-1) Develop a library of persuasive "advocacy materials."

- Compile successful case studies related to public health and health policy information systems to use with the Congress, state and local legislatures, and executives.
- Compile successful strategies for garnering resources at national, state, and local levels.

(III-2) Involve policymakers in the issue.

- Ask national, state, and local policymakers and their staffs about their health information needs.

and public health and between these training programs and the health care delivery system. A short-term goal is to increase the pool of individuals with the interest and expertise needed to make substantive contributions to the research and development necessary to (1) make clinical information systems useful in health services research and public health, (2) mine large databases for health services research and public health purposes, and (3) study the impact of information systems and technology on cost, quality, and access to health care and on prevention efforts.

*NICHSR has an ongoing program to develop appropriate course offerings and to provide training for health sciences librarians in topics related to health services research and health policy. (For example, at the recent Medical Library Association meeting, NLM sponsored an overview course on health services research and health services information

- Demonstrate to these groups how public health and health policy information and information systems can help them meet their needs (e.g., to monitor health and the health system in an era of devolution or to address practical health problems in communities).
 - Suggest what should be done next (e.g., specific types of demonstration projects) to improve the availability of useful public health and health policy information.
 - Include public health and health policy information issues in briefings for legislative staffers.
- (III-3) Work with other constituents—such as consumer groups, libraries, schools, the media, foundations, managed-care organizations, community-based organizations, and the Coalition for Healthier Cities and Communities—to make a stronger case for information to improve the public's health.

resources and on epidemiology techniques—some course syllabi are available on the NICHSR Web site.) As part of NLM's public health outreach effort, a group is developing an inventory of available public health training offerings valuable for librarians. NLM will fund relevant courses in each region over the next 2 years.