PHS Capacity-Building Strategies

THE U.S. PUBLIC HEALTH SERVICE (PHS) is involved in almost everything that happens in the American health enterprise. The mission of the PHS, broadly stated, is to protect and advance the health of the American people, by

- Conducting and supporting biomedical, behavioral, and health services research and communicating research results to health professionals and the public;
- Preventing and controlling disease, identifying health hazards, and promoting healthful behaviors for the nation's citizens;
- Monitoring the adequacy of health personnel and facilities available to serve the nation's needs;
- Improving the organization and delivery of health services and bringing good health care within the reach of all Americans;
- Ensuring that drugs and medical devices are safe and effective and protecting the public from unsafe foods and unnecessary exposure to radiation;
- Administering block grants to the States for preventive health and health services; alcohol, drug abuse, and mental health services; maternal and child health services; and
- Working with other nations and international agencies on global health problems and their solutions.

The role of the PHS, in carrying out its responsibilities, is one of leadership through cooperation. PHS works in concert with other agencies of the Department of Health and Human Services and of the Federal Government, with State and local health departments, with nonprofit and private sector organizations, with other nations and international organizations, and, of most importance, with the health professionals who provide preventive and clinical services from day-to-day and with the citizens who receive those services.

Overview of the PHS Agencies

The Agency for Health Care Policy and Research (AHCPR), created December 19, 1989, is charged with the mission of enhancing the quality, appropriateness, and effectiveness of health care services and access to such services.

The Agency for Toxic Substances and Disease Registry (ATSDR) mission is to prevent or mitigate adverse human health effects and diminished quality of life resulting from exposure to hazardous substances in the environment.

The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) mission is to find scientifically based solutions to the problems of alcoholism, mental illness, and drug abuse, and to provide national leadership in translating those solutions into practice. ADAMHA is the lead agency for prevention of mental illness and substance abuse.

The Centers for Disease Control (CDC) is the lead agency for prevention within the Public Health Service. The mission of CDC is to improve the quality of life for all Americans by preventing unnecessary disease, disability, and premature death and by promoting healthful behaviors. Specifically, this mission includes the study and prevention of chronic diseases; controllable risk factors, such as poor nutrition, smoking, lack of exercise, high blood pressure, and stress; infectious diseases; and injury or diseases associated with environmental, home, and workplace hazards.

The Food and Drug Administration (FDA) mission is to protect and promote the public health and well-being of consumers by identifying, preventing, and resolving public health problems. FDA is committed to enhancing the development of high quality food, cosmetics, drugs, biologics, medical devices, and radiological products, and to ensure that high quality is maintained in the marketplace.

The Health Resources and Services Administration (HRSA) mission is to support and deliver health services to the disadvantaged and underserved, those with limited access to health care, as well as to develop resources, such as qualified health professionals and facilities, to meet those needs.

The mission of the Indian Health Service (IHS) is to ensure the equity, availability, and accessibility of a comprehensive high quality health care delivery system providing maximum involvement of American Indians and Alaska Natives in defining their health needs, setting priorities for their local areas, and managing and controlling their health program.

The mission of the National Institutes of Health (NIH) is to improve the health of the nation by increasing the understanding of processes underlying human health, disability, and disease; to advance knowledge concerning the health effects of interactions between people and the environment; and to develop and improve methods of preventing, detecting, diagnosing, and treating disease. NIH works towards that mission by conducting research in its own laboratories; supporting the research of non-Federal scientists in universities, medical schools, hospitals, and research institutions throughout this country and abroad; helping in the training of research investigators; and fostering and supporting biomedical communication.

The Office of the Assistant Secretary for Health (OASH) is responsible for oversight, policy, and coordination of activities within PHS.

Capacity-building Strategies of PHS

The 13 summary statements listed highlight the strategies used by PHS to strengthen the core functions of public health.

Assessment strategies. In carrying out PHS responsibility for assessing the health of the nation, Public Health Service agencies dedicate substantial resources to systematically collecting, assembling, analyzing, and distributing health information. Often, the assessment function includes joint efforts with other Federal agencies, State and local health departments, tribal governments, industries, academic health centers, medical care providers, and many other partners.

Assessment at the Federal level includes conducting epidemiologic, laboratory, statistical, biomedical, behavioral, and health services research. In addition, it includes tracking illnesses, injuries, disabilities, and deaths; acute and chronic conditions; and personal, environmental, and occupational risk factors. Preventive and curative health services and their costs are also tracked. Using this health information, legislative and executive bodies at all levels of government develop policies to target programs to specific health needs and then monitor the outcomes of these policies and programs.

Four strategies address the assessment function:

1. Developing health information and information systems that are useful to legislative and executive governmental bodies at the Federal, State, and local levels, and to other groups and organizations

Identifying needs. Working with other Federal agencies, State and local health departments, as well as other participants in the public health system, such as hospitals, health care professionals, and industry, PHS agencies identify those data that are needed for an accurate assessment of the nation's health. Key questions in the process are whether some of this information may be available already, how to fill gaps in information, how to assure information of the highest quality, and how to address special problems. Examples are collecting and interpreting information for small geographic areas or population groups or about sporadic clusters of rare illnesses, injuries, and premature deaths, or conducting epidemiological studies of mental health and substance abuse service needs and usage.

Research. Gaps also remain in knowledge needed to respond to identified problems. Support for the assessment function thus includes research and investigations designed to help define health status or provide approaches for the many sectors of the public health system to use directly. The research

responsibilities of the PHS agencies often involve the development and utilization of large information bases on morbidity, mortality, and associated risk factors, and on health service use and medical practice. Moreover, prevention research often leads to knowledge breakthroughs that can be transferred directly to relevant sectors of the public health system as new prevention technology.

Identifying gaps. Significant gaps remain in the data needed to track national progress in health promotion and disease prevention, especially in the areas of mental, occupational, and environmental health, and access to preventive health services and primary care. The IOM report identifies gaps in assessment capacity that limit State and local health department accomplishments in policy development and assurance.

Uniform National Data Set. The IOM report recommends establishment of a Uniform National Data Set (UNDS) (*8b*). Establishing a UNDS will take years of substantial effort by Federal, State, and local agencies. Within PHS rest both the responsibility and expertise to coordinate this effort. Because of the magnitude of the undertaking, and the breadth of agreement needed among those who will provide and use the UNDS data, PHS will concentrate its initial efforts on a core group of indicators that, with the consensus of State and local participants and collaborators, could then be established as a minimum UNDS. Nothing about the minimum set will impede agencies from collecting other data and ultimate inclusion of these in the UNDS. However, agreement on initial data items for inclusion in the minimum set and agreement to collect these data using common definitions will facilitate the local, State, and national comparisons envisioned by the IOM report.

New systems. The increasing health problems associated with the progressive aging of the United States population, along with the disparate health burdens of minority and low-income communities, underscore the need for data on chronic disease, disability, effectiveness of clinical and preventive services, and quality of life. Morbidity surveillance remains an important component of infectious disease control programs as well as an increasingly important part of developing chronic disease control programs. Similarly, enhanced systems are needed that can effectively monitor and report on product experiences and adverse reactions in drugs, medical devices, biologics, and food. Such reporting systems continue to be enhanced by FDA in cooperation with industry, States, hospitals, and health professionals.

Improved mortality data. The quality and timeliness of data about causes of death can be improved during the 1990s. Mortality data have been the most readily available means for tracking progress toward achieving many national health objectives during the 1980s. In addition, much of what the nation needs to do to strengthen public health in the 1990s will require other types of data. For example, childhood injuries and the disabilities they cause are major targets for prevention efforts. Important sources of national data of these types are the National Health Interview Survey and the National Health and Nutrition Examination Survey.

Detailed data on special groups. Morbidity, mortality, use of and access to health services, and health behaviors vary markedly by age, race, sex, socioeconomic status, and other factors. Many health services and health promotion activities, therefore, must be targeted toward specific groups of people, for example, racial or ethnic minorities, older persons, people with chronic disabilities, workers in certain industries, and the homeless. Although national data sets can now provide general data on major racial and minority groups, as well as older persons and people with chronic disabilities, these need to be expanded to produce sufficiently detailed information about smaller racial, ethnic, and socioeconomic groups. Providing detailed information for these groups at the State and local levels would require further expansion of existing national data sets.

Intra-State comparisons. A critical gap still exists in State and local capacity to collect relevant data that allow comparisons within and among States and with national data. The Healthy People 2000 Objectives will help in identifying what new health information systems will be needed to monitor progress toward achieving these Objectives.

Tribal government and Indian Health Service systems. A variety of data are required as well to base planning and policy development for comprehensive health services to American Indians and Alaska Natives. An Indian Health Service-Tribal government partnership is the focus for information systems planning and enhanced systems capabilities. For example, the Plan emphasizes expanding Resource and Patient Management systems to

meet tribal needs. This comprehensive data base system allows for the integration of patient, patient care, and administrative data. Another emphasis is the development of professional expertise and a tribal epidemiologic data base to define risk population subsets and measure changes in health status.

Health services data. Assessment also bears importantly on the development of policy and the assurance of delivery of health services to the disadvantaged and the underserved, those with limited access to care, as well as the development of resources, qualified health professionals, and facilities. These assessment actions can be categorized in three broad areas: structure, process, and outcome.

Structure refers to questions about the nature and sufficiency of the public health infrastructure and health care delivery infrastructure. One focus for action in this area is developing health information systems that measure the need for health care services. Emphasis in particular is needed on measuring need for primary care among special population groups, such as mothers and children, minority populations, older persons, and those living in rural areas. Another major focus is surveying local public health capacity in every community with significant underserved populations to determine who provides care and participates in the system, and where either improved coordination or additional resources are required.

Strengthening the capacity of State and local health departments, as well as other organizations to collect data or to provide specific health services, requires that we know more about these organizations themselves. In addition, as identified by the PHS Coalition on Work Force Statistics, there are major gaps in data on the knowledge, skills, and abilities of people working in public health and preventive medicine, and about the services they deliver.

Both the IOM report and the mid-course review of the 1990 Objectives give anecdotal information about how well (or how poorly) State and local public health systems work, but reliable data about capacity and performance are not routinely available. A uniform national data set should include information about public health capacity at each level of government and about the characteristics of public health personnel.

Process refers to determining ways to best organize and provide health services and training. An important focus for action is supporting selected research efforts, with emphasis on the problems of maternal and child health, maintaining access to care for rural populations, and cost effectiveness of local health delivery systems.

Outcome refers to measuring the clinical effects of interventions, using outcome measures, or at least intermediate outcome measures.

2. Making health information available to State and local health departments, Federal agencies, and other users, employing appropriate new technology

Timely access to data. All potential users of public health information must have ready and timely access to the data they need. The ideal is to work toward transforming the current patchwork of data systems into a unified health information system for the entire nation. Data in this unified health information system would allow public health researchers to assess trends in diseases, injuries, disabilities, health services access, and premature deaths more accurately than ever before. Much effort by PHS agencies will be required to develop and provide user access to such a unified health information system.

User access. All PHS agencies are working to improve user access to research findings and Federal data sets. PHS supported consensus development conferences assess current medical technologies and attempt to reach as wide an audience as possible. Additional emphasis will be placed on producing user tapes of many survey data bases, such as the National Death Index, and on active dissemination of research and programs to help users translate the latest health services research findings to the practical problems faced by health agencies.

Adapting to change. As new health problems emerge, PHS must maintain the capacity to modify existing information systems and develop new systems to track these problems. For example, PHS supports large data bases that contain much of the world's biomedical literature. These are accessible by personal computers throughout the U.S. and many foreign countries. The acquired immunodeficiency syndrome (AIDS) epidemic demonstrates the need for information technology and suggests how responses can use new technology in tracking AIDS and in using electronic bulletin boards and voice mail to assemble and access summary data, for example.

New information technology. PHS can work with many parts of the public health system to improve skills use and access to current information technologies. These include an array of searchable data bases and advanced information technologies, such as computer assisted telephone interviewing (CATI) and easy-to-use software for health data retrieval, reduction, and analysis. PHS also is working with reporting areas to allow rapid electronic transmission of surveillance data, such as by the National Electronic Telecommunications System for Surveillance (NETSS).

3. Building the capacity of State and local health departments and other relevant organizations to use health information systems to prevent disease, promote health, and increase access to services in their communities

Public health data provide a framework for both policy development and public health action. Thus, strengthening public health requires that public health agencies and others increase their capacity, not only to acquire data, but to analyze, disseminate, and act upon health information.

State centers for health statistics. As health department data use grows in importance, the existing State centers for health statistics should be enhanced and expanded through a program of technology transfer, training, and assistance in data systems development. Such capacity should be maintained to allow for the timely assessment of public health needs and evaluation of outcomes. To serve their own needs and the needs of others, both States and localities may need assistance in small-area data sets and in building local capacity to collect and use data for community needs assessment. Assistance from PHS should emphasize flexible systems that produce comparable data.

Using a Uniform National Data Set. With the establishment of a Uniform National Data Set, local health officers would benefit by being able to evaluate information about their communities in comparison with other communities. Types of data likely to be considered part of the UNDS include morbidity and mortality data, occupational, environmental, and behavioral risk factors, service delivery statistics, and data characterizing local public health agencies and their capacity. Other candidate areas include access, utilization, quality of care, and use and insurance coverage of clinical preventive services. PHS can increase its efforts to help local and State public health agencies, tribal governments, and others to use these data effectively.

Actions PHS needs to take include, for example, (*a*) development of core items in the UNDS; (*b*) standardization of data items, such as age and race; (*c*) achieving linkages across major data sets to be able to determine the broader system-wide implications of program specific policies; and (*d*) delivery of training, technical assistance, and consultation to improve capacity to use these data sets.

4. Evaluating the impact of public health programs and policies

Evaluation needs. Evaluation is needed of how well public health programs are implemented (for example, the quality and efficiency with which services are provided), and of what the programs accomplish (that is, how much disease and how many deaths they prevent, and how they improve the quality of life). PHS needs to emphasize evaluation of health promotion, disease prevention, and primary and case managed care based on outcomes as well as compliance with structure and process expectations.

Broad responsibility for evaluation. State and local health departments, tribal governments, providers of primary care, and other community-based organizations must be able to make scientific assessments of what their communities need and to translate this information into strategic plans and daily tasks that will, with adequate resources, guarantee the benefits of public health for all.

Policy development strategies. Science and understanding of public health practice should be the basis for policy development. This concept should not be taken for granted; it is critical to the credibility and acceptability of sound policy. The Federal role in policy development includes development of a scientific data base, independent assessment, consensus development, and transfer of information to professional groups, service organizations, government organizations, Congress, and the public. Policies should be developed with the active participation of all interested parties, should be specific in scope, should be written in language that is easy to understand, and should be communicated effectively to the public. Three strategies address the policy development function.

1. Developing goals for public health at the national, State, and local levels

Healthy People 2000 Objectives. The Healthy People 2000 Objectives for the Nation, as described in "Healthy People 2000" (*6*), spells out a national plan for improving the health of Americans. The objectives, by being tied to the "Healthy Communities 2000" (*7*) model standards, is meaningful for public health professionals working at all levels of government. A national conference on the Healthy People 2000 Objectives involved all of the relevant partners in the public health system. Their participation in defining these targets already has been frequent and substantial.

Clinical prevention services. The recent U.S. Preventive Services Task Force report, "A Guide to Clinical Preventive Services," is a science-based review that establishes a basis for a minimum set of recommended services (*10*). The Guide provides recommendations on 169 interventions for 60 potentially preventable diseases and conditions. It is intended to help primary care clinicians, including physicians, nurses, nurse practitioners, physician's assistants, and other allied health professionals to select the most appropriate and effective preventive interventions for their patients. One of the Healthy People 2000 Objectives, 21.2, proposes that at least 50 percent of the population receive the recommended services within an appropriate interval. PHS will establish a policy on access to preventive services in PHS-supported programs.

PHS policy mechanisms. These efforts focus on outcomes (for example, reductions in morbidity) and the services needed to accomplish these outcomes. In addition to participating in the development of the Healthy People 2000 Objectives for the Nation, PHS agencies develop public health policies in other ways, including working with advisory committees, coordinating Federal activities for preventing the spread of HIV, issuing guidelines for community preventive health service delivery, improving quality, efficiency, and timeliness of new product review and approval processes, and exploring how to use financial incentives, education, and regulations to assure that the public health services needed to obtain national objectives are delivered. Special population groups, such as minority and low-income families and persons with disabilities, are an important part of the policy agenda for the 1990s.

Building capacity to set goals. PHS agencies have focused additional effort on building capacity to develop goals. Successful implementation of this strategy requires, at the national, State, and community level, both skills and effective processes for goal-setting and for assuring participation of all relevant partners who may affect or be affected by the issue. While the Healthy People 2000 Objectives contain specific health outcomes for American Indians and Alaska Natives, a more formal process for establishing tribal health outcomes must be established. The use of such processes as the Model Standards and the "Groundswell Manual" will be explored further with tribal governments.

State health department roles. As mentioned in the IOM report, State decision makers should be urged to consider carefully the role that health departments at all levels should play in environmental and occupational health, injury control, mental health, and provision of medical care to the indigent.

2. Developing strategies and programs to realize the goals

The existing base of prevention knowledge and the acquisition of new health information help to define what is possible for public health to achieve, but this information must be translated into prevention applications in order to realize the goals. PHS uses a variety of means to accomplish this translation of knowledge into public health practice.

Strategic planning. One important effort is strategy development, typically with indepth participa-

tion of other parts of the public health system. Strategic plans are under development or being implemented for HIV prevention, tuberculosis elimination, minority health, and international health problems, and applications are being requested for a Drug Policy Research Center. PHS agencies, States, and members of the Healthy People 2000 Consortium are to develop implementation plans to achieve the Healthy People 2000 Objectives and to translate the objectives into specific programs and activities. Another important mechanism used by PHS agencies is convening national conferences with key partners, which is most effective when the conferences are convened as working sessions that involve technology transfer, workshops, and feedback from the field.

Coordination of activities. To achieve our objectives in the health care sector, we need to foster coordination of activities, avoid duplication of activities, and increase the likelihood that individuals will have access to the full range of services available. Developing a so-called one-stop shopping approach that offers health, social, and welfare resource services in the same location will require coordination among the Federal, State, local, and private levels. There is a need to increase public health consciousness, within health agencies and educational institutions. For example, schools that train primary care providers and other health professionals need to stress a public health viewpoint. Programs to encourage greater awareness of the public health system and its priorities should be directed to all health professionals, not only public health workers.

Vertical and horizontal strategies. PHS will continue to develop strategies and programs in areas of emerging national priority, such as access to primary care and preventive services, minority health, infant mortality, injury control, chronic disease, tobacco use, improved premarket evaluation of human drugs, and, of course, HIV prevention. In addition, strategies to increase public health capacity to meet these and other Healthy People 2000 priorities, such as the strategies outlined in this "Plan to Strengthen Public Health," will be vigorously pursued. These complementary approaches, often termed vertical and horizontal strategies, should lead to an integrated and systematic effort by PHS to assure that our public health resources are maximally applied to high priority health objectives. Moreover, PHS will continue actively to involve its public health partners in the development and refinement of new strategies and programs.

3. Developing support for public health beyond the traditional circle of partners

New constituencies. To strengthen the public health of the nation, a broad constituency is needed that extends beyond the traditional alliance of official health agencies at the Federal, State, and local levels. This broad constituency includes partners in government agencies responsible for transportation, environmental protection, agriculture, and labor; voluntary agencies; clinical medicine and all components of the health care sector; tribal governments; schools and universities; industry; foundations; professional associations; community organizations; representatives of minority groups; religious groups; insurance companies; elected leaders; the media; and others. Members of this broader constituency determine who will do what and by when to strengthen public health. They also provide key support for securing the additional resources required to strengthen public health. An example of this is the National Coalition for Adult Immunization, which has representation on virtually all of the sectors named.

Assurance strategies. A primary Federal role in assurance is to help State and local health agencies and other relevant authorities determine what preventive and primary care services their communities need and then to help them assure that these services are provided. As described in the IOM report, assurance is a function of government at all levels that cannot be delegated.

For many essential public health services, health departments are not typically the only providers. Responsibility for assurance may not require that health departments provide services directly. It does, however, require that health departments ensure that essential services are delivered. This is the guarantor role, which is the responsibility of assuring that services are delivered, whether they be epidemiologic investigations, disaster relief, or personal health care services. One way for PHS to help fulfill this role is by promoting among Federal, State, and local officials partnerships dedicated to achieving national objectives, thus assuring that the public health services needed in local communities are delivered. Six strategies address the assurance function.

1. Developing and maintaining the capacity of public health agencies at the State and local levels, and other organizations, to plan, implement, and assure the quality of the services that they provide or need to provide

Technical assistance to health agencies. Most PHS agencies provide technical assistance to State and local health agencies that strengthens their capacity to provide services otherwise unavailable, and to provide them without interruptions. Depending on the circumstances, these agencies include public health departments, community health centers, mental health and substance abuse agencies, agencies on aging, environmental and occupational health agencies, and tribal governments. Technical assistance designed to enhance implementation of public health services often comprises an important fraction of the total activities of PHS agencies. The scope of health problems addressed cover virtually all of the priority areas outlined in the Healthy People 2000 Objectives.

HIV prevention capacity. For example, PHS provides national leadership in efforts to prevent the spread of HIV infection. A key goal is to build HIV prevention capacities and promote collaboration among governmental, public, and private agencies and organizations at local, State, regional, national, and international levels. Particular emphasis is needed to build collaboration with groups serving racial and ethnic populations.

Health services capacity. Assistance to build local capacity to provide health services forms a major agenda for ongoing activities at PHS. Infrastructure reform and enhancement to help increase and improve basic facilities, equipment, and other resources, is a key need in supporting routine provision of services in a community-based program. This plan outlines substantial support to States, communities, and tribal governments in their efforts to plan, organize, and deliver health care, especially to underserved and rural area residents, migrant workers, the homeless, mothers and children, and other groups with special needs. Increased community outreach is stressed to foster preventive health behavior and encourage early entry into the health and social services system. Outreach programs are necessary in order for needy populations to best benefit from the facilities, services, and coordinating systems that may be in place. In addition, the plan addresses enhancement of support services, which will facilitate the provision of health care by overcoming racial, cultural, and other barriers to obtaining appropriate health services. These include such approaches as case management and bilingual services directed to specific groups.

Native American health capacity. The PHS mission includes providing resources and technical assistance directly to American Indian and Alaska Native communities, or in partnership with tribal governments. The purpose is to strengthen their capacity to provide services in a comprehensive and uninterrupted manner. This plan includes establishment of a technical support center that will have, as part of its mission, the goal of establishing, in partnership with American Indian and Alaska Native communities, capacity-building strategies and comprehensive health programs. The development and use of self-assessment tools for tribal organizations and urban Indian organizations will allow for focused evaluation of the progress toward achieving the capacity-building strategies.

Using objectives and plans. Under this plan, PHS will increase its assistance to public health departments to set and achieve measurable objectives and enlist the interest and support of community decision makers in developing public health services. The Healthy People 2000 Conference, held

in Washington, DC, September 6–7, 1990, in collaboration with the Healthy People 2000 Consortium, will help maintain the momentum generated in setting objectives and will highlight implementation efforts.

Industry capacity. As indicated in the introduction, the public health system goes beyond the health institutions, such as health agencies and health care providers, to include the public, which is in the roles of consumer, audience, client, and ally, and also to include industries that produce and distribute products. PHS works with industries to guide them in developing their capacity to address public health needs, such as assistance to deal with critical problems on a fast track, for example AIDS, and to bolster commercial capacity to deliver safe and effective health products on an ongoing basis. Hence, capacity-building efforts include regulating and educating industries in a manner which enhances their capacity to deliver healthful products. It also entails educating health professionals and consumers in appropriate product use.

Health communications capacity. PHS has strong interests in identifying and reaching vulnerable groups and in linking preventive services for these groups with followup medical care and social services. Success in reaching these vulnerable groups as well as being able to work with political officials and community leaders often depends on effectively communicating public health messages in newspapers and on radio and television broadcasts. PHS should increase its efforts to work with its public health constituencies to improve the use of media, both to increase communication of specific health messages and to raise community awareness and support for strengthened public health capacity. Additional actions are proposed in this area.

Translating science. The ultimate goal of federally supported research is to improve public health. Yet, the transition from science to action is far from automatic. In order to have an impact on medical and public health practices that affect health, research results must be easy to obtain and readily applicable. For example, the lay public must be able to find important health-related information in the communications media they know about and use regularly. Results must also be translated into concrete, relevant action steps. For public health and health care professionals, publication of research findings is only the first step in making new information accessible. Professionals need to understand and accept a study's implications for their practice and may need to acquire new knowledge or develop new skills to apply advances effectively. PHS has a significant role to play in these research translation and health communications areas.

2. Helping to obtain the fiscal resources to enable public health agencies at the State and local levels, and other organizations, to assure delivery of public health services and to enhance the capacity of the public health infrastructure

Sufficient and stable financial support is essential for strengthening public health. This support may include increased use of fees, better access to primary care and preventive services with increased third party reimbursement, an increased role for the private sector, and flexibility in uses of public financing.

Federal funding to achieve national priorities. The majority of health department resources are State and local funds. States reported that 29 percent of their expenditures in fiscal year 1987 were from Federal sources, notably the Special Supplemental Food Program for Women, Infants, and Children (WIC), of the Department of Agriculture; the Maternal and Child Health Services Block Grant Program of HRSA; the Preventive Health and Health Services Block Grant Program of CDC; other block grant programs; and a number of specific disease control and prevention grants authorized under the PHS Act, such as those for control of sexually transmitted diseases and for immunization. The IOM report recommends that the Federal public health obligation focus on provision of funds to strengthen capacity for services, especially to achieve an adequate capacity to achieve national objectives. While ADAMHA, CDC, and HRSA are the major State and local funding sources in the PHS, virtually every PHS agency administers funding programs for these purposes.

3. Helping to ensure an adequate supply of appropriately trained health personnel

Personnel shortages. Adequate numbers of properly trained staff are essential for strengthening public health. In the Department's annual report to Congress on the supply of medical and public

health personnel, concern is noted both on the limited data bases regarding numbers, types, and skill levels of public health workers, and on the evident shortage of appropriately trained health and behavioral workers, based on the existing information.

Incentive approaches. Actions PHS will take include providing incentives to ensure that there are sufficient numbers of appropriately trained health professionals to provide services, particularly to meet the needs of underserved areas. Particular areas of focus include earlier exposure and motivation to provide primary care in underserved areas, expanded scholarship and appropriate cost-effective loan repayment, broader use of residency programs, focused training for minorities, and improved compensation and working conditions in health systems in underserved areas. In partnership with tribal governments, continued dissemination of information and training are crucial to assure that competent professionals will be available. The training must be focused to develop the professional competence of American Indian and Alaska Native people.

Science training. Another aspect of capacity building is science training, including the continuing ability to assess, to study interventions, and to develop scientific data bases for policy development. These training activities are essential to assure that skilled professionals are available to accomplish these tasks. In addition, PHS is developing new strategies to enhance science education and attract new talent, including minorities and women, into health fields.

Actions by others. PHS's capacity building efforts would be enhanced if State and local agencies and academic health centers make progress on some of the following recommendations of the IOM Report. For example, the report cites a need to improve personnel systems and training programs and to ensure that training is widely available. Salaries and benefits must be structured so that public health agencies can hire and retain qualified professionals and permit these professionals to move among different levels of government without losing employment benefits. New personnel categories may be needed in some areas. Training, whether conducted by schools of public health, other programs, or on the job, must follow high standards and provide the knowledge, skills, and abilities needed to develop and carry out public health programs.

Training needs. Through technical assistance and training programs, PHS works with numerous constituencies to assure that public health personnel have the knowledge, skills, and abilities to deliver the public health services their communities need. PHS agencies, the Association of Schools of Public Health, and organizations whose members hire public health-trained staff are collaborating on a Faculty-Agency Forum. Its purpose is to estimate the skills health workers will need and the numbers and types that will be needed, as a guide to future public health training.

Field assignments. Direct assignment of PHS personnel is a significant capacity-building effort. It is essential that the training be keyed to the knowledge, skills, and abilities these workers will require for changing assignments in the 1990s.

4. Collaborating with other Federal agencies on effective ways, including regulatory approaches, to address and solve problems in service delivery

Joint agency approaches. The PHS agencies have responsibilities for different aspects of public health services and protection. There are many opportunities for PHS agencies to collaborate on approaches in areas where potential health status improvements are missed because of problems in service delivery. For example, HRSA has lead responsibility to secure an integrated approach (one-stop shopping) to services for pregnancy and infant health. Other areas of collaboration include scientific investigations (such as biomedical, behavioral, epidemiologic, laboratory, and statistical research) and prevention applications research (such as method development, evaluation projects, and demonstration studies). PHS and the Environmental Protection Agency should discuss how to strengthen the linkages of public health agencies with environmental agencies at all levels of government. Continued joint efforts also are needed in risk assessment, risk management, and scientific investigations in support of regulatory responsibilities.

5. Broadening the partnership for assuring the delivery of public health services

The public health system requires the actions of many partners, including labor organizations, private industry, and physicians in private medical

practice. For example, FDA seeks increasingly to work with industries to guide them in the development of their capacity to address public health needs. Capacity building, in this case, involves helping industry to deal with critical public health problems on a fast track (such as in the case of the AIDS epidemic) and to bolster commercial capability to deliver safe and effective health products on an ongoing basis.

Promoting dialogue. Similarly, the emergence of new prevention technologies and newly recognized health problems demands new partnerships. Demographic and societal changes, such as the aging of the population and the changing composition of the American work force, also mandate that public health agencies broaden their support. PHS agencies have an important role in promoting dialogue and providing appropriate forums to gain support for strengthened public health action.

6. Providing health information and related services directly to the public.

Direct services. These services include preventing the importation of disease and unsafe products, educating the public about health hazards (such as the risks of acquiring HIV), guaranteeing a safe food supply as well as safe and effective medical drugs and devices, and certifying personal protective devices used in occupational health, such as respirators. Several PHS agencies maintain extensive public information and communication programs.

Tribal health services. PHS has historically provided comprehensive, integrated health services to American Indian and Alaska Native people directly through federally operated medical and public health programs. While the goal of self-determination is being pursued, there will continue to be a need to provide medical, mental health, dental, chemical dependency, environmental health, and other public health services directly in a variety of locations. Assurance of the availability and quality of services is a direct Federal role in these circumstances.

Summary

This plan describes a strategic framework that, if fully implemented, will strengthen the capacity of the public health system at the local, State, and Federal levels to carry out the core functions of public health. The following section includes capacity-building actions that PHS agencies are undertaking to fulfill the PHS mission.