

Free Executive Summary



The Future of the Public's Health in the 21st Century

Committee on Assuring the Health of the Public in the 21st Century

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The anthrax incidents following the 9/11 terrorist attacks put the spotlight on the nation's public health agencies, placing it under an unprecedented scrutiny that added new dimensions to the complex issues considered in this report. The Future of the Public's Health in the 21st Century reaffirms the vision of Healthy People 2010, and outlines a systems approach to assuring the nation's health in practice, research, and policy. This approach focuses on joining the unique resources and perspectives of diverse sectors and entities and challenges these groups to work in a concerted, strategic way to promote and protect the public's health. Focusing on diverse partnerships as the framework for public health, the book discusses: The need for a shift from an individual to a population-based approach in practice, research, policy, and community engagement. The status of the governmental public health infrastructure and what needs to be improved, including its interface with the health care delivery system. The roles nongovernment actors, such as academia, business, local communities and the media can play in creating a healthy nation. Providing an accessible analysis, this book will be important to public health policy-makers and practitioners, business and community leaders, health advocates, educators and journalists.

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Executive Summary

The beginning of the twenty-first century provided an early preview of the health challenges that the United States will face in the coming decades. The systems and entities that protect and promote the public's health, already challenged by problems like obesity, toxic environments, a large uninsured population, and health disparities, must also confront emerging threats, such as antimicrobial resistance and bioterrorism. The social, cultural, and global contexts of the nation's health are also undergoing rapid and dramatic change. Scientific and technological advances, such as genomics and informatics, extend the limits of knowledge and human potential more rapidly than their implications can be absorbed and acted upon. At the same time, people, products, and germs migrate and the nation's demographics are shifting in ways that challenge public and private resources. Against this background, the Committee on Assuring the Health of the Public in the 21st Century was charged with describing a framework for assuring the public's health in the new century.

The report reviews national health achievements in recent decades, but also examines the hidden vulnerabilities that undercut current health potential, and that, if not addressed, could produce a decline in the future health status of the American people. The concept of health as a public good is discussed, as is the fundamental duty of government to promote and protect the health of the public. The report describes the rationale for multisectoral engagement in partnership with government and the roles that different actors can play to support a healthy future for the American people. Finally, it describes major trends that are likely to influence the nation's health in the coming decades.

The committee's work began with a vision—*healthy people in healthy communities*. This is not a new idea, but it is the guiding vision of *Healthy People 2010*, the health agenda for the nation. The committee embraced that vision and began discussing who should be responsible for assuring America's health at the beginning of the twenty-first century—a duty historically assigned to governmental public health agencies, through the work of national, state, tribal, and local departments of health. Current realities indicate that this is no longer sufficient. On the one hand, government has a unique responsibility to promote and protect the health of the people built on a constitutional, theoretical, and practical foundation. However, governmental public health agencies alone cannot assure the nation's health. First, public resources are finite, and the public's health is just one of many priorities. Second, democratic societies define and limit the types of actions that can be undertaken only by government and reserve other social choices for private institutions. Third, the determinants that interact to create good or ill health derive from various sources and sectors. Among other factors, health is shaped by laws and policies, employment and income, and social norms and influences (McGinnis et al., 2002). Fourth, there is a growing recognition that individuals, communities, and various social institutions can form powerful collaborative relationships to improve health that government alone cannot replicate.

Health is a primary public good because many aspects of human potential such as employment, social relationships, and political participation are contingent on it. In view of the value of health to employers, business, communities, and society in general, creating the conditions for people to be healthy should also be a shared social goal. The special role of government must be allied with the contributions of other sectors of society. This report builds on the foundation of the *Future of Public Health* report, which asserted that public health is “what we as a society do collectively to assure the conditions in which people can be healthy” (IOM, 1988). In addition to assessing the state and needs of the governmental public health infrastructure—the backbone of the public health system—this report also focuses on the roles and actions of other entities that could be potential partners within such a system.

The emphasis on an intersectoral public health system does not supersede the special duty of the governmental public health agencies but, rather, complements it with a call for the contributions of other sectors of society that have enormous power to influence health. A public health system would include the governmental public health agencies, the health care delivery system, and the public health and health sciences academia, sectors that are heavily engaged and more clearly identified with health activities. The committee has also identified communities and their many entities (e.g., schools, organizations, and religious congregations), businesses and

employers, and the media as potential actors in the public health system. Businesses play important, often dual, roles in shaping population health. In the occupational setting, through environmental impacts, as members of communities, and as purveyors of products available for mass consumption, businesses may undermine health by polluting, spreading environmental toxicants, and producing or marketing products detrimental to health. However, businesses can and often do take steps to contribute to population health through efforts such as facilitating economic development and regional employment and workplace-specific contributions such as health promotion and the provision of health care benefits. The media is also featured because of its deeply influential role as a conduit for information and as a shaper of public opinion about health and related matters.

The events of the autumn of 2001 placed the governmental public health infrastructure under unprecedented public and political scrutiny. Although motivated by concern about its preparedness to respond to a potential crisis, this scrutiny offered an opportunity to assess the overall adequacy of the governmental public health infrastructure to promote and protect the public's health in the new century. This status check revealed facts that were well known to the public health community but that surprised many policy makers and much of the public. The governmental public health infrastructure has suffered from political neglect and from the pressure of political agendas and public opinion that frequently override empirical evidence. Under the glare of a national crisis, policy makers and the public became aware of vulnerable and outdated health information systems and technologies, an insufficient and inadequately trained public health workforce, antiquated laboratory capacity, a lack of real-time surveillance and epidemiological systems, ineffective and fragmented communications networks, incomplete domestic preparedness and emergency response capabilities, and communities without access to essential public health services. These problems leave the nation's health vulnerable—and not only to exotic germs and bioterrorism. The health of the public is also at risk when social and other environmental conditions undermine health, including toxic water, air, and housing; inaccurate and confusing health information; poverty; a lack of health care; and unequal opportunities for health. Government's partners, potential actors in the public health system, can contribute to assuring population health by helping to change the conditions for health in communities, at work, and through the media.

AREAS OF ACTION AND CHANGE

To address the present and future challenges faced by the nation's public

health system—including potential actors in the private and nonprofit sectors—this report proposes six areas of action and change to be undertaken by all who work to assure population health. These areas include

1. Adopting a population health approach that considers the multiple determinants of health;
2. Strengthening the governmental public health infrastructure, which forms the backbone of the public health system;
3. Building a new generation of intersectoral partnerships that also draw on the perspectives and resources of diverse communities and actively engage them in health action;
4. Developing systems of accountability to assure the quality and availability of public health services;
5. Making evidence the foundation of decision making and the measure of success; and
6. Enhancing and facilitating communication within the public health system (e.g., among all levels of the governmental public health infrastructure and between public health professionals and community members).

FINDINGS AND RECOMMENDATIONS

Governmental Public Health Infrastructure

Finding: Public health law at the federal, state, and local levels is often outdated and internally inconsistent. This leads to inefficiency and a lack of coordination and may even pose a danger in a crisis requiring an immediate and effective public health response. Pioneering work at the national level has gone into developing models and guidance to assist states in reforming their public health laws as appropriate for their unique legal structures and public health preparedness needs, but a more comprehensive effort is needed.

1. **The Secretary of the Department of Health and Human Services (DHHS), in consultation with states, should appoint a national commission to develop a framework and recommendations for state public health law reform. In particular, the national commission would review all existing public health law as well as the Turning Point¹ Model State Public Health Act and the Model State**

¹ Turning Point, a program funded by the Robert Wood Johnson and the W. K. Kellogg foundations, works to strengthen the public health infrastructure at the local and state levels across the United States and spearheads the Turning Point National Collaborative on Public Health Statute Modernization.

Emergency Health Powers Act²; provide guidance and technical assistance to help states reform their laws to meet modern scientific and legal standards; and help foster greater consistency within and among states, especially in their approach to different health threats (Chapter 3).

Finding: The public health workforce must have appropriate education and training to perform its role. Today, a majority of governmental public health workers have little or no training in public health. Enhancing the knowledge and skills of governmental public health workers and nongovernmental workers who perform public health functions is necessary to ensure that essential public health services are competently delivered. Assessing and strengthening competence will help to ensure workforce preparedness, nurture leadership, and assure the quality of public health services.

2. All federal, state, and local governmental public health agencies should develop strategies to ensure that public health workers who are involved in the provision of essential public health services demonstrate mastery of the core public health competencies appropriate to their jobs. The Council on Linkages between Academia and Public Health Practice³ should also encourage the competency development of public health professionals working in public health system roles in for-profit and nongovernmental entities (Chapter 3).
3. Congress should designate funds for the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA) to periodically assess the preparedness of the public health workforce, to document the training necessary to meet basic competency expectations, and to advise on the funding necessary to provide such training (Chapter 3).
4. Leadership training, support, and development should be a high priority for governmental public health agencies and other organi-

² The Model State Emergency Health Powers Act (MSEHPA) provides states with the powers needed “to detect and contain bioterrorism or a naturally occurring disease outbreak. Legislative bills based on the MSEHPA have been introduced in 34 states” (Gostin et al., 2002).

³ The Council on Linkages between Academia and Public Health Practice is comprised of leaders from national organizations representing the public health practice and academic communities. The Council grew out of the Public Health Faculty/Agency Forum, which developed recommendations for improving the relevance of public health education to the demands of public health in the practice sector. The Council and its partners have focused attention on the need for a public health practice research agenda.

zations in the public health system and for schools of public health that supply the public health infrastructure with its professionals and leaders (Chapter 3).

5. A formal national dialogue should be initiated to address the issue of public health workforce credentialing. The Secretary of DHHS should appoint a national commission on public health workforce credentialing to lead this dialogue. The commission should be charged to determine if a credentialing system would further the goal of creating a competent workforce and, if applicable, the manner and time frame for implementation by governmental public health agencies at all levels. The dialogue should include representatives from federal, state, and local public health agencies, academia, and public health professional organizations who can represent and discuss the various perspectives on the workforce credentialing debate (Chapter 3).

Finding: Developments in communication and information technologies present both opportunities and challenges to attaining the vision of healthy people in healthy communities. Harnessing the potential of these technologies will enable public health officials to collect and disseminate information more efficiently, improve the effectiveness of public health interventions, and enable the public to understand what services should be provided, and thus what they have the right to expect from their public officials.

6. All partners within the public health system should place special emphasis on communication as a critical core competency of public health practice. Governmental public health agencies at all levels should use existing and emerging tools (including information technologies) for effective management of public health information and for internal and external communication. To be effective, such communication must be culturally appropriate and suitable to the literacy levels of the individuals in the communities they serve (Chapter 3).

Finding: Existing information networks make it difficult, and sometimes impossible, for governmental public health agencies to exchange information and communicate effectively with the health care delivery system for the purposes of surveillance, reporting, and appropriately responding to threats to the public's health. Clear communication and enhanced information gathering, processing, and dissemination mechanisms will increase the accountability and effectiveness of governmental public health agencies and other public health system actors. Individuals and communities may also

benefit by being able to contribute and collect information directly relevant to them.

7. The Secretary of DHHS should provide leadership to facilitate the development and implementation of the National Health Information Infrastructure (NHII). Implementation of NHII should take into account, where possible, the findings and recommendations of the National Committee on Vital and Health Statistics (NCVHS) working group on NHII. Congress should consider options for funding the development and deployment of NHII (e.g., in support of clinical care, health information for the public, and public health practice and research) through payment changes, tax credits, subsidized loans, or grants (Chapter 3).

Finding: At this time, DHHS lacks a system for conducting regular assessments of the adequacy and capacity of the governmental public health infrastructure. Such assessments are urgently needed to keep Congress and the public informed and would play an important role in supporting a regular process of assessment and evaluation at state and local public health agency levels.

8. DHHS should be accountable for assessing the state of the nation's governmental public health infrastructure and its capacity to provide the essential public health services to every community and for reporting that assessment annually to Congress and the nation. The assessment should include a thorough evaluation of federal, state, and local funding for the nation's governmental public health infrastructure and should be conducted in collaboration with state and local officials. The assessment should identify strengths and gaps and serve as the basis for plans to develop a funding and technical assistance plan to assure sustainability. The public availability of these reports will enable state and local public health agencies to use them for continual self-assessment and evaluation (Chapter 3).

Finding: The capacity of the nation's public health laboratories should be assessed. Every state has at least one state public health laboratory to support infectious disease surveillance and other public health activities. About 60 percent of the 3,000 local health departments provide some laboratory services. Enhanced funding has been provided to prepare states and some urban areas for bioterrorism and other emergencies. The adequacy of these funds and how effectively they are being used to address laboratory capacity problems are unknown. The appropriate funding lev-

els to sustain current capacity and enable the laboratories to integrate new technologies as they emerge have not been determined and require investigation.

9. DHHS should evaluate the status of the nation's public health laboratory system, including an assessment of the impact of recent increased funding. The evaluation should identify remaining gaps, and funding should be allocated to close them. Working with the states, DHHS should agree on a base funding level that will maintain the enhanced laboratory system and allow the rapid deployment of newly developed technologies (Chapter 3).

Finding: After adequate funding levels are determined for the governmental public health infrastructure, the appropriate investment level is needed to assure that every community has access to the essential public health services.

10. DHHS should develop a comprehensive investment plan for a strong national governmental public health infrastructure with a timetable, clear performance measures, and regular progress reports to the public. State and local governments should also provide adequate, consistent, and sustainable funding for the governmental public health infrastructure (Chapter 3).

Finding: Current funding structures frequently burden the work of state and local public health jurisdictions with administrative requirements. "Stove-pipe" (i.e., categorical) funding is often inflexible, at times discouraging evidence-based planning and use of funds or the blending of resources in special circumstances.

11. The federal government and states should renew efforts to experiment with clustering or consolidation of categorical grants for the purpose of increasing local flexibility to address priority health concerns and enhance the efficient use of limited resources (Chapter 3).

Finding: Although the health care delivery system has several mechanisms for accreditation and quality assurance, the committee found that there are no such structures for the governmental public health infrastructure. Accreditation mechanisms may help to ensure the robustness and efficiency of the governmental public health infrastructure, assure the quality of public health services, and transparently provide information to the public about the quality of the services delivered.

12. The Secretary of DHHS should appoint a national commission to consider if an accreditation system would be useful for improving and building state and local public health agency capacities. If such a system is deemed useful, the commission should make recommendations on how it would be governed and develop mechanisms (e.g., incentives) to gain state and local government participation in the accreditation effort. Membership on this commission should include representatives from CDC, the Association of State and Territorial Health Officials, the National Association of County and City Health Officials, and nongovernmental organizations (Chapter 3).

Finding: Research is needed to guide policy decisions that shape public health practice. The committee had hoped to provide specific guidance elaborating on the types and levels of workforce, infrastructure, related resources, and financial investments necessary to ensure the availability of essential public health services to all of the nation's communities. However, such evidence is limited, and there is no agenda or support for this type of research, despite the critical need for such data to promote and protect the nation's health.

13. CDC, in collaboration with the Council on Linkages between Academia and Public Health Practice and other public health system partners, should develop a research agenda and estimate the funding needed to build the evidence base that will guide policy making for public health practice (Chapter 3).

Finding: Effective interagency collaboration on health issues at the federal level is crucial but difficult because of the specialized nature of agency structures and responsibilities. Furthermore, many agencies not traditionally associated with health issues make policy and manage programs with potential implications for health. More effective coordinating structures are needed to reduce obstacles to the effective use of federal regulatory and standard-setting powers in health. Mechanisms are needed to develop collaborative relationships and to harmonize regulations within DHHS, across federal agencies, and among federal state and local governments to assure effective action for protecting the population's health.

14. The Secretary of DHHS should review the regulatory authorities of DHHS agencies with health-related responsibilities to reduce overlap and inconsistencies, ensure that the department's management structure is best suited to coordinate among agencies within DHHS with health-related responsibilities, and, to the extent possible, sim-

plify relationships with state and local governmental public health agencies. Similar efforts should be made to improve coordination with other federal cabinet agencies performing important public health services, such as the Department of Agriculture and the Environmental Protection Agency (Chapter 3).

Finding: The success of the public health system depends in part on collaboration among all levels of government. Although noting the importance of preserving state autonomy and the ability to address local circumstances, the National Governors' Association (1997) acknowledged a need for a federal role in certain domestic issues—where issues are national in scope and where the national interest is at risk—and to help states meet the needs of special populations. Collaboration on such issues would also improve the alignment of policy across federal agencies. The committee believes that a more formal entity could facilitate the link between the Secretary of DHHS and state health officers for the purpose of improving communication, coordination, and collaborative action on a national health agenda.

15. Congress should mandate the establishment of a National Public Health Council. This National Public Health Council would bring together the Secretary of DHHS and state health commissioners at least annually to

- Provide a forum for communication and collaboration on action to achieve national health goals as articulated in *Healthy People 2010*;
- Advise the Secretary of DHHS on public health issues;
- Advise the Secretary of DHHS on financing and regulations that affect governmental public health capacity at the state and local levels;
- Provide a forum for overseeing the development of an incentive-based federal–state-funded system to sustain a governmental public health infrastructure that can assure the availability of essential public health services to every American community and can monitor progress toward this goal (e.g., through report cards);
- Review and evaluate the domestic policies of other cabinet agencies for their impact on national health outcomes (e.g., through health impact reports) and on the reduction and elimination of health disparities; and
- Submit an annual report on their deliberations and recommendations to Congress.

The Council should be chaired by the Secretary of DHHS and cochaired by a state health director on a rotating basis. An appropriately resourced secretariat should be established in the Office of the Secretary to ensure that the Council has access to the information and expertise of all DHHS agencies during its deliberations (Chapter 3).

Community

Finding: Community organizations are close to the populations they serve and are therefore a crucial part of the public health system for identifying needs and responses and evaluating results. Communication and collaboration between community organizations and health departments are often limited, leading to the duplication of effort and an inefficient use of resources. Moreover, foundation and governmental funding mechanisms are often not structured in ways that encourage broad community engagement and leadership at all stages. Communities are sometimes brought into the effort late, after planning has begun, or they are simply used as informants or subjects of research. The goal of achieving lasting change for health improvement should guide community groups and public and private funders.

16. Local governmental public health agencies should support community-led efforts to inventory resources, assess needs, formulate collaborative responses, and evaluate outcomes for community health improvement and the elimination of health disparities. Governmental public health agencies should provide community organizations and coalitions with technical assistance and support in identifying and securing resources as needed and at all phases of the process (Chapter 4).
17. Governmental and private-sector funders of community health initiatives should plan their investments with a focus on long-lasting change. Such a focus would include realistic time lines, an emphasis on ongoing community engagement and leadership, and a final goal of institutionalizing effective project components in the local community or public health system as appropriate (Chapter 4).

Health Care Delivery System

Finding: Health care is an important determinant of population and individual health. Although most Americans receive the health care services that they require, the approximately 41 million people who have no health

insurance experience difficulty in accessing care and are often unable to obtain needed services. Furthermore, the services that they do receive may not be timely, appropriate, or well coordinated. Recent Institute of Medicine (IOM) reports have found that health insurance coverage is associated with better health outcomes for children and adults. It is also associated with having a regular source of care and with the greater and more appropriate use of health services. These factors, in turn, improve the likelihood of disease screening and early detection, the management of chronic illnesses, and the effective treatment of acute conditions. The ultimate result is better health for children, adults, and families. Increased health insurance coverage would likely reduce racial and ethnic disparities in the use of appropriate health care services and may also reduce disparities in morbidity and mortality among ethnic groups.

- 18. Adequate population health cannot be achieved without making comprehensive and affordable health care available to every person residing in the United States. It is the responsibility of the federal government to lead a national effort to examine the options available to achieve stable health care coverage of individuals and families and to assure the implementation of plans to achieve that result (Chapter 5).**

Finding: In addition to a lack of health care coverage, many people are covered by health insurance plans that do not include coverage for preventive health care, mental health, substance abuse treatment, and dental health services or require copayments that lessen access (Allukian, 1999; King, 2000; Solanki et al., 2000). This causes many individuals to live with undiagnosed mental illness and others to go without treatment (DHHS, 1999). Many children and adults suffer from oral health conditions that may affect their overall health status (DHHS, 2000). These often-neglected services constitute gaps in efforts to assure the health of the population.

- 19. All public and privately funded insurance plans should include age-appropriate preventive services as recommended by the U.S. Preventive Services Task Force and provide evidence-based coverage of oral health, mental health, and substance abuse treatment services (Chapter 5).**

Finding: As the public health system strains to meet the challenges posed by increasing costs, an aging population, and a range of threats to health, it will need a meaningful partnership with the health care delivery sector to attain their shared population health goals.

20. **Bold, large-scale demonstrations should be funded by the federal government and other major investors in health care to test radical new approaches to increase the efficiency and effectiveness of health care financing and delivery systems. The experiments should effectively link delivery systems with other components of the public health system and focus on improving population health while eliminating disparities. The demonstrations should be supported by adequate resources to enable innovative ideas to be fairly tested (Chapter 5).**

Businesses and Employers

Finding: Employers play a major role in the health of their employees and the population at large through their impacts on natural and built environments, through workplace conditions, and through their relationship with communities. For example, employers may be an important part of a region's economic development, which, in turn, may support health improvement. In addition, low unemployment rates and vibrant businesses are likely to mean better housing, higher incomes, and improved overall quality of life within communities. Furthermore, employers facilitate access to health care services by purchasing health care for their employees.

21. **The federal government should develop programs to assist small employers and employers with low-wage workers to purchase health insurance at reasonable rates (Chapter 6).**
22. **The corporate community and public health agencies should initiate and enhance joint efforts to strengthen health promotion and disease and injury prevention programs for employees and their communities. As an early step, the corporate and governmental public health community should:**
 - a. **Strengthen partnership and collaboration by**
 - **Developing direct linkages between local public health agencies and business leaders to forge a common language and understanding of employee and community health problems and to participate in setting community health goals and strategies for achieving them, and**
 - **Developing innovative ways for the corporate and governmental public health communities to gather, interpret, and exchange mutually meaningful data and information, such**

as the translation of health information to support corporate health promotion and health care purchasing activities.

- b. Enhance communication by
 - Developing effective employer and community communication and education programs focused on the benefits of and options for health promotion and disease and injury prevention, and
 - Using proven marketing and social marketing techniques to promote individual behavioral and community change.
- c. Develop the evidence base for workplace and community interventions through greater public, private, and philanthropic investments in research to extend the science and improve the effectiveness of workplace and community interventions to promote health and prevent disease and injury.
- d. Recognize business leadership in employee and community health by elevating the level of recognition given to corporate investment in employee and community health. The Secretaries of DHHS and the Department of Commerce, along with business leaders (e.g., chambers of commerce and business roundtables), should jointly sponsor a Corporate Investment in Health Award. The award would recognize private-sector entities that have demonstrated exemplary civic and social responsibility for improving the health of their workers and the community (Chapter 6).

Media

Finding: Both the news and entertainment media shape public opinion and influence decision making, with potentially critical effects on population health. Moreover, public health efforts and especially the activities of governmental public health agencies often receive and attract little media attention, explaining in part the widespread lack of understanding about the concepts and content of public health activities (i.e., population-level health promotion and protection, as well as disease prevention). Editors and journalists and medical and public health officials generally do not understand each other's perspectives, methods, and objectives. This lack of understanding frequently leads to the provision of inaccurate or inadequate health information and missed opportunities to communicate effectively to the public. The journalism and public health communities have identified a

clear need for training, research, and dialogue to improve their ability to accurately inform and communicate with the public, communities, and other actors in the public health system.

23. An ongoing dialogue should be maintained between medical and public health officials and editors and journalists at the local level and their representative associations nationally. Furthermore, foundations and governmental health agencies should provide opportunities to develop and evaluate educational and training programs that provide journalists with experiences that will deepen their knowledge of public health subject matter and provide public health workers with a foundation in communication theory, messaging, and application (Chapter 7).
24. The television networks, television stations, and cable providers should increase the amount of time they donate to public service announcements (PSAs) as partial fulfillment of the public service requirement in their Federal Communications Commission (FCC) licensing agreements (Chapter 7).
25. The FCC should review its regulations for PSA broadcasting on television and radio to ensure a more balanced broadcasting schedule that will reach a greater proportion of the viewing and listening audiences (Chapter 7).
26. Public health officials and local and national entertainment media should work together to facilitate the communication of accurate information about disease and about medical and health issues in the entertainment media (Chapter 7).
27. Public health and communication researchers should develop an evidence base on media influences on health knowledge and behavior, as well as on the promotion of healthy public policy (Chapter 7).

Academia

Finding: Academia provides degree and continuing education to a significant proportion of the public health workforce. Consistent with the previous recommendations to assess workforce competency and develop strategies to overcome deficits, changes are needed in both academic settings and curricula and in the financial support available to students training for careers in public health.

28. Academic institutions should increase integrated interdisciplinary learning opportunities for students in public health and other related health science professions. Such efforts should include not only multidisciplinary education but also interdisciplinary education and appropriate incentives for faculty to undertake such activities (Chapter 8).
29. Congress should increase funding for HRSA programs that provide financial support for students enrolled in public health degree programs through mechanisms such as training grants, loan repayments, and service obligation grants. Funding should also be provided to strengthen the Public Health Training Center program to effectively meet the educational needs of the existing public health workforce and to facilitate public health worker access to the centers. Support for leadership training of state and local health department directors and local community leaders should continue through funding of the National and Regional Public Health Leadership Institutes and distance-learning materials developed by HRSA and CDC (Chapter 8).

Finding: The committee finds that health-related research is disproportionately biomedical, focused on the health and health problems of individuals. Funding and incentives for population-level research and community-based prevention research are low, as these are not priority areas within academia or the governmental public health infrastructure.

30. Federal funders of research and academic institutions should recognize and reward faculty scholarship related to public health practice research (Chapter 8).
31. The committee recommends that Congress provide funds for CDC to enhance its investigator-initiated program for prevention research while maintaining a strong Centers, Institutes, and Offices (CIO)-generated research program. CDC should take steps that include
 - Expanding the external peer review mechanism for review of investigator-initiated research;
 - Allowing research to be conducted over the more generous time lines often required by prevention research; and
 - Establishing a central mechanism for coordination of investigator-initiated proposal submissions (Chapter 8).

32. CDC should authorize an analysis of the funding levels necessary for effective Prevention Research Center functioning, taking into account the levels authorized by P.L. 98–551 as well as the amount of prevention research occurring in other institutions and organizations (Chapter 8).
33. NIH should increase the portion of its budget allocated to population- and community-based prevention research that
- Addresses population-level health problems;
 - Involves a definable population and operates at the level of the whole person;
 - Evaluates the application and impacts of new discoveries on the actual health of the population; and
 - Focuses on the behavioral and environmental (social, economic, cultural, physical) factors associated with primary and secondary prevention of disease and disability in populations.

Furthermore, the committee recommends that the Director of NIH report annually to the Secretary of DHHS on the scope of population- and community-based prevention research activities undertaken by the NIH centers and institutes (Chapter 8).

34. Academic institutions should develop criteria for recognizing and rewarding faculty scholarship related to service activities that strengthen public health practice (Chapter 8).

The findings and recommendations outlined above illustrate the areas of action and change that the committee believes should be emphasized by all potential actors in the public health system. Recommendations are directed to many parties, because in a society as diverse and decentralized as that of the United States, achieving population health requires contributions from all levels of government, the private business sector, and the variety of institutions and organizations that shape opportunities, attitudes, behaviors, and resources affecting health. Governmental public health agencies have the responsibility to facilitate and nurture the conditions conducive to good health. Without the active collaboration of other important institutions, however, they cannot produce the healthy people in healthy communities envisioned in *Healthy People 2010*.

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THE FUTURE OF THE PUBLIC'S HEALTH *in the 21st Century*

Committee on Assuring the Health of the Public in the
21st Century

Board on Health Promotion and Disease Prevention

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

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*“Knowing is not enough; we must apply.
Willing is not enough; we must do.”*
—Goethe



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Shaping the Future for Health

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Preface

Without health there is no happiness.

Thomas Jefferson

In 1988, the Institute of Medicine (IOM) report *The Future of Public Health* presented strong evidence to indicate that the governmental public health infrastructure was in disarray. The report provided a common language for national discussion about the role of public health (what we as a society do collectively to assure the conditions in which people can be healthy) and about the steps necessary to strengthen the capacity, especially of governmental public health agencies (e.g., local and state health departments and federal agencies), to fulfill that role. Moreover, the 1988 report prompted significant actions by policy makers, public health agencies, and educational institutions, including some remarkably successful efforts in several states to increase investment in governmental public health activities and to define more clearly the desired outcomes of such activities and the resources necessary for governmental agencies, such as health departments, to perform essential public health functions.

Much has changed in public health practice since 1988. Many of these changes reflect progress in the science of improving health at the population level, the emergence of innovative public-private partnerships in communities, and the development of new ways to dialogue and act on health. The Public Health Functions Steering Committee, as representatives of the national public health community,¹ developed a broad consensus definition

¹ The committee comprised the American Public Health Association, the Association of Schools of Public Health, the Association of State and Territorial Health Officials, the Environmental Council of the States, the National Association of County and City Health Offi-

of the essential public health services in 1994 (see Chapter 1, Box 1-1). Moreover, a national plan has been developed as part of *Healthy People 2010* to strengthen the public health infrastructure; significant progress has been made in describing the nation's public health workforce and its shortcomings, and the framework for a National Health Information Infrastructure has been defined.

At the same time, the broader context of public health practice has been undergoing a radical transformation, as evidenced by the demographic change in the age and diversity of the population, the shifting epidemiology of disease from acute to chronic illness, the explosion in technology, and the importance of global health to our national health. Further, state- and especially federal-level investment in governmental public health infrastructure—workforce, information systems, laboratories, and other organizational capacity—has been uneven and unsystematic. Recently, substantial appropriations to this infrastructure have been directed to address bioterrorism in the wake of the events of October 2001. However, concerns remain about the adequacy and sustainability of funding needed to assure the balanced capability of this infrastructure to act effectively across the spectrum of public health activities, not only in response to crises. These and other factors place unprecedented stress on governmental public health agencies as they struggle to carry out their mandates in an evolving micro-biological, political, and social environment.

Given existing and anticipated challenges to assuring the health of the public, the Centers for Disease Control and Prevention (CDC); the National Institutes of Health (NIH); the Health Resources and Services Administration (HRSA); the Substance Abuse and Mental Health Services Administration (SAMHSA); the Department of Health and Human Services (DHHS), Office of the Secretary, Assistant Secretary for Planning and Evaluation (DHHS/OS/ASPE); and the DHHS Office of Disease Prevention and Health Promotion (ODPHP) entered into an interagency agreement to support an Institute of Medicine study. The Committee on Assuring the Health of the Public in the 21st Century was convened with the charge to create a framework for assuring population health² in the United States that would

cial, the National Association of State Alcohol and Drug Abuse Directors, the National Association of State Mental Health Program Directors, the Public Health Foundation, and several agencies of the U.S. Public Health Service (Agency for Health Care Policy and Research, Centers for Disease Control and Prevention, Food and Drug Administration, Health Resources and Services Administration, Indian Health Service, National Institutes of Health, Office of the Assistant Secretary for Health, and Substance Abuse and Mental Health Services Administration).

² Population health (also referred to in this report as *the health of the population* or *the public's health*) is the focus of public health efforts. It refers to "the health of a population as measured by health status indicators and as influenced by social, economic and physical

be more inclusive than that of the 1988 report and that could be effectively communicated to and acted upon by diverse communities. In support of that overall goal, the study sought to:

- enhance understanding of the core purposes, functions, and roles of governmental public health agencies and other entities engaged in public health action in improving health outcomes for all;
- crystallize knowledge about the conditions under which improvements in population health occur and how to affect those conditions (Chapter 2);
- set an agenda for scientifically credible research that informs efforts to improve population health outcomes and that also fits the complex, adaptive systems in which population health occurs (Chapter 8);
- provide evidence-based recommendations for improving the practices and the broader conditions that affect population health outcomes (Chapters 3, 4, and 5);
- address the capacity and workforce needed to support improvements in population health (Chapters 3 and 4);
- inform more strategic investments by grantmakers for population health improvement (Chapter 4); and
- promote engagement in the civic work of building healthier communities by a broad array of sectors, organizations, and people (Chapters 3 through 8).

To complete the report, entitled *The Future of the Public's Health*, in acknowledgment of the 1988 report but to suggest the broader scope, the committee met nine times over a 19-month period between January 2001 and July 2002. During this time, four workshops were held with representatives from a variety of federal agencies, state and local nongovernmental public health entities, private companies, and researchers in the field of public health. The committee also engaged in a visioning activity to forecast alternative scenarios for the status of population health in the United States in the coming decade and to assist with the development of recommendations that would appropriately address future challenges to public health and health care. Additional data collection activities provided input regarding the current status of the public health system and examples of how challenges to population health and health care delivery are being addressed at the state and local levels. Members of the committee also conducted site visits to two Turning Point projects (New Orleans, Louisiana; Franklin,

environments, personal health practices, individual capacity and coping skills, human biology, early childhood development and health services" (Federal, Provincial and Territorial Advisory Committee on Population Health, 1999).

New Hampshire) and three Community Voices projects (Baltimore, Maryland; Denver, Colorado; Oakland, California).^{3,4} Additionally, multiple requests were made for public comment. The committee also reviewed the current literature on a wide range of subjects and received information from its liaison panel of representatives from federal, state, and local agencies, as well as advocacy and nongovernmental organizations (see the Acknowledgments for a complete listing).

Based on a consideration of this evidence, the committee decided against crafting a new vision statement. Instead, the committee embraced the vision articulated by *Healthy People 2010, healthy people in healthy communities*, and turned its attention to developing recommendations for the priority actions necessary to attain that vision.

Given the immensity of the charge, the committee struggled to select these priorities from the vast array of areas in need of consideration and response. Several broad themes emerged from the committee's discussion, including the need for a policy focus on population health; the need for greater understanding and emphasis on the broad determinants of health; and the importance of strengthening the public health infrastructure, building partnerships, developing systems of accountability, emphasizing evidence, and enhancing communication. These are the areas of action and change needed to improve our ability to protect and promote health.

The concept of a "public health system"—a complex network of individuals and organizations that, when working together, can represent "what we as a society do collectively to assure the conditions in which people can be healthy" (IOM, 1988: 1)—occurred early in committee deliberations. The committee also found that many entities and sectors are needed to act on the multiple factors that shape population health, and focused on several key partners who can have a particularly significant impact on health by working individually and as potential actors in a public health system. In addition to the governmental public health infrastructure, the committee examined the community, the health care delivery system, employers and business, the media, and academia.

³ Turning Point is a grant program of the W. K. Kellogg and Robert Wood Johnson foundations that began in 1996 and that ended in 2002. The goal of Turning Point has been to "transform and strengthen the public health infrastructure in the United States" by supporting states and local communities to "improve the performance of their public health functions through strategic development and implementation processes" (www.wkkf.org).

⁴ Community Voices is a 5-year initiative launched by the W. K. Kellogg Foundation in 1998 in 13 U.S. communities. The goal of Community Voices is to improve health care for the uninsured and underinsured by strengthening and securing the safety net and community support services.

The broad themes outlined above are discussed in more detail in Chapter 1, which also provides a discussion about the status of the health of Americans at the beginning of the twenty-first century, with a special focus on the mismatch of health spending and health outcomes, the nation's shortcomings in health status (especially disparities in health among population groups), and the potential future challenges and threats to population health.

Chapter 2 presents a framework to illustrate the well-supported hypothesis that the health of populations and individuals is shaped by a wide range of factors in the social, economic, natural, built, and political environments. These factors interact in complex ways with each other and with innate individual traits such as race, sex, and genetics. The chapter then focuses specifically on several social determinants of health most robustly supported by the evidence. Approaching health from a broad perspective takes into account the potential effects of social connectedness, economic inequality, social norms, and public policies on health-related behaviors and health status. The chapter discusses seat belt and tobacco control policies as examples of public policies that have had considerable positive impacts on health status because they acknowledge the population-level and ecological factors involved in producing good or ill health.

The chapters that follow provide evidence of the positive impacts that key potential participants can have acting individually or in partnership, as appropriate, in a public health system working for the health of the public in the twenty-first century.

When most people think of public health, they think of state and local health departments, which have traditionally been responsible for public health services. Chapter 3 discusses the role of **the governmental public health agencies** at the federal, state, tribal, and local levels as the backbone of the public health system. In particular, the chapter examines the unique role and responsibility that governmental public health agencies have in promoting and protecting the public's health by facilitating, supporting, and empowering other potential participants in a public health system. This chapter also discusses the importance of political will to support and finance the development and maintenance of a strong governmental public health infrastructure that can ensure that all communities have access to the essential public health services.

Chapter 4 discusses **the community**, defined as narrowly as a neighborhood or as broadly as the nation. The community is both a setting—the place where health is supported and protected by social connections and healthy social, built, economic, and natural environments or risked and damaged by detrimental environments and social norms—and a potential partner in the public health system through its organizations, associations, and networks. Communities have the knowledge and resources that are

necessary ingredients in assuring population health, and Chapter 4 illustrates clearly the significance of authentic community engagement in the public health system.

The health care delivery system and the role that it can play in maintaining both individual and community health are discussed in Chapter 5. Particular attention is given to this system's current fragility and the implications of this fragility for the effectiveness of governmental public health agencies and the broader public health system. The chapter makes note of the historic gap in priorities for investment between public health and health care. Also, it proposes ways for the health care delivery system to refocus its efforts in health improvement and strengthen its collaboration with governmental public health agencies to ensure the best possible disease surveillance, the promotion of healthier communities as well as healthier individuals, and preparedness for any emergencies.

Chapter 6 highlights the current and potential contributions of **employers and businesses** (private and public) to the health of their workforces and to the communities in which they are located. Although employers do not typically see themselves as partners in the public health system, their potential contribution to assuring population health cannot be underestimated. Most people spend at least a third of their days on the job; and the workplace may supply their health care insurance, may offer messages or activities that support or undermine health, and may also shape their health with occupational and environmental exposures and psychosocial stresses. Businesses and employers are also significant members of communities everywhere, and in recent years, many have acknowledged and acted upon their role as corporate citizens by fostering improvement in the economic and physical health of communities.

The role of the **media** in promoting health is the subject of Chapter 7. That chapter explores the unique potential of the news and entertainment media in communicating and informing the public about health risks and benefits, health policy, and related matters. Although their approaches and end goals are somewhat different, the news media's mandate coincides with that of the public health system: to serve and be accountable to the public. It is imperative for its own objectives and those of the public that the media "get it right." Also, a continuous dialogue among public health officials and educators and reporters, media leaders, and educators can play a crucial role in facilitating the development of media expertise in public health and public health expertise in providing timely, accurate, and understandable health information.

Chapter 8 highlights the responsibilities of **academia** in training the individuals who work in public health and health care professions and in building the science base for health promotion, disease prevention, and community health action. Assuring the health of the public depends in part

on the efforts of well-trained professionals who are supported by an adequately funded research infrastructure.

The Future of the Public's Health began with an extensive charge. The committee thus endeavored to (1) examine and (2) explain the nation's health status, as well as (3) describe the key individuals and organizations needed to work individually or together as a public health system to create the conditions in which people can be healthy and (4) recommend the evidence-based actions necessary to make this system an effective force in attaining the vision of healthy people in healthy communities, and, ultimately, a healthier nation and a healthier world.

Achieving this vision will be a dynamic process as our knowledge about the factors that create the conditions for health increases. The sophistication of our actions must evolve to shape forces in the global, national, and local environments that can act for or against health. Finally, we must sustain our commitment to a healthier nation through education, investment, and political will.

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The report was reviewed by individuals chosen for their diverse perspectives and technical expertise in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments to assist the authors and the Institute of Medicine in making the report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The content of the review comments and the draft manuscript remain confidential to protect the integrity of the deliberative process. The committee wishes to thank the following individuals for their participation in the report review process:

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