Public Health System: Structure and Function

CHAPTER OUTLINE

The U.S. Institute of Medicine (IOM) describes the challenges inherent in organizing the public health system for the 21st century as follows[1]:

> 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.

The U.S. public health system was designed at a time when most threats to health were infectious, before computer information systems, and when local autonomy prevailed. This chapter describes the structure of the U.S. health system and discusses how it must respond to contemporary challenges. Public health systems in other countries are likely structured very differently but still need to adapt to the same challenges.

I. ADMINISTRATION OF U.S. PUBLIC HEALTH

A. Responsibilities of the Federal Government

The public health responsibility of the U.S. Federal Government is based on two clauses from Article 1, Section 8, of the U.S. Constitution. First, the Interstate Commerce Clause gives the federal government the right "to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes." Second, the General Welfare Clause states that "the Congress shall have Power to lay and collect Taxes . . . for the common Defense and general Welfare of the United States." Federal responsibility also is inferred from statements that Congress has the authority to create and support a military and the authority to negotiate with Indian tribes and other special groups.

1. Regulation of Commerce

The regulation of commerce involves controlling the entry of people and products into the United States and regulating commercial relationships among the states. People may be excluded from entry to the United States if they have infectious health problems, such as active tuberculosis. Products may also be excluded from entry, such as fruits and vegetables if infested with certain organisms (e.g., Mediterranean fruit fly) or treated with prohibited insecticides or fungicides. In the past, similar prohibitions have been extended to the importation of animal products from cattle that might contain the prions of bovine spongiform encephalopathy and, as recently in 2011, produce that might be contaminated with *Escherichia coli.*

The regulation of commercial relationships between states has increased over time. Contaminated food products that cross state lines are considered to be "interstate commerce"; what crosses state lines are harmful microorganisms. The federal government takes the responsibility for inspecting all milk, meat, and other food products at their site of production and processing. (In contrast, the state or local government is responsible for inspecting restaurants and food stores.) Likewise, polluted air and water flowing from state to state are deemed to be "interstate commerce" in pollution and come under federal regulation.

2. Taxation for the General Welfare

The power to "tax for the general welfare" is the constitutional basis for the federal government's development of most of its public health programs and agencies, including

the Centers for Disease Control and Prevention (part of the Department of Health and Human Services) and the Occupational Safety and Health Administration (OSHA, part of the Department of Labor); for research programs, such as those of the National Institutes of Health (NIH); and for the payment for medical care, such as Medicare and Medicaid (see Chapter 29).

3. Provision of Care for Special Groups

The federal government has taken special responsibility for providing health services to active military personnel, through military hospitals; families of military personnel, through military hospitals or the Civilian Health and Medical Program of the Uniformed Services; veterans, through the Veterans Administration hospital system; and Native Americans and Alaska Natives, through the Indian Health Service of the U.S. Public Health Service.

4. Funding Federal Legislation

Funding of federal legislation requires a two-step process. The initial bill provides an **authorization** of funds. An authorization bill only sets an *upper limit* to the amount of funds that can be spent. No monies can be spent, however, until they have been specifically **appropriated** for that bill's purposes in a subsequent appropriations bill. The authorization is a political fiction for which members of Congress can claim political gain. In practice, the amount *appropriated* tends to be about *half* the amounts *authorized* in the bills, and the amounts are usually appropriated for only one fiscal year at a time. It is in the funding bills that fiscal (and political) reality must be faced. Because a funding bill covers many items, the voters usually are unaware that the amount actually appropriated is much smaller than the amount promised in the authorization bill.

5. Coordination of Federal Agencies

In the United States the federal department most concerned with health is the Department of Health and Human Services (DHHS), which has four major operating units, described next[2] (Fig. 25-1).

ADMINISTRATION ON AGING

The Administration on Aging provides advice to the Secretary of the DHHS on issues and policies regarding elderly persons. It also administers certain grant programs for the benefit of the aging population.

ADMINISTRATION FOR CHILDREN AND FAMILIES

The Administration for Children and Families is responsible for administering child welfare programs through the states, Head Start programs, child abuse prevention and treatment programs, foster care, adoption assistance, developmental disabilities programs, and child support enforcement.

CENTERS FOR MEDICARE AND MEDICAID SERVICES

The Centers for Medicare and Medicaid Services (CMS) is responsible for administering two major programs of the Social Security Act. **Medicare** is covered under **Title 18** of the Social Security Act and pays for medical care for the elderly population. **Medicaid** is covered under **Title 19** and pays for medical and nursing home care in cooperation with the states (see Chapter 29). CMS duties include setting standards for programs and institutions that provide medical care, developing payment policies, contracting for third-party payers to cover the bills, and monitoring the quality of care provided. CMS also supports graduate medical education, residency, and fellowship programs that provide care for individuals covered by Medicare or Medicaid.

PUBLIC HEALTH SERVICE

The U.S. Public Health Service (PHS) comprises the following eight constituent agencies:

1. The **Agency for Healthcare Research and Quality** (AHRQ) is the main federal agency for research and policy development in the areas of medical care organization, financing, and quality assessment. Since 2000, the agency has placed increasing emphasis on medical care quality.
2. The **Agency for Toxic Substances and Disease Registry** (ATSDR) provides leadership and direction to programs designed to protect workers and the public from exposure to and adverse health effects of hazardous substances that are kept in storage sites or are released by fire, explosion, or accident.
3. The **Centers for Disease Control and Prevention** (CDC) has the responsibility for "protecting the public health of the [United States] by providing leadership and direction in the prevention and control of diseases and other preventable conditions and responding to public health emergencies." The CDC directs and enforces federal quarantine activities; works with states on disease surveillance and control activities; develops programs for prevention and immunization; is involved in research and training; makes recommendations on how to promote occupational health and safety through the **National Institute on Occupational Safety and Health** (NIOSH); provides consultation to other nations in the control of preventable diseases; and participates with international agencies in the eradication and control of diseases around the world. The CDC has a complex organizational structure (Fig. 25-2).
4. The **Food and Drug Administration** (FDA) is the primary agency for regulating the safety and effectiveness of drugs for use in humans and animals; vaccines and other biologic products; diagnostic tests; and medical devices, including ionizing and nonionizing radiation–emitting electronic products. The FDA is also responsible for the safety, quality, and labeling of cosmetics, foods, and food additives and colorings.
5. The **Health Resources and Services Administration** (HRSA) is responsible for developing human resources and methods to improve health care access, equity, and quality, with an emphasis on promoting primary care. HRSA also supports training grants and training programs in preventive medicine and public health.
6. The **Indian Health Service** promotes the health of and provides medical care for Native Americans and Alaska Natives.

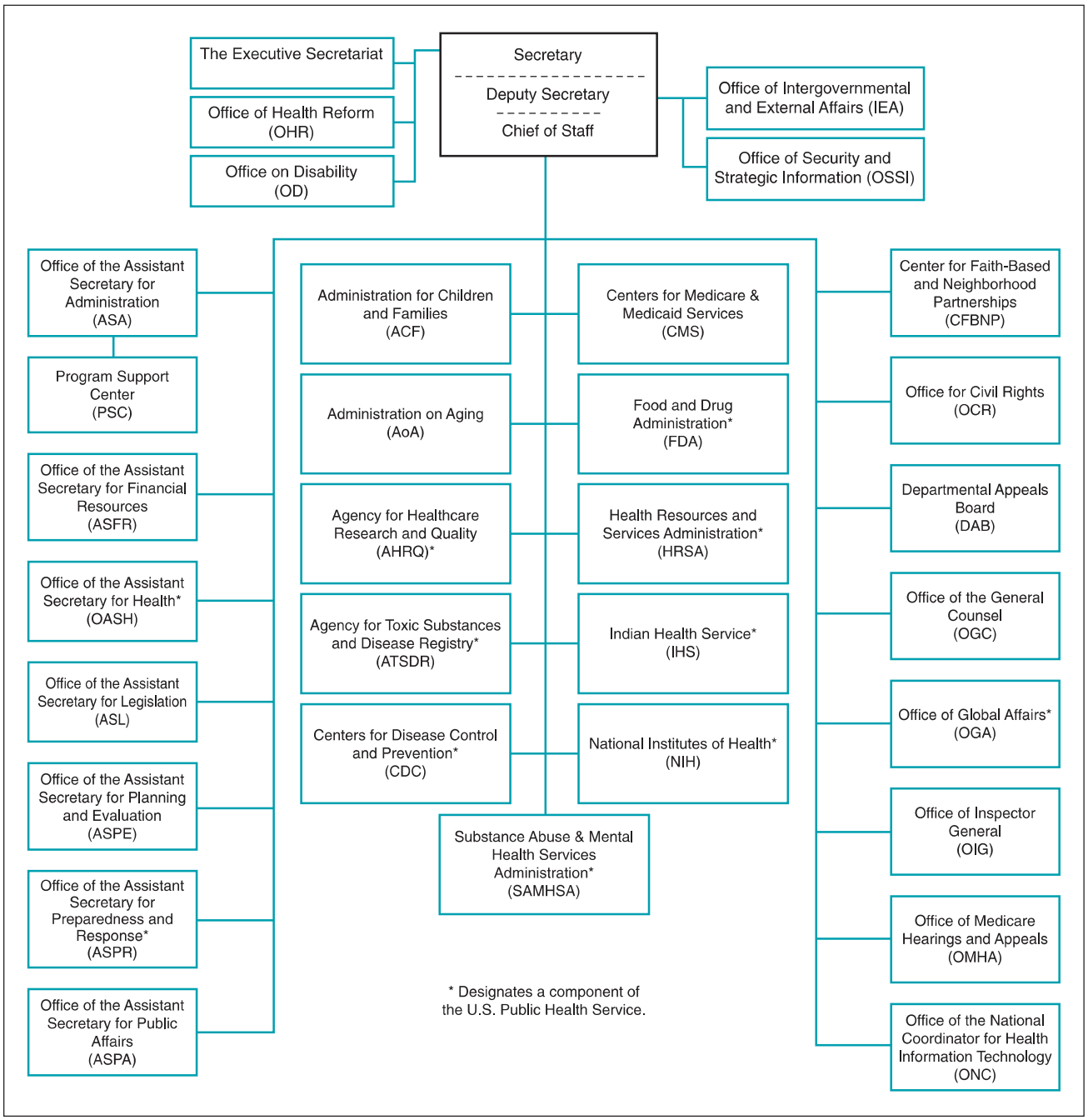

Figure 25-1 U.S. Department of Health and Human Services (DHHS) organizational chart. (From http://www.hhs.gov/about/orgchart.)

7. The **National Institutes of Health** (NIH) consists of 27 institutes, which perform *intramural* (in-house) research on their particular diseases, organ systems, or topics (e.g., National Cancer Institute; National Heart, Lung, and Blood Institute; National Human Genome Research Institute; National Center for Advancing Translational Science). The institutes also review and sponsor *extramural* research at universities and research organizations through competitive grant programs. Some of the institutes also undertake disease control programs and public and professional education in their area (e.g., National Library of Medicine, National Institute for Neurological Disorders and Stroke).
8. The **Substance Abuse and Mental Health Services Administration** (SAMHSA) provides national leadership in preventing and treating addiction and other mental disorders, based on up-to-date science and practices, and has four major operating divisions: Center for Mental Health Services, Center for Substance Abuse Prevention, Center for Substance Abuse Treatment, and Center for Behavioral Health Statistics and Quality.

The PHS is not the only important agency in public health. The other major federal organization is the **Office of Public Health and Science** (OPHS), which leads the *Healthy People* initiative through its Office of Disease Prevention and

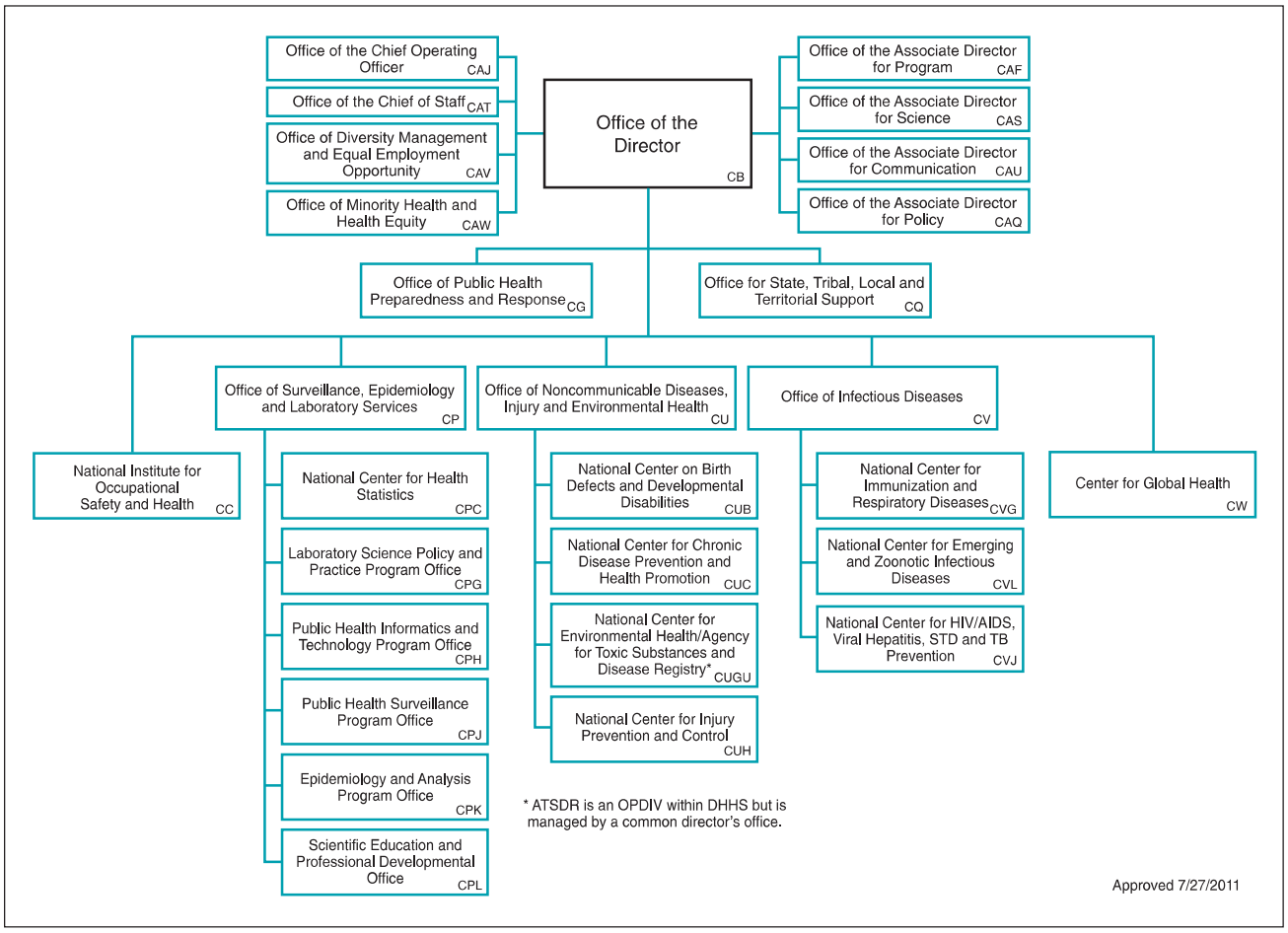

Figure 25-2 U.S. Centers for Disease Control and Prevention (CDC) organizational chart. *STD,* Sexually transmitted disease; *TB,* tuberculosis. (From http://www.cdc.gov/maso/pdf/CDC_Official.pdf.)

Promotion (see Chapter 26) and oversees the U.S. Surgeon General's office, President's Council on Bioethics, U.S. Public Health Service Commissioned Corps, and Office of Minority Health (Fig. 25-3).

B. Responsibilities of States

In the United States the fundamental responsibility for the health of the public lies with the states. This authority derives from the 10th Amendment to the Constitution: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."

In 1988 the IOM stated that "the mission of public health is to ensure conditions in which people can be healthy", and that the three "core functions of public health agencies at all levels of government are assessment, policy development, and assurance."[3]

1. The **assessment** role requires that "every public health agency regularly and systematically collect, assemble, analyze, and make available information on the health of the community, including statistics on health status, community health needs, and epidemiologic and other studies of health problems."[3]
2. The **policy development** role requires that "every public health agency exercise its responsibility to serve the public interest in the development of comprehensive public health policies by promoting the use of the scientific knowledge base in decision-making about public health, . . . by leading in developing public health policy, and by taking a strategic approach, developed on the basis of a positive appreciation for the democratic political process."[3]
3. The **assurance** role requires that "public health agencies assure their constituents that services necessary to achieve agreed upon goals are provided, either by encouraging action by other entities (private or public sector), by requiring such action through regulation, or by providing services directly."[3]

Within these three core functions, 10 essential public health services have been defined (Box 25-1). Administrators and others involved in public health have been struggling to define how the mission and three core functions can best be fulfilled. As indicated by the assurance role, public health agencies enjoy considerable latitude. Although not required to provide all (or even most of) the services themselves, the agencies are expected to use all their authority and resources to ensure that needed policies, laws, regulations, and services exist.

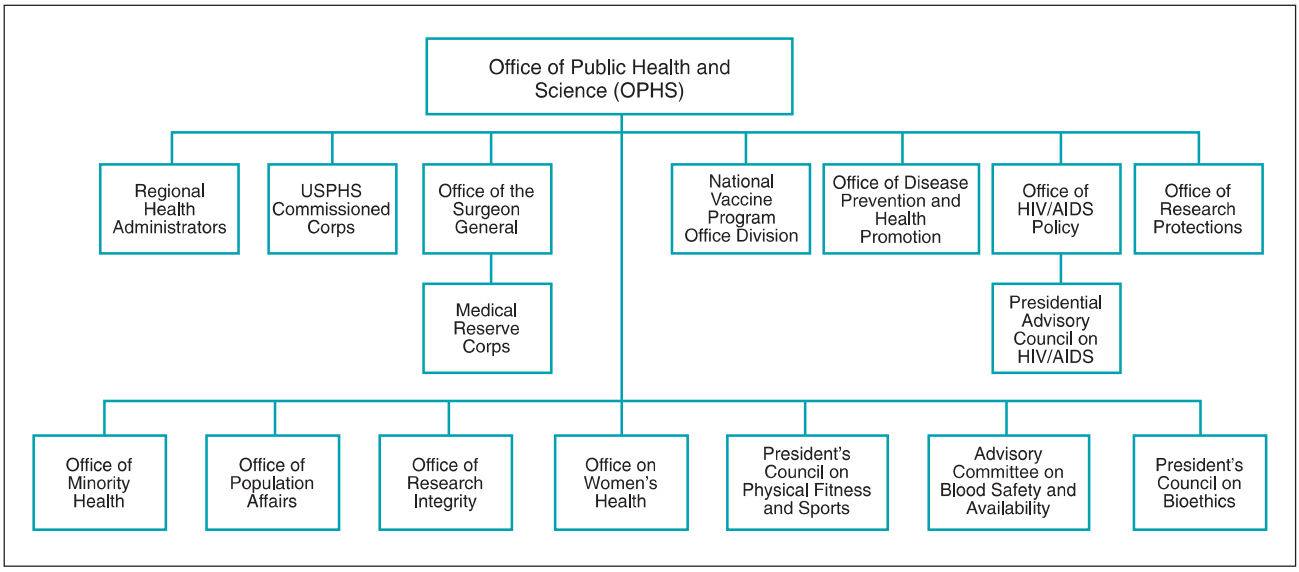

Figure 25-3 U.S. Office of Public Health and Science (OPHS) organizational structure. *HIV/AIDS*, Human immunodeficiency virus and acquired immunodeficiency syndrome. (From http://www.hhs.gov/about/orgchart/ophs.html.)

Each state has a health department to perform or oversee the performance of the 10 essential public health services. The state health department oversees the implementation of the **public health code,** a compilation of the state laws and regulations regarding public health and safety. (Laws are rules passed by a legislature. In contrast, **regulations** are technical rules added later by an empowered body with specific expertise, such as a state or local board of health.) In some states, responsibility for mental health services falls to the health department, whereas other states have separate departments of mental health services. Every state also licenses medical and other health-related practitioners and medical care institutions, such as hospitals, nursing homes, and home care programs.

C. Responsibilities of Municipalities and Counties

Although the states hold the fundamental police power to protect health, they delegate much of this authority to chartered **municipalities,** such as cities, or other incorporated areas. These municipalities accept public health responsibilities in return for a considerable degree of independence from the state in running their affairs, including property ownership and tax levies. In this respect, they differ from **counties** (called "parishes" in Louisiana). Counties are bureaucratic subdivisions of the state created to administer state responsibilities (with varying degrees of local control), such as health services, as well as courts of law, educational programs, highway construction and maintenance, and police and fire protection.

Local public health departments usually are administrative divisions of municipalities or counties, and their policies are established by a city or county **board of health.** These boards of health have the right to establish public health laws and regulations, provided that they are at least as strict as similar laws and regulations in the state public health code, and provided that they are *reasonable.* Anything that is too

Box 25-1 Governmental Public Health Infrastructure: The 10 Essential Public Health Services

Assessment

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and health hazards in the community.

Public Development

3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.

Assurance

6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services, and assure the provision of health care when otherwise unavailable.
8. Ensure a competent public health and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.

Serving All Functions

10. Research for new insights, and innovate solutions to health problems.

Modified from Public Health Functions Steering Committee, 1994; American Public Health Association, Association of Schools of the Public Health Association of State and Territorial Health Officials, Environmental Council of the States, National Association of County and City Health Officials, National Association of State Alcohol and Drug Abuse Directors, National Association of State Mental Health Program Directors, Public Health Foundation, US Public Health Service.)

strict risks being overturned by the courts on the grounds that it is *unreasonable.*

The courts have generally upheld local and state health department laws and regulations when they pertain to the control of communicable diseases. The courts have also upheld laws relating to safe water and subsurface sewage disposal, immunization, regulation of restaurants and food stores, quarantine or treatment of persons with an infectious disease, investigation and control of acute disease outbreaks, and abatement of complaints relating to the spread of infectious disease (e.g., rabid animals).

Outside the area of communicable diseases, neither legislatures nor courts have been as supportive of laws and regulations. Laws requiring motorcyclists and bicyclists to wear helmets sometimes have not been enacted or have been repealed, despite abundant evidence of their benefits.[4] If an individual risk factor for disease can be shown to have a negative *public* impact, however, such as passive smoke inhalation, legislatures usually support controls, provided the direct fiscal impact is minimal (see Chapter 26).

D. Responsibilities of Local Public Health Departments

1. "Basic Six" to 10 Essential Services

The best-known description of the responsibilities of local health departments emerged in 1940, when six primary areas of responsibilities were defined as follows[5]:

1. Collecting vital statistics
2. Controlling communicable diseases
3. Protecting maternal and child health
4. Monitoring and protecting environmental health
5. Promoting health education
6. Maintaining public health laboratories

These functions of local health departments, later known as the "basic six," continue to influence the direction of local departments, despite the many changes in the nature of public health problems over time. However, these six functions are not fully adequate to deal with some more recent public health problems, such as environmental pollution crossing state lines and the increased incidence of chronic degenerative diseases. For a time, public health leaders debated the proper functions and responsibilities of health departments at the local and state level.[6,7] To help health departments in evaluating their work, the CDC has created a National Public Health Performance Standards Program.[8]

Public health departments cannot carry out their responsibilities without funding by legislative bodies. From the 1950s to the early 1970s, the danger of infectious diseases seemed to be waning. Consequently, and despite occasional warnings that communicable diseases were still major threats, legislatures saw infectious diseases as a diminishing threat, and funding for public health agencies decreased.[9] The emergence of legionnaires' disease and Lyme disease in the mid-1970s was soon followed by toxic shock syndrome, AIDS, multidrug-resistant tuberculosis, and the resurgence of other infectious diseases.[8,9] By the time society began to awaken to the problem of the emerging public health diseases, the IOM and others considered the public health system to be in "disarray,"[3,10] and the "basic six" functions have reappeared as important functions of local health departments.

Box 25-2 Ten Greatest Public Health Achievements of 20th Century

1. Immunization
2. Motor vehicle safety
3. Improvements in workplace safety
4. Control of infectious diseases
5. Decline in deaths from coronary heart disease and stroke
6. Safer and healthier foods
7. Healthier mothers and infants
8. Family planning
9. Fluoridation of drinking water
10. Recognition of tobacco use as a health hazard

From US Centers for Disease Control and Prevention. http://www.cdc.gov/about/history/tengpha.htm

Public health agencies perennially struggle to garner enough popular and government support to promote health and prevent disease effectively. Nonetheless, Americans have benefited greatly from the many achievements of public health efforts, in conjunction with laboratory research, clinical medicine, and sanitary and safety engineering. Box 25-2 provides the CDC's list of the 10 leading public health achievements of the 20th century. For the 21st century, the following domains have been defined as "winnable battles," the public health priorities areas with proven effective interventions[11]:

- Food safety
- Global immunization against polio, measles, rubella, meningitis, pneumococci, and rotaviruses
- Health care–associated infections
- Human immunodeficiency virus (HIV) infection
- Lymphatic filariasis
- Mother-to-child transmission of HIV and congenital syphilis
- Motor vehicle injuries
- Nutrition, physical activity, and obesity
- Teen pregnancy
- Tobacco use (especially smoking)

2. Health Director's Duties

The programs run by a local health department vary by region or county and depend on available funding, state and local priorities, and availability of other providers and institutions. Some local health departments manage a complex set of services, including mental health and primary care for underserved populations, which involves managing teams and human resources, analyzing organizational performance, and overseeing budgeting analysis. Health directors must adhere to applicable federal and state rules when they hire, evaluate, and fire employees. Directors must also ensure that employees are supervised appropriately, including regular performance evaluation, pay equity to comparable jobs, and compliance with grievance process (see Chapter 28). Particular challenges arise if different staff members

with similar responsibilities are paid from different payrolls (e.g., county, city, state, grant funders).

In addition to running these services, the health director serves as the *chief health policy advisor* to local elected officials for public health, community assessment, access to medical care, and financing of health and medical care.[12] The director also serves as the *chief public health educator* for politicians and the public, to ensure ongoing funding, grassroots support, and collaboration with community groups and health care institutions.

3. Environmental Protection

Among the functions of local health departments, protecting the public from food-borne illness and inspecting septic systems are among the most important.

RESTAURANT INSPECTION

Most contamination occurs through just a few breakdowns: unwashed hands, improper cooking, improper storage, unclean utensils, and contact between food and nonfood surfaces.[12] Local food regulations vary by county and district. However, most local health departments inspect restaurants episodically, assign points for violations of code depending on the gravity of violations, and provide grades to restaurants as a summary assessment (A-F or colors). Health inspectors particularly look at five critical items (sometimes called "red items") that pose an immediate health hazard, as follows[13]:

- Improper hand hygiene
- Food is not kept at temperatures high enough or low enough to inhibit bacterial growth
- Incorrect sanitizer concentrations of dishwasher or cleaning solutions
- Cross-contamination between raw and cooked products
- Plumbing hazards

If an establishment is found to pose an immediate hazard, or if it has a history of persistent failure to comply with recommendations, health inspectors can shut it down. In those cases, the establishment usually cannot reopen until the health inspector has returned to confirm that the violations have been corrected. Some departments also perform compliance inspections for restaurants with borderline scores to document improvement.[14]

WASTEWATER DISPOSAL

Many rural areas have no central sewage system. Every new building needs a septic tank and a "drain field," the size of which varies with the drainage pattern and depth of the topsoil. Otherwise, raw sewage may contaminate an aquifer and pollute everybody's drinking water. Given the amount of money involved in developing land and the potential for damage, the health director and environmental staff need to coordinate closely with local and county officials in planning and zoning and the granting of building permits.[12]

In an age of vanishing rain forests, receding polar ice caps, and progressive climate change, environmental protection has taken on new meaning. Such issues as conservation and biopreservation intersect meaningfully with public health, as addressed in Chapter 30.

II. BROADER DEFINITIONS OF PUBLIC HEALTH POLICY

The current view of public health policy in the United States is narrower than that in the world public health scene. According to the **Ottawa Charter for Health Promotion,** which guides much of the international work in this area, health promotion requires that *all* policies be reviewed for their health impact and adjusted to strengthen, rather than hinder, the effort to achieve good health, as follows[15]:

> Health promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health.
>
> Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation and organizational change. It is coordinated action that leads to health, income and social policies that foster greater equity. Joint action contributes to ensuring safer and healthier goods and services, healthier public services, and cleaner, more enjoyable environments.
>
> Health promotion policy requires identification of obstacles to the adoption of *healthy public policies* in non-health sectors, and ways of removing them. The aim must be to make the healthier choice the easier choice for policy makers as well.

The switch from *public health policy* to *healthy public policies* is subtle but important. The point of this approach was that *all* public policies must be evaluated and, if necessary, modified for their impact on public health.

III. INTERSECTORAL APPROACH TO PUBLIC HEALTH

So far, this chapter has emphasized the role of specific U.S. public health agencies at the federal, state, and local level. However, as the Ottawa Charter emphasizes, many duties with public health implications are carried out by government agencies that are not usually considered "health agencies." Departments of **agriculture** are responsible for monitoring the safety of milk, meat, and other agricultural products and controlling zoonoses (animal diseases that can be spread to humans). The U.S. Department of Agriculture (USDA) also administers the program for **Women, Infants, and Children** (WIC), which supports low-income women and children up to age 5 who are at nutritional risk by providing foods to supplement diets and financial support. This program has a substantial impact on food choices, childhood obesity, and oral health. Departments of **parks and recreation** must monitor the safety of water and sewage disposal in their facilities. **Highway** departments are responsible for the safe design and maintenance of roads and highways. **Education** departments are charged with overseeing health education and providing a safe and healthful environment in which to learn. Government departments that promote a **healthy economy** are crucial as well, because when an economy falters, the people's health suffers as well.

Because health is the result of the entire fabric of the environment and life of a population, a true public health approach must be **intersectoral;** that is, it must consider the health impact of policies in every sector of a society and government, not just in the health sector or medical care sector. Moreover, a true public health approach must also consider the health impact of policies on the planet more broadly, being mindful of the health of entire ecosystems (see Chapter 30). The perspectives of the Ottawa Charter and **intersectoral policy analysis** are foundations for the broader, more community action–oriented approach to public health currently emphasized in Europe and elsewhere. This approach is sometimes called "the new public health" or the "healthy communities" approach.[16] The healthy communities movement is also active in the United States[17] (see Chapter 26).

The United States is fortunate to be home to many voluntary health agencies and other nongovernmental organizations (NGOs) whose focus is to prevent or control diseases and promote health. Some focus on certain diseases (e.g., American Heart Association [AHA], American Lung Association [ALA]), and others confront a related group of diseases (e.g., American Cancer Society [ACS]). Sometimes groups join forces; cigarette smoking is a major risk factor for heart disease, lung disease, and cancer, so the AHA, ALA, and ACS have worked together to curtail smoking. These organizations raise money for research, public education, and preventive programs. Some NGOs even provide direct patient care, such as Planned Parenthood, which strives for a comprehensive approach to reproductive health. These agencies strive to fill the gaps left by the public health system. At the same time, these agencies form important stakeholders that can substantially influence the success or failure of public health initiatives.

IV. ORGANIZATIONS IN PREVENTIVE MEDICINE

Many organizations in the United States emphasize public health and preventive medicine; the largest is the **American Public Health Association** (APHA), with annual meetings typically bringing together 12,000 to 15,000 people. APHA has gradually changed from an organization focusing on science and the practice of public health to one emphasizing national public health and medical care **policy,** although some sections still emphasize science or practice. It publishes the *American Journal of Public Health* and welcomes as members anyone who is trained in, working in, or just interested in public health (www.apha.org).

Other organizations that promote the health of communities include **American College of Preventive Medicine** (ACPM) and **Association of Teachers of Preventive Medicine** (ATPM). With ATPM, ACPM copublishes the *American Journal of Preventive Medicine* and cosponsors a yearly conference on prevention science and policy. ATPM members include university faculty, preventive medicine residency program directors and faculty, and others interested in teaching health promotion and disease prevention in schools of medicine, public health, and other health professions. The goal of ATPM is to improve research, training, and practice in preventive medicine and to support the funding for training programs. Chapter 15 provides more details on training for physicians.

V. ASSESSMENT AND FUTURE TRENDS

In its 2002 report the IOM assessed the state of the U.S. public health system as follows[1]:

> 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 [attacks of 9/11/2001], 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.

In response to this report and other voices, DHHS has disseminated sample policies, established grant programs to upgrade and integrate information systems, and developed an accreditation system for public health providers and local health departments. However, much remains to be done so that the public health system can maintain the gains made in the 20th century and prepare for the challenges of the 21st century.

VI. SUMMARY

Public health services in the United States are provided by the federal, state, and local levels of government, although the primary authority for health lies with the states. The federal government becomes involved in health mostly by regulating international and interstate commerce and by its power to tax for the general welfare. Local governments become involved in health as the states delegate authority for health to them. The fundamental health responsibilities have expanded greatly from the "basic six" minimum functions, when infectious diseases were the greatest concern, to a large and diverse set of functions that now include the control of chronic diseases, injuries, and environmental toxins (preventive medicine). In the intersectoral approach to public health, all public policies are scrutinized for their impact on health.

References

1. Institute of Medicine (IOM): *The future of the public's health in the 21st century*, Washington, DC, 2002, National Academies Press. http://books.nap.edu/catalog/10548.html on 1/25/.
2. US Department of Health and Human Services: 2012. http://www.hhs.gov.
3. IOM: *The future of public health*, Washington, DC, 1988, National Academy Press.
4. Centers for Disease Control and Prevention (CDC): Injury control recommendations: bicycle helmets. *MMWR* 44:1–17, 1995.

5. Jekel JF: Health departments in the U.S., 1920–1988: statements of mission with special reference to the role of C.-E. A. Winslow. *Yale J Biol Med* 64:467–479, 1991.
6. Hanlon JJ: Is there a future for local health departments? *Health Serv Rep* 88:898–901, 1973.
7. Terris M: The epidemiologic revolution, national health insurance, and the role of health departments. *Am J Public Health* 66:1155–1164, 1976.
8. National Public Health Standards. 2012. http://www.cdc.gov/nphpsp.
9. Jekel JF: Communicable disease control in the 1970s: hot war, cold war, or peaceful coexistence? *Am J Public Health* 62:1578–1585, 1972.
10. Garrett L: *Betrayal of trust: the collapse of global public health*, New York, 2000, Hyperion.
11. CDC: Winnable battles. http://www.cdc.gov/winnablebattles/FocusAreas.html.
12. Buttery CMG: *The local health department*. 2012. Chapter 1. Accessed at http://www.commed.vcu.edu/LOCAL/2012/Ch1_local_health_director_12.pdf.
13. What health inspectors look for. http://www.foodservicewarehouse.com/education/health-safety/what-inspectors-look-for.aspx.
14. New York City Department of Health and Mental Hygiene: Letter grading for sanitary inspections. http://www.nyc.gov/html/doh/downloads/pdf/rii/restaurant-grading-faq.pdf.
15. Ottawa Charter for Health Promotion: *Report of an International Conference on Health Promotion, sponsored by the World Health Organization, Health and Welfare Canada, and the Canadian Public Health Association, Ottawa*. 1986.
16. Ashton J: *The new public health*, Buckingham, UK, 1988, Open University Press.
17. Duhl LJ, Lee PR, editors: Focus on healthy communities, *Public Health Rep* 115:114–289, 2000.

Select Readings

Douglas FD, Keck CW: Structure and function of the public health system in the United States. In Wallace RB, editor: *Maxcy-Rosenau-Last: Public health and preventive medicine*, ed 15, New York, 2008, McGraw-Hill Medical.
Duhl LJ, Lee PR, editors: Focus on healthy communities, *Public Health Rep* 115(2 and 3):114–289, 2000 [special issues].
Fallon FL, Zgodinski EJ: *Essentials of public health management*, Boston, 2008, Jones & Bartlett.
Garrett L: *Betrayal of trust: the collapse of global public health*, New York, 2000, Hyperion.
Institute of Medicine: *For the public's health: revitalizing law and policy to meet new challenges*, Washington, DC, 2011, National Academies Press.
Novick LF, Mays GP: *Public Health Administration*, Gaithersburg, Md, 2001, Aspen.

Websites

www.apha.org [American Public Health Organization].
www.acpm.org [American College of Preventive Medicine].
www.atpm.org [Association of Teachers of Preventive Medicine].