An Introduction to Public Health in Washington

Presentation to the Joint Select Committee on Public Health Finance
September 20, 2005
Good afternoon madam Chair and members of the Committee, I'm Jonathan Seib, staff to the Senate Health and Long-Term Care Committee, with Chris Blake, staff to the House Health Care Committee.
As an introduction to public health, we've been asked to take the next 30 minutes to address the following three questions:

What is public health?

How is the public health system structured? and

What does the public health system do for my constituents? How is it done?
What is public health? Why does it matter?

We'll start by asking: just what is public health?
“Public Health” is . . .

- **RCW 43.70.575**: “Activities that society does collectively to assure the conditions in which people can be healthy. This includes organized community efforts to prevent, identify, preempt, and counter threats to the public’s health.”

- **RCW 70.38.025**: “The level of well-being of the general population; those actions in a community necessary to preserve, protect, and promote the health of the people for which government is responsible; and the governmental system developed to guarantee the preservation of the health of the people.”

The term is actually defined a couple of times in state statute. The first definition is from the statute creating the Department of Health. Adopted in 1989, it follows closely the definition of public health developed by the Institute of Medicine in its 1988 report *The Future of Public Health*.

The other definition is found in the Certificate on Need statute, and although the few sections of that law where the term is actually used seem obsolete, this definition is nonetheless interesting in contrast to the first definition for its focus on those actions in the community for which government is responsible. Although this committee will also focus primarily on government’s role in the public health system, as the first definition suggests, the concept encompasses a broader set of community actors than just the government.
Additional perspective on public health can be found in a brief review of its history. Although our formal definitions may be recent, as these pictures suggest, the concept of public health certainly is not.
### Selected History of Public Health

- **Ancient:** Romans construct subsurface drains to remove wastewater
- **1348:** Venice appoints sanitary council to quarantine ships, goods and people
- **1721:** Inoculation for smallpox accepted as effective means to contain disease
- **1790:** First local board of health established in Petersburg, Virginia
- **1848:** Dr. John Snow removes handle from Broad Street pump in London, ending cholera epidemic and founding epidemiology
- **1850:** National disease monitoring first conducted in the United States

In fact, it goes back much further and includes many things that today we simply take for granted -- such as sewers.

The first formal structures of public health appeared in this country in the late 1700s, and much like today, were focused at the local level.

Dr. Snow's efforts in the mid-1800s also deserve special mention because of its place in the foundation of public health practice. In this case, Dr. Snow, an English anesthesiologist, mapped the location of deaths during a cholera epidemic and noted a disproportionate number occurring near the vicinity of a certain water pump. On his advice, officials removed the handle from the water pump and the epidemic subsided. The pump handle has remained a symbol of effective epidemiology -- the study of patterns of disease and injury in human populations and the application of this study to the control of health problems.
The structure of Washington's public health system was grounded in the state's constitution, which called for the formation of the State Board of Health. Local boards of health and a state department of health emerged later.

Another milestone that helped define public health as it is know today was the case of Jacobsen v. Massachusetts, where the U.S. Supreme Court upheld the right of a state to impose reasonable requirements on individuals in the name of public health -- affirming the notion that public health is not simply the providing of services, but also may involve the exercise of the state's police power.
Selected History of Public Health

- 1970: Washington Department of Health becomes the Health Services Division of DSHS
- 1984: SB 4306 establishes the Joint Select Committee on Public Health
- 1989: Washington Department of Health reestablished as a separate department
- 1993: ESSB 5307 requires the development of a state public health improvement plan

After a long period of what some described as neglect, the 1980s saw efforts nationally and in this state to reinvigorate public health and the public health system. In this state, that effort included the reestablishment of a separate Department of Health and culminated in the health reform act of 1993, which among other things, directed the Department of Health to develop and maintain a public health improvement plan, which it has evolved and been perfected since then, and will provide the basis for much of the discussions of this Committee.
“Ten Great Public Health Achievements of the 20th Century”

- Vaccination
- Motor-vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard


The federal Centers for Disease Control put its own take on the recent history of public health in 1999 by identifying what it saw as the top ten achievements in public health for the preceding 100 years. Among those things noted in CDC’s announcement of the list: a 90% reduction in infant mortality since 1900, a 51% decrease in death rates for coronary heart disease since 1972, and a 40% reduction in the rate of fatal occupational injuries since 1980.
Public Health v. Medical Treatment

- Public Health
  - Focus on health status of populations
  - Public service ethic, tempered by concerns for the individual
  - Emphasis on prevention and health promotion
  - Activated all of the time

- Medical Treatment
  - Focus on clinical improvement of individuals patients
  - Personal service ethic, conditioned by awareness of social responsibilities
  - Emphasis on diagnosis and cure
  - Activated when a person is injured or ill

When we move beyond the definitions and concepts, perhaps the easiest way to understand what public health is by comparison to that which it often times confused – medical treatment or health care. Though it's not really fair to characterize the two as adversaries, since they're really best when working together, as this slide indicates, there are some key differences that go to the core of what public health is, particularly its focus on populations rather than individual patients, and on prevention rather than diagnosis and treatment.
The point is further illustrated in this chart. Really just two different ways of looking at the same information, it depicts the different perspective brought to bear by public health versus clinical medicine. While clinical medicine tends to explain a death through the particular ailment that immediately preceded it, public health takes a step back to focus on the circumstances which led to the ailment in the first place.
In fact, a recent *Health Affairs* article suggests that on a population basis only about 10 percent of early deaths can be attributable to shortfalls in medical treatment, while behavioral choices and other factors within the domain of public health have much greater influence.
I wanted to end our description of public health on this slide, because ultimately public health is what the public health system does. While there will be much more detail on this later (especially the top of the triangle) in today’s meeting, this diagram illustrates well the foundation of these activities, and what is needed to make them happen. The bottom line: public health is professional people using information in an organized way to improve the health status of a community.
So how is the public health system structured?
Authority and responsibility within the public health system is shared among federal, state and local agencies. Although most public health authority is based on state law, the federal government nonetheless exerts a strong influence on public health practice through its ability to tax and spend and its responsibility for regulating interstate commerce. National, and even international in scope, federal agencies support state and local efforts through funding, training and technical assistance, advanced laboratory support and data analysis, and other activities. The state agencies have a similar relationship with local public health jurisdictions.
At the federal level, the primary public health agencies are organized under the U.S. Public Health Service in the Department of Health and Human Services. Among these are the Centers for Disease Control and Prevention, which is indeed the center of federal public health activities; the National Institutes of Health, which is the focal point for medical research in the U.S.; and the Health Resources and Services Administration, which is responsible for improving and expanding access to healthcare, including improving healthcare and public health systems.
In addition to HHS, various White House agencies, 14 cabinet-level departments and agencies, and more than 10 public corporations and commissions and sub-cabinet agencies are also responsible for certain health programs.
The State Board of Health (RCW 43.20)

- Independent 10-member Board appointed by the Governor
- Forum for the development of public health policy
- No enforcement authority, but adopts rules regarding:
  - Drinking water quality
  - Control and abatement of health hazards and nuisances related to waste disposal
  - Disease prevention and control
  - Cleanliness of facilities
  - Isolation and quarantine
  - Other Misc.

At the state level, the State Board of Health works with and within the State Department of Health, serving as the focal point for professional and citizen health concerns and to gather these concerns into a coherent policy. Although it cannot take independent enforcement action, the Board is authorized to adopt administrative rules on a variety of subjects, including drinking water quality, disease prevention and control (such as its recent effort regarding HIV/AIDS, and newborn screening requirements), and isolation and quarantine. The Board also issues the biennial Washington State Health Report, which reports on the people’s health status and recommends priority health goals for state government.
The State Department of Health (RCW 43.70)

- Collects and analyzes public health and health care data; maintains birth, death, marriage and divorce statistics.
- Provides public health services and public health laboratory.
- Assure minimum standards of quality for health care providers and facilities.
- Monitors environmental health measures that affect humans
- Strengthen state and local health partnerships
- Public Health Improvement Plan

The Washington State Department of Health is the state's primary public health agency. In reestablishing the Department in 1989 after an almost two decade effort to integrate it into the Department of Social and Health Services was deemed unsuccessful, the Legislature stated its intent to provide a strong, clear focus on health issues in state government "by creating a single department in state government with the primary responsibilities for the preservation of public health, monitoring health care costs, the maintenance of minimal standards for quality in health care delivery, and the general oversight and planning for all the state's activities as they relate to the health of its citizenry."
The Department is headed by the Secretary of Health, who is appointed by the Governor. In addition to its administrative and planning duties, the department is divided generally into four functional areas which correspond to its statutory duties.
Other State Agencies with Public Health Responsibilities

- Department of Agriculture
- Department of Ecology
- Department of Labor & Industries
- Department of Social and Health Services
- Health Care Authority
- Office of the Insurance Commissioner
- Office of the Superintendent of Public Instruction
- Department of Community, Trade and Economic Development
- Washington State Patrol
- Washington Traffic Safety Commission
- Department of Transportation
- Institutions of Higher Education

And, although it's likely that this Committee's deliberations will focus to a large extent on the activities and resources of the Department of Health and of local health jurisdictions, it's important to at least note that there are other state agencies that also have public health responsibilities.
The third leg of the public health system in Washington is local public health jurisdictions, of which there are currently 35. State law authorizes their organization in one of three ways. The functions of the jurisdiction differ little regardless of the way in which it is organized. Local boards of health are made up of County Commissioners, and also may include other elected and non-elected officials. Each jurisdiction must also appoint a local health officer who meets statutorily-prescribed qualifications.
There are about a dozen health districts, mostly in Eastern Washington, including three multi-county districts. There are two combined city-county health departments. All others are organized as single county health departments.
Local health jurisdictions in Washington operate independently, not simply as subdivisions of DOH. In statute, they are both directed to enforce the laws of the state and are authorized to enact their own laws. Much of the statutory language regarding local health jurisdictions parallels, but in less comprehensive terms, the responsibilities of the state Board and Department of Health.
Local Health Jurisdictions

And finally, although I’m not familiar enough with the their operations to say whether this is typical, this organization chart from the Clark County Health Department seems a useful illustration of how local public health gets its work done.
It's now Chris's job to explain further exactly what that job is.

REFERENCE PAGE 63 (APPENDIX 4) OF THE PHIP

The final segment of the staff presentation is intended to do two things:

- Give a broad overview of the functions of public health, the activities within each function, and the services that are used to carry out the activities that accomplish each of these functions. This will establish context for the case studies to follow (they will highlight an activity from each function – see agenda);

- In addition, this will introduce the framework that is used to discuss the public health system in the Public Health Improvement Plan and the Budgeting, Accounting, and Reporting System (BARS) so that Committee members can analyze these materials in the same way that public health and finance personnel analyze them.
What Public Health Does

- Prevent epidemics and the spread of disease
- Protect against environmental hazards
- Prevent injuries
- Promote and encourage healthy behaviors and mental health
- Respond to disasters and assist communities in recovery
- Assure the quality and accessibility of health services

The American Public Health Association has identified these items as the responsibilities of public health. The Public Health Improvement Plan has organized these responsibilities into five function areas for defining standards for public health agencies and measuring their performance.

Three concepts to understand: functions, activities, services. These responsibilities cover the field of things that public health does. The PHIP has categorized these responsibilities into five topic areas referred to as functions. Within each function there are numerous activities (subset of functions). The substantive, “nuts and bolts” tools (processes) of public health are known as services. So functions are the things that public health hopes to accomplish, services are how public health tries to accomplish this.

(Performance measured by a site reviewer process to establish baselines for all of the LHJs).
Known as the “10 essential services of public health.” The substantive, “nuts and bolts” tools (processes) of public health are known as services. They are the things that a public health agency does. Developed by the CDC in the 1990s to clarify the role of public health in the overall health system. SEE PHIP: Appendix 4 (page 63) of the PHIP has a crosswalk.

State PH standards designed to reflect these services.

Generally, each of these services can be found in each of the functions. Although to greater or lesser degree. (Appendix 4 has the crosswalk)
How It’s Done:  
The Practice of Public Health

- **Assurance**
  - Enforce laws and regulations to achieve health goals
  - Link people to needed personal health services
  - Ensure a skilled health workforce
  - Evaluate effectiveness, accessibility, and quality of health services
  - Research and apply innovative solutions
Public Health Functions

- Protecting people from disease
- Assuring for a healthy environment
- Prevention and community health promotion
- Access to health services
- Understanding health issues

Compared to the services (tools) of public health, the public health functions are the product (what the essential services are intended to accomplish). These are the functions as identified by the PHIP. Each function is comprised of several activities. These same functions are used by the State Auditors Office to describe the broad categories of public health activities and to monitor the spending on each activity.
Public Health Functions

Combined State- and Local-Level Spending
FY2004 = $589 million

- Access to Health Services, 15%
- Administration, 10%
- Environmental Health, 13%
- Disease Protection, 12%
- Understanding Health Issues, 6%
- Prevention & Health Promotion, 44%

* The charts depicting FY04 expenditures exclude $18-$23 million of fee-supported state Department of Health professional licensing and regulatory activities.

This considers spending by public health function by state and local public health agencies from all sources (federal, general fund, grants, and fees).

This is not to say that Washington is spending too much on one area or not enough on another area, but it is just to provide a fiscal perspective of how public health does its work.
First function to consider is protecting people from disease and these are some of the activities within the function. Local and state spending on each of these activities is tracked by the State Auditor’s Office. Some of the services used to accomplish this function include informing and educating the public and maintaining a skilled workforce.

Sexually-Transmitted Disease: education/prevention re risk reduction, provides STD testing services.

Tuberculosis: educates and performs disease outbreak investigations.

HIV/AIDS: education/prevention, testing and counseling, case management services (needle exchanges).

Other Communicable Disease: educates and performs disease outbreak investigations (flu, chickenpox).

Immunizations: educates public about immunizations; conducts immunization services at clinics

Laboratory:

CHILD Profile: sends information about immunizations and other child health-related matters to parents of young children. (WA DOH program and LHJs may participate to target mailings)

Other Non-Communicable Diseases:
About a 12% of the funds spent by state and local health departments last year was for disease protection.

Portion of spending on this function relative to all spending on public health.
Activities Associated with Protecting People from Disease

About 98% of spending for disease protection was through local health departments, and 2% was by the Department of Health.

Comparison of the spending by the state with the LHJs within this function.

Statewide Activities:
- Technical assistance

Local Activities:
- Case investigation, reporting & data gathering
- Identifying potential sources of exposure
- Data collection and analysis
Second function to consider is assuring for a healthy environment and these are some of the activities within the function. Some of the services used to accomplish this function include mobilizing community partnerships and maintaining a skilled workforce.

**Drinking Water Quality**: investigates and assists in correcting drinking water contamination and complaints.

**Solid and Hazardous Waste**: monitors the handling, treatment, storage, transportation, and disposal of hazardous waste by identifying contaminated properties and providing technical assistance.

**On-Site Sewage/Land Development**: review land development applications to assure that wellheads are protected and that there is adequate water supply.

**Vector Control**: controls disease carrying animals such as rats, bats, and mosquitoes.

**Food**: inspects and issues permits to retail food service establishments; trains food workers; investigates food illness reports.

**Chemical and Physical**:

**Living Environments**: inspecting schools, camps, recreational water facilities.
Activities Associated with Assuring for a Healthy Environment

About 13% of the funds spent by state and local health departments last year was for environmental health.

Portion of spending on this function relative to all spending on public health.
About 72% of environmental health spending was through local health departments, and 28% was by the Department of Health.

Comparison of the spending by the state with the LHJs within this function.
Third function to consider is prevention and health promotion and these are some of the activities within the function. Some of the services used to accomplish this function include researching solutions, informing and educating the public, supporting policies and plans to reach health goals, mobilizing community partnerships, and maintaining a skilled workforce.

**Cancer Prevention and Control:** Developing plans for addressing specific diseases.

**Cardiovascular Risk Reduction:**

**Tobacco Prevention and Control:** Public information campaigns; quite-line services.

**Violence and Injury Prevention:** Drowning prevention, bike helmet programs, fall prevention.

**Children with Special Health Care Needs:** genetic testing, counseling, diagnosis, and treatment; early hearing loss diagnosis and intervention; birth defects surveillance.

**Women, Infants, and Children:** provides high-risk mothers, babies, and children with health assessments, health care referrals, and vouchers for nutritious food.

**General Health Education:**

**Maternal/Infant/Child/Adolescent Health:** teen pregnancy education; student health information
About 45% of the funds spent by state and local health departments last year was for prevention and health promotion activities.

Portion of spending on this function relative to all spending on public health.
Activities Associated with Prevention and Health Promotion

About one-third of spending for prevention and health promotion was by local health departments, and two-thirds was by the Department of Health.

State- and Local-Level Spending FY2004 ($ millions)

$85
$172

Comparison of the spending by the state with the LHJs within this function. Only function where most of the money is spent by DOH.

Statewide Activities:

- Maternal & Child Health – data collection, analysis, surveillance, development of practice standards, monitoring, and training and technical assistance.
- WIC (Women Infants and children) – provides high-risk mothers, babies, and children with health assessments, health care referrals, and vouchers for nutritious food.
- Chronic Disease Prevention – Tobacco, Cancer Prevention & Control
Fourth function to consider is access to health services and these are some of the activities within the function. Some of the services used to accomplish this function include informing and educating the public, and evaluating the effectiveness, accessibility and quality of health services.

**Family Planning:** birth control products, education, and counseling; physical examinations; pregnancy testing.

**Family Resource:**

**Oral Health:** educating public
Activities Associated with Access to Health Services

About 15% of the funds spent by state and local health departments last year was to improve access to health services.

Portion of spending on this function relative to all spending on public health.
Activities Associated with Access to Health Services

About 70% of spending for access to health services was through local health departments, and 30% was by the Department of Health.

Comparison of the spending by the state with the LHJs within this function.

Family Planning
Oral Health
Family and Individual Health
Fifth function to consider is understanding health issues and these are some of the activities within the function. Some of the services used to accomplish this function include monitoring community health status and maintaining a skilled workforce.

**Vital Records:** partners with WA DOH to collect and provide copies of birth and death certificates. Locals supply forms, collect forms, examine forms for completeness.

**Epidemiology:** collects, investigates, and distributes data about illness and death by reviewing disease trends, identifying sources of illness, and educating the public.

**Assessment Activities:** measuring the health of the community.

**Bioterrorism:** partners with local medical providers, first responders, and emergency managers to detect bioterrorism incidents and plan responses to them.

**Child Death Review:** reviews cases of unexpected deaths of children up to 18 years old and reports to WA DOH.
About 6% of the funds spent by state and local health departments last year was for vital records, epidemiology, assessment and health planning.

Portion of spending on this function relative to all spending on public health.
Activities Associated with Understanding Health Issues

About two-thirds of spending for health issues was through local health departments, and one-third was by the Department of Health.

Comparison of the spending by the state with the LHJs within this function.

Statewide Activities:
- Center for Health Statistics – vital records – birth & death certificates
- Disease surveillance and analysis
- Education & technical assistance
- Public Health Laboratory
- Child Profile

Local Activities:
- Local data gathering and analysis
- Design and implementation of health promotion interventions
- Strategic planning
Public Health Functions

- Protecting people from disease
- Assuring for a healthy environment
- Prevention and community health promotion
- Access to health services
- Understanding health issues

Combined State- and Local-Level Spending
FY2004 = $589 million

Access to Health Services, 15%
Prevention & Health Promotion, 44%
Understanding Health Issues, 6%
Environmental Health, 12%
Disease Protection, 12%
Administration, 11%

* The charts depicting FY04 expenditures exclude $18-$23 million of fee-supported state Department of Health professional licensing and regulatory activities.

That concludes my portion of the presentation, so I'll leave you with this slide showing each of the functions and the proportion of the spending on public health services that each one represents.