

CREATING A STRONGER PUBLIC HEALTH SYSTEM

Statewide Priorities for Action

Presented to
Joint Select Committee on
Public Health Funding

MAY 25, 2006

Presented by
Washington State Association of
Local Public Health Officials

with assistance from
Washington State Department of Health
Washington State Board of Health

PUBLIC HEALTH
ALWAYS WORKING FOR A SAFER AND
HEALTHIER WASHINGTON



Washington State Association of Local Public Health Officials

An Affiliate of
Washington State Association of Counties

May 25, 2006

Dear Chair Schual-Berke and Members of the Committee:

Public health is a basic function of government, serving every person who lives in or visits any of our communities. We all depend on public health for services like clean drinking water, safe food, immunizations, and protection from infectious diseases.

Historically, in Washington State, public health services have been delivered by county government, and have been funded with a combination of local, state and federal funds. The state and federal funding has been primarily categorical, in small amounts, for specific purposes. For the past 30 years, there has not been a dedicated source of support to ensure that public health services would be readily available throughout the state.

In response for the Committee's request to learn about "gaps" in public health services currently delivered, we asked local and state public health officials to set specific priorities for public health services that are not delivered, or are insufficient, today because the system lacks the funding needed to carry them out. These public health system "gaps" are described in detail in following pages. We based out priority decisions on a set of beliefs that we hold as public health professionals, shown on the following page.

We appreciate the time and attention given to public health funding by members of the Committee and staff.

Sincerely,

Janet Davis

Janet Davis, RN, BSN, MPH
Chair, Washington State Association of Local Public Health Officials

Decisions on statewide priorities for public health actions rest on the following beliefs:

We've got to **invest in our families and kids**, starting early in peoples lives. This is where health begins for all of us. Because we have evidence it works, we recommend a substantial investment in a statewide nurse home visiting program to help high risk families get off to a healthier start.

We need to **stop communicable diseases** before they spread, by following up on every disease report and reaching out to people at high risk. By law, many diseases must be reported, but statewide, we lack the capacity to do a thorough job of following up on every report, and contacting people who may be at risk of catching or spreading disease like pertussis, tuberculosis, HIV and other sexually transmitted diseases.

We must **reduce the impact of chronic diseases** because they are the greatest driver of health care costs - and the greatest threat to health for the next generation. Chronic diseases (like diabetes, asthma, or heart disease) are expensive to treat and some are increasingly affecting younger people. How healthy we are in the future depends on investments we make now to keep these diseases at bay. Public health has a key role to play in helping initiate and sustain community health promotion programs.

We need **safe drinking water, safe food and safe air** - everywhere in the state. These resources are essential to life and we have to protect them – for our own health and for the future. Over time, the emphasis for these programs has been on regulatory programs, and each separate effort is largely supported by fees. While regulations are important, they are not the whole answer: We need strong, community-specific environmental health and prevention programs.

Information about our health is the key to change. Every community has some resources to make healthy changes – once they have specific information of what is causing harm, risk or illness. Health assessment gives us the information needed to make certain that our investments are wise – and yield results.

People need **health care services** – and often need help to find them. Many people have trouble finding the health care services they need for themselves and their families. The result is delay – and often more suffering and greater cost to all. Public health agencies cannot stop the health care crisis, but they can help people navigate the system, and help communities target the service gaps they find.

The Public Health Officials of Washington State, 2006

CREATING A STRONGER PUBLIC HEALTH SYSTEM

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EXECUTIVE SUMMARY

Public health officials are concerned about the harmful consequences of a continued lack of funding to address public health needs in Washington. In prior work, they estimated the public health system is under-funded by about \$400 million per year. At the local level, overall funding has declined significantly over the past decade.

The Joint Select Committee on Public Health Financing asked local health officials to answer the following questions:

- What important public health needs are you unable to meet?
- How much would it cost to meet them?
- How would those investments protect or improve the public's health? And, how will we know if the investments are effective?

In response, public health officials from across Washington participated in outlining, prioritizing and estimating costs of addressing public health problems statewide.

The result of their work is presented in this report. The Public Health Priority Model is set forth in three tiers of possible additional funding: \$50 million, \$100 million, and \$200 million.

The greatest unmet needs are for workers and information tools that would help to stop the spread of communicable disease, reduce the growing impact of chronic disease, and help support at-risk families and teens to avoid problems. Protecting food, water and air are basic responsibilities that cannot be neglected. And, helping people get the critical health services they need will help them lead healthier lives.

Public health interventions are based on the best available evidence about what works - and can be evaluated through time to ensure they are effective. Examples of effective public health programs are Washington's very high rate of seat belt use (so, fewer traffic fatalities) and our recent declines in smoking rates (future lives saved and medical costs averted.)

Yet, Washington faces serious public health challenges: rising communicable disease rates, increases in chronic illnesses like diabetes and heart disease, and many individuals and families who are unable to access the health care and support services they need.

The priority actions outlined in this report call out some of the greatest public health problems facing us today. Investments in these areas can bring tremendous benefits to communities and will result in measurable improvements to the health of Washington's residents. We *can* make Washington a healthier, safer place to live.

SECTION 1: THE 2006 PUBLIC HEALTH PRIORITY MODEL

Establishing statewide capacity in the public health system

The Joint Select Committee on Public Health Finance was convened to consider how the state's public health system might be financed to assure that public health services are reliably available, statewide.

Public health officials were asked to describe what public health needs would be met, if additional funding were provided to public health, and to place the recommendations for additional resources in priority order.

The 2006 Public Health Priority Model presented here applies to a whole public health *system* – not a single service or a specific place. It includes 35 local government public health agencies that are independently organized, funded at different levels and administered by separate Boards of Health. It also includes the State Department of Health and State Board of Health.

In this model, public health officials have estimated the cost of addressing gaps in public health services so that reliable and similar services can be offered statewide. They have grouped priorities into three levels of investment. In selecting priorities and estimating costs, they have focused on needs believed to exist *statewide*. Their recommended actions would result in an even distribution of new resources to serve all communities.

Three Tiered Budget Packages

On the following pages, specific priorities are set forth in rank order and grouped into packages that would increase public health spending by:

- \$200 million per year
- \$100 million per year
- \$ 50 million per year

For comparison purposes, note that local health departments have combined annual expenditures from all sources of about \$350 million per year.

LHJs: Costs were calculated for meeting a need in 34 local health jurisdictions – “LHJs”, which include both county health departments and health districts.

King County: Costs for addressing the needs within King County were calculated separately, but many of the same needs would be addressed both inside and outside that most-populous county. King County priorities are included in the list of priority actions and costs for all health departments; however, when a special King County-only priority exists, it is noted in [blue](#).

DOH: State level priorities and the costs for coordination, support and oversight of additional local capacity at the state level were calculated for the Department of Health (DOH.)

The proportions of spending at each budget level reflect population: about 30% for King County and 70% for other counties combined – with 5% reserved for state-level work.

Table 1: Three Budget Tiers

Tier	34 LHJs	Sea-King	DOH
\$50 Million	\$32.5 M	\$15.0 M	\$2.5 M
\$100 Million	\$65.0 M	\$30.0 M	\$5.0 M
\$200 Million	\$130.0 M	\$60.0 M	\$10.0 M

Applying the 2006 Public Health Priority Model

The 2006 model takes prior public health cost modeling work much farther and makes significant adjustments. It conveys specific priorities and costs for each action that public health officials believe should be taken.

- Specific public health priority actions are listed and the cost of carrying them out statewide is calculated. Actions are presented in six broad categories, summarized on page 11.
- Priorities have been set among the actions, as shown on page 12. Selections are based on common criteria, page 9.
- Each recommended action is something that cannot be accomplished now because there is not funding, or there is insufficient funding.
- An “index” health department was used to estimate the cost to accomplish a priority action, using a health department that serves a population of 175,000 (the average among all 35.) Costs were based on a staffing model, per full time equivalent, or “FTE”, because staff costs are the vast majority of the cost of providing services. The costing method is described in detail in Appendix 1. The FTE assumptions are shown in Appendix 5.
- Public health experts from around the state were convened in special workshops to develop the priorities and estimate the staffing support needed. A leadership group was convened to review all the preceding work and make final priority selections. The process steps and the participants’ names are included in Appendixes 2 and 3.
- The three-tier budget levels were set in advance. Many more public health needs were identified than could be funded, and these non-funded actions are listed on page 63. The full list of priorities is more closely aligned with the original overall estimate from 2004, described below.

Background – The 2004 Public Health Cost Model

In 2004, local health officials and state partners worked to develop a first, basic cost model. They believed their agencies were severely under-funded, but had not been able to answer the question: How much funding would it take to meet the needs for public health services, statewide?

Their work was completed as part of the objectives of the Public Health Improvement Plan Finance Committee. Their effort represented the most comprehensive effort undertaken at that time to calculate the cost of needed public health services.

To assist the Committee, public health leaders from six health departments worked separately with their management teams to estimate the cost of providing services they believed were needed – but which were not affordable with current resources. To have a comparable estimate, they were asked to plan for the staffing needed to serve a population of 175,000. The leaders then compared their estimates as a group and developed a single cost model.

The overall cost of providing comprehensive public health services for the index-sized health department was calculated. This figure was then scaled to county size (using a pre-existing method for grouping counties), and a statewide budget-need was established. Current resources were subtracted, to reveal the size of the “gap” between current and needed funding. To meet the gap statewide, it would take at least an additional \$400 million per year.

Comparing models

The 2004 Cost Model gave a general estimate of overall need, illustrating the magnitude of change needed to create a more reliable public health system.

The 2006 model is far more specific, with discrete costs for each item included. The use of the index health department of 175,000 population was retained because it is easier to understand and to test the common-sense application of a recommendation for a familiar-size health department. The scaling factors were retained as a way to achieve “sameness” in resources to address a problem statewide, while adjusting for size. The salary assumptions were lowered and based on an annual survey so they can be updated in the future. The span of control (for management costs), fringe benefit and indirect cost assumptions remained the same because they were considered realistic.

Criteria used for setting public health priorities:

In selecting priorities and placing items in rank order, local and state health officials considered the following:

1. The added investment will significantly contribute to averting a health threat.
2. The added investment will significantly improve the public health outcomes, based on existing evidence.
3. A significant portion of the community will benefit directly or indirectly from the investment.
4. Current investment avoids greater future costs.
5. The investment will achieve a fundamental public health infrastructure improvement, affecting a number of service areas and/or most LHJs.
6. The added investment will expand the capacity of LHJ's to fulfill existing mandates.
7. The activity or service has implications across LHJ's – either regionally or statewide.
8. The activity or service is essential for addressing health disparities among state populations.
9. No other organization or agency is addressing this service or activity. This is a primary role of public health, and not of any other organization.
10. There is no other current stable source of funding for this activity or service.
11. There is a public expectation and acceptance that the public health system is responsible for coordinating a response.
12. The investment would improve collaboration with and leverage resources from community partners.

Priority needed to meet at least six of the criteria to be considered a high priority.

BUDGET TIERS – IN TWO VIEWS

Funding proposals are provided in three tiers. Throughout the document, the same color is used to denote the Budget Tier.

	Tier I \$50 million
	Tier II \$100 Million
	Tier III \$200 Million

A range of priority actions are included in each Tier, reflecting the fact that public health services respond to many needs in a community. Public health officials have placed the highest priority needs in the top tier, and divided potential resources among services.

1. Statewide Summary, Page 11

This chart groups related services into broader packages, for each of three levels of investment. It illustrates how public health officials would distribute resources at each level. These figures include all LHJs and DOH. (More detail is provided beginning on page 16, and each specific priority action is described beginning on page 32.)

2. Rank Order for Funding, Page 12

This shows how all priority actions would be funded, in rank order, based on the judgments of local and state health officials. The rank order included all LHJs. King County's priorities are included when they matched all other health departments; they are shown separately (*in blue*) when the priority action was unique at that budget level.

Title	Category	Abbreviation
Stop Communicable Disease	Communicable Disease	CD
Reduce Chronic Disease	Health Promotion	HP
Invest in Healthy Families	Healthy Families	HF
Protect food, water, air	Environmental Health	EH
Help People Access Care	Health Access	HA

Statewide Summary: ALL 35 LHJs and DOH

This table groups the public health priorities for additional investment for 35 local health jurisdictions and the Department of Health. Details are included in the following pages. \$0 = actions not funded at \$200 million level

Table 2: Summary of Priority Actions and Costs

Summary of Public Health Priority Actions	Dollars in Millions:			
	\$50	\$100	\$200	\$0
<i>Totals are cumulative, adding each prior Tier. \$0 = actions not funded; costs exceed \$200 million.</i>				
Stop communicable diseases before they spread: Case Investigation and Outreach Disease surveillance and epidemiology Raising community awareness for better protection Managing information for faster reporting and response Maintaining surge capacity and emergency response plans	15	34	58	22
Reduce the impact of chronic diseases: Evidence-based interventions to prevent disease Surveillance and Epidemiology of chronic disease trends Engage health providers in coordinated prevention efforts	16	22	32	10
Invest in Healthy Families: Nurse home-visit programs for high risk families Supportive services for pregnant women Injury prevention Outreach and treatment for adolescents	6	19	41	13
Protect safety of drinking water, food and air: Zoonotics: diseases from animals, insects, parasites Water quality control, and On-site maintenance Food safety protection	5	16	26	47
Use health information to guide decisions: Support collection of local data that is specific and timely Analysis tools for local data to monitor trends Infrastructure for electronic data	8	10	22	15
Help people get the health care services they need: Translation services and materials Identify specific, local problems in access to care Engage community partners; address local service gaps Assist people in finding medical homes	0	0	29	0
Statewide Infrastructure			1	0
	50	101	209	107

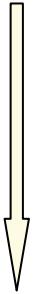
Table 3: Public Health Priorities in Rank Order - By Budget Tier for 35 LHJs

Black type denotes all 35 LHJs. Blue type denotes action unique to King County.

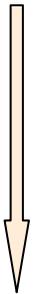
	\$ in Millions	LHJ Priority Actions	Type
↓	12.5	Case Investigation of Communicable Diseases	CD
	15.9	Reduce Chronic Disease impacts, costs	HP
	6.02	Nurse-Family Home Visits - Step 1	HF
	2.8	Local health data for decision-support	HI
	2.4	Tools for health information management	HI
	2.35	Program evaluation, measuring results	HI
	3.1	Zoonotics - response to emerging threats	EH
	.75	Outreach to High Risk Settings and Groups	CD
	.54	Risk Reduction Campaigns: immunizations, STDs	CD
	.33	Injury Prevention Interventions	HP
\$50 M	46.69	Total for Tier I	
↓	10.76	Outreach to high risk settings and groups	CD
	1.4	Community information on disease risks	CD
	12.1	Nurse-Family Home Visits Statewide	HF
	2.77	Disease surveillance and regional epidemiology	CD
	2.1	Case Investigation of Communicable Disease	CD
	8.31	Food Safety for high risk permanent settings	EH
	2.77	Water quality control information management	EH
	6.12	Reduce Impact of Chronic Disease	HP
	1.0	Local Health Data Support & Tools	HI
	.62	Program Evaluation	HI
.68	Training for Response to Disease, Floods, Earthquakes	CD	
\$100 M	95.32	Total at Tier II (48.63 this segment)	
↓	3.2	Store and transmit information electronically	CD
	3.3	Health Provider partnerships and coordination	HP
	1.4	Promote self-care strategies	HP
	5.0	Risk reduction campaigns: immunizations, STDs	CD
	2.1	Food Safety for high risk temporary settings	EH
	7.1	Expand Maternity Support Services	HF
	4.2	Injury prevention interventions	HF
	4.2	Translation services	HA
	4.6	Training (disease, floods, earthquakes)	CD
	4.6	Document local problems in access to health care	HA
	2.1	Community engagement EH risks	EH
	6.6	Local data analysis for decision support - Stage 2	HI
	2.8	Community Coalitions on Access problems	HA
	4.8	Assessment for quality improvement	HI
	11.2	Assist clients to find medical homes	HA
	4.3	Outreach for substance abuse and other risks	HP
	3.1	Adolescent health treatment and outreach	HF
	3.8	Mapping and analysis of CD information	CD
	5.1	On-site maintenance and operations oversight	EH
	5.6	Maintain plans, assignments for surge capacity	CD
.20	Water Quality Control Information Management	EH	
3.0	Additional Nurse-Family Partnership	HF	
1.0	Outreach to High Risk Settings and Groups - child care ctrs	HF	
6.0	Community-wide health system support/infrastructure	HA	
\$200 M	194.62	Total for Tier III (99.3 this segment)	

Table 4: Public Health Priorities in Rank Order – By Budget Tier for Department of Health

The Department of Health provides coordination of services, statewide support for data systems and other infrastructure programs and technical assistance. In some cases, the department provides direct service on a regional or statewide basis.



\$ in Millions	DOH Priority Actions	Category
.27	Food safety and EH support to LHJs	EH
.65	PHIMS: Electronic Disease reporting and information mgmt.	CD
.16	Epidemiology & Surveillance, Outbreak Investigation	CD
.22	Epidemiology & Surveillance, Community Health Assessment	HI
.43	Information tools and systems to support local analytic capacity	HI
1.01	Water Quality and On-Site Maintenance & Operations	EH
2.74	Total at Tier I	



.31	Basic Health Promotion Services support, translation	HP
.46	Nurse-Family Partnerships support to local programs,	HF
.54	Service to schools: indoor air, environmental toxin concerns	EH
.21	Expand Epi & Surveillance, Community Health Assessment	HI
.16	Expand Epi & Surveillance, Outbreak Investigation	CD
.41	Expand Services for STD treatment	CD
.21	PHRED: Electronic Lab reporting	CD
.21	SECURES: 24/7 notification system	CD
5.25	Total at Tier II (\$2.51 this segment)	

\$100 M



.47	Healthy Communities, Mini-grants	HP
.41	Targeted Prevention: asthma, stroke, heart disease, cancer	HP
.36	Workforce training on-line -reduce travel, increase competency	IN
.42	Statewide program evaluation and performance measurement	HI
.11	Radiation training for emergency responders	CD
.20	Laboratory: upgrade capacity and equipment for reporting	CD
.25	Improve statewide public health system, planning, policy	IN
.50	Storage Area Networks (SAN) for off-site data storage	IN
.50	Laboratory: Upgrade capacity and equipment Bio-Safety III	CD
.93	Hep C Assessment and testing	CD
9.4	Total at Tier III (\$4.15 this segment)	

\$200 M

SECTION 2: COSTS OF PRIORITY ACTIONS BY CATEGORY

Summary Table

Page 15 lists the public health actions recommended by category, in priority order, at each budget Tier.

The categories include:

- Communicable Disease
- Health Promotion/Chronic Disease
- Healthy Families
- Health Assessment Information
- Environmental Health
- Access to Health Care Services
- Infrastructure

Category Description

Pages 16 to 31 summarize each priority category, using the following outline:

- Service description
- Current Problem
- Summary of strategies
- Potential performance measures

Detailed descriptions of each priority action are included in Section 3, beginning on 32.

Current Funding is shown in Appendix 6. It is important to note that the priority actions presented in this document are not funded today or are insufficiently funded. Current funding information is provide background purposes only, and is arranged in categories similar to what is presented in this report. However, current funding is often categorical and not available to support these actions.

Table 5: Public Health Priorities By Category of Service For 35 LHJs

Color Denotes Budget Tier: \$50 M \$100 M \$200 Million

\$M	Communicable Disease	\$M	Health Information
12.5	Case Investigation of Communicable Diseases	2.8	Local health data for decision-support
.75	Outreach to High Risk Settings and Groups	2.4	Tools for health information management
.54	Risk Reduction Campaigns: immunizations, STDs	2.35	Program evaluation, measuring results
10.76	Outreach to high risk settings and groups	1.0	Local Health Data Support & Tools
1.4	Community information on disease risks	.62	Program Evaluation
2.77	Disease surveillance and regional epidemiology	6.6	Local data analysis for decision support
2.1	Case Investigation of Communicable Disease	4.8	Assessment for quality improvement
.68	Training for Response to Disease, Floods, Earthquakes	20.57	Total
3.2	Store and transmit information electronically		
5.0	Risk reduction campaigns: immunizations, STDs	\$M	Environmental Health
4.6	Training (disease, floods, earthquakes)	3.1	Zoonotics - response to emerging threats
3.8	Mapping and analysis of CD information	8.31	Food Safety for high risk permanent settings
5.6	Maintain plans, assignments for surge capacity	2.77	Water quality control information management
53.7	Total	2.1	Food Safety for high risk temporary settings
		2.1	Community engagement EH risks
		5.1	On-site maintenance and operations oversight
		.20	Water Quality Control Information Management
		23.68	Total
\$M	Health Promotion/Chronic Disease	\$M	Access to Critical Health Services
15.9	Reduce Chronic Disease impacts, costs	4.2	Translation services
6.12	Reduce Impact of Chronic Disease	4.6	Document local problems in access to health care
3.3	Health Provider partnerships and coordination	2.8	Community Coalitions on Access problems
1.4	Promote self-care strategies	11.0	Assist clients to find medical homes
4.3	Outreach for substance abuse and other risks	6.0	Community-wide health system support/infrastructure
31.02	Total	28.6	Total
\$M	Healthy Families		
6.02	Nurse-Family Home Visits - Step 1		
.33	Injury Prevention Interventions		
12.1	Nurse-Family Home Visits Statewide		
7.1	Expand Maternity Support Services		
3.1	Adolescent health treatment and outreach		
4.2	Injury prevention interventions		
3.0	Additional Nurse-Family Partnership		
1.0	Outreach to High Risk Settings and Groups - child care centers		
3.0	Additional Nurse-Family Partnership		
1.0	Outreach to High Risk Settings and Groups - child care centers		
40.85	Total		

*Blue type denotes action unique to King County.
Total \$198.42 excludes DOH.*

COMMUNICABLE DISEASE

Summary of Proposed Public Health Actions for 35 LHJs and DOH

in Millions	Priority for LHJs	Tier \$M
12.5	Case Investigation of Communicable Diseases	50 ↓
.75	Outreach to High Risk Settings and Groups	
.54	Risk Reduction Campaigns: immunizations, STDs	
10.76	Outreach to high risk settings and groups	100 ↓
1.4	Community information on disease risks	
2.77	Disease surveillance and regional epidemiology	
2.1	Case Investigation of Communicable Disease	
.68	Training for Response to Disease, Floods, Earthquakes	
3.2	Store and transmit information electronically	200 ↓
5.0	Risk reduction campaigns: immunizations, STDs	
4.6	Training (disease, floods, earthquakes)	
3.8	Mapping and analysis of CD information	
5.6	Maintain plans, assignments for surge capacity	

\$53.7 Total LHJ

	Priority for Department of Health	Tier \$M
.65	PHIMS: Electronic Disease reporting and information mgmt.	50
.16	Epidemiology & Surveillance, Outbreak Investigation	100 ↓
.61	Expand Epi & Surveillance, Outbreak Investigation	
.41	Expand Services for STD treatment	
.21	PHRED: Electronic Lab reporting	
.21	SECURES: 24/7 notification system	
.11	Radiation training for emergency responders	200 ↓
.20	Laboratory: upgrade capacity and equipment for reporting	
.50	Laboratory: Upgrade capacity and equipment Bio-Safety III	
.93	Hepatitis C Assessment and testing	

\$3.99 Total DOH

\$57.69 All Communicable Disease

Public health officials have recommended increased investment in fighting communicable disease as their highest-ranked priority.

Preventing the spread of communicable disease is a core responsibility of public health agencies. There are more than 85 diseases and conditions that must be reported to the health department so that prevention measures can be put in place.

The types of communicable diseases needing public health response cover a very wide range of conditions. Examples are: illnesses for which there are vaccines (like measles or mumps), outbreaks of food or water born diseases, sexually transmitted diseases, tuberculosis, and some respiratory illnesses, just to name a few.

These diseases can affect many people across a population and the public health response is to limit the number of people affected, as quickly as possible. Recent local examples: excluding un-immunized children from school due to a high number of pertussis cases, and testing hundreds of school-age children after possible exposure to TB.

The current problem:

- There is no basic funding to fight communicable diseases or respond when one occurs in a community.
- Some diseases are on an upward trend. If they continue, future costs will be greater. And, complacency sets in: Without resources to combat disease, we live with rates of diseases like STDs that could be cured and curtailed with aggressive action.

Chlamydia rates are rising about 125 per year. This has the greatest impact on women, teens and people in their 20's.

Gonorrhea rates have climbed again, after a low point in the mid-1990's. More than 2800 cases were reported last year.

Syphilis: Washington saw more than 200 new cases of syphilis in 2004, a disease that is making resurgence. Last year the rate of primary and secondary syphilis was showed a rise of 84% over 2003. Primary and secondary syphilis continues to increase especially among men who have sex with men in urban areas.

HIV: With today's drugs, people are leading longer and healthier lives with HIV, but there is no vaccine or cure. This remains a very serious, infectious, life-long disease with very high treatment costs – it's estimated that for each HIV infection, medical costs may reach \$200,655. Prevention remains our best remedy by far.

Tuberculosis is another disease making an unwelcome comeback in some of our communities. Every case of latent TB requires extended drug therapy to prevent the disease from becoming infectious. Every infectious case requires a daily regimen of drugs and is often administered in "daily observed therapy" – a labor intensive process developed to make sure the disease is treated – and not left to develop into a drug-resistant strain.

Immunization has been a key strategy for public health – protecting children and adults from very serious diseases. But, 22% of Washington's kids are not fully immunized by age 2. We have made progress in recent years – but have a significant way to go.

Pertussis is “whooping cough” – and it is a very serious disease. A significant increase in pertussis cases makes it clear: We cannot afford to let up on immunizations – the diseases are waiting in the wings. Vaccination against pertussis is also cost effective with \$27 of direct and indirect savings for each \$1 spent.

- When a disease problem occurs, it needs immediate response - but often, there are not adequate resources to support needed action or to sustain prevention efforts.
- Health officials say they can deal with disease emergencies, but often lack the resources it takes to do adequate follow up, such as contacting partners and family members.
- The strength of communicable disease programs varies from one county to the next - but in our mobile society, the need for protection is the same everywhere.
- There is very limited ability to do disease surveillance. Tracking diseases and where they occur over time is key to spotting problems early and starting prevention effort. There are not resources to establish good tracking systems statewide.

Recommended strategies:

- Establishing basic communicable disease capacity statewide, in every health department so that aggressive prevention and surveillance can take place.
- Providing resources for active outreach to people at highest risk of disease – to go where the problem is.
- Assuring that every health department has some resources to track and record disease trends so they know what and where the problem occurs locally.
- Informing the community and health providers about disease issues, like immunization rates, to focus attention.
- Maintaining expertise to assure that workers are prepared in the event of a mass casualty or pandemic flu.

Performance Measures:

Performance measures vary by strategy but can include:

- Lower rates of diseases like Chlamydia and other sexually transmitted diseases
- Higher immunization rates among pre-schoolers
- Accurate and timely disease reporting by health providers
- Up-to-date mapping of disease trends

HEALTH PROMOTION/CHRONIC DISEASE PREVENTION

Summary of Proposed Public Health Actions for 35 LHJs and DOH

in Millions	Priority for LHJs	Tier \$M
15.9	Reduce Chronic Disease impacts, costs	50
6.12	Reduce Impact of Chronic Disease	100
3.3	Health Provider partnerships and coordination	200 ↓
1.4	Promote self-care strategies	
4.3	Outreach for substance abuse and other risks	

\$31.02 Total LHJ

in Millions	Priority for Department of Health	Tier \$M
.31	Basic Health Promotion Services support, translation	100
.47	Healthy Communities, Mini-grants	200 ↓
.42	Targeted Prevention: asthma, stroke, heart disease, cancer	

\$1.20 Total DOH

\$32.22 Total Health Promotion

Public health officials in Washington made chronic disease prevention their second-ranked-priority.

Many of the most prevalent and costly illnesses seen today are preventable—but the underlying diseases are rising. Providing information and tools to help people make healthy choices is key to changing the trends and creating a healthier population, overall.

Six of the top ten health indicators cited by the nation's *Healthy People 2010* project are directly attributed to health behavior: physical activity, overweight and obesity, tobacco use, substance abuse, sexual behavior, injury and violence.

HP 2010 estimates that \$50 billion – and 480,000 lives – are lost each year to tobacco use. \$200 billion per year is paid for medical expenses and lost productivity due to poor nutrition alone. In an alarming trend, the CDC reports that health care providers are finding more and more children with type 2 diabetes, a disease usually diagnosed in adults aged 40 years or older.

One alternative to this decline in health is to make health promotion a higher priority and to invest in programs that demonstrate results in helping individuals and whole communities become healthier. Washington's success in lowering tobacco use through its dedicated campaign is one example of how trends can be reversed.

The current problem:

- Health costs are raising and the greatest driver of costs are chronic diseases and conditions that could be prevented with healthier lifestyles. Despite the potential for greater health at lesser cost, there is no prevention agenda in place today.
- Resources for health promotion are very small and tend to be piecemeal – focused on one disease at a time, and funded only sporadically.
- Programs must be sustained to have a lasting impact, and they take time to achieve results. There are no “quick fixes” when it comes to changing health habits.
- It takes health education and public health expertise at the community level to design effective, evidence-based programs and current local resources are very limited.
- Many federal programs that have helped support health promotion are being reduced or eliminated, making health promotion resources even scarcer for public health officials and their community partners.

Recommended strategies:

- Providing community health education and health promotion specialists statewide
- Establishing strong linkages with health care providers so they have effective tools and information for patient education
- Events and information that shifts the health care model to self-care strategies
- Active outreach to groups and settings where the risk is very high for poor nutrition, inactivity, alcohol or other substance abuse.

Performance measures:

Performance measures vary by strategy but could be measured in terms of:

- Percentage of children, adolescents and adults at a healthy weight
- Average amount of exercise and physical activity each week
- Smoking rates
- Average servings of fruits and vegetables consumed daily

Long term benefits – and decreased health care needs -- could be seen in:

- Lower rates of diabetes, heart disease, stroke and some cancers
- Lower rates of substance abuse
- Lower rates of hospitalizations for asthma

HEALTHY FAMILIES

Summary of Proposed Public Health Actions for 35 LHJs and DOH

in Millions	Priority for LHJs	Tier \$M
6.02	Nurse-Family Home Visits - Step 1	50 ↓
.33	Injury Prevention Interventions	
12.1	Nurse-Family Home Visits Statewide	100
7.1	Expand Maternity Support Services	200 ↓
3.1	Adolescent health treatment and outreach	
4.2	Injury Prevention Programs	
3.0	Additional Nurse-Family Partnership	
1.0	Outreach to High Risk Settings and Groups - child care centers	
3.0	Additional Nurse-Family Partnership	
1.0	Outreach to High Risk Settings and Groups - child care centers	
\$40.85	Total LHJ	
Priority for Department of Health		
.47	Nurse-Family Partnerships support to local programs	100
\$.47	Total DOH	

\$41.32 Total Health Families

Programs to support healthy families were rated as the third-highest priority by Washington's public health officials.

The greatest emphasis was placed on expanding the Nurse-Home Visiting program for families where infants are at risk of health problems, developmental or emotional problems, abuse or other risks.

The recommendation is based on a 15 year longitudinal study of the "OLDS Model Nurse-Family Partnership." Public health nurses visit families regularly during the first two years of a child's life, working to help the family develop positive relationships, good parenting and communication skills and to provide referrals and on-going support.

Participants in this program saw decreased risks for many factors – and the benefits were evident even when the children were adolescents (examples: fewer moms on welfare, less substance abuse for kids and moms, fewer arrests for moms and among kids by age 15.)

The investment for intensive nurse-home visits is high, but public health officials believe the evidence is clear: Early investments will pay dividends in terms of stronger families for years to come.

In addition, programs that support pregnant women who are at risk of health and emotional problems during pregnancy are also key to having children born healthy. Programs that seek out adolescents in risky circumstances can be critical component of the healthy families work – especially since these young people may become parents long before they are ready.

The current problem:

- Each year 80,000 babies are born in Washington. About 37,000 are born to low income homes and 15,000 are to first-time moms. These are factors that contribute to being at risk for future problems.
- Supportive programs like nurse-home visiting are very rare, so few families receive the support that could make a life-long difference.
- Some programs like Maternity Support Services are excellent and provide a pathway to healthier births, but should expand to serve more women.
- Programs for adolescent outreach are also rare, despite increased risks for pregnancy, alcohol and drug abuse, emotional and mental health problems, and suicide.

Recommended strategies:

Make an active difference in families lives through outreach and follow-up:

- Help support healthy pregnancy with supportive counseling, referrals and education
- Provide every at-risk infant the benefits of home-visit programs
- Reach out to youth at risk and help them to programs that support their health and well-being.
- Place emphasis on injury prevention, because injury is a high risk for all children – as well as for the elderly.

Performance Measures:

- Healthy birth outcomes; good birth weights and less tobacco use by moms
- Less child abuse and neglect for home-visit families
- Less substance abuse and fewer arrests for moms
- Reduction in pregnancy rates over four subsequent years
- Long term for kids: fewer arrests, cigarettes, sex partners, and alcohol use
- Greater labor force participation by moms in subsequent four years.
- For outreach: Teenagers with better access to health care, lower pregnancy rates, lower STD rates and
- Lower rates for childhood injuries, senior falls, and pedestrian injuries.

HEALTH INFORMATION

Summary of Proposed Public Health Actions for 35 LHJs and DOH

in Millions	Priority for LHJs	Tier \$M
2.8	Local health data for decision-support	50 ↓
2.4	Tools for health information management	
2.35	Program evaluation, measuring results	
1.0	Local Health Data Support & Tools	100 ↓
.62	Program Evaluation	
6.6	Local data analysis for decision support - Stage 2	200 ↓
4.8	Assessment for quality improvement	
\$20.57	Total LHJ	

Priority for Department of Health

.22	Epidemiology & Surveillance, Community Health Assessment	50 ↓
.43	Information tools and systems to support local analytic capacity	
.22	Expand Epi & Surveillance, Community Health Assessment	100
.36	Workforce training on-line -reduce travel, increase competency	200 ↓
\$1.23	Total DOH	

\$21.8 Total Health Information

Providing health information, often called "health assessment" is a core function of public health, according to the *Institutes of Medicine*.

Accurate and timely information is critical to make the best possible decisions for health interventions, or to decide a public health policy or make an informed choice about funding. Is this cancer cluster cause for alarm? Are our health problems getting better or worse? Are public health programs getting results?

Answering these questions requires collecting, analyzing and interpreting health data. It takes expertise, computers, software, and communication skills, and data must be collected over time in order to see the trends.

Public health officials in Washington want to increase the amount and quality of health information available so that community partners, policy makers and citizens have an accurate view of where communities are achieving – or failing to achieve - our health objectives.

The current problem:

- Many health departments do not have the tools, software or staff hours needed to collect and maintain data. Without dedicated resources, they cannot conduct the health assessments their communities' value.
- While every community wants information on its specific health issues, it can be expensive to obtain, especially behavioral risk data that would help them tailor community-specific strategies.
- The "information infrastructure" needs to keep pace with technology changes and needs to be coordinated statewide for everyone to benefit. This requires standardized, updated technology tools and training in how to use them.
- Evaluation programs are essential to knowing whether an investment is paying off, but evaluation is often the first item cut from programs when a budget is strained.

Recommended strategies:

- Every health department would have some increased capacity to collect local data and conduct and publish local health assessments.
- Statewide coordination and support for surveys, software use and training would be increased.
- Evaluation and quality improvement strategies would be put to use in every health department to help programs generate useful performance management information.

Performance measures:

- Every health department can provide statistics about disease trends, injury rates, and other indicators of health to community partners on a regular basis.
- Staff are capable of using up-to-date software to map or analyze program data or community health concerns and they know how and where to obtain special expertise when needed.
- All programs have an evaluation plan that includes both quantitative and qualitative assessment of results.

ENVIRONMENTAL HEALTH

Summary of Proposed Public Health Actions for 35 LHJs and DOH

in Millions	Priority for LHJs	Tier \$M
3.1	Zoonotics - response to emerging threats	50
8.31	Food Safety for high risk permanent settings	100 ↓
2.77	Water quality control information management	
2.1	Food Safety for high risk temporary settings	200 ↓
2.1	Community engagement EH risks	
5.1	On-site maintenance and operations oversight	
.20	Water Quality Control Information Management	

\$23.68 Total LHJ

Priority for Department of Health

.27	Food safety and EH support to LHJs	50 ↓
1.0	Water Quality and On-Site Maintenance & Operations	
.54	Service to schools: indoor air, environmental toxin concerns	100 ↓

\$1.81 Total DOH

\$25.49 Total Environmental Health

Environmental health services are designed to protect human health from risks in the environment. They are based on the need for clean and safe food, drinking water and air so they typically include inspecting restaurants and grocery stores, overseeing small water systems, making sure that new septic tank installations will not foul drinking water supplies.

In 2004, more than 80 food borne illness outbreaks were investigated, each affecting 100 or more people. This is an example of a “hidden cost” in public health system: you never know when or where it will happen, but the “detective work” begins the minute we are alerted of a possible problem – to find the source, identify the organism, contact people who might be affected – and keep the consequences as limited as we can.

Increasingly, there is concern about environmental risks posed by animals, birds, insects or parasites. For example environmental health workers are usually the frontline investigators for hanta virus, West Nile Virus, tick-borne fever and other “zoonotic: diseases. In addition, air quality concerns like mold in buildings, especially schools, has created new demands.

These services are provided in every county, most often as part of the health department. In the few instances where they are organizationally separate, their authority is still derived from the Board of Health and the Health Officer.

The current problem:

- Environmental health services have been largely supported by fees for inspections (restaurants, water, on-site systems.) Fees do not cover the increasing demands of animal disease and problems like mold – so there is no revenue to support the needed workers.
- Every county has developed programs independently so there have not been solid data tracking programs established for similar services. Statewide information on trends and costs would be very valuable to improve services.
- Water resources, in particular, need attention such as sampling and mapping of contaminants. Water is exposed to the surface, moves underground without regard to borders and can carry – and spread health risks. Fees are not an option for lakes, rivers, streams, and groundwater... but some resource is needed to assess human health threats and prevent harm.
- Food safety programs rely heavily on inspections, but to be most effective they need to be augmented with education for food program managers and staff. They also need to target the highest risk establishments and places where food is handled on a temporary basis – such as fairs or community events. Fees are not adequate to support this level of intervention.
- On-site sewage programs (septic tanks) include plan review and site assessment before the septic tank is installed. A fee is charged to support that action. But the long term consequences of poor installation or failing systems takes added resources; this is where the greatest need exists for on-going water resource protection.

Recommended strategies:

- Increase control efforts and sampling of disease vectors like animals, birds, insects
- Create regional databases for tracking water quality so that trends and contaminants are mapped
- Target high risk food establishments for more frequent inspections and food handling education
- Establish maintenance and operations programs for on-site sewage systems, education for owners, tracking water quality in affected areas.
- Greater involvement of community members in environmental health assessments and response plans, so that protecting health in the environment is understood to be a pro-active endeavor, and not a “regulatory program.”

Performance measures:

- Zoonotics: process measures for initial program efforts, and reduction in selected vector populations
- Trend information on water quality for areas affected by contaminants and on-site sewage programs, to show increased water quality (of pinpoint problems.)
- Decreased food born illness, decreased rates of critical violations at inspection.

ACCESS TO CRITICAL HEALTH SERVICES

Summary of Proposed Public Health Actions for 35 LHJs and DOH

in Millions	Priority for LHJs	Tier \$M
4.2	Translation services	200 ↓
4.6	Document local problems in access to health care	
2.8	Community Coalitions on Access problems	
11.0	Assist clients to find medical homes	
<u>6.0</u>	<u>Electronic Health Record for community health system</u>	

\$28.6 Total

According to the Office of the Insurance Commissioner, Washington has about 800,000 people without health insurance today, about one of every 14 people. In some cases, insurance is not the barrier – people may live in areas where there simply is not adequate access to health care in a timely way; not enough providers or too far too travel.

Public health agencies are not a substitute for the doctor’s office. In fact, most public health agencies provide just a few specific services such as immunizations or assessing how an infant is thriving in the WIC program.*

The local health department focuses on services and support that take place *outside* a doctor’s office. As they interact with clients, public health workers are often positioned to identify who needs access to care, and to help that client navigate the medical care system in order to find a medical home.

Getting people into medical care takes knowledge of the local system and a good understanding of a clients medical needs so they do not “slip between the cracks” in a complicated and confusing system.

A second way that public health plays a role in access is as a convener of local health providers and community leadership. When communities face a health care access crisis, it is often the health department that provides leadership, holds meetings, and gets the community working together to solve the problem.

*The one exception is Public Health Seattle King-County, which operates system of comprehensive health clinics.

The current problem:

- Washington's population is increasingly diverse and comes from many different language groups. Public health workers need help getting public health materials and information about medical access translated to assist clients whose English is limited. These needs exist statewide, although the languages needed vary to some extent.
- Many communities want to address the medical access issues they hear about, but find there is no solid information. Community specific analyses of the issues are needed, yet there is very little local data collected.
- Many health departments have undertaken coalition building or other strategies to address local medical access problems. These are ad hoc and time limited. There are not resources for on-going efforts to help identify and address local needs.
- Too few people are available with the expertise and the time to help clients get medical problems addressed. It can be very time consuming, and requires persistence and thorough knowledge of local health care resources.

Recommended strategies:

- Make translation services available so that public health information and advice can be read in a person's own language, and coordinate or provide translation support to health department staff as they work with clients.
- Provide every health department with some resources to document health care access issues in order to develop an accurate picture of the local situation.
- Provide support for leadership in bringing together medical leaders and community members to address medical access issues that affect them.
- Provide direct assistance to clients in every community to help them find a regular source of medical care – a medical home.

Performance Measures:

- Materials translated into locally needed languages
- Cultural competency training for public health workers
- Baseline data exists on access problems and medical resource needs, by community
- Community-level coalitions are active, involved
- Fewer public health clients are without a medical home

Current Funding:

Many health departments provide some clinical services because they are not adequately available in the community. If not addressed, these health needs would have implications for the community as a whole, besides the individuals. While they fill an important role for clients, they are not a substitute for comprehensive medical care.

Examples of individual client services at some health departments include treatment of sexually transmitted diseases, family planning services, HIV/AIDS testing counseling and some follow up care, maternity support services, WIC – Women’s Infant’s Nutrition program, immunizations, on-going treatment of tuberculosis.

STATEWIDE INFRASTRUCTURE

Summary of Proposed Public Health Actions for 35 LHJs and DOH

in Millions	Priority for LHJs	Tier \$M
.36	Workforce training on-line -reduce travel, increase competency	IN ↓
.25	Improve statewide public health system, planning, policy	
.50	Storage Area Networks (SAN) for off-site data storage	

\$1.11 Total DOH, Statewide Infrastructure

The public health system statewide includes more than 5400 employees. They work in groups ranging from just a few staff members at the smallest health department to about two thousand staff members at the largest.

While every local situation is unique, there are some support actions the state Department of Health can provide to make sure that some basic needs are taken care of, statewide. Specifically, these include:

- Providing access to on-line training opportunities for all public health employees. As in all health fields, information is constantly changing. Public health workers must keep current, but the cost of travel is often prohibitive. By providing access to an electronic learning management system, public health workers can learn new skills, keep records of their training, and post material they develop as learning aids. This requires a small fee that could be paid at the state level, with additional support to keep the system up-to-date.
- Convening public health leaders so they can find effective ways to work together across the system, expanding benefits of the Public Health Improvement Partnership. Creating the best public health system requires the combined efforts of public health professionals throughout the state.
- Establish data storage for both state and local health departments at secure, off-site locations so that electronic data cannot be lost. Assist local health departments in disaster recovery of data, in response to computer failures, natural disaster or terrorist event.

SECTION 3: DESCRIPTIONS FOR PRIORITY ACTIONS

The following pages provide details for each public health service outlined in the three proposed funding levels. They are grouped by category. In some cases, the same service is requested in two steps, with an increased level of effort allowed in the larger budget tier.

For each service, the following information is provided:

- Cost
- Action or Service Description
- Problem Statement
- Performance Measures
- Background
- Staff Levels Resources

Service	Page
Communicable Disease	34
Health Promotion/Chronic Disease Prevention	43
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Appendix 4

Staff Resources are estimated from an index health department of 175,000 people. The range is also shown. This shows how much of one full time position would be needed in a small health department and how many positions would be needed in a large, urban department.

King County has provided separate estimates of FTEs, also in Appendix 4.

COMMUNICABLE DISEASE

\$14,600,000 **Increase case investigation and disease response capacity statewide**

Increase capacity for Communicable Disease response through epidemiologic case investigation, case contact finding, identifying risk factors, and case management and follow up with individuals, post exposure to disease. This includes all communicable diseases. Examples: tuberculosis, sexually transmitted diseases, food born illness, measles, pertussis.

\$12, 500,000 Tier I, statewide

\$ 2, 100,000 Tier II, expanded King County specific

Problem Statement:

There is no basic funding dedicated to communicable disease control. Resources vary significantly from one place to the next. Agencies try to piece together basic services, with the result that every outbreak is a crisis, they can respond only to urgent situations, and basic follow up cannot be done.

Performance Measures:

Outcome:

- Disease rates fall over time

Interim:

- All contacts of case will receive timely investigation, treatment, and follow up
- Outbreaks are contained quickly; no secondary cases, or limited transmission documented
- All cases and contacts will be investigated in timely manner; follow up is routine and documented.

Rationale:

This is the highest ranked- priority for public health. The most basic public health intervention is to stop the spread of disease by limiting exposure. This takes concerted effort wherever disease occurs, and is very time intensive. A significant number of communicable diseases exist within communities, but health departments rarely have sufficient staff time and expertise to support effective diseases prevention efforts.

Staff Resources (excluding King County):

Average/Index: 4 FTE

Range: .12 to 12.4 FTE

COMMUNICABLE DISEASE

\$11,510,000 Outreach to People at High Risk for Disease Transmission

Establish capacity to conduct targeted outreach to groups at high risk for disease, targeting interventions to groups and settings most likely to benefit. This spans a very broad range of communicable disease threats present in all communities. Examples: childhood immunizations, child care centers, schools, senior centers, older adults for flu and pneumococcal vaccines, safe sexual behavior, risks for IV drug users.

\$ 750,000 Tier I , King County specific
\$10,760,000 Tier II, comprehensive statewide effort

Problem Statement:

Resources are generally not available to develop and sustain focused outreach efforts. It takes targeted, disease-specific actions to eradicate disease. Reaching high risk groups or settings requires intensive effort.

Performance Measures:

Measures would be specific for the targeted interventions selected but could include:

- Increases in childhood immunization rates
- Increases in adult immunization rates
- Decreases in STD rates
- Decreases in Hepatitis and other blood borne diseases among IV drug users
- Less absenteeism in child care centers
- Lowered rates of pneumonia among older adults

Rationale:

Curtailling disease takes concerted effort over time. The most effective strategies may concentrate on specific groups of people – *who* is at risk because of behavior or shared items? Or, on specific settings – *where* is the risk and can it be mitigated? Both approaches require intensive personnel time and relentless follow up. The benefit is that disease transmission can be reduced, resulting in far fewer cases over time, less need for medical intervention, and overall lower costs.

This effort builds on the proposal for basic CD capacity. It moves from responding to cases – to *preventing* disease in places or among groups where the disease organism is known to thrive. Outreach work takes specialized skills in working with people and expert knowledge of how diseases are spread – through both behavior and environmental conditions.

Staff Resources (excluding King County):

Average/Index: 3 FTE

Range: .09 to 9.3 FTE

COMMUNICABLE DISEASE

\$ 5,540,000 Risk reduction campaigns: immunizations, STDs, respiratory diseases

Identify disease risks and carry out multi-pronged strategies to lower risk and reduce disease in affected communities.

\$ 540,000 Tier I, Sea-King specific
\$5,000,000 Tier III, statewide effort

Problem Statement:

Local health departments can identify significant and avoidable disease risks in their communities. Yet, they seldom have the resources needed to address those risks in effective community-wide strategies. Effective campaigns can reduce overall impacts and costs, but they carry a cost and must be well-planned and evidence based.

Performance Measures:

- Risk reduction campaigns are carried out – and include measures of effectiveness (such as observed behavior, public knowledge or reported behavior).
- Targeted measures are attained: STDs drop, immunization rates rise and people are familiar with and practice “cover your cough” techniques.
- Materials and strategies are evaluated and improved over time

Rationale:

Getting results for better public health often relies on public awareness - whether the problem is getting youngsters immunized or getting people to think about the health consequences of unprotected sexual behavior.

Public awareness requires communication that engages everyone who can take an action to improve or protect their health - or support another person to do so. Campaigns are not just posters – they involve many selected strategies, all combined for maximum impact.

Public health departments, with medial and health education expertise, are typically the best agency to research, initiate and maintain effective campaigns. Often they help community partners extend the effort or take on a leadership role.

Staff Resources (excluding King County):

Average/Index: 1.6 FTE

Range: .05 to 4.96 FTE

COMMUNICABLE DISEASE

\$1,400,000 Expand Community Understanding of CD Risks

Health providers, as well as many people in the general public, need to know what disease risks confront the community – and how they can influence those risks.

Problem Statement:

Among health providers, knowledge about communicable disease patterns in the community is often low, because there are not resources in most communities to summarize and share information regularly. Among the general public, knowledge is even lower. To support disease control efforts, people must first know the size and nature of the problem.

Performance Measures:

As with high risk outreach, measures would be specific for the targeted interventions selected but could include:

- Increases in childhood immunization rates
- Increases in adult immunization rates
- Decreases in STD rates
- Decreases in Hepatitis and other blood borne diseases among IV drug users
- Less absenteeism in child care centers
- Lowered rates of pneumonia among older adults

In addition, interim measures could include the development of:

- Materials for skill building, such as fact sheets, Questions and Answers
- Curricula and teaching aids
- Surveys that test knowledge among the public or professional groups

Rationale:

Many health providers, other professionals and family members can become part of the disease-control efforts if they have knowledge and understand how to use it effectively.

Providing information and teaching certain skills is the first step in “leveraging” the power of doctors, teachers, clergy, parents, and peers to spot a disease risk and be prepared to ask the right question, share a fact or just speak up with effective information. Health departments have very limited health education and communication capacity so this important potential goes untapped.

Staff Resources (excluding King County):

Average/Index: 0.25 FTE

Range: .04 to .775 FTE

COMMUNICABLE DISEASE

\$2,769,000 Disease Surveillance and Regional Epidemiology

Improve the accuracy, timeliness and completeness of notifiable disease reporting. Medical care settings provide the vast majority of disease reports that lead to a public health disease investigation. Yet, reports are often, late, inaccurate or incomplete, which all affect the ability of public health workers to respond appropriately.

Problem Statement:

Health departments can strengthen the link between medical care and public health efforts by establishing a routine, periodic presence in health care settings. Most health departments do not have any capacity to do this today.

What we know from summaries of lab results that disease reporting can be improved. Health care providers are the people who must report notifiable conditions. Some providers would only rarely see a reportable condition, and may not recall how to do so. Some providers may treat a patient and not understand the need to report. Some may assume a report has already been made.

Performance Measures:

Outcome:

- Disease reports are filed quickly, within statutory timeframes
- Reports are complete and accurate
- Providers indicate they have trusted contacts in the local health department
- Providers report suspected cases and clusters whenever they have a concern

Rationale:

This investment establishes a liaison function between the health department, doctor's offices, hospitals. The effort will foster continuous awareness about the importance of reporting diseases so that all conditions of public health concern are reported as required and to ensure that patients get adequate follow up outside of the clinical setting, if needed.

Timeliness and accuracy are critical for some diseases: the faster the health department has a report, the faster a response effort can be mounted. Quick response is key to curtailing an epidemic. A real life example from Washington involved a case of measles in a college-age student. Thousands of students had to be vaccinated just prior to spring break. If the risk had not been caught in time, they could have easily spread measles to many states and other countries.

Staff Resources (excluding King County):

Average/Index: 1 FTE

Range: .03 to 3.1 FTE

COMMUNICABLE DISEASE

\$3,200,000 Store and transmit information electronically

Provide and use common tools to collect and store information about communicable disease in all local and state offices. Track and maintain records of disease by location over time. Analyze disease events in real time, conducting surveillance for early identification of outbreaks.

Problem Statement:

Old disease reporting systems relied on paper forms, were slow, less secure than electronic forms, and were maintained in many separate locations. The only way to track disease trend was to compile all those separate records – and very slow process. Old systems will not work in today's world.

The Public Health Systems Information Database (PHIMS) is an emerging electronic tool to help health departments collect, store and transmit disease data in a common format in real time.

It will take on-going resources to create and deploy an electronic tool statewide. Local health departments do not have the resources to do this on their own. It is also essential that tools be common so that information can be shared.

Performance Measures:

- All health departments use PHIMS to collect and file disease reports
- All health departments can analyze and produce data based on PHIMS

Rationale:

Local health departments are prepared to manage information electronically, and have made significant gains in recent years in having the capacity to do so. For disease reporting, consistency and timeliness are key. Having a single statewide system used in every department will assure better reporting, and allow better analysis of disease trends and events. It will also allow cross-jurisdiction work, such as case investigation to be handled with ease.

Staff Resources (excluding King County):

Average/Index: 1 FTE

Range: .03 to 3.1 FTE

COMMUNICABLE DISEASE

\$4,668,000 Training and cross-jurisdictional coordination for emergency response (disease, flood, earthquakes)

Increase capacity for public health professionals to train and exercise emergency response plans on a regular basis. Ensure public health staff know and understand their roles in emergency preparedness, response and recovery. Ensure cross-jurisdictional coordination through regular cross-jurisdictional exercising of plans.

\$ 680,000 Tier II, Sea-King specific

\$4,600,000 Tier III, statewide effort

Problem Statement:

Since 9/11 and subsequent anthrax scares, etc. public health has been recognized as a critical partner in Emergency Preparedness. Federal funds have been provided develop local, state, and national public health emergency preparedness plans. However, federal funds are being reduced and the future of state funds is uncertain. Like police, fire, EMS and other first responders, if staff are not regularly training and plans are not regularly exercised, preparedness is on paper only.

For public health departments, it takes additional funds to provide training so that other workers can be paid to cover the services not performed that day.

Performance Measures:

- Percentage of local health jurisdictions conducting annual exercises to test Emergency Response Plan
- Percentage of staff in each local health jurisdiction trained
- Percentage of local health jurisdiction exercises with multi-agency involvement

Rationale:

To maintain an effective response capability, emergency response and recovery plans need to be exercised on a regular basis. The problem for local public health jurisdictions is that the majority of staff critical to the public health response in an emergency are funded by fees and/or grants. Every time staff are pulled out of the field to engage in training to the plan, or exercising of the plan, revenues are lost to the health jurisdiction and regular public health services are suspended. Some way of covering costs, and substituting labor, is essential if employees are going to serve as emergency responders.

Staff Resources (excluding King County):

Average/Index: 0.75 FTE

Range: .23 to 2.33 FTE

COMMUNICABLE DISEASE

\$3,800,000

Mapping and analysis of Communicable Disease information

Map disease trends and analyze all available data to pinpoint areas for intervention. Establish geographical and spatial analysis capability.

Problem Statement:

Tools are available for improved analysis of disease trends, across the state or community, and over time. These tools can help health officials understand how diseases are affecting the population so that they can anticipate and respond more quickly. Purchasing, learning and adopting use of these tools takes dedicated time and resources, and special skills.

Performance Measures:

- Disease incidence is mapped and analyzed for use by policy makers
- Resources are available to interpret and disseminate disease data
- Communicable disease databases are maintained, and up-to-date
- GIS and other mapping tools are used for analysis

Rationale:

Efforts to combat disease will be more effective with improved ability to analyze and anticipate the occurrence of disease. This is an important capacity to work with regional and local epidemiology resources, and will be critical in detecting outbreaks. Cross- jurisdiction training will be important to develop common approaches and standards of use statewide.

Staff Resources (excluding Sea-King):

Average/Index: 1 FTE

Range: .03 to 3.1 FTE

COMMUNICABLE DISEASE

\$5,600,000

Maintain plans, assignments for surge capacity

Maintain plans for health department response to emergency events. Coordinate with other local and state partners, assuring that all responders know their roles. Help coordinate plans across health resources on a local and regional basis. Estimate and plan for personnel needs in a pandemic or other widespread disaster.

Problem Statement:

The importance of the public health role is well-established post 911, anthrax and Katrina. While federal programs have begun to organize and support the development of emergency response plans, local officials say the amount of federal funds falls short of what is really needed to create and sustain reliable plans over time.

Performance Measures:

- Community-specific plans are available and updated annually
- Health personnel rosters are available so that trained workers know where and how to report
- Mass vaccination plans are complete and practiced
- Public health and hospitals have documented coordination plans
- Workers are trained in incident command response

Rationale:

The scale of this statewide planning is large -- and will continue in time, into the future. It will require diligent attention to plans, training, communication and cross-jurisdictional coordination for many years to come. People expect that local government resources will be in place to mitigate the harm following an event and that all emergency responders will be prepared to carry out well-developed plans.

Staff Resources (excluding King County):

Average/Index: 2 FTE

Range: .06 to 6.2 FTE

HEALTH PROMOTION/CHRONIC DISEASE PREVENTION

\$22,076,605

Increase Capacity to Promote Healthy Behaviors

Promote health behaviors for primary prevention, nutrition and physical activity, science and evidence-based interventions aimed at the real causes of premature death and illness. Ensure some resources are available in every community to give individuals and decision makers the information and tools they need to support healthy choices.

Tier I:

34 LHJs	\$8.3 M
Sea-King	<u>7.6 M</u>
	\$15.9 M

Tier II:

Sea-King	\$6.12 M
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Problem Statement:

Chronic diseases, like diabetes, are emerging in epidemic proportions. Very little funding is available for programs that help people gain the knowledge and insight needed to pursue healthy lifestyle choices. The limited funding available is often too small to make an impact, not sustained long enough to get results, and limited to a single one topic or disease.

Performance Measure:

Outcome:

- Chronic Disease Rates fall over time
- Lower rates of heart disease, diabetes, stroke
- Reduce death and disability caused by accidental injuries
- Reduce death and disability caused by violence

Interim:

- Reduce the proportion of overweight/obese children, adolescents, adults
- Increase the frequency of children and adults making healthy food choices
- Reduce the proportion of adolescents using alcohol or any illicit drugs
- Reduce the binge drinking among adults
- Increase the rates of adolescents who abstain from sex
- Increase safe storage of firearms
- Increase safe driving behavior
- Reduce tobacco use

Rationale:

In the last century, antibiotics, improved hygiene and better health care reduced illness and early death. But in the next century, the gains must be made in healthy lifestyles: According to *Healthy People 2010*, six of the top ten leading health indicators relate directly to health behavior.

Jobs have become less physically active. Hectic lives and convenience have led to less healthy eating choices. We have seen a rapid rise in obesity and stress which in turn lead to increased chronic diseases such as diabetes, heart disease and cancers. Injury, from accidents and violence, has become the leading cause of death in youth.

Staff Resources (excluding King County):

Average/Index: 3 FTE

Range: .99 to 9.3 FTE

HEALTH PROMOTION/CHRONIC DISEASE PREVENTION

\$3,300,000

Establish linkages with providers statewide

Establishing linkages with health care providers to help them incorporate prevention models promote best practices and develop actions to address health disparities.

Problem Statement:

One factor affecting health care costs is the rise in chronic diseases. The best mechanism to reduce the cost of this trend is to reduce the chances of the disease occurring in the first place. Opportunities are lost because the health care system is not structured to pay for prevention and providers are not often trained in effective prevention techniques.

Performance Measures:

Outcome:

- Patients receive information about healthy choices at provider visits
- Individuals report making healthier choices more often
- Individuals report satisfaction with education and health information

Interim:

- Number of nurse/health education visits to providers
- Number of Collaboratives created – with specific measures identified
- Number of CME/CNE programs on prevention practices

Rationale:

Health care providers can play a key role in helping individuals know and understand the impact of their lifestyle choices on their own health. Yet provider-patient time is limited and often focused on treatment of illness, not its prevention or management. Public health nurse liaison programs have been shown to increase awareness and recognition by providers that they have an opportunity to focus on prevention with their patients. Public health prevention experts can visit providers in their offices, present to health care groups about information and techniques that are shown to work well, provide effective materials.

Staff Resources (excluding King County):

Average/Index: 1.2 FTE

Range: .40 to 3.72 FTE

HEALTH PROMOTION/CHRONIC DISEASE PREVENTION

\$1,380,000

Promote greater emphasis on self-care strategies for chronic disease prevention

Shift the model from expert care to appropriate self-care. Increase the capacity for local health jurisdictions to provide educational programs that teach people to take responsibility for their own health and the prevention of chronic diseases, rather than to rely upon the health care system to keep them healthy.

Problem Statement:

What people eat or whether or not they exercise is a personal choice. However, if those choices are unhealthy ones, the costs are borne not just by the individual in terms of poor health, but also by society in terms of lost productivity and increased health care costs. There is little funding available to mount campaigns to encourage health lifestyle choices and encourage people to take responsibility for their health.

Performance Measures:

Outcome:

- Reduced Chronic Disease Rates
- Reduced health care costs related to chronic disease

Interim:

- Number of meetings with stakeholders to discuss shifting from the model of expert care to self-care.
- Action Plan resulting from stakeholder work
- Checkpoints and evaluation of actions during implementation

Rationale:

Individuals have the greatest capacity to keep themselves healthy through healthy lifestyle choices. Public health experts have the tools to work with health care providers and community partners to develop collaborative campaigns to inform people and provide them with the tools needed to make healthy lifestyle choices. Effective interventions are not a one-time splash of information, but require a multi-pronged approach, sustained over time. Public health experts are skilled in conducting such these efforts and can boost a communities potential for effective campaigns by engaging many different partners to carry out the work.

Staff Resources (excluding King County):

Average/Index: 0.5 FTE

Range: .015 to 1.55 FTE

HEALTH PROMOTION/CHRONIC DISEASE PREVENTION

\$4,350,000

Outreach to people with high health risks, including substance abuse

Focus on initiating prevention strategies among people at very high risk for health problems because of addiction, mental illness or other life-affecting factors. Provide capacity for current efforts to shift from treatment-centered care to include health prevention, and integrate support services across systems (mental health, drug abuse, corrections.)

Problem Statement:

Public health jurisdictions do not currently have the work force capacity to mount effective health outreach efforts for people whose health is at serious risk because of complicated problems like drug use, or alcohol addiction. They may become health department clients only when they are very sick - and need help finding urgent medical care, or dental care. Where outreach services exist, in mental health for example, workers may not be trained to introduce effective personal health strategies that could result in long-term improvements.

Performance Measures:

Outcome:

- Reduced chronic disease rates in high risk populations
- Reduced severity of health problems when treatment begins
- Better treatment outcomes
- Reduced use of alcohol and illicit drugs

Interim:

- Number of partner agency contacts to teach effective health strategies and to develop community coordination plans
- Number of client contacted on outreach

Rationale:

Severe long-term health consequences show up in groups of people whose lives are affected by alcohol abuse, drug use and addiction. Health is also compromised by poverty, unstable living situations, family violence and other stresses that make self-care especially difficult.

Health-oriented outreach workers can connect with individuals in risky circumstances and help them obtain needed care sooner. They can also connect with other community support systems to get health support strategies introduced in many settings.

Staff Resources (excluding King County):

Average/Index: 1.5 FTE

Range: .045 to 4.65 FTE

HEALTHY FAMILIES

Establish Funding for Home Visiting Programs

\$21,026,044 **First Time Parents:** Establish early, intensive nurse-family visitation programs for promoting parenting skills (support cognitive, social and emotional development of children) – statewide implementation

Focus on high risk families to enhance parent/child bonding and development of positive parenting skills. Increase protective factors for children's growth and development and resiliency.

\$ 6,026,044 Tier I, Grant Program only
\$12,000,000 Tier II, added for statewide program
\$ 3,000,000 Tier III, King County services
\$21,026,044

Problem Statement:

First time parents, often teenager or single moms, who come from abusive families often repeat the cycle of abuse. Mom may have trouble bonding with her infant. She also may not have coping skills to deal positively with the intense needs of infants and toddlers. Children raised in this kind of environment often experience school failure, negative socialization and end up in the juvenile justice system. Funding tends to focus on the problems created when the child enters the juvenile justice system.

There is very little funding available to apply proven interventions such as the OLDS Model Nurse Family Partnership program.

Performance Measures:

Long-Term Outcome:

- Reduced time on welfare
- Reduced juvenile crime
- Reduced drop-out rates

Interim:

- Reduced smoking among pregnant first time, high risk mothers
- Healthier pregnancies, healthier birth outcomes
- High risk, first time moms receive parenting skills education
- High risk, first time moms are taught how to problem solve and to create a nurturing environment for her baby

Rationale:

This investment would provide for implementing the OLDS Model Nurse Family Partnership for high risk families statewide. The OLDS Model is an evidence-based intervention shown, through a longitudinal study, to reduce failure in school, reduce violence, and keep children out of the juvenile justice system.

The Model has been replicated and shown the same results. Public health nurses visit client families regularly during the first time mother's pregnancy and her baby's first two years. Interventions are strongly client centered and strength based. This work is very time intensive and services include prenatal and child health education, referral for needed community services, communication skill building, life course development support (education, employment, etc.), utilization of specific Nurse-Family Partnership philosophy, utilization of specific program protocols to guide each home visit, and demonstration of parallel process to role-model healthy parent-child relationship through the nurse-client relationship.

In a 15 year follow-up study of the families in the clinical trial: Those visited by nurses fared significantly better than a control group that did not receive visits. In the nurse-visited families there were:

- 30 fewer months' use of welfare after the birth of the first child
- 79% fewer verified reports of child abuse and neglect through the first child's 15th birthday
- 69% fewer arrests among the mothers
- 44% fewer behavioral problems among the mothers due to substance abuse
- 56% fewer arrests among the 15-year old children
- 69% fewer sexual partners among the 15-year olds
- 28% fewer cigarettes smoked by the 15-year olds
- 56% fewer days of consuming alcohol by the 15-year old children
- 83% increase in the rates of labor force participation by the first child's fourth birthday
- Clients are more likely to attempt breastfeeding
- 25% reduction in cigarette smoking during pregnancy among women who smoked cigarettes at registration
- 43% reduction in subsequent pregnancies among low-income, unmarried women by the first child's fourth birthday

Staff Resources (excluding King County):

At \$5 M Investment:

Not statewide – establish as grant program.

At \$16 M Investment:

Average/Index: 6 FTE

Range: .18 to 18.16 FTE

HEALTHY FAMILIES

\$4,481,246

Expand prenatal and maternity support services to achieve healthy birth outcomes for high risk pregnancies

Increase capacity for maternity support services for high risk pregnancies and, to the extent possible for non-high risk pregnancies, to include post-partum mental health issues, and maternal depression. Currently many in high risk situations go unserved.

Problem Statement:

High risk pregnancies can result in poor birth outcomes due to lack of good nutrition; lack of prenatal care or care late in pregnancy; use of tobacco, alcohol, or illicit drugs, etc. Additionally, there is the risk of post-partum mental health issues and maternal depression. Currently many of these women in high risk pregnancies go un-served and do not know how to access needed services to enhance the chances of a healthy pregnancy. This effective program could expand to serve more women.

Performance Measures:

Outcome:

- Reduction in low birth weight babies
- Increased percentage of low-income women with high risk pregnancies with first prenatal visit in first trimester
- Reduced percentage of tobacco use
- Increased percentage of moms with post partum contraception methods

Rationale:

Maternity Support Services (MSS) connects public health nurses and other public health professionals with pregnant women at risk for poor prenatal/postpartum health, higher infant death and illness and poor parenting outcomes. Nurses provide access to community services, education and counseling to support a healthy pregnancy. Programs such as First Steps provide up-to-date health promotion, health education and local resource information. Basic public health messages are taught including access to prenatal care, immunizations, smoking cessation, environmental dangers, mental health problems, and drug and alcohol use.

Staff Resources (excluding King County):

Average/Index: 2.0 FTE

Range: .06 to 6.2 FTE

HEALTHY FAMILIES

\$7,066,044

Increase Injury Prevention Actions Statewide

Reduce accidental Injuries through community-based campaigns, using data about what can stop injury: auto restraints; pedestrian safety; senior falls prevention; firearm safety; locking up poisons and other household risks.

Problem Statement:

Preventable injuries are a major cause of death and disability. Spending tends to focus on the cost of treating the injury after it happens rather than preventing it from occurring. *Healthy People 2010* estimates response to injuries cost \$224 billion annually in the US in terms of productivity loss and direct health care costs.

Performance Measures:

Outcome:

- Reduced death and disability from bicycle accidents
- Reduced disability from senior falls
- Reduced pedestrian death and disability
- Decrease in hospitalization and long term care due to falls

Interim:

- Number of adults and children educated on the risks associated with not using helmets
- Number of people educated on correct installation of child safety seats
- Number of seniors educated on healthy lifestyle choices – good nutrition and physical activity – and the direct link to reduction of injuries sustained from falls

Rationale:

Evidence-based interventions exist for injury prevention. Money invested in educational campaigns can have a large impact. Accidental injuries have highly predictable patterns and are preventable. They are the leading cause of death and disability for birth-18. The return on investment is potentially great – yet very few programs exist.

Strong safety education curriculum can encourage young people to wear bike helmets, promotes safe storage of firearms, and can teach adults the correct ways to safely seat child passengers.

Staff Resources (excluding King County):

Average/Index: 1.5 FTE

Range: .045 to 4.65 FTE

HEALTHY FAMILIES

\$3,080,000

Adolescent health treatment and outreach.

Outreach activity specifically focused on teens at risk. Utilize evidence-based programs to reduce mental health problems, substance abuse, violence, chronic disease, pregnancy and sexually transmitted diseases, unintentional injury and suicide.

Problem Statement:

Adolescents are an underserved subgroup, frequently faced with new and difficult health choices. They are a vulnerable group without strong decision-making skills. Schools are often overwhelmed and unable to provide the intensive intervention needed by teens. And, many teens at high risk are not in schools.

Public Health experts can intervene with adolescents to reduce risky behavior, but have very little funding with which to establish targeted teen programs.

Performance Measures:

Outcome:

- Reduce teen pregnancy rates
- Reduced teen STD rates
- Reduced teen suicide rates

Interim:

Increased number of teens accessing health treatment and preventive services.

Rationale:

Providing adolescents with appropriate education and information can help them make healthy choices or to help them re-focus after making poor choices. Treatment and prevention models that are effective for an adolescent population are not the same as those for adults. The school-based and mall-based clinic model has demonstrated positive outcomes for teens with access to those services.

Failure to invest in adequate adolescent health and preventive health services ignores the long-term costs associated with unhealthy behaviors. Those costs are associated with increased medical care costs, teen pregnancies, school failure, mental health problems, substance abuse problems, and violence and abuse. The potential for incurring those costs exists for every teen in need of services, but unable to access them.

Staff Resources (excluding King County):

Average/Index: 0.75 FTE

Range: .023 to 2.33 FTE

HEALTH INFORMATION

\$20,570,000 Health information infrastructure and support

Tier I:

- \$2,800,000 Local health data for decision-support**
Provide basic analytic tools and skills for a wide range of health concerns so that local information can be collected, analyzed and presented in an informative manner.
- \$2,400,000 Tools for health information management**
Place up-to-date software in every health department. Provide data from a range of sources for specific local areas.
- \$2,350,000 Program evaluation, measuring results**
Develop and maintain strong evaluation programs and skills in public health programs and ensure that they are used statewide.

\$7,550,000

Tier II:

- \$1,000,000 Local health data for decision-support**
Expand data collection capability for qualitative and qualitative analyses. *King County specific.*
- \$620,000 Program evaluation, measuring results**
Extend evaluation efforts and assist in documenting and advancing best practices in health information and assessment. *King County specific.*

\$1,620,000

Tier III:

- \$6,600,000 Local health data for decision-support**
Upgrade and expand data systems. Provide electronic devices for use in the field to record and store data efficiently. Improve technical support for quality improvement data. Improve death investigation data. *Primarily King County specific; \$1.38 million, other LHJs.*
- \$4,800,000 Program evaluation, measuring results**
Develop and maintain strong evaluation programs and skills in public health programs and ensure that they are used statewide.

\$11,400,000

Problem Statement:

Communities rely on their local public health agencies for accurate health information. Today, information is often managed in an electronic network and is analyzed at a very precise level.

For public health to do its work, agencies need modern technology tools and skilled staff to operate them. Acquiring these tools should be done in a coordinated manner to assure standard practices and quality statewide and to reduce the overall costs of bringing public health into the electronic age. Separate plans and purchases, by 35 local governments, will take too much time, be uneven, and result in fragmented system.

Similarly, evaluation efforts should be standardized statewide so that local efforts can be compared as appropriate, and so that overall system performance can be monitored.

Performance Measures:

- Health departments can produce accurate and timely data
- Staff have skills for data collection and analysis, and can share those skills with the community
- Evaluation is a demonstrated part of every program, and relevant data are tracked and analyzed for program improvement

Tier I Staff Resources (excluding King County):

Average/Index: 1.75 FTE

Range: .053 to 5.43 FTE

Tier II Staff Resources:

King County only

Tier III Staff Resources (excluding King County):

\$6.11 M:

Average/Index: 2.2 FTE

Range: .066 to 6.82 FTE

\$4.15 M:

Average/Index: 1.5 FTE

Range: .045 to 4.65 FTE

ENVIRONMENTAL HEALTH

Control the spread of human diseases by animals

\$3,098,321

Increase zoonotic disease surveillance.

Increase surveillance and control of disease vectors and. Increase capacity to respond to zoonotic diseases as they emerge. Educate the public concerning zoonotic diseases.

Problem Statement:

Many diseases that have been in the national headlines in recent years are zoonotic (transmitted from animals to human). These include avian flu, West Nile virus, monkeypox, and severe acute respiratory syndrome (SARS). Zoonotic diseases found in pets and indigenous animals in Washington State include rabies, tularemia, plague, hantavirus pulmonary syndrome, tick-borne relapsing fever, Q fever, cryptosporidiosis, and reptile-associated salmonellosis. This is an area of environmental health activity that cannot be fee-supported. The resources local health jurisdictions are able to devote to zoonotic disease control vary widely, and all jurisdictions are severely taxed by recent demands—particularly those created by the threat of West Nile virus and avian influenza.

Performance Measures:

Reduction in incidence of zoonotic diseases in Washington State.

Rationale:

Zoonotic disease control has been a critical activity of public health from the beginning—dating back to the control of rat populations to prevent the spread of bubonic plague (part of a group of activities known as vector control). Specific needs in Washington change over time. The focus was on hantavirus ten years ago (although Whatcom County had a hantavirus death in April 2006). Today, efforts are largely focused on West Nile virus—identifying the mosquito species found in different parts of the state, trapping mosquito pools for testing, controlling mosquitoes, picking up dead birds to send to the lab, educating to public about prevention.

Organizationally, zoonotic disease programs typically reside with the environmental health division of a public health agency, and their activities are a key part of communicable disease control efforts. Partners would include the Department of Agriculture, which controls zoonotic diseases in animals, and mosquito control districts (which exist only in some areas of the state).

Staff Resources (excluding King County):

Average/Index: 1 FTE

Range: .03 to 3.1 FTE

ENVIRONMENTAL HEALTH

\$2,769,000

Create regional databases for tracking quality of drinking water.

Gather data and review and analyze it regularly to establish trends and identify emerging issues. Map contaminants in communities. Communicate health issues related to ground and surface water to communities.

Problem Statement:

Surface waters (rivers, and lakes) and groundwater (aquifers) provide drinking water as well as recreation. Contamination of drinking water with chemicals, heavy metals, and pathogens can lead to a wide range of human illness, such as gastro-intestinal illness, blue baby syndrome (nitrogen) and cancer. An example of a high-profile water quality issue in Washington is pesticide contamination of ground water sources in Whatcom County. Water quality issues like this exist across the state. Aquifers, lakes, rivers and other water bodies cross jurisdictional boundaries and need to be understood locally and regionally. No single entity today takes a systematic, regional approach to identify water quality issues that threaten human health.

Performance Measures:

Regional databases established and analyzed annually to identify trends and issues.

Rational:

Public health agencies are charged with ensuring that contamination of groundwater and surface water does not impact the public's health. This is currently done on a site-by-site basis, typically by inspecting proposed well sites and by checking the quality of water produced by new wells for one or two households. Problems that arise after well construction can go unrecognized. Public health agencies also check the quality of water from public water suppliers and can provide advice and technical assistance when there is a known risk. And they investigate and respond to other problems when they are identified. But the approach to identifying water quality problems is limited and highly localized. Cumulative impacts and trends—particularly those that are regional or inter-jurisdictional—are not identified.

Staff Resources (excluding King County):

Average/Index: 1 FTE

Range: .03 to 3.1 FTE

ENVIRONMENTAL HEALTH

\$8,307,000

Increase food safety programs.

Increase the frequency, duration and quality of inspections of food service establishments and focus additional efforts on high-risk establishments

Problem Statement:

The purpose of a food safety inspection is to detect and correct procedures and practices pose a risk to health. According to the FDA, "Studies have shown that the types of food served, the preparation steps these foods require, the volume of food, the population served, and previous compliance history can have a bearing on the opportunity for the occurrence of foodborne illness." The number of food service inspectors in Washington State is inadequate to meet existing minimum standards for frequency of inspection and certainly inadequate to implement modern protocols and to increase contact with high-risk establishments. The most recent "Report Card on Washington's Health" gave the state an F for E. coli rates and a C for listeriosis rates.

Performance Measures:

- Decreased number of reported food-borne illnesses;
- Increased food service establishments receiving minimum number of inspections
Decreased percent of establishments with one or more critical violations.

Rationale:

The Washington State Board of Health has modeled the state's Food Code after the U.S. Food and Drug Administration's 2001 Food Code. The national standard calls for each food service establishment to be inspected every six months. The frequency of inspection varies among jurisdictions in the state and many cannot meet the Washington standards. Most health jurisdictions lack the resources for additional inspections of high-risk establishments. The standard of performance is also changing, to FDA standards Hazard Analysis and Critical Control Point (HACCP) concepts; these are risk-based and include education for the establishment. The FDA estimates that HACCP requires 8-10 hours per year per establishment. (BARS data suggest local staffing is dramatically below what would be required to implement HACCP statewide.)

Staff Resources (excluding King County):

Average/Index: 2.5 FTE

Range: .075 to 7.75 FTE

ENVIRONMENTAL HEALTH

\$2,076,750

Increase inspections of high-risk, temporary food service establishments.

Problem Statement:

According to the Food and Drug Administration's 2001 Food Code (the model for the Washington food code) a temporary food establishment (TFE) is any food establishment that operates for not more than 14 consecutive days in conjunction with a single event or celebration. Whether indoors or out, TFEs often have limited physical and sanitary facilities. Many are high-risk operations involved in extensive preparation of raw ingredients; cooking, cooling, and reheating of potentially hazardous foods; and advanced food preparation. Improper temperature control, poor hygiene, and inadequate facilities have caused major foodborne disease outbreaks associated with TFEs, according to the CDC. Some local health jurisdictions lack staffing to inspect all TFEs in a timely manner.

Performance Measures:

- Increased percent of temporary food establishments inspected;
- Decreased incidence of foodborne diseases

Rationale:

TFEs can be found at art shows, music festivals, circuses, fairs, carnivals, circuses, cultural celebrations, fundraisers, trade and food shows, and many other community events. They are seasonal and are increasing in popularity. The number that must be inspected is unpredictable, the workload comes in bunches, the window for inspection is short and inspections must often be conducted outside of normal work hours, so they require overtime pay. TFEs also require an additional step for local health jurisdiction — review of plans that must be submitted 14 days in advance.

Staff Resources (excluding King County):

Average/Index: 0.75 FTE

Range: .023 to 2.33 FTE

ENVIRONMENTAL HEALTH

\$2,076,750

Involve the community in environmental health needs assessments

Involve local community members in processes to identify community needs and priorities related to environmental health.

Problem Statement:

Environmental health risks contribute to approximately a quarter of the disease burden in the United States. Groups focused on environmental health practice, like the Environmental Competency Project (sponsored by APHA and CDC) cite assessment as a core function of public health. A 2004 report by the State Board of Health found, however, that most local health jurisdictions in Washington do not use a prioritization process that systematically identifies environmental health risks and includes diverse community members when establishing their environmental health priorities. They generally rely on staff knowledge, experience, anecdotal information, and limited data, according to the report.

Performance Measures:

Number of community environmental health assessments conducted

Rationale:

Community health assessment is a systematic way of identifying and communicating health information and resources relevant to a particular community. Information is from expert and non-expert sources, and includes statistical data, needs, concerns, perceptions, and values. Agencies, organizations, and individuals work together throughout the assessment process. An assessment of a community's health would be incomplete without considering environmental health risk factors. Community assessment is as critical to environmental health as it is to the rest of public health. Environmental health, however, is largely financed through fees that are often tied to the direct costs of delivering individual services. This financing structure does not easily allow for the development of assessment capacity within environmental health units.

Staff Resources (excluding King County):

Average/Index: 0.75 FTE

Range: .023 to 2.33 FTE

ENVIRONMENTAL HEALTH

\$5,071,634

Support maintenance and operation of onsite sewage systems to protect water quality.

Inventory on-site systems, track maintenance and operation, and educate the public about the need for operations and maintenance of on-site systems.

Problem Statement:

Even properly sited and installed onsite systems can pose a threat to human health and the environment if they are not properly operated and maintained. Proprietary systems, which are often installed in the most high-risk settings, can cease to perform adequately if not serviced (recalibrated, for example). Drain fields fail when tanks are not regularly pumped. Local health jurisdictions charge fees to oversee the design and installation of new systems but often lack the infrastructure to support on-going operation and maintenance activities. Examples of ground and surface water adversely impacted by poorly functioning onsite systems include Lake Wenatchee, Puget Sound, Hood Canal and the Rathdrum Prairie — Spokane Valley Aquifer.

Performance Measures:

- Acres of shellfish land closed to harvesting because of bacteriological contamination originating from on-site sewage systems;
- Increased percent of onsite sewage systems with current operations and maintenance.

Rationale:

The Environmental Protection Agency (EPA) states that decentralized on-site systems can be a safe and effective solution for handling human waste—but it notes that such systems are often installed and then forgotten. “The difference between failure and success is the implementation of an effective wastewater management program. Such a program, if properly executed, can protect public health, preserve valuable water resources, and maintain economic vitality in a community,” according to the EPA’s *Handbook for Managing Onsite and Clustered (Decentralized) Wastewater Treatment Systems*. The program activities would include: establishing a database of systems, entering maintenance reports into the system, working to identify unknown systems, identifying and inspecting potentially failing systems, following up with owners who are not performing necessary maintenance, providing education for owners.

Staff Resources (excluding King County):

Average/Index: 1.5 FTE

Range: .045 to 4.65 FTE

ACCESS TO CRITICAL HEALTH SERVICES

\$4,150,000

Translation services and community health workers are available with cultural knowledge and competency.

Increase capacity to connect clients with multiple language requirements to needed services. Increase cultural competency in community health workers.

Problem Statement:

Health Departments have no or very limited resources to translate educational materials into a multitude of languages, work with limited English speaking members of the community or to provide training to existing staff in cultural competency.

Health status of minority communities is significantly worse than the health status of the majority population in many areas. There are many reasons that contribute to health disparities, but two significant ones are the lack of cultural competence of the person providing the service and the lack of access to translation services. As long as cultural barriers exist, effective interventions and treatment will be difficult to achieve and disparities (along with the monetary and societal costs associated with disparity) will continue.

Performance Measures:

- Increased translation services available to public health programs
- Increased public health education materials, campaigns, and surveys available in difference languages
- Cultural competency training completed by public health workers
- Increase in culturally diverse staff in health departments

Rationale:

Access to translation services is a priority for public health effectiveness in providing information and referral services for non-English speaking clients. Cultural competency is necessary to overcome cultural barriers to accessing critical health services. Tools used by public health jurisdictions to assess the health of a particular community, such as surveys or materials and campaigns, need to be available in multiple languages.

Cultural knowledge and competency is essential to any effort to reduce health disparities. For clients, having information available in their own language is also critical.

Staff Resources (excluding King County):

Average/Index: 1.5 FTE

Range: .045 to 4.65 FTE

ACCESS TO CRITICAL HEALTH SERVICES

\$4,560,500

Document local problems in access to health care

Collect baseline data using standards tools and skill sets available to identify services available and gaps in services.

Problem Statement:

Currently, local health jurisdictions and their community partners have limited, if any, resources with which to undertake data collection about the availability of health services. They may have only fragmentary or state-level indicators. Community-specific information is needed at the local, regional, and state levels. Without baseline data, communities and state level partners are unable to understand the scope of the access problem, nor can they effectively develop policy and make decisions designed to best respond.

Performance Measures:

- LHJs collect baseline data about access to critical health services,
- Analyses are presented to the community and to policy makers
- Local data are used to inform discussion, and make decisions

Rationale:

Public health agencies often play a key leadership role in addressing access problems, using specialized skills in collection and analysis of information.

Investment in this activity will ensure communities and decision-makers know about the availability of health care services in their communities and what the gaps are to accessing critical health care services. Today, communities may know they have a problem with lack of access to critical health services, but they will not know why, or the extent of the problem. With local baseline data, communities can develop fact-based, targeted strategies. By collecting data over time, they can monitor trends and evaluate the effectiveness of strategies designed to address access issues.

Staff Resources (excluding King County):

Average/Index: 1.5 FTE

Range: .045 to 4.65 FTE

ACCESS TO CRITICAL HEALTH SERVICES

\$2,770,000

Coalition building for policy development, pilot programs, advocacy and leadership.

Convene community leaders and build coalitions to address health access problems. Develop policy, establish pilot programs, and advocate at state, federal and local levels. Provide information to health care leaders.

Problem Statement:

Access to health care is a significant issue facing our communities, the state and the nation. A significant portion of our residents do not have health insurance and cannot afford the high costs of medical care. Many parts of our state do not have enough providers to meet the health care needs of their communities.

For people who lack health insurance or are underinsured, there is often no health care system in place for them. People who do not have adequate access to health care services will wait until they are very sick and then they will go to the emergency room for services – the most expensive way to deliver needed health care services.

Performance Measures:

Outcome:

- Increased access to critical health services

Interim:

- Meetings with medical care leaders to share information on access issues
- Community Coalitions organized with plans developed and implemented

Rationale:

To increase access to critical health services and to prevent further decline in access, communities will need to come together and develop strategies to address their specific local access issues. What they learn can inform state and national efforts as well.

Public health departments have data/information, education, and facilitation capability that they can bring to the table. They can convene stakeholders and build coalitions for policy development, pilot programs, advocacy and leadership at all levels of government. They can convene and facilitate community conversation. Locally driven, innovative strategies can yield impressive results like: Project ACCESS, specialty referral programs, and Puget Sound Health Alliance.

Staff Resources (excluding King County):

Average/Index: 1 FTE

Range: .03 to 3.1 FTE

ACCESS TO CRITICAL HEALTH SERVICES

\$10,785,000

Help people find medical and dental homes for all family members to achieve preventive health care and continuity.

While public health cannot guarantee universal access to health care, public health can identify unmet needs regarding medical homes and potentially respond with additional resources as needed and available.

Problem Statement:

There are individuals in communities who are eligible for existing services but do not have the knowledge or ability to access them. Without this individual assistance, some individuals, many of them high risk, with significant medical or dental needs, will not get the care they need or will seek it in the emergency room. Children not getting the health care or dental care they need often are unable to succeed in school.

Public health agencies have often have service relationships with people who need this assistance. They are well-positioned to help find medical homes for clients they serve, provide case management for individuals needing a variety of resources, and advocate for services. Most agencies, however, do not have the resources to provide these services, so they happen only sporadically.

Performance Measures:

Outcome:

- Increased number of individuals having medical and dental homes

Interim:

- Identification of unmet needs regarding medical and dental homes
- Number of contacts with provider community to identify ways to increase number of health care slots available to low-income

Rationale:

Providing a medical and dental home for individuals helps to ensure that needed health care services are provided and that illnesses or dental issues are treated early. Illnesses that progress or dental issues that are not addressed lead to more serious illness and potential disability and more expensive treatment. This drives up the cost both in terms of dollars spent as well as productivity or learning opportunity lost.

People who have medical and dental homes have a continuity of care that facilitates early diagnosis and treatment. They have a chance to develop a trusted relationship with the health care provider, who then has a better chance of influencing their patient to adopt healthier lifestyle choices.

Staff Resources (excluding King County):

Average/Index: 2 FTE

Range: .06 to 6.2 FTE

ACCESS TO CRITICAL HEALTH SERVICES

\$6,000,000

Establish community-wide health information system support and infrastructure for public health and community clinics that serve the safety net. (King County)

Problem Statement:

Health care for low income, uninsured and specialty care populations is fragmented, lacking necessary coherence as a system to ensure patients receive the health services they need and that clinical information is interoperable across sites and safety net health care organizations. This will support sustainable quality and cost performance in our most vulnerable population.

Performance Measures:

- Infrastructure that has capacity to respond to emerging health care issues.
- Up to date and accurate interoperable health information service, available quickly at any safety net provider.
- Consistent quality of clinical information to report health status of populations served in the PH and Community Health Clinic system.

Rationale:

Establishing supportive infrastructure and information management systems would greatly improve patient health care services, reduce costs and increase efficiency and quality.

SECTION 4: PRIORITIES NOT FUNDED AT \$200 MILLION LEVEL

Communicable Disease	\$22,428,900
Health Promotion/Chronic Disease	\$10,365,750
Healthy Families	\$12,460,500
Environmental Health	\$47,109,550
Health Information and Evaluation	\$14,814,150
Total Not Funded at \$200 Million	\$107,178,850

Communicable Disease - Actions not funded at \$200 Million

Category	Priority Action Description	Statewide Cost
Detection/Case Investigation	Develop programs for screening undocumented individuals (Regional activity)	\$692,250
	CD staff training and continuing education	\$692,250
	Detection - develop CD screening programs in jails, juvenile centers and homeless shelters	\$1,384,500
	Increase confirmatory testing in clinics & hospitals through education	\$1,384,500
Public & Provider Education	Reporting of health issues to community	\$692,250
	Increasing capacity for cultural competence and awareness of public health staff	\$692,250
	Community outreach worker (LHJ or community-based organization) reflective of high-risk population	\$8,307,000
	Increasing capacity for cultural competence and awareness of public health staff	\$692,250
	Public health professionals: Outreach to external providers and public at large for delivery of messages (PHN, RD, EH, etc.)	\$2,769,000
Surveillance & Epidemiology	Surveillance staff continuing education & training	\$276,900
Intervention & Surge Capacity	Adequate local vaccine oversight: inventory control, vaccine ordering, quality control (storage), accountability (usage report), provider relations, clinic immunization assessment	\$2,769,000
	System Intervention: individual case follow up and treatment, and population-based, preventive, vaccine distribution	\$2,076,750
Total- Unfunded Communicable Disease Actions		\$22,428,900

Health Promotion and Chronic Disease Prevention - Actions Not Funded at \$200 Million

Category	Priority Action Description	Statewide Cost
Healthy Children & Families	Education and family planning service to prevent unintended pregnancies	\$1,384,500
Access: System Creation	Capacity for collaboration to new system development and strategies	\$692,250
Access: System Creation	Base planning capacity: anticipate overall health care system failure. Translate the kind of emergency preparedness we have done to be ready for any outbreak to shore up safety net.	\$1,384,500
Health Promotion & Chronic Disease Prevention	Integrate assessment & community education and decisions. Redesign public outreach regarding chronic disease and substance abuse. Shift from tertiary to primary prevention to achieve identification of population at risk and skills to initiate changes; and measurement of impact	\$4,153,500
	Community mobilization regarding environmental causes of chronic disease	\$1,384,500
	Community education about preventing pandemic and seasonal flu issues/readiness to accept changes in behavior	\$1,384,500
	Total – Health Promotion & Chronic Disease Prevention	\$10,365,750

Healthy Families – Actions Not Funded at \$200 Million

Category	Priority Action Description	Statewide Cost
Healthy Children & Families	Full capacity for WIC services	\$6,922,500
	Safe, healthy child care to support optimal cognitive, emotional, and social development of children	\$4,153,500
	Policy development/policy level work: safe and healthy homes and neighborhoods (activity, safety-violence, environmentally clean/safe)	\$1,384,500
	Total- Healthy Families and Children	\$12,460,500

Health Information and Evaluation - Actions Not Funded at \$200 Million

Category	Priority Action Description	Statewide Cost
Epidemiology	Collection & analysis of local and county qualitative and quantitative data	\$830,700
	Infrastructure: Data, Surveys, BRFSS, HYS, Locally developed, IT hardware & software platforms, analytic tools, workforce development, technical assistance, public health surveillance	\$2,076,750
Evaluation/ Outcomes	Program evaluation results are generated and presented to appropriate decision makers. (Duplicate of "all counties have sufficient resources?")	\$692,250
	All counties have sufficient resources, including data systems, to evaluate internal and external program effectiveness and impact (outcomes/key indicators).	\$1,938,300
Informing program and policy development	Presentations, summary interpretations for multiple audiences, policy level, community dialogue, high quality slides and graphics	\$692,250
	Call to action, data to action, follow-up and respond to community engagement; using prioritization to develop policy/program funding proposals, more assessment/community scan (HIAs)	\$969,150
	Community engagement and dialogue: how to go to us, address questions and need for more data, prioritization	\$1,384,500
Technical assistance, community-level data utilization	Respond to community requests: Data for grants, needs assessments, grant writing assistance, "go to us" for data, external assessments and evaluations	\$692,250
	Establish and maintain community coalitions (in relation to data coordination, facilitation, and staffing – HD takes the lead)	\$1,384,500
	Systems are in place to develop, implement, monitor, report, and incorporate results as part of an ongoing, department-wide QI process.	\$ 4,153,500
	Total – Health Information and Evaluation	\$14,814,150

Environmental Health – Actions Not Funded at \$200 Million

Category	Priority Action Description	Statewide Cost
Emergency Preparedness	Ongoing updates and revisions to Public Health emergency response plan to ensure currency and all hazards approach	\$553,800
	Receiving regular training and exercising cross-jurisdictional coordination of emergency response	\$2,076,750
	Ongoing public awareness and education	\$1,384,500
	Capacity of on-call response for off-hours/24 hour emergency	\$276,900
Community Involvement	Involvement/education on environmental contamination issues	\$1,384,500
Land Use Decisions	Direct participation in land use permitting decisions	\$2,076,750
	Direct participation in land use planning	\$1,384,500
Overarching Service	Establish technology to track and evaluate data.	\$175,000
School Safety	Build regional capacity for school design review	\$276,900
	Establish on-site evaluation program for schools and childcare facilities	\$2,769,000
	Build community partnership to address problems identified and provide technical assistance.	\$692,250
Air Quality Monitoring	School/public building consultation	\$1,384,500
	Second hand smoke enforcement/education	\$276,900
	Public education/information	\$553,800
Water Quality Control	Onsite sewer systems enforcement, survey, failure identification and repair	\$8,307,000
	Public water system monitoring, compliance, and sanitary survey	\$2,769,000
	Ground water and surface water quality and regional data	\$2,769,000
	Onsite sewer systems inspection and permitting	\$2,769,000
	Public/private system technical assistance and education	\$692,250
	System approval - public and private: water availability, quality and quantity	\$692,250
	Well siting and construction	\$553,800
	Onsite sewer systems installer/ operations and maintenance specialist professional licensing	\$692,250
Food Safety	Surface water: ambient monitoring and shellfish protection	\$692,250
	Standardization of training for food safety inspectors	\$692,250
Hazardous Materials Management	Public Health risk assessment and communication for hazardous materials incidents	\$276,900

Category	Priority Action Description	Statewide Cost
	Quicker response to clandestine drug labs	\$692,250
	Follow-up to ensure drug labs are cleaned up	\$692,250
	Faster initial response to hazardous materials incidents	\$276,900
	Site hazard assessment work	\$692,250
Solid Waste Management	Increased response and resolution to address solid waste handling such as illegal dumping, medical waste issues, e-waste, large-scale agricultural waste, and animal carcasses	\$2,769,000
	Identification and evaluation of closed and abandoned landfills	\$692,250
	Inspection and permitting of solid waste facilities for compliance with regulations	\$692,250
Vector/Rodent Control and Zoonotic Disease	Implement community education regarding zoonotic preventions, safety, and control.	\$1,384,500
Water Recreational Facility Safety	Monitor water quality of established, developed swim areas/natural bathing beaches	\$692,250
	Implement pool manager training and certification.	\$276,900
	Increase inspections at facilities with x% of critical violations.	\$1,384,500
Food Safety	Establish and implement a food manager training and certification program.	\$692,250
	Total Environmental health Actions Not Funded	\$47,109,550

APPENDICES

- 1. Costing public health priorities: Methodology – May, 2006**
- 2. Process for developing the 2006 Public Health Priorities model**
- 3. Participants: Public health cost study workgroups**
- 4. Calculating staff – full time equivalents (FTE) by type of public health jurisdiction**
- 5. Current funding by categories from 2004 selected BARS reports**
- 6. Financing Local Public Health in Washington State, Challenges and Choices**

APPENDIX 1:

Costing Public Health Priorities: Methodology - May 1, 2006

Local public health agencies, working in concert with the Washington State Department of Health, have been asked to formulate the costs of meeting basic public health needs statewide. This has been undertaken in two recent processes. In 2004, a methodology was developed to estimate funding needs for 34 service areas, grouped into five broad topics in public health and applied to all local health agencies. In 2006, the method was adapted and applied by using a much more detailed breakdown of services into specific actions, and placing each action into priority order to yield a potential statewide cost.

2006 Cost Calculator

The methodology to cost actions in 2006 draws parallels to the 2004 costing methodologies in that the approach is FTE-driven and it estimates statewide needs. In 2006, these steps were used:

- 1. Describe Needed Action:** Expert panels were convened to consider all services from 2004 cost model. They were asked to identify what actions need to be taken, but cannot be taken today for lack of resources. As an example, instead of estimating the need to address “water quality control” as one service as in 2004, the expert panel described 11 specific actions that should be taken, statewide.
- 2. Estimate FTEs:** For each action, experts were asked to estimate the resource need, expressed in terms of the amount of staff time it would take to complete the job and maintain performance over time. In all cases, they used an “index health department” which would serve a community of 175,000 people. (The 175,000 population is the average of all local health jurisdictions statewide, and gives every participant a mental point of reference to start from for ease of discussion.)
These results give us an estimate of how many FTE would it take to carry out a given public health activity where: a) it is not being done today or, b) more capacity is needed to adequately deliver the service.
The theory behind an FTE basis is that any activity not being carried out adequately today needs the attention and energy of a person in public health to do the work. An FTE basis as a driver for cost works more reliably than population or workload statistics.
- 3. Add FTEs for span of control:** A span of control factor is added: ratios for program and department-level supervisory staff and administrative FTEs to support that professional staff. A small factor was also applied for Health Officer support. Ratios were developed in the 2004 process based on public health professionals’ experience in their own departments and generally accepted management guidelines.

4. **Convert FTE to dollars.** The resulting FTE in these categories are then multiplied by salary per FTE. Salaries are based on the AWC salary survey for 2005, average of formal high steps, for the following positions: Direct professional staff uses Public Health Nurse and Environmental Health Specialist salaries (\$50,400). Program and Department Supervision uses the Environmental Health Director, and Nursing Services Supervisor salaries (\$60,250). Health Officers' salaries are converted from hourly to annual based on an annual WSAC survey. (Most health departments use only a portion of an FTE in Health Officer time, so the ratio, above, is very small.)
5. **Fully build costs by adding indirect costs:** Employee benefit and indirect cost factors (supplies, facilities, utilities, technology) are added as a percentage of the total. The percentages used for benefit and indirect costs are based on the 2004 approach of reviewing and averaging indirect rates from DOH's review of Consolidated Contract rates by local department.

At this point, we have the per-FTE cost, in dollar terms, for an "index" mid-size LHJ to perform the proposed public health action.

6. **Scale to a statewide number:** This step converts FTEs to dollars and converts the index LHJ to a statewide number.

Using the Rural-Urban Commuting System classifications (RUCA) used in the Baseline Evaluation of the Standards for Public Health in Washington State¹, that dollar total is then scaled up and down to take size of health department into account. The point of this step is to spread that hypothetical FTE evenly throughout the state based on size of jurisdiction, so that each department would have the resources needed to be able to do the work.

For example, a health department such as Whatcom, with 177,000 population and classified as Urban, would get roughly \$123,000 to carry out an activity that required a single FTE. By comparison, Island County, with 75,000 population and classified as Mixed Rural, would receive \$37,000 for the same action (just part of one FTE.)

¹ See *Standards for Public Health in Washington State: Baseline Evaluation Report*, p. 113, November 12, 2002, which established county peer groups for purposes of reporting on the standards.

Every proposed public health action was converted to an overall cost and scaled for statewide applicability. With all of the scaling factors taken together, the statewide cost impact of adding each FTE is \$2.7 million.

7. **Setting Priorities:** The total cost of each action proposed by the expert panels – priority actions that are currently not funded or are under-funded - were placed in priority order by a specially comprised and representative group of local health department leaders.
8. There are be non-FTE costs for information-technology and other statewide support costs to be borne by the Department of Health. These costs are calculated and shown separately.
9. Estimates for King County have been developed separately. They use actual salary factors and actual span-of-control factors. The health department conducted a parallel process of outlining and prioritizing work that is currently not done, or performed at an insufficient level.

What is the Statewide Cost above the current level to perform the service?

Enter # of Direct FTEs here: 1.00 Changing this number will change all costs across all priorities

First, determine costs for Index LHJ:

	Salary per FTE	Total FTE	%/Total	
FTEs: Direct Professional Staff (updated - rounded from AWC salary survey for PHN/EHS)	\$50,400	1.00	69%	<i>salaries based on AWC salary survey</i>
FTEs: Program Management/Supervision (Ratio - 1 FTE per 7 Staff, from AWC EHD)	\$60,250	0.14	10%	
FTEs: Administrative Support (Ratio - 1 FTE per 5 Direct & Program Staff)	\$40,000	0.23	16%	
FTEs: Department Management (Ratio - 1 FTE per 20 Total Staff, also AWC EHD)	\$60,250	0.07	5%	<i>based on proportion of 1 FTE to index total = 1/155</i>
Health Officer (proportion, based on AWC Salary Survey for full time HO)	\$130,000	0.01	0%	
Total "Average" Mid-Size Local Health Jurisdiction FTEs	\$73,000	1.45	100%	<i>65% Staff</i>
Benefit Costs (25% of personnel costs)	\$18,000			<i>16% Benefits</i>
Indirect Costs (23% of total costs): Supplies, Facilities, Utilities, Technology	\$21,000			<i>19% Indirect</i>

Cost for an "Index" LHJ (pop 175,000) to provide PH services

\$112,000

Next, determine statewide total costs combining mid-size LHJ costs and scaling factors:

(Multiply the number of LHJs by the scaling factor by the estimated cost to reach the total estimated cost)

LHJ Peers	# of LHJs	Scaling Factor	Estimated Cost for Peer Group
Large Town	7	0.33	\$258,751
Mixed Rural	6	0.36	\$240,843
Small Town/Rural 1	4	0.03	\$13,301
Small Town/Rural 2	7	0.16	\$128,078
Urban	6	1.10	\$738,037
Large Urban	4	3.10	\$1,389,781

Total Estimated Cost Statewide to Perform Service (rounded)

\$2,769,000

APPENDIX 2:

Process for developing the 2006 Public Health Priorities Model

The Joint Select Committee on Public Health Financing has asked local health officials to answer the following questions:

1. What important public health activities are you unable to do-- or unable to do adequately - and how much would they cost?
2. How would an investment in those activities protect or improve the public's health?
3. If public health received an additional investment of around \$50 million, \$100 million, or \$200 million, what activities would you fund? What are your priorities?
4. How will we know if these investments are effective?

Process to Establish Priorities

The process to establish priorities involved broad representation of state and local public health officials. Their charge was to establish priorities in the core service areas of:

Communicable Disease, Environmental Health, Assessment, and Health Promotion, Disease Prevention and Access (combined).

Four work groups of subject matter experts in each identified the current gap in services. They prioritized the activities that are not currently being done or are done insufficiently within each of the core service areas. They selected priorities using criteria relevant to public health effectiveness.

The groups were also asked to describe the service activity, why it is important for protecting the public's health and preventing disease, and they were asked to provide examples of performance measures that would demonstrate results.

Because public health is primarily a staff driven service model, FTEs were used to identify the cost of each activity, based on an index local health jurisdiction serving a population of 175,000. The total cost for the index local health jurisdiction resulting from this process was then scaled up and down to reflect a statewide cost estimate for 34 local health jurisdictions. King County followed the same process, but separately, because of its size and complexity compared to the other 34 local health jurisdictions. The final package combines the 34 local health jurisdictions, King County and the Department of Health.

A separate group of local public health and state public health leaders were brought together to set priorities among all activities recommended across the core services. Their selections were made at the funding increment levels requested by Legislative staff, approximately \$50 million, \$100 million, and \$200 million.

A phone and visual-link conference was held on May 15 so that all local health officials could discuss the funding models.

APPENDIX 3: Public Health Cost Study Workgroups

Vetting Group

April 25, 2006

Don Sloma – Washington Health Foundation
Sherri McDonald – Thurston County Public Health & Social Services
John Wiesman – Clark County Health Department
Tom Locke – Clallam/Jefferson County Health Departments
Regina Delahunt – Whatcom County Health Department
Kathleen Uhlorn – Public Health – Seattle and King County
Vic Harris – Tacoma-Pierce County Health Department
Peggy Grigg – Grant County Health District
Barry Kling – Chelan-Douglas Health District
John Peppert – DOH; Infectious Disease and Reproductive Health
Jude Van Buren – DOH; Epi, Health Statistics and Public Health Lab
Bill White – DOH; Deputy Secretary
Gregg Grunenfelder – DOH; Environmental Health
Joan Brewster – DOH; Public Health Systems Development
Craig McLaughlin – State Board of Health
Vicki Kirkpatrick – WSALPHO
Rick Mockler – Snohomish Health District
Marty Wine – Berk and Associates
Ursula Roogen-Runge – Strategic Learning Resources

Communicable Disease

April 10, 2006

Suzanne Plemmons – Kitsap County Health District
Peter Browning – Skagit County Department of Public Health
Donna Larsen – Snohomish Health District
Sherri Bartlett – Lincoln County Health Department
Carol McNeil – Island County Health Department
Diana Yu – Thurston/Lewis/Mason County Health Departments
Jo Hofmann – DOH; Public Health Lab
Janna Bardi – DOH; Maternal and Child Health
John Peppert – DOH; Infectious Disease and Reproductive Health
Joan Brewster – DOH; Public Health Systems Development
Craig McLaughlin – State Board of Health
Vicki Kirkpatrick – WSALPHO
Rick Mockler – Snohomish Health District
Marty Wine – Berk and Associates
Ursula Roogen-Runge – Strategic Learning Resources

Prevention and Access

April 12, 2006

Susan Johnson – Public Health – Seattle and King County
Barry Kling – Chelan-Douglas Health District
Tom Locke – Clallam/Jefferson County Health Departments
Deborah Ahern - Thurston County Public Health & Social Services Department
Heidi Keller – DOH; Health Promotion
Candi Wines – DOH; Maternal and Child Health
Janet Charles – DOH; Community Wellness and Prevention
Mary Looker – DOH; Community and Rural Health
Vince Schueler – DOH; Community and Rural Health
Joan Brewster – DOH, Public Health Systems Development
Craig McLaughlin – State Board of Health
Vicki Kirkpatrick – WSALPHO
Rick Mockler – Snohomish Health District
Marty Wine – Berk and Associates
Ursula Roogen-Runge – Strategic Learning Resources

Environmental Health

March 24, 2006

Marc Marquis – Chelan-Douglas Health District
Art Starry – Thurston County Public Health and Social Services Department
Jim Matsuyama – NE Tri-County Health District
Regina Delahunt – Whatcom County Health Department
Debbie Riley – Mason County Department of Health Services
Gregg Grunenfelder – DOH; Environmental Health
Joan Brewster – DOH; Public Health Systems Development
Craig McLaughlin – State Board of Health
Vicki Kirkpatrick – WSALPHO
Rick Mockler – Snohomish Health District
Marty Wine – Berk and Associates
Ursula Roogen-Runge – Strategic Learning Resources

Assessment

March 31, 2006

Jane Wright – Kittitas County Health Department
Sherri McDonald – Thurston County Public Health & Social Svcs Dept.
Carrie McLachlan – Island County Health Department
Sandra Ciske – Public Health – Seattle and King County
Cindan Gizzi – Tacoma-Pierce County Health Department
Jane Ballard – Snohomish Health District
Lyndia Vold – Spokane Regional Health District
Roger Arango – Grant County Health District
Christie Spice – DOH; Community Assessment
Jude Van Buren – DOH; Epi, Health Statistics and Public Health Lab
Joan Brewster – DOH, Public Health Systems Development
Craig McLaughlin – State Board of Health
Vicki Kirkpatrick – WSALPHO
Rick Mockler – Snohomish Health District
Marty Wine – Berk and Associates
Ursula Roogen-Runge – Strategic Learning Resources

APPENDIX 4 (Part I):

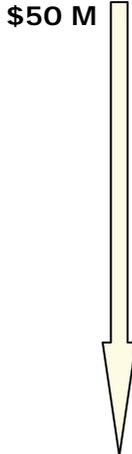
Calculating staff – full time equivalents (FTE) by type of public health jurisdiction

Public Health Priorities in Rank Order – By Budget Tier for 35 LHJs

Black type denotes all 35 LHJs. Blue type denotes King County-specific actions.

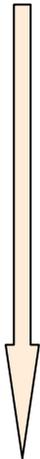
King County FTEs in Appendix 4, Part II.

FTEs represent one LHJ in each RUCA



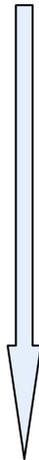
\$ in Millions	Actions	Type	FTE Large Town	FTE Mixed Rural	FTE Small Town/Rural 1	FTE Small Town/Rural 2	FTE Urban	FTE Large Urban
12.5	Case Investigation of Communicable Diseases	CD	1.32	1.44	.12	.64	4.4	12.4
15.9	Reduce Chronic Disease impacts, costs	HP	.99	1.08	.09	.48	3.3	9.3
6.02	Nurse-Family Home Visits - Step 1	HF	.59	.65	.05	.29	1.98	5.58
2.8	Local health data for decision-support	HI	.10	.11	.01	.05	.33	.93
2.4	Tools for health information management	HI	.25	.27	.023	.12	.83	2.33
2.35	Program evaluation, measuring results	HI	.23	.25	.02	.11	.77	2.17
3.1	Zoonotics - response to emerging threats	EH	.33	.36	.03	.16	1.10	3.10
.75	Outreach to High Risk Settings and Groups	CD						
.54	Risk Reduction Campaigns: immunizations, STDs	CD						
.33	Injury Prevention Interventions	HP						
46.69	Total for Tier I							
10.76	Outreach to high risk settings and groups	CD	.99	1.08	.09	.48	3.3	9.3

\$100 M



\$ in Millions	Actions	Type	FTE Large Town	FTE Mixed Rural	FTE Small Town/Rural 1	FTE Small Town/Rural 2	FTE Urban	FTE Large Urban
1.4	Community information on disease risks	CD	.08	.09	.008	.04	.275	.775
12.1	Nurse-Family Home Visits Statewide	HF	1.31	1.43	.12	.63	4.36	12.28
2.77	Disease surveillance and regional epidemiology	CD	.33	.36	.03	.16	1.1	3.1
2.1	Case Investigation of Communicable Disease	CD						
8.31	Food Safety for high risk permanent settings	EH	.99	1.08	.09	.48	3.3	9.3
2.77	Water quality control information management	EH	.33	.36	.03	.16	1.1	3.1
6.12	Reduce Impact of Chronic Disease	HP						
1.0	Local Health Data Support & Tools	HI						
.62	Program Evaluation	HI						
.68	Training for Response to Disease, Floods, Earthquakes	CD						
95.32	Total at Tier II (48.63 this segment)							
3.2	Store and transmit information electronically	CD	.33	.36	.03	.16	1.1	3.1
3.3	Health Provider partnerships and coordination	HP	.40	.43	.04	.19	1.32	3.72
5.0	Risk reduction campaigns: immunizations, STDs	CD	.53	.58	.05	.26	1.76	4.96

\$200 M



\$ in Millions	Actions	Type	FTE Large Town	FTE Mixed Rural	FTE Small Town/Rural 1	FTE Small Town/Rural 2	FTE Urban	FTE Large Urban
2.1	Food Safety for high risk temporary settings	EH	.25	.27	.025	.12	.83	2.33
7.1	Expand Maternity Support Services	HF	.66	.72	.06	.32	2.2	6.2
4.2	Injury prevention interventions	HF	.50	.54	.045	.24	1.65	4.65
4.2	Translation services	HA	.50	.54	.045	.24	1.65	4.65
4.6	Training (disease, floods, earthquakes)	CD	.25	.27	.023	.12	.83	2.33
4.6	Document local problems in access to health care	HA	.50	.54	.045	.24	1.65	4.65
2.1	Community engagement EH risks	EH	.25	.27	.023	.12	.83	2.33
6.6	Local data analysis for decision support - Stage 2	HI	.73	.79	.066	.35	2.42	6.82
2.8	Community Coalitions on Access problems	HA	.33	.36	.03	.16	1.1	3.1
4.8	Assessment for quality improvement	HI	.50	.54	.045	.24	1.65	4.65
11.2	Assist clients to find medical homes	HA	.66	.72	.06	.32	2.2	6.2
4.3	Outreach for substance abuse and other risks	HP	.50	.54	.045	.24	1.65	4.65
3.1	Adolescent health treatment and outreach	HF	.25	.27	.023	.12	.83	2.33
3.8	Mapping and analysis of CD information	CD	.33	.36	.03	.16	1.1	3.1
5.1	On-site maintenance and operations oversight	EH	.51	.56	.047	.25	1.71	4.81
5.6	Maintain plans, assignments for surge capacity	CD	.66	.72	.06	.32	2.2	6.2

\$ in Millions	Actions	Type	FTE	FTE	FTE	FTE	FTE	FTE
			Large Town	Mixed Rural	Small Town/Rural 1	Small Town/Rural 2	Urban	Large Urban
.20	Water Quality Control Information Management	EH						
3.0	Additional Nurse-Family Partnership	HF						
1.0	Outreach to High Risk Settings and Groups - child care centers	HF						
6.0	Electronic Health Record for community health system	HA						
193.22	Total for Tier III (97.9 this segment)							

APPENDIX 4 (Part II):

Calculating staff – full time equivalents (FTE) by type of public health jurisdiction

Calculations for FTEs – King County

State Public Health Category	TIER	PHSKC Service Description	PHSKC Cost	FTE
Health Promotion	1	Staff assistance, community support and engagement, convening community groups and facilitating coalitions, tailored presentations and analyses on public health topics.	606,132	6
Health Information	1	Support department in strategic planning.	323,435	3
Health Promotion	1	Establish capacity to conduct targeted outreach to groups at high risk for disease, targeting interventions to groups and settings most likely to benefit.	1,000,000	9.51
Health Promotion	1	Improve oral health and reduce the level of dental disease in accord with the US Healthy People 2010 goals and the Washington State Public Health Improvement Plan.	501,435	4.65
Health Information	1	Collection & analysis of local and county qualitative and quantitative data.	1,675,334	16.4
Health Information	1	GIS (map-making and spatial analysis)	331,246	3.1
Health Information	1	Build a core of evaluators (quantitative and qualitative) to design, carry out and present results of evaluation of public health programs.	406,132	3.75
CD	1	Increased capacity for case and contact finding, investigation, case management and follow up related to communicable diseases.	1,500,000	14.5
EH	1	Zoonotic Diseases: Increase capacity for: surveillance and investigation; data management, mapping, and analysis, enhanced surge capacity to respond to rapidly emerging disease threats.	498,321	4.6
Health Promotion	1	Public health prevention and control measures, interventions and outreach related to chronic diseases and associated risk factors, including individual behaviors and environmental factors.	5,539,038	54.1
Healthy families	1	Olds Model Nurse-Family Partnership	1,026,044	9.75

State Public Health Category	TIER	PHSKC Service Description	PHSKC Cost	FTE
CD	1	Health and safety consultation and technical assistance with limited client assessment at homeless shelters and child care centers.	745,108	7.3
CD	1	Increase adolescent and adult immunization services.	536,132	5
Healthy Families	1	Capacity to address community based campaigns, based on data regarding prevalence of behaviors related to injury risks, including: auto restraints; pedestrian safety; senior falls; firearm safety; poisoning and other household risks.	331,246	3.1
			15,019,603	144.76
Health Promotion	2	Improve oral health and reduce the level of dental disease in accord with the US Healthy People 2010 goals and the Washington State Public Health Improvement Plan.	200,000	1.85
Health Information	2	Collection & analysis of local and county qualitative and quantitative data.	200,000	1.85
Health Information	2	GIS (map-making and spatial analysis) (4.0 FTE)	100,000	1
Health Information	2	Build a core of evaluators (quantitative and qualitative) to design, carry out and present results of evaluation of public health programs.	406,132	3.75
CD	2	Increased capacity for case and contact finding, investigation, case management and follow up related to communicable diseases.	713,321	7
CD	2	Staff receive regular trainings and cross-jurisdictional coordination of emergency response.	688,124	6.75
Healthy families	2	Olds Model Nurse-Family Partnership	1,000,000	9.51
CD	2	Health and safety consultation and technical assistance with limited client assessment at homeless shelters and child care centers.	200,000	1.85
CD	2	Increase adolescent and adult immunization services.	700,000	6.85

State Public Health Category	TIER	PHSKC Service Description	PHSKC Cost	FTE
Healthy Families	2	Capacity to address community based campaigns, based on data regarding prevalence of behaviors related to injury risks, including: auto restraints; pedestrian safety; senior falls; firearm safety; poisoning and other household risks.	100,000	1
Health Promotion	2	Establish capacity to conduct targeted outreach to groups at high risk for disease, targeting interventions to groups and settings most likely to benefit.	1,100,000	10.4
Health Promotion	2	Staff assistance, community support and engagement, convening community groups and facilitating coalitions, tailored presentations and analyses on public health topics.	215,623	2
Health Information	2	Support department in strategic planning.	215,623	2
Health Information	2	Collection & analysis of local and county qualitative and quantitative data.	663,681	6.5
Health Information	2	Build a core of evaluators (quantitative and qualitative) to design, carry out and present results of evaluation of public health programs.	215,623	2
CD	2	Increased capacity for case and contact finding, investigation, case management and follow up related to communicable diseases.	1,400,000	13.2
Chronic Disease	2	Public health prevention and control measures, interventions and outreach related to chronic diseases and associated risk factors, including individual behaviors and environmental factors.	2,000,000	19.4
CD	2	Increase capacity to conduct targeted risk-group outreach and provider training related to child, adolescent and adult immunizations	498,321	4.6
Health Promotion	2	Establish linkages with providers to create school age initiatives that focus on prevention and control of communicable disease, immunization, chronic disease, health behaviors, wellness.	431,246	4
Health Promotion	2	Establish linkages with providers to incorporate mental health and substance use disorders into primary care services.	1,781,494	17.37
CD	2	Conduct targeted outreach with mobile health teams to serve the homeless persons.	1,758,321	17.15

State Public Health Category	TIER	PHSKC Service Description	PHSKC Cost	FTE
Health Promotion	2	Public health prevention and control measures, interventions and outreach related to chronic diseases and associated risk factors, including individual behaviors and environmental factors.	400,000	3.7
			14,987,509	143.73
Access to Health Care	3	Increase dental care for uninsured low income adults.	3,000,000	28.75
Access to Health Care	3	Provide information and referral to medical/dental homes for low income and uninsured adults and children.	300,000	2.75
Health Information	3	Tablet PCs for environmental health field inspectors, Electronic record management system	442,423	0
Health Information	3	Electronic Health Record for community health system: provides a secure electronic file of patient history, medical transcription notes, billing information and all other information necessary to have a complete patient profile and extract data for decision support.	6,000,000	0
Health Information	3	Upgrade systems to improve decision support	4,000,000	0
CD	3	Response team training, planning for health care coalition, pandemic flu planning and coordination	2,500,000	24.25
CD	3	Improving accuracy, timeliness and completeness of notifiable disease reporting from private healthcare providers	431,246	4
CD	3	Development and maintenance of CD database for disease reporting, investigation and data analysis	378,000	3.5
EH	3	Onsite sewer systems enforcement, survey, failure identification and repair.	485,152	4.5
EH	3	Individual, small and institutional drinking water technical resource to identify and develop interventions for none system issues such as lead in schools, water related emergency planning.	215,623	2
PR	3	Olds Model Nurse-Family Partnership	3,052,089	29.5
CD	3	Health and safety consultation - child care centers	1,000,000	9.51

State Public Health Category	TIER	PHSKC Service Description	PHSKC Cost	FTE
CD	3	Oversee collection, maintenance, analysis, interpretation and dissemination of disease information	650,000	6.4
ASS	3	Technical support for health care system-clinical quality improvement processes Resources for QI (backfill of champions, resources for learning collaboratives, etc.)	638,435	6.25
CD	3	capacity to provide better information to the public and conduct targeted communicable disease prevention campaigns	498,321	4.6
CD	3	Child Care Provider – Preparedness Program Develop infection control program and preparedness capacity among child care provider in the county	107,812	1
Health Promotion	3	Activity: public education in health centers: Create disease prevention information kiosks in health center site	107,812	1
Healthy Families	3	Improve women's health to improve birth outcomes and parenting capacity: including Pre-conception screening for non-pregnant women for chronic health conditions; pre-conception and prenatal group interventions to make behavior/lifestyle changes to reduce	1,526,044	14.75
Healthy Families	3	Addition of three school based or linked health centers in King County outside of Seattle; contracting through CBOs, or if none interested, operated by PHSKC	1,000,000	9.51
EH	3	Code enforcement/abatement funding when property owners cannot/will not clean up properties. Increased response and resolution to address solid waste handling such as illegal dumping, medical waste issues, e-waste, large-scale agricultural waste, and animals.	296,482	2.75
EH	3	Grant Proposal	323,435	3
Access to Health Care	3	Family planning services for uncompensated, low income persons in King County	945,108	9
Access to Health Care	3	Expand primary care in South King County, integrated with mental health and substance abuse services, see above.	1,000,000	9.51
Health Information	3	Maintain effective death investigations for the standard workload and growing population of King County	732,132	7.25

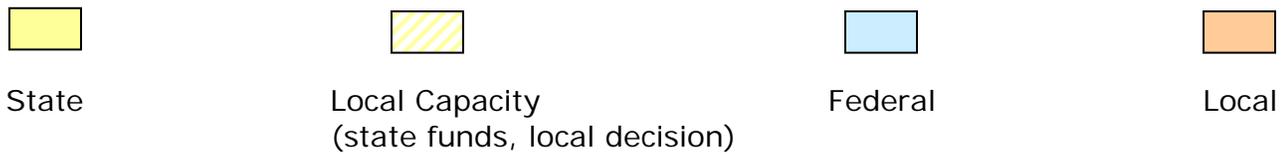
State Public Health Category	TIER	PHSKC Service Description	PHSKC Cost	FTE
Access to Health Care	3	Enhanced capacity to undertake research or innovative projects to test approaches to public health interventions specific to King County	415,800	3.85
			30,045,914	187.63
			60,053,026	476.12

APPENDIX 5:
Current funding by categories from 2004 selected BARS reports

Who Pays, for What?
Annual expenditures by Local Public Health Departments/Districts

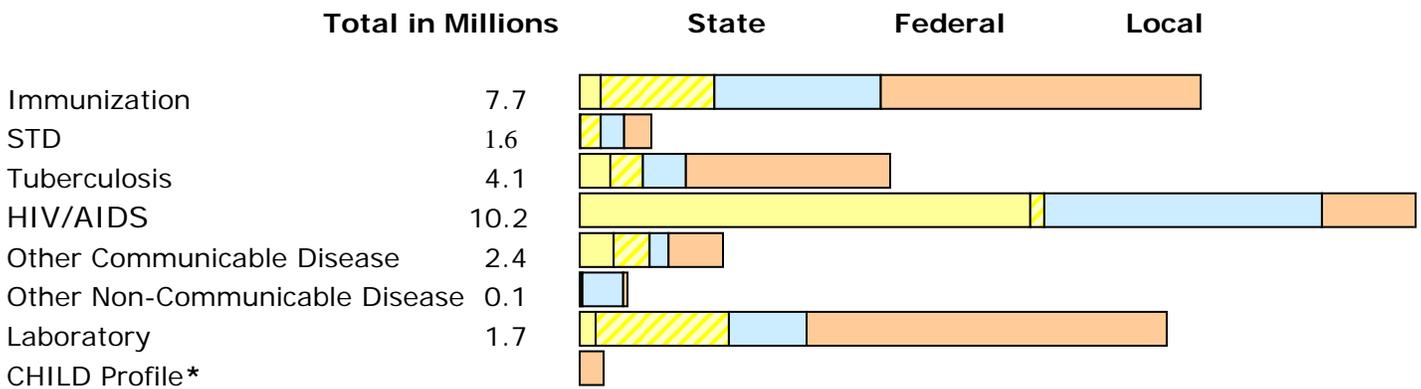
BARS, 2004
34 Local Health Departments exclusive of Public Health Seattle-King County
\$135.9 Million, Total
Selected BARS Codes

Source of Funds:



These charts illustrate current funding in the public health systems, base do source of funds. They list services available today. The preceding report on public health priorities contain needed actions that are not covered by current funds. If there appears to be any overlap due to subjects or titles, it is because a current service is insufficiently funded.

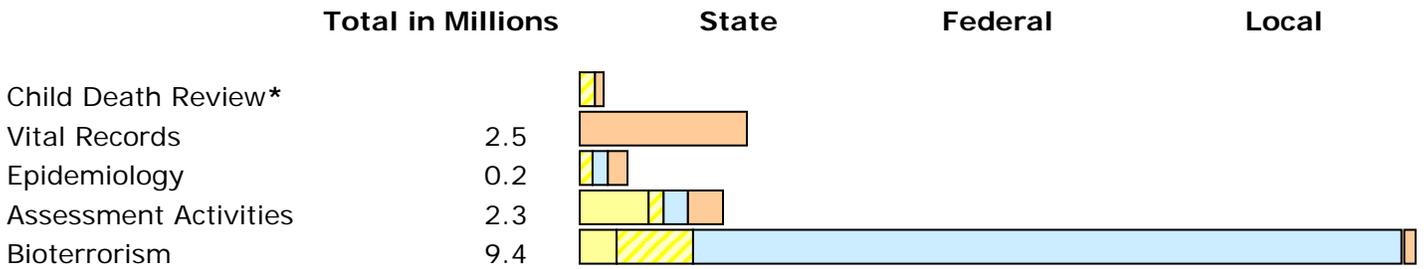
Communicable Disease \$28.5 Million



Comment: There is no “core” Communicable Disease funding for public health. As a result, disease investigation and surveillance tools are limited and they vary from one community to the next. Most Communicable Disease funding for local health departments comes from local dollars. Nearly all state dollars are in the categorical program to combat HIV/AIDS. Federal dollars are also categorical, divided primarily between Immunization and laboratory services. This leaves local departments in a difficult situation when there is an unexpected disease outbreak, a challenging TB case or a rise in STDs.

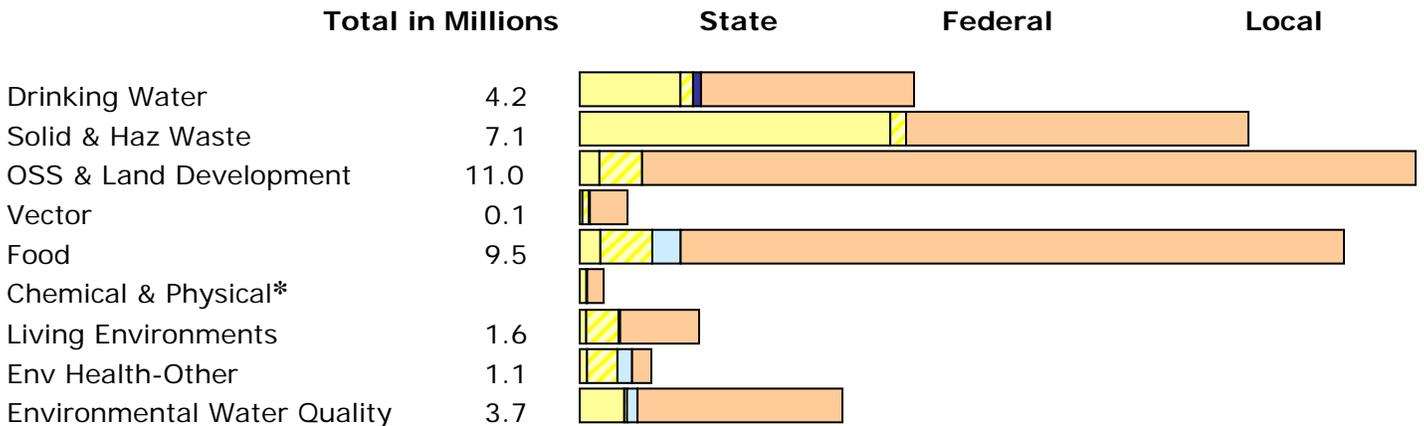
*Less than .1 million

Health Information \$14.8 Million



Comment: A cornerstone of public health is epidemiology and health assessment – discerning trends in health threats so that response can be initiated quickly, and harm contained or eliminated. Without good health information, community health providers and policy makers don’t have the facts they need to make decisions. And, serious problems can go unrecognized until they grow very large. There is a severe shortage of resources in this area of public health, from all sources. Recent federal investments are helping – but the efforts are focused on emergency preparedness, so they do not support general health assessment capacity. And, federal grants can be very unstable year – to year.

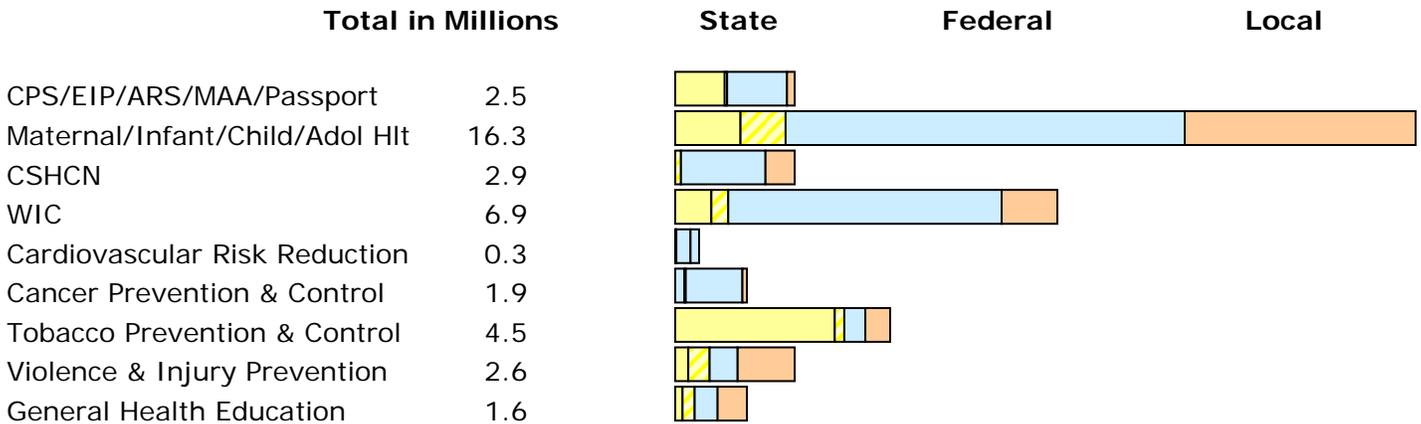
Environmental Health \$38.2 Million



Comment: There is no “core” environmental health funding. This service is heavily dependent on fees charged at the local level. Fees are constraining because they can only be raised and spent for particular functions. Many environmental health needs fall outside the possibility of collecting fees. For example: a fee can be charged to issue a septic tank permit, but there is no fee- capability to assess a nearby lake or stream to see if the water is being jeopardized.

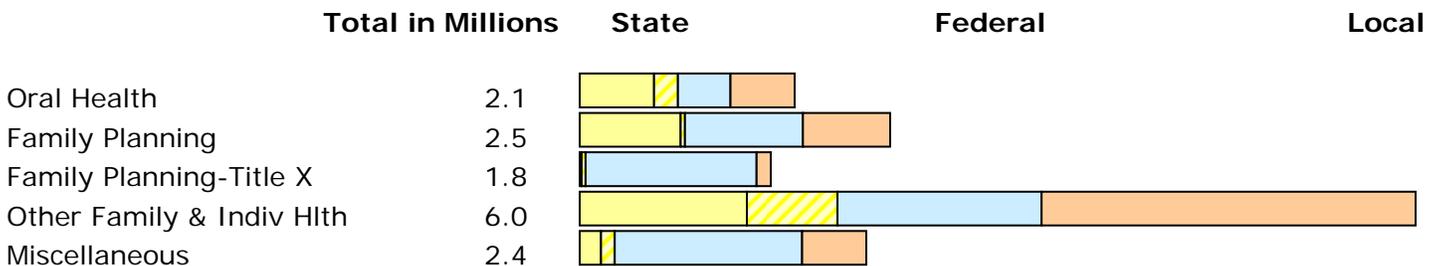
*Less than .1 million

Health Promotion/Chronic Disease Prevention \$39.6 Million



Comment: These services are vital for getting results in health trends. However, nearly all the funding is highly categorical, and primarily federal. Federal grants carry tight restrictions and often cannot be adapted in ways that make common sense at the local level. To make a real impact of chronic disease, there would need to be basic and sustained funding so that health departments can plan, implement and build skills for effective interventions. It is very possible to have an impact – there are programs that work, but it takes dedicated resources and concerted effort to get results.

Access to Critical Health Services \$14.8 Million



Comment: At the local level, public health has traditionally been an agency that connects people to needed service. They are “case managers” both in some formal ways, and also in many informal ways. That information and referral function is a benefit of public health work that is often unobserved, but which makes a huge difference to clients and their families. In addition, some public health agencies provide direct clinical services because they are the only such provider in the community, or the level of service is insufficient to meet the need. Local government carries most of this burden, and federal funds, always vulnerable, shares costs for some specific services.

Totals may vary due to rounding

Financing Local Public Health in Washington State: Challenges and Choices

July 2005

PHIP Finance Committee
Berk & Associates

In the last decade, local funding to support local public health services declined 27%, a drop of \$22.3 million, in the 34 jurisdictions outside of King County (2005 dollars).

Everyone in Washington State relies on its government public health system for protection against environmental dangers and diseases, including major outbreaks that could cause widespread harm to the state's people and economy. The system's financial structure, however, prevents it from adequately performing these essential functions. This document summarizes the financial and policy analysis conducted by the Public Health Improvement Partnership Finance Committee, with the assistance of Berk & Associates, over the last four years. It is intended as a resource to help policy makers understand the financial difficulties facing the public health system in Washington.

This document is limited to consideration of local public health financial issues. A brief description of Washington's public health system is provided on page 16 of this report and in-depth information is available in the Public Health Improvement Plan (<http://www.doh.wa.gov/hip>).

Public Health for Washington, in a Changing World

Protecting people's safety has long been government's primary purpose. Like law enforcement and fire protection, public health protection is an essential component of public safety and a unique government role. Public health efforts—from the taming of tuberculosis, to the eradication of polio, to the mitigation of diseases caused by poor water quality—have historically been responsible for vast improvements in life expectancy and quality of life. The public health system continues to serve the people of Washington by enforcing safety standards, preventing outbreaks, and collecting data to inform personal and policy decisions.

Maintaining a strong public health system is necessary to keep known diseases at bay, and doubly important for anticipating and meeting the emerging health threats that follow major changes in our world. In evaluating the way public health services are funded, it is important to understand these changes, which include:

Greater mobility. An increasingly mobile world population helps infectious diseases travel farther and faster than ever. A single outbreak, anywhere in the world, could quickly bring severe consequences to Washington State. In 2003, an outbreak of SARS in China spread to Toronto within weeks. That city's public health system was unable to contain the outbreak and the resulting fear was enough to effectively shut down the city. The final cost: 44 deaths, 438 probable and suspected SARS cases, and economic damages to the city estimated at \$1 billion (Canadian). There is no reason SARS could not be spread to Washington, and the same is true for other emerging diseases such as Avian Flu.

Resistant strains. Some old diseases that had long been thought conquered—including tuberculosis (TB), gonorrhea and staph infection—have re-emerged in new strains that are dangerous because of their resistance to multiple antibiotics. In 2003, Seattle public health experts scrambled to stop a large outbreak of resistant TB among Seattle's homeless population. The outbreak ultimately encompassed 44 cases, and was prevented from spreading further only through the intensive screening and testing of high-risk individuals, which required additional staff and funds. Similarly, several unrelated cases of active TB were found in Snohomish County in June 2005. Resistant strains have been implicated in at least one case, and the investigation and response have already involved over 50 staff—almost a quarter of the county's public health workforce.

Bioterror threats. Since 2001, the threat of a terrorist attack using smallpox, anthrax or other biological weapons has been widely recognized. Public health agencies would be on the front lines in the event of such an attack, and the probable damage would increase sharply with each passing hour before their response. It is therefore imperative that a robust surveillance system be in place to quickly detect biological incidents, and that the public health system be fully prepared to respond to them.

Funding Public Health in Washington: Past and Present

Washington's 35 local health jurisdictions (LHJs) provide the bulk of government public health services in the state. In 2004, the LHJs spent a combined total of about \$370 million. (By comparison, spending on law enforcement and criminal justice by the state's cities and counties totaled \$1.93 billion.) The revenues to fund LHJs' services have always come from a combination of local, state and federal funding, but the mix of these funds and the conditions attached to their use have changed significantly over time.

Prior to 1976, a portion of the local property tax everywhere was set aside for general public health and tuberculosis control. In 1976, this standard contribution was repealed by the state Legislature, and city and county decisions came to determine local funding of public health. The result was that, over time, spending came to vary widely from one jurisdiction to another. Dedicated funding would not return until 1996, when legislation went into effect to release cities from their public health funding responsibilities and assigned a portion of the new state Motor Vehicle Excise Tax (MVET) for public health use. The new source actually fell \$7 million short of what would have been the cities' share, but the Legislature made up about 50% of the difference in a series of special appropriations. Since LHJs were held to their historic funding levels, the variation among them continued.

In 2000, following voter approval of the tax-limiting Initiative 695, the Legislature voted to repeal the MVET. Appropriations from the state General Fund restored 90% of the lost public health funds, but the stability of a dedicated funding source was gone and, overall, the public health budget was short by more than \$2.5 million per year. In 2001 the Legislature again used special appropriations to make up 90% of the difference, and it has made an equal appropriation—without adjustments for inflation or population growth—in each biennium since.

One constant over the years has been the great variation between the Seattle-King County Health Department and any other local jurisdiction. Of the 35 LHJs, Seattle-King County serves the population that is the largest, with greatest density, diversity and number of high-risk individuals. It also provides the broadest scope of services and the only comprehensive primary care services provided by any local public health agency in the state. In 2004, public health expenditures by Seattle-King County totaled \$185 million, or 53% of total spending by all LHJs in the state. Because Seattle-King County is so unique and so influential on statewide statistics, and because it employs a different way of categorizing the funds it receives, this paper does not include revenue totals from Seattle-King County.

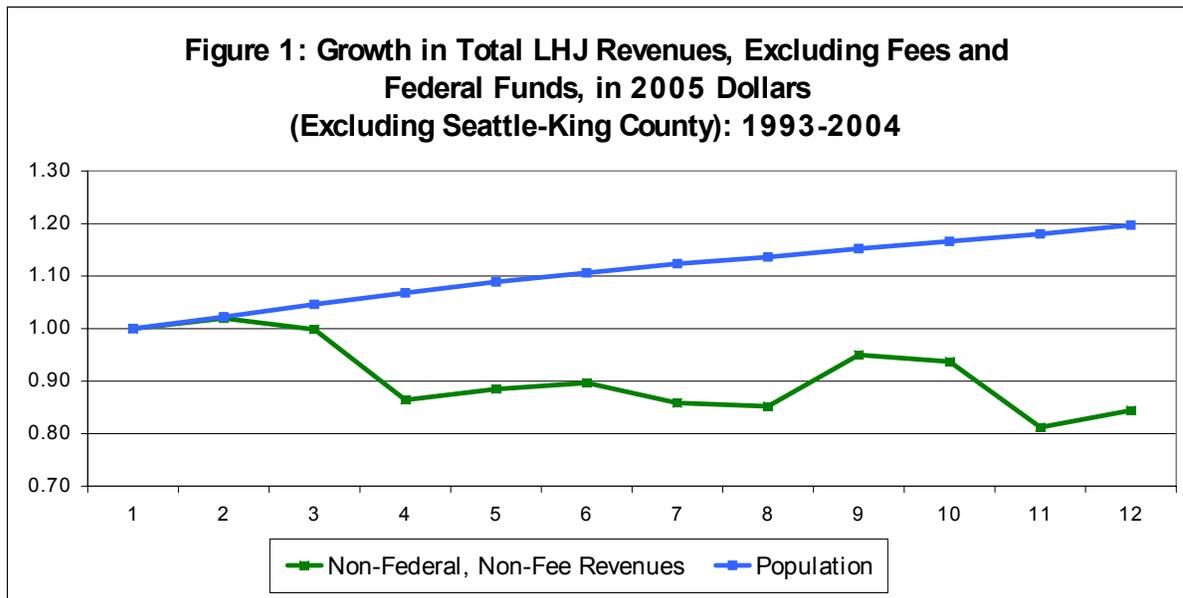
Today's system for financing public health in Washington has several noteworthy aspects:

- No dedicated, stable funding
- Declining local revenue
- Emerging health threats
- Reliance on categorical funds
- Increasing reliance on fees
- Local funding disparities

No dedicated, stable funding. The local property taxes assessed before 1976, and the MVET dollars collected in the late 1990s, both provided a dedicated and stable funding source for public health. Since 2000, however, the public health system has

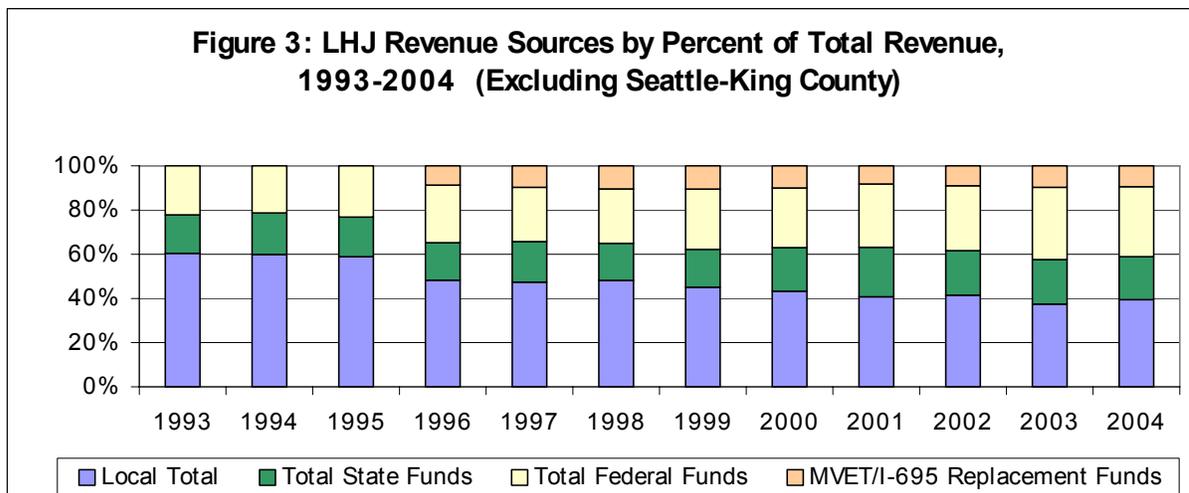
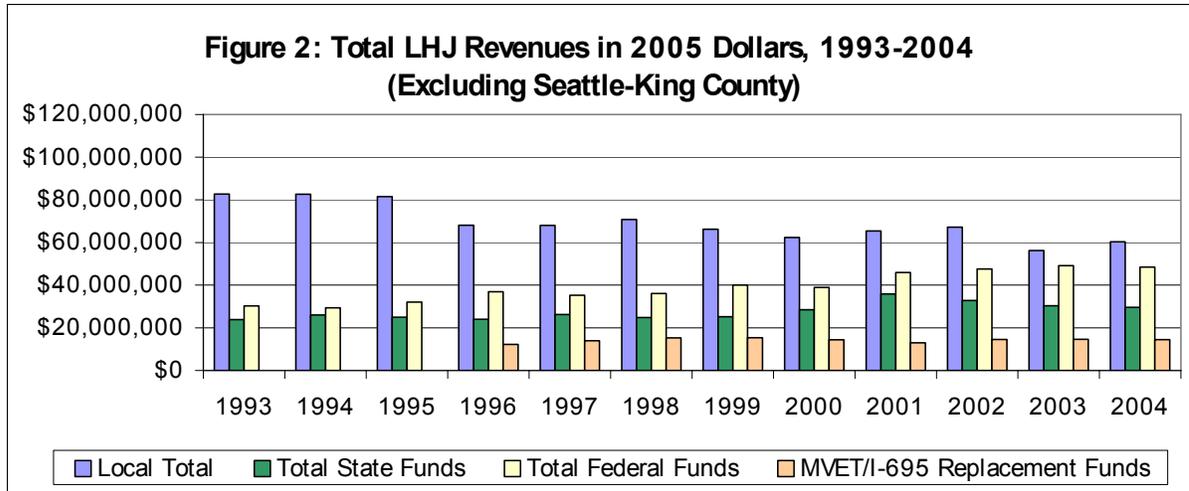
depended on budget appropriations made by the Legislature every two years from the state’s General Fund. There is no longer a revenue source dedicated to public health, nor a clear expectation of steady funding over time.

Between 1993 (the first year for which detailed data are available) and 2004, total state and local revenues for public health (excluding license and fees) grew at rate that consistently lagged behind population growth. As Figure 1 illustrates, moreover, revenues also fluctuated during that time. Volatility in funding makes it difficult for LHJs to meet service needs and maintain and trained and ready workforce.



Declining local revenue. The mix of sources for public health funding has shifted since 1993, with a greater share of funding now coming from the state level and a smaller share coming from local sources. Local funds in this analysis are taken from each county’s BARS report and include local tax funds. However, in some cases the figure also includes state and federal grants which the local government passes along to the health department or district. Further analysis would need to be done to separate all state and federal sources of funds.

Between 1993 and 2004, in the 34 LHJs outside of King County, the absolute amount of funding from local sources dropped from \$82.7 million to \$60.4 million (2005 dollars), a decline of 27% (Figure 2). The share of local funding also decreased (outside of King County,) with local contributions dropping from 60% of LHJ budgets to 39%, while state revenues (including special appropriations) grew from 19% to 29% (Figure 3).



Emerging health threats. Stability is not the only characteristic of public health funding that has changed since 1976. Public health agencies' responsibilities have grown significantly. The responsibility to be ready for emerging health threats has become more demanding with the changes in the world described above: greater population mobility, and new threats from antibiotic-resistant disease and bioterrorism. LHJs must now also spend revenue to fulfill a variety of other new and expanded duties, including:

- cleaning up dangerous methamphetamine labs;
- enforcing more stringent food codes;
- administering new vaccines; and
- monitoring and preventing many new and emerging diseases.

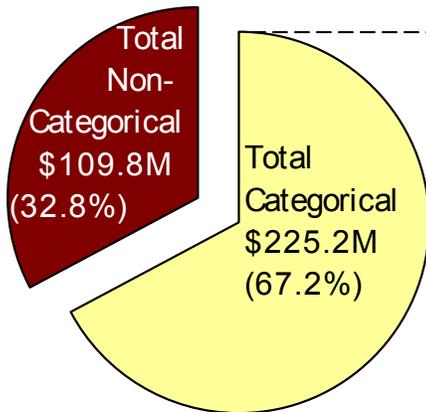
One more new responsibility—to enforce a new set of complex rules for residential septic systems—is also anticipated for the near future.

Reliance on categorical funds. Most of the funding for public health in Washington comes with strings attached, in restricted, category-specific grants and revenues. As

Figure 4 illustrates, two out of three dollars spent by LHJs in 2004 were derived from a categorical source. Figure 5 shows the categorical expenditures from each source: federal grants, state grants, Medicaid (federally and state supported), and local licenses and fees.

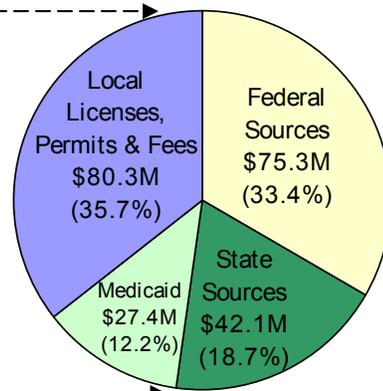
Categorical funds often arrive in small amounts and are available only for very specific purposes—not for alleviating the underlying causes of public health problems. Thus, while valuable, categorical funds do not directly improve LHJs’ ability to provide “core” public health services, such as detecting and preventing infectious disease, and assuring the cleanliness of food and drinking water. Categorical dollars may provide indirect support to core services in some cases, but the benefit of such “spillover” capacity is limited and does not substitute for direct funding. Furthermore, categorical funds are not always reliable—especially at the federal level. Tightening Medicaid rules, a White House budget proposal that would eliminate preventive health block grants to states, and a looming deficit all suggest a coming downturn in federal support for public health.

Figure 4: Total LHJ Expenditures in 2005 Dollars, by Source Type, 2004



Total: \$335 million

Figure 5: Categorical LHJ Expenditures in 2005 Dollars, by Source, 2004



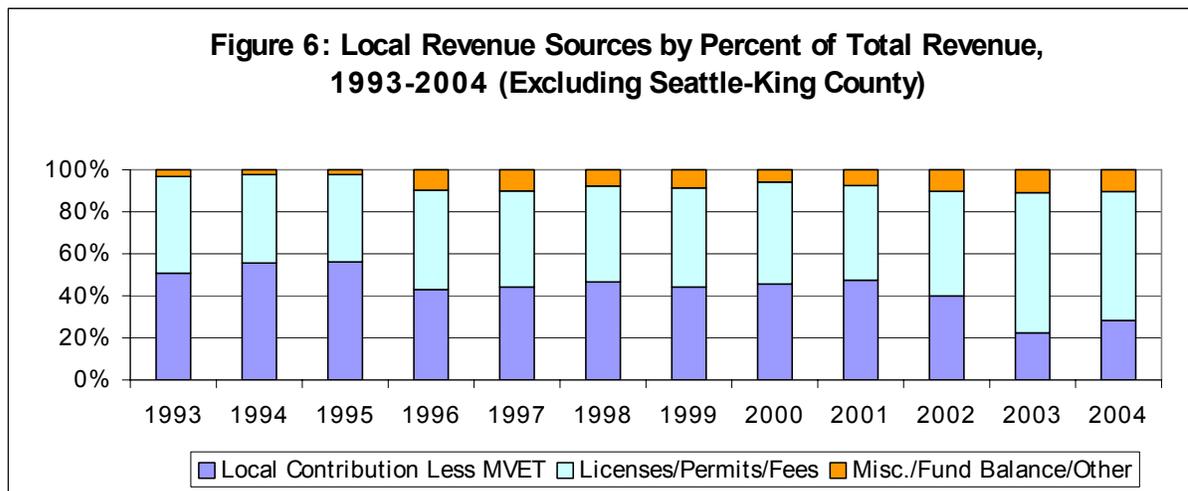
Total: \$225.2 million

Expenditures by Seattle-King County Health are included in figure 4. Non-categorical funding comes from local government tax revenue and two state-level sources: local Capacity Development Funds, and “backfill” tax dollars appropriated to replace MVET funds. Categorical restrictions are greater than they appear, because some of the local government contributions are state and federal grants passed along by local government – and they carry spending restrictions.

The public health system’s reliance on categorical funding poses a dilemma to the local health officials: restricted funds can provide staff for a special purpose, but those staff are not free to address the core needs that are most pressing in a local community. Thus an agency with personnel available may still not be able to use a

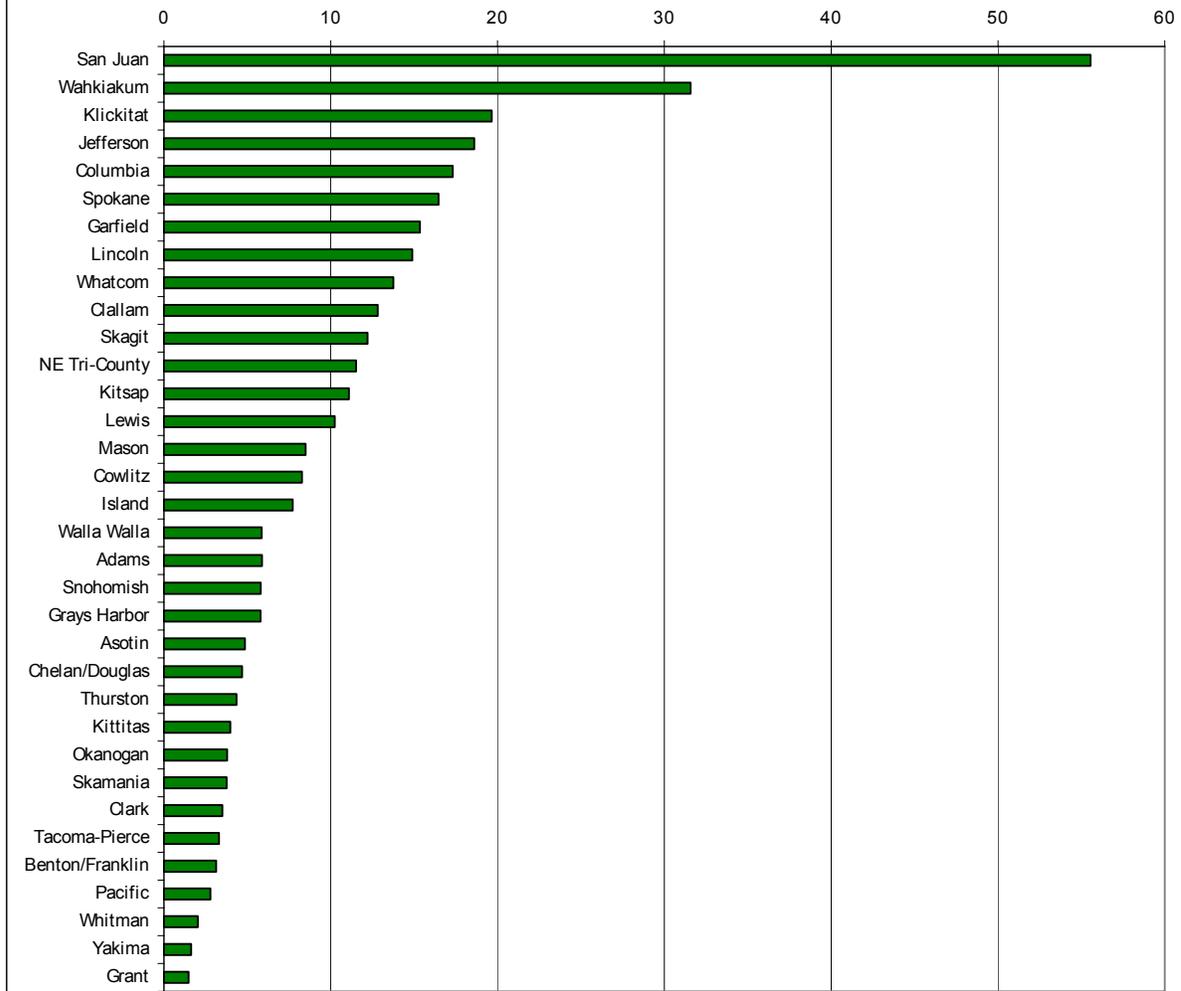
staff member—such as a bilingual nurse—to provide the services the area seems to need the most. Categorical health priorities have also been known to hinder one another. When the federal government provides bioterrorism training opportunities, for example, LHJ staff may be unable to attend because their positions are funded for a different specific activity (and may be needed to generate fee revenues).

Increasing reliance on fees. At the local level, categorical funds come from license, permit and other fees. Unlike taxes, which are paid by a broad public base, fees are charged to individual businesses, and perhaps their customers by extension. By law, fee revenue must only fund the service for which the fee was charged, and must not exceed the cost of the service. Fees can also be difficult to increase once established. As Figure 6 illustrates, license and fee revenues have been providing an increasing share of local revenues for LHJs outside of King County. (This trend is not evident in King County.) For the LHJs, this means greater reliance on an especially inflexible form of funding.



Local funding disparities. Since 1976, large disparities have emerged in the levels of local funding provided to different LHJs across the state—and, by extension, in the levels of service each can provide. The unique circumstances at each LHJ make individual comparisons difficult (and every budget is constructed differently), but Figure 7, next page, illustrates the great overall variation in per capita revenue provided by local governments in 2004. Three LHJs received \$30-55 of local government funding per resident that year, while nine others received less than \$4 per resident (2005 dollars).

Figure 7: Total Per Capita Local Government Contributions by LHJ in 2005 Dollars, 2004
 (Total does not include permit/fee revenue or fund balance)



Funding Challenges

The above factors together have raised major financing challenges for Washington’s public health system. For the system to adequately carry out its work of improving and protecting health and safety around the state, its budget and financing system must do the following:

Facilitate funding decisions based on objective standards. Effective funding decisions, and true public accountability for public health spending, both require a reference point: what is it that every public health jurisdiction should be doing and accomplishing? What should residents, taxpayers and leaders have a right to expect? These are pressing questions, best answered by a set of deliberate, objective and uniform standards for public health in Washington.

Provide stable and dedicated funding. A robust public health system delivers essential community health services; saves individuals and communities from the suffering and disproportionate expense of preventable disease; and actively prepares for potentially devastating health threats. Maintaining such a system is a long-term investment, made in the most effective and stable form when particular revenue sources can be *dedicated* to maintaining the public health system’s core capacity.

Without a dedicated funding source, there is no assurance that core public health services will continue, without deterioration, from year to year. Public health protection is akin to law enforcement and fire protection in this respect: all three are constant public needs that reward sustained and forward-looking investments, and that can rise to critical importance at any given moment.

When public health funding is uncertain, effective management and planning becomes quite difficult. Any effort requiring longer-term investment risks being curtailed before completion, and the general uncertainty can complicate even simple decisions. In one Washington county, for example, county officials have pressured the LHJ to use special Legislative appropriations only for one-time projects, on the grounds that funding regular services could lead to unfunded public expectations in the next biennium.

Support public health consistently across the state. Local public health services will always reflect the values and priorities of local communities, but the current pattern of health protection across the state is marked by extreme disparities. This poses a problem not only for equity but for system performance. Diseases do not respect jurisdictional boundaries, and in the event of a broad threat to public health, a “weak link” at one jurisdiction could put thousands at risk elsewhere in the state.

Employ efficient structures and systems. Washington’s large network of local health jurisdictions has important benefits for the on-the-ground business of assessing and assuring the health and safety of local communities. Nevertheless, those advantages must be weighed against the inefficiencies of providing core services through what some have called a “patchwork” of different entities with widely varying sizes, services, needs and priorities.

The Cost of Basic Public Health

Washington’s public health officials have responded to these challenges by developing standards about public health services. Without a clearly stated set of standards, it is impossible to do the important work of measuring performance. State and local health officials have worked together to create a draft set of standards for which they, at the state and local levels, are mutually accountable. The standards describe what public health professionals in this state believe everyone has a right to expect of the

governmental public health system. The first standards were field-tested in 2000, used in a baseline measurement of the entire system in 2002, and clarified in 2004. Measurement is underway in 2005, with performance results expected in the fall. The standards represent basic protection that should be in place everywhere, in five key aspects of public health:

- **Understanding health issues** through data collection and analysis;
- **Protecting people from disease** through disease surveillance, case investigation and control measures;
- **Assuring a safe, healthy environment for people** through food, water, waste and other regulation for safety;
- **Promoting healthy living** through locally-focused health promotion activities; and
- **Helping people get the services they need** through assessment, referrals, and some direct services.

The baseline test identified some standards that are already being met, as well as some that are expected to remain unattained for a number of years. Unmet standards are especially prevalent in environmental health and access (“helping people get the services they need”), two areas where resources were thin for service and follow-through. The evaluation process involves feedback and collaboration with the LHJs, which are then prepared to take whatever corrective steps they can given the resources available. Measures for state level performance are also included, emphasizing the fact that public health is a mutually dependent and mutually accountable *system*.

With the standards and baseline results in hand, work began in the effort to estimate the cost of bringing the entire state up to a basic level of service, an exercise the Legislature required when it established the PHIP. Consultation with local and state public health staff and sophisticated cost-model methodologies were used to approximate the size of the “gap” between current funding levels and the resources necessary to meet the standards. Cost estimates were based on the costs for providing specific services, described in Appendix A, and categorized by Standards topic area, Appendix B. The cost models took into account jurisdictional size, but did not attempt to parse public health costs under any possible re-organization. The conclusion: To meet the standards 95% of the time throughout the state would require a sustained annual investment of about \$400 million, in addition to current resources—\$15 million for the state Department of Health and \$385 million for the LHJs.

This was a first attempt to gauge the cost of providing similar public health services statewide and additional work needs to be done to specify and prioritize costs. Establishing a predictable level of public health services throughout Washington will not be inexpensive, but it is possible—and critically important. With an objective approach to costs and performance, a stable and dedicated funding source, and a hard look at

equity and efficiency across the state, the people of Washington could rely on a public health system.

Sources

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Appendix A: Public Health Services

What are the services that a mid-size health jurisdiction must provide to achieve 95% performance according to the Washington Public Health Standards?

ASSURING A SAFE AND HEALTHY ENVIRONMENT

- Food Safety (inspections, education, permitting, data management including local responsibilities for shellfish monitoring)
- Water recreational facility safety (inspections, education, permitting, data management)
- Hazardous Materials Management (drug lab inspection, testing oversight, clean-up oversight)
- Solid Waste Management (permitting, inspection, enforcement, education)
- Water Quality Control: sewage (permitting, inspection, enforcement, education and O&M), ground water, drinking water (permitting, inspection, enforcement, education, DW data), surface water (DW permit, inspection, enforcement, education, environmental monitoring)
- Vector/Rodent Control/Zoonotic Disease (inspection, enforcement, education, sampling)
- Air Quality Monitoring (indoor investigations)
- Environmental Laboratory Services
- School Safety (inspection, education, consultation)
- Environmental Health Community Involvement
- Environmental Sampling
- Review of Land Use Decisions

PROTECTING PEOPLE FROM DISEASE

- Detection/Case Investigation: screening (specimen collection and analysis), testing, lab (identification and diagnosis), diagnosis (clinical and lab identification)
- Surveillance, Reporting (transmission of information), Data Analysis (monitor and interpret), Data Gathering (collecting information and collection systems), Epidemiological Investigations, Case Finding (identifying cases and location), Contact Tracing (identifying potential exposure)
- Regional Epidemiology
- Laboratory (identification and diagnosis)
- System Intervention: immunizations (preventive pre-or post-exposure), treatment and prophylactic treatment (dispensing, shots, application, observation), counseling (one-on-one education and therapy), TB Program
- Public and Provider Education (informing general public and outbreak specific)
- Surveillance of chronic disease trends and behavioral changes (identification of clusters, special studies to identify risk factors and focus prevention efforts, prevention activities focused on behavioral and environmental/policy interventions, and evaluation)

- Outreach and prevention with high-risk populations
- Plans and surge capacity for response to emergency situations that threaten the health of people

UNDERSTANDING HEALTH ISSUES

- Epidemiology (infectious and non-infectious disease trends monitoring, collection and analysis of data on health risk behaviors, health status and critical health services)
- Dissemination of assessment information in the community to support decision making
- Technical assistance, education and leadership for community-level data utilization
- Evaluation of public health program results

PREVENTION IS BEST: PROMOTING HEALTHY LIVING

- Capacity for health education and systems-work related to the following activities: engaging community agencies, organizations and constituencies to address and develop locally designed programs driven by locally identified health issues, strategic planning based on community needs, local data gathering and analysis, coalition and stakeholder building
- Resource assessments (develop assessment of resources based on specific needs), generate resources (design materials, find funding, write grants), designing and providing promotional materials, and/or social marketing campaigns evaluating results of efforts, collecting and disseminating research-based best practices
- Assure and support healthy pregnancy, healthy birth outcomes, early brain development. Includes maternal & child health programs, early intervention, health and safety promotion in child care centers, children with special health care needs, family planning, First Steps/MCM/MSS community outreach and WIC
- Evaluating results of efforts, collecting and disseminating research-based, replicable best practices (including about chronic illnesses and health behaviors), provider and public education

HELPING PEOPLE GET THE SERVICES THEY NEED

- System assurance: Bring people together and provide leadership and support, system infrastructure, support for local community SWOT Assessment.
- Provide information and education about critical public health services. Create conditions that make action possible.
- Information and referral activities (maintain inventory of services, referral, resource broker)
- Create conditions that make action possible (standards, policy, QA, materials and supplies, information and education).
- Safety net services (direct services as identified through local assessment, menu of critical services)

ADMINISTRATION

- Leadership, planning, policy development and administration

- Financial and Management Services (accounting, budget, contracts, procurement, grants, asset management)
- Leadership and Governance (communication, PR, relationship building, program planning, fundraising)
- Legal Authority (policies, procedures, regulations)
- Human Resources (personnel, employee development and recognition, compensation and benefits management, employee policies)
- Information Systems (hardware/software systems, networking, data sharing, policies)

Appendix B: The Cost of Meeting the Standards

How much would it cost for all health jurisdictions to achieve 95% performance according to the Washington Public Health Standards?

The PHIP Finance Committee’s effort to “cost the standards” generated estimates of the annual funding that would be required to bridge the gap, in each of five topical service areas, between what health jurisdictions currently provide and what they would need to provide to achieve 95% performance according to the standards. These figures (presented in Table B-1) are strictly estimates, based only on the system needs that local and state health officials know of today.

Table B-1: Estimated Annual Cost of Meeting the State Public Health Standards, by Topical Area

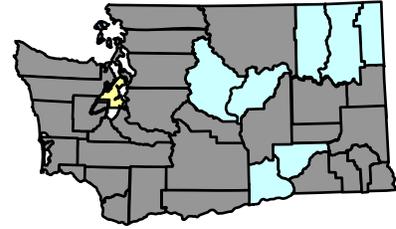
<i>Area of Public Health Service</i>	<i>Estimated Cost (thousands of dollars)</i>	<i>% by Topic</i>
Assessment	\$23,039	6%
Communicable Disease	\$98,651	25%
Environmental Health	\$110,622	28%
Prevention and Promotion	\$129,986	32%
Access to Critical Health Services	\$37,702	9%
Total	\$400,000	100%

Source: Public Health Improvement Partnership Finance Committee

Appendix C: Local Public Health in Washington State

Organization

Washington has 35 local public health jurisdictions, all of which are either departments within county governments or separate districts, established under county authority. Three districts encompass more than one county: Benton-Franklin, Chelan-Douglas, and Northeast Tri-County (covering Ferry, Stevens and Pend Oreille Counties).



A local Board of Health oversees each health department or district. Some Boards are comprised of three county commissioners, others include a mix of county and city representatives and a few have included one or two non-elected representatives. By law, the majority of the Board of Health must be elected.

Population served

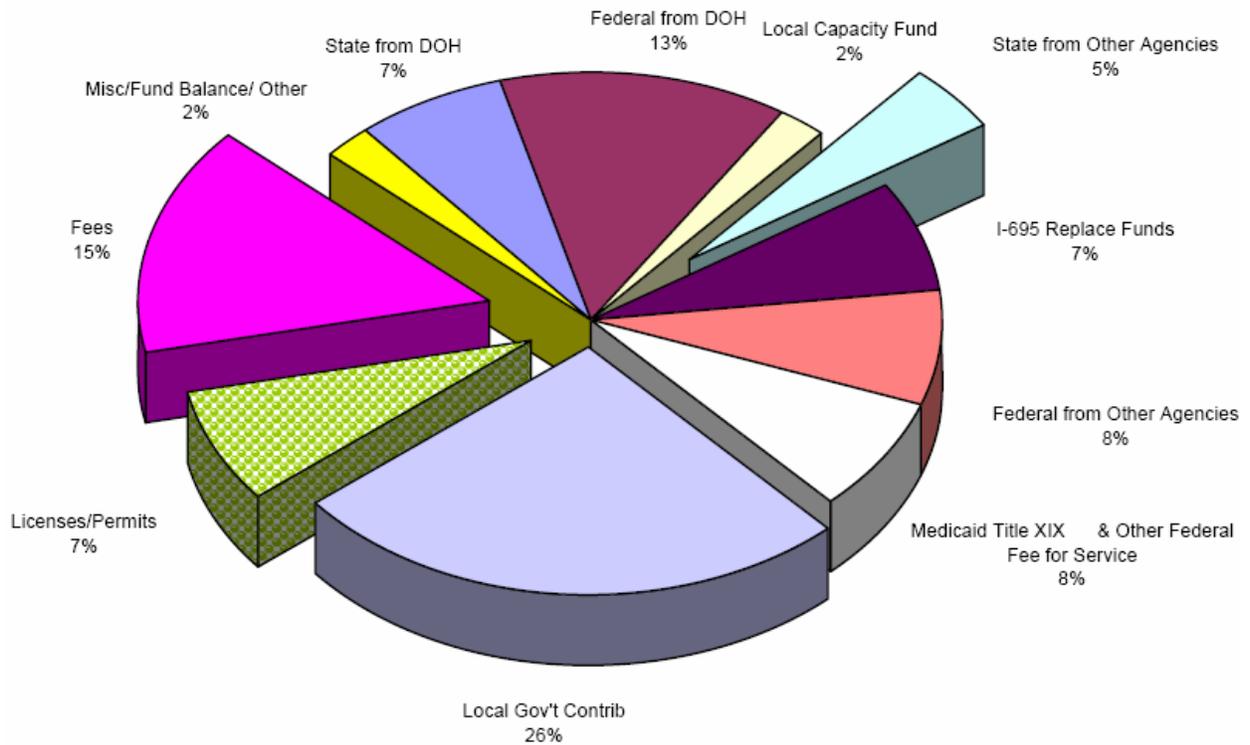
The smallest health department, in Garfield County, serves 2,400 people. The largest, Public Health Seattle-King County, serves 1,788,300.

Funding

In 2004, local health jurisdiction revenues were \$349,792,798. (see Sources, p. 17)

Health departments and districts rely on a mix of local, state and federal funding. Local funding comes from general tax revenue, plus revenues from licenses, permits and fees at the local level. Federal funds come from grants for specific programs or as reimbursement for performing specific services. About 20% of funds come from state government, and about two-thirds of those are linked to specific programs.

Figure C-1: Funding of Local Health Services in Washington, by Source, 2004



Source: Washington State Budget, Accounting and Reporting System (BARS), DOH