

*Michael Pratt, MD, MPH*  
*Sherrri McDonald, RN, MPA*  
*Patrick Libbey*  
*Mark Oberle, MD, MPH*  
*Arthur Liang, MD, MPH*

Drs. Pratt, Oberle, and Liang are with the Centers for Disease Control and Prevention. Dr. Pratt is a medical epidemiologist in the Health Interventions and Translation Branch, Division of Chronic Disease Control and Community Intervention, National Center for Chronic Disease Prevention and Health Promotion. Dr. Oberle is a Medical Officer and Dr. Liang is in the Epidemiology Program Office. Ms. McDonald is the Assistant Director and Mr. Libbey is the Director of the Public Health and Social Services Department, Thurston County, WA.

*Teasheet requests to Michael Pratt, MD MPH, Health Interventions and Translation Branch, Division of Chronic Disease Control and Community Intervention, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Mailstop K-46, 4770 Buford Highway, Atlanta, GA 30341-3724; tel. 404 488-5522; fax 404 488-5964.*

## Local Health Departments in Washington State Use APEX to Assess Capacity

---

### SYNOPSIS

---

THE ASSESSMENT PROTOCOL for Excellence in Public Health process was carried out in the state of Washington to assess local health department capacity and to identify their self-perceived strengths and weaknesses. Staff from 24 of the 32 local health departments in Washington completed organizational capacity assessments.

Fifty percent or more of the health departments identified the following eight indicators as strengths: legal authority, public policy and implementation, budget development, financial reporting and administration, audit, financial documentation, organization and structure of program management, and policy board procedures. Seven indicators were identified as weaknesses by 50% or more of the respondents: legal counsel, mission and role, data collection and analysis, planning and development, evaluation and assurance of community health assessment, community health assessment and planning, and community health policy.

The results of the assessment highlight the traditional organizational and service delivery strengths of the local health departments and point out weaknesses in their ability to assess community health and to develop communitywide health policy.

**T**here are nearly 3,000 local health departments spread across the United States<sup>1</sup>. Relatively little effort has been devoted to the study of local health departments despite their critical role in assuring public health. Since 1945 a handful of studies have listed local health departments and described their jurisdictions, staff, structures, and patterns of service delivery<sup>1-4</sup>. It is difficult to discern from these descriptive studies how well local health departments are carrying out the three core functions of public health identified in the Institute of Medicine's 1988 report *The Future of Public Health*: assessment, policy development, and assurance<sup>5</sup>. In that report, the Institute of Medicine noted that local health departments are understaffed, overworked, and focus on assurance (service delivery), largely at the expense of assessment and policy development functions.

In response to these observations, the American Public Health Association, the Association of Schools of Public Health, the Association of State and Territorial Health Officials, the Centers for Disease Control and Prevention

(CDC), the National Association of County Health Officials (NACHO), and the United States Conference of Local Health Officers collaborated to develop the Assessment Protocol for Excellence in Public Health (APEXPH or APEX)<sup>6</sup>. The APEX process was designed to assist local health departments in assessing and improving their own organizations and in working with the local community to assess and improve the health status of the citizenry. In the state of Washington, however, considerable interest developed in using APEX to provide a statewide overview of local health department capacities, strengths, and weaknesses as perceived by their staff. This study was designed and carried out by the Washington State Association of Local Public Health Officers, the Department of Health and CDC to assess local health department capacity in the state of Washington and to identify strengths and weaknesses of local health departments.

## Methods

The current APEX manual was pilot tested by more than 40 local health departments across the country. The manual consists of three sections: Part I, Organizational Capacity Assessment; Part II, The Community Process; and Part III, Completing the Cycle<sup>6</sup>. These sections are designed to guide health departments through self-assessment and community assessment and through the development of action plans to address priority problems. The initial phase of the Washington APEX project focused solely on Part I: Organizational Assessment. The organizational capacity assessment requires health department staff to describe the agency's performance in terms of approximately 200 indicators that can be grouped into nine broad functional areas:

*Operational authority* indicators encompass the development and enforcement of local regulations, intergovernmental relations, and the availability of legal counsel for local health departments to address issues of public health law. *Community relations* includes working with other organizations and the public and communicating with the media and the public. *Community health assessment* scores reflect the existence of a clear mission statement and the collection, analysis, and utilization of community health data for program evaluation and planning. The *public policy development* indicators also involve the use of data for planning and priority setting, but by the board of health, citizens advisory groups, and local government. The *assurance of public health services* variables measure whether personal and environmental health services are available in the community. Other variables address *financial management, personnel*

*management, program management, and interaction with a policy board.*

A standardized self-administered questionnaire was developed for use in Washington by the Washington State Department of Health (DOH), the Washington State Association of Local Public Health Officials (WSALPHO), CDC, and NACHO. The approximately 200 APEX indicators fit into the 32 broader variables listed in the table. An organizational capacity assessment team from each participating health department rated their department's performance on these variables as "acceptable," as a "strength, or as a "weakness." The teams included members of senior management as well as representatives from major units of the health department.

DOH, CDC, and NACHO provided the local health departments with technical assistance and training in consensus development and in the use of the APEX manual. Representatives from each local health department and the sponsoring organizations participated in an initial two-day

meeting to orient local health department staff to the APEX process. Health departments that opted to participate in the Washington APEX Project attended an additional full-day workshop four months later in which participants discussed and adopted a standardized approach to completing the questionnaire. The entire process was coordinated by WSALPHO. DOH staff were made available to any local health department that wanted on-site assistance. The data were aggregated by CDC and analyzed by WSALPHO, DOH, and CDC.

## Results

Twenty-four of the 32 local health departments and districts in Washington participated in the study. Both large and small health departments were included among the 24. Representation from the western (14 health departments) and the eastern (10 health departments) regions of the state was nearly equal.

The table lists the percentages of health departments that rated their performance on each of the indicators as acceptable, as a strength, or as a weakness. Eight indicators were identified as strengths by 50% or more of local health departments: legal authority to carry out public health functions, implementation of Federal and state policies, authority and procedures for budget development, financial reporting and administration, an independent financial audit, financial documentation, a management plan providing organization and structure of program management, docu-

The strengths reported by local health departments in Washington reflect the historical strengths of the public health system in the United States.

## Percent of local health departments rating APEXPH indicators as a strength, acceptable, or a weakness

Indicator	Strength	Acceptable	Weakness
I. Authority to Operate			
A. Legal Authority.....	54	29	17
B. Intergovernmental Relations.....	13	50	38
C. Legal Counsel.....	21	25	54
II. Community Relations			
A. Constituency Development.....	17	38	46
B. Constituency Education.....	25	54	21
C. Documentation.....	13	67	21
III. Community Health Assessment			
A. Mission and Role.....	4	29	67
B. Data Collection & Analysis.....	0	50	50
C. Resource Assessment.....	8	67	25
D. Planning and Development.....	4	21	75
E. Evaluation and Assurance.....	4	17	79
IV. Public Policy Development			
A. Community Health Assessment and Planning.....	0	21	79
B. Community Health Policy.....	8	42	50
C. Public Policy & Public Health Issues.....	21	46	33
V. Assurance of Public Health Services			
A. Public Policy Implementation.....	50	38	13
B. Personal Health Services.....	42	50	8
C. Involvement of Community in Public Health System.....	8	67	25
VI. Financial Management			
A. Budget Development & Authorization.....	58	29	13
B. Financial Planning & Resource Development.....	17	42	42
C. Financial Reporting & Administration.....	65	26	9
D. Audit.....	63	33	4
E. Documentation.....	58	33	8
VII. Personnel Management			
A. Policy Development & Authorization.....	33	54	13
B. Personnel Administration & Reporting.....	33	54	13
C. Staffing Plan & Development.....	17	54	29
D. Personnel Policy & Procedure Audit.....	8	46	46
E. Documentation.....	29	46	25
VIII. Program Management			
A. Organization & Structure.....	58	38	4
B. Evaluation.....	0	54	46
C. General Information Systems.....	4	58	38
D. Shared Resources.....	21	71	8
IX. Policy Board Procedures.....	58	25	17

mented operating procedures, and policy board procedures.

Seven indicators were identified as weaknesses by 50% or more of the respondents: access to legal counsel, mission and role, data collection and analysis, planning and staff development, evaluation and assurance of community health assessment, community health planning, and developing community health policy. No local health department identified community health assessment and planning data collection and analysis, or program evaluation as a strength.

Health departments were stratified by size of the popu-

lation served (less than or more than 100,000), budget (above or below \$1 million), number of employees ( $\leq 24$ , 25-49,  $\geq 50$ ), and region (east and west). We used the 2-tailed Fishers exact test to compare each of the indicators. Only one statistically significant difference was observed by region. Few consistent differences were evident between large and small health departments as defined by the three measures of size. Intergovernmental relations were identified as a weakness by eight (57.1%) of the western Washington health departments while only a single eastern

Washington health department perceived this to be a weakness ( $P = 0.03$ ). The lack of an understandable mission and role was identified as a weakness by 88.9% of health departments serving populations of 100,000 or more and by 53.3% of health departments serving populations under 100,000. Large health departments reported a weakness in the area of evaluation and assurance more often than smaller health departments. Neither of these differences reached statistical significance. Data collection and analysis were perceived as a weakness by half of all health departments and as acceptable by the other half.

## Discussion

The eight indicators identified as strengths by 50% or more of health departments fit into four broad categories, all of which involve basic public health infrastructure:

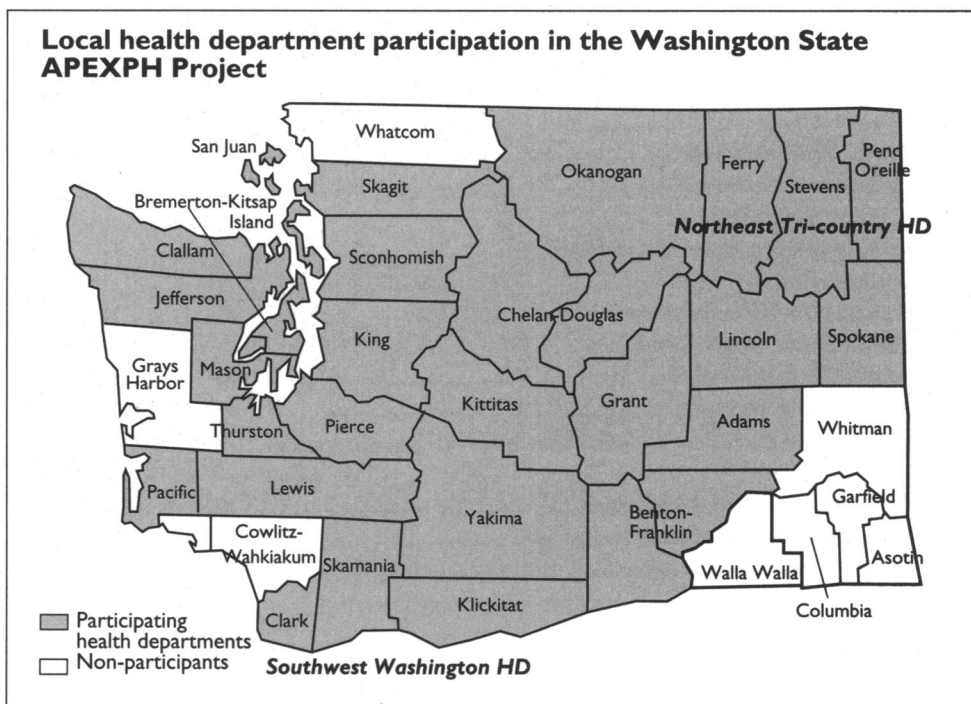
1. Health departments have the legal authority to carry out regulatory functions and routinely do so.
2. Health departments are adept at providing direct health services and implementing policy made by Federal and state authorities (public policy implementation).
3. Health departments have well developed budgeting, audit, and financial management capacities and view themselves as excellent custodians of public monies.
4. Local health departments have well defined and effective means of communicating with their boards of health. The basic organizational structure and operating mechanisms of the public health system exist and appear to be flourishing among local health departments in Washington.

On the other hand, many local health departments recognize a number of significant weaknesses, which fall into four broad areas:

1. Inadequate health department access to legal counsel, particularly among smaller health departments;
2. Lack of clarity about their mission and role;
3. Lack of expertise in data collection and analysis, program evaluation, and community health assessment; and
4. The inability to use data effectively to guide established community public health priorities and program planning and policy.

Interestingly, the perceived areas of strength and weakness varied little by health department size or location

within the state. The respondents expressed an across-the-board perception of excellence in service delivery and basic day-to-day management functions. Perceptions of weaknesses in collecting, analyzing, interpreting, and applying community health and program-specific data were equally widespread and clear. Both large and small health departments felt that they had difficulty in linking their assessment and policy development functions. Actual capacity in data assessment may vary considerably from small to large health departments, but all the health departments per-



ceived this function as less than optimal. The results of the APEX process in Washington State are concordant with previous observations of local health department capacities, including the *National Profile of Local Health Departments* and the IOM report on *The Future of Public Health*<sup>1-5</sup>. All 32 local health departments in Washington participated in the National Profile of Local Health Departments in 1989 and reported being active in personal health assurance functions and services such as immunizations, child health, and tuberculosis control. Nearly all of the local health departments were also active in basic assessment functions, such as communicable and reportable disease monitoring and vital records. Seventy-two percent of (23 of 32) local health departments in Washington reported activity in health planning and priority setting. However, staffing patterns clearly indicated that assessment and policy development were areas of weakness. Only three (9%) of the 32 local health departments reported employing a full- or part-time epidemiologist or statistician. The same small proportion (9%) of health departments reported having a health planner or analyst on staff. Specialists in both epidemiology/sta-

tistics and health planning were concentrated in a few large health departments. Although completely validating self-reported measures of health department capacities is impossible, we believe that the consistency of the findings of this study across the state and in comparison to earlier studies suggests that its findings are valid.

The strengths reported by local health departments in Washington reflect the historical strengths of the public health system in the United States. An effective public health system has been developed to provide limited preventive services to those most in need, to control communicable diseases, and to ensure public sanitation. The infrastructure needed to carry out these functions is well established. Some cracks in this infrastructure, such as inadequate legal services may appear as health department resources are stretched too thin or when departments tackle more complex health issues. Despite these vagaries, local health departments in Washington appear to do a good job of carrying out traditional public health functions.

The nature of public health is changing, however, and local health departments are having difficulty adapting to new roles. Multifactorial chronic diseases with major behavioral components and associated with complex community health policy issues are stressing a system designed to deliver basic services and combat communicable diseases. The old models of clinic-based service delivery and sanitary regulation do not adapt well to community organizing and population-based interventions. This transition has probably engendered some of the confusion among both health department staff and the community at large as to the mission and role of the health department.

Addressing the health problems of the community as a whole is a very different mission from that of providing limited clinical services for the needy. Local health departments will need to provide leadership to bring together the wide variety of organizations and resources that can contribute to assuring the community's health.

Addressing the health problems of the community as a whole is a very different mission from that of providing limited clinical services for the needy.

The expanding role of health departments into new areas such as chronic disease prevention, injury control, and HIV-AIDS has greatly complicated assessing community health and developing health policy. Local health departments in Washington clearly perceive a need for a greater capacity to collect, analyze, and interpret health data and to use these data to guide policy. Meeting this need will require placing trained public health officers, administrators, and epidemiologists in local health departments or, alternatively, providing training and technical assistance to existing public

health staff. In either case this will require commitment of public resources to developing assessment and planning capacity at the local level. Creative combinations of support and staffing may be needed to provide these skills in smaller health jurisdictions that do not have the population or economic base to support a large professional staff. The results of the Washington APEX Project highlight the organizational and service delivery strengths of local health departments and point out the need to redefine their

role in assessing the health of their communities and developing community-wide health policy.

#### References

1. National profile of local health departments. Washington, DC: National Association of County Health Officials, 1990.
2. Emerson H. Local health units for the nation: a report of the Subcommittee on Local Health Units, Committee on Administrative Practice, American Public Health Association. New York: Commonwealth Fund, 1945.
3. Miller, CLA, et al. A survey of local public health departments and their directors. *Am J Public Health* 1977;67:931-939.
4. Mullan F, Smith J. Characteristics of state and local health agencies. Baltimore MD: Johns Hopkins University School of Hygiene and Public Health, 1988.
5. Institute of Medicine. The future of public health. Washington, DC: National Academy Press, 1988.
6. APEXPH Steering Committee. APEXPH assessment protocol for excellence in public health. Washington DC: National Association of County Health Officials, 1991.