The Quality Improvement Experience in a High-Performing Local Health Department: Los Angeles County

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Quality improvement in public health is a key element in the movement toward accreditation. Multiple national, state, and local initiatives are under way to define quality in a public health context and to develop tools and promising practices to support quality-improvement efforts in local health departments. Until recently, efforts to improve quality at the local level have largely focused on performance measurement to assess the relationship between inputs, outputs, and outcomes. The Los Angeles County Department of Public Health has developed its own unique approach to quality improvement. This approach includes focusing on three overlapping areas (professional practice, performance improvement, and public health science) that align closely with essential public health services 8 (competent worker), 9 (evaluation), and 10 (research). Broadening the focus of quality-improvement efforts to include these three areas (rather than performance improvement alone) provides additional opportunities to address key infrastructure issues that may affect the quality of services that are provided to the public and, thus, health outcomes. While the experience in Los Angeles County parallels other efforts, it includes unique elements that will be of use to public health professionals in other agencies.

KEY WORDS: **performance improvement, performance measures, professional practice, quality improvement**

A movement to define quality and its improvement within a public health context is well under way. In August 2008, the US Department of Health and Human Services defined *quality* in public health as "the degree to which policies, programs, services, and research for the population increase desired health outcomes and conditions in which the population can be healthy."[1] This definition provides a reference point for current and future efforts to measure and improve quality. Quality improvement is closely tied to a variety of related processes that focus on public health agencies and the public health workforce, including performance measurement, accreditation, certification, credentialing, and professional standards. A recent review of local health department performance,[2] for example, suggests that local efforts to link inputs, outputs, and outcomes should improve quality. Similarly, in the area of accreditation, the *Exploring Accreditation* Steering Committee lists promotion of "high performance and continuous quality improvement" as its first goal.[3] Thus, a long overdue focus on quality within public health is being carried forward by a number of simultaneous efforts.

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Even so, the concept of quality improvement and its application within local public health agencies remain poorly defined. The Robert Wood Johnson Foundation sponsored a conference in 2007 to explore the adaptation of quality-improvement approaches to public health practice. A summary of this conference[4] noted that quality improvement is a relatively new area of interest for public health, especially in comparison with US healthcare and other industries. Participants recognized numerous advances and contributions since the 1980s and identified a set of elements for success. In addition, a number of current challenges were highlighted, including the lack of clear, established measures; the inherent difficulty in the transition from problem recognition to action; the challenge that the breadth of public health practice presents in the face of limited resources to support quality improvement; and the challenge of collecting data necessary to support quality improvement processes. In addition, the third phase of the Multi-State Learning Collaborative (MLC-3) seeks to unify state and local health departments with other stakeholders to improve health outcomes through the use of quality improvement practices.[5]

Since California is not among the states participating in the MLC-3 project, the Los Angeles County Department of Public Health developed its own unique approach to quality improvement. While drawing upon the lessons and tools of others, the department has adapted its approach to the setting of a local health department that provides services to a very large, diverse population residing in a primarily urban, geographic area. In this report, we describe the evolution and status of our current efforts, as well as our vision for future improvements.

Historical Evolution of Quality Improvement Efforts

The Los Angeles County Department of Public Health ("the Department") is one of the nation's largest health departments with an annual budget of more than $750 million and a workforce of nearly 3700 employees. The Department provides public health services to approximately 10 million persons residing within an area of 4060 square miles. Approximately 90 percent of the population resides in one of the county's 88 incorporated cities, 16 of which include more than 100 000 persons. The Department serves all residents in the county, except those living in the cities of Pasadena and Long Beach, which have their own health departments. Programs and services include communicable disease control, maternal and child health programs, emergency preparedness, alcohol and drug programs, HIV/AIDS prevention and treatment services, health benefits for children in low-income families or those with disabling conditions, epidemiology programs, community health promotion activities, and programs in chronic disease and injury prevention. Direct clinical-care services represent less than 10 percent of the Department's work and are delivered through 14 geographically dispersed clinics that provide immunizations and treatment of tuberculosis and sexually-transmitted diseases.[6] The majority of the county's personal and mental health services are provided by the Departments of Health Services[7] and Mental Health,[8] respectively.

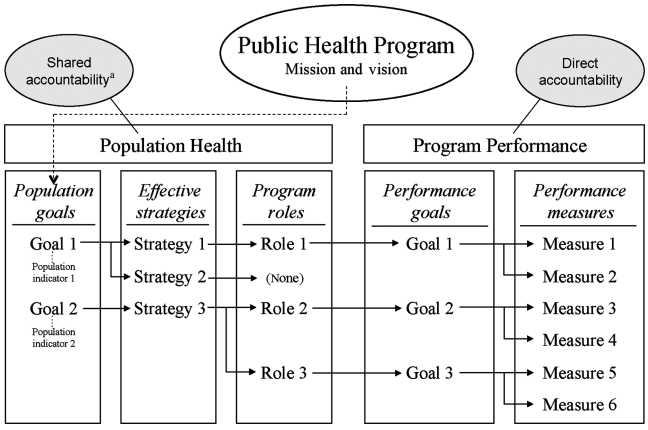
As part of an effort to revitalize public health in the late 1990s, the Department implemented activities to link program performance to health outcomes.[9] In collaboration with the RAND Corporation, the Department launched an effort in 2001 to develop performance measures. Two articles were published that proposed specific performance measures and described a conceptual approach to quality measurement.[10,11] As a result, a fundamental expectation for the development and use of performance measures was established in the Department.

In 2002, an effort was launched to promote and support the use of performance measures in the Department. Given the size of the Department, a decision was made to measure the performance of each individual "program" within the organization, rather than to measure the performance of the Department as a whole. The Department established an office of Quality Assurance (QA) with dedicated staff to lead the effort. Training, in the ideas of public accountability and performance, was provided to key senior leaders. Over a period of several years, QA staff members provided one-on-one consultation to the directors of nearly 40 programs to develop an initial set of performance measures. In 2006, the Department reorganized and established a Division of Quality Improvement that integrated the work of several offices: the former QA office, the Office of Organizational Development and Training, and a number of administrative offices that provide oversight for the professions of nursing, health education, public health investigation, medicine, and dentistry. The division organized its quality improvement activities around three key areas: (1) performance improvement, (2) professional practice, and (3) public health science. Teams, charters, goals, and action plans were developed for each. The following sections describe accomplishments in each of these key areas of Quality Improvement.

Quality Improvement Area 1: Performance Improvement

The Department's approach to performance improvement was adapted from Mark Friedman's "Results

FIGURE 1 ● Linkage of Population Health with Program Performance



[a]Shared accountability: While accountability is shared with others within the department or the community, the program assumes responsibility to lead or influence the effort to improve population health outcomes.

This conceptual model links "shared" accountability for population-health outcomes with "direct" accountability for work that is performed by public health agencies. Arrows display the logical order of various elements of the model with one another. The use of effective, evidence-based strategies is embedded in the model to ensure that the best-available evidence is considered before making decisions on roles and specific work activities.

Accountability" framework.[12] A conceptual model to link "shared" accountability for population health outcomes with "direct" accountability for services provided at the program level was developed (Figure 1). This makes a clear distinction between population-level outcomes and program-specific performance. A major contribution of this distinction is the explicit acknowledgment of the responsibility of public health leaders to identify and focus on population health outcomes that are "shared" with community partners, while holding public health leaders directly accountable for the effectiveness of the work under their direct control. Establishing these two levels of accountability and distinguishing between their associated measures has simplified discussions between quality improvement and program staff about the relationship between the quality of work performance and the improvement of health outcomes. To emphasize this distinction and avoid confusion, the term *population indicator* is used to describe measures of population health, whereas the term *performance measure* is used to describe measures of program performance. The term *shared accountability* acknowledges that meaningful improvements in population health cannot be accomplished by individual units within the Department alone but require coordination and collaboration not only within the Department but also with external partners, including other governmental agencies, the medical community, the business community, schools, faith-based organizations, and residents.

With technical assistance provided by Departmental QA staff, each program developed a written document that contained the elements outlined in the figure. In an initial phase, all programs developed mission and vision statements that were approved by the Department Director. Next, based on the mission statement, programs identified one or more population-level goals and related indicators of population health. Programs were requested to list evidence-based sources and strategies related to their program. Finally, the list of evidence-based strategies was compared and linked with current program roles and activities. While roles were often similar to the 10 essential public health services, some program staff were not familiar with this framework. To encourage an open, informal identification of key work activities, programs identified roles and activities using words with which they were familiar. On the program-performance side of the model, each "role" was translated into a performance goal. Examples might include to "conduct surveillance" or to "provide education to staff, providers, and the public." For each performance goal, two or more measures of performance were identified. Utilizing Friedman's "Four Quadrant" approach,[13] measures that tracked quality of effort or effect were preferred over those that tracked quantity. Examples of population goals, evidence-based strategies, program roles, and performance measures for three Departmental programs are shown in Table 1.

All Departmental programs provided data for population indicators and performance measures in April 2008. Some programs indicated that data were not available for many of their performance measures or that the measures needed to be updated to be relevant to current goals and activities. Subsequently, a Department-wide update of population indicators and performance measures was completed in the fall of 2008. A second request for data was made in April 2009. At the time of writing this paper, an in-depth analysis of performance data was pending. Preliminary results of data provided from 39 Departmental programs for their selected population indicators and performance measures are shown in Table 2. Performance measures are organized within the 10 essential public health services as defined in the National Association of County and City Health Officials (NACCHO) Operational Definition of a Functional Local Health Department.[14] We chose to use the NACCHO terminology because the category descriptions more accurately reflect local health department activities and the examples provided by NACCHO allow for easy placement of activities within appropriate categories. An 11th category titled "Core Business Functions" was added to capture measures related to business activities (eg, grants management and contract monitoring) that did not fit well in any of the other

TABLE 1 ● Examples of population goals, evidence-based strategies, program roles, and performance measures, Los Angeles County Department of Public Health, 2007

	Immunization program	Tobacco program	Physical activity and cardiovascular health program
Population goal	To reduce morbidity and mortality from vaccine-preventable diseases by improving immunization levels	To reduce tobacco-related death, disease, and disability in Los Angeles County	To unite the strengths of public, private, nonprofit, and citizen efforts in increasing and promoting physical activity through policy, programs and initiatives, research and evaluation, and public-awareness campaigns to reduce the burden of diseases
Effective, evidence-based strategies (from *The Community Guide*)	1. Client reminder/recall system 2. Reducing out-of-pocket costs 3. Provider-based: Assessment and feedback for providers	1. Smoking bans and restrictions 2. Increasing the unit price for tobacco 3. Media campaigns with interventions	1. Community-wide campaigns 2. School-based education 3. Non-family social support
Program roles/performance goals	1. Conduct surveillance 2. Assess immunization-coverage levels 3. Support and monitor providers of immunization services through contracts, professional education and training, technical assistance, supplying vaccine, and assisting with vaccine management and registry deployment	1. Advocate/enact policies that decrease second-hand smoke 2. Advocate/enact policies that reduce tobacco availability 3. Advocate/enact policies that counter pro-tobacco sponsorship influences	1. Advocate/support policies and interventions that create or enhance access to places for physical activity in communities, and promote physical activity of residents 2. Promote physical activity before, during, and after school 3. Advocate/support policies and interventions that promote physical activity in the workplace
Performance measures	1. Percentage of children younger than 6 years who participate in population-based registries 2. Percentage of case-management reports for pregnant women testing positive for HBsAg initiated and completed as per standard 3. Percentage of Immunization Program public and nonprofit clinic partners who routinely meet the 17 Standards for Pediatric Immunization Practices as measured by annual Quality Assurance Review	1. Number of major Hollywood movie studios that voluntarily adopt at least 1 of 4 Smoke Free Films proposed solutions to reduce youth exposure to smoking in films 2. Number of jurisdictions adopting a legislative-based policy that prohibits smoking in outdoor areas 3. Percentage of beach miles covered by a policy that prohibits outdoor smoking	1. Percentage of developments in the unincorporated areas of Los Angeles County that utilized Smart Growth design principles to promote physical activity 2. Percentage of Los Angeles Unified School District schools that provide public access to physical activity facilities outside the normal school hours 3. Percentage of Los Angeles Unified School District schools that meet the grade standard to provide 200–400 min of physical education and physical activity every 2 weeks

categories. This approach is similar to that adopted by the Public Health Accreditation Board wherein Part A addresses administrative functions and Part B addresses the 10 essential public health services and the Operational Definition.[15]

For all programs combined, a total of 53 population goals, 224 population indicators, and 736 performance measures have been established. A median of 20 performance measures was identified per program (range: 2–49, data not shown). Of note, "administrative" programs do not have population-level goals or indicators. Among the 21 "public health programs," a total of 130 population indicators were identified, with a median of five indicators per program (data not shown). For "administrative" programs, the majority of performance measures (100 of 121 measures) are in

TABLE 2 ● Number of population goals, population indicators, and performance measures for programs, Los Angeles County Department of Public Health, 2008

				Performance measures (number)											
				National Association of County and City Health Officials (NACCHO) Operational Definition Categories											
Administrative programs		Population goals (number)	Population indicators (number)	Monitor health status and understand health issues facing the community	Protect people from health problems and health hazards	Give people information they need to make healthy choices	Engage the community to identify and solve health problems	Develop public health policies and plans	Enforce public health laws and regulations	Help people receive health services	Maintain a competent public health workforce	Evaluate and improve programs and interventions	Contribute to and apply the evidence base of public health research	Core business functions	Performance measures—total
1	Health education			1		3					16	3	2		25
2	Public health laboratory				3						5	3		1	12
3	Nursing										7		4	1	12
4	Administration													6	6
5	Organizational development and training				1						9			3	13
6	Assessment and epidemiology			5		5					2		2		14
7	Physician education										4				4
8	Public health investigation								2		10	2			14
9	Information systems													6	6
10	Quality improvement							1			6	4	2	2	15
	Subtotal			**6**	**4**	**8**	**0**	**1**	**2**	**0**	**59**	**12**	**10**	**19**	**121**
Public health programs															
1	Acute communicable disease	1	4	4	12	2	1				2	1	2		24
2	Alcohol and drug programs	3	12			1	2	2	3	4	4	9	2	1	28
3	Children's medical services	3	7							4		4			8
4	Environmental health	3	10	1	21	1		2	2			3		2	32
5	Emergency preparedness	1	2	5	6						3	2			16
6	Health facilities	2	7		5	2					7	10	1	14	39
7	HIV epidemiology	1	2	6	1	2				1			2	1	13
8	Immunization	1	6	2						1		1			4
9	Injury and violence prevention	2	18	3	2			1					2	9	17
10	Maternal and child health	3	12	5	3	6	4			7	3	1	2	6	37
11	Nutrition	2	6	1		10	4	1	3					2	21
12	AIDS Programs	1	5			2		3	2	11		3	3	2	26
13	Oral health	3	3			1	2					1			4
14	Senior health	2	6			3	1						2		2
15	Women's health	1	5			7	4	1		5		1	3	1	22
16	Physical activity	1	3			5		3	3		2		2	1	16
17	Sexually transmitted disease	1	4	3	3		1			12			2		21
18	Tuberculosis control program	1	5	4	3	4				9	4		3	2	29
19	Tobacco control and prevention	1	2			2	1		4	4	1				12
20	Toxics epidemiology	1	3	4	4	6		3						6	23
21	Veterinary public health	1	8	4	4	11		2						3	24
	Subtotal	**35**	**130**	**42**	**64**	**65**	**20**	**18**	**17**	**58**	**26**	**36**	**26**	**50**	**418**

(*continues*)

TABLE 2 ● Number of population goals, population indicators, and performance measures for programs, Los Angeles County Department of Public Health, 2008 (*Continued*)

				Performance measures (number)											
				National Association of County and City Health Officials (NACCHO) Operational Definition Categories											
Administrative programs		Population goals (number)	Population indicators (number)	Monitor health status and understand health issues facing the community	Protect people from health problems and health hazards	Give people information they need to make healthy choices	Engage the community to identify and solve health problems	Develop public health policies and plans	Enforce public health laws and regulations	Help people receive health services	Maintain a competent public health workforce	Evaluate and improve programs and interventions	Contribute to and apply the evidence base of public health research	Core business functions	Performance measures—total
Service planning areas															
1	Service planning area 1	3	16	3	4	7	10			9	2	2		2	35
2	Service planning area 2	3	16		4	5	2		3	11	3	2		2	28
3	Service planning area 3	2	11		4	5	1		3	10	1	1		2	24
4	Service planning area 4	2	11		4	5	1		3	10	1	1		2	24
5	Service planning area 5	2	12		4	2			2	10		2		2	18
6	Service planning area 6	2	12		4	6			2	12		2		4	24
7	Service planning area 7	2	8		4	6			4	10		2		2	24
8	Service planning area 8	2	8		4	1		3		12		1		2	20
	Subtotal	**18**	**94**	**3**	**32**	**37**	**14**	**3**	**17**	**84**	**7**	**13**	**0**	**18**	**197**
	Total	**53**	**224**	**51**	**100**	**110**	**34**	**22**	**36**	**142**	**92**	**61**	**36**	**87**	**736**
	(%)	(7)	(30)	(7)	(14)	(15)	(5)	(3)	(5)	(19)	(13)	(8)	(5)	(12)	(100)

categories eight ("Maintain a competent public health workforce"), nine ("Evaluate and improve programs and interventions"), 10 ("Contribute to and apply the evidence base of public health research"), or 11 ("Core Business Functions"). In contrast for "public health programs," the categories with the highest frequencies of performance measures are "Give people information" ($N = 65$), "Protect people from health problems and health threats" ($N = 64$), and "Help people receive health services" ($N = 58$). The categories with lowest frequencies were "Enforce public health laws and regulations" ($N = 17$), "Develop public health policies and plans" ($N = 18$), and "Engage the community to identify and solve health problems" ($N = 20$). Of note, some population indicators and performance measures are shared across programs. This is especially true in "Service Planning Area" offices (which coordinate or provide communicable disease and some chronic disease prevention services within a defined geographic area) where a majority of indicators and measures are related to communicable disease control and are identical among all eight offices.

The effort to develop population indicators and performance goals for each program met a number of significant challenges. These included the reluctance of some public health leaders to link population-level health outcomes with their work, less than optimal knowledge of the evidence base in various program areas, and a prevailing resistance to collect or even acknowledge the importance of data to assess the quality and effectiveness of work. Strong and consistent support from the Department Director, availability of one-on-one consultation by the QA team, and peer pressure applied through transparent sharing of progress and results all contributed to improved acceptance of the effort. In addition, the structure and content of the approach were validated by the launch of the national effort toward accreditation and have moved the Department well down the road in this area.

A related performance improvement initiative in Los Angeles County is called the "Public Health Report Card." The Report Card has been published each year since 2003 and focuses on cross-cutting infrastructure (ie, structure and process)[16] measures that apply to all programs in the Department. The current Report Card is aligned with three infrastructure goals of the Department's strategic plan. The number of measures within each goal are as follows: Organizational Effectiveness—17, Workforce Excellence—3, and Fiscal Accountability—4. Examples of measures from each of these goal areas are shown in Table 3. Aggregate results of the Report Card have been shared broadly within the Department each year. Program-specific results have been shared with senior managers. Transparency and leadership support have led to improvements in many of the Report Card measures. For example, the first Report Card (2003) showed that only 14 percent of employees had completed a course on the "Core Functions of Public Health" whereas by 2006–2007 the percentage had increased to 43 percent. Similarly, although only 35.9 percent of Performance Evaluations were completed on time in 2004, the number had increased to 97 percent by 2006–2007.

Quality Improvement Area 2: Professional Practice

Professional practice was added as an element of the Department's Quality Improvement program in 2007, with the goal of creating an increasingly competent public health workforce, especially within those disciplines which were supported by administrative offices (nursing, health education, and public health investigation). Moreover, efforts have been made to include other professional groups within the workforce (eg, medicine, epidemiologists, environmental health specialists, and laboratory personnel) and to coordinate efforts with the Office of Organizational Development and Training. After a literature review to identify best practices for the management of professional staff members, a survey was developed and administered in late 2007 to assess the completeness and consistency of services provided to professional staff members by administrative offices. Elements in the survey included, for example, whether a professional guide, an orientation guide, or an orientation program existed; whether generic duty statements, standards of practice, and tools to measure adherence to standards existed; the extent to which recruitment and retention efforts existed; whether the director of the profession had sufficient professional authority within the Department; and whether the profession had an annual recognition

TABLE 3 Selected measures from the public health report card, Los Angeles County, 2007–2008

Strategicplan goal	Measures
Organizational effectiveness	1. Programs using population-based data to guide planning and monitoring activities
	2. Programs reporting results for at least 50% of their performance measures
	3. Programs with a quality-improvement plan to address performance that did not reach a preapproved benchmark or demonstrate reasonable progress
	4. Programs with information on evidence-based interventions posted and updated annually on their Web site
	5. Programs with plans to assess, prioritize, and respond to stakeholder education needs
	6. Programs that have tested within the past 90 days an internal phone tree to contact employees in the event of an emergency
	7. Program staff whose duty statement reflects their duties in emergency response
	8. Programs that have established a relationship with external partners on policy issues
	9. Programs that have developed an external-policy agenda
Workforce excellence	1. Employee performance evaluations submitted on time
	2. Staff who have *ever* completed select trainings
	a. Core functions of public health
	b. Health Insurance Portability and Accountability Act
	c. Any leadership development course
	d. Federal Emergency Management Agency (FEMA) IS (Independent Study) 100 (Intro to Incident Command)
	e. FEMA IS 700 (National Incident Management System)
	f. Emergency-preparedness drill or exercise *(in current year)*
	3. Supervisors who are current with all select trainings
	a. All mandatory human-resource trainings
	b. FEMA IS 200 (Incident Command System)
	c. New Supervisor Development Program
Fiscal accountability	1. Department and its budget units operate within their annual Net County Cost budget allocation
	2. Grant expenditure performance to be within 90% of planned expenditures
	3. Emergency preparedness program requisitions processed before grant period end date
	4. Grant contractual payments processed within recommended 30-day timeline

event. Based on the results of this survey, several goals were established: to develop generic and role-specific duty statements for the Department's 847 nurses, 99 public health investigators, and 71 health educators; to establish annual recognition events for each of the distinct professions; and to complete a literature review of best practices in employee retention with the intent of identifying goals for improvement.

As of May 2009, annual recognition events have been established for the disciplines of nursing, health education, and public health investigation. Generic duty statements have been completed for nearly all professional-position classifications within each of the three professional groups. Several goals for improvement of employee retention were selected on the basis of the literature review, including establishing a comprehensive, Department-wide exit interview process to inform the Department on the rate and reasons for loss of members of the workforce. Under the leadership of the Office of Organizational Development and Training, a framework for Public Health Worker Competency, adapted from the Council on Linkages Core Competencies document,[17] has been developed and is currently being augmented with discipline-specific competencies. Additional areas underway include the development of standards of practice related to duty statements, expansion of the credentials review process for members of the professional staff, and the development of an ethical framework and training module to assure competence in this area.

Quality Improvement Area 3: Public Health Science

Public health science was added as an independent element of the quality improvement program to promote the best use of evidence and scientific methods within the Department. Areas of interest include the knowledge and skills of workers in the core sciences of public health, the extent to which the Department uses evidence and scientific information to prioritize work efforts, and the level of scientific activity within the Department. After completing a literature review of evidence-based public health practice, the team composed and distributed a brief summary document, including tools to search for and categorize levels of evidence. A Web-based training module on evidence-based public health practice is under development. Monthly journal clubs have been established for the Department as a whole and for each of the professional disciplines. Minimum expectations to "contribute to . . . the evidence base of public health"[14] are included in program-performance measures and results are made transparent through periodic sharing of a list of peer-reviewed publications authored by employees of the Department. A "white paper" on prioritization in public health decision making, to include tools for specific applications, has been written, distributed, and used within the Department. A comprehensive review is under way to ensure that the Department is supporting evidence-based interventions contained in the Community Guide.[18] A science fair to highlight scholarly activity within the Department and to formally recognize substantial achievement in this area is planned for 2010. In addition, the recent hiring of a chief science officer reflects the organization's commitment to ensuring that the best-available evidence is used in planning and improving the Department's work.

Discussion

The complexity of public health practice and the diversity of services that local health departments provide do not lend themselves to a simple approach to quality improvement. The quality of public health services cannot be measured adequately either by a simple evaluation of service delivery or by feedback from "customers" on their level of satisfaction. While these aspects of quality are important, the definitive measure of quality work is improvement in population health outcomes. Attainment of this goal requires an approach to performance measurement that links key work activities with the most important indicators of health outcomes and ensures that effective, evidence-based strategies are identified and utilized. Our conceptual model for performance improvement takes these aspects into consideration and is aligned with the work of others who emphasize the importance of systems and models.[11,16,19] Our experience confirms the difficulty inherent in asking public health leaders to assume responsibility for broad public health issues whose solution requires the participation of others. We believe that our conceptual approach, in which population goals ("shared accountability") are distinguished from program-performance goals ("direct accountability"), solves this inherent tension. Visible improvements resulting from an expanded sharing of accountability with others is reflected in both results of the performance measures and procedural changes in the Department. For example, reduction of the incidence rate of hepatitis A (from 9.4 per 100 000 in 2000–2001 to 0.8 per 100 000 in 2007–2008) and increases in the percentage of children aged 19–35 months who have received three doses of polio vaccine (from 88% in 2000–2001 to 96% in 2007–2008) have been achieved through increased collaboration with community partners. In addition, increased collaboration with cities, schools, and businesses have followed from a

recognition of the key role these partners play in areas such as emergency preparedness and prevention of obesity, including improvement of the physical environment.

Through our detailed review of program activities, we confirm that broad categories of "role" performance exist across a wide range of public health "program" activities. These include surveillance, education, delivery or assurance of services, enforcement of regulations, and the development of policy. These are, of course, the essential public health services. Our observations and analyses indicate that the provision of some services is inconsistent across similar programs, and that variations in service delivery are sometimes due more to the decisions of program managers than to inherent funding or organizational barriers. For example, relatively few programs are active in policy development, notwithstanding that this is the most powerful tool of public health practice. We also noted major internal work activities related to resource acquisition and financial management that were not captured by the essential public health service/NACCHO Operational Definition framework: monitoring of contracts and the acquisition and management of grants. We chose to add an 11th category, titled "Core Business Functions," within our framework to capture measures of quality in this area.

Our experience indicates that a single-dimension focus on performance is inadequate to address other important determinants of quality in public health practice. Early on, we realized that performance improvement focused on essential public health service 9, which is concerned primarily with evaluation. We eventually recognized that two other essential services (8 and 10) also focus primarily on important infrastructure capacities within the agency—as opposed to direct services to community members—and are therefore important areas of focus for quality improvement. These are the areas of "professional practice" (aligned with essential service 8—competent worker) and "public health science" (aligned with essential service 10—research).

As has been emphasized by others,[4] the success factors of leadership, shared vision, commitment, transparency, and the use of tools and methods are critical to quality improvement. This has certainly been the case in Los Angeles County. Many internal barriers in the form of organizational and personal resistance could not have been overcome without the Department Director's strong support, to include regular reviews of the status of performance-measure development and explicit statements of expectation of support from senior management. Early resistance to public sharing and comparison of results across programs has evolved to a point where transparency is becoming the norm. Currently, all goals, population indicators, performance measures, and results are posted on an intranet site that is accessible to all Department executives. We expect to provide access to this site to a much larger segment of the organization soon.

This work provides a broad foundation for our Department to respond to the call for public accountability. With the rich information resources now available to us, we are simultaneously able to report the results of our most important work to the county's chief executive officer as well as prepare for eventual accreditation. In numerous areas, we believe, this work extends beyond what is required for accreditation. For example, we are now able to recognize and compare the effectiveness of similar work across programs and to identify and promote best practices in areas such as education, policy development, and grant management. At the same time, we are able to close the gap between the broad goals of our Department's strategic plan and the hundreds of performance measures contained in program-level performance-related documents. Thus, the quality improvement framework integrates the work of the entire Department across several dimensions and enables a clearer understanding of how diverse work activities combine to improve the health of the county's population.

Summary

The development of an integrated, comprehensive public health quality-improvement program in Los Angeles County has extended over a 7-year period. Three mutually supportive domains have been identified: performance improvement, professional practice, and public health science. Alignment of quality-improvement activities with the organization's strategic plan has increased their relevance and importance. This foundation allows the Department to assess and identify areas for improvement and to ensure success in voluntary national accreditation. Even more important, the quality improvement program supports the organization in its effort to "increase desired health outcomes and conditions in which the population can be healthy."[1]

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