Structure and Functions of State Public Health Agencies

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Objectives. We assessed the structure and functions of state health departments throughout the United States and compared our findings with those from a previous national assessment conducted in 1990.

Methods. In 2001, we sent a survey to the state health officers of all 50 states. The survey asked about the structure and functions of the state health agency.

Results. The survey was completed by state health officers from 47 states (a 94% response rate). More than half of the states responding had a freestanding state public health agency and a state board or council of health. Forty-four percent had a regional or district structure. Although some traditional public health functions have been curtailed, important new public health functions have emerged since 1990.

Conclusions. Our current findings confirm core changes in the structure and functions of state public health systems over the past decade and emphasize the need for more research into these systems to maximize their organizational performance. (*Am J Public Health.* 2006;96:167–172. doi:10.2105/AJPH.2004.053439)

After the terrorist attacks of September 11, 2001, the nation experienced a renewed recognition of its dependency on the public health system. Although dramatic investments in the form of Congressional appropriations have been made since 2001 to enhance the capacity of federal, state, and local public health agencies to respond to terrorist threats, relatively little was known about the baseline structure and functions of these same agencies. In addition to the threat of terrorism, state health departments face numerous public health challenges. A strong infrastructure is required to perform the 10 essential public health services identified by US public health officials in 1994 and described elsewhere[1,2] and to protect the public from environmental toxins, influenza, chronic diseases, and unacceptable rates of infant mortality. Moreover, if they are to be responsive, state health agencies must be able to provide the core functions of public health: assessment, policy development, and assurance across the domains of health protection and health promotion activities.[1,3]

Although investigators have examined local health departments' performance of critical public health activities[4–15] and various aspects of state-level public health agencies,[13,16–22] these studies have been limited in scope. None have assessed state health department structure or functions from a comprehensive vantage point. The most recent comprehensive, nationwide examination of state health department structure and functions, compiled by the Centers for Disease Control and Prevention (CDC), was conducted in 1990.[3] Because much has changed since 1990, we surveyed state health officials (SHOs) in 2001 to gain a better understanding of state health departments' structure and functions.

METHODS

Using 1990 national survey instrument as a point of departure, we included in our updated questionnaire items examining structures, authorities, responsibilities, and functions of state health departments. In its earlier work, the CDC contacted the state-level liaison health official (or equivalent) in each of the 50 states to gather information, achieving a 100% response rate.[3] We sought data on the same topics displayed in either the tables or the text of the final CDC report. When available, we used data from the 1990 study for comparative purposes. The information we used in this study was derived from summary tables provided in the CDC's final report, with the majority of data gleaned from the narrative describing each state. Because more than a decade had passed since the last similar inventory was conducted, we also developed a set of questions regarding emerging public health functions to better reflect the current public health practice environment.

Surveys and cover letters were mailed in June–August 2001 to all active SHOs seeking their participation. SHOs or their designees had the option to return the written survey or answer electronically via a Web site established for this purpose. If no response was received within 30 days, the SHO was contacted directly via e-mail, telephone, or letter by one of the authors. SHOs that did not complete the survey were contacted at least 3 times.

Questions regarding the agency's structure typically required a yes/no response, and queries regarding authority and responsibility involved a multiple-choice format. Respondents were asked to select, from a list, the specific functions the agency performed in the state. For purposes of describing our findings, data are aggregated across all of the states that participated.

The entire population of state health agencies was surveyed; we used tabulated percentages to facilitate the comparison between our results and those of the earlier survey. We performed cross-tabulations using a variety of independent variables related to organizational structure. In addition, we analyzed responses from a regional perspective, using the 4 US Census Bureau geographic regions.[23] Population size was used both as a continuous variable and as a categorical variable to allow comparisons between responses. Statistical significance was determined via χ^2 tests, Fisher exact tests, or *t* tests, as appropriate.

RESULTS

We received completed surveys from 47 states (33 written responses and 14 electronic responses), an overall response rate of 94%. Details of the structure, responsibilities, authorities, and functions of SHOs and boards of health, as well as the organizational characteristics and functions of state health agencies, are shown in Tables 1 through 4.

TABLE 1—Structure of US State Health Agencies and Boards and Councils of Health: 1990 and 2001

	1990, No. (%)	2001, No. (%)
Structure of state public health agency		
Freestanding, independent agency	31 (60.8)	25 (55.6)
Component of superagency	20 (39.2)	20 (44.4)
State board or council of health		
Yes	35 (70.0)	26 (60.5)
No	15 (30.0)	17 (39.5)
Responsibilities of board or council of health[a]		
Promulgate public health rules	13 (37.1)	17 (65.4)
Advise governor and legislature on state health policy issues	12 (34.3)	13 (50.0)
Formulate state health policy	22 (62.9)	10 (38.5)
Develop public health legislative agenda	. . .[b]	6 (23.1)
Provide public health information	24 (68.6)	4 (15.4)
Evaluate data	1 (2.9)	4 (15.4)
Establish public health budget	2 (5.7)	4 (15.4)
Conduct research	1 (2.9)	2 (7.7)
Individual or entity responsible for appointment of board/ council members		
Governor	35 (100.0)	23 (88.5)
Other	1 (2.9)	2 (7.7)
Director of superagency	0 (0.0)	1 (3.8)
Legislature	0 (0.0)	0 (0.0)
Composition of board or council of health		
Public health professionals	26 (74.3)	21 (80.8)
Private citizens	14 (40.0)	18 (69.2)
Consumer representatives	7 (20.0)	14 (53.8)
Business professionals	20 (57.1)	11 (42.3)
Other	. . .[b]	9 (34.6)
Education professionals	1 (2.9)	5 (19.2)
Agency directors	3 (8.6)	5 (19.2)

Note. Data for 1990 were derived from the 1991 Centers for Disease Control and Prevention (CDC) report described in the Introduction of this article.[3]
[a]1990 comparison data may underestimate the number of boards and councils performing these responsibilities, because data were gathered from the narrative for each state. The narrative highlights reported by the CDC may not included all of the activities occurring within the state.
[b]Not available.

Structure of State Public Health Agencies and Boards of Health

Twenty-five states had freestanding or independent health agencies, representing 55.6% of the states responding to this question (Table 1). In the remaining 20 states, the public health agency was located within a larger "superagency," most typically a health and human services department. No statistically significant geographic variation was found among respondents. Although states with independent health agencies tended to be less populous, this difference did not reach statistical significance.

Twenty-six states had boards or councils of health, whereas 17 states did not. These boards and councils reportedly performed a variety of roles, most notably promulgating rules (65.4%), advising elected officials on health policy concerns (50.0%), and formulating state health policies (38.5%). To a lesser extent, boards and councils developed public health legislative agendas (23.1%) or established public health budgets (15.4%). Only 4 states (15.4%) perceived the role of boards and councils to include provision of public health information. Board memberships typically comprised a broad cross-section of the community, including citizens (69.2%), consumers (53.8%), business professionals (42.3%), educators (19.2%), and public health professionals (80.8%). An overwhelming majority of states had board members who were gubernatorial appointees (88.5%).

State Health Officials

In more than two thirds (68.1%) of the responding states, the governor was responsible for selecting the SHO (Table 2). In approximately half of the states (53.2%), the SHO served in a cabinet-level position. Eighty percent of these states had independent, freestanding health agencies ($P<.001$). Other than governors, directors of superagencies (14.9%) made the choice of SHO most frequently, although boards of health were entrusted with this decision in 4 states. In the latter instance, all 4 states had independent health agencies.

Regarding the question of whether states required SHOs to have an allopathic or osteopathic medical doctorate degree, 20 (44.4%) of the 45 SHOs responding to this item indicated that such a degree was necessary in their state. Seven (15.6%) indicated that their state required some other degree, and one state (2.2%) required either a master of public health or a master of public administration degree. Seventeen (37.8%) of the respondents reported that no specific degree was required.

The relationship between SHO degree requirements and cabinet-level status, as well as that between SHO degree requirements and structure of the state health department, was also examined. Eight (32.0%) of the 25 states in which the SHO was a cabinet-level appointee required the individual to be a physician; 14 (63.6%) of the states in which the SHO was not a cabinet-level appointee required a medical degree ($P=.04$). However, examination of the relations between states with no SHO degree requirements and all other states revealed no significant differences regarding either state health agency structure or cabinet-level appointment.

Results showed that SHOs have a wide range of responsibilities. For example, nearly all state public health agencies (97.9%) are directed by the SHO. As director, the SHO is responsible for the day-to-day functioning of the agency as well as for policy setting. En-

TABLE 2—Characteristics of the State Health Officer Position: United States, 1990 and 2001

	1990, No. (%)	2001, No. (%)
Individual or entity responsible for appointment of state health officer		
Governor	27 (52.9)	32 (68.1)
Board of health	1 (2.0)	4 (8.5)
Superagency director	4 (7.8)	7 (14.9)
Other	19 (37.3)	4 (8.5)
Cabinet-level appointment		
Yes	30 (58.8)	25 (53.2)
No	21 (41.2)	22 (46.8)
Required professional degree		
Medical degree (MD or DO)	27 (52.9)	20 (44.4)
Master's degree in public health or public administration (MPH or MPA)	1 (2.0)	1 (2.2)
Other degree requirement	. . .[a]	7 (15.6)
No degree requirement	23 (45.1)	17 (37.8)
Statutory responsibilities[b]		
Direct state health agency	50 (100.0)	46 (97.9)
Control policy and operational direction of state public health agency	26 (51.0)	46 (97.9)
Keep abreast of possible public health problems	35 (68.6)	46 (97.9)
Promulgate rules	11 (21.6)	41 (87.2)
Inform governor and legislature of state health conditions	19 (37.3)	41 (87.2)
Propose budget to governor and legislature	1 (2.0)	40 (85.1)
Propose substantive legislation to governor and legislature	2 (3.9)	40 (85.1)
Supervise local health departments	4 (7.8)	20 (42.6)
Retain membership on state board of health	3 (8.6)	10 (21.3)
Other	2 (3.9)	13 (27.7)

Note. Data for 1990 were derived from the 1991 Centers for Disease Control and Prevention (CDC) report described in the Introduction of this article.[3]
[a]Not available.
[b]1990 comparison data may underestimate the number of state health officials with these statutory responsibilities, because data were gathered from the narrative for each state. The narrative highlights reported by the CDC may not have included all of the activities occurring within the state.

gaging in rule setting (87.2%) and keeping elected officials informed of state health matters (97.9%) are other key functions performed by most SHOs.

In approximately 85% of the states, the SHO was authorized to propose budget and substantive legislation to the governor and legislature, whereas fewer than half (42.6%) of state SHOs supervised local health departments. SHOs from states with a centralized form of control (10 of 11; $P<.001$), states with a district structure (15 of 20; $P<.001$), and southern states (14 of 16; $P<.001$) were more likely to supervise local health agency operations. However, no relationship was found between state health department structure (freestanding vs superagency) and whether the SHO supervised local health agencies.

District Structure and Organizational Oversight

Responses also indicated that 20 states (43.5%) had elected to establish an intermediate administrative structure between the state-level agency and local health departments (data not shown). Strong regional variation was found, with a marked southern preference for districts (12 of 15 states; $P=.006$). However, no relationship was noted between the presence of districts and independent superagency status or between the presence of districts and state population as either a continuous or a categorical variable.

Results showed that states have adopted a variety of governance approaches to provide oversight and supervision for local health agencies. Eleven (24.4%) of the states exercised centralized organization (the state-level health department guided efforts at the local level). At the other end of the continuum, 10 (22.2%) states relied entirely on local communities for oversight (decentralized control). Regarding type of control, 24 (53.3%) of the responding states had some form of shared or mixed organizational control. States with a district structure were far more likely to have a centralized control approach than to have other forms of governance (9 of 11; $P=.004$). In comparison with states in other regions, states in the South, where a district structure is more common, tended to have a more centralized public health system ($P=.01$). No differences in type of organizational control were found among states with differing population sizes.

Functional Roles and Responsibilities of State Health Agencies

In nearly all cases (46 of 47 states; 97.9%), the state health agency was the state public health authority (Table 3). However, other roles played by state health departments were less consistent from state to state. Many states were responsible for rural health and public health laboratories (in each case, 78.7%), special-needs children (76.7%), and oversight of minority health (72.3%); in only 7 states (14.9%) was the state health agency responsible for environmental health, Medicaid, or health insurance regulation. Only 34.0% of state health agencies directed a state pharmacy, and only 27.7% were responsible for oversight of state nursing home regulations.

Further analysis revealed several patterns of variation regarding these "traditional" roles of state health agencies. For example, single-state Medicaid was found more typically in states with larger populations (37.5% of large states vs 7.7% of other states; $P=.02$). Shared or split forms of environmental health leadership were found less often among states with centralized control than among states with other forms of control ($P=.02$). States with a district structure were more likely than were states without an intermediate administrative entity to have a pharmacy system ($P=.01$); Midwestern states were less likely than were states in other regions to have public health laboratories ($P=.04$). Freestanding, independent health agencies were more frequently re-

TABLE 3—Responsibilities of US State Health Agencies: 1990 and 2001

	1990, No. (%)	2001, No. (%)
State public health authority	50 (100.0)	46 (97.9)
Rural health	. . .[a]	37 (78.7)
Public health laboratory	. . .[a]	37 (78.7)
Children with special health care needs	39 (76.5)	36 (76.6)
Minority health	. . .[a]	34 (72.3)
Institutional licensing agency	41 (80.4)	28 (59.6)
State health planning and development agency	22 (43.1)	26 (55.3)
Partial/split leadership of environmental agency	. . .[a]	24 (51.1)
Institutional certifying authority for federal reimbursement	40 (78.4)	20 (42.6)
Public health pharmacy	. . .[a]	16 (34.0)
State nursing home	. . .[a]	13 (27.7)
Medical examiner	. . .[a]	10 (21.3)
State mental health authority encompasses substance abuse	. . .[a]	9 (19.1)
State health professional licensing agency	10 (19.6)	8 (17.0)
State mental institution or hospital	16 (31.4)	8 (17.0)
Partial/split responsibility for Medicaid	1 (2.0)	8 (17.0)
Medicaid single-state agency	5 (9.8)	7 (14.9)
Lead environmental agency	15 (29.4)	7 (14.9)
State tuberculosis hospital	. . .[a]	7 (14.9)
Health insurance regulation	. . .[a]	7 (14.9)
Disability determination	. . .[a]	4 (8.5)
State mental health authority does not encompass substance abuse	4 (7.8)	1 (2.1)
Correctional health	. . .[a]	0 (0.0)

Note. The 1990 comparison data (derived from the 1991 Centers for Disease Control and Prevention [CDC] report described in the Introduction of this article[3]) may underestimate the number of states with these responsibilities, because data were gathered from the narrative for each state. The narrative highlights reported by the CDC may not have included all of the activities occurring within the state.
[a]Not available.

TABLE 4—States With Responsibilities in Emerging Areas of Public Health Practice: United States, 2001

Emerging Responsibility	States With Responsibility, No. (%)
Bioterrorism	42 (89.4)
Vaccine for Children program	41 (87.2)
Injury control epidemiology	41 (87.2)
Injury control and prevention	41 (87.2)
Breast and cervical cancer screening	41 (87.2)
Chronic disease epidemiology	40 (85.1)
Tobacco control and prevention	39 (83.0)
Cancer epidemiology	39 (83.0)
Environmental epidemiology	37 (78.7)
Disaster preparedness	36 (76.6)
Perinatal epidemiology	36 (76.6)
Violence prevention	32 (68.1)
Emergency medical services regulation and service provision	30 (63.8)
Quality improvement or performance management	29 (61.7)
Toxicology	27 (57.4)
Radon control	26 (55.3)
Breast and cervical cancer treatment	21 (44.7)
Institutional review board	21 (44.7)
State Title XXI Children's Health Insurance Initiative	13 (27.7)

sponsible for licensing of state health professionals than were agencies that were part of a larger entity (P=.05). However, health department roles were unrelated to whether states had boards or councils of health.

Since 1990, certain public health issues, such as injury and chronic disease, have increased in prominence. Respondents were asked to select from a list those emerging areas that were the responsibility of the state health department (Table 4). Results showed that 89.4% of state health departments were already preparing for terrorist events before September 2001, whereas 76.6% were engaged in some form of disaster preparedness. Relative to states with other types of governance structure, states with a centralized structure were less likely to be engaged in either bioterrorism preparedness (94.1% vs 72.7%; P=.05) or disaster preparedness (82.4% vs 54.5%; P=.06). The size of a state's population was not associated with involvement in bioterrorism or disaster preparedness. However, regional differences were found in disaster preparedness, with the Midwest less likely than other regions to be engaged in this activity (54.5% vs 83.3%; P=.05).

Many states had taken steps to bolster their assessment capabilities. For example, more than 75% were developing specialized epidemiological capacity across a number of disciplines (injury epidemiology: 87.2%; cancer epidemiology: 83.0%; environmental epidemiology: 78.7%; perinatal epidemiology: 76.6%). In addition, 61.7% of states were engaged in quality improvement or performance management activities. However, fewer than half of the agencies (44.7%) had an internal institutional review board responsible for protection of human research participants, and only slightly more than one fourth (27.7%) had substantial roles in the Title XXI Children's Health Insurance Initiative. Among these emerging activities, only quality improvement was found to vary. States without an intermediate administrative entity between the state-level agency and local health departments were more likely than states with a district structure to have quality improvement responsibilities (P=.05).

DISCUSSION

The public health system, with its overburdened infrastructure, is under assault.[2,24] In addition to the traditional services offered by the public health sector, there is now the specter of globally circulating emerging diseases and bioterrorism, as well as the challenges faced by many Americans with chronic, unremitting diseases. Few recent national-level studies have focused on states' public health system structure and functions,[3,17–19,21] even though an understanding of these critical dimensions is necessary in

any attempt to improve public health system performance. Thus, our goal in this study was to set the stage for debate and action toward a 21st-century public health system.

We identified several structural trends worthy of note. For example, half of the states have freestanding, independent state health agencies, whereas half also have boards or councils of health. However, there were 6 fewer independent, freestanding state health departments in 2000 than in 1990. This decrease has occurred against the backdrop of the Institute of Medicine's recommendations to increase the number of new departments of health (vs superagencies) and to broaden the scope of their health responsibilities.[1]

This decline also has occurred at a critical moment in the history of public health. We are at a point of equipoise. At a time that members of the public health profession are being asked and expected to do more, the potential arises that superagency entanglements and shifting bureaucratic priorities may intervene, blunting an enhanced public health response when and where it is needed most. Certainly, boards and councils are also engaged in important work that benefits the public. But just as we celebrate their contributions, we must recognize that boards of health, compared with a decade ago, have a much diminished role nationally regarding formulation of state health policy.

We found that governors remain engaged in selecting both board members and SHOs, minimizing the number of bureaucratic levels between SHOs and key decisionmakers. Also on a positive note, there is more involvement of private citizens and consumers on boards and councils. These trends auger well for community ownership of the health decision-making process. In addition, public health professionals are on boards and councils in 4 out of every 5 states, lending their knowledge and experience to board deliberations. Participation by public health professionals may also contribute stability to state health leadership, helping to lengthen the brief tenure of SHOs.

Our results provide evidence, as well, of a strengthened role for SHOs in management and policy-making compared with 1990. Supervision of local health agency operations appears to be largely a regional responsibility closely tied to a district structure and centralized governance. However, the enhanced role of SHOs has been coupled with a substantial decline in cabinet-level positions that have the potential to influence policy on a larger stage. The decline in freestanding state health agencies is closely tied to this loss of cabinet posts for SHOs, given that 80% of cabinet posts are found in states with independent agencies.

Furthermore, degree requirements for state health directors have changed little. Given the increasingly complex nature of the health environment, it is somewhat surprising that advanced doctoral degrees in public health or medicine are not a prerequisite for this office in many states. It is also noteworthy that states with degree requirements tend not to have SHOs with cabinet positions, perhaps a reflection of the intricacies of successfully navigating the political appointment process.

Trends in organizational control have changed little since 1990. A modest shift away from decentralized governance has occurred, with more than half of the states now employing some form of mixed or shared organizational control. It is conceivable that this greater interdependence may foster closer collaboration and partnership formation, a positive finding if this partnership contributes to improved preparedness planning against terrorism and other disasters such as pan-influenza and natural events. In their work, DeFriese et al. proposed similar improved intergovernmental relationships and partnering in terms of shared and mixed organizational structures.[25] Given the magnitude of recent federal investments in terrorism preparedness, states should be encouraged to implement the organizational configurations most conducive to successful collaboration and planning. However, the number of states with an intermediate district-level structure has declined substantially since 1990. The significance of districts and organizational control and their relationship to performance also warrant further research.

Many traditional functional roles and responsibilities of state health agencies have remained remarkably consistent. For example, nearly all respondents reported that the state health agencies are the public health authorities in their states. This finding reflects the fact that although public health functions may be spread across a number of state agencies, the state health agency has primary responsibility regarding public health issues. Most state health departments continue to focus on subpopulations such as children with special health-care needs, to support public health laboratories, and to reach out to rural communities.

Nonetheless, changes have occurred in a number of important state health agency responsibilities since 1990. On a positive note, our results showed that more states are making health planning and development a task of health agencies. However, a substantial decline has occurred in the number of states engaged in institutional licensing, and a lesser decrease has occurred in state health department oversight of mental health institutions and hospitals. One notable change was the more than 50% decline in state health agencies' taking the lead role regarding environmental health. Although there was no comparable shared-responsibility measure in the 1990 data, 24 states indicated a level of shared environmental health responsibilities in 2001. If, indeed, a lack of connection exists between public health and environmental health, the health impact of environmental issues is in danger of being overlooked, and the effects of this phenomenon may be magnified in states with centralized forms of control.

Public health agencies are being asked to perform a number of important new functions. These emerging areas of public health activity and responsibility suggest some positive trends. The emphasis on expanded epidemiological capacity will undoubtedly bolster states' ability to improve surveillance against the threat of terrorism by enhancing their overall public health infrastructure. This emphasis on expanded capacity began before September 2001. Nearly all states had initiated bioterrorism preparedness efforts by the time of our survey, although states with centralized forms of control appeared to be trailing with respect to this trend. Fewer state health agencies had responsibility for disaster preparedness, especially in the Midwest. This finding suggests that, in some states at least, suboptimal linkage between these 2 essential activities might have existed. More positively, almost two thirds of the states had some degree of regulatory oversight regarding emergency medical services, positioning them well to tie together public health activities

and prehospital disaster management and planning.

Our findings showed that 62% of health departments have quality improvement and performance management initiatives under way. This finding falls short of the 88% figure reported by Mays et al.[21] Although most such programs are rudimentary,[26] some are further advanced,[13] and create a very promising trend that could be accelerated. Special emphasis on performance management may be warranted in states with a district structure, along with further examination of their contributing roles in the adoption of formal quality improvement processes. Institutional review boards are active in nearly half of the states. This fact ensures protection of individuals receiving health department services during research and offers potential for increased public health practice research, with the states appropriately serving as laboratories.

Despite its important contributions to the literature on public health infrastructure, our study involves several limitations. First, although our survey had a high response rate, not all states participated. Second, the survey involved self-reported responses; the information presented here was offered from the perspective of SHOs or their designees. Although these individuals are well positioned to respond to inquiries related to public health in their states, studies based on self-reported data by their nature introduce the potential for bias.

Third, functional categories were stated in broad terms. State-level functions (e.g., programs for minority health, health planning, tuberculosis) may be very different in scope from one state to the next. Finally, a significant amount of 1990 data were derived from the 1991 CDC report, which may not have catalogued all aspects of state structure and functions. This derivation may have resulted in an underreporting of responsibilities for state health agencies, boards or councils of health, and SHOs. Thus a minimal number of states may be represented in our findings as performing particular functions.

In conclusion, this survey of state health agency structure and functions just before the terrorist attacks of September 11, 2001, offers a snapshot of the status of state-level public health around the nation. In addition to providing a benchmark for future studies, our results strongly suggest a need for further public health systems research to better ensure that public health structures and functions yield maximal health outcomes. We believe that our findings will help set the stage for future work on the important relationship between the structure and function of public health systems and the performance of these systems. ■

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Contributors

L.M. Beitsch assisted with all stages of the study and led the writing of the article. R.G. Brooks originated the study and assisted with the writing of the article. M. Grigg developed the survey instrument and assisted with the writing of the article. N. Menachemi assisted with the statistical analysis and the writing of the article.

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References

1. Institute of Medicine. *The Future of Public Health.* Washington, DC: National Academy Press; 1988.

2. *Public Health's Infrastructure: A Status Report.* Atlanta, Ga: Centers for Disease Control and Prevention; 2001.

3. *Profile of State and Territorial Public Health System, 1991.* Atlanta, Ga: Centers for Disease Control, Public Health Practice Program Office; 1991.

4. Beaulieu J, Scutchfield FD. Assessment of validity of the National Public Health Performance Standards: the Local Public Health Performance Assessment Instrument. *Public Health Rep.* 2002;117:28–36.

5. Derose SF, Asch SM, Fielding JE, Schuster MA. Developing quality indicators for local health departments—experience in Los Angeles County. *Am J Prev Med.* 2003;25:347–357.

6. Handler AS, Turnock BJ, Hall W, et al. A strategy for measuring local public health practice. *Am J Prev Med.* 1995;11:29–35.

7. Handler AS, Turnock BJ. Local health department effectiveness in addressing the core functions of public health: essential ingredients. *J Public Health Policy.* 1996;17:460–483.

8. Handler A, Issel M, Turnock B. A conceptual framework to measure performance of the public health system. *Am J Public Health.* 2001;91:1235–1239.

9. Lovelace K. External collaboration and performance: North Carolina local public health departments, 1996. *Public Health Rep.* 2000;115:350–357.

10. Mays GR, Halverson PK, Baker EL, Stevens R, Vann JJ. Availability and perceived effectiveness of public health activities in the nation's most populous communities. *Am J Public Health.* 2004;94:1019–1026.

11. Weiler P, Boggess J, Eastman E, Pomer B. The implementation of model standards in local health departments. *Am J Public Health.* 1982;72:1230–1237.

12. Zahner SJ, Vandermause R. Local health department performance: compliance with state statutes and rules. *J Public Health Manage Pract.* 2003;9(1):25–34.

13. Beitsch L, Grigg M, Mason K, Brooks R. Profiles in courage: evolution of Florida's quality improvement and performance measurement system. *J Public Health Manage Pract.* 2000;6(5):31–41.

14. Pratt M, McDonald S, Libbey P, Oberle M, Liang A. Local health departments in Washington State use APEX to assess capacity. *Public Health Rep.* 1996;111:87–91.

15. Richards TB, Rogers JJ, Christenson GM, Miller CA, Gatewood DD, Taylor MS. Assessing public health practice: application of ten core function measures of community health in six states. *Am J Prev Med.* 1995;11:36–40.

16. Duncan WJ, Ginter PM, Kreidel WK. A sense of direction in public organizations—an analysis of mission statements in state health departments. *Adm Soc.* 1994;26:11–27.

17. Ford EW, Duncan WJ, Ginter PM. The structure of state health agencies: a strategic analysis. *Med Care Res Rev.* 2003;60:31–57.

18. Ford EW, Wells R, Capper SA. High performance public health: assessing agencies' strategic management capabilities. *J Health Hum Serv Adm.* 2003;25(4):407–431.

19. Ford EW, Duncan WJ, Ginter PM. Health departments' implementation of public health's core functions: an assessment of health impacts. *Public Health.* 2005;119:11–21.

20. Ginter PM, Duncan WJ, Capper SA. Keeping strategic thinking in strategic planning: macro-environmental analysis in a state department of public health. *Public Health.* 1992;106:253–269.

21. Mays GP, Halverson PK, Miller CA. Assessing the performance of local public health systems: a survey of state health agency efforts. *J Public Health Manage Pract.* 1998;4(4):63–78.

22. Pickett GE. A state view of local health departments. *Am J Public Health.* 1981;71:84–85.

23. US Bureau of the Census. US Census Bureau regions. Available at: http://www.census.gov. Accessed December 6, 2004.

24. Institute of Medicine. *The Future of the Public's Health in the 21st Century.* Washington, DC: National Academy Press; 2003.

25. DeFriese GH, Hetherington JS, Brooks EF, et al. The program implications of administrative relationships between local health departments and state and local government. *Am J Public Health.* 1981;71:1109–1115.

26. Public Health Foundation. *Turning Point Performance Management Collaborative Survey on Performance Management Practice in States.* Seattle, Wash: Turning Point National Program Office, University of Washington; 2002.