

# Examination of the Relationship Between Public Health Statute Modernization and Local Public Health System Performance

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**Objectives:** Wide variation in performance of public health (PH) systems, coupled with national interest in improving PH system quality, makes it a priority to identify factors associated with performance. One factor may be congruence between a state's PH enabling statutes and the obligations outlined in *Public Health in America*—the collaboratively developed framework that defines the mission and essential services (ESs) of PH.

**Subjects:** This research examined the relationship between (1) the degree to which language in a state's PH enabling statutes reflects PH's mission and ESs and (2) the performance of local public health systems in delivering ESs, measured by National Public Health Performance Standards scores in 207 local jurisdictions. **Methods:** Binary logistic regression demonstrated that a high degree of congruence between statutory language and public health's mission increased the odds of above-average system performance for 5 of 10 ESs. **Results:** High levels of congruence between statutory language and the ESs themselves increased odds of above-average system performance for 6 of 10 ESs. Results yielded modest odds ratios (<2.0).

**Conclusions:** Limitations of the data make it impossible to draw firm conclusions; however, these modest results suggest that statutory language may account for little of the variation in local public health system performance.

**KEY WORDS:** essential services, logistic regression, mission, performance, public health law, statute

Wide variation in performance of public health (PH) systems, coupled with national interest in improving PH system quality, makes it a priority to identify factors associated with performance.<sup>1–26</sup> One factor may

be congruence between a state's PH enabling statutes and the obligations outlined in *Public Health in America*—the collaboratively developed framework that defines the mission and essential services (ESs) of PH.<sup>27</sup> This research examined the relationship between (1) the degree to which language in a state's PH enabling statutes reflects PH's mission and ESs; and (2) the performance of local PH systems in delivering ESs, measured by the National Public Health Performance Standards Local Performance Assessment Instrument, Version 1.0 (NPHPS V.1).<sup>28</sup> No research published to date has documented this aspect of PH performance.

The current regulatory climate is ideal to assess the effect of statutory authority on PH system performance. At the same time that states are being encouraged to modernize their laws, they are being encouraged to monitor and improve performance.<sup>29,30</sup> Empirical evidence about the relationship between the codification of ESs into statutory language and systemwide performance can inform efforts to reform PH statutes,

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This study was supported by the Network of National Public Health Institutes as part of its funding of research on the relationship between public health enabling statutes and system performance.

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harmonize accreditation requirements with statutory language, and provide guidance to local health officials and planners of PH systems on how to ensure that ESs are built into system-performance goals.

Based on an earlier qualitative analysis of the correspondence of states' PH enabling statutes with the ESs of PH,<sup>31</sup> the present quantitative analysis seeks to determine the association between the degree to which terms related to each of the ESs occur in states' PH enabling statutes and the performance scores received by local health systems that completed the NPHPS V.1.

**The National Public Health Performance Standards Program as a measure of performance**

The National Public Health Performance Standards Program is a collaborative effort coordinated by the Centers for Disease Control and Prevention.<sup>28</sup> The program has produced standards that address quality and accountability in practice for state and local PH systems and for PH governing bodies. The program fosters systematic data collection and analysis to build a science base for PH systems improvement. Standards established for each of the 10 ESs outlined in *Public Health in America* address performance of the overall PH system (ie, all public, private, and voluntary entities that contribute to PH). These standards describe an optimal (not minimum) level of performance intended to support a process of continuous quality improvement. The NPHPS V.1 instrument is a standard tool that establishes a consistent basis for study. Interpretation of any analysis must be guided by the fact that the unit of analysis for the local NPHPS data is the entire local PH system.

There are caveats with using the NPHPS data set. Although the validity of the assessment instrument has been established, reliability is a well-recognized weakness of the data produced by the assessment.<sup>32</sup> Data in the NPHPS program are self-reported. The administration of the assessment and self-scoring can vary widely because the data are collected by a nonstandardized methodology, which limits data integrity for comparison. Despite this limitation, NPHPS data are the *only* nationally agreed-upon data set that contains performance data on local PH systems available for use by researchers and accepted as a foundation for accreditation.<sup>33</sup>

**● Methods**

**Description of the data**

As described in a companion study,<sup>31</sup> the language of the statutes enabling PH agencies in all 50 states was

**TABLE 1 ● Public health (PH) mission statement (MS) and essential service (ES) descriptions used to assess co-occurrence with terms found in each state's PH enabling statutes**

PH mission statement description	
MS 1	Prevents epidemics and the spread of disease
MS 2	Protects against environmental hazards
MS 3	Prevents injuries
MS 4	Promotes and encourages healthy behaviors
MS 5	Responds to disasters and assists communities in recovery
MS 6	Assures the quality and accessibility of health services
PH essential service description	
ES 1	Monitor health status to identify community health problems
ES 2	Diagnose and investigate health problems and health hazards in the community
ES 3	Inform, educate, and empower people about health issues
ES 4	Mobilize community partnerships to identify and solve health problems
ES 5	Develop policies and plans that support individual health and community health
ES 6	Enforce laws and regulations that protect health and ensure safety
ES 7	Link people to needed personal health services and assure the provision of healthcare when otherwise unavailable
ES 8	Assure a competent public health and personal healthcare workforce
ES 9	Evaluate effectiveness, accessibility, and quality of personal and population-based health services
ES 10	Research for new insights and innovative solutions to health problems

collected and qualitatively analyzed for co-occurrence of specific terms contained in the mission statement and ESs defined in *Public Health in America*. Table 1 displays the six mission statements and 10 ESs that were used to make this assessment. The states were categorized into highly congruent, congruent, and divergent on the basis of the number of specific terms occurring in the statutes. The results of the qualitative analysis are displayed in Table 2.

**Sample**

Data collected from the NPHPS V.1 instrument were used to quantify local health system performance for this study. These data consist of 448 reports (observations) from local health systems in 30 states. We eliminated scores from local PH systems that had completed the instrument before enabling statutes had been reformed in that state. This step reduced the number of observations in the sample data set to 207 local PH systems within 14 states. Table 3 summarizes the distribution of these local PH systems by the degree of congruence with mission and services, respectively.

**TABLE 2 ● Congruence between the language of 50 state's PH enabling statutes with six mission statements and 10 essential PH services**

State	PH mission statements						Congruence <sup>a</sup>	Essential PH services										Congruence <sup>b</sup>
	1	2	3	4	5	6		1	2	3	4	5	6	7	8	9	10	
AL	X						DM	X	X				X					DS
AK	X			X		X	HCM	X	X	X	X	X	X		X			HCS
AZ	X	X	X	X		X	HCM	X	X	X	X	X	X	X	X	X	X	HCS
AR	X						DM	X	X			X	X					CS
CA	X	X	X	X	X		HCM	X	X	X	X		X		X	X	X	HCS
CO	X	X					CM	X	X	X			X	X	X			CS
CT	X		X	X		X	HCM	X	X	X	X	X	X	X				HCS
DE	X	X		X			HCM	X	X		X	X	X		X			CS
FL	X		X				CM	X	X	X	X	X	X					CS
GA	X	X			X		HCM		X	X	X	X	X		X		X	HCS
HI	X	X					CM	X	X	X	X		X					CS
ID	X	X			X		HCM				X	X				X		DS
IL	X	X	X		X	X	HCM	X	X	X	X	X	X	X	X	X		HCS
IN	X	X					CM	X	X			X	X					CS
IA	X			X	X		HCM	X	X	X		X	X	X	X	X		HCS
KS	X						DM	X	X	X	X	X	X	X				HCS
KY	X		X	X	X		HCM	X	X	X	X	X	X		X	X		HCS
LA	X	X			X		HCM	X	X			X	X					CS
ME	X	X			X		HCM	X	X	X	X	X	X	X		X		HCS
MD	X	X		X			HCM		X		X	X	X			X		CS
MA	X	X			X		HCM	X	X	X	X	X	X		X	X		HCS
MI	X	X		X			HCM	X	X	X	X	X	X	X	X	X	X	HCS
MN	X						DM	X	X	X			X		X	X		CS
MS	X	X					CM	X	X		X	X	X	X	X			HCS
MO	X	X					CM	X	X			X	X					CS
MT	X			X		X	HCM	X	X	X	X	X	X	X	X	X	X	HCS
NE	X						DM	X	X	X		X			X			CS
NV	X			X			CM		X	X		X	X		X			CS
NH	X	X					CM	X	X	X	X							CS
NJ	X						DM		X			X	X					DS
NM	X						DM		X	X	X	X	X					CS
NY	X	X					CM	X	X			X	X		X		X	CS
NC	X	X		X		X	HCM	X	X	X			X	X		X		CS
ND	X					X	CM	X		X		X	X			X		CS
OH	X				X		CM	X	X	X	X	X	X					CS
OK	X		X	X		X	HCM	X	X	X	X	X	X			X		HCS
OR	X				X		CM	X	X	X		X	X		X			CS
PA	X						DM	X				X	X					DS
RI	X						DM	X	X				X	X				CS
SC	X						DM	X	X	X		X	X					CS
SD							DM					X	X					DS
TN	X						DM	X	X	X								DS
TX	X		X			X	HCM	X	X	X		X	X		X			CS
UT	X	X	X			X	HCM	X	X	X		X	X			X		CS
VT	X			X			CM		X	X		X					X	CS
VA	X	X			X		HCM	X	X	X		X	X	X				CS
WA	X	X					CM					X	X					DS
WV	X	X					CM	X	X	X	X	X	X		X			HCS
WI	X	X	X		X		HCM	X	X	X	X	X	X	X	X	X	X	HCS
WY	X				X		CM	X	X	X			X					CS
Total	49	24	10	14	14	10		41	45	35	23	40	46	15	20	18	8	

Abbreviations: PH, public health; HCM, highly congruent mission; CM, congruent mission; DM, divergent mission; HCS, highly congruent service; CS, congruent service; DS, divergent service.

<sup>a</sup>HCM = states congruent on three or more mission statements; CM = states congruent on two mission statements; DM = states congruent on zero to one mission statements.

<sup>b</sup>HCS = states congruent on seven or more essential services; CS = states congruent on four to six essential services; DS = states congruent on three or less essential services.

**TABLE 3 ● Counts of congruence levels between the language in states' PH enabling statutes and mission statements or essential services. These results are for local PH systems that completed the NPHPS V.1 assessment instrument after their most recent PH statute modification**

	Local PH systems ( <i>n</i> = 207)	States represented ( <i>n</i> = 14)
Mission statements		
Highly congruent	21	5
Congruent	76	3
Divergent	110	6
Essential services		
Highly congruent	20	4
Congruent	159	6
Divergent	28	4

Abbreviation: PH, public health.

### Statistical tests

A sampling weight was assigned to each set of performance observations on the basis of the number of local health systems that had completed the NPHPS V.1 instrument within each of the 14 eligible states. This step ensured that the congruence level of states with higher numbers of jurisdictions completing the NPHPS assessment did not overpower states with fewer jurisdictions completing the assessment.

A binary logistic regression model was constructed in which the independent variable was the degree of congruence between the language in the state's statute and mission or ESs. The dependent variable, NPHPS V.1 performance scores, was dichotomized as above or below a weighted average score received on each ES by the total number of local PH systems that had contributed data to the NPHPS V.1 data set (*n* = 448). This average was calculated by weighting scores by state on the basis of the number of local PH systems with NPHPS scores in that state. A *t* test was performed to gauge the difference in scores between the national weighted average and our sample weighted average (*n* = 207) for the 10 ESs. The *t* statistic with nine degrees of freedom was 0.36, indicating no significant difference between the two weighted averages at a probability value of .05 ( $t_9 = 0.36, P < .05$ ).

## ● Results

### Mission statements

Binary logistic regression yielded modest odds ratios (OR < 2.0) both for high versus low and for moderate versus low levels of congruence between the language

in states' PH enabling statutes and six PH mission statements. These results are displayed in Figure 1. The presence of *moderate congruence* between the language in a state's PH statutes and the mission statements resulted in statistically significant *increased odds* of local PH systems performing above the national mean score for performance on essential service 10 (research, OR 1.35). However, *moderate congruence* with the mission statements resulted in statistically significant *decreased odds* of performance above the national mean on five of the ESs: ES 1 (monitor health, OR 0.82), ES 2 (diagnose and investigate problems, OR 0.65), ES 3 (inform and educate, OR 0.80), ES 5 (develop policies, OR 0.82), and ES 6 (improve and enforce laws, OR 0.79).

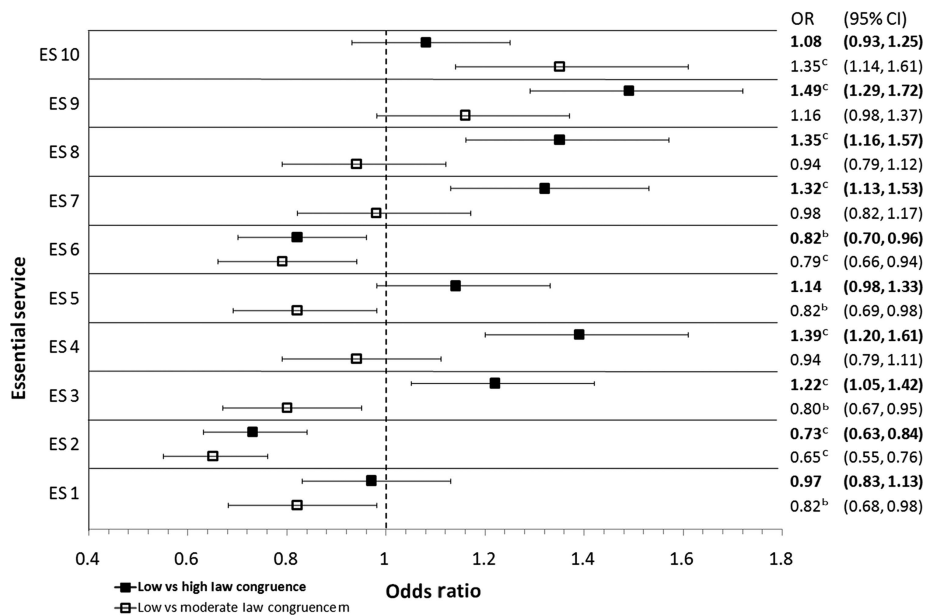
The presence of *high congruence* between a state's PH statutes and mission statements resulted in statistically significant *increased odds* of local PH health systems' performing above the national mean performance score on ES 3 (inform and educate, OR 1.22), ES 4 (mobilize community, OR 1.39), ES 7 (link people to services, OR 1.32), ES 8 (assure competency, OR 1.35), and ES 9 (evaluate effectiveness, OR 1.49). *High congruence* between a state's statutes and mission statements resulted in statistically significant *decreased odds* of performing above the national mean score of performance on ES 2 (diagnose and investigate problems, OR 0.73) and ES 6 (improve and enforce laws, OR 0.82).

### Essential services

Binary logistic regression also yielded modest odds ratios (OR < 2.0) both for high versus low and for moderate versus low levels of congruence between the language in states' PH enabling statutes and the 10 ESs of PH. These results are displayed in Figure 2. The presence of *moderate congruence* between the language in a state's PH statutes and the ESs resulted in statistically significant *increased odds* of local PH systems performing above the national mean score for performance on ES 4 (mobilize community, OR 1.23), ES 7 (link people to services, OR 1.34), ES 8 (assure competency, OR 1.33), ES 9 (evaluate effectiveness, OR 1.34), and ES 10 (research, OR 1.36). However, *moderate congruence* with the ESs resulted in statistically significant *decreased odds* of performance above the national mean on ES 6 (improve and enforce laws, OR 0.71).

The presence of *high congruence* between a state's PH statutes and ESs resulted in statistically significant *increased odds* of local PH health systems' performing above the national mean performance score on ES 3 (inform and educate, OR 1.22), ES 4 (mobilize community, OR 1.48), ES 7 (link people to services, OR 1.43), ES 8 (assure competency, OR 1.49), ES 9 (evaluate effectiveness, OR 1.55), and ES 10 (research, OR 1.27). *High congruence* between a state's statutes and ESs resulted

**FIGURE 1 ● Mission Statement Congruence<sup>a</sup>**

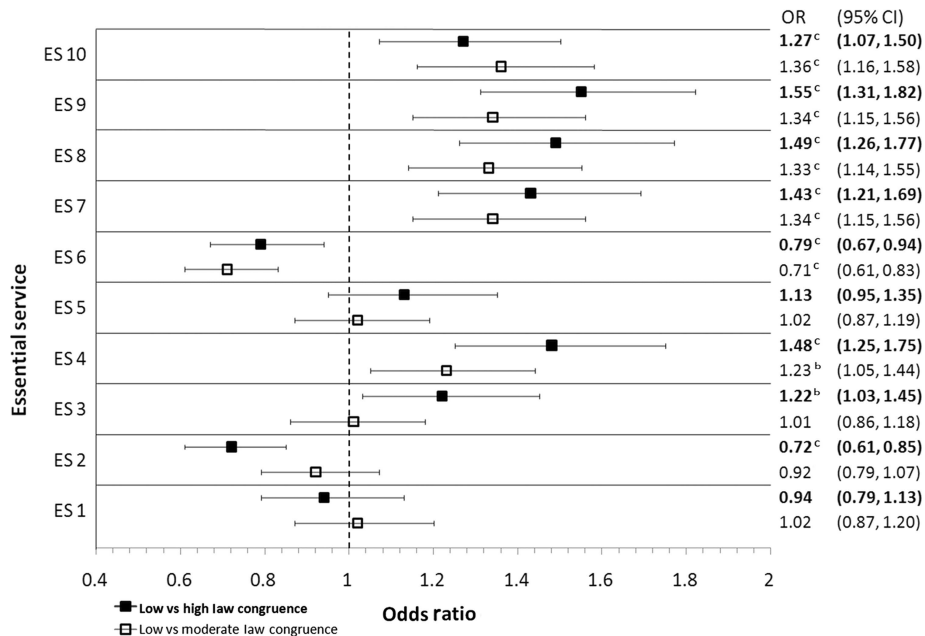


<sup>a</sup>Forest plot of binary logistic regression results for 207 local PH systems within 14 states. The results indicate the odds ratio (OR) and confidence interval (CI) of local PH system performance being above the national weighted average on each essential service (ES) for two levels (low vs high and low vs moderate) of state PH statute congruence with the six PH mission statements. The vertical, dashed line represents the null value (equivalent to no change in performance).

<sup>b</sup> $P \leq .01$ .

<sup>c</sup> $P \leq .05$ .

**FIGURE 2 ● Essential Service Congruence<sup>a</sup>**



<sup>a</sup>Forest plot of binary logistic regression results for 207 local PH systems within 14 states. The results indicate the odds ratio (OR) and confidence interval (CI) of local PH system performance being above the national weighted average on each essential service (ES) for two levels (low vs high and low vs moderate) of state PH statute congruence with the 10 essential services. The vertical, dashed line represents the null value (equivalent to no change in performance).

<sup>b</sup> $P \leq .01$ .

<sup>c</sup> $P \leq .05$ .

in statistically significant *decreased odds* of performing above the national mean score of performance on ES 2 (diagnose and investigate problems, OR 0.72) and ES 6 (improve and enforce laws, OR 0.79).

### Limitations

There are several limitations in our ability to draw any conclusions from the data reported above. First, as identified earlier, the NPHPS V.1 data are self-reported, thereby leading to concerns about reliability, whether caused by inflated scores, difference in scoring behavior, or other factors. Second, because the study could use data only from states that had modified their PH statutes before local health systems completed the performance assessment, the original NPHPS V.1 data set (containing observations on 448 local PH systems in 31 states) was reduced by more than half (to 207 local PH systems in 14 states), which may limit the generalizability of these results. Third, although we selected states on the basis of the date of the most recent modification to state PH enabling statutes, it was not possible within the limits of this study to identify what or how substantive the changes to mission or required services were. Laws pertaining to certain ESs or mission statements could have been reformed over an extensive period. It may also be the case that the degree of obligation to deliver ESs under state law led to improved performance, or that the laws were only created after the process of performance improvement had begun. We were not able to determine temporal relationships at this level of detail. Finally, PH systems differ widely, both in the profiles of the populations served and in the ways in which they are organized, as well as how they collaborate to achieve the mission and perform the ESs. These differences were not accounted for in this analysis.

### ● Discussion and Implications of the Analysis

The small number of states (14) for which adequate information was available, compounded by concerns about the reliability of the performance score data, led the research team to be extremely cautious about drawing any specific conclusions from this analysis. Results from the logistic regression models suggest some positive association between higher performance on several ES in local health systems when there is a high (or sometimes moderate) level of congruence with the Mission or Essential Services of Public Health in the state's PH enabling statutes. More puzzling are the many negative correlations. It is counterintuitive to observe decreased odds of being above the national mean in performance on ESs when the state law is *more* congruent with either

the mission statements or ESs. That these negative odds were identified most often in the mission statement congruence model suggests tenuous relationships in the mix among the *Public Health in America* mission statements, performance, and ESs. Counterintuitive negative odds also reflect the limitations of these data and of this analysis. Despite the assumption that a modern PH law supports a high level of performance, the associations identified here account for very little of the variation in performance scores and cannot be considered predictive.

Another factor that this study was unable to take into account is the impact of the internal structure and management of any one PH system. At the heart of each local PH system is a local PH department, many of which are extremely small, have limited internal specialization, and depend on the larger state agency to deliver some ESs.<sup>34</sup> If these smaller agencies are in geographically remote or low population jurisdictions, the local PH system may be similarly limited in capacity. In such circumstances a high-quality, modernized state PH statute may not be sufficient to support higher levels of performance. No statute, no matter how good, automatically guarantees that better performance will follow if staff, funding, and other resources are not available.

Although much PH work is accomplished on a voluntary basis by communities of common interest, only the infrastructure of governmental PH is capable of assuring that conditions in which people can be healthy are available to all.<sup>35</sup> This is true because governmental PH agencies are bound by geography to all of the people in their assigned jurisdiction, regardless of economics, social structure, disease patterns or other variables. Lack of a modern PH statute can leave an organization unable to act in ways that the community expects. However, as this study demonstrates, the line between a modern statute and effective performance is not a straight one. Available data may limit our ability to explore the potential explanatory factors for the unexpected findings, but that should not diminish our collective commitment to develop a long-term program of research into this intriguing intersection of law and PH performance.

### REFERENCES

1. Handler AS, Turnock BJ, Hall W, et al. A strategy for measuring local public health practice. *Am J Prev Med.* 1995;11(6) (suppl):29–35.
2. Halverson PK, Miller CA, Kaluzny AD, Fried BJ, Schenck SE, Richards TB. Performing public health functions: the perceived contribution of public health and other community agencies. *J Health Hum Serv Adm.* 1996;18(3):288–303.
3. Handler A, Turnock B. Local health department effectiveness in addressing the core functions of public health: essential ingredients. *J Public Health Policy.* 1996;17(4):460–483.

4. Mays GP, Halverson P, Miller CA. Assessing the performance of local public health systems: a survey of state health agency efforts. *J Public Health Manag Pract.* 1998;4(4):63–78.
5. Lichiello P. *Guidebook for Performance Measurement: Turning Point National Program Office.* Washington, DC: University of Washington; 1999.
6. Barry MA. How can performance standards enhance accountability for public health? *J Public Health Manag Pract.* 2000;6(5):78–84.
7. Halverson PK. Performance measurement and performance standards: old wine in new bottles. *J Public Health Manag Pract.* 2000;6(5):vi–x.
8. Mahan CS. How can performance standards strengthen accountability for public health? *J Public Health Manag Pract.* 2000;6:85–87.
9. Reid WM, Beitsch LM, Brooks RG, Mason KP, Mescia ND, Webb SC. National Public Health Performance Standards: workforce development and agency effectiveness in Florida. *J Public Health Manag Pract.* 2001;7(4):67–73.
10. Landrum LB, Beitsch LM, Turnock B, Handler A. Performance management: the evolution of standards, measurement, and quality improvement in public health. In: Novick LF, Morrow CB, Mays GP, eds. *Public Health Administration, 2nd ed.* Sudbury, MA: Jones and Bartlett; 2007:459–481.
11. Institute of Medicine. *The Future of the Public's Health in the 21st Century.* Washington, DC: National Academy Press; 2002.
12. Landrum LB. *State Public Health System Performance Standards: Reports From the Field: September/October 2003.* Arlington, VA: Association of State and Territorial Health Officials; 2003.
13. Stanley J, Kanarek N, Bialek R, Mistry K. Local public health system performance and its relationship to community health improvement. Paper presented at: Academy Health 20th Annual Research Meeting; June 27–29, 2003; Nashville, TN.
14. Mays G, McHugh M, Shim K, et al. Identifying dimensions of performance in local public health systems: results from the National Public Health Performance Standards Program. *J Public Health Manag Pract.* 2004;10(3):193–203.
15. Mays GP, McHugh MC, Shim K, et al. Getting what you pay for: public health spending and the performance of essential public health services. *J Public Health Manag Pract.* 2004;10(5):435–443.
16. Public Health Foundation. *From Silos to Systems: Using Performance Management to Improve the Public's Health.* Seattle, WA: Turning Point Performance Management National Excellence Collaborative; 2004.
17. Scutchfield FD, Knight EA, Kelly AV, Bhandari MW, Vasilescu IP. Local public health agency capacity and its relationship to public health system performance. *J Public Health Manag Pract.* 2004;10(3):204–215.
18. Baird JR, Carlson KJ. National Public Health Performance Standards assessment: first steps in strengthening North Dakota's public health system. *J Public Health Manag Pract.* 2005;11(5):422–427.
19. Ellison JH. National Public Health Performance Standards: are they a means of evaluating the local public health system? *J Public Health Manag Pract.* 2005;11(5):433–436.
20. Lenihan P. The public health system: an idea whose time has come. *J Public Health Manag Pract.* 2005;11(2):165–167.
21. Beitsch L, Thielen L, Mays G, et al. The multistate learning collaborative, states as laboratories: informing the national public health accreditation dialogue. *J Public Health Manag Pract.* 2006;12(3):217–231.
22. Kanarek N, Stanley J, Bialek R. Local public health agency performance and community health status. *J Public Health Manag Pract.* 2006;12(6):522–527.
23. Mays GP, McHugh MC, Shim K, et al. Institutional and economic determinants of public health system performance. *Am J Public Health.* 2006;96(3):523–531.
24. Bekemeier B, Riley CM, Padgett SM, Berkowitz B. Making the case: leveraging resources toward public health system improvement in Turning Point states. *J Public Health Manag Pract.* 2007;13(6):649–654.
25. Joly BM, O'Rourke K, Tilson HH, Leonard JF. Use of National Public Health Performance Standards to assess Maine's diabetes system. *J Public Health Manag Pract.* 2007;13(1):68–71.
26. Erwin P. The performance of local health departments: a review of the literature. *J Public Health Manag Pract.* 2008;14(2):E9–E18.
27. Public Health Functions Steering Committee, Office of Disease Prevention and Health Promotion. *Public Health in America.* Washington, DC: United States Public Health Service; 1994.
28. National Public Health Performance Standards Program. Centers for Disease Control and Prevention Web site <http://www.cdc.gov/od/ocphp/nphpsp>. Updated 2008. Accessed August 8, 2008.
29. Erickson DL. The Public Health Statute Modernization National Collaborative: developing a model state public health law. *J Public Health Manag Pract.* 2002;81(1):39–46.
30. Meier BM, Hodge JG, Gebbie KM. Alaska public health law reform. *J Health Polit Policy Law.* 2008;33(2):284–291.
31. Meier BM, Merrill J, Gebbie K. Modernizing state public health enabling statutes to reflect the mission and essential services of public health. *J Public Health Manag Pract.* 2009;15(4):281–288.
32. Beaulieu J, Scutchfield FD, Kelly AV. Content and criterion validity evaluation of National Public Health Performance Standards measurement instruments. *Public Health Rep.* 2003;118(6):508–517.
33. Corso LC, Landrum LB, Lenaway D, Brooks R, Halverson PK. Building a bridge to accreditation—the role of the National Public Health Performance Standards Program. *J Public Health Manag Pract.* 2007;13(4):374–377.
34. National Association of County and City Health Officials. *2005 National Profile of Local Health Departments.* Washington, DC: National Association of County and City Health Officials; 2006.
35. Institute of Medicine. *The Future of Public Health.* Washington, DC: National Academy Press; 1988.