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Public Health Governance and Population Health Outcomes

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Abstract

Research reviews have identified a gap in understanding the diversity of health department governance structures and in understanding how the variations in governing relates to health outcomes. This report details the categorization of local public health governance and reveals that certain governance types may be better suited to achieve better population health outcomes. State systems achieve the poorest health outcomes, but the best health outcomes are achieved when the political branches have a key role in local public health governance. Public health systems should consider greater local control and involvement in governance; but local governance should include the political branches -- and even the state -- to achieve more positive health outcomes.

Keywords

public health, governance, local boards of health, health outcomes

Cover Page Footnote

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Introduction*

Recently, reviews have identified a need for studies that explore the structures and governance of public health and how that relates to improved health outcomes^{1,2}. Current research has identified some intriguing findings, one of which is that a Board of Health is not directly associated with LHD “effectiveness” or with improved health system performance^{3,4}. Bhandari found that scores for the performance of the ten essential public health services were lower where there was an LBOH than where there was not, but having a policy-making board was positively associated with overall system performance of the ten essential services⁵. However, none of this work directly examined health boards and health outcomes and only accounted for the presence or absence of a board of health, when in fact boards of health vary in their range of authority. This study examined existing governance structures to identify nine different types of governance structures in 164 purposefully selected counties from 41 states and compared health outcomes for the different governing types. Our results showed that a county’s type of public health governance relates to its population health outcomes. These findings can guide states and local public health agencies in making the most effective choices about optimally structuring public health governance to face the challenges ahead.

Methods

Due to our focus on health outcomes at the county level, nine states were eliminated from the study because the jurisdictional boundary of the health department is not the same as the jurisdictional boundary of the county or counties it serves[†]. To test our findings in as many different states as possible, and under very different conditions of social and economic factors that impact health, we purposefully selected four counties from each state that represented different relationships between health outcomes and socio-economic factors. The four counties were selected using the within-state rankings on “Health Outcomes” as reported in the 2011 County Health Rankings study⁶: the healthiest county at the highest SES level, the healthiest county at the lowest SES level, the least healthy county at the highest SES level, and the least healthy county at the lowest SES level.

Next, we examined the operative state law for each county in the study and the county level responses to survey questions regarding local governance on the National Profile of Local Health Departments. Lastly, county level websites were checked and in rare cases phone calls to particular counties were made to verify and reconcile operative structures and authority. Based on these data, we created numerical codes for each county to represent the presence of a board of health, the size of the board, and the required composition of the board of health. Next, we identified the level of government (i.e., board of health, county, or state) with the statutory authority for each of four authorized powers: hiring and firing, budgeting, adopting regulations, and setting fines and fees.

Based on these data, we identified nine unique governance types relying on three concepts of governing: The locus of primary authority for public health in the county (the state, the county government, a local board of health, or various levels of sharing among them), the extent of

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[†]The nine excluded states (CT, DE, HI, MA, NH, NJ, NM, RI, and SD) were states where within-state health jurisdictions were too few (i.e., Delaware with two), too many (i.e., Massachusetts with 353) or non-existent (Hawaii and Rhode Island).

empowerment of the local board of health where it exists (fully empowered, shared authority with another level, advisory, or no local board of health), and the composition of the local board of health. These three components were combined to create the Composite Governance Index, which is a taxonomy dividing the governance of these counties into nine types. Two types of ANOVA were used to compare the values for health outcomes across these nine governance types. For the Kruskal-Wallis mean rank comparisons, a Monte Carlo correction method was used to correct for low sample sizes.

Health outcomes were measured with a “Proximal Health Outcomes Index.” This index, comprised of indicators derived from the County Health Rankings data set, is based on factors that local health departments would most likely affect. These include the percent of adult smokers, the percent of babies born at low birth weight, the rate of chlamydia cases per 100,000 people, the rate of babies born to teens per 1000 females ages 15-19, the diabetic screening rate, and the mammography screening rate. All scores were recoded so that positive values indicated a healthier county.

Results

The governance coding and the ANOVA results are shown in Table 1. Even with the variation in the number of counties within each type, the table shows that the rankings on proximal health outcomes are significantly different across the nine different governance types. In itself, this finding shows the utility of considering governance type when examining health outcomes.

The analysis, however, provides evidence for several interesting findings. First, the bad news: State-run systems achieve the lowest mean ranking and are the furthest below the overall mean on Proximal Health outcomes than any other governance type. Perhaps more interesting is that the second poorest performing health governance type is empowered boards of health that are comprised of health professionals. In contrast, the relatively healthiest governance type is an empowered board comprised of a combination of health professionals and political office-holders, but where neither group has a majority. The second best performing governance type is one that shares responsibility among a board of health, the county government and the state. Finally, another surprising finding from the perspective of health outcomes, is that empowered boards of health comprised of a majority of political office-holders are related to better health outcomes.

Implications

One of the most basic implications of these findings is the creation of a useful means of distinguishing among local health governance types. Categorizing local health governance can be quite challenging given the variations and exceptions among counties. We believe that identifying specific and distinctive governance types is a significant contribution of this endeavor, and putting this categorization to use by examining health outcomes across the different governance types is potentially even more powerful. One limitation of the study is the limited number of counties in the analysis. These findings should be replicated with much larger numbers of counties and in more comprehensive models of county health outcomes; but, the findings presented here -- while far from the end of this story -- provide some profound implications.

First, we begin to see the problems of state-centralized systems. Having limited local control and buy-in would seem to have negative ramifications for county level health outcomes. We might

have expected empowered local health boards, comprised of trained health professionals, to correct this; but surprisingly, this, too, could be a mistake from the perspective of achieving population health outcomes.

Health governance that yields the best health outcomes turns out to be a more nuanced undertaking. This, however, is perhaps understandable from a broader perspective of public health. The system that governs best (from the perspective of health outcomes) includes the political branches on an empowered health board. Another relatively strong governance structure is a local board that shares authority with the local county government and the state. This may not be surprising considering the contemporary challenges that health departments face, and the important role that having multiple stakeholders, including those with political power and even those with a statewide perspective, can have for achieving population health.

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Table 1 : Governance coding and ANOVA results

Composite Governance				Proximal Health	
Name	Description	N	%	Mean Rank **	Z
State	State is fully empowered to run LHD	54	32.93	101.44	-0.382073
State w/County	State and County share power to run LHD	17	10.37	77.88	-0.018161
State w/ LBOH	State and LBOH share power to run LHD	8	4.88	85.62	-0.015179
County	County is fully empowered to run LHD	38	23.17	74.87	0.171168
County w/ LBOH	County and LBOH share power to run LHD	6	3.66	81.83	0.086388
Shared Governance	LBOH and County and State all have some power	12	7.32	56.92	0.500562
Pol BOH	Empowered LBOH, with a majority of political designees	13	7.93	72	0.216619
Pol and Health	Empowered LBOH, with some political designees and some health professionals, but not a majority of either.	6	3.66	30.83	1.005837
Health BOH	Empowered LBOH, with a majority of health professionals	10	6.10	90.3	-0.081846