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Health Inspectors on Local Boards of Health: the Impact on Communities' Environmental Health Governance

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ABSTRACT

Background: This study examines whether having a required health inspector on a local board of health (LBOH) improves the board's information on environmental health.

Methods: Analysis uses the national random sample of 351 U.S. LBOHs in the 2011 Profiles collected by the National Association of Local Boards of Health (NALBOH) and examines whether having a required health inspector on a LBOH increases the likelihood it receives information on 10 environmental health topics.

Results: LBOHs overall received little information on environmental health, and 48% reported wanting no or little additional information. Having a required health inspector on a LBOH did not increase the likelihood of a LBOH receiving information on 8 environmental health topics. On two additional topics, food safety and groundwater protection, LBOHs with a required health inspector are *less* likely to report receiving information. A required health inspector board member also did not significantly influence the openness of a LBOH to receiving more information on environmental health.

Conclusions: While LBOHs are the predominant public health department governing agencies in the United States, this study points to a low level of training and knowledge about environmental health issues. Having a required health inspector board member also does not improve LBOHs' reported likelihood of receiving information.

Keywords: Local boards of health, sanitarians, environmental health, governance, health inspectors
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INTRODUCTION

Local boards of health (LBOHs) are the predominant governance structure for public health in the United States. As such, they have the potential to be powerful advocates for environmental health. LBOHs govern local health departments which in turn often employ health inspectors (sometimes called sanitarians) who administer regulatory environmental health programs (food safety, water, air, solid waste, sewage, hazardous waste, etc.).

Some LBOHs require the inclusion of a sanitarian board member. Does this inclusion influence LBOHs' environmental health awareness through greater information?

METHODS

Institutional Review Board Approval: Secondary analysis of the data set for this article was reviewed and approved as exempt by the University of Kentucky Institutional Review Board.

Participants

The 2011 NALBOH Profile Survey consists of random sample of 353 LBOHs drawn from among the 2,420 U.S. LBOHs (Jones & Fenton, 2012a).

Setting

This study examines 2,420 LBOHs in the United States.

Assessments/survey instruments

The survey instrument was reviewed by a panel of experts for content and face validity and pilot tested (n = 18) provided additional feedback and resulted in modifications to the survey. The pilot test participants included a national convenience sample of LBOH members. An outside vendor formatted the survey to make it available online. Paper copies were available upon request from the time that the survey was launched. After approximately 6 weeks, a cover letter and copy of the survey were sent via surface mail to all boards of health. The cover letter also included a link and personal identification number (PIN) to allow access to the survey online. During the time while the survey was in the field, attempts were made to encourage response through contacts via email, facsimile (FAX),

newsletter reminders, and personal calls. Responses were voluntary.

For this current analysis of the NALBOH data, LBOH was marked as having a health inspector if it reported requiring at least one board member be a registered health inspector or sanitary engineer. LBOHs reporting they did not know if a health inspector is required were excluded from analysis.

Statistical analyses

We analyzed the resulting analytic sample of 353 individuals using univariate statistics, chi-square tests, and

independent samples t-tests. All data were analyzed at a 95% confidence level. Data were analyzed using IBM SPSS 23.

RESULTS

353 randomly selected LBOHs in 35 states responded to the online profiles survey (Figure 1). Of the 351 responding LBOHs, 83% report no source of information on environmental health issues.

Figure 1: Map Showing States with Local Boards of Health

Of the 351 LBOHs responding to the environmental health questions, a small percentage report being required to have a registered sanitarian (1.7%) or sanitary engineer (6.0%) on their boards. For analysis we marked a LBOH as having a health inspector if it reported requiring at least one board member be a registered sanitarian or sanitary engineer.

Table 1. Statistically significant Fisher's Exact Tests

Variable	Significance (p < 0.05)
Food safety information comes from a health officer or environmental health officer	.032
Groundwater protection information comes from a health officer or environmental health officer	.033

n = 351

Table 2: Percentages of LBOHs Reporting Need for More Training or Information on Environmental Health Practice and Policies

	Indicate the degree to which your board needs training or information in the following areas.
No need (1)	21.7%
Little need (2)	26.2%
Some need (3)	34.5%
Quite a bit of need (4)	14.3%
Great need (5)	3.7%

n = 328

Table 1 shows the variables whose Fisher's Exact Tests reveal statistical significance in terms of differences between LBOHs with a required health inspector and those LBOHs without a required health inspector. Counterintuitively, LBOHs with a required health inspector are less likely to report receiving information on food safety and groundwater protection from a health officer or environmental health officer. There are no statistically significant differences, however, in terms of receiving information regarding vector control, indoor air quality, surface water quality, healthy homes, hazardous waste, pollution prevention, outdoor air quality, and recreational water quality.

The LBOHs required to have a health inspector are, however, significantly different in certain ways from their peers. They have more board members, are more likely to be appointed, less likely to be elected, and are more likely to have members designated by statute to the board. On the other hand, LBOHs did not differ statistically in terms of the type of jurisdiction served, chair's education, chair's work experience in public health, or the likelihood of receiving various environmental health information from other board members (rather than from environmental health officers).

LBOHs also responded as to whether they felt their board needed additional training. On the topic of environmental health practice and policies, 21% reported needing no training with another 27% reporting they needed little

training on this topic (see Table 2). Having a health inspector on the LBOH had no statistically significant influence in terms of perceived need for more environmental health training.

DISCUSSION

While members of LBOHs oversee the environmental health of 72% of all U.S. LHDs, the NALBOH data point to a lack of information by LBOHs on environmental health issues: 83% report no source of environmental health information. Confounding this lack of information is the fact that LBOH members are primarily unpaid, volunteer appointees led by chairs with no education or work experience in public health (Jones & Fenton, 2012a). To borrow a phrase from political science, most LBOHs appear to be "low information" stewards of America's local environmental health. Yet, almost half of LBOHs report needing no or little training on environmental health practice and policies.

Relatively few LBOHs are required to have a registered sanitarian or sanitary engineer as a board member. LBOHs required to have a health inspector tend to be larger and more likely to consist of appointees. Since these boards with a required health inspector are also less likely to receive environmental health information from a health officer, we originally conjectured that the health inspector on the LBOH fulfilled these functions. Analysis, however, showed these LBOHs were no more likely to report

receiving environmental health information from a fellow board member. Thus curiously, LBOHs with a required health inspector appear to receive *less* environmental health information than LBOHs without one. A prior study (Jones & Fenton, 2012b) points to inactivity by many boards with the LBOH's primary function being the approval of the LHD's budget. Thus, it may be that the relatively small number of LBOHs with an appointed health inspector member largely function solely to approve the LHD budget and do not receive nor see a reason to receive more education on environmental health issues.

CONCLUSIONS

LBOHs may represent a powerful, potential force in safeguarding and improving the environment and communities' health if board members can be *educated* about environmental health and *empowered* as advocates. The NALBOH data suggest there is much work to be done

around LBOH education and that requiring LBOHs to include a health inspector is not associated with increased environmental information provided to a LBOH or an increased desire for more environmental health training.

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