

Predictors of Local Health Department National Accreditation Status

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I. INTRODUCTION

Background

Public health department accreditation is a recent advent across the United States. The Public Health Accreditation Board (PHAB) was established in 2007, accrediting the first local health departments (LHDs) in 2011. As of December 2014, there were 54 accredited health departments in total, 48 of which were local and 6 were state-level. A recent study showed that 6% of LHDs have applied for accreditation or released a statement of intent to do so, while 15% have opted not to undergo accreditation. PHAB recently developed a list of four priority research questions to guide researchers in building an evidence base for national accreditation. One of the priority questions was “What are the barriers and facilitators to seeking and obtaining accreditation?” By distinguishing factors that may contribute to the likelihood of becoming accredited, leaders can attempt to overcome or avoid some of the barriers. Furthermore, leaders can utilize some of the facilitators in order to promote increased pursuit and successful achievement of accreditation and avoid leaving vulnerable or disadvantaged health departments behind. However, due to the relatively recent establishment of PHAB and national accreditation, little research exists on factors that predict whether or not a health department achieves accreditation, particularly in regard to characteristics of the health departments and their served jurisdictions.

Study Aims

The current study aimed to help in building a foundation for the evidence-base behind accreditation and address one of the PHAB priority questions by describing the predictive characteristics associated with LHD success in becoming accredited.

Hypotheses

It was hypothesized that per capita expenditures would be a predictor of accreditation, as previous research supports, and a proxy measure for the level of available resources possessed by the LHD to overcome financial costs (a commonly reported barrier) of accreditation. Additionally, as previous research also suggests, jurisdiction type, size of population served, presence of a local board of health, and administration of a community health assessment were hypothesized to be factors predictive of accreditation status.

II. METHODS

Data

Data for the study were taken from the Public Health Accreditation Board (PHAB) website and the 2010 National Association of County and City Health Officials (NACCHO) National Profile of Local Health Departments. The survey included a set of core questions sent to all LHDs in the United States. Supplemental questions were grouped into two modules. Local health departments were randomly assigned to receive the core questions and one of the two modules. Only core questions were considered for analysis in the study. The 2010 NACCHO Profile of LHDs Survey was utilized to generate independent variables. The overall response rate was 82 percent, with 2,107 of 2,565 local health departments responding.

Variables

Accreditation status was determined through the use of the PHAB website. PHAB records were used to establish the LHDs that had received accreditation by November 2014. Independent variables were selected based on literature review of previous studies that indicated which factors may be predictive of health department accreditation status. These variables included population served, type of office (county, city, regional), local board of health presence, per capita spending (Q1: <\$22.99; Q2: \$22.99-41.12; Q3: \$41.13-68.77; and Q4: >\$68.77 per capita), and conducting of a community health assessment within the last three years.

Statistical Analysis

Descriptive statistics were generated for variables in the analysis. Bivariate analyses were conducted between accreditation status and independent variables using chi-square test for independence and t-test. Fisher’s exact test was utilized for small cell count associations. A predictive logistic regression model was used to assess the relationship between accreditation status and population served, type of office, local board of health presence, per capita spending, and community health assessment. The data were analyzed using SAS 9.3.1.

III. RESULTS

Table 1: Descriptive Statistics of 2010 NACCHO Profile Survey

	N	%
Accreditation Status		
Accredited	47	2.2
Non-Accredited	2060	97.8
Community Health Assessment		
No (not within last 3 yrs)	1183	56.6
Yes (within last 3 yrs)	908	43.4
Local Board of Health		
No	522	24.9
Yes	1577	75.1
Spending per capita		
[Q1] <\$22.99	430	25
[Q2] \$22.99 - \$41.12	430	25
[Q3] \$41.13 - \$68.77	431	25
[Q4] >\$68.77	430	25
Jurisdiction		
County	1539	73
City	299	14.2
Regional	269	12.8
	N	Mean (SD)
Population*	2107	1.34 (3.96)

Table 1 provides descriptive statistics for the independent and dependent variables used from the 2010 National Association of County and City Health Officials (NACCHO) Profile Survey. The total sample size was 2107, with an average population of 134,000 (Standard Deviation (SD) = 396,000). There were 47 accredited LHDs that completed the profile survey, which represented 2.2% of the sample, and 2060 non-accredited LHDs that did not complete the survey. Most communities (56.6%) did not have a community health assessment completed within the last three years, while three quarters (75%) of local health agencies had a board of health. Spending per capita was evenly distributed across categories (25% in each) due to the quartile method used to categorize this variable. County-level LHDs represented the majority (73%) of jurisdiction types, with city-level representing 14.2% and regional representing 12.8%.

Table 2: Crude and Adjusted ORs and 95% CI for Accredited vs Non-Accredited and Independent Variables

	Crude		Adjusted	
	OR	(95% CI)	OR	95% CI
Community Health Assessment				
No (not within last 3 yrs)	Ref		Ref	
Yes (within last 3 yrs)	1.95	(1.08, 3.51)	1.86	(1.02, 3.40)
Local Board of Health				
No	Ref		Ref	
Yes	4.97	(1.54, 16.1)	5.93	(1.69, 20.81)
Spending per capita				
[Q1] <\$22.99	Ref		Ref	
[Q2] \$22.99 - \$41.12	3.07	(1.11, 8.53)	3.12	(1.08, 9.00)
[Q3] \$41.13 - \$68.77	3.06	(1.10, 8.51)	3.17	(1.09, 9.20)
[Q4] >\$68.77	1.82	(0.60, 5.47)	1.56	(0.48, 5.05)
Jurisdiction				
County	Ref		Ref	
City	1.001	(0.44, 2.27)	1.5	(0.61, 3.70)
Regional	0.63	(0.22, 2.79)	0.79	(0.28, 2.28)
Population*	1.05	(1.02, 1.08)	1.06	(1.02, 1.09)

Statistically significant at alpha=0.05 level ORs and 95% CIs in bold
*Per 100,000

Table 2 describes crude and adjusted odds ratios (ORs) and associated 95% confidence intervals (CI) for accreditation status and independent variables. When a predictive logistic regression model was ran with all of the independent variables, significance was retained across all relationships that were significant in the crude analysis. After adjustment, completion of a community health assessment within the last three years was found to be a positive predictor of being accredited (OR=1.86; CI: 1.02, 3.40), as was presence of a local board of health (OR=5.93; CI: 1.69, 20.81), being in Q2 (OR=3.12; CI: 1.08, 9.00) or Q3 (OR=3.17; CI: 1.09, 9.20) of spending per capita when Q1 was used as the reference group, and increased population (OR=1.06 [per 100,000 increase]; CI: 1.02, 1.09). Neither city (OR=1.5; CI: 0.61, 3.70) nor regional (OR=0.79; CI: 0.28, 2.28) jurisdictions were statistically significant relative to county jurisdiction, even after adjustment.

IV. CONCLUSION

The current study found multiple characteristics to predict LHDs achievement of accreditation. These LHDs can be considered early adopters of accreditation because they are among the first to complete the process. Future research should focus on comparing the differences between early adopters, late adopters, and non-adopters. Additionally, as more LHDs become accredited, the potential sample size for accreditation will expand, allowing for more characteristics to be used in predictive analyses. These factors could include population demographics, workforce characteristics, and details about services providers. Future research will also need to evaluate outcomes of accreditation, including impacts on LHD efficiency, health outcomes, and economic impacts.