

Organizational Characteristics of Large Urban Health Departments

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Approximately 150 million Americans lived in large metropolitan jurisdictions in 2013. About 1 in 7 Americans is served by a member of the Big Cities Health Coalition (BCHC), a group of 20 of the largest local health departments (LHDs) in the United States. In this brief, we describe the organizational characteristics of the country's largest health departments, including those that form the BCHC, and quantify the differences and variation among them. We conducted secondary analyses of the 2013 National Association of County & City Health Officials Profile, specifically characterizing differences between BCHC members and other large LHDs. The data set contained 2000 LHDs that responded to National Association of County & City Health Officials' 2013 Profile. While LHDs serving 500 000 or more people account for only 5% of all LHDs, they covered 50% of the US population in 2013. The BCHC members served approximately 46 million people. The BCHC LHDs had a greater number of staff, larger budgets, and were more involved in policy than their larger peers.

KEY WORDS: Big Cities Health Coalition (BCHC), large LHDs, organizational characteristics

This supplement focuses on leadership perspectives from members of the Big Cities Health Coalition (BCHC)—a membership group of 20 of the nation's largest local health departments (LHDs). But what makes for a big city health department?

Public health systems and services researchers often examine characteristics of LHDs using the National Association of County & City Health Officials (NACCHO) Profile, a systematic longitudinal survey of LHDs in the United States. These comparisons frequently group health departments into categories on the basis of the size of the population served. As Mays has noted, one means of making these comparisons historically came

from dichotomizing at 100 000 people served, as noted in Mays' critical works on operations and finance of large LHDs.¹⁻⁴ More recently, these LHDs were typically grouped together by population served: fewer than 50 000 people served (small), 50 000 to 499 999 people served (medium), and 500 000 or more people served (large). Much of the previous research comparing LHDs of different jurisdictional sizes assumes homogeneity within these groups. However, all large LHDs are not the same; there may be as much variation among the large-sized LHD groups as there is between groups.⁵ The population served by the nation's 137 large-sized LHDs can range from 500 000 people to more than 9 000 000; a range significantly greater than that found in any other group. The heterogeneity inherent among the large-sized LHDs contributed to the creation of the BCHC.

The BCHC was formed in 2002 as a membership group to allow leaders from large, urban health departments to connect around issues prominent in the big cities. The 20 member health departments are Atlanta, Baltimore, Boston, Chicago, Cleveland, Dallas, Denver, Detroit, Houston, Los Angeles, Miami, New York, Philadelphia, Phoenix, San Antonio, San Diego, San Francisco, San Jose, Seattle, and Washington, DC (Table 1). This brief will highlight characteristics of BCHC LHDs, as well as differences between BCHC LHDs and other large, urban health departments.

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The authors declare no conflicts of interest.

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DOI: 10.1097/PHH.0000000000000172

TABLE 1 ● Members of the Big Cities Health Coalition in 2014

Primary Metropolitan Area Served	LHD Name	State	2013 Population	Jurisdiction Type	Health and Human Services Agency Status	Has a Local Board of Health
Atlanta	District 3, Unit 2: Fulton County Health District	Georgia	949 599	County	HHSAs	Yes
Baltimore City	Baltimore City Health Department	Maryland	619 493	City	Not HHSAs	No
Boston	Boston Public Health Commission	Massachusetts	625 087	City	Not HHSAs	Yes
Chicago	Chicago Department of Public Health	Illinois	2 707 120	City	Not HHSAs	Yes
Cleveland	Cleveland City Department of Public Health	Ohio	393 806	City	Not HHSAs	No
Dallas	Dallas County Health & Human Services	Texas	2 542 649	County	HHSAs	No
Denver	Denver Health and Hospital Authority	Colorado	619 968	County	Not HHSAs	No
Detroit	Detroit Health Department	Michigan	706 585	City	Not HHSAs	No
Houston	Houston Department of Health and Human Services	Texas	2 145 146	City	Not HHSAs	No
Los Angeles	Los Angeles County Department of Public Health	California	9 285 379	County	Not HHSAs	No
Miami	Florida Department of Health in Miami-Dade County	Florida	2 554 766	County	HHSAs	No
New York City	The New York City Department of Health and Mental Hygiene	New York	8 244 910	City	Not HHSAs	Yes
Philadelphia	Philadelphia Department of Public Health	Pennsylvania	1 536 471	County	Not HHSAs	Yes
Phoenix	Maricopa County Department of Public Health	Arizona	3 880 244	County	Not HHSAs	Yes
San Antonio	San Antonio Metropolitan Health District	Texas	1 756 153	County	Not HHSAs	No
San Diego	County of San Diego HHS and Public Health Services	California	3 140 069	County	HHSAs	No
San Francisco	San Francisco Department of Public Health	California	812 826	County	Not HHSAs	Yes
San Jose	Santa Clara County Public Health Department	California	1 809 378	County	HHSAs	No
Seattle	Public Health—Seattle & King County	Washington	1 969 722	County	Not HHSAs	Yes
Washington, District of Columbia	Government of the District of Columbia Department of Health	District of Columbia	617 996	City	Not HHSAs	No

Abbreviations: HHSAs, health and human services agency; LHD, local health department.

● Methods

We used data from the 2013 NACCHO Profile.⁶ Through a Web-based survey, the Profile collects data from the nation's 2800 health departments (condensed

into N = 2532 reporting units) on organizational characteristics. The response rate for the 2013 NACCHO Profile was 78%. There were 137 LHDs that served 500 000 or more people (including BCHC members). Ninety-two percent completed the survey. All but 1

BCHC member LHD completed the 2013 profile; financial and staffing data were manually entered on the basis of county documentation for this jurisdiction.⁷ Descriptive statistics are reported, as are inferential comparisons using the Tukey test for multiple comparisons of means and the Fisher exact test for bivariate comparisons of categorical data. Data were managed and analyzed in Stata 13 (StataCorp, College Station, Texas).

● **Results**

Approximately 5% of all LHDs nationally serve populations of 500 000 or more and serve about half the population of the United States (Table 1). Twenty of these 137 LHDs are BCHC members, representing fewer than 1% of all LHDs but serving 1 in 7 Americans (15% of the US population). The 46 million residents who are served BCHC LHDs live across 27 270 square miles. In contrast, the 1544 smallest LHDs serving fewer than 50 000 people serve 31 million residents across an estimated 1.4 million square miles. Despite similarities in size, BCHC LHDs are organized in a variety of ways. Twelve are housed within county government and 8 within city government; 4 are located within a Health and Human Services agency; and 12 do not have local boards of health but are administered in a different fashion (eg, by the mayor’s office, or a county executive).

Staffing

The BCHC members have more full-time employees (FTEs) than the smallest 1554 health departments combined (Table 2): 1486 employees on average (median 772), compared with 340 employees on average (median 305) for other LHDs serving large jurisdictions of more than 500 000 people. On average, BCHC members employed 1309 FTEs (median 772, minimum 143, maximum

5826). Other large LHDs employed 311 FTEs on average (median 260, minimum 10, maximum 1040). Per capita staffing among LHDs varies considerably. The BCHC LHDs have 0.99 FTEs per 1000 residents on average (median 0.509, minimum 0.155, maximum 7.3), more than double other large LHDs. Other large (non-BCHC) LHDs have 0.40 FTEs per 1000 residents on average (median 0.34). Local health departments serving midsized jurisdictions had 0.57 FTEs per 1000 residents (median 0.46) and LHDs serving small jurisdictions had 1.06 FTEs per 1000 residents (median 0.71). The median FTEs per capita for rural jurisdictions were the highest among all groups. There was a stepwise decrease in the mean FTEs per capita from the BCHC LHDs to the other large LHDs to the medium-sized jurisdictions, but then an increase in the smallest jurisdictions approaches that of the BCHC LHDs’ average. The employment of epidemiologists is another way BCHC LHDs look different from all other jurisdictions, including other large health departments (Table 2). In absolute terms, BCHC LHDs had more than 10 times more epidemiologist FTEs, on average, than other large LHDs. This relationship held after accounting for LHD size. Once population size is taken into account, BCHC LHDs had 4 times as many epidemiologist FTEs as other large LHDs, per capita (*P* < .01).

LHD services and policymaking activities

The BCHC jurisdictions provided a number of activities more frequently than did other large LHDs (Table 3), including several clinical infectious disease screening and treatment activities for HIV/AIDs and other sexually transmitted diseases as well as population-based services aimed at preventing chronic disease, enforcing smoke-free ordinances, and promoting injury prevention. Epidemiology activities are another area of difference between BCHC and other large LHDs. BCHC LHDs more commonly reported providing injury, behavioral, chronic disease, syndromic, and

TABLE 2 ● Local Health Department Characteristics by Population Served in 2013 (Weighted)^a

Population Served in 2013	Number of LHDs	LHDs, %	Total Population (Millions)	Total Population, %	Total Number of FTEs	Total FTEs, %
<50 000	1544	61	31.3	10	21 692	15
50-499 999	850	34	125.8	41	60 210	42
Other large LHDs serving >500 000	117	5	106.6	34	36 768	25
BCHC members	20	1	46.9	15	26 194	18
Total	2532	100	310.6 ^a	100	144 865	100

Abbreviations: BCHC, Big Cities Health Coalition; FTEs, full-time employees; LHDs, local health departments.

^aPublic health services for several million individuals are provided by state health agencies in areas without local health departments.

TABLE 3 • Comparison of Selected Activities Conducted by LHDs, by BCHC Member Status^a

	BCHC LHDs (n = 16-18)	Other Large LHDs Serving 500 000 + People (n = 105-108)	All LHDs (n = 1904-1961)
Clinical services			
Screen for HIV/AIDS	100%	93%	62%
Screen for other STDs	94%	92%	65%
Screen for cardiovascular health	47%	37%	27%
Provide treatment of HIV/AIDS	56%	39%	24%
Provide treatment of other STDs	88%	87%	61%
Provide comprehensive primary care	35%	18%	11%
Provide oral health care	53%	50%	25%
Provide behavioral health care	29%	24%	10%
Provide EMS services	31%	15%	3%
Provide laboratory services	81%	65%	28%
Population-oriented services			
Chronic disease epi	94%	58%	44% ^b
Injury epi	81%	42%	27% ^b
Behavioral epi	75%	52%	37%
Syndromic epi	100%	78%	48% ^b
Maternal/child health epi	94%	76%	49%
Injury prevention	81%	45%	38% ^b
Pregnancy prevention	94%	66%	49%
Chronic disease prevention	100%	69%	50% ^b
Violence prevention	71%	34%	21% ^b
Campground inspection	8%	45%	41% ^b
Enforcing smoke-free ordinances	93%	67%	59% ^b
Lead inspections	85%	63%	49%
Asthma prevention	50%	43%	11%
Vital records	88%	66%	55%

Abbreviations: BCHC, Big Cities Health Coalition; epi, epidemiology; EMS, emergency medical services; HIV/AIDS, human immunodeficiency virus/acquired immunodeficiency syndrome; STDs, sexually transmitted diseases.

^aBecause these data are functionally a census of the universe of LHDs of interest, comparisons do not necessarily require inferential statistics; descriptive comparisons of total proportion may be appropriate.

^bDifferences between BCHC and other LHDs serving large jurisdictions are statistically significant at $P < .05$, using Fisher exact test.

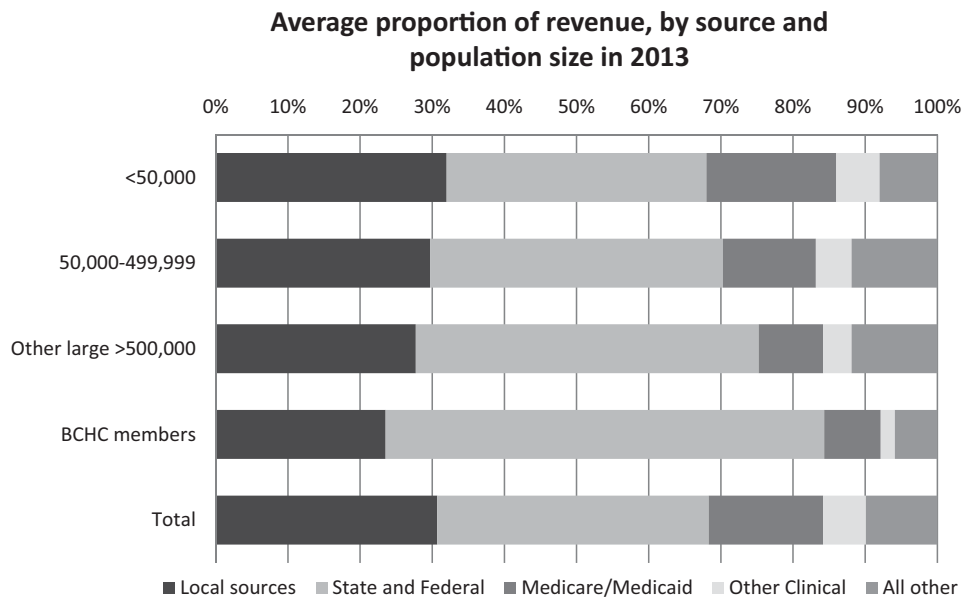
maternal/child health epidemiology than did other large LHDs.

NACCHO tracks 5 significant areas of LHDs policy activities (Figure). Overall, NACCHO Profile data suggest that BCHC LHDs and other large LHDs are more active in policymaking than their smaller counterparts, especially at state and federal levels. Fewer than half of small LHDs said that they prepared issue briefs at the local, state, or federal level. Forty-two percent of BCHC members created issue briefs for federal audiences, compared with 17% of other large LHDs, 4% of medium-sized LHDs, and 2% of small LHDs. Ninety-five percent of BCHC members reported giving public testimony locally, compared with one-third of small LHDs. More than two-thirds of BCHC members said that they had given public testimony at the state level in 2012-2013. Overall, 100% of BCHC members said that they had worked on at least 1 of the 5 policy areas at

the local level tracked by NACCHO in the past 2 years, 89% reported working on at least 1 at the state level, and 74% at the federal level. Among other large LHDs, 87% reported working on at least 1 policy area at the local level, 77% at the state level, and 36% at the local level. Overall, 81% of all LHDs reported being active in 1 of the 5 policy areas at the local level, 57% at the state level, and 15% at the federal level.

Finances

Total expenditures in LHDs were strongly correlated with total FTEs ($r = 0.95$). The BCHC LHDs spent \$311 million on average (median \$100 million). Other large LHDs spent \$42 million on average (median \$30 million). The differences narrow considerably when adjusted for population size with a per capita calculation. In fiscal year 2013, spending in the BCHC

FIGURE ● Average Proportion of LHD Revenue by Source

Abbreviation: BCHC, Big Cities Health Coalition.

LHDs averaged \$79 per capita (median \$48) compared with \$43 per capita (\$33 median) at other large LHDs. Seven BCHC members reported spending less than \$50 per capita in their jurisdictions, and 1 jurisdiction spent \$14 per capita. A difference in provision of certain high-cost services including comprehensive primary care, behavioral health care, and emergency medical services may explain some of these variations.

● Discussion

The BCHC member cities are often grouped with other large health departments with jurisdictional sizes of 500 000 people or more. However, this analysis identifies significant heterogeneity among this group of LHDs. The BCHC LHDs perform more population-based services than other large LHDs and have extensive surveillance capacity. Epidemiology is a major point of difference between BCHC LHDs and other large LHDs; more staff are employed in both absolute and relative terms. After accounting for population size, BCHC LHDs have 4 times as many epidemiology FTEs, on average, compared with other large LHDs. The BCHC LHDs also perform more types of epidemiology and surveillance, on average, than do other large LHDs. This is critically important, as more and better data are critical to policy involvement and movement.⁸ However, these services and capacities are not uniformly robust across all BCHC LHDs, and further informatics capacity and development are needed.⁹

While there are differences in funding between BCHC LHDs and other large LHDs, these data also identify funding discrepancies among BCHC LHDs. Some BCHC LHDs are well resourced in absolute terms and on a per capita basis. Significant variation in local and state revenue has meant that per capita spending varies by an order of magnitude between the highest and lowest spending LHDs in the BCHC. This is due in part to the portfolio of services that a LHD provides, and that some BCHC jurisdictions do not provide extensive direct clinical services, focusing more on population-oriented services.¹⁰ However, much of the variation may also be due to inconsistent state allocation of federal pass-through funds. In fiscal year 2013, \$430 million of \$5.4 billion* in CDC grants to governmental public health agencies went directly to county or city governmental health departments.¹¹ If LHDs do not receive funds directly from the federal government, they are dependent on state agencies for pass-through federal monies, which are not necessarily distributed in line with population size or need.⁵ This has profound implications for the health of the 46 million residents served by BCHC LHDs. Greater examination of policies related to direct funding of large, urban LHDs is needed to ensure that LHDs are resourced appropriately to face mounting challenges of chronic disease, made worse by disparities endemic to cities.¹²

*This figure does not include grants to nongovernmental entities, hospitals, or educational institutions.

Limitations

The NACCHO Profile is arguably the best nationwide source of data on the organizational capacities and characteristics of LHDs.¹³ However, the NACCHO Profile is not without its limitations. Despite a relatively robust response rate of 78%, nonresponse biases may be an issue. The profile is self-reported.

● Conclusions

The nation's large health departments serve more than 50% of American citizenry, and the largest 1% of LHDs—those forming the BCHC—serve 15% of the population, approximately 46 million people. The 20 BCHC LHDs stand out from other large health departments in terms of the size of their workforce, total expenditures, policy involvement, and surveillance capacity. The characteristics of these large health departments give their leaders the potential of having notable influence in developing policies that advance the public health agenda in large urban areas and nationally.

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