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Hospital Community Benefit in the Context of the Larger Public Health System: A State-Level Analysis of Hospital and Governmental Public Health Spending Across the United States

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Abstract

Context: Achieving meaningful population health improvements has become a priority for communities across the United States, yet funding to sustain multisector initiatives is frequently not available. One potential source of funding for population health initiatives is the community benefit expenditures that are required of nonprofit hospitals to maintain their tax-exempt status.

Objective: In this article, we explore the importance of nonprofit hospitals' community benefit dollars as a funding source for population health.

Design: Hospitals' community benefit expenditures were obtained from their 2009 IRS (Internal Revenue Service) Form 990 Schedule H and complemented with data on state and local public health spending from the Association of State and Territorial Health Officials and the National Association of County & City Health Officials. Key measures included indicators of hospitals' community health spending and governmental public health spending, all aggregated to the state level. Univariate and bivariate statistics were used to describe how much hospitals spent on programs and activities for the community at large and to understand the relationship between hospitals' spending and the expenditures of state and local health departments.

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Results: Tax-exempt hospitals spent a median of \$130 per capita on community benefit activities, of which almost \$11 went toward community health improvement and community-building activities. In comparison, median state and local health department spending amounted to \$82 and \$48 per capita, respectively. Hospitals' spending thus contributed an additional 9% to the resources available for population health to state and local health departments. Spending, however, varied widely by state and was unrelated to governmental public health spending. Moreover, adding hospitals' spending to the financial resources available to governmental public health agencies did not reduce existing inequalities in population health funding across states.

Conclusions: Hospitals' community health investments represent an important source for public health activities, yet inequalities in the availability of funding across communities remain.

Keywords

community benefit; governmental public health agencies; population health; public health spending; tax-exempt hospitals

Achieving meaningful population health improvements has become a priority for communities across the United States, yet funding to sustain multipronged initiatives is frequently not available. Improving population health requires communities to simultaneously address a wide range of factors known to determine health. Besides medical care resources, these factors include aspects of community members' individual health behaviors and the socioeconomic and physical environments that they live in.¹ Responsibility for improving population health outcomes is a shared effort whose success relies on building and sustaining effective multipronged partnerships.²⁻⁶ Sustaining these partnerships, however, requires adequate resources. Given that both public and private sectors are facing economic pressures, identifying sustainable sources of financial support thus represents an important task for communities across the country.⁷

One potential source of funding for population health initiatives is the community benefit expenditures that are required of nonprofit hospitals to maintain their tax-exempt status.⁷ Almost all nonprofit hospitals are exempt from federal, state, and local taxes. According to recent research, tax-exempt hospitals spend approximately 7.5% of their operating budget on community benefits as defined by the Internal Revenue Service (IRS).⁸ Currently, more than 85% of hospitals' total community expenditures are for the provision of clinical care, including offering charity care, treating Medicaid patients, and providing subsidized health services whereas approximately 8% of total hospitals' community benefit expenditures support programs and services that are aimed at improving the health of the community more broadly, such as immunization campaigns, breast cancer screening, and health education initiatives.⁸ The remainder of hospitals' community benefit expenditures (~7%) support health research and health care professionals education activities.

Under the Affordable Care Act (ACA), however, demand for charity care is expected to decrease as many of the currently uninsured are gaining coverage. Reduced spending on charity care frees up resources that hospitals may be able to redirect to other community benefit activities, including community health improvement (CHI) initiatives.^{9,10} Whether hospitals will indeed reinvest their charity care savings is an open question. At the federal

level, there is no minimum spending threshold for hospitals to remain tax-exempt. Likewise, only a handful of states have minimum spending thresholds for hospitals to remain exempt from state and local taxes.^{11,12} Recent efforts to increase transparency around hospitals' community benefit spending in the form of revisions to IRS Form 990 Schedule H, however, may put pressure on hospitals to maintain their pre-ACA levels of community benefit investment by making changes to the composition of the benefits they provide.¹³

Little is currently known about the importance of hospitals' community benefit dollars as a funding source for improving population health. Building on 2 recently published studies of hospital community benefit, this article aims to shed light on this question.^{8,14} We first compare funding from hospitals' community benefit budgets with the resources available to governmental public health agencies, in particular state and local health departments, and document the variation in resources available for community health activities across the country. We then analyze whether tax-exempt hospitals' investments in community health reduce existing disparities in the resources available to improve population health.

Findings of this study are of interest to both policy makers and health care and public health practitioners. Policy makers may use the findings to gain a more complete understanding of the funding sources available for population health initiatives beyond the resources of governmental public health agencies. This knowledge may help them assess whether current levels of funding for population health initiatives are adequate, given the population health needs of the state. For health care and public health practitioners, an understanding of the resources available in a community for population health activities is critical as they engage in multipronged partnerships and aim to secure sustainable funding for their efforts. Moreover, comparing local levels of funding to state averages will allow communities to assess the adequacy of the financial resources available, given the specific health needs of the community, and inform lobbying efforts for increased funding.

Methods

Data and sample

Data for this study came from a number of sources. Data on the level and composition of nonprofit hospitals' community benefit expenditures were obtained from their 2009 tax filings (IRS Form 990 Schedule H). In 2009, more than 1800 general acute care nonprofit hospitals completed Form 990 Schedule H at the individual hospital level. These 1800 hospitals represent approximately two-thirds of all nonprofit hospitals in the United States. The remaining one-third of nonprofit hospitals were covered under a group exemption that allowed them to complete Form 990 Schedule H at the system level. Hospitals that were covered under a group exemption were not included in our final sample.⁸

To obtain an estimate of the total community benefit investment of all nonprofit hospitals in the United States (including both individual and system hospitals), data from IRS Form 990 Schedule H were merged with data on nonprofit hospitals' operating expenditures from the American Hospital Directory. The American Hospital Directory (www.ahd.com) provides detailed demographic, operational, and financial data for more than 6000 hospitals in the United States.

Data on state and local public health spending were obtained from the Association of State and Territorial Health Officials Profile of State Public Health and the Profile Study of the National Association of County & City Health Officials, respectively. Data on states' decision about whether or not to expand Medicaid were obtained from the Kaiser Family Foundation.¹⁵ With the exception of the latter, all data were for the years 2012–2013.

The unit of analysis for this study was the state. Therefore, all data were aggregated to the level of each state. Data on hospitals' community benefit expenditures were available for all 50 states and the District of Columbia. Data on state public health spending were available for 47 states and the District of Columbia. Data on local public health spending were available for 38 states and the District of Columbia. Our final sample thus included data for 37 states and the District of Columbia.

Measures

Key measures for this study included 2 sets of indicators: (1) indicators of hospitals' community health spending; and (2) indicators of governmental public health spending. All indicators were expressed in terms of state-level dollars spent per capita. For the purpose of this study, hospitals' spending on community health initiatives was defined in terms of their expenditures in the following categories (as reported on IRS Form 990 Schedule H):

- *Community health improvement (CHI)*: This indicator included hospitals' spending on community health improvement services and community benefit operations (activities and programs subsidized by the organization for the express purpose of CHI, documented by a community health needs assessment) as well as cash and in-kind contributions (contributions, monetary or otherwise, to community benefit activities made by the organization to community groups). Examples include immunization campaigns, breast cancer screening, and health education initiatives. Data for this indicator were obtained from the 2009 IRS Form 990 Schedule H, Part I, lines 7e and i.
- *Community-building activities (CBA)*: This indicator included hospitals' spending on activities that the organization engaged in to protect or improve the community's health or safety, such as housing for low-income seniors or violence prevention programs. While the IRS does not consider CBA to be community benefit, hospitals are nonetheless asked to report on their CBA in Part II of IRS Form 990 Schedule H. For the purpose of this study, hospitals' spending on CBA was included as an additional indicator of hospital investment in population health.

We focused on the aforementioned categories, as these represent expenditures aimed at improving the health of the broader population, rather than clinical services provided to individual patients. For both categories (CHI and CBA spending), we first computed state averages, that is, for each state, we obtained hospitals' spending in each of the 2 categories as a percentage of the hospital's total expenditures. We then calculated the simple averages for these 2 spending indicators across all hospitals in a state. These state-level averages were then multiplied with each state's total nonprofit hospital expenditures for 2012 (obtained from the American Hospital Directory) to estimate total spending on both CHI and CBA by

all nonprofit hospitals in a given state.¹⁴ Estimated state-level per capita spending in each category was obtained by dividing total estimated spending of all hospitals in a state by the state's population in 2012.¹⁴

Indicators of governmental public health spending were defined as per capita spending by state and local health departments in each state. To obtain state-level per capita spending indicators, total expenditures by state and local health departments as reported by the Association of State and Territorial Health Officials and the National Association of County & City Health Officials, respectively, were divided by the population of each state. Simply combining these per capita expenditures to obtain total state and local public health spending, however, would result in double-counting, as certain dollars are counted by both the state and the local health departments when they report their spending.¹⁶ The funding that state health departments receive from the federal government is spent only partially directly by the state health department. The remainder is distributed to local health departments as "federal pass-through," along with funds that come from the state. These funds are not only counted by state health departments when reporting spending but also included in the spending figures reported by local health departments, thus resulting in double-counting. Aggregating state and local public health spending thus requires that these dollars are counted only once.

Computing integrated spending estimates, such as was done in the study by Leider and colleagues,¹⁶ however, is beyond the scope of this article. Instead, we used the estimates of state, local, and combined state and local public health spending reported by Leider and colleagues to compute a state-specific adjustment factor. This adjustment factor was then used to reduce the combined total spending of state and local health departments by the proportion of funds estimated to have been double-counted. For the purpose of this article, for each state, for which Leider and colleagues report data, an adjustment factor was calculated by dividing estimated state and local spending by the sum of total state spending and total local spending.¹⁶ These state-specific adjustment factors were then multiplied by the sum of total per capita expenditures of both the state and the local health department in each state to obtain adjusted combined state and local public health spending. Adjustment factors were available for 36 states and the District of Columbia. The final sample for all analyses using adjusted state and local public health spending thus contains 1 fewer state (New York) than the final sample for the analysis of unadjusted spending.

Analytic approach

Univariate and bivariate statistics were used to address our research questions. First, descriptive statistics were computed regarding how much nonprofit hospitals spend on community health initiatives. We then examined how much hospitals' spending on community health initiatives contributed to the financial resources of the larger public health system. Second, bivariate correlation analysis was conducted to understand the relationship between hospitals' spending on community health initiatives and the expenditures of state and local health departments. Finally, Gini coefficients were used to explore to what extent hospitals' community health spending reduced disparities in the availability of resources for population health improvement efforts across states.

Gini coefficients represent a measure of inequality to quantify differences in various outcomes of interest, such as a country's income distribution. Coefficients range from 0 to 1, whereby smaller values indicate less inequality in the outcome of interest and greater values indicate more inequality. Gini coefficients have been used to study inequalities in numerous outcomes of interest, including inequality in tax revenue or social spending across states or municipalities, yet to our knowledge, no one has used Gini coefficients to study inequalities in population health spending.^{17,18} For the purpose of this study, Gini coefficients were calculated for each spending category separately as well as for hospital and governmental public health spending combined (both adjusted and unadjusted for double-counting of certain categories of funds).

Results

Across all 50 states and the District of Columbia, median estimated spending by tax-exempt hospitals on all community benefit activities was \$130 per capita in 2012 (Table 1). Of these \$130, an estimated median of \$9.05, or 6.6%, went toward CHI activities. In addition to CHI activities, most tax-exempt hospitals engaged in CBA. In 2012, tax-exempt hospitals across the United States spent an estimated median of \$1.57 per capita on such activities. Combined, tax-exempt hospitals thus contributed almost \$11 per capita in financial resources to population health improvement efforts. In comparison, median state and local health department spending amounted to \$82 and \$48 per capita, respectively (Table 1). Adjusting for double-counting, state and local health departments combined spent a median of \$104 per capita. Tax-exempt hospitals' spending thus contributed an additional 9% to the resources available for population health to state and local health departments.

Hospitals' estimated spending on both CHI and CBA varied widely across states (Table 1 and Figure 1). Per capita spending on CHI ranged from less than \$1 in Alabama to almost \$30 in Alaska. Similarly, per capita spending on CBA ranged from close to \$0, as reported by hospitals in Utah, to more than \$44 in Colorado. The proportion of hospitals' community benefit dollars spent on CHI thus varied widely, ranging from 2% of hospitals' total spending on community benefits in Tennessee to more than 25% in Alaska. Similarly, when expressed as a proportion of total community benefit spending, estimated spending on CBA ranged from none, as reported by hospitals in Utah, to 32% in Colorado. As a result of this variation, tax-exempt hospitals' contributions to the larger public health system varied widely: When expressed as a percentage of adjusted combined state and local health spending, hospitals' spending on community health ranged from less than 1% in Alabama to more than 50% in Colorado.

Hospitals in states that have since expanded Medicaid had substantially higher estimated spending on community benefit programs and services in 2012 than hospitals in states that have not expanded Medicaid (Table 1). Median 2012 community benefit spending by hospitals in Medicaid expansion states was estimated at \$143 per capita compared with \$94 in nonexpansion states. Hospitals in Medicaid expansion states also spent more on CHI and CBA than hospitals in nonexpansion states. Median 2012 CHI spending was almost \$11 per capita in expansion states but less than \$7 per capita in nonexpansion states. Median CBA spending was more than \$1.60 per capita in expansion states but less than \$1.30 in

nonexpansion states. As a result, in Medicaid expansion states, hospitals' combined CHI and CBA spending contributed an additional 11% to the resources available for population health in 2012, whereas hospitals in nonexpansion states contributed only an additional 7%.

Not surprisingly, hospitals' estimated expenditures on CHI and CBA were strongly positively correlated (see Table 2). Hospitals' community health investments were not, however, related to governmental public health spending (Table 2). All correlation coefficients between hospitals' community health spending and the spending by local health departments were positive, yet none of the coefficients was significant at the 5% confidence level. Likewise, none of the correlation coefficients between hospital spending and the spending by state health departments was significantly different from zero. Hospitals thus did not spend more per capita on CHI and CBA in states characterized by below-average spending levels of state and local health departments, nor did higher governmental public health spending appear to reduce the amounts hospitals spent on community health initiatives.

Adding hospitals' community health investments to the financial resources available to governmental public health agencies did not reduce existing inequalities in population health spending across states. The financial resources available to state and local health departments for public health varied widely across states (Table 1 and Figure 2). Quantifying this inequality resulted in Gini coefficients for state and local health department spending of 0.26 and 0.31, respectively (Table 3). When considered together, however, state and local health spending was much less unequal across states, as shown by a drop in the Gini coefficient to 0.22 for unadjusted combined state and local public health funding and 0.20 for adjusted combined state and local public health funding. Likewise, hospitals' spending on CHI and CBA exhibited large variation across states (Table 1). Quantifying this inequality using Gini coefficients resulted in coefficients of 0.31 and 0.62 for hospitals' spending on CHI and CBA, respectively. When considered together, hospital spending was still relatively unequal, as shown by a Gini coefficient of 0.36. Further combining hospitals' spending on CHI and CBA with existing governmental public health resources did not reduce existing inequalities in the resources available for population health across states, as shown by a drop in the Gini coefficient from 0.22 for combined unadjusted state and local public health spending alone to 0.21 for combined hospital and unadjusted governmental public health spending. Similarly, when combined state and local public health spending was adjusted for double-counting, the Gini coefficient dropped from 0.20 for adjusted combined state and local public health spending alone to 0.19 for combined hospital and adjusted governmental public health spending (Figure 3).

Discussion

Nonprofit hospitals' community benefit spending plays an important role for funding community health initiatives. In 2012, hospitals' investment in CHI and CBA contributed an additional 9% to the financial resources available for public health activities in a community, with further increases expected as the ACA takes full effect. As a result of the ACA's health insurance mandate, the number of uninsured Americans has already begun to decline.¹⁹ In response, demand for charity care at many hospitals has begun to decline as well, although

some of these reductions are being offset by increases in the unreimbursed costs of treating Medicaid patients and reductions in disproportionate-share hospital payments.^{20,21} Nonetheless, lower charity care costs may free up financial resources that hospitals may decide to reinvest in programs and services that benefit the broader community. Under federal and most state exemption standards, hospitals are not required to maintain a minimum amount of community benefit to remain tax-exempt. Hospitals that experience reductions in charity care costs are therefore not obligated to redirect these savings to other areas of community benefit activity. Nonetheless, increased transparency of hospitals' community benefit activities, in the form of both federal and state community benefit reporting requirements, can be expected to put pressure on hospitals to at least maintain, if not increase, their levels of community benefit spending in the future.¹³

Hospitals' financial contributions to the larger public health system, however, vary substantially across states. In some states, hospitals contribute almost nothing to funding population health activities, whereas in other states, the amount of hospitals' contributions plays an important role in the funding of community health initiatives. The health needs of communities across the United States vary widely (as documented by, among others, the County Health Rankings) as do the public and private community organizations working to address these needs. Variations in both the total amount and the pattern of population health spending reflect some of these geographic variations, yet prior research has also shown that demographic variation can only explain parts of these variations.²² How this variation in funding sources available for population health will change in the era of the ACA is not yet clear. Future funding levels depend on federal, state, and local policies and the interplay among them. Federal health reform, for instance, relies on states expanding their Medicaid programs, yet a substantial number of states have decided not to do so.¹⁵ Medicaid expansion, however, has important implications for hospitals' charity care costs. Expansion state hospitals have begun to see larger reductions in the number of charity patients than hospitals in nonexpansion states.²⁰ Hospitals in expansion states may thus have more additional financial resources to dedicate to community health initiatives. Hospitals in these states, however, already spend more on such activities than hospitals in nonexpansion states. As a result, variations in hospitals' contributions to the larger public health system may continue to grow under the ACA.

Perhaps, not surprisingly, nonprofit hospitals' investments in community health are largely unrelated to governmental public health spending. For decades, hospitals have focused their community benefit activities on providing free and reduced cost care to the indigent.⁸ Programs and activities for the community at large have only recently become of greater interest to hospitals. Total spending on activities aimed at improving the health of the community at large is still comparatively small.⁸ Moreover, in the past, few hospitals systematically planned which programs and services to invest in. Additional provisions in the ACA are expected to change this. To remain tax-exempt, nonprofit hospitals are now required, among other things, to conduct a community health needs assessment every 3 years and develop an implementation plan.²³ Hospitals are asked to collaborate with others in the community, especially the local health department, in the development of these documents. Already, there is evidence that hospitals, local health departments, and other community stakeholders are increasingly engaging in partnerships.^{24,25} Partnership efforts,

however, require stable and sustainable funding. The finding that funding levels are highly uneven across states, and by extension, likely across communities, may thus serve as a call to action for both policy makers and health care and public health practitioners to work toward ensuring adequate and stable funding streams, given the health needs of each community. Future work will be needed to assess the levels of funding that tax-exempt hospitals provide over time for population health improvement, especially in light of the changes to the demand for direct patient community benefits that hospitals are facing under the ACA.

Limitations

This research has a number of limitations that should be considered when interpreting the results. First of all, data for this study were limited to the years 2012–2013 and therefore do not take into account any actual changes that hospitals may have experienced in their community benefit spending under the ACA. As discussed earlier, changes in nonprofit hospitals' community benefit portfolio are likely as health reform is being implemented.

Second, hospital spending numbers presented in this study are estimates based on 2009 spending levels, rather than actual community benefit expenditures by tax-exempt hospitals in 2012. Implicit in this approach is the assumption that the level and pattern of hospitals' community benefit expenditures did not change significantly between 2009 and 2012. Given that 2009 was the first year in which tax-exempt hospitals were required to complete the revised IRS Form 990 Schedule H, it can be expected that the level of community benefit spending reported in subsequent years will be higher as hospitals learn how to better capture and report their community benefit activities.²⁶ Actual community benefit spending in 2012 was thus likely higher than the estimates reported here.

Third, since the IRS does not count CBAs as a community benefit, not all hospitals provided detailed information on these activities in their Form 990 Schedule H. Missing information may thus bias our estimates of hospitals' spending on CBA downward.

Fourth, the state-specific adjustment factors used in this study were derived from calculations by Leider and colleagues¹⁶ using data for 2008. For the purpose of this study, we applied these adjustment factors to data for 2012–2013, thus assuming that these factors remain relatively constant over time. Whether this is indeed the case will require further analysis that is beyond the scope of this study.

Fifth, the data used in this study were aggregated to the level of the state. State-level averages, however, ignore the significant in-state variation in both hospitals' community benefit activities and local health departments' financial resources. Community-level analyses using data at the local or regional level may thus be a useful exercise as local public health and health care leaders engage in multipronged collaborations.

Sixth, as a result of our unit of analysis, our sample size of 38 states with complete data on all variables of interest is rather small. While definitions of a small sample in statistics or economics vary, our sample size makes it more difficult to determine the Lorenzo curves used in the calculation of Gini coefficients resulting in potential downward bias in the

coefficients. The Gini coefficients reported in this article may thus portray funding streams to be more equal across states than they truly are.

Finally, this study does not take into account the financial contributions made by other community stakeholders besides nonprofit hospitals and governmental public health agencies. Currently, comprehensive data on total financial resources available for public health in a community are not available.²⁷ As a result, it is unknown how hospitals' investments compare with those of other community stakeholders, and a more complete understanding of the financial investments by all community stakeholders would likely result in a different assessment of the inequalities in population health spending across communities and states.

Conclusion

Hospitals' community health investments represent an important source of funding to support the efforts of multisector partnerships at improving population health, yet inequalities in the availability of funding across communities remain. Once the ACA takes full effect, hospitals may have additional resources to invest in CHI activities. Changes in hospital spending, however, will likely not be uniform across hospitals and states. While hospitals in Medicaid expansion states will likely be able to dedicate additional funding to community health efforts, hospitals in nonexpansion states will continue to experience significant demand for charity care and other clinical services. Disparities in the financial resources available for community-level population health improvement efforts will thus continue to exist into the foreseeable future. For policy makers and practitioners, these findings should be a call to action. In particular, communities with substantial unmet health needs will require additional funding to engage in sustained multipronged initiatives aimed at improving population health outcomes.

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FIGURE 1.
Community Health Improvement and Community-Building Dollars per Capita

FIGURE 2.
State and Local Health Department Spending per Capita

FIGURE 3.
Total per Capita Public Health Spending by Nonprofit Hospitals, State Health Departments,
and Local Health Departments

State-Level per Capita Public Health Spending by Nonprofit Hospitals, SHDs, and LHDs

TABLE 1

State	Hospital Spending				Governmental Public Health Spending			
	Total CB Spending	CHI Spending	CHI as % of Total CB Spending	CBA as % of Total CB Spending	CBA Spending	LHD Spending	SHD Spending	Combined LHD and SHD Spending (Adjusted)
Alaska	\$114.41	\$29.66	25.9	6.3	\$7.20	n/a	\$123.56	n/a
Alabama	\$29.50	\$0.74	2.5	0.4	\$0.11	\$66.00	\$117.93	\$183.93
Arkansas	\$79.88	\$4.86	6.1	1.3	\$1.06	n/a	\$124.19	n/a
Arizona	\$129.96	\$6.16	4.7	0.9	\$1.12	\$54.30	\$59.22	\$113.52
California	\$109.22	\$7.91	7.2	2.5	\$2.71	\$77.42	\$87.67	\$165.09
Colorado	\$141.67	\$25.54	18.0	31.7	\$44.85	\$75.60	\$80.90	\$156.50
Connecticut	\$179.59	\$13.66	7.6	1.9	\$3.33	\$24.18	\$71.02	\$95.20
District of Columbia	\$261.60	\$25.80	9.9	0.4	\$0.98	n/a	\$339.97	n/a
Delaware	\$185.79	\$9.70	5.2	5.4	\$9.94	\$19.06	\$103.96	\$123.02
Florida	\$96.30	\$3.39	3.5	4.0	\$3.83	\$76.18	\$114.75	\$190.93
Georgia	\$62.91	\$4.76	7.6	0.9	\$0.55	\$42.94	\$71.23	\$114.17
Hawaii	\$88.65	\$2.48	2.8	1.4	\$1.28	n/a	\$325.35	n/a
Iowa	\$67.96	\$8.33	12.3	2.8	\$1.93	\$58.33	\$67.52	\$125.85
Idaho	\$64.72	\$7.68	11.9	0.4	\$0.28	\$32.77	\$55.54	\$88.31
Illinois	\$171.72	\$16.97	9.9	0.5	\$0.86	\$65.83	\$24.64	\$90.47
Indiana	\$158.74	\$9.06	5.7	0.8	\$1.24	\$13.30	\$50.91	\$64.21
Kansas	\$74.51	\$3.67	4.9	1.0	\$0.77	\$51.11	\$67.32	\$118.43
Kentucky	\$173.92	\$8.38	4.8	0.5	\$0.92	\$89.75	\$89.07	\$178.82
Louisiana	\$50.47	\$3.13	6.2	0.9	\$0.44	n/a	\$69.81	n/a
Massachusetts	\$166.16	\$17.72	10.7	2.0	\$3.30	\$21.81	\$16.51	\$38.32
Maryland	\$125.96	\$24.87	19.7	5.4	\$6.85	\$172.72	\$73.42	\$246.14
Maine	\$225.41	\$10.64	4.7	0.9	\$2.10	n/a	\$574.22	n/a
Michigan	\$125.75	\$10.96	8.7	1.4	\$1.75	\$55.44	\$82.43	\$137.87
Minnesota	\$183.06	\$11.35	6.2	0.8	\$1.48	\$60.47	\$95.27	\$155.74
Missouri	\$138.30	\$7.12	5.1	1.6	\$2.22	\$48.55	\$63.09	\$111.64

State	Hospital Spending					Governmental Public Health Spending				
	Total CB Spending	CHI Spending	CHI as % of Total CB Spending	CBA Spending	CBA as % of Total CB Spending	LHD Spending	SHD Spending	Combined LHD and SHD Spending (Unadjusted)	Combined LHD and SHD Spending (Adjusted)	
Mississippi	\$39.66	\$1.35	3.4	\$0.03	0.1	\$28.95	\$83.90	\$112.85	\$112.85	
Montana	\$151.58	\$13.31	8.8	\$3.40	2.2	\$51.35	\$63.44	\$114.79	\$114.79	
North Carolina	\$84.99	\$6.16	7.3	\$2.36	2.8	\$88.54	\$77.52	\$166.06	\$166.06	
North Dakota	\$111.79	\$13.68	12.2	\$3.18	2.8	\$48.31	\$120.48	\$168.79	\$168.79	
Nebraska	\$93.62	\$15.81	16.9	\$1.75	1.9	\$21.71	\$85.84	\$107.55	\$107.55	
New Hampshire	\$259.64	\$21.54	8.3	\$2.10	0.8	\$24.04	\$64.47	\$88.51	\$88.51	
New Jersey	\$134.92	\$10.75	8.0	\$0.53	0.4	\$17.46	\$395.04	\$412.50	\$412.50	
New Mexico	\$85.62	\$9.05	10.6	\$4.69	5.5	n/a	\$55.04	n/a	n/a	
Nevada	\$31.03	\$3.85	12.4	\$0.83	2.7	\$47.76	n/a	n/a	n/a	
New York	\$150.88	\$12.07	8.0	\$1.65	1.1	\$117.79	\$88.85	\$206.64	n/a	
Ohio	\$197.00	\$11.72	5.9	\$1.59	0.8	\$39.12	\$54.00	\$93.12	\$93.12	
Oklahoma	\$58.18	\$2.08	3.6	\$1.01	1.7	n/a	\$90.09	n/a	n/a	
Oregon	\$141.46	\$9.32	6.6	\$1.93	1.4	\$64.32	\$71.80	\$136.12	\$136.12	
Pennsylvania	\$159.24	\$13.42	8.4	\$1.30	0.8	\$22.73	\$69.96	\$92.69	\$92.69	
Rhode Island	\$236.27	\$7.63	3.2	\$0.16	0.1	n/a	\$113.54	n/a	n/a	
South Carolina	\$71.04	\$3.83	5.4	\$2.36	3.3	n/a	n/a	n/a	n/a	
South Dakota	\$150.10	\$6.87	4.6	\$0.74	0.5	n/a	\$109.91	n/a	n/a	
Tennessee	\$138.05	\$2.87	2.1	\$0.86	0.6	\$31.23	\$82.98	\$114.21	\$114.21	
Texas	\$59.11	\$6.92	11.7	\$0.14	0.2	\$24.53	\$115.36	\$139.89	\$139.89	
Utah	\$76.51	\$6.84	8.9	\$0.00	0.0	\$51.18	\$74.14	\$125.32	\$125.32	
Virginia	\$291.02	\$16.88	5.8	\$2.43	0.8	\$40.40	\$203.31	\$243.71	\$243.71	
Vermont	\$334.72	\$14.34	4.3	\$3.50	1.0	n/a	n/a	n/a	n/a	
Washington	\$84.97	\$4.97	5.9	\$1.37	1.6	\$50.89	\$79.89	\$130.78	\$130.78	
Wisconsin	\$169.26	\$11.19	6.6	\$1.28	0.8	\$31.39	\$45.47	\$76.86	\$76.86	
West Virginia	\$144.35	\$10.24	7.1	\$1.55	1.1	\$30.39	\$117.76	\$148.15	\$148.15	
Wyoming	\$112.87	\$3.60	3.2	\$2.60	2.3	\$31.54	\$65.76	\$97.30	\$97.30	
Medicaid expansion states	\$143.01	\$10.86	7.8	\$1.62	1.4	\$52.60	\$81.67	\$136.12	\$136.12	
Nonexpansion states	\$93.62	\$6.84	5.7	\$1.26	0.9	\$40.40	\$80.25	\$114.21	\$99.58	

State	Hospital Spending				Governmental Public Health Spending			
	Total CB Spending	CHI Spending	CHI as % of Total CB Spending	CBA Spending	CBA as % of Total CB Spending	LHD Spending	SHD Spending	Combined LHD and SHD Spending (Unadjusted)
United States	\$129.96	\$9.05	6.6	\$1.57	1.1	\$48.31	\$81.67	\$124.17
								Combined LHD and SHD Spending (Adjusted)
								\$104.29

Abbreviations: CB, community benefit; CBA, community-building activity; CHI, community health improvement; LHD, local health department; n/a, not available; SHD, state health department.

TABLE 2
Correlation Between Hospital Community Benefit Spending, LHD Spending, and SHD Spending^a

	Hospital CHI Spending	Hospital CBA Spending	Combined Hospital CHI and CBA Spending	LHD Spending	SHD Spending	Combined LHD and SHD Spending (Unadjusted)	Combined LHD and SHD Spending (Adjusted)
Hospital spending							
CBA spending	0.50 ^b (.0012)						
Combined CHI and CBA spending	0.84 ^b (<.001)	0.89 ^b (<.001)					
Governmental public health spending							
LHD spending	0.22 (.20)	0.19 (.26)	0.23 (.16)				
SHD spending	-0.032 (.85)	-0.034 (.84)	-0.038 (.82)	-0.12 (.48)			
Combined LHD and SHD spending (unadjusted)	0.075 (.65)	0.060 (.72)	0.077 (.65)	0.38 ^c (.020)	0.88 ^b (<.001)		
Combined LHD and SHD spending (adjusted)	0.047 (.78)	0.080 (.64)	0.075 (.66)	0.27 (.10)	0.90 ^b (<.001)	0.98 ^b (<.001)	
Total spending							
Total spending (combined LHD and SHD spending unadjusted)	0.22 (.19)	0.21 (.20)	0.25 (.13)	0.40 ^c (.012)	0.85 ^b (<.001)	0.99 ^b (<.001)	
Total spending (combined LHD and SHD spending adjusted)	0.23 (.18)	0.27 (.11)	0.29 (.086)	0.31 (.058)	0.86 ^b (<.001)	0.98 ^b (<.001)	0.98 ^b (<.001)

Abbreviations: CBA, community-building activity; CHI, community health improvement; LHD, local health department; SHD, state health department.

^aThe values given are Pearson correlation coefficients with *P* values in parentheses.

^bStatistically significant at the 1% confidence level.

^cStatistically significant at the 5% confidence level.

TABLE 3

Gini Coefficients for Hospital Community Benefit and Governmental Public Health Spending

Spending Indicator	Gini Coefficient
Hospital community benefit spending	
CHI spending	0.31
CBA spending	0.62
Combined CHI and CBA spending	0.36
Governmental public health spending	
LHD spending	0.31
SHD spending	0.26
Combined LHD and SHD spending (unadjusted)	0.22
Combined LHD and SHD spending (adjusted)	0.20
Total spending	
Combined hospital, LHD, and SHD spending (unadjusted)	0.21
Combined hospital, LHD, and SHD spending (adjusted)	0.19

Abbreviations: CBA, community-building activity; CHI, community health improvement; LHD, local health department; SHD, state health department.