Analysis of Hospital Community Benefit Expenditures' Alignment With Community Health Needs: Evidence From a National Investigation of Tax-Exempt Hospitals

Simone R. Singh, PhD, Gary J. Young, JD, PhD, Shoou-Yih Daniel Lee, PhD, Paula H. Song, PhD, and Jeffrey A. Alexander, PhD

Objectives. We investigated whether federally tax-exempt hospitals consider community health needs when deciding how much and what types of community benefits to provide.

Methods. Using 2009 data from hospital tax filings to the Internal Revenue Service and the 2010 County Health Rankings, we employed both univariate and multivariate analyses to examine the relationship between community health needs and the types and levels of hospitals' community benefit expenditures. The study sample included 1522 private, tax-exempt hospitals throughout the United States.

Results. We found some patterns between community health needs and hospitals' expenditures on community benefits. Hospitals located in communities with greater health needs spent more as a percentage of their operating budgets on benefits directly related to patient care. By contrast, spending on community health improvement initiatives was unrelated to community health needs.

Conclusions. Important opportunities exist for tax-exempt hospitals to improve the alignment between their community benefit activities and the health needs of the community they serve. The Affordable Care Act requirement that hospitals conduct periodic community health needs assessments may be a first step in this direction. (*Am J Public Health.* 2015;105:914–921. doi:10.2105/AJPH.2014.302436)

Considerable effort has been devoted to investigating how much tax-exempt hospitals spend on community benefits, that is, services and other activities that hospitals undertake at their own expense for the good of the community.[1–9] These benefits include charity care, community health improvement initiatives, and unprofitable, but essential, clinical services. Because most nonprofit hospitals in the United States are exempt from federal, state, and local taxes, the interest in documenting these expenditures derives from a general expectation that nonprofit hospitals will provide community benefits in exchange for their tax exemption.[10]

Recently, Young et al. reported the results of a large national investigation of hospital expenditures on community benefits on the basis of the Internal Revenue Service (IRS) definition of community benefits and tax filings.[11] The study showed that in 2009, tax-exempt hospitals spent, on average, 7.5% of their operating budgets on community benefits. More than 85.0% of this total community benefit spending went to clinical services, such as charity care and the provision of unprofitable clinical services, and the remainder went to services benefiting the community more broadly. Young et al. also documented considerable variation among hospitals in total community benefit spending, with a more than 20-fold difference between hospitals in the top and bottom deciles.

Perhaps more important than the amount hospitals spend on community benefits is the distribution of such benefits among communities. Little is known about the pattern of expenditures among communities on the basis of health needs, not just medical needs but also the social, physical, and behavioral needs of a community that can affect people's health. Specifically, do hospitals respond to greater community health needs by spending more on community benefits? Is there a general correspondence between types of community needs and types of community benefit expenditures?

The national investigation of community benefits did examine whether hospitals spent more on community benefits in communities with greater health needs, measured in terms of county per capita income and the proportion of uninsured residents.[11] Although no relationship was observed between these 2 community health indicators and hospital community benefit expenditures, these indicators represent just 1 dimension of community health needs. A more comprehensive view of community health needs—including indicators of socioeconomic factors, clinical care, health behaviors, and the physical environment—may provide additional insight into the relationship between community health needs and hospital expenditures on community benefits.

We investigated the pattern of hospital community benefit expenditures in relation to community health needs on the basis of a broad set of indicators of health needs from the County Health Rankings.[12] An understanding of the relationship between hospital expenditures on community benefits and community need is critically important in light of the mandate from the Patient Protection and Affordable Care Act (ACA) that federally tax-exempt hospitals conduct community health needs assessments every 3 years and develop plans for addressing identified health needs.[13,14]

By conducting regular community health needs assessments, hospitals will presumably be in a better position to determine how much and what types of benefits are most appropriate for the communities they serve. Because the IRS has yet to fully implement this mandate, we

sought to assess the relationship between hospital community benefit expenditures and community health needs before the ACA. This information can help gauge the success of the community health needs assessment mandate in the future. Therefore, we focused our analysis on hospital community benefit expenditures in 2009, 1 year before the ACA was passed.

METHODS

We focused on private, tax-exempt hospitals that provide general, acute care services. Since 2009, these hospitals have been required to submit annual reports on their community benefit expenditures to the IRS on Form 990 Schedule H. Hospitals' tax filings thus were our main data source. For each tax-exempt hospital for which we were able to obtain IRS Form 990 Schedule H for 2009, we complemented reported community benefit expenditures with indicators of community health needs from the 2010 County Health Rankings. In addition, we obtained data on hospitals' institutional characteristics as well as pertinent community and market characteristics from the American Hospital Association's annual survey, the Area Resource File, and the Centers for Medicare and Medicaid Services. We defined the local community as the county where the hospital was physically located.

Following the process outlined in the study of Young et al.,[11] we obtained IRS Form 990 Schedule H for 1832 hospitals representing approximately two thirds of all private, tax-exempt hospitals that provide general, acute care services in the United States.[15] The missing one third comprised almost entirely hospitals that were affiliated with hospital systems that filed a consolidated IRS Form 990, and thus no hospital-level information was available for hospital community benefit expenditures.

For approximately 83% of the 1832 hospitals for which we did have hospital-level tax filings (1522 hospitals located in 1178 counties), we were able to complement the filings with indicators of community health needs from the 2010 County Health Rankings.[12] For the remaining counties, there were no complete data available. This resulted in the exclusion of 310 hospitals (16.9%) from the analyses. Excluded hospitals were more likely to be small, critical access hospitals located in rural counties for which reliable county-level data can be difficult to obtain. Nonetheless, although the final sample of 1522 hospitals did somewhat underrepresent system-affiliated hospitals, it was otherwise comparable to all private, tax-exempt general hospitals in the United States in terms of number of beds, geographical location, and teaching status.

Measures

Community benefit expenditures. IRS Form 990 Schedule H requires federally tax-exempt hospitals to report expenditures on community benefit activities for the following distinct categories[16]: financial assistance at cost (i.e., subsidized care for patients who qualify for such care under the hospital's charity care policy), cost of means-tested government programs (e.g., Medicaid), community health improvement services and community benefit operations (i.e., activities carried out or supported for the express purpose of improving community health, such as conducting or otherwise supporting childhood immunization efforts), health professions education, subsidized health services (i.e., clinical services provided at a financial loss), research, and cash and in-kind contributions for community benefit (i.e., contributions to carry out any of the activities that are classified as community benefits on Form 990 Schedule H).

We combined hospitals' net expenditures on all community benefit measures reported on Form 990 Schedule H into 3 community benefit indicators: total community benefit, direct patient care benefits, and community health initiatives. We defined total community benefit as the sum of hospitals' net expenditures on all categories of community benefit as reported on Form 990 Schedule H. We defined direct patient care benefits as the sum of hospitals' net expenditures on financial assistance, unreimbursed costs for means-tested government programs, and subsidized health services. We defined community health initiatives as the sum of hospitals' net expenditures on community health improvement services and community benefit operations as well as cash and in-kind contributions for community benefit. To allow comparisons of hospitals of different sizes, we standardized all 3 measures by dividing a hospital's community benefit expenditures by its total operating expenses.

Community need indicators. The County Health Rankings provide a comprehensive set of community health status indicators. We focused on the measures contained in the County Health Rankings' health factor ranks.[17] These include 23 measures that are attributable to a community's health behaviors, clinical care, socioeconomic factors, and physical environment (Table 1).

We obtained the raw data for each measure and county to calculate 1 global community health needs indicator and 4 subindicators of community health needs. We excluded 7 measures for which the County Health Rankings and Roadmaps Program, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, deemed the available data for a measure not comparable across states because of how the measures are defined and the data are collected (chlamydia rate, high school graduation rate, adults with college degrees, income inequality, single-parent households, violent crime rate, and liquor store density).

For the remaining 16 measures, we performed the following standardization: we calculated a *z* score for each measure, whereby we started with the county value on each community need measure, subtracted the total sample mean value from the county value, and then divided the difference by the sample SD. We calculated sample means and SDs using data for only those counties in which 1 or more of our sample hospitals were located. We converted all *z* scores so that a higher score indicated poorer health or greater health needs. We then used the *z* scores to derive 1 global community health needs indicator and 4 subindicators of community health needs. Our global indicator was the weighted sum of all 16 measures that were included in the analysis.

Our subindicators covered the previously noted 4 dimensions of community health needs: health behaviors, clinical care, socioeconomic factors, and the physical environment. We calculated each of these 4 subindicators as the weighted sum of between 3 and 5 measures contained in the County Health Rankings. To weight the individual measures in all our calculations, we recalibrated the weights used in the 2010 County Health Rankings to adjust for the fact that 7 indicators were excluded from our analysis. The weights used in all calculations are shown in Table 1.

TABLE 1—Calculation of Community Health Needs Indicators: United States, 2009

Subindicator (Weight, %, for Global Community Health Needs Indicator)	Measure (Weight, %, for Community Health Needs Subindicators)
Health behaviors (30)	
Smoking	Adult smoking rate (33.3)
Diet and exercise	Adult obesity rate (33.3)
Alcohol use	Bing drinking (8.3)
	Motor vehicle crash death rate (8.3)
Unsafe sex	Adolescent birth rate (16.7)
Clinical care (20)	
Access to care	Adult uninsured rate (25.0)
	Primary care provider rate (25.0)
Quality of care	Hospitalization rates for ambulatory-sensitive conditions (25.0)
	Diabetic screening rate (12.5)
	Hospice use rate (12.5)
Social and economic factors (40)	
Employment	Unemployment rate (40.0)
Income	Children in poverty (40.0)
Family and financial support	Social and emotional support (20.0)
Physical environment (10)	
Environmental quality	Unhealthy air quality owing to particulate matter (25.0)
	Unhealthy air quality owing to ozone (25.0)
Built environment	Access to health foods (50.0)

Note. Following the 2010 County Health Rankings approach, we calculated the global community health needs indicator using 4 subindicators (health behaviors, clinical care, social and economic factors, physical environment) and the weights shown in parentheses. We calculated each of the 4 subindicators using the measures shown with weights shown in parentheses. The measures included represented 16 of the 23 measures included in the 2010 County Health Rankings. We excluded 7 measures because data were not comparable across states. The 7 missing measures were chlamydia rate, high school graduation rate, adults with college degrees, income inequality, single-parent households, violent crime or homicide rate, and liquor store density.

Analytic Approach

We first explored the bivariate relationship between hospitals' provision of community benefits and the health needs of the communities in which hospitals were located. We conducted an analysis of variance to compare community benefit expenditures across communities whereby communities were divided into 4 quartiles on the basis of their score on our global community need indicator.

For our analytic models, we performed 2 sets of multivariable regression analysis for each of our 3 community benefit variables: total community benefits, direct patient care benefits, and community health initiatives. In the first set of regressions, the independent variable of interest was our global community need indicator. In the second set of regressions, the independent variables of interest were the 4 subindicators reflecting a community's needs in the areas of health behaviors, clinical care, socioeconomic factors, and the physical environment.

We estimated all regressions using a generalized linear model. Following Young et al., we included numerous institutional-, community-, and market-level control variables in our models.[11] Consistent with previous studies, we defined all community- and market-level indicators at the level of the county in which a hospital was located.[5,11] We conducted the statistical analyses using Stata version 12.1 (StataCorp LP, College Station, TX).

RESULTS

Table 2 presents data on hospitals' community benefit expenditures and selected institutional characteristics. Hospital expenditures on community benefits varied across quartiles of community health needs, with hospitals located in communities with the greatest needs having the highest expenditures as a percentage of their operating budgets. Hospitals in communities with greater needs spent more on direct patient care benefits, such as charity care, government payment shortfalls, and subsidized health services, than did hospitals in communities with fewer health needs.

Hospitals did not, however, dedicate more financial resources to programs and activities that would benefit the community more broadly in the form of direct spending on community health initiatives or financial and in-kind contributions to community groups. In fact, the group of hospitals that spent the most on community health improvement initiatives were hospitals in quartile 1 (i.e., hospitals serving the healthiest communities). We also noted a distinct pattern for hospital profit margins. Hospital profit margins were highest in communities with the lowest health needs and declined as the health needs of communities increased.

The results from the multivariate regression analyses were similar to those from the analyses of variance. Our multivariate regression models revealed that hospitals located in communities with greater needs (as measured by our global community health needs indicator) spent more as a percentage of their operating budgets on direct patient care benefits (Table 3). The results for total community benefits were largely consistent with those for direct benefits, which is not surprising, because direct patient care represented more than 86% of hospitals' total community benefit spending. However, our multivariate model did not reveal any relationship between our global community health needs indicator and hospital spending on community health improvement initiatives.

When examining the relationship between our 4 subindicators of community needs (i.e., health behaviors, clinical care, socioeconomic factors, physical environment) and hospital expenditures on community benefits, we found a community's socioeconomic status to be a significant variable in the models for both direct patient care benefits and total community benefits (Table 4). The worse

TABLE 2—Hospital Institutional Characteristics and Community Benefit Expenditures, Total Sample and by Community Health Needs Quartile: United States, 2009

Variable	Total Sample, n = 1522, Means or Frequencies (SD)	Quartile 1 (Lowest Health Need), n = 381, Means or Frequencies (SD)	Quartile 2, n = 381, Means or Frequencies (SD)	Quartile 3, n = 377, Means or Frequencies (SD)	Quartile 4 (Greatest Health Need), n = 383, Means or Frequencies (SD)
Hospital operating characteristics					
No. of beds*	199 (196)	184 (156)	200 (227)	200 (183)	212 (210)
Teaching hospitals, %	7.6 (26.4)	6.3 (24.3)	9.2 (29.0)	6.4 (24.5)	8.2 (27.5)
Urban location, %*	64.5 (47.9)	75.1 (43.3)	62.1 (48.6)	61.9 (48.6)	59.1 (49.2)
Sole community provider, %*	9.7 (29.5)	7.9 (27.0)	8.4 (27.8)	11.9 (32.5)	10.5 (30.7)
Profit margin*	2.5 (13.8)	4.3 (8.1)	3.4 (9.2)	1.2 (18.3)	1.2 (16.5)
Hospital community benefit expenditures					
Direct patient care benefit as % of total expenditures	6.3 (5.4)	5.7 (3.7)	6.0 (4.1)	6.4 (5.9)	6.9 (7.2)
Community health improvement initiatives as % of total expenditures	0.6 (2.8)	0.8 (5.1)	0.5 (1.0)	0.5 (1.0)	0.5 (1.6)
Total community benefit as % of total expenditures	7.2 (6.3)	6.8 (6.2)	7.1 (4.7)	7.2 (6.1)	7.8 (7.6)

Note. We calculated community health needs quartiles using the global community health needs indicator.
*$P < .01$ for analysis of variance between quartiles.

a community's socioeconomic status, the more hospitals located in these communities spent on total community benefits and direct patient care benefits. Surprisingly, the health behaviors subindicator was also significantly and negatively associated with both total community benefits and direct patient care benefits, indicating that hospitals located in communities with relatively poorer health behaviors spend less on community benefits. However, on further examination, we found this result to be spurious because of a problem of multicollinearity. The bivariate correlation between the health behavior subindicator and hospitals' expenditures on community benefits was close to zero.

Additionally, when we reran the regression model to include only health behaviors of the 4 subindicators of community need, the coefficient on the health behaviors subindicator was no longer statistically significant. We also reran analyses to check whether the regression results for the other subindicators were influenced by multicollinearity but did not find this to be the case. With respect to community health improvement initiatives, there was no relationship between any of our 4 subindicators of community need and hospitals' spending on this type of community benefit. Hospitals in communities with greater needs do not appear to spend more on community improvement initiatives than do hospitals in communities with fewer needs.

DISCUSSION

We are among the first to examine patterns in the spending of tax-exempt hospitals on community benefits in relation to broad-based measures of community health needs. Our findings point to certain patterns of association between community need and hospital expenditures on community benefits. Before the ACA mandate for tax-exempt hospitals to conduct community health needs assessments, hospitals located in communities with greater needs spent, as a percentage of their operating budgets, more on direct patient care benefits. This was particularly true in communities with relatively low socioeconomic status. Expenditures on direct patient care benefits account for most of hospitals' total spending on community benefits. Although there is much variation in this level of spending among hospitals, community health needs appear to be a factor in how much hospitals spend.

By contrast, we did not observe a relationship between hospital expenditures on community health improvement initiatives and community health needs. Hospitals did not spend more on such initiatives in communities with the greatest health needs. Thus, hospitals appear more inclined to respond financially to the health needs of their community when these needs can be met primarily by providing clinical care services within the confines of the hospital itself. Hospitals appear less able or less willing to respond to community health needs through investment in community health initiatives. This is perhaps not surprising, as hospitals have historically been focused on providing care to individual patients who cross their thresholds. Indeed, their core competency is the provision of medical care, which oftentimes involves delivering highly specialized services to individual patients with complex needs. Improving the health of their communities more broadly has never been a core competency of most hospitals.

Moreover, before the passage of the ACA, many hospital leaders may not have seen a role for their hospitals, regardless of capability, in population-based community health initiatives. They may have attributed such activities primarily to public health departments and community-based advocacy groups whose mission is to engage in such activities. Additionally, hospitals located in communities with greater health needs appeared to have tighter operating margins than did other hospitals. These hospitals may well face higher demands

TABLE 3—Regression of Hospital Community Benefit on Global Community Health Needs Indicator: United States, 2009

Characteristic	Direct Patient Care Benefits		Community Health Improvement Initiatives		Total Community Benefits	
	b (95% CI)	P	b (95% CI)	P	b (95% CI)	P
Community needs	0.980 (0.390, 1.570)	.001	−0.260 (−0.560, 0.048)	.1	0.670 (−0.006, 1.340)	.052
Institutional characteristics						
Number of beds	0.010 (−0.001, 0.003)	.22	0.010 (−0.001, 0.002)	.15	0.010 (0.001, 0.005)	.013
System affiliation	−0.200 (−0.810, 0.400)	.51	0.050 (−0.270, 0.360)	.77	−0.090 (−0.780, 0.600)	.8
Network affiliation	−0.240 (−0.840, 0.370)	.44	0.020 (−0.290, 0.330)	.91	−0.360 (−1.050, 0.330)	.31
Case–mix index	−2.040 (−3.800, −0.280)	.023	−0.390 (−1.300, 0.520)	.4	−1.620 (−3.630, 0.390)	.12
Wage index	0.030 (−0.042, 0.011)	.4	−0.020 (−0.059, 0.0170)	.29	0.040 (−0.047, 0.120)	.39
Teaching hospital	0.140 (−1.140, 1.420)	.83	0.050 (−0.610, 0.710)	.89	2.570 (1.120, 4.030)	.001
Contract managed	−0.010 (−1.060, 1.030)	.98	−0.010 (−0.540, 0.530)	.99	−0.030 (−1.220, 1.160)	.96
Church affiliation	−0.300 (−1.110, 0.510)	.47	0.060 (−0.350, 0.480)	.76	−0.400 (−1.320, 0.530)	.4
Sole community provider	0.580 (−0.460, 1.620)	.28	0.630 (0.094, 1.170)	.021	1.520 (0.330, 2.710)	.012
Profit margin						
High (≥ 3%)	0.200 (−0.480, 0.880)	.56	−0.210 (−0.570, 0.140)	.23	0.010 (−0.770, 0.780)	.99
Negative	0.300 (−0.480, 1.080)	.45	−0.140 (−0.540, 0.260)	.51	0.110 (−0.780, 1.000)	.81
Community and market characteristics						
State-level community benefit reporting requirement	0.130 (−0.490, 0.750)	.68	0.420* (0.097, 0.740)	.011	0.630 (−0.085, 1.340)	.084
Market competition	−0.039 (−1.190, 1.110)	.95	0.120 (−0.470, 0.710)	.68	−0.400 (−1.710, 0.900)	.54
Percentage of hospital beds in local community controlled by						
For-profit hospitals	0.460 (−1.750, 2.670)	.69	−0.130 (−1.270, 1.010)	.83	−0.530 (−3.050, 2.000)	.68
State or local government	0.920 (−0.920, 2.750)	.33	−0.400 (−1.340, 0.540)	.41	0.620 (−1.470, 2.710)	.56
Urban setting	0.048 (−0.700, 0.790)	.9	−0.093 (−0.480, 0.290)	.63	−0.085 (−0.930, 0.760)	.84
Geographic region						
Northeast	−1.790 (−2.810, −0.760)	.001	−0.880 (−1.410, −0.350)	.001	−2.200 (−3.370, −1.030)	< .001
Midwest	−0.910 (−1.870, 0.054)	.064	−0.630 (−1.130, −0.140)	.012	−1.270 (−2.370, −0.180)	.023
South	−1.720 (−2.760, −0.670)	.001	−0.700 (−1.240, −0.160)	.011	−1.960 (−3.150, −0.760)	< .001

Note. CI = confidence interval.

for direct patient care benefits, thus leaving fewer financial resources available for community health improvement initiatives.

Another explanation for the lack of an observed relationship between hospital expenditures on community health improvement initiatives and community health needs is that for purposes of Form 990 Schedule H reporting hospitals have a good deal of latitude in what they call a community health improvement initiative. Hospitals may report expenditures on activities that have more to do with their organizational priorities than with the health needs of their communities. For example, hospitals may report expenditures for community-based services that function, at least in part, as referral programs for specific clinical programs the hospital offers.

Hospitals may also report expenditures for activities that are located in geographical areas where the hospital is attempting to expand its reputation or market share rather than areas with the greatest health needs. Finally, some hospitals engage in activities that involve supporting community groups with which they have had a long affiliation and potentially even a shared financial interest. As a result, the community health improvement initiatives that hospitals report may not be strongly related to an objective assessment of, and attempt to meet, the health needs of the community served.

Certainly, recent policy developments and industry trends have the potential to influence hospital spending priorities on community benefits that may strengthen the relationship between community benefit expenditures and community health needs. The ACA requirement that tax-exempt hospitals conduct periodic community health needs assessments may be a first step toward improving the alignment between community needs and hospital-based community benefits.[18] A detailed assessment of the health needs of their communities can enable hospitals to evaluate their current portfolio of community benefits in light of existing community needs and refocus their charitable activities to address the most pressing health needs.

Some hospitals were conducting these assessments even before the ACA required them, but there is little information regarding how

TABLE 4—Regression of Hospital Community Benefit on Subindicators of Community Health Needs: United States, 2009

Variable	Direct Patient Care Benefits		Community Health Improvement Initiatives		Total Community Benefits	
	b (95% CI)	*P*	b (95% CI)	*P*	b (95% CI)	*P*
Sub 1: Health behaviors	−0.800 (−1.450, −0.150)	.016	0.055 (−0.280, 0.390)	.75	−0.780 (−1.530, −0.041)	.039
Sub 2: Clinical care	0.400 (−0.340, 1.014)	.29	−0.072 (−0.450, 0.310)	.71	0.080 (−0.760, 0.920)	.85
Sub 3: SES factors	1.150 (0.630, 1.680)	< .001	−0.190 (−0.460, 0.085)	.18	1.010 (0.410, 1.610)	.001
Sub 4: Physical environment	−0.180 (−0.510, 0.150)	.28	−0.019 (−0.190, 0.150)	.83	−0.130 (−0.500, 0.250)	.5
Institutional characteristics						
Number of beds	0.001 (−0.001, 0.003)	.31	0.001 (−0.001, 0.002)	.13	0.003 (0.001, 0.005)	.022
System affiliation	−0.140 (−0.740, 0.470)	.66	0.035 (−0.280, 0.350)	.83	−0.035 (−0.730, 0.660)	.92
Network affiliation	−0.220 (−0.820, 0.390)	.48	0.016 (−0.300, 0.330)	.92	−0.340 (−1.020, 0.350)	.34
Case-mix index	−1.850 (−3.620, −0.077)	.041	−0.420 (−1.340, 0.500)	.37	−1.510 (−3.530, 0.520)	.15
Wage index	−0.110 (−0.089, 0.068)	.79	−0.015 (−0.056, 0.0250)	.46	−0.001 (−0.090, 0.089)	.99
Teaching hospital	0.039 (−1.240, 1.130)	.95	0.060 (−0.600, 0.720)	.86	2.470 (1.010, 3.930)	.001
Contract managed	−0.039 (−1.080, 1.000)	.94	−0.002 (−0.540, 0.540)	.99	−0.035 (−1.220, 1.150)	.95
Church affiliation	−0.310 (−1.120, 0.500)	.45	0.070 (−0.350, 0.490)	.47	−0.410 (−1.340, 0.510)	.38
Sole community provider	0.470 (−0.580, 1.510)	.37	0.640 (0.097, 1.170)	.021	1.440 (0.250, 2.630)	.018
Profit margin						
High	0.230 (−0.450, 0.910)	.5	−0.220 (−0.570, 0.130)	.22	0.028 (−0.750, 0.810)	.94
Negative	0.270 (−0.500, 1.050)	.49	−0.130 (−0.530, 0.270)	.51	0.091 (−0.800, 0.980)	.84
Community and market characteristics						
State-level community benefit reporting requirement	0.180 (−0.450, 0.810)	.58	0.420 (0.096, 0.750)	.011	0.670 (−0.053, 1.400)	.069
Market competition	0.220 (−1.030, 1.470)	.73	0.063 (−0.580, 0.710)	.85	−0.047 (−1.470, 1.380)	.95
Percentage of hospital beds in local community controlled by						
For-profit hospitals	0.430 (−1.800, 2.660)	.71	−0.120 (−1.280, 1.030)	.84	−0.440 (−3.000, 2.110)	.73
State or local government	0.600 (−1.240, 2.430)	.52	−0.370 (−1.320, 0.580)	.45	0.370 (−1.730, 2.470)	.73
Urban setting	0.220 (−0.550, 0.990)	.58	−0.010 (−0.500, 0.300)	.63	0.013 (−0.870, 0.900)	.98
Geographic region						
Northeast	−1.600 (−2.670, −0.540)	.003	−0.930 (−1.480, −0.380)	.001	−2.010 (−3.230, −0.790)	.001
Midwest	−0.200 (−1.260, 0.860)	.71	−0.730 (−1.280, −0.180)	.009	−0.670 (−1.890, 0.540)	.28
South	−1.280 (−2.410, −0.150)	.026	−0.780 (−1.360, −0.190)	.009	−1.490 (−2.780, −0.200)	.023

Note. CI = confidence interval; SES = socioeconomic status.

hospitals use the assessments to set spending priorities for community benefits. Although the American Hospital Association does ask hospitals as part of its annual survey whether they conduct community health needs assessments, the response categories for the survey are not well defined with respect to the activities hospitals undertake to conduct such assessments and what actions they undertake as a result of the assessments. Thus, the survey's value for understanding the role of hospital community health needs assessment in setting community benefit expenditure priorities is limited. Certainly, the IRS and other federal agencies should closely monitor the implementation of the ACA community health needs assessment requirement and evaluate its impact on aligning hospital community benefit activities with community health needs.

Additionally, payment reforms entailing global payment arrangements and the formation of accountable care organizations create financial incentives for hospitals to focus on population health.[19] These payment reforms found in the Medicare Shared Saving Program, another feature of the ACA, and a growing number of initiatives by Medicaid programs as well as private health plans combine spending and quality targets for health care providers who assume financial and clinical responsibility for a defined population.[20] This shift from volume-based payment to value-based payment may result in more hospital prioritization of community health initiatives, particularly among hospitals in communities with a relatively high incidence of chronic illness, because hospitals will have financial incentives to reduce service utilization for individuals for whom they are responsible.

Furthermore, the full implementation of the ACA health insurance mandate should substantially reduce the demand for charity care, which has been one of the top hospital priorities for community benefit spending.[11] Hospitals may reallocate the money they devote to charity care to other types of community benefits including community health improvement. A competing pressure, however, is

the expansion of state Medicaid programs that potentially may expose hospitals to an increase in unreimbursed expenditures for Medicaid patients.[21] Young et al. found that unreimbursed Medicaid expenditures constituted the largest component of total community benefit expenditures by hospitals,[11] thus the impact of the Medicaid expansion on community benefit provision remains unclear.[22]

Finally, with the advent of Form 990 Schedule H, there may eventually be more transparency and scrutiny of the community benefits hospitals provide, a development that may lead to shifting hospital spending priorities for community benefits that are better aligned with community needs.[8,23] Community advocacy groups are beginning to take steps to improve the public's access to Form 990 Schedule H data through Web-based resources. Better access to this information will likely result in further discussion of the adequacy of hospitals' community benefit activities because of the specific needs of the population served.

Limitations

This study has several limitations. First, our study sample was limited to tax-exempt hospitals that reported their community benefit expenditures to the IRS at the individual hospital level and were not exempt from Form 990 Schedule H reporting under a group exemption. Our sample does somewhat underrepresent hospitals affiliated with systems, and caution should be taken when extrapolating our findings to these hospitals.

Second, our sample was limited to 1 year of data (2009), the first year for which hospitals were required to report their community benefit expenditures to the IRS. Because establishing internal reporting systems takes time, the expenditure data reported may not completely reflect a hospital's true community benefit activity, and some measurement error may exist. Our findings do, however, provide a baseline for future evaluations that entail data for years after 2009.

Third, consistent with previous studies, we defined a hospital's community as the county in which the hospital is located.[5,11] Clearly, the communities for most hospitals are not fully equivalent to the county in which they are located. For community benefit reporting, the IRS allows hospitals to define their community. Although at times a hospital's definition of its community may include all or most of the county in which it is located, hospitals are free to define the community they serve in terms of, for instance, specific geographical areas or target populations served.

Finally, and perhaps most importantly, this study is grounded on input measures of hospital community benefits in the form of expenditures. Although hospitals that direct greater financial resources to those community benefits that are most closely aligned with community need may well achieve better health for their communities, the relationship between such expenditures and health status is not well understood.

Conclusions

Because of the lack of a relationship between community health needs and hospitals' provision of community benefits aimed at broadly improving the health of their communities, important opportunities exist for hospitals to improve the alignment between their charitable activities and community needs. The ACA requirement that tax-exempt hospitals conduct periodic community health needs assessments may be a first step in this direction, as the assessments may enable hospitals to refocus their charitable activities to address the most pressing needs. In this vein, hospitals should begin to evaluate their community benefit activities so that scarce resources can be invested in the areas with the greatest potential for improved population health outcomes. ■

About the Authors

Simone R. Singh, Shoou-Yih Daniel Lee, and Jeffrey A. Alexander are with the Department of Health Management and Policy, University of Michigan School of Public Health, Ann Arbor. Gary J. Young is with the Northeastern University Center for Health Policy and Health Care Research and the Department of Strategic Management and Health Care Systems, D'Amore-McKim School of Business and Bouve College of Health Sciences, Boston, MA. Paula H. Song is with the Department of Health Policy and Management, University of North Carolina Gillings School of Global Public Health, Chapel Hill.

Correspondence should be sent to Simone R. Singh, Department of Health Management and Policy, 1420 Washington Heights, M3533 SPH II, Ann Arbor, MI 48109 (e-mail: singhsim@umich.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

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Contributors

S. R. Singh conceptualized the study idea, conducted the analyses, and led the preparation of the article. S. R. Singh, G. J. Young, and S-Y. D. Lee compiled the data. G. J. Young assisted with the analyses. G. J. Young and S-Y. D. Lee cowrote the article. P. H. Song and J. A. Alexander revised the final article. All authors helped refine the study idea and assisted with the interpretation of the results.

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Human Participant Protection

Human participants were not involved in this study, so institutional review board approval was not required.

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