2. Alternative Funding Policies for the Uninsured: Exploring the Value of Hospital Tax Exemption

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THE NUMBER OF PEOPLE LACKING HEALTH INSURANCE in the United States continues to grow, largely owing to failed efforts to enact universal national coverage and the reduction in employment-based health insurance benefits. In 1998, 44.3 million Americans were without health insurance, and the numbers are still rising, despite a healthy economy and growing employment (Campbell 1999). State and federal policy makers are seeking alternative sources to finance or provide health services for uninsured populations. The Children's Health Assistance Program, which Congress authorized in 1997, provided $24 billion in new federal funding for a five-year period, ending in 2002. This program has extended coverage to approximately two million previously uninsured children (Thorpe 1997). However, it is not clear whether there will be added coverage or whether the program will be extended past 2002. Meanwhile, the pressure on states to assure access to health services for those without adequate insurance is escalating (*American Health Line* 1997; 1998; 1999a; 1999b).

The tax exemption accorded nonprofit hospitals constitutes an investment of public resources for charitable purposes, one of which is care for the millions of uninsured. Considerable controversy exists, both over the extent to which the public is benefiting from tax-exempt hospitals and

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the form these benefits are taking.[1] (Gaul and Borowski 1993; Pimley 1997; Frizzell 1998). The increasingly competitive environment faced by hospitals raises concerns that their commitment to the most vulnerable members of the community, as demonstrated by the provision of free care and essential community services, may be waning (Mann, Melnick, Bamezai, et al. 1995).

Total uncompensated care provided by hospitals (which includes both free care and provision for bad-debt expenses) was estimated to exceed $18 billion in charges in 1996 (Fagnani and Tolbert 1999), or 6.1 percent of total hospital costs, a ratio that has not changed much in ten years. This reflects care that is hospital based only; the value of other sources of care (i.e., free-standing community health centers and public clinics) and of necessary care forgone by the uninsured is not part of this calculation.

One traditional means of financing hospital-based uncompensated care has been to raise charges to privately insured and self-paying patients; the Prospective Payment Assessment Commission (ProPAC) estimated that this source generated roughly $12 billion to cover uncompensated care in 1992 (ProPAC 1994). However, growth in this source of financing is limited by the increasingly stringent cost-containment efforts of many private payers (Mann et al. 1995). In addition, hospitals serving relatively more uninsured patients experience a competitive price disadvantage when they try to finance uncompensated care by charging higher prices to relatively fewer privately insured patients.

Another major source of financing uncompensated care is federal disproportionate-share spending, which dispensed close to $14 billion in 1995 to hospitals serving high proportions of Medicaid and uninsured or low-income patients. These payments in aggregate could cover more than 80 percent of hospital-reported uncompensated care (Thorpe 1997). However, federal disproportionate-share payments that might alleviate the burden of uninsured people are not distributed evenly among either the states or hospitals: 11 states receive the bulk of these payments, leaving 39 states with disproportionate-share payments that are well below the average cost incurred per uninsured person (Thorpe 1997). The

[1] *Hospitalization Utilization Project v. Commonwealth of Pennsylvania*, 487 A.2d 1306 (1985); *Utah County v. Intermountain Health Care, Inc.*, 709 P.2d 265, 267 (1985); *Medical Center Hospital v. City of Burlington* [*Vermont*], 566 A.2d 1352, 1356 (1989); *Rideout Hospital Foundation v. Los Angeles County* [*California*], 10 Cal. Rptr. 2d 141, 8 Cal. App.4th 214 (1992).

formula for distribution of these funds is based on the level of hospital inpatient treatment of elderly patients who are eligible for Medicaid and Supplemental Security Income (SSI), and on state priorities (i.e., a quarter of all federal disproportionate-share payments go to mental institutions), rather than on where the uninsured populations are (Thorpe 1997). Uncompensated care and outpatient care are not included in the formula, which further distorts the distribution of funds, to the detriment of hospitals serving larger proportions of low-income patients (Fagnani and Talbert 1999).

While the federal government considers additional measures for expanding health insurance coverage or subsidizing providers of uncompensated care—which range from allowing people under 65 to buy into Medicare or the federal employees' health plan to expanding tax benefits for individuals and small groups purchasing health insurance—some states (e.g., Massachusetts, New York, California, Missouri, Pennsylvania, and Texas) are demanding greater accountability of tax-exempt hospitals. Accountability is taking the form of requesting quantification of hospital benefits to the community (including free care and bad debt, as well as other benefits) and of debating whether the particular mix of benefits reported is an appropriate reflection of the community's most pressing needs (Noble, Hyams, and Kane, et al. 1998; Greene 1995).

Our research is intended to provide useful, credible information and insights for policy makers, community advocates, and private, nonprofit hospital trustees who are exploring the feasibility and desirability of increasing hospital-based care to the under- and uninsured, at least to the level of the value of their tax exemptions. We build on prior research by analyzing a multistate sample of hospitals (most previous research used data from only one state per study), by including a broad set of quantifiable tax sources (property and sales taxes, as well as income taxes), and by separating "uncompensated care" into its two policy-relevant components (bad debts and free care). Besides comparing tax benefits with uncompensated care provided by tax-exempt hospitals, the research addresses the geographic *distribution* of tax benefits in excess of uncompensated care ("excess tax benefits"), as reflected in the distribution of low-income populations. The study clarifies the extent to which hospitals with excess tax benefits are located in areas with high proportions of low-income populations. Where this is the case, a strong argument can be made for local community advocates and hospital trustees

to press for increases in the hospital's level of charity care and to request accountability from the hospital regarding its community benefit priorities. Alternatively, hospitals with excess tax benefits that are located areas with relatively few low-income people are less likely to be accessible to the communities that most need charity care. Some mechanism of redistributing excess tax benefits, such as requiring contributions to a free-care pool or to programs that expand Medicaid eligibility, might be considered. However, redistribution policies would have to be implemented by states, rather than by local communities; the likelihood of achieving statewide political consensus for redistribution is lower than the chances of local communities' obtaining more charity care from their hospitals.

On the one hand, because many hospitals are sensitive to pressures from the local media, community health and advocacy organizations, and their own community-based boards, they would be expected to respond constructively to pressures to do more for the under- and uninsured populations within their service area. Thus, there is a strong *political* argument for leaving community-benefit accountability to local forces. On the other hand, as our findings will indicate, the most burdensome under- and uninsured populations can be found in the local service areas of hospitals with little or no excess tax benefits. Thus, a policy designed to redistribute resources across local boundaries, probably at the state level, would be a more *efficient* way to match excess tax benefits to the areas most in need of charity care.

Defining and Quantifying the Value of Hospital Tax Exemption

Hospital Sample

We relied on the *American Hospital Guide* (American Hospital Association 1994), which lists the distribution of 3,100 acute, nonprofit, private hospitals, to determine the target bed size, region, and teaching status (i.e., membership in the Council of Teaching Hospitals, as reported in the AHA *Guide*) of the 500 hospitals that we selected for analysis. We were primarily limited by the availability of audited financial statements. We were successful in obtaining reasonable representation for all bed-size categories, teaching categories, and regions, except

from the East South Central region, which could not supply all the necessary audited financial statements and did not have any published uncompensated-care reports. The tabulations below compare the bed size, regional, and teaching characteristics of our sample with those of the target sample.

Region	Actual total	Target total
New England	46	45
Mid-Atlantic	95	113
South Atlantic	129	73
East North Central	91	104
East South Central	0	22
West North Central	26	38
West South Central	33	29
Mountain	30	22
Pacific	71	54
Totals	521	500

Bed size	Actual	Target
75–300	304	328
300–500	142	115
500+	75	57
Totals	521	500
Teaching status	76	76

Data Sources and Variables Included in the Analysis

To obtain the hospitals' financial information, we relied primarily on their 1995 audited financial statements, supplemented by state charity care reports and Medicare Cost Reports (MCRs), to fill in elements (charity care, gross patient service revenue) not disclosed in the statements supplied by some hospitals. Hospitals' audited financial statements were collected primarily from state health information agencies (providing hard copy or electronic statements for 471 hospitals in our sample). In states lacking centralized collection of audited financial

statements (50 hospitals in our sample), we corresponded directly with hospitals to obtain their statements. From the audited financial statements we collected the following variables: *bad debts* (generally reported as an expense, valued at charges); *free care* (generally disclosed in footnotes, valued at charges); the hospital's overall *markup of charges over cost ratio* (dividing the sum of gross patient service revenue plus other operating revenues by operating expenses less bad debt expense); *earnings before depreciation, amortization, and interest* (for estimating the value of property-tax exemptions, as described below); *excess revenues over expenses* (for estimating the value of income-tax exemptions, described below); and *supplies expenses*, when reported (for estimating the value of sales tax exemptions, also described below). Bad-debt and free-care charge values were divided by the markup ratio to approximate the hospital's average cost of uncompensated care.

We based our valuation of uncompensated care on average cost, in accordance with the literature, which generally uses this measure to value uncompensated care for research or community benefit purposes (Catholic Health Association 1989; Boles 1990; Sanders 1993; Clement, Smith, and Wheeler 1994; Mann et al. 1995). State policy makers also use average cost in the various guidelines and legislation that define charity care. For instance, in Texas, New Hampshire, and Massachusetts, charity care is valued at average cost for community benefit reporting purposes. The appeal of average cost is that it is calculable with publicly reported financial data (charges and markup ratios), and it approximates the long-run costs that the hospital must cover to provide services to patients. However, average cost is greater than the short-term marginal cost of an additional patient. It can be argued that hospitals' tax-exempt benefits should be compared with the marginal, rather than the average, costs of providing uncompensated care because marginal cost represents the additional financial burden imposed upon the hospital for one additional patient. A number of state regulatory payment schemes in the 1980s used the concept of marginal cost as a basis of payment for volume increases beyond a base year (e.g., New York, Massachusetts, and Maryland). However, marginal cost is not as straightforward to calculate as average historical cost because its definition varies with the *time frame* assumed (more costs are marginal as the time frame lengthens), with the *specific services provided* (e.g., outpatient surgery, routine inpatient care, ancillary services), and with the *cost structure of each institution* (hospitals employing mostly per diem nurses incur higher marginal costs than

those employing mostly salaried nurses; hospitals at full capacity may have higher marginal costs than hospitals with excess capacity). Thus, use of marginal cost requires making difficult-to-substantiate assumptions about the proportion of average cost that is marginal. In practice, a wide range of "reasonable" assumptions has been used for a variety of purposes. A hospital consulting-company executive estimates, based on extensive experience with hospital cost-accounting systems and behavior, that roughly 30 percent of average cost is variable with volume, although the percentage varies with the particular accounting systems and behavior of each hospital department (R. Siegrist, HealthShare Technologies, 1999: personal communication with N.M. Kane). State payment systems in use during the 1980s generally allowed "marginal cost" volume adjustments of anywhere from 20 to 80 percent of average cost, depending on the unit of payment and the incentives intended. This wide range of possible assumptions led us to conduct our analyses on the basis of average cost. However, we will discuss the marginal-cost implications of our key findings as well.

According to the accounting principles guiding the preparation of hospital financial statements, charity or free care is care provided to those who qualify based on financial eligibility standards established by hospitals, which are guided in some states by regulations. Charges are never recognized and collection is not attempted (American Institute of Certified Public Accountants 1994). Bad debts represent care for which the patient was billed, but the hospital was unable to collect. The inclusion of bad debt as a measure of charitable benefit is controversial; some of what is classified as bad debt might have been categorized as free care if the hospital had been able to capture the relevant information about the patient's financial situation. Some studies suggest that as much as 50 percent of bad debt may actually be charity care when the patients' income and insurance status are taken into account (Epstein, Lukas, and Weissman 1992; Sanders 1995). However, others indicate that many bad debtors are not indigent, and that hospital factors associated with a high level of bad debts are different from the factors associated with a high level of free care (Buczko 1994). We calculate the benefits side of our analysis, both without bad debt and with varying percentages (25, 50, 75, 100) of bad debt added to free care. Our supplemental analyses of the characteristics of hospital services and location include 50 percent of bad debt as a way to simplify the presentation of results, based on what the literature suggests is a reasonable figure.

It is important also to acknowledge that the definition of eligibility for free care across our sample is not uniform. For instance, in Massachusetts, free or "charity" care guidelines issued by the state define eligibility for a 100 percent discount if the patient's family income is less than *200 percent* of federal poverty levels, and a sliding-scale discount applies for families with incomes between 200 percent and 400 percent of federal poverty levels. In Washington, patients are eligible for 100 percent discounts if their family income is *100 percent* of federal poverty levels; partial discounts are allowed for patients with family incomes between 100 percent and 200 percent. In Texas, the state guidelines for determining charity-care eligibility require the hospital to index its criteria to federal poverty guidelines and stipulate that the income level for eligibility must be neither lower than the county requirements nor higher than 200 percent of federal poverty guidelines. There are few clear state standards; in most states, the eligibility definition is up to the hospital board's discretion (Access Project 1999). Thus, the distinction between free care and bad debt, as recognized in audited financial statements, does not uniformly distinguish patients by income level.

We used other data sources, including state income-tax and sales-tax rates, which we obtained from the state tax guide published by the Commerce Clearing House. The 1994 AHA *Hospital Guide* was our source for the bed-size, region, and teaching-status characteristics of our sample hospitals. We also used the *Guide* to determine the availability of essential community services that incur substantial operating deficits: burn units, neonatal intensive care units (NICUs), and level III trauma units.

To obtain information on property taxes, initially we collected 1995 hospital property-assessment values and tax rates directly from the county and local assessor's offices for each hospital in our sample. After collecting and reviewing the data for 296 hospitals, we concluded, with the advice of consultant property-tax experts, that the information grossly underestimated the value of property-tax exemptions. Assessors do not regularly reassess tax-exempt property, and when they do, they pay little attention to the accuracy of the values. In addition, a given property may be subject to several different tax rates (county, city, special district), and it is difficult to get a rate that encompasses all property-tax levies (Gaskell and Kitchen 1997). Instead, we used an income approach to estimate the market value of each hospital (Pecesky 1991).

The specific model for estimating hospital value is as follows:

EBITDA/Capitalization rate

where:

EBITDA = 1995 earnings before interest, taxes , depreciation, and amortization.

Capitalization rate = .128, a rate chosen by our property-tax consultants as a reasonable rate applicable to commercial properties in general.

To this model we applied statewide, aggregate, effective property-tax rates (the ratio of aggregate property taxes levied to the full market value of taxable commercial property in each state), which were published by the Advisory Commission on Intergovernmental Relations (ACIR). This ratio covered a range from $1.03 per $100 of value (Nevada) to $2.92 (New Hampshire), with a national average of $1.53. It is possible that these tax rates, which were based on state information from 1991, may have changed somewhat between 1991 and 1995; unfortunately, the ACIR stopped publishing state aggregate tax rates after 1993. Another drawback is that the state rates are aggregated and thus do not reflect within-state variations.

The values derived from this estimating technique closely approximated (1.3 percent higher) the tax assessments we received from hospitals in Connecticut, a state whose hospital property-tax assessments are relatively accurate because they are used by local authorities to negotiate local payments in lieu of taxes made by hospitals. Table 1 shows that the Pearson correlation coefficients between the two alternative property-tax values are significant and moderately correlated (coefficient of .4908). Other financial measures that are considered highly related to property-tax values (Boles 1990; Gaskell and Kitchen 1997), including total operating expenses, total operating revenues, beds, and gross and net property, plant, and equipment (PP&E), were all much more highly correlated to the property-tax estimate based on the income approach (property tax 1 in table 1) than to the property-tax values provided by local assessors (property tax 2 in table 1). Thus, we used the estimated tax values (property tax 1) for both the 296 hospitals with assessed values and the 225 hospitals for which no local property-tax assessment data were available.

TABLE 1
Pearson Correlation Coefficients (p-value)

	Prop tax 1	Prop tax 2
Property tax 1[a]	1.00	
Property tax 2[b]	.4908	1.00
	.0001	
Total operating expenses	.8026	.5029
	.0001	.0001
Total operating revenue	.8410	.5040
	.0001	.0001
Beds	.7170	.5390
	.0001	.0001
Gross PP&E	.7771	.4573
	.0001	.0001
Net PP&E	.7592	.4534
	.0001	.0001

$N = 296$ for property tax values, operating revenues and expenses, and net PP&E; 294 for beds; and 280 for gross PP&E.
[a]Property tax 1 = tax estimate based on the income approach.
[b]Property tax 2 = values collected from assessors.
Abbreviation: PP&E = property, plant, and equipment.

Variables Excluded from Our Analysis

We did not estimate a value for the benefits of tax-exempt debt, despite the finding that it was a significant source of tax benefit for exempt hospitals in at least one study (Morrissey, Wedig, and Hassan 1996). That study's finding was based on a comparison of tax-exempt revenue-bond interest rates with taxable corporate-bond interest rates, after adjusting for term and risk. However, this comparison fails to adjust for the tax deductibility of taxable debt for nonexempt corporations. Others have argued that the difference between *after-tax* interest rates of corporate taxable debt and tax-exempt debt of comparable risk and duration is not significant (Boles 1990). Typical differences in the relative yield of taxable and tax-exempt long-term debt (20-year or greater maturity) over the last 15 years ranged between 100 and 300 basis points (1 to 3 percent) (*Moody's Bond Record* 1998); the yield difference in the long-term bond market primarily reflects individual investor tax rates (Allen 1995). The marginal tax rate for these individual investors is roughly 22 percent,

whereas the marginal tax rate for corporations is close to 46 percent (Allen 1995). Thus an Aa-rated 20-year bond might have an interest rate for a tax-exempt borrower of 6.2 percent, the average yield from the Revenue Bond Index for 1995 (*Bond Buyer Yearbook* 1998, 33); a nonexempt borrower of similar risk class might pay 250 basis points higher interest, or an 8.7 percent interest rate, on taxable debt. However, at a 46 percent marginal tax rate, the taxable borrower's after-tax rate of interest is only 4.7 percent (.087 interest rate * .54), which is below the tax-exempt interest rate.

Arguments can be made on broader (and difficult to quantify) grounds that a nonprofit would have to make major financial and organizational changes in order to attract private-equity capital, or to become taxable, and thus take advantage of the corporate tax deductibility of interest expenses (P. Dennett, American Private Pension and Welfare Plans, 1997: personal note to N.M. Kane). The availability of tax-exempt debt shelters the nonprofit from having to make that investment. Unfortunately, it is not possible to quantify the size of such an investment for individual tax-exempt hospitals. Our omission of the value of having access to tax-exempt debt thus understates the tax-benefit side of our analysis.

Also excluded is the value of charitable donations to the hospital, which are tax deductible to the donor. Others have dismissed donations as being an insignificant amount: 1 percent of total hospital revenues (Boles 1990). Unfortunately, we do not really know how insignificant donations might be because of the difficulty of capturing total donations benefiting the hospital. Many donations to hospitals are given to, or held by, parent or foundation affiliates of the hospital entity; thus, an analysis based on hospital-entity revenues alone do not include the bulk of hospital donations. We excluded donations as a tax-exempt benefit, which again understates the tax-benefit side of our analysis.

Our analysis did not enable us to quantify reasonably from publicly available data a number of elements that have been included as charitable community benefits in some studies: the unreimbursed costs of teaching and research, money-losing services, and other community services, such as health education and screening programs, are some examples. However, at least some of these services do not target low-income or underserved communities; many are implemented primarily as competitive tactics to gain market share, obtain managed-care contracts, or

minimize losses incurred in the acute sector (e.g., subacute or home care). Some commonly included elements, like the provision of services to Medicaid patients, are not unique to tax-exempt hospitals (Pattison and Katz 1983; Renn, Schramm, Watt, et al. 1985; Shortell, Morrison, Hughes, et al. 1986; Arrington and Haddock 1990). For example, we tested for differences in proportions of Medicaid recipients to total patients in 1996 in four states where a large number of tax-exempt and investor-owned hospitals were located. We found no significant difference in Medicaid participation between private tax-exempt and investor-owned hospitals, a finding that is reflected in other studies we have cited. The Catholic Health Association distinguishes basic services and standard promotional activities, which are performed by all health care organizations, from "true" community benefits, which are expected of tax-exempt organizations. The latter category must demonstrate the following criteria:

- They are financed through philanthropic contributions, volunteer efforts, or endowment.
- They respond to a unique or particular health problem in the community.
- They generate a low or negative margin.
- They respond to the needs of special populations, such as minorities, the frail elderly, poor persons with disabilities, the chronically mentally ill, and persons with AIDS.
- The service or program would likely be discontinued if the decision were made on a purely financial basis. (Trocchio 1996)

Unfortunately, many hospitals do not report community benefits according to a standardized and meaningful framework, such as that provided by the Catholic Health Association. We did not have any publicly available, uniformly defined data on these types of community benefits, so they were not quantified in our analysis.

We did identify both teaching hospitals and hospitals that provide the three types of specialized care of frequently mentioned in the literature as essential, but generally unprofitable, community services: burn units, level III trauma units, and NICUs. Although our analysis recognizes hospitals providing these services, we cannot quantify the losses they incur as a result of doing so. Further research is needed to address the financial implications of providing these services.

Another potential benefit we explored was an amount that could be attributed to pricing differences between tax-exempt and investor-owned hospitals. In the 1980s, investor-owned hospitals were consistently found to charge higher prices (gross charges) than did tax-exempt hospitals (Eskoz and Peddecord. 1985; Renn et al. 1985; Pattison and Katz 1983; Watt, Derzon, Renn, et al. 1986; Clement, Smith, and Wheeler 1994). However, Clement also noted that, as price competition increased in California during the late 1980s, the differences in prices actually paid by third parties to tax-exempt and investor-owned hospitals diminished significantly; by 1986–87, the difference was barely perceptible.

We explored the 1996 net price differential (net revenues per case-mix-adjusted discharges, adjusted for outpatient activity) between private tax-exempt and investor-owned hospitals in four states (California, Florida, Virginia, and North Carolina) with a good sample of investor-owned hospitals as well as information on the case mix of all payers. The price differential in that analysis was not significant between the two ownership categories (see Appendix). Thus, we did not include a favorable price differential of nonprofits as a community benefit.

The core variables we used to calculate the value of both tax exemption and uncompensated care are summarized in table 2.

TABLE 2
Core Variables

Value of tax exemptions	Uncompensated care
Federal income tax Applied to hospital net income, excluding donations and after state income, sales, and property taxes	Free care Free care at charges divided by the markup ratio
State income tax Applied to hospital net income, excluding donations and after federal income, sales, and property taxes	Bad debts at varying percentages Bad debt at charges divided by the markup ratio
Sales tax Applied to supply cost, estimated at 16% of operating expense	
Property tax Estimated[a]	

[a]See text.

Key Findings

Aggregate Relation of the Value of Tax Exemption to Uncompensated Care Provided

Figure 1 shows the aggregate value of tax exemptions and uncompensated care provided by our sample of hospitals. On the tax-exemption side, it is important to note that local property-tax exemptions constituted 43 percent of the total tax value; state sales and income taxes constituted another 30 percent (24 percent sales tax, 6 percent income tax) of the total value; and federal income taxes made up the remaining 27 percent. This suggests that hospitals should be responsive to local community efforts to direct the activities of hospitals toward greater support of the under and uninsured because local communities provide the largest share of tax-exempt dollar value. It also means, however, that redistributional possibilities may be more limited because local taxpayers may object to schemes that redistribute the benefits of local tax exemption to other locations.

The findings also indicate that the dollar value of the federal income-tax exemption is relatively small; thus, revoking it would not have as large a direct financial impact on a hospital as would revoking state and local exemptions. However, federal tax revocation would affect hospitals to a greater degree than the dollars alone would suggest: federal

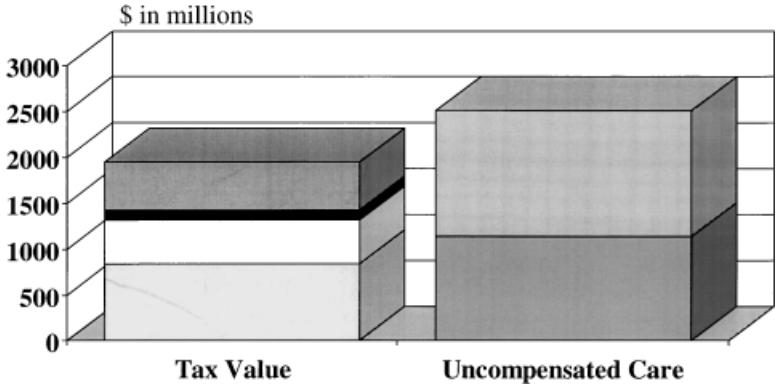

FIG. 1. Value of tax exemption versus value of uncompensated care for a multistate sample of 507 hospitals, 1994–95. ▫ property; □ sales; ■ state income; ■ federal income; ■ free care; ■ bad debt.

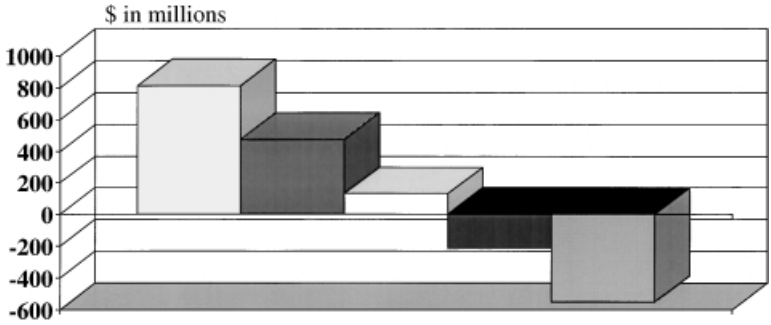

FIG. 2. Tax value minus uncompensated care by varying levels of bad debt. ▭ free care only; ■ free care and 25 percent bad debt; □ free care and 50 percent bad debt; ■ free care and 75 percent bad debt; ▦ free care and all bad debt.

tax-exempt status is needed for access to tax-exempt debt, federally insured loans, research grants, tax-deductible donations, and less tangible benefits (community trust, appeal to physicians)—all variables that we were unable to quantify reasonably.

On the uncompensated-care side, it is clear that the aggregate value of tax exemption exceeds that of free care alone. Figure 2 demonstrates the necessity of assuming that roughly 75 percent of bad debts was incurred by the medically indigent in order to eliminate excess tax benefits in the aggregate. Even when 100 percent of bad debts was included, roughly one-third of hospitals still had excess tax benefits.

When only free care (at average cost) was considered, 75 percent of the sample showed excess tax benefits. When 50 percent of bad debt was included with free care, 55 percent of hospitals still showed excess tax benefits. For those hospitals, tax values exceeded the value of care by an aggregate amount of $658 million, or an average of $2.38 million per hospital.

If free care and bad debt were valued on the basis of a marginal cost assumption of 50 percent of average cost, then 86 percent of hospitals had excess tax benefits with free care alone. When 50 percent of bad debt was added to free care, 79 percent of hospitals still had excess tax benefits. For the 79 percent of hospitals with excess tax benefits, the benefits exceeded the marginal cost value of care by an aggregate amount of $1.1 billion, or an average of $2.78 million per hospital.

TABLE 3
Comparison of Values: Hospitals with Excess Tax Benefit versus Excess Care Provided

Raw variables	Excess tax benefits	Excess care provided
Aggregated		
No. of hospitals	277	231
Beds in operation	85,382	68,851
Total operating revenues ($000)	30,945,509	26,243,559
Bad debt ($000)	538,582	829,338
Free care ($000)	405,659	731,819
Tax benefit ($000)	1,334,329	513,759
Percentage of total		
No. of hospitals	55	45
Beds in operation	55	45
Total operating revenues	54	46
Bad debt	39	61
Free care	36	64
Tax benefit	72	28

Relative Burden of Care: Hospitals with Excess Tax Benefits versus Hospitals Providing Excess Care

Table 3 provides an overview of aggregate values when uncompensated care (based on the average cost of free care plus 50 percent of bad debt) is subtracted from the quantified benefits of tax exemption. The 45 percent of hospitals providing care greater than the value of tax exemption represents a proportionate 45 percent of beds and total operating revenues. However, these hospitals provided 64 percent of free care and 61 percent of bad debts, while receiving only 28 percent of the total value of tax exemption within the sample population of hospitals. Table 4 indicates that the value of tax exemption at these hospitals was only 2 percent of revenues, compared with 4 percent for hospitals whose tax values exceeded care values. Given that the value of tax exemption is driven very much by profitability, it appears that the provision of uncompensated care by this group has lowered their income levels considerably relative to the hospitals with excess tax benefits.

For the 55 percent of hospitals whose tax value exceeded care values, only 49 percent of their total tax value went toward free care and

TABLE 4
Percentage of Total Operating Revenues

	Hospitals with	
	Excess tax benefits	Excess care provided
Tax benefit (%)	4	2
Free care (%)	1	3
Bad debt (%)	2	3
Aggregate size of gap ($000) at average cost		
Free care only	928,670	(218,060)
With 50% bad debt	659,379	(632,729)
With 100% bad debt	390,088	(1,047,398)

"eligible" bad debt (when calculated as 50 percent of total bad debt). These hospitals represented 55 percent of hospitals, beds, and revenues and 72 percent of the tax benefit values of the entire sample, but they provided only 36 percent of the free care and 39 percent of the eligible bad debt. Free care represents only 1 percent of their total revenues. These findings are similar to those of the General Accounting Office (1990), which reported that the profit margins of hospitals with low rates of uncompensated care relative to their tax-exemption benefits were higher than those of hospitals with high rates of uncompensated care.

The Distribution of the Gap for Teaching Hospitals

Seventy-five hospitals in our sample were classified as major teaching hospitals, according to the AHA *Guide*. A higher proportion of teaching hospitals spent more on care than the value of their tax exemptions. Fifty-six percent of teaching hospitals spent more on care than their tax values, compared with 44 percent of nonteaching hospitals. When only free care was considered, 36 percent of teaching hospitals, compared with 23 percent of nonteaching hospitals, spent more on care than their tax values.

However, for those 33 teaching hospitals with excess tax value when 50 percent of bad debt was included in the care provided, the size of the gap was large—averaging slightly over $5 million per hospital, or $10,000 per bed (in service). These hospitals tended to be larger than

the sample generally (6 percent of the hospitals, with 11 percent of the beds and 13 percent of the revenues), and to have higher incomes (tax benefit came to 5 percent of revenues, compared with the sample average of 3 percent). Although it seems possible that the unreimbursed costs of teaching programs might absorb some of that positive gap, it is unlikely to absorb all of it. Thus, a substantial proportion of teaching hospitals may have room for more charitable care within the value of their tax exemptions, if they could be so persuaded.

The Distribution of the Gap between Tax-Exempt Value and Uncompensated Care

A key issue that we explored was the distribution of tax-exempt values that exceeded the amount of uncompensated care hospitals provided ("excess tax benefits") in relation to residence of poor populations. We assume that poor populations would be associated with more under- and uninsured people. Figure 3 provides an overview of the relation between hospital location and excess tax benefits. Hospital location is categorized by the percentage of people living below federal poverty levels in the county. Hospitals located in counties with low poverty percentages showed aggregate excess tax benefits when 50 percent bad debt was included.

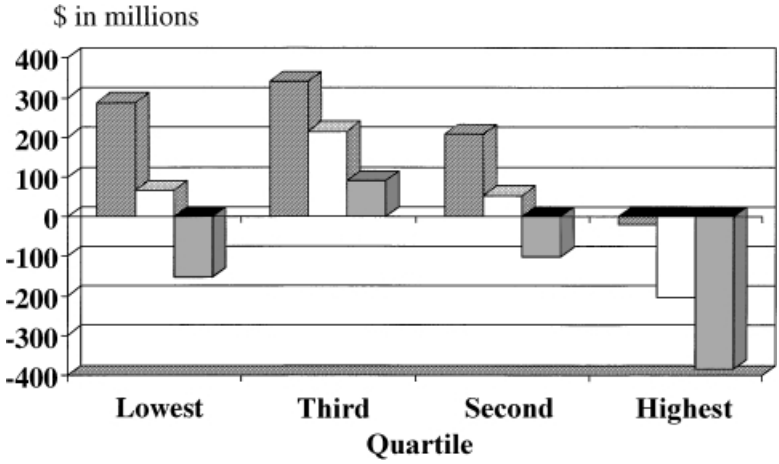

FIG. 3. Tax value minus uncompensated care by poverty level of county. ■ free care only; □ free care and 50 percent bad debt; ■ free care and all bad debt.

Hospitals located in counties with the second lowest percentages of poor people had excess tax benefits, even when 100 percent of bad debt was included. In contrast, hospitals in counties with the highest poverty-level percentages provided care in excess of tax values, even when no bad debt was included. Clearly, there is a strong relation between a hospital's excess tax-benefit levels and the level of poverty in its local area (which is not necessarily its primary service area). This complicates the logistics of matching excess tax value with uncompensated care to under- and uninsured populations.

On the other hand, analysis of disaggregated hospitals indicates that opportunities to encourage hospitals to do more exist even in the counties with the highest poverty levels. At a 50 percent bad-debt level, 45 percent of hospitals located in the poorest counties still had excess tax benefits, and 27 percent remained in "excess," even at 100 percent bad-debt levels. Fifty-five percent of hospitals in counties with the second highest poverty levels had excess tax benefits at 50 percent debt, and 36 percent remained in excess, even when 100 percent of bad debt was included.

Nonquantifiable Benefits: Characteristics of Hospital Service Mix

Hospitals with excess tax values might provide financial benefits in the form of burn units, trauma centers, and NICU units. As in the case of teaching, we cannot quantify the financial impact of these services on our sample of hospitals. However, we did find that a substantial proportion of hospitals with excess tax benefit provided at least one such service. Thirty-four percent offered one service, 19 percent offered two services, and 12 percent offered all three services to their communities; 36 percent did not offer any of the three services. The most common was an NICU, followed by trauma, and then burn units. The hospitals with excess tax benefits were significantly more likely to have these units than were hospitals with excess care: 46 percent of hospitals with excess care did not offer any of the three services. This analysis suggests that it would be useful to quantify the losses sustained by hospitals that provide essential and unprofitable community services when determining whether a hospital has met its charitable obligations to the community. It is also a reminder that the full value of excess tax exemption is unlikely to be

captured in the form of free care to uninsured populations because there are other charitable benefits that are valued by communities.

Influence of the Availability of Public Hospitals

One side issue raised by the analysis was whether or not the presence of a public hospital offsets the need for charity care that a community might expect of its private, nonprofit hospitals. Whereas such a finding might explain why some hospitals show excess tax benefits, it leaves unresolved the question of whether the hospital is meeting other community needs at a level that justifies its tax exemption. In any case, we found that the presence of public hospitals did not have a statistically significant effect on the ratio of uncompensated care to the value of tax-exempt benefits.

We measured public presence by the number of public hospitals in the county where each hospital was located. This public-presence variable, like the poverty-level variable, is a characteristic of the hospital's *environment or location*; it does not necessarily correspond to a hospital's market area, which is determined by strategic factors, of which location is only one (i.e., specialty mix, referral base, managerial or board goals). The hypothesis is that the presence of public hospitals might lead some hospitals to provide less uncompensated care than the value of their tax exemption. Table 5 shows the mean value of the ratio of uncompensated care (free care plus 50 percent of bad debt) to the value of tax benefits, for hospitals located in counties with and without public hospitals, by poverty level of the county. We found no statistically significant difference in the ratio between hospitals that had a public hospital in their county and those that did not, regardless of the poverty level of the

TABLE 5
Ratio of Mean Uncompensated Care to Value of Tax Exemption

Percentage of the population below poverty level	No public hospital presence	Public hospital presence positive	*P* value
Lowest quartile	.83	3.28	.0650
Second-lowest quartile	1.99	.78	.9293
Second highest quartile	1.22	1.76	.2399
Highest quartile	.96	1.31	.6480
All quartiles	1.33	1.56	.5602

county; the only weakly significant result (p value = .065) contradicts the hypothesis that some hospitals provide less uncompensated care because of the presence of a public hospital. In counties that had the lowest percentage of households with incomes below federal poverty levels, the ratio of uncompensated care to tax-exempt benefits was *higher* in counties *with* public hospitals.

Policy Discussion and Conclusions

The debate over the value of tax exemption and whether it should more directly benefit those lacking health insurance seems likely to continue in the near future, as competitive forces squeeze hospitals and private insurance coverage continues to erode. This analysis indicates that less than half of our nonprofit community hospitals provide care to the medically indigent or uninsured at levels in excess of tax benefits, even when 50 percent of bad debt is included in the care value. If marginal rather than average cost were used to value free care and bad debt, even more hospitals would have excess tax benefits.

Our analysis also shows that the distribution of tax benefits is not positively related to the burden of uninsured care. Some hospitals, particularly those in the poorest communities, provide considerably more uncompensated care than the value of their tax exemptions; others, particularly those in wealthier communities, provide considerably less. However, even hospitals in poor communities do not all share the burden equally. Those with the greatest tax benefits (generally, the most profitable) offer the least uncompensated care commensurate with the value of tax exemption. Obviously, the two are related: the more uncompensated care an institution provides, the lower its income, and hence the lower its tax values. Although "no margin, no mission" is a frequently recited mantra of the hospital industry, having a larger margin is no guarantee that the charitable mission will be better served. Charity provision must constantly compete for resources that might otherwise be channeled into competitive goals, such as investing in the latest technology, acquiring physician practices and absorbing the subsequent operating losses, paying "competitive" salaries to hospital executives, or contracting with managed-care plans at rates below cost in order to capture market share.

If one accepts the concept that the value of tax exemption should be directed first toward care for the under- and uninsured, what leverage

can be most usefully applied to persuade hospitals to provide the amount of free care that is commensurate with the value of their tax exemptions? The federal government could take intermediate steps (short of tax revocation) to stimulate greater hospital provision of uncompensated care. One option is to revise Medicare participation requirements to include federally established standards of uncompensated care to *financially eligible* populations. These standards should reasonably approximate the value of tax benefits, adjusting for teaching, essential community services, and other acceptable and quantifiable community benefits, net of donations. A penalty option that would fall short of revoking Medicare participation might be the imposition of federal income taxes to offset shortfalls between tax value and care provided. Resources thus generated could be earmarked for expansions in Medicaid or Medicare eligibility.

However, the costs of monitoring and enforcing such a policy at a national level would be significant. There would have to be some way of obtaining reasonably current and accurate local property-tax assessments. Patients' eligibility for "charity" would have to be standardized and more thoroughly documented. More challenging still would be the need to develop a standard definition of a nonprofit hospital's "taxable income," raising the specter of nonprofit hospitals' having to maintain the kind of convoluted and expensive tax-accounting systems that are kept by the for-profits. The clash of Medicare reimbursement ambiguities and IRS accounting requirements, already a major source of legal action among for-profit hospitals, would no doubt become a major factor in the nonprofit hospital sector as well.

There is no federal reporting mechanism in place for collecting such information. Although the MCR is useful for determining Medicare costs and payments, it is woefully inadequate for measuring the financial performance of hospital entities (American Hospital Association and Arthur Andersen 1998). Hospitals' financial performance can be measured according to generally accepted accounting principles, but accounting practices for measuring and reporting their charitable activities and ascertaining the value of tax exemptions are not well established. The experience with MCRs suggests that federal policy makers may not be up to the task of monitoring hospitals' charitable benefits and activities at a relevant level of detail.

A weaker, but perhaps more feasible, federal policy would encourage hospitals and their boards to become more accountable to their local communities through grants, demonstration programs, and best-practice

awards. States and localities could be rewarded financially for becoming more involved in determining how hospitals should earn their tax exemption. Providing federal funds for states to develop and implement effective charitable accountability programs, with active federal oversight of their content, would encourage such initiatives and even provide a needed boost to existing programs.

Local communities, which provide the largest quantifiable tax exemptions and are in the best position to identify and set priorities for their own health-care access problems, should be encouraged to hold hospitals accountable for their charitable activities. Hospital trustees are supposed to represent the community; they have a duty to respond to a well-presented community argument for greater accountability with respect to returns on tax-exempt values. However, many, if not most, communities are not organized to exert pressure effectively on their local hospitals in order to obtain better health-care access for the most vulnerable; nor do community groups generally have the necessary information for presenting the best argument to their health care institutions.

Local municipalities could act in a number of ways to persuade hospitals to be more accountable for the charitable services they offer the uninsured. The simplest would be to maintain updated property-tax-assessment values for hospitals and related nonprofit entities and assure public access to those records. A second measure would be for the municipality to require all nonprofit hospitals to file annually, on a timely basis, both their audited financial statements and any community benefit statements they might have. These documents would be offered to the public, along with property-tax information. Municipalities could initiate or participate in community-needs assessments, particularly of their under- and uninsured populations, and they could also be prepared to establish priorities, with public input, for the allocation of charitable dollars. Finally, at the most activist level, municipalities could challenge hospitals with excess tax benefits to explain their charitable priorities publicly and then negotiate "payments in lieu of taxes," which would be designated for critical health services for the uninsured. To date, most municipalities that challenge hospital tax exemptions are simply seeking new revenue sources for general municipal functions; removing resources from the health system in this way does not result in good public health policy, although it may make good fiscal policy.

States are in a good position to encourage local communities to take action: they can mandate uniform reporting of hospital free care and other

community benefits and create or estimate the tax-value data that are so difficult to generate on a national level. States also can combine the value of state and local exemptions by requesting accountability commensurate with tax values; the combination represents a meaningful proportion of hospital tax benefits. Some states have begun to raise general awareness and to demand uniform reporting of free care and bad debts, as well as other community benefits; however, they are far from setting standards or enforcing sanctions in the event that hospitals fail to achieve a standard (Noble, Hyams, and Kane 1998). Policy makers should work to improve these early state initiatives, rather than declaring failure based on progress to date. Changing the environment and raising public expectations of hospitals' accountability for their charitable performance require time and sustained effort.

Another policy that states might consider is the notion of free-care pools, like the ones already in place in Massachusetts, New York, Florida, and New Jersey. Our research shows that many hospitals with excess tax values are not located in the areas that most need free care; a redistributive mechanism can best be developed at the state level. We noted that, within our sample of hospitals, those in states with free-care pools had ratios of uncompensated care to tax-exempt values that were two to three times higher than hospitals in states with no redistributive pools. Although we cannot claim causality, the strong possibility exists that hospitals are more open to providing charity if there is some way of "leveling the playing field" in terms of income redistribution.

Finally, our research findings do not support the notion that coercing more charity care out of hospitals will *solve* the nation's problem of financing care for the uninsured. Although there is plenty of opportunity for local communities to pressure hospitals to offer more uncompensated care for medically indigent patients, the level of resources provided through hospital tax exemptions falls short of the mark for funding universal coverage. Even if all 3,000-plus nonprofit community hospitals in the country were required to provide care equal to the value of their tax exemptions, extrapolating our findings to all of these hospitals brings the total amount of new care to less than $100 per uninsured person per year. This would have paid for less than one month of a health insurance premium in 1997 in a major metropolitan area (St. Louis Area Business Health Coalition 1999). Even if marginal cost were used to value care provided, such that the dollar amount doubled, converting the excess tax value into care for the uninsured would not purchase much health insurance.

Both the federal government and the states have begun to stem the steady erosion in private health insurance that has resulted from fundamental changes in the practices of employers who have traditionally provided private health insurance. These efforts must continue. The cure for the problem of funding the uninsured must be found outside the resources of our nonprofit institutions.

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Appendix

The dependent-variable denominator was defined as (case-mix-adjusted discharges [CMAD] * [Gross Patient Service Revenue/Gross Inpatient Service Revenue]). The numerator was Net Patient Service Revenue (net of contractual adjustments, free care, and bad-debt expenses), as reported in the 1996 MCR. Case-mix-adjusted discharges were for 1996, provided by each state's case-mix-adjusted discharge data sets. We predicted the dependent variable, Net Patient Service Revenue/CMAD adjusted for Outpatient Activity, based on a general linear regression model with the following predictor variables: ownership (public, private nonprofit, for-profit), percent of Medicare patients, percent of Medicaid patients, length of stay, occupancy, and state. Length of stay, occupancy, percent Medicare, and state were significant predictors (R^2 of .407) of the dependent variable. Neither private nonprofit nor for-profit ownership was a significant variable with respect to the dependent variable.