Nonprofit Hospitals and the Decline of Charity Care

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Abstract

Nonprofit hospital systems in the United States are divesting facilities in low-income areas and acquiring facilities in affluent areas. Critics worry that this will result in less spending on "charity care," which is medical care provided free-of-charge when authorities determine in advance to do so. We develop a dynamic hypothesis to display the systemic nature of this phenomenon. We then formulate a system dynamics model to test the hypothesis. We find that greater access to private health insurance in affluent areas drives this phenomenon. Furthermore, we find that policymakers and regulators have a limited menu from which to choose to safeguard charity care in low-income areas. They can closely monitor the nonprofit hospital systems and revoke their nonprofit status (with its attendant tax breaks) and thereby coerce them into spending a specified amount on charity care. Or they can expand Medicaid, the state-and-federal health care insurance for low-income populations, which slightly raises reimbursement to hospitals, thereby reducing the need for charity care.

Introduction

Hospitals in the United States fall into three categories: government-run, for-profit, and nonprofit. The majority are nonprofits (Mathews, McGinty and Evans, 2022). Nonprofit hospitals receive billions of dollars in tax breaks in exchange for serving their communities, particularly by providing "charity care" to low-income residents of those communities (Evans, Rust and McGinty, 2022). Rothbart and Yoon (2022: 59) define charity care as "unbilled expenditures for disadvantaged patients when the determination to provide care free-of-charge is made before medical services are provided." Despite these implied responsibilities, numerous studies (e.g., Bai et al., 2021; Gaskin et al., 2019; Mathews, McGinty and Evans, 2022) have found that nonprofit hospitals often provide minimal charity care. For example, Bai et al. (2021) used 2018 Medicare[1] Hospital Cost Reports to compare over 4,000 U.S. hospitals in all three categories; their assessment was blunt:

> In aggregate, nonprofit hospitals spent $2.3 of every $100 in total expenses incurred on charity care, which was less than government ($4.1) or for-profit ($3.8) hospitals. No hospital ownership type outperformed the other two types with respect to charity care provision in a majority of hospital service areas containing all three types…. These results suggest that many government and nonprofit hospitals' charity care provision was not aligned with their charity care obligations arising from their favorable tax treatment. (Bai et al., 2021: 629)

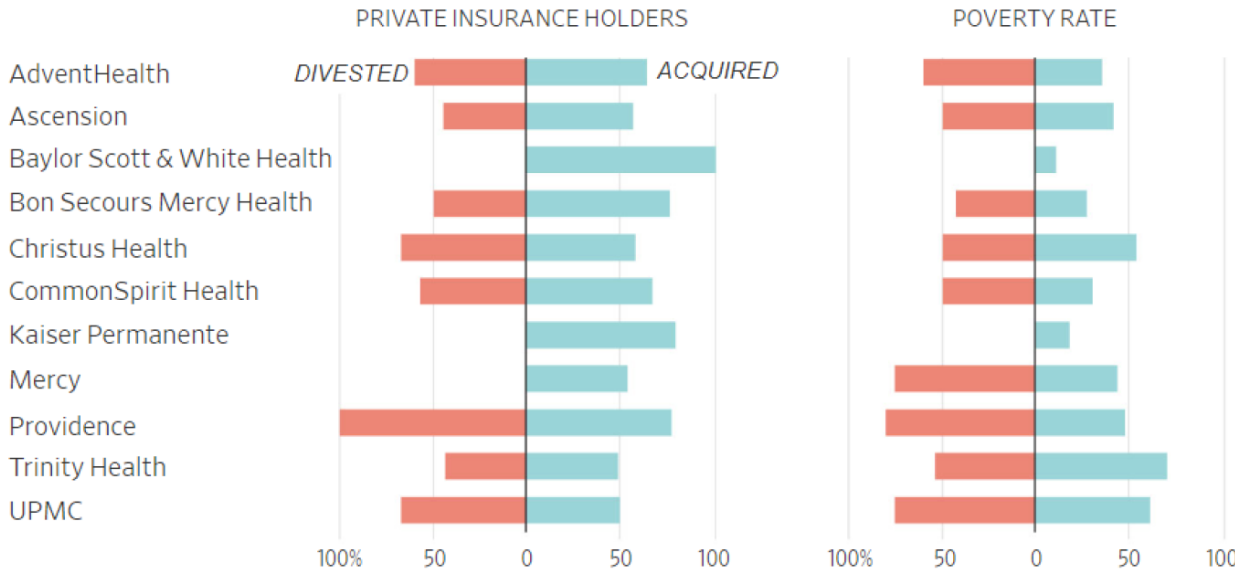
A recent article in the *Wall Street Journal* (Evans, Rust and McGinty, 2022) examined another trend among nonprofit hospital systems: divesting their hospitals in low-income areas and acquiring hospitals in affluent areas. Evans, Rust and McGinty put it this way:

> Many of the nation's largest nonprofit hospital systems, which give aid to poorer communities to earn tax breaks, have been leaving those areas and moving into wealthier ones as they have added and shed hospitals in the last two decades.
>
> As nonprofits, these regional and national giants reap $8.8 billion from tax breaks annually, by one Johns Hopkins University researcher's estimate. Among their obligations, they are expected to provide free medical care to those least able to afford it.
>
> Many top nonprofits, however, avoid communities where more people are likely to need that aid, according to a *Wall Street Journal* analysis of nearly 470 transactions. As these systems grew, many were more likely to divest or close hospitals in low-income communities than to add them.

Figure 1 contains a graphic from Evans, Rust and McGinty (2022) that shows the transactions—divestitures and acquisitions—of eleven of the nation's largest nonprofit hospital systems. Those systems tended to divest hospitals in areas of low private insurance coverage and high poverty (orange bars in Figure 1), and to acquire hospitals in areas with high private insurance coverage and low poverty (blue bars in Figure 1).

The present paper will explore the systemic structure of the phenomenon of nonprofit hospitals leaving low-income areas and entering affluent areas.

[1] In the United States, the federal Medicare program covers people aged 65 or older, while Medicare (a joint state-federal program) covers people younger than 65 years old who qualify by virtue of low income, disability or similar criteria.



Note: High insurance coverage and poverty rates are above states' median rates; low are at or below. Insurance coverage is ages 18-64 for 2012 data and 19-64 for 2020 data. Kaiser Permanente didn't divest hospitals during the period.
Sources: American Hospital Directory Inc.; Dartmouth Atlas of Health Care; Census Bureau; IPUMS NHGIS, University of Minnesota; nonprofit systems and their financial statements; 'The Price Ain't Right?' 2019 Quarterly Journal of Economics; Rand Corp.

Figure 1 Percentage of hospital transactions in markets with high private insurance coverage or high poverty rates. Source: Evans, Rust and McGinty, 2022.

Dynamic Hypothesis

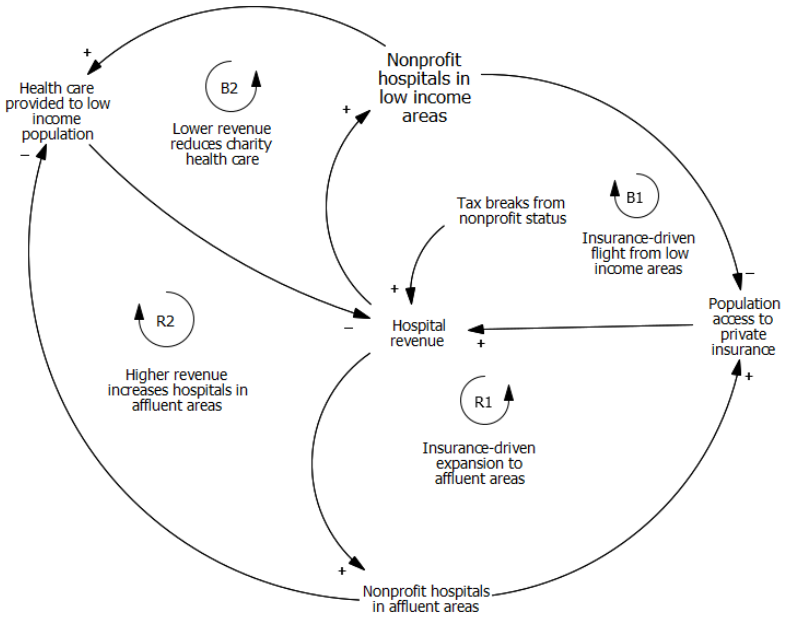


Figure 2. Dynamic hypothesis for why nonprofit hospitals are divesting in low-income areas and acquiring in affluent areas.

Figure 2 shows a causal loop diagram that proposes to explain how this phenomenon has evolved. The hypothesis has two reinforcing loops and two balancing loops:

- **Loop R1**: Patients at hospitals in affluent areas tend to have greater access to private insurance, which, compared to public insurance like Medicaid and Medicare, yields higher hospital revenue, which in turn encourages nonprofit hospitals systems to expand to those areas, gaining even greater access to a pool of patients with good access to private health insurance.

- **Loop R2**: There are fewer low-income patients in affluent areas, so nonprofit hospitals there do not have to provide as much charity care, which increases their revenue, encouraging them to expand to other affluent areas.
- **Loop B1**: This loop is the inverse of R1. Nonprofit hospitals in low-income areas serve populations who have lower access to private insurance, which in turn reduces hospital revenues, discouraging them from expanding to low-income areas.
- **Loop B2**: Increased charity care from hospitals in low-income areas generates in lower (or no) payments and reimbursements (typically from Medicare and Medicaid), resulting in lower revenues, which in turn discourages expansion to low-income areas.

Stock-and-Flow Model

Figure 3 illustrates the stock-and-flow structure that attempts to capture the dynamic hypothesis.

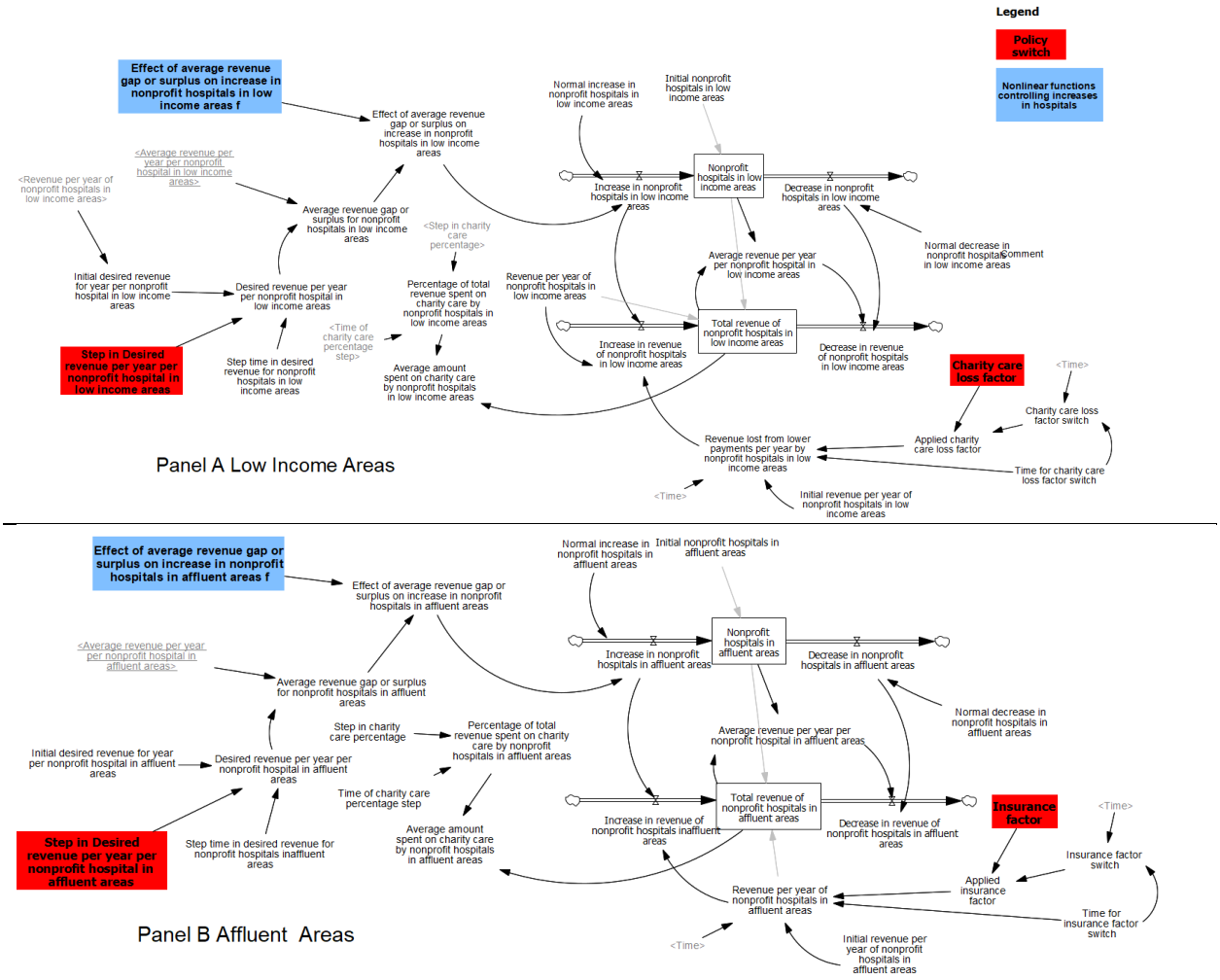


Figure 3. Stock-and-flow model structure for dynamic hypothesis explaining the divestiture of nonprofit hospitals from low-income areas and acquisition of nonprofit hospitals in affluent areas. (Note: for clarity, does not show some first-order controls.)

It is important to note that this is a *stylized* model. It represents *one* nonprofit hospital system and how its management makes decisions to reduce (divest) hospitals in low-income areas and increase (acquire)

hospitals in affluent areas. Also, there are first-order controls on the two hospital stocks, to prevent them from dropping below zero, that are hidden in Figure 3.

The model has a coflow structure, which tracks the number of nonprofit hospitals and their respective revenue levels in two types of areas—low-income (Panel A in Figure 3) and affluent (Panel B in Figure 3). The model allows four kinds of policy tests:

- The effect of loss of revenue from charity care in low-income areas, shown as "Charity care loss factor," highlighted in red in Figure 3's Panel A.
- The effect of insurance access in affluent areas, shown as "Insurance factor" highlighted in red in Figure 3's Panel B.
- The effect of changes in revenue objectives for hospitals in low-income areas, shown as "Steps in desired revenue" highlighted in red in Figure 3's Panel A.
- The effect of changes in revenue objectives for hospitals in affluent areas, shown as "Steps in desired revenue" highlighted in red in Figure 3's Panel B.

The model has two important nonlinear functions, highlighted in blue in Figure 3. These functions show the effect of revenue gaps or surpluses on the increase in hospitals in both low-income and affluent areas. As shown in Figures 4 and 5, the two functions have the same shape, which augments the normal increase in hospitals as the surplus enlarges.

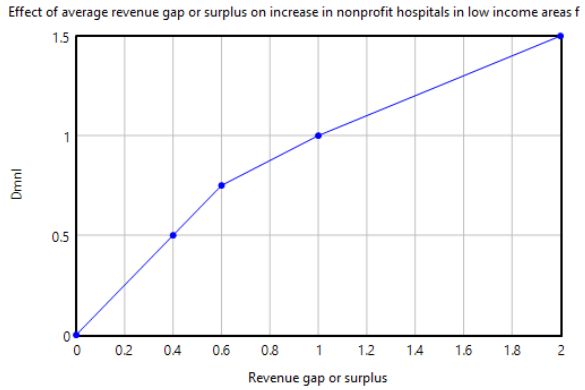


Figure 4. Effect of revenue gap on increase in nonprofit hospitals in low-income areas.

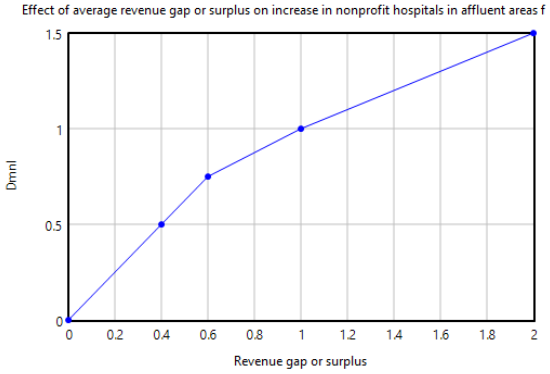


Figure 5. Effect of revenue gap on increase in nonprofit hospitals in affluent areas.

Policy Tests

Base situation

The model runs from the year 1990 to the year 2020. The stylized nonprofit hospital system in it begins with five hospitals in each area, with those in the affluent area generating $3 million in revenue, and those in low-income area generating $1 million. To establish a base, we assume no changes in desired revenues, no losses from charity care in the low-income area, and no private insurance effect in the affluent area. The results, for number of hospitals and revenues, are flat, as Figure 6 shows.

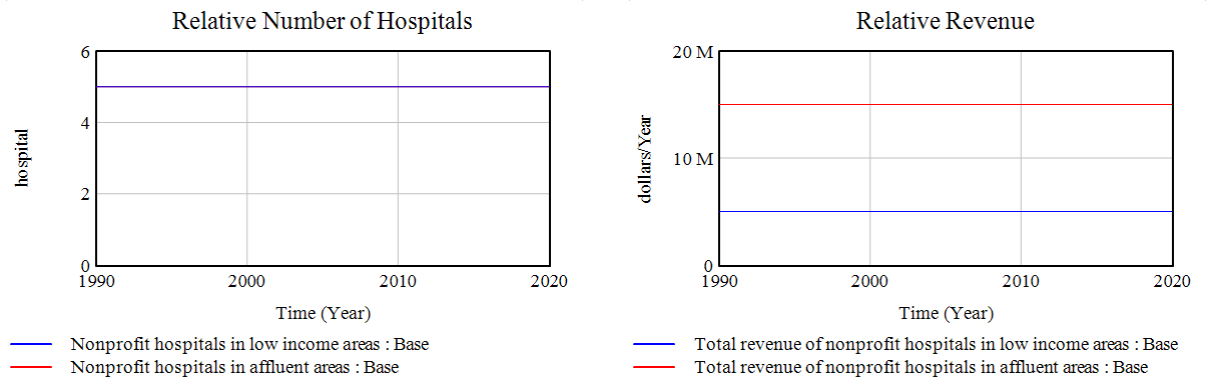


Figure 6. Number of hospitals and revenues in base run.

Increased revenue expectations

The first policy run tested the effect of increased revenue expectations in each area. Setting increased expectations of $2 million starting in 2005 yielded the results in Figure 7.

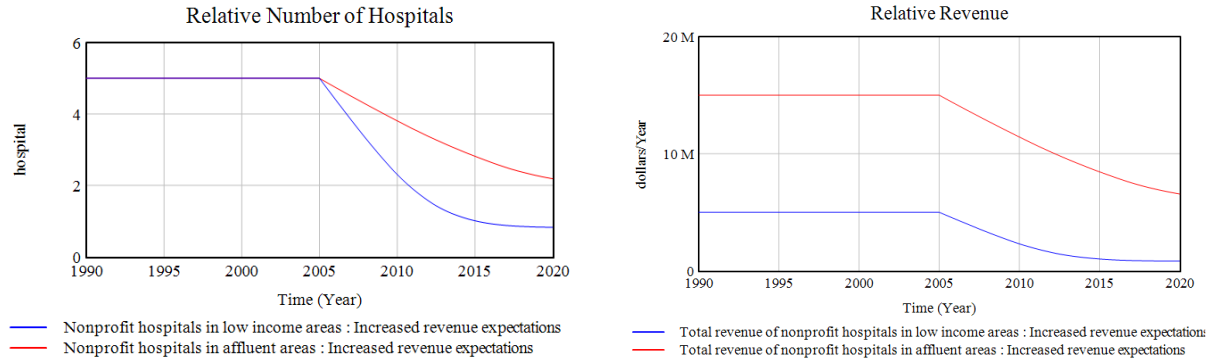


Figure 7. Number of hospitals and revenues with higher revenue expectations starting in 2005.

Neither hospitals in low-income areas nor hospitals in affluent areas generated sufficient revenue to meet the higher expectations, leading to divestiture of hospitals in both areas, although both lower revenues and hospital divestiture were worse in the low-income areas. These patterns clearly do not match what Evans, Rust and McGinty (2022) found in their study.

Increased insurance factor in affluent areas

Experts interviewed by Evans, Rust and McGinty (2022) said that one reason for better hospital financial performance in affluent areas was because more patients there had access to private insurance, which reimburses more than Medicare and Medicaid. Accordingly, in this policy run we changed the insurance factor in affluent areas from zero to fifty percent starting in the year 2005. Figure 8 shows the results.

As expected, there is no change for low-income areas either in number of hospitals or amount of revenue. However, the change in affluent areas is noteworthy: revenue increases because of the higher reimbursements from private insurance, which leads to more hospitals in those areas.

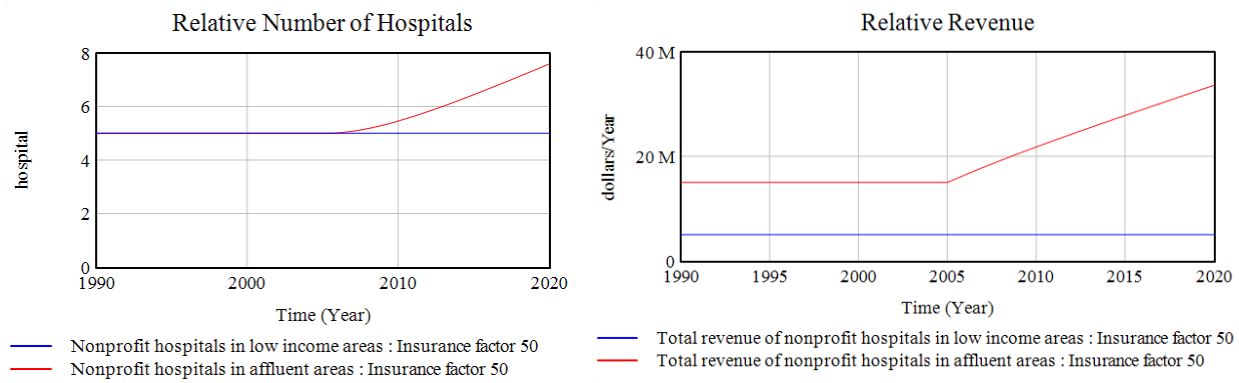


Figure 8. Number of hospitals and revenues with higher insurance factor in affluent areas starting in 2005.

Charity care loss factor in low-income areas

Because charity care is more prevalent in low-income areas, and because Medicare and Medicaid reimbursements are lower in those areas, it would be useful to do an experiment that reduced revenues in those areas. Figure 9 shows the results of a ten percent decline in normal revenue caused by these factors, starting in 2005.

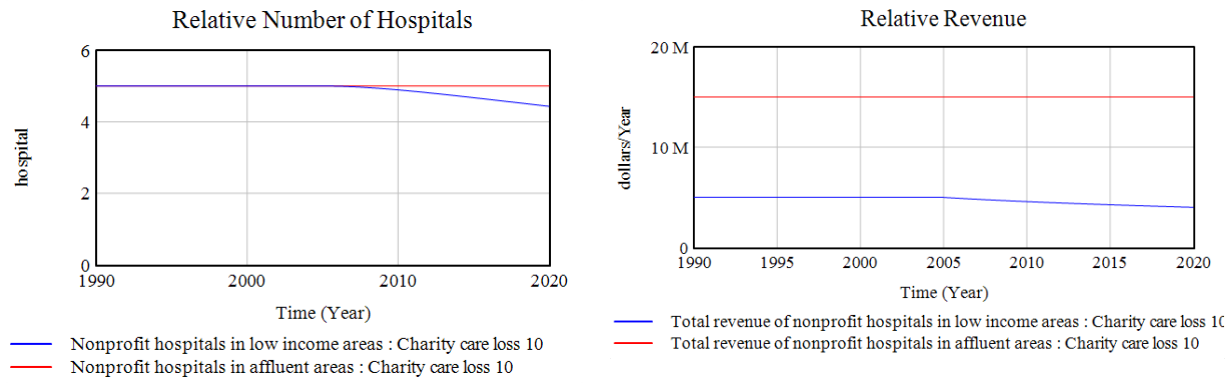


Figure 9. Number of hospitals and revenues with ten percent decline in revenues starting in 2005.

As expected, the result of higher charity care losses is a reduction in revenue, which in turn leads to divestiture of hospitals, from the initial five to around one.

Current scenario

The phenomenon described by Evans, Rust and McGinty (2022) combines the previous two policy scenarios—losses from charity care in low-income areas coupled with revenue gains, driven by private insurance reimbursements, in affluent areas. We call this the "current scenario," and Figure 10 shows its results.

The nonprofit hospital system in the model begins to divest its hospitals in low-income areas, which leads to a gradual decline in revenues from its hospitals in those areas (blue lines in Figure 10). By contrast, the system begins to acquire hospitals in affluent areas, which leads to robust increases in revenues from its hospitals in those areas (red lines in Figure 10).

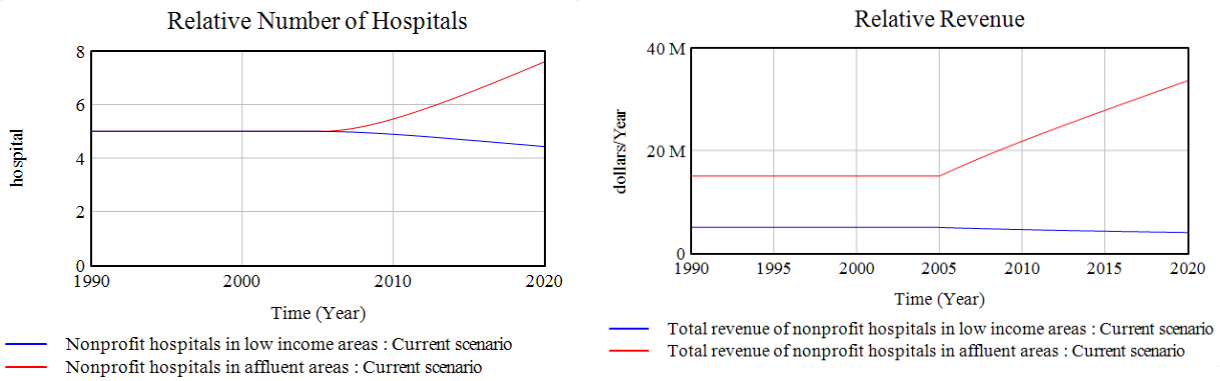


Figure 10. Number of hospitals and revenues in the current scenario, starting in 2005.

Charity care

One of the main reasons for the controversy over the phenomenon—nonprofit hospital systems divesting from low-income areas and acquiring in affluent areas—is the effect on the amount of charity care they provide in the low-income areas. A frustration experienced in modeling this problem is that research has shown quite clearly that nonprofit hospital systems are all over the lot in terms of their spending on charity care (Bai et al., 2021; Bai et al., 2022; Cooper et al., 2019; Gaskin et al., 2019; Kennedy et al., 2010; Mathews, McGinty, and Evans, 2022; Rothbart and Yoon, 2022). Mathews, McGinty, and Evans (2022), analyzing annual Medicare cost reports filed by hospital systems, found that nonprofit systems spent an average of 2.3 percent of revenue on charity care. By contrast, for-profit hospitals spent on average 3.4 percent of revenue on charity care. Among the nonprofit hospital systems, charity care expenditures ranged from well under 1 percent to over 4 percent. (See Figure 11, which contains a graphic from their article.)

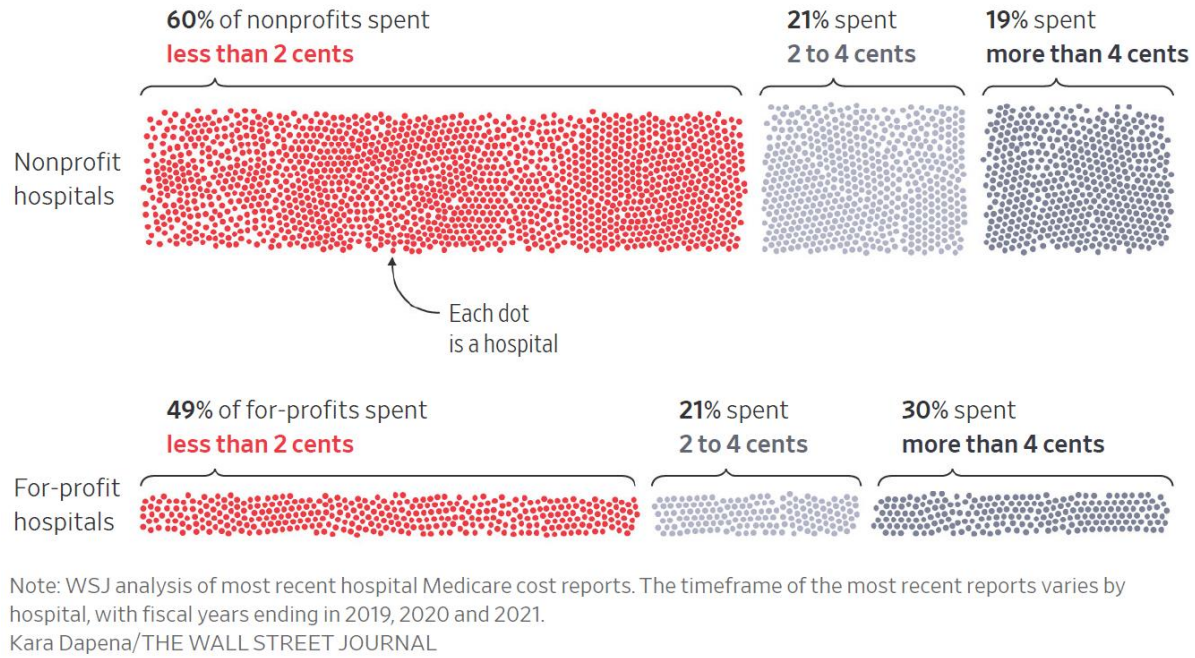


Figure 11. Spending on charity care for every dollar of net patient revenue, by hospital type. (Source: Mathews, McGinty, and Evans (2022)

This pattern of charity care spending makes it difficult to select proper parameters for charity care spending. For the purposes of the present model, the assumption is that nonprofit hospitals in both areas spend the national average, about 2.3 percent, of their revenue on charity care. Figure 12 shows the model's results for the current scenario.

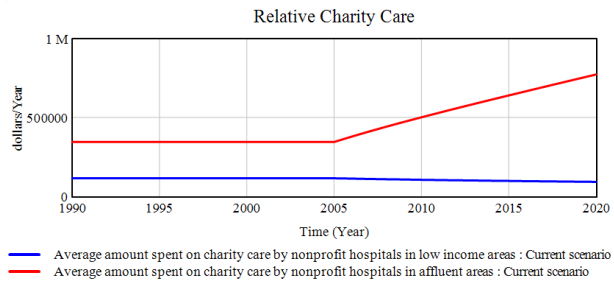


Figure 12. Spending on charity care for the current scenario.

Figure 12 shows a gradual decline, starting in 2005, in charity care spending in low-income areas, which is at least plausible. It also shows a robust increase, starting in 2005, in charity care spending in affluent areas, which seems a bit less plausible. It is the increase in hospitals and revenue that drives this result, which makes sense in the context of the model, but may overstate the amount of charity care spending needed in affluent areas.

Policy Recommendations

Minimum charity care provisions

Many states have already seized on one possible leverage point—requiring that nonprofit hospitals hit some percentage target of charity care. However, studies have shown that this approach yielded little improvement. For example, Kennedy et al. (2010) examined the effects of 1993 Texas legislation that required nonprofit hospitals to meet specific community benefit criteria to retain tax-exempt status. One criterion was to spend a minimum of four percent of revenue on charity care. The authors reported:

> Overall, the Texas law changes did not, on average, lead to increased charity care spending by NFP hospitals. While spending increased by NFPs providing too little charity care prior to the law, this group represents less than 20% of our sample. Kennedy et al. (2010: 242-243)

Similarly, Rothbart and Yoon (2022) examined the effect of Minimum Charity Care Provision (MCCP) requirements in Illinois. They report:

> …. We find no evidence that nonprofit hospitals increase charity care in response to the MCCP requirements on average. Instead, we find that there is heterogeneity in responses…. (Rothbart and Yoon, 2022: 58)

In other words, nonprofit hospital systems in Illinois were all over the lot in their provision of charity care *before* the imposition of Minimum Charity Care Provisions and they were all over the lot *after* their imposition.

Rigorous state monitoring of charity care

In their paper, Rothbart and Yoon (2022) mention two possible policy avenues that are related to minimum charity care provisions—federal reporting requirements and state reporting requirements. They mention that Illinois has removed or denied the nonprofit status of several hospital systems "for failing to serve a primarily charitable mission and offering insufficient levels of charity care." (Rothbart and Yoon, 2022: 60) If we assume that the state authorities overseeing the hospital system in our stylized

model could issue a mandate of four percent expenditures on charity care, the results would resemble those in Figure 13.

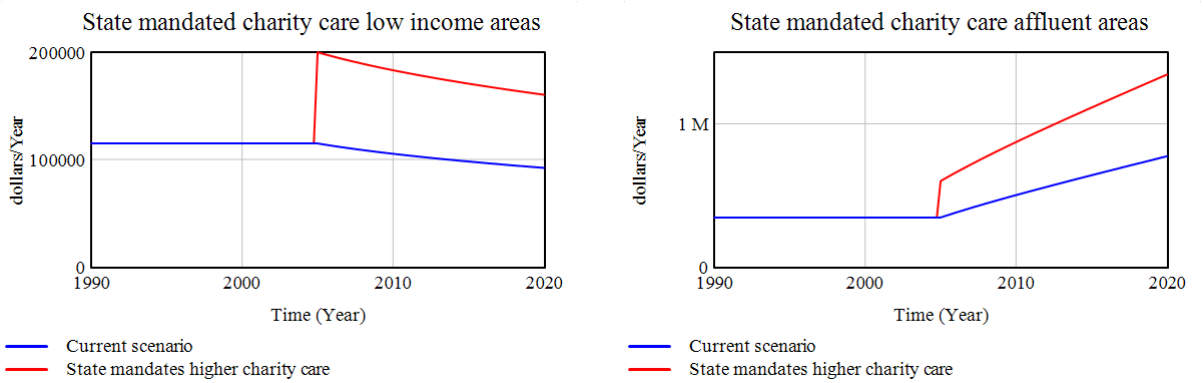


Figure 13. Spending on charity care after state mandate of 4% expenditure, compared to current scenario.

Based on the findings of Kennedy et al. (2010) and Rothbart and Yoon (2022), it is far from assured that a monitoring and sanctioning approach would be effective. However, Figure 13 shows that, were it to be successful, it would result in a greater amount of charity care in both types of locations, although the decline in hospitals would still lead to a long-term decay in charity care in low-income areas.

Reduced charity care loss

Bai and his colleagues (Bai et al., 2022) examined charity care provision differences between states that had expanded Medicaid and those that had not. They found that charity care *went down* in states that had expanded Medicaid. Their conclusion was that Medicaid, the U.S. state-and-federal program aimed at providing health care to low-income populations, reimbursed hospitals for care that had previously been uncovered, thereby leading to a lower need for charity care. In the present model, this would correspond to having a lower charity care loss factor.

Figure 14 shows the difference for low-income areas between loss factors of ten percent (the current scenario, the blue line in the figure) and five percent (the red line in the figure). The ultimate decline in charity care still exists, but the red line shows that its slope is shallower. Therefore, this is a viable, if imperfect and incomplete, policy choice.

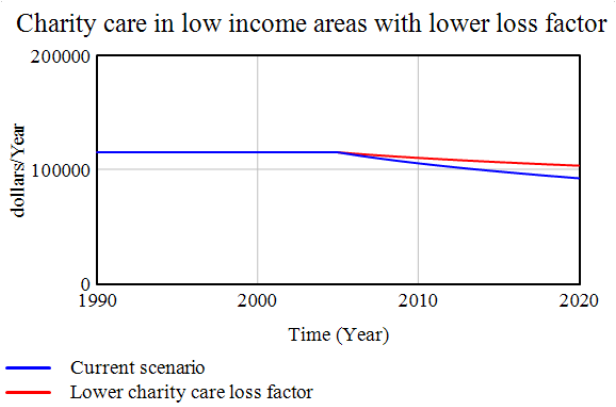


Figure 14. Spending on charity care with lower loss factor, compared to current scenario.

Conclusion

The model considered in the present paper captures the dynamics of the observed behavior, namely nonprofit hospital systems' divesting locations in low-income areas and acquiring locations in affluent areas. It also captures the decline of charity care in low-income areas, but also its increase in more affluent areas.

Based on research in this area, policymakers and regulators appear to have few tools for ameliorating the problems caused by this activity by nonprofit hospital systems. In the

United States, they do not have the authority to prevent a nonprofit hospital system from divesting and acquiring hospitals. They *do* have the authority to mandate minimum levels of charity care, but empirical research shows that approach to have been ineffective.

The only policy approaches shown by the present model to have been somewhat effective are

- Enforcing, on pain of losing nonprofit status (with its attendant tax breaks), some minimum level of charity care (see Figure 13).
- Reducing the losses resulting from charity care by expanding Medicaid and using it to reimburse hospitals so they do not have to discount charity care or charge nothing for it (see Figure 14).

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