

The Anatomy of a Hospital System Merger: The Patient Did Not Respond Well to Treatment

Based on BFI Working Paper 2021-132, [*"The Anatomy of a Hospital System Merger: The Patient Did Not Respond Well to Treatment,"*](#) by Martin Gaynor, Carnegie Mellon; Adam Sacarny, Columbia; Raffaella Sadun, Harvard; Chad Syverson, University of Chicago; and Shruthi Venkatesh, Carnegie Mellon

The mega-merger between two large for-profit hospital chains achieved certain goals, including harmonized electronic medical records and managerial processes; however, detectable gains in profitability or patient outcomes were absent.

Nearly 1,600 hospital mergers occurred in the United States from 1998-2017. A large economics literature has studied the impacts of this trend. Much this literature has focused on measuring changes in market power and price effects, though a substantial body of work has also looked at clinical outcomes, while other papers examined impacts on costs. What is missing is an explanation for why these mechanisms work: What is the mechanism(s) by which mergers affect these outcomes?

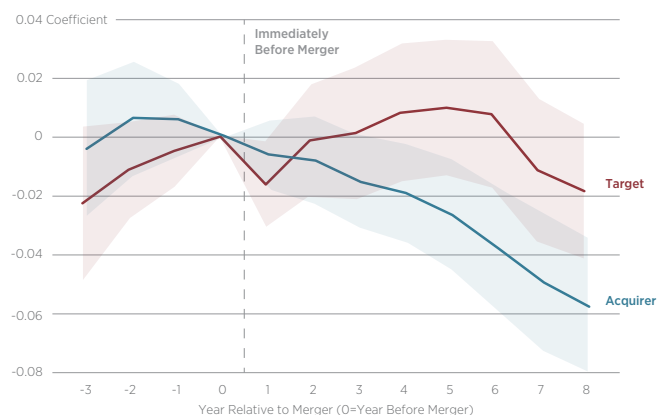
This paper pulls back the curtain on the inner workings of hospital mergers to answer that question. It does so by leveraging a particularly large and consequential acquisition, an ideal case for this "opening the black box" exercise. This mega-merger involved two of the largest for-profit chains in the United States, comprising over 100 individual hospitals. Focusing on this single merger allowed the authors to benchmark changes against the acquirer's claims, particularly about the use of certain inputs.

Importantly, and unique to their study, the authors also surveyed the leadership of these hospitals about management processes and strategies to see further inside the organization and how it managed the merger. Finally, the authors observed rich clinical and financial performance metrics that the existing literature on hospital mergers typically studies as outcomes.

The authors' findings include the following:

- Improving hospital performance through mergers is difficult, as indicated by either metrics of private firm performance or social benefit. Despite having a longstanding strategy and history of growth through

Figure 1 • Event Study of Profit Margin



Notes: This figure shows an event study of the effect of the merger on profits by estimating an event study version of equation (1) in which the outcome is the profit margin. Profit margins winsorized at 5% on each side in each year. See text for more details. The event study is normalized to the year before the merger. Shading represents 95% confidence intervals derived from robust standard errors clustered at the hospital level. The vertical dashed line depicts the time immediately before the merger.

acquisition, the acquiring firm had difficulty improving either the financial or clinical performance of the target hospitals, even eight years after acquisition.

- The acquirer failed to improve performance even though the merger led to changes in intermediate inputs that might have seemed to herald success. The acquirer was able to install many new executives in the target hospitals (often coming from the acquirer's existing hospitals) and drive adoption of a new electronic medical record (EMR) system at target hospitals.
- Several years after the merger, the authors find a great deal of similarity in management practices within the merged hospital network compared to other hospital chains. Despite these organizational changes, there were no substantial improvements in targets' outcomes. The profitability of the target hospitals did not detectably rise. Prices rose, but so did costs, with little detectable impact on quality of care.
- Patients' clinical outcomes, particularly survival rates and chances of being readmitted to the hospital, were little changed.
- The only clear change in outcomes due to the merger was in the profitability of the acquiring firm's existing hospitals, and in a negative direction: relative to other for-profit hospitals, the acquiring firm's profit rates fell by 3 percentage points after the merger.

The authors speculate that this final finding might reflect the consequences of post-merger shifts in the acquirer's attention and resources away from its existing operations and toward its newly purchased hospitals.

Acknowledging the need for further research, the authors note a key puzzle of this merger: the organization was financially motivated to change and improve, yet the merger led to no clear benefits in hospital performance. In this way, the effects closely align with existing findings that hospital mergers fail to improve patient care. The authors' evidence on mechanisms suggests that of all the levers it could have moved to raise performance, the chain exerted its strongest influence on those that were straightforward to implement—new technology and shuffling CEOs—but likely to have little payoff.

Finally, regarding merger policy, the authors' findings provide a new perspective for antitrust authorities evaluating the claimed efficiencies of mergers. This work shows the value of taking an organizational view that considers the stated aims of the merger, how the firm intends to implement those aims internally, and whether those changes are likely to yield performance improvements. Such an approach could help to evaluate merging parties' efficiency claims and assess the likelihood they will be realized post-merger.

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