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Curing the Healthcare System: Does Transparency Help?

By Soroush Saghafian

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The healthcare system in the United States, which is supposed to provide care for sick patients in an effective and efficient manner, is itself sick and needs to be cured. Vis-à-vis other developed countries, our healthcare expenditures per capita is about 2.5 times higher on average, and yet, our patient outcomes are much inferior.

Over the years, researchers and policymakers have been wrestling with a plethora of potential solutions and a paucity of meaningful success. Considering that the high administrative costs could be reduced, third-party payers that create inefficiencies could be removed, and the existing poor reimbursement structure could be reformed are only a few examples of such potential solutions.

In a recent study published in *Operations Research* [1] and in a commentary article published by the *National Academy of Medicine*, we study and discuss one of the solutions that can potentially cure the healthcare sector: public reporting. Public reporting refers to efforts aimed at measuring and publicly reporting quality outcomes, or more broadly, increasing transparency of quality of care delivered by different providers.

In a nutshell, the appeal of such efforts is two-fold: they are supposed to: 1) enable patients to choose providers with higher quality, and 2) induce providers to improve their quality in order to protect and increase their market shares. These two potential outcomes have convinced various government and private organizations to double down on their transparency initiatives. In 2005, for example, the Center for Medicare and Medicaid Services launched the website Hospital Compare to publicly provide information about the quality of care at more than 4,000 Medicare-certified hospitals. We also see various other examples, including CalHospitalCompare.org, the ProPublica Surgeon Scorecard and the Compare Hospitals site by the Leapfrog Group, all of which offer hospital outcome data. Websites by Healthgrades, *Consumer Reports*, Yelp and *U.S. News & World Report* offer a variety of hospital ratings and rankings.

Despite the convincing rationale behind public reporting and similar efforts to enable consumers to make better choices, empirical evidence (e.g., before-and-after studies of the launch of the Hospital Compare website) suggests a paucity of meaningful success – like many other treatments proposed to cure the healthcare sector. Should we blame this lack of success on peculiarities of the healthcare sector and argue that since healthcare is exceptional, increasing transparency of patient outcomes will not yield improvements?

The answer turns out to be "no." Our research reveals that increasing quality transparency in the healthcare sector is indeed a strong tool and should be regarded as an effective solution that can go a long way. However, like many other tools, it needs to be used correctly. Using it incorrectly, like what has been done so far, will not yield improvements, and may even hurt societal outcomes such as social welfare in the long term.

Our findings suggest that policymakers have been incorrectly using this tool for at least three reasons. First, they have been thinking of public reporting as simply making the outcome information publicly available. However, what should have been done is to make such information publicly *understandable* (not just *available*). Measuring health outcomes is a complex endeavor, requiring various statistical risk adjustments. Thus, many patients find such measurements confusing and give it less weight in their decisions compared to factors such as proximity and familiarity. This means that public reporting websites need intuitive displays or summaries to communicate complex statistical comparisons of alternatives that are both customized to individual patient needs and, at the same, understandable by them.

Second, policymakers aimed public reporting efforts at the entire population rather than at specific groups of patients. They could do much better had they targeted specific types of patients who are most responsive to outcome information. This is because such information is less likely to alter decisions by emergent, older or rural patients with fewer hospital options than elective, younger and urban patients with many hospital options. Targeting can make a big difference.

Third, policymakers did not accompany public reporting efforts with other policy interventions that can correct the allocation of patients to hospitals. It turns out that increasing transparency without implementing such policy interventions can hurt societal outcomes. Complementary policy interventions that incentivize suitable patient, provider and payer behavior are necessary to overcome this issue. For instance, absent such interventions, hospitals may change their investment strategies aimed at attracting specific patients, which can hurt the overall system. Similarly, without some form of travel subsidy, patients may choose a nearby hospital instead of a higher quality hospital.

In conclusion, if we want to cure our ill healthcare system, we cannot rely on wrong treatments and expect outstanding results. Wrong treatments can indeed make the illness more severe. This is certainly against the well-known medical saying *"primum non nocere,"* meaning "first, do no harm."

Reference

1. https://pubsonline.informs.org/doi/10.1287/opre.2019.1868

Interview on *Resoundingly Human* Podcast

Healthcare is a complex, often overwhelming subject, and the effort to match patients with providers based on patient needs and provider ability, known as the patient provider alignment (or PPA) problem, has consistently proven difficult to tackle.

In the past, this was thought to have been exacerbated by the limited information available to the public regarding providers and their performance, which could help facilitate better patient provider matches. However, despite efforts to increase transparency by making healthcare data open and available to the public, the PPA problem still persists.

Ashley Kilgore, INFORMS communications manager and host of the INFORMS podcast, *Resoundingly Human*, spoke with Soroush Saghafian regarding his research in this area during a recent episode of the podcast.

The podcast is available on *OR/MS Today* here, and can be downloaded on iTunes, Google Play, Stitcher and Spotify.

Soroush Saghafian

Soroush Saghafian, Ph.D., is an assistant professor at Harvard University and a longtime member of INFORMS. He also serves as an adjunct assistant professor of Healthcare Systems Engineering, Mayo Clinic College of Medicine, a faculty affiliate for both the Harvard Ph.D. Program in Health Policy and Harvard Center for Health Decision Science, and as an associate faculty member of Harvard Ariadne Labs. Saghafian is interested in using and developing operations research and management science techniques that can have significant public benefits. He has been collaborating with a variety of hospitals in improving their operational efficiency, patient flow, medical decision-making and, more broadly, healthcare delivery policies.

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