

VIEWPOINT

Business Model–Related Conflict of Interests in Medicine

Problems and Potential Solutions

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Much current research and debate involving conflicts of interest in medicine focus on the appropriate level of physician interaction with firms in industries related to health care, such as pharmaceutical and medical device companies. The influential article by Brennan et al¹ that led academic medical centers to take the lead in tackling problems caused by conflicts of interest focused almost exclusively on interactions between physicians and pharmaceutical companies. The 2009 Institute of Medicine report *Conflict of Interest in Medical Research, Education, and Practice* also limited its coverage of conflicts to interactions between physicians and pharmaceutical, medical device, and biotechnology companies. The American Medical Student Association “scorecard” grades conflict of interest policies at medical schools purely on the basis of how they regulate physician–industry relations.

Although these interactions may influence physicians in ways unrelated or even detrimental to patient care, only a small percentage of physicians have substantial financial relationships with pharmaceutical or device companies.² In contrast, every physician is paid for

more profitable ones, and can also lead to excessive use of the most profitable treatments. Global payment schemes based on capitation, whereby a health care entity (and indirectly, physicians) receives a capped payment per patient based on the patient’s conditions and health levels, provide the opposite incentive—for physicians to choose too few services for patients because each individual service directly reduces a given patient’s profitability given the contractually determined annual payment. Either of these 2 payment mechanisms creates conflict for physicians.

Despite their prevalence and importance, business model–related conflicts of interest have received little attention in the conflict of interest literature. Although there is an academic literature dealing with the effects of fee-for-service payment systems, with a few exceptions⁵ its focus is on inefficiencies arising from over-referrals for follow-up tests rather than distortions of patient care caused by conflicts of interest.

Studies examining the effects of payment systems on physician practices have revealed effects that are difficult to interpret as benefiting patients. For example, physicians who own or receive payments from third-party companies providing procedures as diverse as computed tomography scans,⁶ surgery, and orthopedic treatments are much more likely to order these services.⁷ Referrals for anatomic pathology services by dermatologists, gastroenterologists, and urologists substantially increase the year after physicians begin to self-refer these tests to their own laboratories.⁸ The distortions of care revealed by these and many other streams of research should raise questions about the extent to which the incentives inherent in fee-for-service models drive similar distortions of care. It is difficult, however, to conduct rigorous research to measure the magnitude of such business model–induced distortions. Randomized experiments usually are not possible, and studies using other designs, such as before–after comparisons, are problematic because modifications to reimbursement schemes that are instituted in physician practices tend to be accompanied by other changes made at the same time.

In most research, the cost of excessive procedures has been measured as the increment to payments made by patients, who often incur larger co-payments or co-insurance, as well as the effect on insurance premiums and government spending on programs such as Medicare and Medicaid. But even these large sums significantly understate the true financial and nonfinancial

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providing patient-directed services via a system set by the physician’s practice group and supported by insurers, government, individuals, and others who reimburse for care. While a minority of physicians receive direct payments from industry, the average primary care physician sees roughly 2000 patients per year who are, directly and via insurance, billed an average of \$5000, suggesting that the typical primary care physician is part of a web of payments estimated to account for an estimated approximately \$10 million annually.³ These payments and the method or formula that determines them—the “business model” of the practice in which a physician operates—create unavoidable conflicts of interest because the services physicians select for a patient can and do directly affect a physician’s income.

Fee-for-service or volume-based reimbursement, which by one estimate determines payments for nearly 90% of US physicians,⁴ provides incentives for physicians to order more and different services than those that match patient need. This can influence treatment mix, with less profitable treatments not selected in favor of

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implications of these conflicts. Patients also experience nonmonetary costs from unneeded testing and procedures because nearly every medical procedure carries medical risks, has adverse effects, generates opportunity costs of patient time, and can carry psychological costs in the form of worry as well as anguish, depending on the results of the tests or procedures. These nonfinancial ancillary costs are likely several orders of magnitude greater than financial costs, yet are difficult to quantify.

A complicating factor is the difficulty of assessing whether any individual procedure was influenced by physician incentives; ie, of measuring bias at the procedure level. Medical care involves significant uncertainty and heterogeneity in treatment efficacy, and patients also vary in their needs and preferences. These complexities make it difficult or impossible to identify specific cases in which payments influenced decisions, which both increases the potential for conflicts of interest to occur and makes it impossible to address the problems with remedies such as the threat of malpractice suits for unwarranted procedures.

In addition, the unwillingness of physicians to consider that they could be influenced by their practice's business model when considering patient care choices makes solving the problem difficult. The vast majority of physicians care first and foremost about their patients. But a significant body of literature in the social sciences demonstrates that financial incentives can and do influence decisions in ways not recognized by decision makers.⁹

What, then, can be done to address problems caused by business model conflicts? One commonly proposed solution—the full disclosure of a physician's financial interests in a given procedure—is likely to be inadequate. Research on disclosure of conflicts of interest shows that even though transparency confers benefits, it seldom mitigates and in some situations can exacerbate problems caused by conflicts.¹⁰ Patients typically do not know what to make of physicians' disclosures, and the value they place on advice and the decisions they end up making do not substantively change when conflicts are disclosed. Given the limited effect

of disclosure, as well as other policies that place the onus of dealing with conflicts on patients, the problem of conflict of interest must be handled with policies targeting physicians, not patients.

Although some benefit may derive from better educating physicians about the potential for business model-related conflicts of interest, the most efficacious solutions will involve changes in incentives. Perhaps the most promising solution is one that has already been adopted by a variety of health systems, such as the Mayo Clinic, the Cleveland Clinic, and the Kaiser group in California: paying physicians on a salary basis without incentives for volume of services rendered. Likely not coincidentally, these systems are known not only for quality of care but also for their comparatively low costs for some services.

Such arrangements do not entirely eliminate conflicts of interest. The institutions and health insurers involved have business interests that are not perfectly aligned with patient interests, and these interests can filter down to physicians even under a salary system; eg, through the magnitude of performance-based raises, threats of employment termination, or simple verbal directives. If not totally shielded from them by their institutions, physicians may also be concerned about malpractice suits, which tend to motivate excessive precautionary testing.

Moving medical payments in the United States to a salary-based system could have consequences beyond reducing conflict of interest concerns. Physicians experience significantly higher job burnout than workers in many other occupations, and the myriad forms, approvals, and other administrative details associated with fee-for-service payment schemes are thought to play a significant role. When contemplating future modifications to their scorecard, the American Medical Student Association might consider that, while their current grading system may discourage visits by drug detailers, a scorecard that took account of business model-related conflicts might have more far-reaching consequences. Encouraging the expansion of salary-based systems might not only improve the quality of patient care but also yield dividends in physician job satisfaction.

ARTICLE INFORMATION

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