The Risks of Rewards in Health Care: How Pay-for-performance Could Threaten, or Bolster, Medical Professionalism

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Pay-for-performance incentive programs are born of attempts to answer the following question: How can we pay health-care professionals, and doctors in particular, so that they will be motivated to provide high-quality care?

This question has several components that deserve careful attention.

HOW SHOULD WE PAY DOCTORS?

How best to pay doctors is an interesting and long-standing dilemma. George Bernard Shaw—a great critic of the capitalist enterprise—once complained of the fact that "any sane nation, having observed that you could provide for the supply of bread by giving bakers a pecuniary interest in baking for you, should go on to give a surgeon a pecuniary interest in cutting off your leg, is enough to make one despair of political humanity."[1]

Following Shaw, there have been a long string of harsh critics of the dominant fee-for-service payment model in medicine. Buttressing these critics have been empirical studies showing that physicians, on average, respond to the fee-for-service incentive as expected, by providing more services, including some that may be of marginal value, useless or even harmful.[2,3]

The opposite incentive however—paying physicians more for doing less—has an equally fervent set of critics. When capitated payment models came to the fore in the 1990s, both doctors and patients rose up in protest.[4] Creating an incentive system in which physicians might earn more by withholding useful care was widely seen as a frontal assault on traditional medical professional values. Doctors who might in any way consider promoting the interests of insurers rather than patients have been called "Schmoctors" among many other, mostly unprintable, epithets.[5]

In the meantime, US health-care costs are dramatically higher, and rising faster, than costs in other countries.[6] The quality of care we deliver is, broadly speaking, mediocre.[7] And health-care purchasers are fed up with paying more and more for a product of uneven or uncertain value.[8] Given the central role of physicians in health-care delivery and the long-running arguments over how best to pay them, it should be no surprise that one possible answer is developing a payment scheme that gives doctors financial incentives to provide high-quality, cost-effective care.

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MEDICAL PROFESSIONALISM AND PAY-FOR-PERFORMANCE

Among the core tenets of professionalism are that physicians should work to ensure and improve quality and that patients' interests should always come before personal or pecuniary interests. But these are professional ideals; physicians face many challenges in living up to them. Not the least of these challenges is that payment systems, as noted above, can create incentives for unethical behavior by setting the physician's pecuniary interests in opposition to high-quality care. In fact, given the perverse incentives in physician payments, sometimes "professionalism" has become almost synonymous with acting to protect one's patients at financial cost to oneself.[9] While altruism is an important virtue, this view of professionalism is disconcerting, first because it is unrealistic to expect physicians to consistently and indefinitely do things for which they are punished. Second, it is an incomplete, and disheartening, view of professionalism that boils down simply to self-sacrifice. Professionalism entails other important values as well, including the existence of a collegial community, self-regulation and commitments to science, teaching and quality improvement.[10]

Pay-for-performance, meanwhile, aims to pay doctors more when they deliver higher-quality care. In theory, therefore, pay-for-performance will align both financial and professional incentives towards quality, which should promote professional values.[11]

But that's an ideal view. In practice, these programs have provoked tremendous consternation and worry, and in this issue of the *Journal*, the Society for General Internal Medicine's Ethics Committee enters the fray with a position paper on ethics and pay-for-performance.[12] Full disclosure: I reviewed it during its development. I thought then, and think now, that the report is helpful because it focuses our attention on a series of practical ways in which pay-for-performance programs might go wrong. The list compiled by Wharam et al. is concise but impressive and, more important, actionable. Some problems relate to the newness of the field: definitions and measures of quality are imprecise at best, and evidence that pay-for-performance improves quality is scant. Recognizing these problems can help establish a research agenda. Other problems relate to the underlying risks that pay-for-performance poses to vulnerable populations and the physicians who serve them. Some of these risks might be mitigated with improved program design. Yet another set of problems relates to the ways in which

physicians might try to 'game the system' under pay-for-performance, such as by treating to the measure. All of these concerns are worthy of monitoring, at least, and many deserve proactive attention in creating ethical pay-for-performance schemes.

But let's return to the basic question driving the development of pay-for-performance programs. How should we pay doctors *so that they will be motivated to provide high-quality care*? The latter part of this question implies two suspect assumptions about the medical profession. First, it assumes that a major reason we suffer from relatively poor quality health care today is that physicians aren't yet sufficiently motivated to do better. Second, it assumes that financial incentives will increase that motivation.

My critique of the first assumption is concise and probably obvious. Simply put, there are many barriers to high-quality care today; I doubt that lack of physician motivation ranks in the top 10. Most physicians are highly motivated to provide quality care, but we practice in a meta-environment that often makes sustainable quality improvement difficult.[13] Without addressing systemic barriers to creating a high-performance health-care system, merely reforming individual physician payments will have little or no effect.[14,15] It may be for this reason that physician pay-for-performance programs so far have shown lackluster results in regard to improving quality.[16]

My critique of the second assumption may be less apparent, and more provocative.

FINANCIAL INCENTIVES CAN BACKFIRE

The central premise of pay-for-performance is that if you pay people to do something, they will do it more often. This premise is so intuitively obvious it is rarely questioned, but the fact is, it isn't always true. A great deal of experimental evidence from both social psychology and econometrics suggests that when an activity is largely driven by internal motivations—such as professionalism or pride in the quality of work one achieves—adding an external (e.g., financial) motivator can actually backfire, often dramatically.

The first and still perhaps the most famous example of this was explored in Titumuss' landmark book, *The Gift Relationship*, in which he compared Britain's voluntary, unpaid blood donation system with America's then pay-for-donation system.[17] America's "rejection of altruism and choice of the private market in blood donor systems" (p. 313), he claimed, created a blood supply that was less stable, more expensive, and less safe than could be produced through a purely voluntary system. He was able to marshal little experimental evidence for his theories, however, and economists at the time were at a loss to explain how paying for blood might drive down supply.[18] Some psychologists, meanwhile, vigorously defended the theory of operant conditioning, which predicted that humans, like rats, when exposed to small repeated rewards for a certain behavior would show increasing instances of the rewarded behavior.[19]

The problem with operant conditioning theory, however, is that it assumes no intrinsic motivation (on the part of the rat) to accomplish the task—only the reward matters. But when one undertakes a task that can be intrinsically rewarding, such as the altruistic act of donating blood, adding an extrinsic financial incentive might undermine, or "crowd out," intrinsic motivation. In fact, a great deal of subsequent empirical work has supported Titmuss. By the early 1990s, according to education researcher Alfie Kohn, "At least two dozen studies have shown that people expecting to receive a reward for completing a task (or for doing it successfully) simply do not perform as well as those who expect nothing."[20] In fact, by 1999 there had been no fewer than four meta-analyses of this issue, the largest of which included more than 125 studies and concluded that "tangible rewards [have] a significant negative effect on intrinsic motivation for interesting tasks, and this effect show[s] up with participants ranging from preschool to college, with interesting activities ranging from word games to construction puzzles, and with various rewards ranging from dollar bills to marshmallows."[21]

A few examples are illustrative of some key details in this large body of work. First, the crowding out of intrinsic motivation by extrinsic rewards only takes place with interesting activities. When researchers study repetitive, rote work, such as replacing windshields, financial incentives work just as economists predict.[21,22] In such cases, intrinsic motivation cannot be undermined, since it doesn't exist at the outset.

Second, the negative effects of incentives can be very strong; not merely undermining motivation, but causing a reverse effect to that intended.[18] In one carefully controlled study, when volunteers were paid a small amount for their time, they spent 4 h per month *less* in volunteer work than those paid nothing.[23]

Third, the undermining effect is especially strong with small rewards and can presumably be overcome, at least in the short term, with very large rewards. When high school students going door-to-door collecting donations were randomized to three groups, those who received commissions of either 1% or 10% of their donations collected fewer donations than those who received no commissions, but those who received 10% collected more than those who received 1%.[24] In the long term, however, any financial incentive can alter the relationship between the worker, the task and the payer in counterproductive ways. For example, when a day care center began to charge a monetary penalty for parents who showed up late to collect their children, the proportion of late arrivals increased significantly—and it did not go down once the fine was removed.[25] A previously non-monetary relationship had been transformed into an explicitly monetary one.

Fourth, intrinsic motivation is related to larger themes of social responsibility, public trust, teamwork and civic virtue. When a group of Swiss citizens was asked about locating a waste repository near their town, 50.8% said they would be willing to accept it. But when they were offered a monetary incentive to do so, only 24.6% were willing.[18]

HOW THE "CROWDING OUT" PHENOMENON WORKS AND WHAT TO DO ABOUT IT

The fact that paying for something can reduce its production constitutes a major anomaly in economics because "it predicts the reverse reaction to the one expected according to the relative price effect."[18] As such, it's not enough to demonstrate that it can happen; to avoid it one must understand *how* it can happen.

There are several related theories about how extrinsic rewards can undermine intrinsic motivation. Individuals might experience financial rewards as an external shift in the locus of

control for their actions, causing a sense of impaired self-determination. When rewards are perceived as controlling, people "take less responsibility for motivating themselves."[18] Self-esteem is also weakened when it is no longer one's own idea to perform at a high standard. Deprived of the opportunity to demonstrate personal interest and motivation, individuals might reduce their work effort. Financial rewards can even make individuals feel their competence is being questioned or that their intrinsic motivation is unappreciated or is being rejected. Finally, Deci and Ryan have postulated that "relatedness" is an innate psychological need, suggesting that incentives that functionally separate out individuals from the groups within which they work can be destructive of intrinsic motivation, self-regulation and well-being.[26] This last theory may hold special importance in professions that rely on the existence of a collegial, mutually supporting and self-regulatory community for their existence.[10]

Physicians are just the sort of people, and medical work is exactly the type of work, where external performance-contingent rewards are most likely to backfire. Practicing medicine is intrinsically interesting, difficult and creative, and it demands a strong commitment to professional excellence to do it well. Yet, as Kohn notes, "In general, the more cognitive sophistication and open-ended thinking that is required for a task, the worse people tend to do when they have been led to perform that task for a reward."[20] This may be why Martin Roland, director of the National Primary Care Research and Development Center in England, believes that the "most damaging" long-term consequence of pay-for-performance would be "if you ended up with a system where, essentially, doctors only did anything because they were paid for it and had lost their professional ethos."[27]

On the other hand, data on performance incentives and theories on how they can undermine intrinsic motivation also suggest some solutions. The greatest dangers for undermining intrinsic motivation lie in: giving rewards to individuals rather than teams, rewarding very specific tasks, imposing rewards in ways that are perceived as externally controlling, and using rewards that are too small. Incentives crafted to avoid these problems can actually "crowd in," or support, intrinsic motivation.[18] For instance, performance incentives for teams, rather than individuals, improved on-time departures in the airline industry;[28] where pay-for-performance in medical care has worked best, it has also been in the setting of rewarding teams, groups or organizations rather than individuals.[16,29] And, since rewards that are felt as controlling are likely to undermine intrinsic motivation, rewards could be placed under the control of recipients. One way to do this would be to trust clinicians to determine whether particular measures are appropriate for particular patients. The idea is called "exception reporting," which has been correlated with higher performance scores in the British pay-for-performance system.[30] To cynics, it might seem naïve to trust physicians to make such judgments, but social science research supports optimism—trust is often repaid with trustworthy behavior. Tax cheating, for example, is actually less common in communities with looser tax oversight and more citizen engagement than in communities with strict tax oversight.[31]

This analysis of pay-for-performance in context with professionalism and intrinsic motivation leads to a final, broad conclusion. If pay-for-performance is to support professionalism, it cannot be done *to* us, it must come *from* us. In other words, it's not enough for physicians to complain that pay-for-performance is misdirected, inaccurate and risky. Wharam et al. make clear that pay-for-performance today might be all these things[12]—but the only way to solve these problems is for the profession to take ownership of the quality measures development process.[32] If we can accomplish this—if the profession asserts its responsibility for determining how to define, measure and reward for quality—then pay-for-performance can promote not only high-quality care, but other core professional values too, including professional autonomy, collegial oversight and self-regulation.

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REFERENCES

1. **Shaw B.** The Doctor's Dilemma, with Preface on Doctors. New York: Brentano's; 1909.
2. **Hemenway D, Killen A, Cashman SB, Parks CL, Bicknell WJ.** Physicians' responses to financial incentives. Evidence from a for-profit ambulatory care center. N Engl J Med. 1990;322(15):1059–63.
3. **Rodwin MA.** Medicine, Money and Morals: Physicians' conflicts of interest. New York: Oxford University Press; 1993.
4. **Wynia MK.** The Oregon capitation initiative: Lessons and warnings from the forefront of the backlash. JAMA. 1996;276(17):1441–4.
5. **Applbaum AI.** Doctor, schmoctor: Practice positivism and its complications. In: Baker RB, Caplan AL, Emanuel LL, Latham SR, eds. The American Medical Ethics Revolution. Baltimore, MD: Johns Hopkins University Press; 1999.
6. **Davis K, Cooper BS.** American health care: Why so costly? The Commonwealth Fund. Invited testimony for the US Senate Appropriations Subcommittee. June 11, 2003.
7. **Roehr B.** Health care in US ranks lowest among developed countries. *BMJ.* 2008;337:a889.
8. **Smith D.** U.S. business leaders say hobbled by health care costs. Reuters Business News, March 14, 2009.
9. **Chervenak FA, McCullough LB.** The moral foundation of medical leadership: The professional virtues of the physician as fiduciary of the patient. Am J Obstet Gynecol. 2001;184(5):875–9.
10. **Wynia MK.** The short history and tenuous future of medical professionalism: The erosion of medicine's social contract. Perspect Biol Med. 2008;51(4):565–78 Autumn.
11. **Hendrickson MA.** Pay for performance and medical professionalism. J Manage Health Care. 2008;17(1):9–18.
12. **Wharam JF, Paasche-Orlow MK, Farber NJ, et al.** High quality care and ethical pay for performance: A Society of General Internal Medicine policy analysis. J Gen Intern Med. 2009; doi:10.1007/s11606-009-0947-3.
13. **Wynia MK.** Physician ethics and participation in quality improvement. In: Jennings B, Baily MA, Bottrell M, Lynn J, eds. Health Care Quality Improvement: Ethical and Regulatory Issues. Garrison, NY: The Hastings Center; 2007.
14. **Conrad DA, Perry L.** Quality-based financial incentives in health care: Can we improve quality by paying for it. Annu Rev Public Health. 2009;30:357–71.
15. **Rosenthal MB.** Beyond pay for performance – emerging models of provider-payment reform. N Engl J Med. 2008;359(12):1197–1200.
16. **Damberg CL, Raube K, Teleki SS, dela Cruz E.** Taking stock of pay-for-performance: A canded assessment from the front lines. Health Affairs. 2009;28(2):517–25.

17. **Titmuss RM.** The Gift Relationship: From human blood to social policy. The New Press: New York; 1997 (Original edition with new chapters, edited by Oakley A and Ashton J).
18. **Frey BS, Jegen R.** Motivation crowding theory: A survey of empirical evidence. J Econ Surveys. 2001;15(5):589–611.
19. **Skinner BF.** Science and Human Behavior. New York: The Free Press; 1953.
20. **Kohn A.** The risks of rewards. Educational Resources Information Center. December 1994. Available at: http://www.alfiekohn.org/teaching/pdf/The%20Risks%20of%20Rewards.pdf Accessed March 26, 2009.
21. **Deci EL, Koestner R, Ryan RM.** A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. Psych Bulletin. 1999;125(6):627–668.
22. **Lazear EP.** Personal economics: Past lessons and future directions. J Labor Econ. 1999;17:199–236.
23. **Frey BS, Goette L.** Does pay motivate volunteers? Institute for Empirical Research in Economic Working Paper No. 7. May 1999. Available at: http://www.iew.uzh.ch/wp/iewwp007.pdf Accessed March 26, 2009.
24. **Gneezy U, Rustichini A.** Pay enough or don't pay at all. Q J Econ. 2000;115(3):791–810.
25. **Gneezy U, Rustichini A.** A fine is a price. J Legal Studies. 2000;29(1):1–17.
26. **Deci EL, Ryan RM.** Self determination theory and the facilitation of intrinsic motivation, social development and well being. Am Psychol. 2000;55(1):68–78.
27. **Galvin R.** Pay for performance: Too much of a good thing? A conversation with Martin Roland. Health Affairs. 2006;25:w412–419.
28. **Austin R, Gittell JH.** When it should not work, but does: Anomolies of high performance. In: Business Performance Measurement. AD Neely, ed. Cambridge: Cambridge University Press, 2002.
29. **Lindenauer PK, Remus D, Roman S, et al.** Public reporting and pay for performance in hospital quality improvement. N Engl J Med. 2007;356(5):486–96.
30. **Doran T, Fullwood C, Gravelle H, Reeves D, Kontopantelis E, et al.** Pay-for-performance programs in family practices in the United Kingdom. N Engl J Med. 2006;355:375–84.
31. **Frey BS.** A constitution for knaves crowds out civic virtues. Economic J. 1997;107(443):1043–53.
32. Physician Consortium for Performance Improvement. American Medical Association. Available at: http://www.ama-assn.org/ama/pub/about-ama/our-people/coalitions-consortiums/physician-consortium-performance-improvement.shtml. Accessed March 30, 2009.