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Countervailing incentives in value-based payment

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ABSTRACT

Payment reform has been at the forefront of the movement toward higher-value care in the U.S. health care system. A common belief is that volume-based incentives embedded in fee-for-service need to be replaced with value-based payments. While this belief is well-intended, value-based payment also contains perverse incentives. In particular, behavioral economists have identified several features of individual decision making that reverse some of the typical recommendations for inducing desirable behavior through financial incentives. This paper discusses the countervailing incentives associated with four behavioral economic concepts: loss aversion, relative social ranking, inertia or status quo bias, and extrinsic vs. intrinsic motivation.

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1. Introduction

The Department of Health and Human Services (HHS) intends to have 85% of Medicare fee-for-service (FFS) payments tied to quality or value by 2016 and 90% by 2018. In addition, HHS is moving away from FFS in favor of alternative payment models, such as accountable care organizations and bundled-payment arrangements. HHS's goal is to have 30% of Medicare payments tied to quality or value through alternative payment models by the end of 2016 and 50% by the end of 2018.[1] The U.S. health care system's transition to value-based payment is underway.

Amidst this transition, the medical profession has begun to discuss how insights from behavioral economics can be used to better motivate physicians to provide high-value care.[2–5] Emanuel et al.[2] have identified 9 behavioral economic concepts that could be relevant in influencing physician performance. This Perspective focuses on 4 of these concepts–loss aversion, relative social ranking, inertia or status quo bias, and extrinsic vs. intrinsic motivation–and the countervailing incentives that exist within each (see Table 1).

2. Loss aversion

Loss aversion is the tendency to prefer avoiding losses to acquiring equal-sized gains. An implication of this concept is that people are likely to work harder to keep money than to gain money. This suggests pay-for-performance programs should pay physicians upfront and take back money when quality and efficiency performance measures are not met. In 2006, Massachusetts General Physicians Organization began a quality incentive

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Table 1
Elements of value-based payment that promote or impede high-value care (by behavioral economic concept).

		Elements of value-based payment that	
Behavioral economic concept	**Description**	**Promote high-value care**	**Impede high-value care**
Loss aversion	The tendency to prefer avoiding losses to acquiring equal-sized gains.	*Upfront Bonuses*: Physicians may be more likely to meet quality and efficiency performance standards if bonuses are paid at the beginning of the year with the understanding that they will be taken away if standards are not met by year's end. • Massachusetts General Physicians Organization[6,7] • Chicago school teachers[8]	*Wage Variation*: Wages are more variable under value-based payment than FFS. People tend to dislike variable wages: falling short of expected income is more painful than exceeding expected income (by the same amount) is pleasurable. Physicians could engage in income boosting activities to avoid falling short (i. e. increasing prices or shortening patient appointments). • Physicians take unappealing actions to boost earnings[10] • It is optimal for employers to reduce wage variability if employees are sufficiently loss averse[9]
Relative Social Ranking	People care about how they compare with their peers.	*Competitiveness*: Physicians compare themselves to their peers. Making comparisons more transparent (i. e. published rankings) could speak to physicians' sense of competiveness and lead to better performance. • Inappropriate Antibiotic Prescribing[11] • Dean Clinic in Wisconsin[2] • Surgeon Report Cards in Pennsylvania[12] • Hospital Performance Reports[13]	*Poor Signals and Avoidance*: Random variation in patient outcomes could lead good physicians to end up at the bottom of rankings. In addition, rankings can make small differences in performance appear more meaningful than they are (i. e. first vs. second). • Surgical Care Improvement Project[19] • Avoiding Sick Patients[14] • The "Top 10" effect[17] • Individuals sabotage others' work to improve their relative ranks[18] • Team based incentives might be preferred if individuals are inequity averse[22–24]
Inertia or Status Quo Bias	A preference for the current state of affairs.	*Better Defaults*: Default to high-value care. People choose default options more often than they otherwise would. For example, physicians prescribe more generic drugs if electronic order-entry programs default to generic drugs instead of brand-name drugs. • Generic Drugs[28,29] • Inappropriate Antibiotic Prescribing[11,30] • Influenza Vaccinations[31] • Organ Donors[32] • Oncology[33]	*Limits of Nudges*: People may search for reasons to favor the default. Even those who do not select the default may ultimately choose an option more similar to the default than they would have otherwise. • Loss of Physician Autonomy[35] • The "Default Pull" effect[34] • Calorie Labeling[36] • Shoves vs. Nudges[37]
Intrinsic Motivation	The desire to act in the absence of external rewards.	*Extrinsic Rewards*: Financial rewards can be used to induce desirable behavior when intrinsic motivation alone does not provide sufficient motivation. • Physicians paid under FFS have been shown to increase their clinical work, improve their billing practices, and provide better continuity of care than salaried physicians from fixed salary to FFS has been shown to increase the amount clinical work, improve billing practices[39–41]	*Crowd-Out*: Financial rewards can discourage the performance of altruistic activities. • Leaving a practice that cares for HIV/AIDS patients in favor of a higher-paying hospital medicine job[43] • Complex Cognitive Tasks[38] • Blood Donations[44] • Meta-analysis of 128 studies examining the effects of extrinsic rewards on intrinsic motivation[42]

program that gave physicians upfront payments. Recent reviews associated the program with improvements in quality and safety.[6,7] Outside of health care, school teacher performance (as measured by student achievement) has shown signs of responding favorably to upfront payment.[8]

While upfront payment has the potential to leverage physician's loss aversion and nudge them toward providing higher-value care, it is also important to recognize the implications loss aversion has for *current* design features of value-based payment. One example is wage variation. Wage variation under value-based payment is likely to be greater than wage variation under FFS, particularly if value-based payment is tied to patient outcomes that are highly variable. Loss aversion implies that employees respond poorly to variable wages–relatively low wage years are more painful than relatively high wage years are pleasurable.[9] There is some evidence that physicians may respond to low wage years by boosting their incomes in subsequent years, either through increasing prices or shortening patient appointments.[10] Thus, as long as there is some level of productivity-based compensation, certain value-based payment arrangements could increase the likelihood of unappealing income boosting activities that stem from perceived low wage years.

3. Relative social ranking

People compare themselves to their peers–and physicians are naturally ambitious and competitive. Appealing to physicians' sense of competitiveness has shown to improve physician performance. The Dean Clinic in Wisconsin found anonymous rankings to have little impact on physician behavior, whereas rankings by name were significantly more effective.[2] Additional examples of where peer comparison has proven effective include reducing inappropriate antibiotic prescribing,[11] surgeon report cards,[12] and public hospital performance reports.[13]

There are, however, drawbacks to comparing physicians to their peers. After New York and Pennsylvania began releasing coronary artery bypass graft (CABG) report cards, both states saw surgeons turn away sick patients in an effort to avoid poor outcomes and lower publicly reported ratings.[14] In Pennsylvania, 63% of cardiac surgeons admitted to being reluctant to operate on high-risk patients.[15] In New York, 67% of cardiac surgeons refused to treat at least one patient in the preceding year that was perceived to be high risk.[16]

Another concern is the power of rankings: individuals often attribute more meaning to rankings than is warranted. For instance, Isaac and Schindler[17] have identified a "top 10" effect–

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