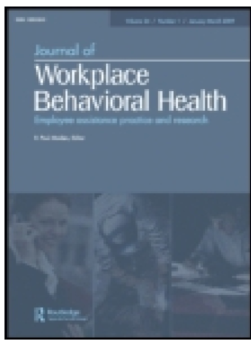

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Incentives to Shape Health Behaviors: How Can We Make Them More Person-Centered?

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Employers and health plans increasingly offer incentives to individuals to help shape their health behaviors including utilization of recommended care. However, despite the focus on patient-centered health care in the broader field, incentives are often one-size-fits-all. "Person-centered incentives" take into account individual differences that are often unobservable to those managing incentives programs and incorporate choice into the incentives structure. The authors propose multiple dimensions of person-centered incentives to consider and suggest a research agenda to determine their impact. Person-centered incentives may constitute a valuable addition to the toolbox of ways to encourage individuals to improve their health behaviors.

KEYWORDS *health care, incentives, person-centered*

INTRODUCTION

Employers and health plans are increasingly using incentives to encourage individuals to adopt healthy behaviors and utilize health care services appropriately. Incentives are now a key part of many workplace-based health and wellness programs. This approach includes a broad range of financial and nonfinancial incentives. Financial incentives include raffles, direct guaranteed payments, and value-based insurance design in which out-of-pocket costs are reduced for high-value health care services (e.g., lower copays for medication for chronic conditions) (Chernew, Rosen, & Fendrick, 2007).

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Nonfinancial incentives include recognition and awards with symbolic or social value.

This move toward incentives in health care represents a lagged adoption of explicit incentives that are already widely used in very disparate fields. For example, airlines have long used frequent flier rewards to incentivize customer loyalty, and stores and restaurants offer similar programs. In health care, incentives to patients have previously been present to a degree. Cost sharing is designed to curb unnecessary utilization, and lower cost sharing for services from in-network providers encourages patients to use those providers. The latest wave of incentives in health care, however, goes well beyond this. The new incentives approaches are often more ambitious, more explicitly tied to health goals, and more varied in technique.

Yet current incentive approaches do not typically reflect or incorporate another key trend in health care, the increasing focus on "patient-centered" or "person-centered" care. (These are related terms with, perhaps, differing connotations. With reference to incentives we prefer the latter term as it is broader; an individual need not be a patient in the context of health promotion incentives). This involves promoting engagement in one's own health and health care, and recognition of individual values and preferences, among other key features. One goal of many incentives programs is, broadly, to increase engagement. However, attention to individuals' values and preferences is frequently not mirrored in the one-size-fits-all approach of most incentives programs.

In this article, we examine why it is important to explore bringing a person-centered focus into the arena of incentives for shaping health behaviors and health care utilization, and discuss how this might be done. We also identify next steps in what we need to learn to bring the most effective incentives into practice.

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INCENTIVES TO INDIVIDUALS TO SHAPE HEALTH BEHAVIORS

There has been a groundswell of interest in using incentives to shape a wide range of health behaviors. Large employers have enthusiastically embraced the use of incentives. In 2012, one survey found that 61% of large employers were using financial rewards for individuals who participate in health management programs/activities (Watson, 2012). This was up from 36% 3 years earlier. Common target behaviors include completing a health risk assessment, quitting smoking, or achieving targets for weight loss or cholesterol. Some employer programs are conducted through health plans, whereas others are handled in-house or by other vendors. Another study found that one third of employer health plans rewarded enrollees for participation in wellness and disease management programs (International Foundation of Employee Benefit Plans, 2011). Employers and health plans use a variety

of incentives in their programs. These include gift cards, gym memberships (the two most common incentives), health insurance premium reductions, lower-value items such as T-shirts, and recognition such as winning a team contest.

The target behaviors of these incentives may be "simple" preventive activities that require only a one-time or periodic action such as completion of a health risk assessment or obtaining a recommended preventive service (Kane, Johnson, Town, & Butler, 2004). Or target behaviors may reflect complex, ongoing behavior such as smoking cessation, weight loss, exercise, or adherence to care for chronic conditions. To date, incentives have tended to focus more on process measures or participation than on outcomes. For example, employees might be incentivized to attend a weight loss or smoking cessation program rather than for losing a certain amount of weight or succeeding at quitting smoking. Outcomes-based incentives are gaining some momentum in the quest to get the best results for the investment. However there are concerns about fairness, potential discrimination, and the typically multiple potential reasons for failure to attain desired outcomes (James, 2012; Volpp, Asch, Galvin, & Loewenstein, 2011).

There are several reasons to look to incentives as an approach that will be effective in reducing health-related risk behaviors (Higgins, Silverman, Sigmon, & Naito, 2012). These include the body of evidence that behavioral reinforcement and operant conditioning play a key role in these behaviors, as well as findings from behavioral economics pointing to preferences for reinforcement that is immediate (vs. delayed) and salient/discrete (vs. diffuse/subtle).

More broadly, motivation theories suggest that intrinsic and extrinsic motivators can be effective. The ultimate goal of most health-related incentives, especially those aimed at ongoing behavior change or maintenance, is for the extrinsic motivators to help get the individual to engage in target behaviors long enough to experience intrinsic rewards. In self-determination theory, this process is described as the "internalization" of the extrinsic motivator (Ryan & Deci, 2000). These intrinsic rewards could include better health, sense of self-efficacy, and other positive experiences. In the workplace setting, extrinsic motivators for health behaviors can be welcomed by some and seen as controversial or unwarranted intrusion by others.

Examining how health-related incentives work in practice is critical. One systematic literature review of how economic incentives affected consumers' preventive behavior concluded that the incentives worked 73% of the time, with stronger effects found for simple one-time behaviors than for complex behaviors requiring sustained effort (Kane et al., 2004). A second review which included risk behaviors (e.g., smoking, weight control) as well as preventive services concluded that financial incentives, even relatively small ones, can influence health behaviors (Sutherland, Christianson, & Leatherman, 2008).

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Both reviews noted that there was a dearth of data on long-term effects of the incentives studied. A Cochrane review in 2005 concluded that financial incentives did not decrease smoking rates in workplaces (Hey & Perera, 2005), but Volpp, Pauly, Loewenstein, and Bangsberg (2009) noted that none of the studies reviewed had much statistical power, and most used incentives that were too small. Volpp et al. (2009) observed more generally that more research is needed on health incentives but that incentives are a promising approach in a number of areas.

Others have noted various design features that could in theory modify the effectiveness of incentives, such as the magnitude, timing, or type (cash, lottery, gift, etc.) (Madison, Volpp, & Halpern, 2011). The review by Kane et al. (2004) on incentives for preventive care found some evidence that incentive magnitude mattered, but only modest differences in impact by type of incentive.

A growing strand in the incentives literature seeks to identify situations where incentives may be ineffective (Gneezy, Meier, & Ray-Biel, 2011). A common concern is whether behavior changes induced by incentives persist after the incentives are withdrawn. For example, in an intervention rewarding warfarin adherence, Volpp et al. (2008) found that adherence improved while participants were rewarded but returned close to baseline levels after the reward period ended. Both reviews mentioned above (Kane et al., 2004; Sutherland et al., 2008) noted that there was a lack of data on long-term effects of the incentives studied, for preventive care and health risk behaviors. For smoking cessation, a review concluded that the durability or long-term maintenance of incentive effects was unknown (Donatelle et al., 2004). Similarly, there is a dearth of research on the impact of incentives for longer-term weight maintenance (Jeffrey, 2012).

As the literature in this area continues to grow, the health care landscape is changing in ways likely to support incentives. The Patient Protection and Affordable Care Act (ACA) of 2010 included provisions that further encourage health-related incentives. One provision increases the extent to which employers can reward employees who satisfy a health standard, from the previous 20% up to 30% of the cost of health coverage. The maximum can rise to 50% to the extent that the additional amounts are attributable to tobacco use prevention or reduction, as stipulated in ACA final regulations.

THE MOVE TOWARD PERSON-CENTERED CARE

The roots of the patient-centered care concept stretch back decades and have multiple contributors (Berwick, 2009). However, the influential 2001 Institute of Medicine (IOM; 2001) report *Crossing the Quality Chasm* catapulted this toward the top of the health care agenda. It recommended that health care improvement should focus on six core needs in health care. One

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of these was for care to be patient-centered, defined as "providing care that is respectful of and responsive to individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions" (IOM, 2001, p. 3). The IOM report further formulated 10 rules for redesigning the health care system, including that care is customized according to patient needs and values, and the patient is the source of control.

In revisiting the patient-centeredness concept, Berwick (2009, p. W560) proposed a new definition of *patient-centered care*: "The experience (to the extent the informed, individual patient desires it) of transparency, individualization, recognition, respect, dignity and choice in all matters, without exception, related to one's person, circumstances, and relationships in healthcare".

Patient-centeredness is integral to many emerging models of care such as patient-centered medical or health homes, and accountable care organizations. The concept of tailoring or customizing has been found useful in a variety of health-related strategies, including health behavior change interventions (Noar, Benac, & Harris, 2007; Sohl & Moyer, 2007). In the incentives world, however, a person-centered paradigm has typically not yet permeated. It is worth examining why it should.

WHY SHOULD INCENTIVES BE PERSON-CENTERED?

Even an otherwise well-designed incentives program, if it fails to incorporate individuals' values, preferences and priorities, will be based on what is believed to work best on average. Of course, in any group, there is likely to be diversity in relevant values, preferences and priorities—meaning that customizing to such individual characteristics should maximize overall impact. In incentives program design and implementation, however, these individual characteristics are typically unobservable ex ante. This is different from the context of health care delivery, in which there is patient–provider interaction to inform health care decision making. Thus, when considering incentives programs, individual choice is a key element because often only the individual will know his or her own preferences and values regarding incentives. A person-centered incentives program is one that offers enrollees some choice around the form the incentives take.

Person-centered incentives could theoretically work better for two reasons. First, individuals could essentially self-match to incentives that would work best for them, based on preferences typically unobservable to others in routine health care management. In addition, it is also possible that having a choice per se could engage people more in thinking about their decisions, incentivize them through conveying respect for their preferences, and/or increase their sense of self-efficacy by offering them control. All of these could lead to better participation or achievement of goals.

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Interestingly, one area in health care where the role of patient choice in incentives has been prominent is in contingency management for substance abuse treatment. Contingency management is an effective approach that involves frequent, immediate reinforcement of target behaviors such as drug-free urinalysis test or attendance at a treatment session (Higgins & Petry, 1999; Kellogg, Stitzer, Petry, & Kreek, 2007; Stitzer & Petry, 2006). Sometimes the approach used is prize based, including situations in which the client draws for a prize and with a winning draw may choose their preferred prize of a given value. Similarly, in a voucher-based system, when clients decide to cash in their voucher earnings, they typically have multiple options of goods and services and this is thought to help to increase the power of the incentives. Kellogg et al. (2007) suggested that programs might even wish to give the patients a choice between a prize-based or a voucher-based reinforcement method. Lessons from the substance abuse field in terms of incentives may inform the broader health care field (Horgan, 2012).

DIMENSIONS OF PERSON-CENTERED INCENTIVES

A review of the relevant literature as well as further consideration of plausible additions suggests multiple dimensions that can be considered when designing person-centered incentives. Table 1 shows these dimensions, paired with the consumer attribute domain each dimension taps into, as well as specific examples. We briefly discuss each dimension below.

Risk Preferences

We know that individuals vary in risk preferences, for example, how appealing a lottery is versus guaranteed payment. In some circumstances risk aversion is typical (Barsky, 1997; Boyle, Yu, Buchman, Laibson, & Bennett, 2011; Holt & Laury, 2002). In others, such as when the guaranteed payment is very small and the lottery value is large, the lottery option becomes more popular (Volpp, Pauly, Loewenstein, & Bangsberg, 2009). Certain characteristics such as female gender, older age, and cognitive status have been found to be associated with risk aversion, but in general, there can be substantial variation in preference that will not be observable in advance.

Personal Tastes, Including Desire for Merchandise

When incentives are non-fungible, such as electronic items, or gift cards for specific stores or entertainment, their appeal may vary widely depending on what the individual already possesses as well as simply their tastes and desires for the goods or services. In this case, person- centeredness may be

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TABLE 1 Key Dimensions of Person-Centered Incentives

Domain/Consumer Attribute	Design Elements	Examples
Risk preferences	Guaranteed payment vs. lottery/raffle	$20 guaranteed or chance to win $500 in drawing
	Lottery or raffle structure: (1) higher probability/lower value vs. lower probability/higher value; (2) fixed probability vs. fixed number of prizes	1 in 20 chance to win $200 or 1 in 100 chance to win $1,000 in drawing; or chance to win one of five $250 awards
Personal tastes, desires for merchandise	Types of specific prizes offered in either guaranteed or lottery/raffle approach	Electronics, communication devices, store gift cards, movie tickets
	Financial vs. non-financial incentives	Preferred employee parking vs. financial award
Competitiveness, team orientation	Structured as competition with others	Prize is awarded to employee or team doing the most physical activity
	Team versus individual is basis of incentives	Team of employees with the most points for physical activity means team members each win prize vs. awarding on basis of individual behavior only
Altruism	Incentive consists of benefit accruing to others or to charity, not to the individual	Individual will be rewarded according to another individual's participation (Schofield et al., 2012) or achieving goal will result in payment to selected causes/charities
Timing preferences	Immediate vs. delayed delivery of incentives, including variation in magnitude	Immediate small payments upon completion of daily goals vs. substantial payment if larger milestone is achieved
Loss aversion, willingness to pre-commit	Patient stakes or pre-commits own resources, receives back (with or without additional funds) if meets goal	Individual deposits money at start of weight loss program, gets money back plus matching amount if weight loss goal is met (Volpp et al., 2008)
Personal health priorities	Individual chooses which of several lifestyle or health issues to focus on for incentives	Flexible incentive program can be applied to multiple health or lifestyle need areas

enhanced by offering multiple types of items or gift cards, or selecting the broadest gift cards possible.

Competitiveness and Team Orientation

Many individuals respond well to calls for competition, whereas others will not participate in health or wellness programs structured this way. Offering a choice of whether to aim for team-based or individual-based awards could help improve participation and outcomes.

Altruism

Altruistic motivation might be harnessed in the service of health goals. Schofield, Kopsic, Loewenstein, and Volpp (2012) devised an incentives experiment in which participants in one arm were assigned to pairs, and rewarded based only on their partner's participation. A more person-centered variation of this might be for incentives to be structured as a donation to a charity/cause of the individual's choice.

Timing Preferences

Although in general it has been found that it is most effective to offer repeated rewards offered as close as possible to the time of target behavior performance (e.g., in contingency management in substance abuse treatment) (Kellogg et al., 2007), it is possible that some individuals would find it more motivating to work toward a large prize occurring at some milestone achievement.

Loss Aversion and Willingness to Pre-commit

In general, people value the loss of a sum they already have more than they value the potential gain of that same amount (loss aversion). This has given rise to the approach of pre-commitment or deposit contracts in which individuals put down some of their own money and place it at risk, getting it back (with added funds) only if they achieve the goal (Volpp et al., 2008; Volpp et al., 2009). However, some persons would be unwilling to risk their own resources in this way, even if it could be effective.

Personal Health Priorities

Taking the idea of person-centered incentives to a higher level, individuals could choose which of several recommended health goals to pursue and apply the incentives to their own highest priority. Clearly the goal would need to be one that was among those pre-selected as medically important

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and amenable to incentives. Because many people have more than one health or utilization behavior in need of improvement, allowing the individual to set the agenda might lead to better initial success (and possibly start a positive upward spiral).

PERSON-CENTERED INCENTIVES IN THE REAL WORLD OF HEALTH CARE

The design of person-centered incentives, as with all incentives, must take into account some key feasibility factors and constraints. Incentives programs will not include or even consider all conceivable incentive options. If certain types of incentives have been found ineffective, featuring these would not be desirable. Incentive program sponsors such as employee wellness programs would, moreover, only find it worthwhile to offer a menu of incentive choices to the extent that doing so enhances outcomes important to the sponsoring organization. We also know that, in general, choice architecture in many contexts can be structured to "nudge" individuals in the direction of the option known to work better (Thaler & Sunstein, 2009). It is worth examining whether structures such as default to the most effective approach may be usefully applied to the context of person-centered incentives. In the workplace setting, person-centered incentives will also be embedded in the culture and values of the organization. Organizational characteristics such as degree of focus on employee health and well-being will contribute to the determination of which incentives are desirable and feasible to offer to employees.

Feasibility often dictates that incentive structures be reasonably simple to administer. They must also be reasonably easy to understand from the point of view of participants. So, person-centered incentives that revolve around choice likely will need to have a limited number of options. The opposite extreme could bring confusion reminiscent of Medicare beneficiaries' selection among Part D plans, in which people get confused and can disengage when confronted with too many options (Cummings, Rice, & Hanoch, 2009).

The usefulness of particular person-centered incentives is also affected by how much preferences vary across the incentive options offered. If nearly everyone prefers the same incentive option, then offering a choice may not yield greatly improved results. Effectiveness is also limited by participants' self-awareness. If an individual is mistaken in the belief that she will be most highly motivated by a certain type of incentive, selecting that choice will not improve results.

Finally, cost and risk to the incentives program sponsor are key factors as well. Magnitude and structure of financial incentives may be involved. Offering a wider selection of incentives can have cost implications, in terms of purchasing and administration. Meaningful choice will need to be balanced

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with the need for operating within fiscal constraints. Other aspects of incentives may also be limited by real-world constraints. For example, employers or vendors may prefer to offer a raffle with a set number of prizes versus a set probability of winning, in part so that the cost is known and capped regardless of how the prize eligibility rate varies.

WHAT DO WE NEED TO LEARN ABOUT PERSON-CENTERED INCENTIVES?

To determine whether and which person-centered incentives work better than a standard incentives approach, we need research in specific areas including the following:

- Descriptive studies that determine the distribution of preferences regarding each dimension of person-centered incentives, in real-world contexts. The person-centered approach rests on choice, and the choice architecture must contain appealing options. These preferences are likely to vary by target population characteristics, setting, and behavior target.
- Comparative effectiveness studies that identify the effectiveness of standard versus person-centered incentives. Head-to-head comparisons will be necessary to zero in on whether and when it is important to offer person-centered incentives.
- Identifying how effectiveness varies by population, setting, behavior target and other contextual factors. This includes investigating to what extent person-centered incentives are advantageous for one-time/periodic versus ongoing behaviors.
- Qualitative studies to enhance our understanding of how individuals experience person-centered incentives. Directly obtaining the perspectives of individuals offered various incentive choices, and how these do or do not affect their decision making, will shed further light on the issues.
- Studies that empirically determine the boundaries of what is feasible in implementing the person-centered concept in incentives arrangements. Examples include studies identifying the optimal number of choices in a given incentives structure, implementation studies of more complex arrangements, and examining new ways to track target behaviors and/or deliver incentives (e.g., through alternate forms of technology).

CONCLUSION

The trend among employers, health plans, and others toward use of incentives to shape individuals' health behaviors is promising. An added focus on what we have termed "person-centered incentives" would take into account

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the reality of individual differences and address these typically unobservable differences by building choice into the incentives structure. This approach also fits within the general trend toward recognizing the importance of patient preferences and values in health care and the interactions relating to health care. It is plausible to hypothesize (as we do) that at least in some circumstances person-centered incentives will be more effective. However, most incentives studied to date do not incorporate or directly evaluate this approach and thus we do not yet know the impact. An active research agenda, as suggested above, is critical in determining whether, under which circumstances and for whom person-centered approaches may be advantageous relative to standard incentives schemes that are not choice-based. We hope that this framework for person-centered incentives helps to focus attention on this potentially useful addition to the health and wellness program toolbox.

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