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Patients as Mercenaries? The Ethics of Using Financial Incentives in the War on Unhealthy Behaviors:

Halpern: Ethics of Financial Incentives

Scott D. Halpern, M.D., Ph.D., M.Bioethics[1,2,3,4], **Kristin M. Madison, J.D., Ph.D.**[1,5], and **Kevin G. Volpp, M.D., Ph.D.**[1,2,6,7]

[1]Center for Health Incentives, Leonard Davis Institute of Health Economics, University of Pennsylvania

[2]Department of Medicine, University of Pennsylvania

[3]Center for Bioethics, University of Pennsylvania

[4]Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania

[5]School of Law, University of Pennsylvania

[6]VA Center for Health Equity and Promotion, University of Pennsylvania

[7]Department of Health Care Management, the Wharton School, University of Pennsylvania

Consider the following paradox: few people would balk if researchers offered smokers $1,000 to participate in a year-long randomized trial of a smoking cessation intervention, yet many would find it distasteful for a large employer to pay its smoking employees an extra $1,000 if they remained smoke-free for one year.

Such discrepant judgments are understandable from the perspective of classical economics. Research participants merit compensation for the risks and opportunity costs they endure in the service of public health, whereas individuals should need no reward for promoting their own well being. However, contrary to traditional theories of rationality, people frequently fail to make health-promoting choices, particularly when such choices require short-term sacrifices to foster long-term goals.[1,2] Thus, corporate and government health plan leaders are increasingly applying extrinsic motivations such as financial incentives and other programs to augment health – particularly cardiovascular health – while hopefully increasing productivity and restraining costs.[3, 4]

Early evidence suggests that financial incentives can effectively promote the cardioprotective behaviors of smoking cessation,[5, 6] weight loss,[7, 8] and cholesterol reduction.[9] Incentives are also currently being studied as a means of promoting warfarin adherence.[10] Although the results of these early studies are promising, further research is needed to determine which incentive structures and amounts are optimal, assess the ability of incentives to produce

ADDRESS CORRESPONDENCE/REQUESTS FOR REPRINTS TO: Scott D. Halpern, Center for Clinical Epidemiology and Biostatistics, 724 Blockley Hall, 423 Guardian Drive, Philadelphia, PA 19104-6021, Phone: (215) 898-1462, Fax: (215) 573-5325, scott.halpern@uphs.upenn.edu.

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sustained behavior changes, and evaluate the cost-effectiveness of implementing incentive programs.

Ethical dimensions of the incentives themselves are also in need of further analysis. For example, some have charged that financial incentive programs are coercive, inequitable, and inconsistent with shared social values.[11] Others have even suggested that implementing incentive programs serves to punish patients for their illnesses.[12] In this essay, we outline the rationale for incentive programs to promote cardiovascular health, identify the ethical arguments that have been used to challenge such programs, and assess the merits of these arguments.

A troubling status quo

Behaviors that threaten cardiovascular health are among the leading causes of premature deaths and rising healthcare costs worldwide. Within any partly or wholly nationalized healthcare system, the costs of caring for patients who smoke, eat excessive or unhealthy foods, or fail to heed physicians' other recommendations tend to be subsidized by those with healthier lifestyles. Similarly, within employer-sponsored health plans, the costs of caring for employees with unhealthy behaviors are borne, in part, by their colleagues who make healthier choices. Although such risk pooling is an essential feature in insuring any group of people, it is intrinsically unjust for the unhealthy choices of some to negatively influence the availability of resources or costs of care for others. Thus, if financial incentives were shown to be cost-effective in curtailing unhealthy behaviors, considerations of justice would suggest their broad implementation.

An additional problem with the status quo is that many people who exhibit unhealthy behaviors wish to change but have great difficulty doing so.[13] Many people want to quit smoking, lose weight, or better adhere to their medical therapies, but few actually achieve these goals. Thus, effective financial incentive programs would also be beneficent, providing patients with tools to help them achieve their health goals.

Concerns with financial incentives

Despite these arguments, using financial incentives to promote health raises several concerns. The first concern is that financial incentives may unduly infringe upon individuals' decision-making autonomy. Left alone, some people voluntarily choose salubrious lifestyles to reduce their risks of future health problems; others accept these long-term risks and live with them rather than foregoing the short-term gratifications offered, for example, by tobacco use. Many people may be uncomfortable with incentive programs because they inherently imply that these latter people are making bad decisions, and that governments or employers that seek to change behaviors somehow know better. However, because incentives merely counter our self-defeating tendencies toward immediate gratification[2] without constraining our options, it is difficult to argue that they infringe upon autonomy.[14] In this way, incentive programs are an example of asymmetric or libertarian paternalism;[1,13] they steer people towards making better choices without actually limiting what those choices are.

A second concern with financial incentives is that they might represent unjust inducements – that is, they may be disproportionately influential on the least well-off or most vulnerable. In this way, however, incentives are no different than taxes on cigarettes or sugared beverages,[15,16] which may preferentially dissuade smoking and sugar consumption among lower-income people. Thus, as with such regressive taxes, incentive programs ought not be considered unjust because society has a legitimate role in helping those who face barriers to helping themselves,[17,18] and because the disproportionate burdens of cardiovascular disease among the poor imply that they stand to benefit the most from incentive programs.[16] Unlike concerns that payments

to research participants or living kidney donors may be unjust if they target the poor to help the rich, health-promoting incentives reward the poor for helping themselves. Finally, if incentives helped financially disadvantaged persons become healthier, these persons might be more productive in workplace settings, promoting greater financial equality in the long term.

A third concern is that by offering incentives for behaviors that people ought to adopt anyway, we may promote mercenary values and subvert social values.[11] This general concern has two components. First, if introducing external incentives "crowds out" peoples' intrinsic motivations to improve their own health,[19] incentives might undermine long-term health outcomes. However, this part of the concern regards the efficacy of incentives, not the ethics. The possibility that incentives may prove ineffective on balance highlights the need for careful research before changing policy, but does not make incentives unethical. The other component of this concern is that because offering financial incentives for healthy behaviors highlights the value of money, such programs may unintentionally de-emphasize the intrinsic values of hard work and charitably assisting those in need. Despite the considerable merits of such non-monetary values, theoretical concerns that health incentives might have such far-reaching effects must be balanced against their more likely effects on curtailing the injurious social norms of smoking and overeating.

The fourth concern with incentives relates to privacy. Because the efficacy of incentives must be monitored (e.g., salivary or urinary cotinine measurements might be used to document smoking cessation), such programs could increase governments' or employers' involvement in peoples' private lives. However, because the costs of people's decisions are at least partly borne by third parties who pay for health care services, governments and employers have legitimate interests in promoting health and reducing absenteeism. Furthermore, because incentive programs should not be compulsory, people who value privacy more than rewards could avoid such monitoring by simply opting out from incentive programs.

Fifth, some may consider it unfair to pay Peter to accomplish something that Paul does for free. However, if Peter and Paul have the same insurer (as is always true within a nationalized health insurance program), then Paul is already paying for the consequences of Peter's smoking. Thus, Paul could also benefit from paying Peter to quit. Furthermore, although such programs reward people who have failed to help themselves while ignoring those who have succeeded, liberal societies regularly provide such targeted support. Paying the obese to promote weight loss is not fundamentally different from providing assistance following a hurricane to homeowners who had failed to purchase insurance.

Are incentives fair in heterogeneous populations?

Perhaps the most vigorous charge levied against financial incentives is that because people differ in their abilities to modify unhealthy behaviors, linking payment to the successful achievement of health outcomes discriminates against those with greater environmental, economic, or genetic barriers to change. Inadequate social support, mental illness, and poor access to care all represent real barriers to changing unhealthy behaviors. Furthermore, there is growing evidence that heritable genetic factors influence how easily people can stop smoking[20] or lose weight.[21] Thus, rewarding the achievement of health outcomes could unfairly favor those living in more amenable social settings or with more forgiving genomes.

By this logic we may properly condemn programs that would charge fees to[22] or restrict insurance eligibility for[23] people who fail to attain targeted results. However, whereas such *disincentive* programs may deprive those most in need of help and widen welfare gaps among employees or citizens, offering positive incentives for better health can only promote individuals' well-being. Incentive programs place no restrictions on anyone's opportunity to

achieve better health, and may prove to have the greatest effects among those who have been least able to attain desirable health goals without incentives.

Conclusions

Controlling healthcare costs requires that choices be made regarding how resources are allocated. Diseases that are caused or exacerbated by behavioral choices have been suggested as targets for restricting the allocation of both truly scarce resources (e.g., transplantable livers for patients with alcoholic cirrhosis) and fiscally scarce resources (e.g., percutaneous coronary intervention for obese smokers).[24,25] Although withholding services from patients perceived to be responsible for their illnesses might reign in healthcare costs, this approach inappropriately forces physicians or government agencies to adjudicate the morality of prior health behaviors through selective rationing.[26] Instead, governments and employers can and should try to curtail unhealthy behaviors by making it easier for people to choose short-term actions that are consistent with their own long-term interests. If we learn that incentive programs are less cost-effective than alternative means of promoting cardiovascular health, or that they carry unintended consequences such as encouraging certain people to adopt unhealthy behaviors so as to become eligible for incentives, then broadly implementing these interventions may be unwise. But given the promise of incentives to favorably modify behavior, we should not let inchoate views that the incentives themselves are unethical prevent us from studying them in earnest.

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References

1. Loewenstein G, Brennan T, Volpp KG. Asymmetric paternalism to improve health behaviors. JAMA 2007;298:2415–2417. [PubMed: 18042920]
2. O'Donoghue T, Rabin M. The economics of immediate gratification. Journal of Behavioral Decision Making 2000;13:233–250.
3. Okie S. The employer as health coach. N Engl J Med 2007;357:1465–1469. [PubMed: 17928592]
4. Quinn, B. Britain creates 9 healthy towns. Available at: http://familyhealthed.org/blog/?p=179
5. Heil SH, Higgins ST, Bernstein IM, Solomon LJ, Rogers RE, Thomas CS, Badger GJ, Lynch ME. Effects of voucher-based incentives on abstinence from cigarette smoking and fetal growth among pregnant women. Addiction 2008;103:1009–1018. [PubMed: 18482424]
6. Volpp KG, Troxel AB, Pauly MV, Glick HA, Puig A, Asch DA, Galvin R, Zhu J, Wan F, DeGuzman J, Corbett E, Weiner J, Audrain-McGovern J. A randomized controlled trial of financial incentives for smoking cessation. New England Journal of Medicine 2009;360:699–709. [PubMed: 19213683]
7. Finkelstein EA, Linnan LA, Tate DF, Birken BE. A pilot study testing the effect of different levels of financial incentives on weight loss among overweight employees. Journal of Occupational and Environmental Medicine 2007;49:981–989. [PubMed: 17848854]
8. Volpp KG, John L, Troxel AB, Norton L, Fassbender J, Loewenstein G. Financial incentive-based approaches for weight loss: A randomized trial. JAMA 2008;300:2631–2637. [PubMed: 19066383]
9. Bloch MJ, Armstrong DS, Dettling L, Hardy A, Caterino K, Barrie S. Partners in lowering cholesterol: Comparison of a multidisdplinary educational program, monetary incentives, or usual care in the treatment of dyslipidemia identified among employees. Journal of Occupational and Environmental Medicine 2006;48:675–681. [PubMed: 16832224]
10. Volpp KG, Loewenstein G, Troxel AB, Doshi J, Price M, Laskin M, Kimmel SE. A test of financial incentives to improve warfarin adherence. BMC Health Services Research 2008;8:272. [PubMed: 19102784]

11. Shaw J. Is it acceptable for people to be paid to adhere to medication? No BMJ 2007;335:233.
12. Gostin LO. Using law to facilitate healthier lifestyles--Reply. JAMA 2007;297:1982–1983. [PubMed: 17488961]
13. Sunstein CR, Thaler RH. Libertarian paternalism is not an oxymoron. The University of Chicago Law Review 2003;70:1159–1202.
14. Halpern SD, Ubel PA, Asch DA. Harnessing the power of default options to improve health care. New England Journal of Medicine 2007;357:1340–1344. [PubMed: 17898105]
15. Kristof ND. Miracle tax diet. New York Times December 18;2008 :A43.
16. Brownell KD, Frieden TR. Ounces of prevention -- The public policy case for taxes on sugared beverages. N Engl J Med 2009;360:1805–1808. [PubMed: 19357400]
17. Anonymous. The ethics of public health. Lancet 2007;370:1801. [PubMed: 18061035]
18. Nueffield Council on Bioethics. Public health: Ethical issues. Cambridge: Cambridge Publishers Ltd; [June 24, 2008]. 2007 at http://www.nuffieldbioethics.org/fileLibrary/pdf/Public_health_-_ethical_issues.pdf
19. Heyman J, Ariely D. Effort for payment - A tale of two markets. Psychological Science 2004;15:787–793. [PubMed: 15482452]
20. Munafo MR, Johnstone EC, Guo B, Murphy MFG, Aveyard P. Association of COMT Val108/158Met genotype with smoking cessation. Pharmacogenetics & Genomics 2008;18:121–128. [PubMed: 18192898]
21. Hainer V, Zamrazilova H, Spalova J, Hainerova I, Kunesova M, Aldhoon B, Bendlova B. Role of hereditary factors in weight loss and its maintenance. Physiological Research 2008;57(Suppl 1):S1–15. [PubMed: 18271696]
22. Rawls P. Extra pounds equal fees for Alabama state employees. Philadelphia Inquirer. August 24;2008
23. Bishop G, Brodkey AC. Personal responsibility and physician responsibility -- West Virginia's Medicaid plan. N Engl J Med 2006;355:756–758. [PubMed: 16928992]
24. Buyx AM. Personal responsibility for health as a rationing criterion: why we don't like it and why maybe we should. J Med Ethics 2008;34:871–874. [PubMed: 19043112]
25. Moss A, Siegler M. Should alcoholics compete equally for liver transplantation? JAMA 1991;265:1296–1298.
26. Halpern SD, Ubel PA, Caplan AL. Solid organ transplantation in HIV-infected patients. New England Journal of Medicine 2002;347:284–287. [PubMed: 12140307]