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## CAN INCENTIVES FOR HEALTHY BEHAVIOR IMPROVE HEALTH AND HOLD DOWN MEDICAID COSTS?

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The impact of individual behavior on the cost of health care is attracting a great deal of attention from policymakers. A number of state Medicaid programs are offering rewards for healthy behavior or considering this step, assuming that financial incentives will improve the health of Medicaid beneficiaries and help hold down health care costs.

Florida and Idaho, for example, recently launched programs that would reward Medicaid beneficiaries for certain behaviors. California, Kentucky, Michigan, Missouri, Pennsylvania, Texas, and Wisconsin are considering this strategy. West Virginia is taking a different approach by making the availability of certain health care benefits contingent upon specified behaviors.

The concept of “health care consumerism,” promoted by the U.S. Department of Health and Human Services and the Center for Health Transformation (a policy institute founded by Newt Gingrich),<sup>1</sup> envisions an overhaul of the health care system based in part on paying patients “for compliance.”<sup>2</sup> According to this model, healthy behavior should be rewarded financially, because financial rewards for healthy choices are “a powerful motivator.”<sup>3</sup>

Because behavior, such as smoking, diet and physical inactivity, accounts for a significant amount of premature mortality,<sup>4</sup> the idea that financial incentives could improve behavior is appealing. States providing or considering incentives for behavior generally aim to either increase the number of beneficiaries who obtain regular health screenings or to decrease the incidence of smoking and obesity. These are unquestionably valid goals for state Medicaid programs. There is, however, little

### KEY FINDINGS

- **A growing number of states are providing financial incentives to encourage Medicaid beneficiaries to obtain preventive services and combat problems like smoking and obesity. Few rigorous studies have been conducted, however, to see whether incentives achieve these goals.**
- **Economic rewards, when combined with other interventions, may be effective in increasing preventive care. No studies indicate that incentives are effective against smoking or obesity, however, both of which are complex problems requiring more substantial assistance.**
- **West Virginia’s penalty-based incentive approach, which restricts health benefits for beneficiaries who do not follow a particular behavior plan, is unlikely to produce health improvements. In fact, it risks harming people who do not comply with the plan because of mental health or other problems, by denying them needed health care services.**

hard evidence that incentive programs will actually achieve these goals, particularly in terms of reducing smoking and obesity.

### **Little Evidence That Rewards Result in More Preventive Care for Medicaid Beneficiaries**

A substantial body of research shows that financial barriers make it more difficult for low-income people to get health care services.<sup>5</sup> Yet there is little evidence that financial *rewards* will lead Medicaid beneficiaries to obtain more preventive services. Few rigorous studies have been conducted on the impact of financial rewards on health-related behavior.<sup>6</sup>

Several recent literature reviews conclude that providing rewards (such as coupons for products or services) for simple behaviors (such as a doctor's visit) appear to be effective, but these reviews also note that the research is sparse and often has limitations, such as small sample sizes.<sup>7</sup> None of these reviews focus specifically on incentives provided to Medicaid beneficiaries.

In 1997, Mercy Health Plan, a managed care organization in Philadelphia, achieved a statistically significant increase in the number of children who received all their immunizations with a program that gave parents a \$10 gift certificate for diapers or shoes when a child was appropriately immunized. However, the reward was offered as part of a comprehensive program that also included home visits by registered nurses, transportation assistance, and ongoing education, so it is not clear whether the reward by itself would have produced the same result.<sup>8</sup>

More recently, a collaboration of California Medicaid managed care plans offered movie tickets or a gift certificate to parents who brought in their infants for well-child visits and adolescents who themselves went in for such visits. A 2004 evaluation of the program found that only about 3,000 of the 145,000 adolescents who qualified for the rewards, and 2,000 of the 56,000 parents who qualified, redeemed their rewards.

The reason for the low return in the California program was unclear, but plans reported that some beneficiaries did not know about or understand the incentives.<sup>9</sup> The plans also reported that implementing the incentive program was labor intensive.<sup>10</sup> The number of well-child services provided did improve during this program, but as in the Philadelphia program, the impact of the incentives could not be identified, as other interventions — including rewards to providers for conducting outreach to members — occurred at the same time.

Other incentive programs, including Florida's recently launched Enhanced Benefits program, have also reported that relatively few beneficiaries have collected the rewards for which they qualify.<sup>11</sup> Florida's program provides beneficiaries with a credit worth \$15 to \$25 that can be redeemed for health-related products such as over-the-counter medications or Band-Aids. The strategy is aimed at both simple preventive behaviors, such as obtaining a flu shot, and more complex behaviors, such as quitting smoking. Florida reports that between September 2006 and November 2006, 57,000 beneficiaries earned roughly \$2.3 million in credits; yet only about 2,000 beneficiaries collected \$50,000 of these credits.

It is unclear why Florida's redemption rate was so low. It also is unclear whether the rewards program has prompted an increase in the desired behaviors. These are important questions, as Florida has spent over \$1.1 million to contract with private vendors to administer the program.<sup>12</sup>

## **Incentives to Reduce Smoking and Obesity**

Reducing the harm and costs associated with obesity and smoking is very important both for public health and for state Medicaid programs. An estimated 64 percent of U.S. adults are either overweight or obese, according to the National Health and Nutrition Examination Survey.<sup>13</sup> Obesity promotes a range of serious conditions, including cardiovascular disease, cancer, and diabetes.<sup>14</sup> A number of recent studies have documented the financial impact of treating obesity-related disease. One study found that obese adults have 36 percent higher average medical expenditures than people of normal weight.<sup>15</sup>

Smoking, the cause of more than 400,000 deaths annually,<sup>16</sup> is also considerably more common among low-income people: 31 percent of adults living below the poverty line smoke, compared with 22 percent of those at or above the poverty line.<sup>17</sup>

The long-term lifestyle changes required to lose weight or quit smoking are unlikely to be affected by short-term economic incentives. Published research does not support the idea that financial incentives are effective at getting people to stop smoking.<sup>18</sup> Although financial rewards may prompt people to use self-help materials or even to quit for a short time, no research has shown that financial rewards produce improvement in the number of people who succeed in quitting smoking entirely. One study, in which incentives were effective in improving the use of self-help materials, also found that the use of incentives was associated with higher relapse rates among those who did manage to quit.<sup>19</sup>

Rather than employing financial incentives, the available research suggests that state Medicaid programs would be better advised to ensure that treatment based on guidelines and recommendations from responsible agencies is available for beneficiaries. In the case of smoking, there are effective medications as well as counseling and behavioral approaches to treatment. The U.S. Preventive Health Services Task Force and the 2000 Public Health Service (PHS) clinical practice guidelines recommend that insurance coverage be provided for tobacco-dependence treatments, including both medication and counseling.<sup>20</sup> A letter the Centers for Medicare and Medicaid Services issued to state Medicaid directors on March 22, 2007 encourages states “to consider the possibilities available for providing coverage for the recommended tobacco-dependence treatment services geared toward reducing adverse health effects in the Medicaid population.”<sup>21</sup>

According to 2005 survey data, only one state (Oregon) provided Medicaid coverage for all tobacco-dependence treatments recommended by the 2000 PHS guideline; 38 states provided some tobacco-dependence treatment, and four states provided tobacco-dependence treatment only to pregnant women.<sup>22</sup>

Obesity is more difficult to treat than smoking. According to the U.S. Preventive Health Services Task Force, there is fair to good evidence that a combination of high-intensity counseling and behavioral interventions can produce modest, sustained weight loss. But there is insufficient evidence that less intensive strategies (such as one-time counseling by a health provider) are effective.<sup>23</sup> Moreover, some experts question whether widespread changes in individual behavior are

possible without eliminating societal barriers to healthy food choices and active lifestyles, a major challenge in some low-income communities.<sup>24</sup> Many low-income people live in neighborhoods where the recreational facilities are poor, stores lack fresh produce, and advertising for tobacco products is widespread.<sup>25</sup>

These challenges — the lack of adequate medical benefits for smoking cessation in many Medicaid programs and the environmental changes that may be needed to help address obesity — are unlikely to be offset by the modest financial rewards that states now offer or are likely to offer.<sup>26</sup> Florida offers beneficiaries \$25 in credits (redeemable for health-related products at a drugstore) for participating in a smoking cessation or weight loss program and \$15 in credits for six months of success in smoking cessation or weight loss. It is questionable whether the equivalent of \$2.50 per month will prompt smoking cessation or weight loss among significant numbers of Medicaid beneficiaries, given the challenge of altering these behaviors and the difficulty in many states of obtaining adequate treatment.

### **Should Medicaid Benefits Be Made Contingent Upon Behavior?**

Incentive programs that make Medicaid benefits contingent upon certain behavior appear to be of less interest to states. West Virginia is the only state taking such an approach; it is seeking to structure its entire Medicaid program for children and families around incentives. This program, currently being piloted in three counties, provides a scaled-back benefits package for most children and parents, and then gives them access to an “enhanced” package if they sign and conform to an agreement with the state that they will engage in certain behaviors such as showing up for scheduled appointments and taking medication as directed. If they do not sign the agreement or the state later decides they did not live up to the agreement, they can lose the health-care services offered under the “enhanced” package.

By providing vital services such as skilled nursing care for children and mental health care for children as well as parents *only* if the parents comply with the behavior requirements established by the state, the West Virginia plan places the health of low-income children and parents at risk.<sup>27</sup> In fact, the individuals most likely to have problems complying with the plan, such as people with mental health problems, are the ones most in need of the services that are made contingent on plan compliance. Physicians also have expressed concerns that the plan will undermine the ability of doctors to negotiate individualized treatment plans with patients. A recent article in the *New England Journal of Medicine* noted that when patients do not follow prescribed treatments, physicians need to be able to explore with the patient the reasons that patients are not complying with the treatments, and that a punitive contract will undermine this process.<sup>28</sup>

“Sticks” or penalties, which have never been used before in Medicaid programs, raise different — and more serious — concerns than rewards. Like rewards programs, penalty programs carry the risk that states will spend Medicaid funds and not achieve their goals. But unlike rewards programs, penalty programs incur the additional risk that they will harm beneficiaries’ health by denying them needed health care services.

## **Idaho's Incentives for Smoking Cessation Are Not an Adequate Substitute for Medicaid Coverage for Smoking Cessation Treatment**

The Idaho Behavioral Preventive Health Assistance Program (PHA)<sup>a</sup> is a voluntary program that provides Medicaid beneficiaries who indicate they want to change a behavior (such as by quitting smoking or losing weight) with 100 points, worth \$100, once they have visited a doctor and agreed upon a plan to treat their condition. Smokers can then use these points (which are provided as a voucher) to purchase counseling, nicotine replacement products (such as a patch or gum), or medication. After participants reach an interim goal agreed upon by the patient and doctor, another \$100 in points is awarded. The program is capped at \$200 worth of points per year.

Idaho's program is likely to set up some smokers for failure, however — particularly heavy, long-term smokers who are at highest risk for disease — by limiting their access to treatment for a chronic condition that is characterized by a high rate of relapse. With \$200 in state incentives, a heavy, long-term smoker could purchase only about eight weeks of a generic nicotine replacement patch; this is not likely to be sufficient, since the recommended duration of treatment is six to 20 weeks. The amounts of nicotine gum, spray, and inhaler that could be purchased with the state incentives would also be insufficient.<sup>b, c</sup>

If the smoker is prescribed generic smoking-cessation medication (as distinguished from a nicotine replacement patch), the state incentives would purchase about eight weeks of medication. The recommended duration of treatment is seven to 12 weeks, followed by up to six months of maintenance treatment to prevent relapse.<sup>c</sup>

Instead of an incentive program, Idaho would be better off providing Medicaid beneficiaries with the comprehensive smoking cessation benefits recommended by the U.S. Preventive Health Task Force in order to give the most at-risk smokers the tools they need to quit.

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<sup>a</sup> Idaho also has launched a preventive care incentive program (the Wellness Preventive Health Assistance program), which focuses on children in families with income above 133 percent of the poverty line and pays delinquent premiums for families whose well-child visits are up to date.

<sup>b</sup> K. Michael Cummings and Andrew Hyland, "Impact of Nicotine Replacement Therapy on Smoking Behavior," *Annual Review of Public Health* (April 2005), pp. 583-599.

<sup>c</sup> \$200 would purchase the following amounts of nicotine replacement therapies at the highest recommended dosages: six weeks of 4mg gum (\$72.99 for 180 pieces; 12-week recommended treatment), or two weeks of nicotine spray (\$142.69 per bottle; 8 week recommended treatment), or two weeks of nicotine inhaler (\$145.99 for 168 doses; 12-week recommended treatment). Based on CBPP analysis of published dosage requirements available from smoking cessation drug therapy. Pharmacist's Letter/Prescriber's Letter 2006;22(12):221212. Prices obtained from a Savon Pharmacy in Boise, ID and <http://www.drugstore.com/>.

## **Should Scarce Medicaid Resources Be Spent on Incentive Programs?**

Medicaid has far-reaching responsibilities. It finances not only health coverage for low-income adults and children, but also medical and long-term care for people with disabilities and, for the elderly, long-term care and help with Medicare premiums and cost sharing. State policymakers must frequently make difficult choices about how best to use finite Medicaid resources to assist these vulnerable populations.

Rewarding beneficiaries for behavior is unlikely to have significant effects either in reducing Medicaid program costs or in improving the overall health status of the Medicaid population. Rewards may have some use in increasing receipt of preventive care, particularly if they are combined with other strategies such as outreach and education. However, these strategies have not been proven cost-effective in Medicaid when employed without education or outreach. Moreover, as Florida's experience shows, states will incur costs to launch, promote, and oversee these programs, in addition to the costs of the incentives themselves.

Rewards are especially unlikely to reduce the human and economic costs of smoking and obesity — the two areas where states are focusing their efforts and where solutions are most needed. As a first step toward reducing tobacco use, states need to ensure that Medicaid beneficiaries have access to the medications, counseling, and other products and services that have proven effective in stopping smoking. In tackling obesity, states need to use their public health entities to help bring about the needed environmental changes.

Penalty-based incentives systems that withdraw Medicaid benefits when patients do not comply with state behavioral requirements, as West Virginia is currently doing, carry particular risk. Such programs are unlikely to produce significant savings and carry risks for the health of vulnerable patients.

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<sup>1</sup> State Medicaid Director Letter, Department of Health and Human Services, April 25, 2007. This letter includes a recommendation that states provide Medicaid beneficiaries with incentives for prevention and wellness and self-management of chronic illness. See also [www.healthtransformation.net](http://www.healthtransformation.net).

<sup>2</sup> Newt Gingrich, "Real Change Requires Real Change," Testimony to the Medicaid Commission by The Center for Health Transformation, July 12, 2006.

<sup>3</sup> Gingrich, p. 5.

<sup>4</sup> One widely cited study that used 2000 mortality data reported to the Centers for Disease Control and Prevention concludes that about half of all deaths that occurred in the United States could be attributed to a limited number of largely preventable behaviors and exposures, such as smoking, poor diet, physical inactivity, excessive alcohol use, sexual behavior and others. See: Ali Mokdad, James S. Marks, Donna F. Stroup, and Julie L. Gerberding, "Actual Causes of Death in the United States, 2000," *JAMA*, 291:10, March 10, 2004. Tobacco use is the leading preventable cause of death in the United States, accounting for one of every five deaths. See: Nancy A. Rigotti, "Treatment of Tobacco Use and Dependence," *The New England Journal of Medicine*, 346: 506-512. For a discussion of these data as applied to low income people, see: Nancy Adler and Katherine Newman, "Socioeconomic Disparities in Health: Pathways and Policies," *Health Affairs* (March/April 2002), pp. 60-76.

<sup>5</sup> For a summary of this research, see Leighton Ku and Victoria Wachino, "The Effect of Increased Cost Sharing in Medicaid: A Summary of Research Findings, Center on Budget and Policy Priorities, revised July 7, 2005.

<sup>6</sup> Jon Christianson, "Consumer Incentives: A Review of the Literature and Options for Medicaid Case Management," University of Minnesota, presentation to the "Quality Improvement and Performance Measurement in Medicaid Care Management," Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services, February 12, 2007

<sup>7</sup> None of these reviews focus specifically on incentives to Medicaid beneficiaries, and some include studies of incentives to higher-income people through worksite interventions. Some studies also fail to distinguish between removal of financial barriers to care (such as providing bus passes) and actual rewards (such as coupons for products). See Robert L. Kane *et al.*, "A Structured Review of the Effect of Economic Incentives on Consumers' Preventive Behavior," *American Journal of Preventive Medicine*, 24:4 (2004); R Jepson *et al.*, "The Determinants of Screening Uptake and

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Interventions for Increasing Uptake: A Systematic Review,” *Health Technology Assessment*, 4:14 (2000); also see Christianson, *op cit*.

<sup>8</sup> Browngoehl, *op cit*.

<sup>9</sup> Suzanne Felt-Lisk and Fabrice Smieliauskas, “Evaluation of the Local Initiative Rewarding Results Collaborative Demonstrations: Interim Report,” Mathematica Policy Research, Inc., August 12, 2005.

<sup>10</sup> The lack of redemption may have been a combination of administrative difficulties in enabling redemption and a lack of interest or action on the part of beneficiaries. The research at this point is unclear and may be clarified in a forthcoming article. For an overview of the project’s results see: Felt-Lisk and Smieliauskas, *op cit*.

<sup>11</sup> Dyke Snipes, Assistant Deputy Secretary for Medicaid Finance, “Medicaid Reform in Florida,” presentation to the Institute for Public Policy and Leadership, May 10, 2007.

<sup>12</sup> Snipes, slide 22.

<sup>13</sup> Eric A. Finkelstein, Ian C. Fiebelkorn, and Guijing Wang, “State-Level Estimates of Annual Medical Expenditures Attributable to Obesity,” *Obesity Research* (January 2004), p. 18.

<sup>14</sup> Finkelstein, p. 21

<sup>16</sup> R. Strum, “The Effects of Obesity, Smoking, and Drinking on Medical Problems and Costs,” *Health Affairs*, 21: 245-53, 2002.

<sup>16</sup> Nancy C. Rigotti, “Treatment of Tobacco Use and Dependence,” *The New England Journal of Medicine* (February 14, 2002), p. 506.

<sup>17</sup> Centers for Disease Control, Morbidity and Mortality Weekly Report, November 10, 2006.

<sup>18</sup> Christianson, slide 17. Research does show that incentives can be effective in promoting smoking cessation in highly controlled settings, such as drug treatment programs. “Quit and win” lottery programs have also had some success in workplace settings. Some recent work has shown positive results with pregnant smokers. See: Rebecca J. Donatelle *et al.*, “Incentives in Smoking Cessation: Status of the Field and Implications for Research and Practice with Pregnant Smokers,” *Nicotine and Tobacco Research*, 6:2 (April 2004).

<sup>19</sup> Short-term quit rates were improved by financial incentives in a study conducted at the Philadelphia Veterans Affairs Medical Center. At six months, however, quit rates in the incentive group were not significantly higher than in the control group. See: Kevin G. Volpp, Andrea Gurmankin Levy, David A. Asch, Jess A. Berlin, John J. Murphy, Angela Gomez, Harold Sox, Jingsan Zhu and Caryn Lerman, “A Randomized Controlled Trial of Financial Incentives for Smoking Cessation,” *Cancer Epidemiology Biomarkers and Prevention*, 15:12-18, January 2006. Relapse rates were higher in the group receiving incentives to quit smoking in a study conducted at the Group Health Cooperative of Puget Sound. See: Susan J. Curry, Edward H. Wagner, and Louis C. Grothaus, “Evaluation of Intrinsic and Extrinsic Motivation Interventions with a Self-Help Smoking Cessation Program,” *Journal of Consulting and Clinical Psychology*, 59:2, 1991.

<sup>20</sup> Michael C. Fiore, William C. Bailey, Stuart J. Cohen, et al. *Treating Tobacco Use and Dependence*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. June 2000.

<sup>21</sup> State Medicaid Director Letter, Centers for Medicare and Medicaid Services, March 22, 2007.

<sup>22</sup> Centers for Disease Control, Morbidity and Mortality Weekly Report, November 10, 2006.

<sup>23</sup> U.S.Preventive Health Services Task Force, Screening and Interventions to Prevent Obesity in Adults, December 2003.

<sup>24</sup> Marion Nestle and Michael F. Jacobson, Halting the Obesity Epidemic: A Public Health Approach, *Public Health Reports* (January/February 2000), p. 12.

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<sup>25</sup> Adler, p. 69.

<sup>26</sup> For a similar perspective focusing on the lack of effectiveness of using financial rewards to reduce overuse of the health system by Medicaid beneficiaries, see John Holahan and Alan Weil, "Toward Real Medicaid Reform," *Health Affairs* 26, no.2 (2007) : w257-270 (published online 23 February 2007; 10.1377/hlthaff.26.2.w254).

<sup>27</sup> Judith Solomon, West Virginia's Medicaid Changes Unlikely to Reduce State Costs or Improve Beneficiaries' Health, Center on Budget and Policy Priorities, May 31, 2006.

<sup>28</sup> Gene Bishop and Amy Brodkey, "Personal Responsibility and Physician Responsibility," *New England Journal of Medicine*, 355: 8, August 24, 2006.