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Structuring Legal, Ethical, And Practical Workplace Health Incentives: A Reply to Horwitz, Kelly, And DiNardo

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This commentary is in response to the March 5, 2013 *Health Affairs* article, "[Wellness Incentives in the Workplace: Cost Savings through Cost Shifting to Unhealthy Lifestyles](#)." In that article, Jill Horwitz and coauthors express concerns about new rules governing workplace health promotion (wellness) programs due to take effect in 2014 as part of the Patient Protection and Affordable Care Act of 2011, [Public Law 111-148](#) ("ACA"). In addition to increasing access to health care services for all Americans, the ACA aims to place greater emphasis on health promotion and disease prevention and to encourage employer adoption of workplace wellness programs. As I discuss below, some of the concerns raised by Horwitz et al. are legitimate points that I agree with. However, I believe that Horwitz and her colleagues go too far when they appear to question the basic idea that employees with modifiable health risks cost more than those without such risks, calling into question the entire concept of workplace wellness programs and indeed of prevention in general. In this post, I explain how well-designed wellness programs can benefit both employers and employees, and I offer some suggestions to ensure that such programs are both effective and fair. A specific provision of the ACA (Section 2705), which is at the heart of the controversy addressed by Horwitz et al., will allow employers to design incentive-based wellness programs that reward not only participation in health promotion programs but also "outcomes" related to having healthy habits and managing biometric values within "normal" ranges. Under the new rules, financial incentives (e.g., different health plan designs, payment terms, premiums levels, deductibles, co-insurance or co-payments) could be offered to workers who are nonsmokers, are at a given weight or BMI, or are effectively controlling their blood pressure, total cholesterol, and blood glucose. Rewards or incentives would also be made available to employees who eat a healthy diet or are physically active. To guard against abuse of this provision, the legislation makes clear that employers can only offer these types of incentives within the context of a wellness program that has "a reasonable chance of improving health or preventing disease, is not overly burdensome, is not a subterfuge for discriminating based on a health status factor, and is not highly suspect in method." In addition, the legislation makes clear that employees can earn the incentive if they are offered, and accept, a reasonable

alternative for achieving a health goal, for example, participating in a weight reduction or smoking cessation program. It also allows for waivers to individuals for whom it is medically inadvisable to participate in a health promotion program, or when a physician determines that attainment of a given health goal is harmful or ill advised. In my opinion, the legislation is balanced since it encourages efforts toward achievement of health goals, in addition to actually achieving those goals, while protecting the rights of individuals where participation in a program, or reduction of health risks, would be counterproductive or harmful. To demonstrate this balance, employer-based incentive designs need to be configured in ways that are practical, ethical, and legal. I think this configuration is feasible. Further, workplace health promotion programs have the potential to significantly improve population health by leveraging the workplace as a setting for health improvement and risk reduction. After all, [approximately 155 million people go to work each workday](#) and spend most of their waking hours there. Contrast that to the very limited time spent with a medical provider, which may total 1-2 hours a year for most of us. **Not A New Idea** Providing financial incentives for program participation, and even outcomes, is not a new idea. Incentive-based programs have been in place for many years, even decades, at several large and small worksites (examples include the Cleveland Clinic, Lincoln Industries, and Johnson & Johnson) – and have been proven effective. For example, Johnson & Johnson introduced an incentive program in 1995 to induce higher participation in risk assessment, screening and follow-up health coaching programs. The \$500 annual [incentive worked](#). Over 90 percent of the employees participated in the program compared to about 25-30 percent in prior years. Today, [Johnson & Johnson still achieves very high participation rates](#), hovering at about 75-80 percent. It also has demonstrated that its program design continues to improve employees' health and save dollars in the company's medical plan. People respond to financial incentives because they can see the connection between leading a healthy lifestyle and paying less for medical insurance. Few doubt the connection between certain health habits – such as smoking, poor diet, and lack of physical fitness – and the devastating effects of acute and chronic illnesses. Getting people to change life-long health habits is difficult, but doable. The evidence is clear that when done right (i.e., adoption of evidence-based practices), workforce populations can improve their behaviors and lower their risk for disease. (More on that evidence base later.) It is true that for incentive-based programs to work, they need to do more than encourage completion of a 15-minute health risk assessment. Programs need to apply behavior change theory to engage people in the task of taking better care of their health. They need to convince them that a healthy lifestyle is not just about earning a financial reward – but rather a path to feeling better, experiencing a better quality of life, having more energy, and generally improving their well-being. In short, to be effective, incentive-based wellness programs need to be built on a comprehensive workplace health promotion framework that achieves positive health (broadly defined) outcomes for the entire workforce – not just program participants. Further, these programs need to be communicated clearly and be viewed as fair and equitable by workers. The end goal should not be cost savings (although that may occur); it should be health improvement, risk reduction, and well-being. To achieve those goals, a successful worksite wellness program needs to create a culture and environment that supports health and wellness – where the default condition encourages good health. **Where We Agree ...** I agree with Horwitz et al. that the ACA legislation should not be used as a vehicle or excuse for “blaming” workers for their poor health habits, or to penalize them financially for not achieving certain health outcomes. Certainly, individuals bear responsibility for their health habits and practices. Behavior is shaped by one's circumstances but they are not the only driver. To think otherwise would minimize or even eliminate a person's responsibility for action or even the person's free will. Behavior change involves re-setting expectations, establishing goals, planning actions, and a making a conscious decision to do something different. It also requires resolve to follow through on a decision and habituate the new behavior. But, the employer also shares responsibility for the health and well-being of workers and can do much to create a healthy workplace environment. Employers can designate workplaces as smoke-free; encourage (not just offer) healthy food choices in cafeterias and vending machines; provide ready opportunities for physical

activity and fitness; reduce out-of-pocket costs for life-enhancing blood pressure-, cholesterol-, or glucose-lowering medications (generic if available); and provide state-of-the-art health promotion interventions to individuals wishing to improve their health behaviors. Employers have a large stake in keeping their workers healthy because healthy workers often use fewer health care services and are more productive. (More on that later.) Employers also understand that lowering the risk profile of workers leads to a lower incidence of disease, fewer accidents, less disability, lower medical spending, and improved performance. The question is not whether employers should adopt workplace health promotion programs, but rather how to do so in an effective, ethical, and practical manner in order to achieve the greatest benefit, at a reasonable cost. **And Where We Disagree...** I believe that common, *modifiable* health risks are damaging to people's health. I cannot imagine an argument against that statement. Further, these modifiable health risks have a negative effect on quality of life, health care utilization, absenteeism, disability, and productivity. It is much better, medically and otherwise, for individuals to be at lower than higher health risk. While the above seems obvious to most of us, Horwitz et al. apparently dispute the many thousands of epidemiological studies that have made the connection between certain modifiable health risks and serious disease states. Which modifiable health risks? The following ten health risks are commonly tracked in worksite health promotion programs using health risk assessments and screening techniques: smoking, obesity, high blood pressure, high blood glucose, high cholesterol, physical inactivity, poor diet, high alcohol consumption, high stress, and depression. These are the "top 10" risk factors that a good worksite health promotion program attempts to reduce, in terms of population prevalence, over the life of the program. So, the first question to ask is this: Is it a good thing or a bad thing to lower these health risks? For individuals, I believe the answer is resoundingly "a good thing." What about organizations? Is it in the organization's best interest to support workers' efforts to improve their health and lower health risks? Again, I would argue that ethically it's a good and noble thing to help people lower their risk for disease, and by doing so protect them from unnecessary illness, disability, worry, and cost. Then the question becomes this: Can organizations create programs that reduce employees' health risks while at the same time saving costs? The answer can be found in [a systematic review](#) conducted by The Community Guide to Preventive Services, housed at the Centers for Disease Control and Prevention (CDC), and led by Dr. Robin Soler. The overall conclusion of the review was that comprehensive, well-conceptualized, and theory-based worksite programs *do* exert a positive influence on health behaviors, biometric measures, and financial outcomes important to employers. As part of the review, an economic analysis was also performed by CDC staff to determine whether these programs save money and unnecessary health care utilization. The answer was "yes" – worksite programs reduced the overall risk profile of the population, reduced healthcare spending, and reduced worker absenteeism. Another [literature review conducted by economists at Harvard University](#) determined that there was a \$3.00 return for every dollar invested, over a three-year time horizon, from effective worksite health promotion programs. **Do High Health Risk Employees Cost More?** Let's return to a fundamental question posed by Horwitz et al. – whether high-risk employees cost more than low-risk ones. Horwitz et al. claim the evidence is mixed on whether modifiable health risks are associated with higher health care costs and reduced worker productivity. I disagree. I believe the evidence is quite consistent in showing that many of the health risks listed above (not all) are associated with higher medical spending and greater productivity losses. My team and I have conducted several of these "risk-cost" studies with varied populations, different time horizons, a variety of health risk assessment instruments, and across multiple administrative databases. Examples of our studies include two multi-employer [HERO analyses](#), the [Workforce Wellness Index review of Truven Health Analytics MarketScan data](#), and three [large employer studies](#) conducted on behalf of PepsiCo, Novartis, and Mayo Clinic. In our cross-sectional studies, we linked individual employees' health risks to their financial outcomes data including medical claims, absenteeism records, disability files, workers' compensation claims, and presenteeism surveys. We then followed workers over time, after they completed a health assessment, to see if having higher health risks at the time of health assessment completion was associated with having

higher medical costs and reduced productivity. Our studies are rigorous in that they control for common confounders such as having multiple health risks, demographic variables, and co-morbidity. Our results have not been “mixed” but rather consistent in terms of the direction of association between risks and costs. True, the magnitude of associations differs across studies largely because of variations in the population examined, health risk assessment instruments used, and multivariate methods applied. But, in general, we find that people at high risk because of the following modifiable risk factors also cost more money: obesity, high blood glucose, high blood pressure, smoking behavior, physical inactivity, high stress, and depression. For three of the ten risk factors (i.e., high alcohol consumption, poor diet, and high cholesterol), our analyses have shown either negative or non-significant associations. Horwitz et al. cite this last point, derived from our [recently published HERO II study](#), as evidence that high risks are not associated with higher costs. They point to a lack of significant relationship between high risk for alcohol consumption, poor diet, and high cholesterol and higher medical spending. In doing so, the authors are “cherry picking” from our findings. As noted above, these three of 10 risk factors examined in the study did not correlate with higher health care costs. But, the other seven risks did. Furthermore, the results of the HERO II study closely aligned with those from the original HERO I study, published 14 years earlier. In both HERO I and II studies, significant associations were found for seven of 10 risk factors. Also, explanations for the counterintuitive findings related to high alcohol consumption, self-reported eating habits, and high total cholesterol values are discussed in both papers with possible explanations offered. When looking at risk-cost relationships, Horwitz et al. note that they narrowed their focus to randomized controlled trials. I am perplexed by this. It is not clear how one would perform a cross-sectional analysis when the requirement is the conduct of a randomized clinical trial. Clinical trials are intervention studies to determine whether something causes something else. However, randomized trials are not necessary when examining a relationship between a risk factor (e.g., smoking or obesity) and an outcome (e.g., higher medical costs or increased absenteeism). To conduct a risk-cost analysis, you need only to study the association between a cause (e.g., a health risk) and an outcome (e.g., higher medical costs). This is how epidemiological studies have determined that smoking “causes” lung cancer, although it is true that not all smokers develop lung cancer, and not all lung cancers are caused by smoking. To establish a clear and unambiguous relationship – that smoking *causes* lung cancer – you would need to randomly assign individuals to a “must smoke” vs. “must not smoke” condition over many years, and then determine how many contracted a dreaded diseases like lung cancer and how many did not. The questionable ethics, legality, and practicality of the above approach are obvious. No one has yet shown that smoking causes cancer in the same way that no one has yet shown that having certain high health risks (like obesity) causes disease onset and higher costs – although these relationships are well established. For most other common risk factors, there are similar impediments to performing randomized trials. In the absence of such trials, there are well accepted criteria (e.g., the [Bradford Hill criteria](#)) that are applied to the evidence to evaluate the causal relationships between risk factor and disease. These criteria include effect size, consistency of findings, temporality, plausibility, and dose response effects. If we hold ourselves hostage to randomized controlled trials to establish the causality of risk factors, we are left in the nonsensical position of still questioning whether cigarette smoking is harmful. Horwitz et al. make the case that studies examining the associations between risks and costs produce “mixed” results and therefore constitute a lack of evidence. As noted above, the findings may be “mixed” or inconsistent because of different operational definitions for high risk, different health risk assessment instruments used by employers, varying time horizons, and different sets of covariates used in regression models. For example, [one study authored by Paul Terry and co-investigators](#) is cited as having counterintuitive results related to the risk-cost for obesity. The table in the appendix shows that this one study found obese people to have lower health care costs than those non-obese. I went back and re-read that study and present the following concerns. First, obesity was operationally defined having a BMI greater than 25 for younger adults, and greater than 27 for older adults. That is an indicator for “overweight,” not “obesity.” Indeed, we, and others,

have found that excess costs are not common in overweight employees but they are for obese individuals whose BMI is 30 and over. Further, in the Terry et al. paper the time horizon for examining claims data and inpatient admissions was only one year following completion of the health assessment survey, whereas our studies employ a three-year observation period. Finally, although the Terry et al. analysis controlled for age, gender, and health status, it did not control for any other risk factors such as smoking, high blood pressure, high cholesterol, or high blood glucose that were controlled in the HERO and related studies. Finally, weight was self-reported and not professionally measured. Far from being definitive, Terry et al. state that their results for obesity were inconclusive since charges for younger patients were slightly lower while inpatient admission rates were higher. For seniors, charges were significantly higher for obese individuals (even as defined by this study). So, the claim that obesity is related to lower costs is not credible. Reading the study, which is now about 15 years old, I was actually struck by the similarities of results and interpretations to those of our analyses, not the differences. In a personal communication with Paul Terry, he acknowledged that at the time he was arguing against indiscriminate financial penalties imposed on people at high risk, a point with which I agree. He also noted that more recent studies by his colleagues show that changes in the risk profile of workers leads to changes in costs incurred, in the hypothesized direction. We have examined changes in health risks, specifically obesity, and how these influence costs in studies published since the Terry et al. publication in 1998. We have shown that [changing one's obesity status](#) – i.e., moving from non-obese to obese and vice versa – affects disease outcomes and health care spending in the predicted direction. These studies followed [employees of Johnson & Johnson over 4 years](#) and [Vanderbilt University employees over 8 years](#). The bottom line is that most informed health care researchers and practitioners will agree that people who smoke, are obese, have high blood pressure, high blood sugar, high cholesterol, are sedentary, and have a poor diet are more likely to be at risk for cancers, cardiovascular disease, and diabetes – all of which inflict a high cost on individuals, the organizations where people work, and larger society.

Stress As A Risk Factor Another point made by Horwitz et al. is that one of the risk factors addressed in risk-cost studies, i.e., stress, is not an issue dealt with in workplace wellness programs. I disagree. Psychosocial risk factors that include stress and depression are almost always addressed by best practice health promotion programs. These programs often coordinate their efforts with employee assistance programs (EAPs) to screen, triage, and treat workers suffering from mental health or stress-related problems. In addition, the current emphasis of workplace programs is to address the health and well-being of the organization, not only its workers. Most experts in the field of worksite health promotion acknowledge that health promotion programs are unlikely to succeed if they simply rely upon individuals to change behaviors in a vacuum. As noted above, effective programs are those that create a “culture of health” where leadership establishes norms encouraging healthy behaviors. This means highlighting and subsidizing healthy foods in cafeterias and vending machines; providing workers opportunities to be physically active – for example access to fitness programs, bike racks, or shower facilities; enforcing strict “no smoking” policies; and allowing for flexible work schedules so that workers can feel in greater control of their work and family lives. In short, stress is an important risk factor addressed by comprehensive workplace programs, both at the individual and organizational levels. In fact, the National Institute of Occupational Safety and Health (NIOSH) has made the connection between workplace health promotion and health protection as one of its central themes for a [Total Worker Health initiative](#).

Do Financial Incentives Change Behavior And Improve Health? Horwitz et al. pose important questions regarding the ability of financial incentives to influence behavior change. I agree that the science in this area is “young” in terms of the shape, size, and type of incentive that achieves the best long-term impact. My colleagues, Kevin Volpp and Eric Finkelstein have done some of the best research in this area and they are the first to admit that more research is needed to nail down best practices. There are several problems with studies that have explored the issue of financial incentives. Much of that research is done with [relatively small sample sizes](#) (as few as 47 subjects) where, because of attrition, they do not have enough power to detect reasonable health improvements in smoking rates, or

weight loss, to be deemed statistically significant. Also, the dollar amounts used for incentives in many cases are very modest (some under \$100) and perhaps not sufficient to convince people to change their behaviors. However, there is growing evidence that financial incentives are powerful tools for facilitating health behavior change over the long run. I offer one [experiment by Volpp et al.](#) conducted with employees at General Electric focused on smoking cessation. The researchers randomly assigned 878 employees into two groups: those who just received information about smoking-cessation programs and those who received information plus financial incentives. The financial incentives were \$100 for completion of a smoking-cessation program, \$250 for cessation of smoking within 6 months after study enrollment, as confirmed by a biochemical test, and \$400 for abstinence for an additional 6 months after the initial cessation, again as confirmed by a biochemical test. The researchers found that the incentive group achieved a significantly higher rate of smoking cessation (three-fold difference) when compared to the information-only group at 9 or 12 months after enrollment and 15 or 18 months after enrollment. Granted, most smokers did not quit smoking, and similar studies involving weight loss are not as conclusive as the Volpp et al. research. However, there is research underway to determine the incentive structure(s) that achieve the best results. In fact, certain incentives, like lotteries, may work better than others that rely upon fixed payments. Other effective incentive structures are those that offer immediate rewards vs. the promise a future benefit, tier-based systems resembling airline frequent flier loyalty programs, social support structures that leverage competition among groups, and those where individuals are motivated to behave in certain ways to avoid financial losses rather than achieve financial gains. Long term, establishing a lasting behavior change relies upon internalizing incentives – that is, finding reasons within oneself to change a health habit. What motivates many people to stop or change a behavior like smoking, overeating, or heavy drinking is being confronted by a jarring life event (e.g., being hospitalized for a health problem or seeing a loved one die because of an indulgence). However, some people simply change behaviors or habits because they see a financial reward for doing so. Think about the millions of people who buy lottery tickets, drive many miles to purchase cheaper gas, wear seat belts because they don't want to be ticketed, or participate in "biggest loser" competitions to win a cash prize. People do these things for the money – and if they can benefit in other ways, all the better. Ideally, we would like individuals to change their poor health habits because they want to improve their well-being and live long, productive, and meaningful lives – to experience old age with energy and full physical and mental capacity. Some people come to that realization, but not all people. Short term, many of us eat the creamy chocolate cake dessert sitting in front of us, light up another cigarette, sit on a comfortable easy chair watching television for too many hours, sleep too little, or drink excessive amounts of alcohol. Offering financial incentives to do something different – like take a walk around the block, stop smoking, or eat a healthy salad – may be a way to get people to develop healthier habits, which may become part of their daily routine and be internally rewarding.

Ethics Of Incentive Programs Underlying this discussion are important ethical and moral issues. Is providing financial incentives for behavior change a good or bad thing? I remember a similar discussion regarding tobacco taxation. The argument against raising taxes on cigarettes was that poor people would be the most severely impacted since they smoke the most and they can least afford to pay the extra amount for a pack of cigarettes once taxes are raised. This misses the entire point that smoking is harmful to people and introducing barriers to smoking, in the form of higher taxes, will convince more people to quit smoking – which is a good thing. [When taxes are raised on cigarettes, smoking rates go down](#), especially for poorer people who can least afford the increase. The same can be said about other health issues – like eating unhealthy foods, not being physically active, or avoiding recommended preventive screenings that detect hypertension, hypercholesterolemia, or pre-diabetes. Financial incentives work to prompt positive health behaviors. As [noted by Halpern et al.](#), they steer people toward making rational choices – those that improve their health – but they don't eliminate the option of making a poor choice – it just costs more to do so. In the case of smoking, financial incentives (or penalties for smoking) worked to reduce smoking rates and societal costs associated with smoking-related illnesses.

Done properly, incentives can drive other population health improvements. **Should We Even Bother To Do Prevention?** I am most troubled by Horwitz et al.'s argument challenging worksite programs or prevention programs in general. The authors try to make the point that health improvement programs do not necessarily improve health outcomes. This seems like a radical idea to me. The authors cite a study where intensive treatments to control risk factors such as high blood glucose did not affect health outcomes – which, the authors claim, were equated with mortality rates. It's true that we all die eventually – death is not preventable. The question is whether, through health promotion and disease prevention programs, we can improve people's overall quality of life and shorten the period of illness or disability prior to death. Jim Fries introduced the concept of compression of morbidity in the early 1980s demonstrating then, and in many [studies that have followed](#), that people who lead healthy lives (e.g., being physically active, not smoking, and in general having lower health risk) compress the period of disability before death – in other words, they lead a better quality life. More importantly, employers who have the most to lose or gain from workplace health promotion programs are less concerned about mortality than they are about morbidity – whether their workers become ill and are unable to perform their jobs. Employers institute workplace programs not to prevent deaths – but rather to keep people healthy and productive while alive. Horwitz et al. cite a program that provided intensive care for diabetes which had no effect on health outcomes, again, defined as mortality rates. This example runs counter to the highly significant [results from the Diabetes Prevention Program \(DPP\)](#), which found that getting people to eat a healthy diet, be physically active, engage in social support groups, and lose weight led to significant reductions in the likelihood of diabetes incidence. In fact, lifestyle modification was twice as effective as giving patients medicine. **Recommendations** I began this post by stating that financial incentives that reward participation in workplace health promotion programs, and efforts at achieving positive health outcomes, can be designed in ways that are legal, ethical, and practical. Here are some recommendations for making that happen. I support the use of tiered incentives that reward participation in programs (e.g., engaging in counseling aimed at teaching individuals how to quit smoking), attempts at behavior change (e.g., completing a smoking cessation program), actual behavior change (e.g., not smoking one week after completing the program), and achievement of health goals (e.g., remaining “quit” after six months). A tiered incentive approach is important to sustaining behavior change over the long-term, especially in the areas of physical activity, nutrition, and smoking cessation. Incentives should be structured in creative ways. Certainly, incentives can be built into the benefit plan design and linked to reductions in premiums, deductibles, and coinsurance payments. But, they can also be offered as “points” (like “frequent flier” miles) useful as currency for products or services of value to workers. They can come in the form of reimbursement for community-based programs focused on the behaviors of interest (e.g., full or partial payment for physical activity classes offered at the local Y, payment for completing a certified smoking cessation program, or financial support for joining a weight management program like Weight Watchers). I also would like to see the establishment of oversight committees – established regionally or nationally (similar to university based Institutional Review Boards or IRBs) that function as an independent appraisal of incentive-based programs. These would be comprised of experts and practitioners in the fields of worksite health promotion, incentive design, ethics, and health law. I believe that incentives should be “reasonable”: not too high to invite fraud and abuse and not too low to be irrelevant or unnoticed by workers. Incentives valued at about \$500 - \$750 a year (inflation adjusted) are probably adequate to get people's attention and induce them to try out new behaviors. Very large incentives or penalties run counter to the notion of voluntary participation in health promotion programs. Finally, it is important to evaluate whether any incentive program succeeds in achieving its stated goal: improving the health and well-being of workers. The success of these programs should hinge on their ability to improve key organizational and individual-level outcome measures. **In Summary** Employers share the goal of improving the health and well-being of workers, so that individuals can enjoy long and productive lives, avoid disability, be less prone to accidents, and perform at high levels. Employees benefit, and so do their organizations, because when disease and

disability is avoided, life is good and money is saved. In contrast, health care providers, hospitals, medical device manufacturers, pharmaceutical companies, insurance companies and, yes, lawyers, benefit when the opposite happens – people are sick. Sick people use more services, require more care, and sue more often. Rather than succumb to the notion that health care costs will continue to rise no matter what, many employers are now offering their workers attractive, effective, and evidence-based workplace health promotion programs designed to improve health and well-being. The evidence shows that properly designed programs aid employees in efforts to quit smoking, lose weight, become physically active, eat healthier, lower blood pressure, manage stress, and manage blood glucose. Smart and fair incentive programs need to be included in the tool kit of interventions available to organizations. As this essay illustrates, the use of incentives is only one tool available. It is not a substitute for a comprehensive and effective program. More experimentation is needed to determine how incentives should be embedded within workplace wellness programs – and how they should *not* be implemented, given the many concerns voiced about their potential for misuse. Let's make sure incentive programs work in a way that is legal, ethical, and practical. As a society, we all stand to gain from effective and fair programs that result in health improvements and cost savings.

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