

Many low-income Americans with diabetes don't take the cholesterol-reducing statins prescribed to protect their long-term health, even when expense should not be a concern. Applying behavioral insights, we can cost-effectively promote statin use and help people better manage their disease.

Summary

Chronic diseases such as diabetes and hypertension account for more than two-thirds of health care spending in the U.S. People with these conditions often go on to have strokes and other forms of cardiovascular disease. Their quality of life is compromised, and they face a higher risk of premature death. Moreover, the treatments they require cost hundreds of billions of dollars annually – more than for any other category of disease. Bearing even a portion of that expense is especially difficult for people with low incomes, many of whom rely on support from Medicaid, the joint federal-state program that helps about one-fifth of Americans pay for long-term medical treatment and care.

These are daunting enough challenges for both patients and health care providers. They're exacerbated by the fact that chronic diseases are often not managed as effectively as they could be. While the growing incidence of diabetes has gained national attention, a high percentage of cases remain undiagnosed. And even people who seek medical help often don't follow the treatments prescribed by their doctors.

There are many steps people can take to reduce their risk of developing diabetes, including regular exercise and adjustments to diet. For those already diagnosed as diabetics, an additional, cost-effective way to protect against cardiovascular disease is to use statins – a class of drugs designed to help lower cholesterol levels in the blood, which in turn reduces the risk of heart attack and stroke. But even though statins are demonstrably beneficial, many patients have trouble adhering to this simple treatment regimen.

At first glance, cost could be a deterrent. Diabetes affects many low-income Americans who may feel they can't stretch their budgets to cover prescription drugs, or who aren't convinced that the promised benefits are worth the expense. But the fact is statins are comparatively affordable. For most people with private insurance coverage, the co-payments for these drugs are modest. And low-income earners who qualify for Medicaid can count on the government insurance program to cover their costs.

So why don't people take the statins they've been prescribed? And more importantly, what might encourage them to embrace such an easy path to healthier and longer lives? This was the question that ideas42 researchers set out to address, in partnership with the Medicaid Leadership Institute and SoonerCare, the Medicaid program administered by the Oklahoma Health Care Authority.

Highlights

- ▶ Chronic diseases account for more than two-thirds of health care spending in U.S.
- ▶ To manage those diseases, people with low incomes often rely on Medicaid
- ▶ Statins are a cost-effective way for diabetics to protect themselves against cardiovascular disease
- ▶ Statins are affordable, but many don't adhere to the treatment

The value of a nudge

Although there is some evidence that financial incentives can motivate people to manage their health better, not all experimental studies have yielded conclusive results. Moreover, implementing such incentives can be extremely expensive. Our team therefore began exploring non-financial approaches to promoting disease management, specifically by leveraging the insights of behavioral science through the use of “nudges.”

Behavioral nudges are designed to encourage particular choices without restricting the options that people have before them – or changing the behaviors of those who are already making good choices. Nudges can take many forms, from the simplification of decision-making steps to clear explanations of potential consequences. They’ve been used successfully to promote everything from organ donation to retirement planning to energy conservation. In the realm of health care, many behavioral interventions have focused on drug adherence: nudges can comprise in-depth information regarding patients’ conditions, as well as simpler dosing regimens, personalized reminders and techniques for self-monitoring symptoms.

Drawing on this body of research, we launched a pilot study to test the effectiveness of behavioral nudges versus financial incentives in improving prescription adherence among diabetics. The intervention was aimed at adult SoonerCare enrollees diagnosed with Type II diabetes whose records showed no paid claims for statin prescriptions in the previous year. By targeting people who had underused a treatment with proven efficacy – statins have been shown to reduce the rate of coronary events and strokes by at least 25% – we hoped to test approaches that could, when fully developed, have a significant positive impact on patient outcomes.

Highlights

- ▶ Financial incentives are often cost-prohibitive to implement
- ▶ A less costly and more effective way to help change behavior is by creating and using “nudges”
- ▶ In this case, targeting people who hadn’t taken statins with nudges aims to significantly impact patient outcomes of coronary disease and strokes

Designing the experiment

For this controlled trial, we randomly divided our sample population of 2,324 diabetics into four groups and sent each a different type of letter from the Oklahoma Health Care Authority:

- *The control group* was simply asked to make appointments with their health care providers to have their cholesterol checked and discuss the use of statins.
- *The financial incentive group* received \$5 gift cards they were invited to activate after seeing a physician.
- *The behavioral nudge group* received letters that included explanations of the health risks they were facing, as well as magnetic notepads with personalized reminders – including their doctors’ phone numbers – to make checkup appointments.
- *The behavioral nudge + financial incentive group* received letters combining both approaches.

To track and compare the responses of the different groups, we analyzed Medicaid claims data for each patient over the next year, noting payments for physician visits, blood tests and filled prescriptions.

Evaluating the results

To gauge the relative success of our various communications strategies, the ideas42 team tracked several outcomes at regular intervals over 12 months. For one crucial outcome, *filling a statin prescription*, the behavioral nudge group was significantly higher than the control group. After 60 days, nudge recipients were 7% more likely to have obtained prescriptions, compared to 4% of those who received a simple recommendation to see a doctor about their cholesterol levels. While the absolute numbers were not large, what the data revealed was how effective an inexpensive nudge can be – in this case yielding a 75% increase in impact. Gift card recipients, by contrast, did not show the same behavior, which suggests that financial incentives, in some situations, may not be as effective on their own as other behavioral techniques.

By the end of our one-year analysis period, the control group had caught up with the nudge recipients (not surprising in a population of diabetics, who are likely to have medical checkups over an extended period). There was no longer a significant difference in the number of prescriptions filled, whether as the result of physician visits or renewals of existing prescriptions. So it seems that the value of the nudge is actually in prompting recipients to act more quickly – which should have a positive effect on long-term health outcomes, particularly when extended across a population of millions.

Highlights

- ▶ Nudging patients to fill a statin prescription rather than just see their doctor yielded an initial 75% increase in impact
- ▶ Over a year, the control group caught up with test group, so now the focus is on timely nudges to prompt patients to act quicker, improving long-term health outcomes

Leveraging what we learned

The Oklahoma pilot yielded two key lessons. First, a well-designed behavioral nudge will evidently motivate people to move faster in managing chronic diseases such as diabetes. What's more, this low-cost strategy appears to be more effective than a material incentive – a gift card offer that would represent a major expense in any large-scale initiative.

These findings sparked immediate interest among health care policy-makers, which in turn has led to further collaborations among physician researchers testing combinations of behavioral incentives. With this groundwork in place, we look forward to seeing our research leveraged in broader efforts to improve the use of medications by patients whose chronic diseases unnecessarily contribute to both the erosion of public health and the rising costs of care.