

New Study Indicates Decreasing Prescription Copayments Results in Increased Adherence for Patients with Chronic Diseases

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Study published in Health Affairs highlights large employer's efforts to develop a healthier workforce by removing barriers to treatment

PHILADELPHIA, Jan. 8 /PRNewswire-FirstCall/ -- Removing economic barriers to treatment for chronic conditions encourages patients to remain on recommended therapies according to a new study published today in the January/February 2008 issue of Health Affairs. The study, funded, in part, by GlaxoSmithKline (NYSE: [GSK](#) - [News](#)), investigated the impact on medication adherence of reducing prescription copayments -- in addition to existing disease management programs -- for employees of a leading service industry company.

Although a lack of medication adherence can be attributed to several factors,(1,2) the effects of high prescription drug copayments have been studied extensively since they have often been used by employers and insurers to control drug expenditures(3). Increasing copayments has been shown to decrease use of medications for chronic conditions.(4-6) But few studies have assessed the impact of decreasing copayments for important prescription medications.

The Impact of Decreasing Copayments on Medication Adherence in the Context of a Disease Management Program was a 12-month study in which the company, a global service provider, decreased copayments for the following medicines used to treat common chronic diseases:

- Heart Disease: angiotensin converting enzyme (ACE) inhibitors, angiotensin receptor blockers (ARBs), and beta-blockers
- Diabetes: medications including oral therapies and insulin
- High Cholesterol: statins
- Asthma: inhaled corticosteroids

Copayment rates for generic medications were reduced from \$5 to \$0; copayments for branded drugs were cut in half. A similar employer with identical disease management offerings and similar but stable copayments served as a control group.

The study was coauthored by Michael E. Chernew, PhD (Harvard University); A. Mark Fendrick, MD and Allison B. Rosen, MD, ScD (University of Michigan); Mayur Shah, MA, Arnold Wegh, MS, Stephen Rosenberg, MD, MPH, and Iver A. Juster, MD (Active Health Management); and Michael C. Sokol, MD, MS and Kristina Yu-Isenberg, PhD, RPh (GSK). Doctors Fendrick, Rosen, and Chernew are members of the University of Michigan Center for Value-Based Insurance Design.

Key Findings

The study investigated the impact of lowering copayments both on the rates of adherence and non-adherence for selected chronic medications. Both adherence and non-adherence were determined based upon the ratio of eligible days each patient was in possession of his or her medicine.

Several key findings resulted:

- There was a statistically significant improvement in adherence for heart disease, diabetes, and high cholesterol.
- The results were achieved in addition to the effects of existing disease management programs.
- Value based insurance design programs can effectively increase adherence to important medications and complement existing disease management programs.

There was a small positive result for inhaled corticosteroids for the treatment of asthma, which was not, however, statistically significant. The authors note that this finding reflects the difficulty of measuring adherence for this class of drugs -- there are multiple doses in a single inhaler as opposed to the other medication classes, which more readily allowed individual doses to be counted.

The current study complements the results of an earlier study from GSK's Health Management Innovations team, which indicated that increasing prescription copayments results in decreased medication adherence. These studies, taken together with the literature on medication adherence, suggest that value based benefits can lead to better adherence which may lead to better outcomes for both patients and employers.

"We saw in the earlier study the detrimental effect of increasing copayments on patient medication adherence. Now with this study, we are able to show that removing economic barriers to medication can positively affect patient behavior," said Michael C. Sokol, MD, MS, medical director for GSK's Health Management Innovations team.

Good Health is Good Business

More often than not, today's greatest healthcare problems are chronic conditions which require ongoing, patient-centered management. In fact, \$3 of every \$4 spent on healthcare in the US⁽⁷⁾ goes to treating the 45% of Americans with at least one chronic disease.⁽⁸⁾ As well, according to the Milken Institute, the seven most common chronic diseases cost the US economy \$1 trillion each year -- including both direct and indirect costs. That figure is expected to reach \$6 trillion each year by the middle of the century if unchecked.⁽⁹⁾

Poor adherence to a medication regimen is a serious problem, especially for those with chronic diseases, contributing to substantial worsening of disease, complications, death, and increased healthcare costs.⁽¹⁰⁾ While employers have often implemented strategies of shifting costs onto the patient, this is only a short-term economic fix. To lower overall

healthcare costs and improve the health of patients, the focus must be on the real problem -- chronic diseases.

"We must encourage patients to take medications as prescribed for these chronic conditions, and encourage employers to support the health management efforts of their workers," said Dr. Mark Fendrick. "As a nation, we must look at the healthcare continuum, focusing on prevention to keep people healthier, giving patients the right treatments to maintain their health, and continuing the search for new cures."

GSK's Health Management Innovations team is also analyzing the results of several other studies investigating potential factors affecting patient compliance, including assessing the impact of:

- copayment level on specific outcomes such as Hba1c levels for diabetic patients
- income on initial copayment levels and increases in copayment levels
- implementing a consumer-directed health plan
- implementing a pay-for-performance initiative

Formal results of these studies will be announced as they are published.

To hear more about this study, visit

www.med.umich.edu/opm/newspage/2008/drugcopay.aspx.

About GlaxoSmithKline

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