

Metformin Prescription for Insured Adults With Prediabetes From 2010 to 2012: A Retrospective Cohort Study

Diabetes prevention is an important national health goal. As one in three adults in the United States currently have prediabetes, there is a growing urgency to implement effective preventative action. In 2002, the Diabetes Prevention Program (DPP) Study demonstrated that either intensive lifestyle interventions or the use of the medication metformin could significantly lower the risk of progression (58% and 31%, respectively) to type 2 diabetes among persons at high risk (i.e., those with prediabetes). Metformin is an evidence-based therapy for diabetes prevention that has been included in American Diabetes Association (ADA) national care guidelines since 2008. Specifically, the ADA state that “metformin therapy for prevention of type 2 diabetes may be considered for those with impaired glucose tolerance, impaired fasting glucose, or an A1c 5.7-6.4%, especially for those with BMI > 35 kg/m², aged <60 years, and women with prior gestational diabetes mellitus (GDM).” However, metformin use is contraindicated with kidney or liver disease and it is not FDA approved for prediabetes.

Over the past decade, lifestyle interventions, which are the most effective means of decreasing progression to diabetes have been translated across various settings, with varying levels of uptake and reach and continued work to maximize wide scale

implementation of the lifestyle intervention is critical. In contrast, little is known about the use of metformin for diabetes prevention in real world practice settings.

This evaluation of a large national sample of insured, working-age adults with prediabetes is one of the first reports to describe metformin use for diabetes prevention. This study evaluated metformin prescription rates among 17,352 patients who were employees of 183 different companies from varying industries across the country. Between 2010 and 2012, only 3.7% of these patients with prediabetes were prescribed metformin over the 3-year study window. Women, obese individuals (BMI>30), and those with 2 or more comorbidities were more likely to be prescribed metformin.

The reasons for low metformin use are not entirely clear and future studies are needed to examine factors that may contribute to underuse. The FDA has not approved Metformin for prevention. Metformin is a low-cost generic medication, making it readily accessible. Further studies are needed to understand the root causes of underuse.

Overall, the lack of meaningful translation of evidence supporting diabetes prevention is a growing concern. Both lifestyle interventions and metformin therapy can be effectively utilized. Since lifestyle interventions provide the largest relative diabetes risk reduction overall, they remain our first line.

[Read the entire article:](#) Tannaz Moin, Jinnan Li, O. Kenrik Duru, Susan L. Ettner, Norman Turk, Abigail Keckhafer, Sam Ho, Carol M. Mangione “Metformin Prescription for Insured Adults with Prediabetes from 2010-2012: A Retrospective Cohort Study” *Ann Intern Med.* 2015;162:542-548.

This document is intended to summarize the findings of a scientific publication and is written for policy-makers, including health plan directors, public health professionals, and public policy leaders.