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High lifetime costs for type 2 diabetes

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A person with type 2 diabetes may spend an average of nearly $85,500 to treat the disease and its complications over his or her lifetime, reports a new study in the *American Journal of Preventive Medicine*. The earlier diabetes is diagnosed, the greater the lifetime costs, with costs for women slightly higher than for men. Anything that can prevent or delay the onset of type 2 diabetes could lead to a sizeable reduction in healthcare costs in the future, say the researchers.

The goals of the study were to understand the financial return on preventing or delaying onset of type 2 diabetes and to get a sense of the long-term financial impact of new cases of diabetes and its complications, said Xiaohui Zhuo, Ph.D., of the Centers for Disease Control and Prevention in Atlanta and lead author. "This has become

increasingly important given the rapid increase of the number of the incident cases in the U.S. and worldwide," he said.

Researchers at the CDC and Research Triangle International in Research Triangle Park, NC, created a simulation model to examine the costs of treating type 2 diabetes and its complications in newly diagnosed people over a lifetime, instead of merely focusing on the economic burden of treating type 2 diabetes in a given year.

The model revealed that a man diagnosed with type 2 diabetes between the ages of 25 and 44 can be expected to incur related costs of $124,700 over his lifetime. A woman diagnosed at the same age may incur related costs of $130,800 over her lifetime. Lifetime costs go down the later in life the diagnosis is made.

Treating complications due to diabetes account for 53 percent of lifetime costs, with 57 percent of that due to complications caused by damage to large blood vessels, which can lead to coronary heart disease and stroke.

Direct medical costs include both the costs of treating diabetes, such as doctor visits, medication, and testing supplies, and for treating complications such as kidney disease, nerve damage, eye damage, heart disease, amputations, and stroke.

"This is a different approach to a calculation of the costs of diabetes," said Robert E. Ratner, M.D., chief scientific and medical officer at the American Diabetes Association. "A better way of doing it is to note that in 2012, in the U.S., we actually had $176 billion in direct medical costs treating people with diabetes," he said. "This is up 40 percent in five years."

Ratner noted that complications due to diabetes have been decreasing in

incidence and severity because of better control of blood sugar levels. "There has been a 50 percent reduction in the need for amputations and a 35 percent drop in kidney disease requiring dialysis or transplantation in the last 12 years," he said. But these gains—and their associated cost reductions—are swamped by the rising number of new cases of type 2 diabetes. "When you look at the annual costs, you can clearly see this is an untenable rate of growth."

More information: Zhuo X, Zhang P, Hoerger TJ. (2013), Lifetime direct medical costs of treating type 2 diabetes and diabetic complications, *American Journal of Preventive Medicine*.

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