

Preconception care for diabetic women could potentially save \$5.5 billion

November 24 2014

Pregnant women with diabetes are at an increased risk for many adverse birth outcomes. Preconception care (PCC) can significantly lower these risks by helping pregnant mothers with diabetes control their glucose levels, resulting in healthier babies and less money spent on complicated deliveries and lifelong medical complications. Effective, universal PCC for diabetic mothers could avert an estimated \$5.5 billion in health expenditures and lost employment productivity over affected children's lifetimes, according to a new study published in the latest issue of the *American Journal of Obstetrics & Gynecology*.

Diabetes in [pregnant women](#) has been linked to significant complications such as preterm deliveries, birth defects, and even perinatal deaths; however, access to PCC can mitigate the frequency of these outcomes by improving [glucose levels](#) before and during the early stages of pregnancy. As well as being detrimental to the health and wellbeing of both mother and child, these diabetes-related complications represent a sizeable cost to healthcare payers and society.

A team of health economists and researchers from the Centers for Disease Control and Prevention (CDC) investigated the savings that PCC could potentially generate by helping to avoid adverse birth outcomes. The study estimated that 2.2% of all U.S. births are to women with pre-existing diabetes, or pregestational diabetes mellitus (PGDM), some without a diabetes diagnosis before pregnancy. The study found that among pregnant women with diagnosed diabetes, effective PCC could avert \$4.3 billion in costs to healthcare payers and society over their

children's' lifetimes. Effective PCC among pregnant women with undiagnosed diabetes could potentially save an additional \$1.2 billion, totaling \$5.5 billion in averted costs.

"We estimated thousands of adverse birth outcomes might be prevented each year among U.S. women with PGDM through universal PCC at an estimated lifetime societal cost savings of up to \$5.5 billion, including nearly \$1 billion in direct medical costs," says lead investigator Cora Peterson, PhD, from the CDC's National Center for Injury Prevention and Control. "Our results suggest a substantial health and cost burden associated with PGDM that could be prevented by universal PCC, which might offset the cost of providing such care."

Along with avoiding unnecessary costs, universal PCC would also help avoid critical birth complications. The study estimates that PCC might avert 8,397 preterm deliveries, 3,725 birth defects, and 1,872 perinatal deaths annually.

"The preconception period is critical for preventing adverse birth outcomes in women with PGDM. By some estimates, nearly half of U.S. pregnancies, including pregnancies among women with PGDM, are unplanned," comments Dr. Peterson. "To prevent adverse [birth outcomes](#) among women with undiagnosed diabetes, diagnosis in the preconception period is needed; the first step would be screening women of reproductive age to identify those with [undiagnosed diabetes](#)."

While PCC can help diagnose and manage PGDM, there are costs to mothers associated with obtaining proper care and treatment. Access to affordable healthcare and insurance is a challenge for many women across the U.S. Investigators based their economic assessment on the idea that PCC would be widely available and utilized by women, although they were not able to include the cost of obtaining care nor the cost of PCC in their calculations. "Our estimates indicate the potential

economic benefit of PCC if it were to be fully utilized by eligible women," explains Dr. Peterson. "It is possible that lack of insurance coverage might disproportionately affect women with both unintended pregnancies and undiagnosed PGDM, creating a substantial cost barrier to PCC for such women."

While there are still many unanswered questions, this new study shines a light on the economic importance of identifying women with PGDM and why providing universal PCC may pay for itself going forward.

Commenting on this study, noted expert in the field Kim Boggess, MD, Professor, Division of Maternal Fetal Medicine at the UNC School of Medicine notes, "While PCC for women with PGDM can avert adverse outcomes and save money, what should the content of this care be and how do we provide it for all [women](#)? Who pays for it? Despite these limitations the results [of this study] suggest that the PCC-preventable health and cost burdens associated with PGDM are substantial. Thus innovated researcher is needed to assess the costs and practicality of delivering this care."

More information: "Preventable Health and Cost Burden of Adverse Birth Outcomes Associated with Diabetes in the United States," by Cora Peterson, PhD, Scott D. Grosse, PhD; Rui Li, PhD; Andrea Sharma, PhD; Hilda Razzaghi, PhD; William H. Herman, MD, MPH; Suzanne M. Gilboa, PhD (DOI: [dx.doi.org/10.1016/j.ajog.2014.09.009](https://doi.org/10.1016/j.ajog.2014.09.009)), *American Journal of Obstetrics & Gynecology*, published online in advance of Volume 212, Issue 1 (January 2015)

Provided by Elsevier

Citation: Preconception care for diabetic women could potentially save \$5.5 billion (2014, November 24) retrieved 25 April 2024 from

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