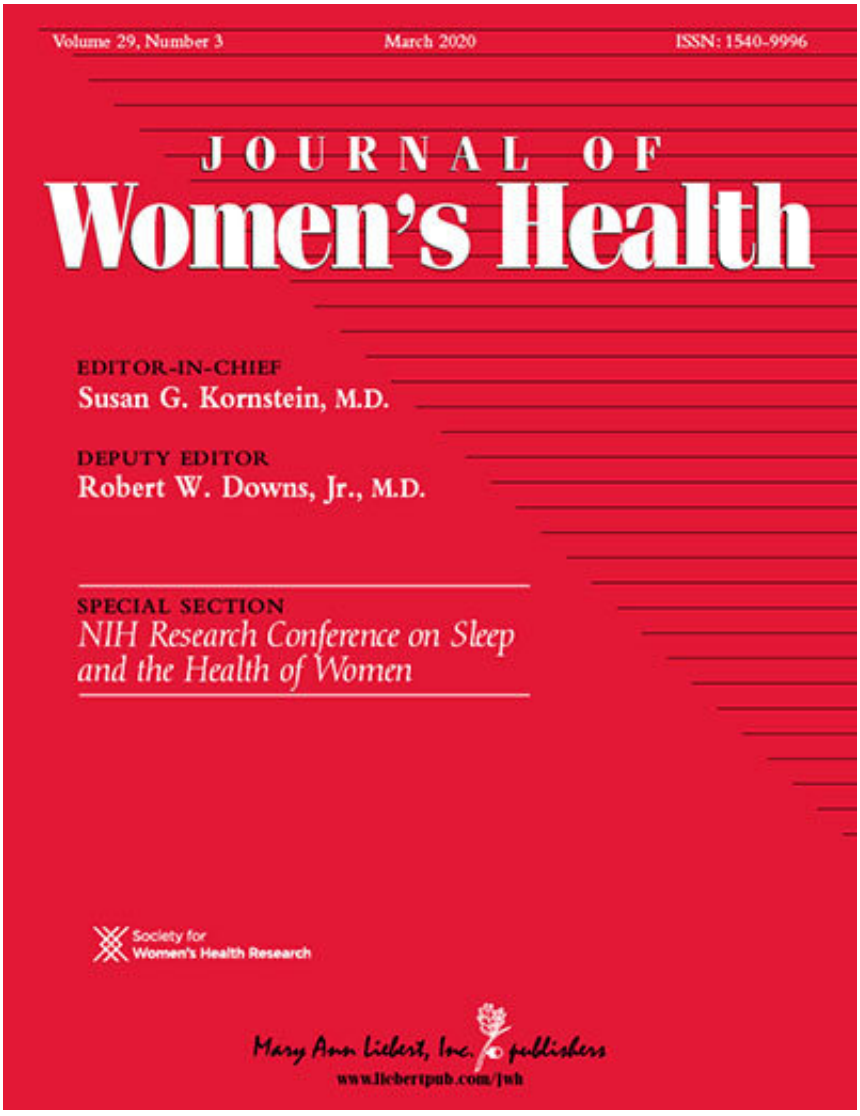
Does preterm delivery contribute to increased cardiovascular disease burden in women?

March 30 2020



Credit: Mary Ann Liebert, Inc., publishers

A new study quantifies the future economic burden of cardiovascular disease (CVD) in women with a history of preterm delivery (PTD). The study, which used a novel Markov microsimulation model to quantify CVD burden in terms of cost and years of life lost over a 50-year period, is published in *Journal of Women's Health*.

The article entitled "How Does Preterm Delivery Contribute to the Increased Burden of Cardiovascular Disease? Quantifying the Economic Impact of CVD in Women with a History of Preterm Delivery" was coauthored by Lan Gao, Ph.D., Shu-chuen Li, Ph.D., and Marj Moodie, DrPh, Deakin University (Geelong) and The University of Newcastle (Callaghan), Australia. While PTD is not traditionally recognized as a CVD risk factor, it places the mother at increased risk of developing CVD, including coronary heart disease and stroke, later in life, and women who have a PTD have about twice the risk of CVD mortality.

Based on an Australian healthcare system perspective, the study comprised two models—a dynamic model and a static model—which showed the total CVD cost burden to be 11.4 billion Australian dollars and 4.5 billion Australian dollars, respectively, over the 50-year study period. The years of life lost were 0.34 per capita and 0.52 per capita, respectively.

In an accompanying Editorial entitled "The Economic Burden of CVD in Women with a History of Preterm Delivery", Margo Minissian, Ph.D., Cedars-Sinai Medical Center (Los Angeles, CA) states: "Considering the substantial economic burden eloquently described by Gao *et al.*, future prevention strategies for women who experience PTD are imperative." In addition, "recognizing PTD as a potential CVD risk factor/enhancer is important."

Dr. Minissian highlights the novel microsimulation modeling technique used in this study, which allows for subsequent recurrent CVD events to

be captured over a lifetime. Most notable was the 19.8% 4-year recurrence rate of stroke.

More information: Lan Gao et al, How Does Preterm Delivery Contribute to the Increased Burden of Cardiovascular Disease? Quantifying the Economic Impact of Cardiovascular Disease in Women with a History of Preterm Delivery, *Journal of Women's Health* (2020). DOI: 10.1089/jwh.2019.7995