Medical Xpress

Online calculator estimates the impact of changes in breastfeeding rates on population health

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Dr. Alison Stuebe. Credit: University of North Carolina at Chapel Hill School of Medicine

In a new study published in Breastfeeding Medicine, researchers have created an online calculator to estimate the impact of changes in breastfeeding rates on population health.

"An Online Calculator to Estimate the Impact of Changes in Breastfeeding Rates on Population Health and Costs" appeared ahead of print today.

"Breastfeeding is good for mother and good for babies," said Dr. Alison Stuebe, associate professor of maternal-fetal medicine in the UNC Department of Obstetrics and Gynecology and Distinguished Scholar of Infant and Young Child Feeding at the UNC Gillings School of Global Public Health, lead author of the calculator paper. "We found that even modest changes would be expected to reduce ear infections, GI illnesses and child obesity."

Leveraging results from the research team's 2016 study on the costs of suboptimal breastfeeding, the calculator allows users to select a population and specify a future breastfeeding rate to generate a report on the expected impact on five maternal and nine child diseases.

The calculator currently uses CDC data released in 2012, when 80 percent of mothers initiated breastfeeding, and 29.2 percent continued through 12 months. The 2014 data, released earlier this month, found that 82.5 percent of mothers initiated, and 33.7 percent continued through 12 months.

Applying these data for the U.S. population, the calculator estimates rising breastfeeding rates prevented 57,581 ear infections, 159,385 episodes of gastroenteritis, and 7,538 cases of child obesity.

Users can model the entire U.S. population, or specify any of the 50 states or the District of Columbia.

"This calculator will be a game-changer for people making policy on maternal and child health and paid family leave," said Dr. Melissa Bartick, assistant professor of medicine at Cambridge Health Alliance and Harvard Medical School and lead author of the team's original cost study.

The calculator estimates the impact of differences in breastfeeding rates

in a modeled population of women followed from age 15 to age 70 and the children that they bear, based on current U.S. patterns of childbearing and very low-birth-weight births, as well as current rates of maternal and child diseases associated with breastfeeding.

"All models are models, and they rest on a set of assumptions," Stuebe said. "Our goal was to provide policy makers and advocates with an approximation of the return on investment for interventions that enable women to breastfeed."

More information: An Online Calculator to Estimate the Impact of Changes in Breastfeeding Rates on Population Health and Costs. *Breastfeeding Medicine*. September 2017, doi.org/10.1089/bfm.2017.0083

Melissa C. Bartick et al. Suboptimal breastfeeding in the United States: Maternal and pediatric health outcomes and costs, *Maternal & Child Nutrition* (2016). DOI: 10.1111/mcn.12366

Provided by University of North Carolina at Chapel Hill School of Medicine