Researchers from the University of South Carolina’s Arnold School of Public Health, the University of California at Davis, and the Bill and Melinda Gates Foundation have published a paper comparing methods used to estimate global burden of disease related to undernutrition and suboptimal breastfeeding. The project was led by Associate Professor Epidemiology and Biostatistics Alexander McLain and Health Promotion, Education, and Behavior Professor Edward Frongillo and published in Advances in Nutrition.

In this paper, the authors provide a detailed review of the methods used by the Global Burden of Disease study and other entities to estimate the global burden of disease that is attributable to undernutrition and suboptimal breastfeeding. The Global Burden of Disease study is an effort to estimate the disease burden that can be attributed to various risk factors.

Results from the Global Burden of Disease study are used around the world to monitor the Sustainable Development Goals established by the United Nations. It also helps inform health policies and research strategies.

“The Global Burden of Disease study, along with other studies such as those from the Maternal Child Epidemiology Estimation Group and the Lancet Breastfeeding Series Group, produce estimates of the nutrition-related global burden of disease that exhibit considerable differences,” Dr. McLain says. “These differences are difficult to reconcile due to the estimation methods, which in recent years have substantially increased in complexity.”

Another aim of this paper is to compare methods to determine causes for differences in estimates. The authors found that the main determinant of differences in estimates is what causes of death are linked to each risk factor. They suggest that methods used to estimate nutrition-related disease burden be more clearly documented to foster discussion and collaboration on the important assumptions required to produce estimates.