

Katherine P. Adams
Research Statement

As an applied microeconomist, my research interests are primarily in development economics with a specific focus on maternal and early childhood undernutrition in Africa. At the interface of economics and nutrition, my research aims to improve our understanding of human behavior as it relates to health and nutrition and to translate that understanding into informed guidance on policies that improve nutritional and other outcomes in developing countries.

My dissertation and postdoctoral research provide an economic analysis of a randomized controlled nutrition trial in Ghana. The trial was designed to test the efficacy of small-quantity lipid-based nutrient supplements (LNS) to prevent maternal and early childhood undernutrition. I was directly involved in the randomized trial from the planning stages onward and played a lead role in designing and pretesting questionnaires, planning for manpower requirements in the field, training enumerators in the field, cleaning data, developing statistical analysis plans, analyzing data, and writing up research results.

One central theme of this research is household valuation of LNS and how understanding household demand for LNS can shape strategies for its delivery at scale. I designed contingent valuation surveys to elicit hypothetical willingness-to-pay (hWTP) for LNS and found that while hWTP was, in general, positive, and respondents were willing to pay a price premium for LNS over a local substitute, neither personal experience using LNS nor contact with others consuming LNS had a systematic effect on hWTP. I also designed an experimental auction to characterize incentive-compatible experimental willingness-to-pay (eWTP) for LNS and to explore the effect of providing information on the potential long-term benefits of preventing maternal and early childhood undernutrition on eWTP. Although the literature has identified a lack of information as a potential barrier to adoption of preventative health and nutritional products, I found limited evidence of information constraints.

A second theme of my research is behavioral responses and spillover effects associated with targeted nutrition interventions. Within the context of the randomized trial, I studied how households responded to the targeted provision of LNS to mothers and babies and assessed intrahousehold spillover effects. This research, presented in my job market paper, found households responded to the intervention by increasing their labor supply to fund increased expenditures on food (including nutrient-dense foods like fish, milk, and vegetables). Even with higher household expenditures on nutrient-dense foods, using anthropometric data on the youngest, non-targeted child in the household, I did not find evidence that the intervention had a spillover effect on the nutritional status of these children with one exception of an improvement in linear growth among children with relatively taller mothers.

My ongoing research efforts related to the randomized trial include an analysis of how personal experiences over the course of the nutrition trial, including assigned treatment group, morbidity, and health and nutritional outcomes, shaped hWTP for LNS over time. I am also

analyzing heterogeneity in the effects of the intervention on child nutritional outcomes across a set of socioeconomic variables including an indicator of food security, household wealth, and education. Finally, we are in the planning stages of an extension of the trial to include long-term follow-ups to assess the effects of early childhood supplementation on growth, health, cognitive development, human capital, and socioeconomic outcomes throughout the life cycle.

I have also recently undertaken several other research activities related to health and nutrition in developing country settings. The first is an ongoing effort to develop new, least-cost formulations of ready-to-use therapeutic foods (RUTF) that make use of ingredients that are available locally in developing countries. Through joint work with nutritionists and food scientists, we developed country-specific linear-programming tools for Ethiopia, Ghana, India, and Pakistan to identify RUTF formulations that minimize ingredient costs while meeting nutritional and product quality constraints. Research from the test case of Ethiopia is forthcoming in the *American Journal of Clinical Nutrition*. This project is also in the planning stage of a phase II extension that will involve randomized trials to test new formulations.

I have also collaborated with nutritionists to identify national 'dietary gaps' in terms of a country's food supply relative to a recommended diet for the resident population. Planned extensions of this project include using a detailed, disaggregate agricultural sector model to predict how, and at what costs, policy efforts to influence supply and demand of foods could help nudge food supply and consumption closer to the recommended diet.

My research agenda reflects specific interests in both demand- and supply-side factors that shape health and nutritional outcomes in developing countries. And while I am passionate about using economic tools to understand and address undernutrition, the experiences I've gained through my recent research on the subject, from conception through distilling research results for economists and other audiences, are an example of applied interdisciplinary research aimed at understanding the interplay between key biophysical processes and human behavior, which has broad applications to many topics in economic development. I look forward to applying my solid foundation as a development economist to building a successful research career that has real impacts on well-being in developing countries.