



Boston University
School of Medicine

John T. Cook, Ph.D.
Associate Professor of Pediatrics
Boston University School of Medicine
Boston Medical Center

Vose Hall, Rm 316
88 East Newton Street
Boston, MA 02118
Telephone: 617.414.5129
Fax: 617.414.3679
John.Cook@bmc.org

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I am John Cook, Associate Professor of Pediatrics in Boston University's School of Medicine. I represent pediatricians, public health researchers and public health workers associated with the Children's Sentinel Nutrition Assessment Program (C-SNAP), a multi-site clinical research and policy center with sites in Boston, Philadelphia, Baltimore, Little Rock and Minneapolis. C-SNAP's peer-reviewed research articles and policy reports can be found on its website at <http://www.c-snap.org>. I am here today to tell you a little bit about the science that provides a rationale for supporting the programs included in the Child Nutrition Program reauthorization and why C-SNAP feels compelled to speak up for increased funding and improvements in these programs.

Over ten years C-SNAP has collected data on nearly 30,000 children under age 3 years through face-to-face interviews of their adult caregivers in emergency departments and clinics. Using those data C-SNAP has examined associations between food insecurity and child health outcomes, and how receiving food assistance influences those associations. We found that, after controlling for confounding factors, compared to young children from food secure families, **young food insecure children are:**

- **90% more likely to be in fair or poor health and**
- **31% more likely to be hospitalized.**

C-SNAP also found a dose-response relationship between health status and severity of food insecurity, meaning that **the odds of a child being in fair or poor health increase as food insecurity becomes more severe**. C-SNAP also found that receiving food assistance, like WIC or food stamps, attenuated the effects of food insecurity, but did not eliminate it. In another study

we found that the presence of **child food insecurity (the most severe form of food insecurity), in addition to household food insecurity, raised young children's risk of being in poor health (from 51% more likely to twice as likely)**. Again, receipt of food assistance modified the effect of food insecurity on a child's risk of being in poor health by reducing, but not eliminating the risk. These results point to two issues: 1) people who are food insecure seek help so there are more food insecure people using food assistance programs, but 2) the 'dose' of assistance is not enough to eliminate food insecurity. This second point has been explored in some of our other research. (See 'Food Stamps as Medicine: A New Perspective on Children's Health' and 'The Real Cost of a Healthy Diet')

Iron deficiency, and iron deficiency anemia (IDA), are the most prevalent nutritional deficiencies in the U.S. and worldwide. Iron deficiency in early life has been linked to concurrent and persistent deficits in cognition, attention, and behavior even after treatment. Several recent studies have reported a prevalence of IDA in children up to 18% in some high-risk subpopulations in the U.S. One study found that joint or separate participation in the WIC and Food Stamp Program (FSP) reduced the risk of iron deficiency. The link between these child nutrition programs and iron deficiency confirms a recent C-SNAP study that examined associations between child food insecurity (CFI) and IDA in children ages 6-36 months. We found that **young food insecure children were 140% more likely to have IDA than young food secure children**. This finding is troubling since it is: a) directly related to diet, and b) has implications for school readiness and therefore long-term academic achievement.

In a study examining associations between participation in WIC and indicators of underweight, overweight, length, child's health status, and food security in children ages ≤ 12 months, C-SNAP found that compared with WIC recipients, **infants who did not receive WIC benefits because of access problems were more likely to be:**

- **underweight,**
- **short, and**
- **in fair/poor health.**

C-SNAP's research over a period of ten years has consistently shown that receipt of benefits from federal food assistance programs, especially WIC and the Food Stamp Program, moderates and reduces adverse impacts of food insecurity on the health of young vulnerable children, but

does not eliminate them. Our best judgment, based on our work and that of other researchers, is that the **federal food assistance programs work very well to protect vulnerable young children's health when they are adequately funded, but they seldom are.** We liken this situation to prescribing an inadequate dose of medicine for a child with a serious illness. WIC, the Child and Adult Care Food Program, and the other programs under consideration here today are the right medicine, but the dose is currently never enough, or the prescription for long enough, to cure the illness.

We will include specific recommendations in our written testimony, but we mainly want to say here today that food insecurity is a health problem for millions of children in the US, and it is damaging their potential to succeed and become healthy, productive adults. It is as though we are intentionally handicapping the next generation of scholars, physicians, scientists and leaders simply because we lack the courage and commitment not to. Thank you very much for listening.