

SERIES – HUNGER: A NEW VITAL SIGN

Food Security Protects Minnesota Children's Health

At every healthcare visit, a child's vital signs are recorded to quickly gauge how his/her body is functioning. Just as measuring body temperature, heart rate, and blood pressure can help reveal how sick or hurt a child is, finding out through two simple questions* if the patient's family has trouble affording enough food every month can help clinicians provide better care and reduce children's risk of poor nutrition, developmental delays, or hospitalization.

Close monitoring of health during the first three years of life is important because these years are a critical time of brain and body growth for a child and form the foundation for future health and academic and social ability. Unfortunately, families with young children are also those at highest risk of **food insecurity**: lack of access to sufficient food to lead active, healthy lives. One in five U.S. families with children under six years old are food insecure.¹ Children's HealthWatch research shows when young children experience food insecurity, they are at increased risk of poor health and developmental delays.² Further, food-insecure mothers are at increased risk for depression and stress which, in turn, impacts parenting—compounding the risk for children's development to be delayed.

In Minnesota, 228,324 families (10.6 percent) are food insecure.³ Between 2000 and 2012, visits to food pantries in the state increased by 166 percent, to over 3 million visits annually.⁴ In Hennepin County, 11.8 percent of the population, and 14.4 percent of families with children, are food insecure.⁵



"It's hard to be healthy when you're hungry"

Dr. Jon Pryor

CEO, Hennepin County

Medical Center

Summary of Findings

Compared to young children in food-secure Minnesota families, young children in food-insecure Minnesota families:

1. Are at greater risk of poor health
2. Have mothers who are more likely to be in poor health and to experience depressive symptoms
3. Are at greater risk of being overweight if not receiving SNAP

Recommended Public Policy Solutions

1. Continue to modernize and simplify Minnesota's SNAP application process
2. Support public policies that increase access to nutritious, healthy foods
3. Universally screen for food insecurity in healthcare settings and make appropriate referrals for timely intervention



www.childrenshealthwatch.org

Children's HealthWatch is a nonpartisan network of pediatricians, public health researchers, and policy and child health experts that conduct primary research to inform public policies that impact children's health.

*(1) "Within the past 12 months we worried whether our food would run out before we got money to buy more" and (2) "Within the past 12 months the food we bought just didn't last and we didn't have money to get more"

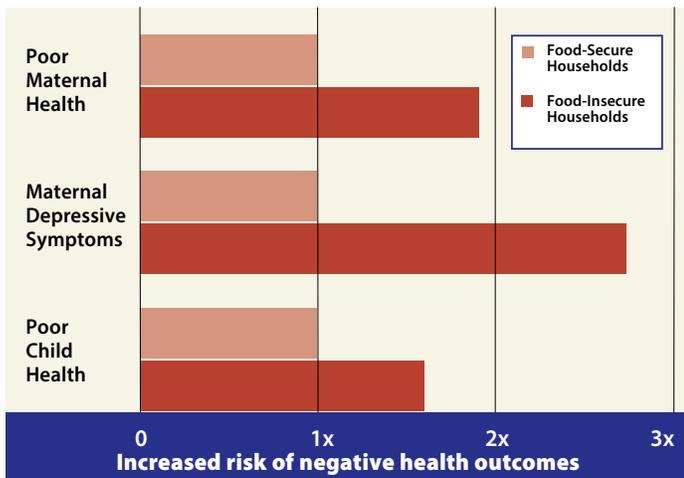


Figure 1: Food-insecure Minneapolis families experienced significantly higher risk of poor health outcomes.

Source: Children's HealthWatch Data, 2006-2012. All increases statistically significant at $p < 0.05$

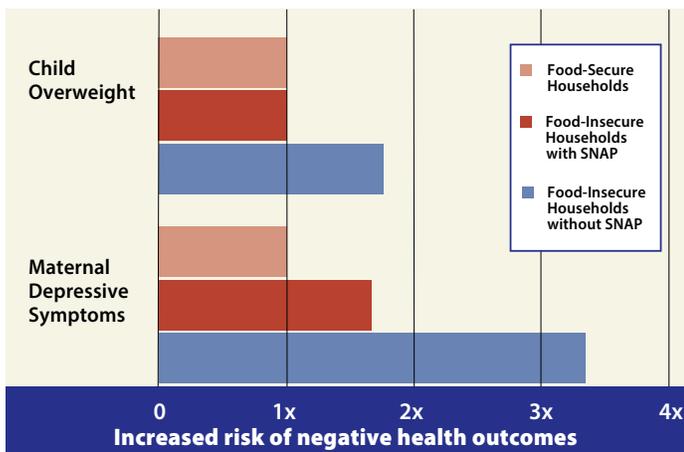


Figure 2: Food-insecure Minneapolis families not receiving SNAP experienced significantly higher odds of poor health outcomes, compared to food-insecure families receiving SNAP.

Source: Children's HealthWatch Data, 2006-2012. All increases statistically significant at $p < 0.05$

The most effective tool to reduce food insecurity is the federal Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamps.^{6,7} SNAP provides assistance to families struggling to purchase the food they need – stabilizing households in hard economic times. In 2010, 62 percent of eligible working poor Minnesotans were enrolled in SNAP; this was significantly lower than the national average SNAP participation rate of 75 percent.⁸

Healthy Child Development Relies Upon Food Security

In a sample of more than 5,000 families with children under the age of four who received care at Hennepin County Medical Center, Children's HealthWatch found more than one third (36 percent) were food insecure. Lack of access to sufficient food impacts children both directly through harm to their own health and well-being and indirectly through harm to their mother's mental health. Food-insecure children in Minneapolis are **59 percent more likely to be in fair or poor health** than children in food-secure households. Their mothers are simultaneously at increased risk of themselves being in poor health; food-insecure mothers¹ are **nearly twice as likely to be in fair or poor health and more than two and a half times as likely to have maternal depressive symptoms** compared to mothers in food-secure households. Research shows maternal depression impacts mothers' ability to care for their children and is another pathway of risk to healthy child development.⁹

SNAP Protects the Health of Mothers and Children

Children's HealthWatch research has previously shown SNAP significantly reduces food insecurity, and young children in families receiving SNAP are less likely to be underweight or at risk for developmental delays, compared to children in families likely eligible for, but not receiving SNAP.² As Figure 2 shows, **Minneapolis families receiving SNAP showed markedly decreased risk of maternal depressive symptoms, and improved child health outcomes** in terms of healthy weight status and general health. Other researchers have shown food insecurity places some children at increased risk of overweight, as families turn to inexpensive, calorie-dense foods that offer little or no nutritional value.⁶ Children's HealthWatch data reveals that **SNAP protects young Minneapolis children from becoming overweight.**



“I’ll let them eat
before I eat, and
then whatever’s
left over I’ll eat.”

Mother of a child treated at
Hennepin County Medical Center

Food insecurity: when families lack access to sufficient food for all members to lead active, healthy lives. Food insecurity is most precisely measured by the USDA’s 18-item Household Food Security Survey.

Children’s HealthWatch 2-item food insecurity measure:

Children’s HealthWatch has validated a shortened 2-item screener suitable for clinical use¹³, which identifies families as being food insecure if they answer positively (‘Often true’ or ‘sometimes true’ vs. ‘never true’) to either of the following two statements:

“Within the past 12 months we worried whether our food would run out before we got money to buy more.”

“Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.”

Policy Solutions Within Reach

The negative effects of food insecurity extend far beyond those who experience them firsthand, creating a ripple effect felt across the state. Persistent food insecurity among Minneapolis children directly contributes to rising public healthcare costs and poor educational outcomes, costing Minnesota taxpayers an estimated at least \$1.2 billion each year, including \$925 million in direct medical costs alone.¹⁰ By helping Minnesotans to afford enough nutritious food, Minnesota stands not only to improve the health of children in families facing economic hardship, but also to strengthen its economy.

Furthermore, cuts to SNAP hurt state retailers – when SNAP benefits were cut nationally on November 1, 2013, due to the expiration of the American Recovery and Reinvestment Act benefit boost, Minnesota lost \$55 million that would have entered its economy through food purchases.¹¹ By supporting access to SNAP and thus ensuring access to healthy food for households who need it, policy makers and healthcare providers in Minnesota will protect the health of more children from low-income families and reduce healthcare costs associated with food insecurity.

Leaders in Minnesota should adopt public policies that:

- Continue modernizing and simplifying the state’s SNAP application process. Integrating data between programs such as Medical Assistance would reduce operational inefficiencies and allow those who qualify for assistance to receive it.
- Support policies and innovative strategies that increase access to nutritious, healthy foods for low-income families with young children.
- Increase the role hospitals and other health institutions play in reducing food insecurity in both rural and urban communities statewide, by universally screening for food insecurity using the Children’s HealthWatch 2-item food insecurity measure (above), facilitating access to federal food assistance programs like SNAP and WIC, having onsite food pantries, and utilizing hospitals for community-based summer and after-school feeding programs.¹²

Conclusion

Food insecurity is an issue that affects us all. Children’s HealthWatch research shows food insecurity puts young children in Minneapolis at greater risk of poor health and developmental delays and increases poor health and risk of depression among their mothers. Investing in access to and quality of nutrition programs reduce societal healthcare and education costs for Minnesota. By recognizing and addressing food insecurity as a pressing public health issue, we can act to protect the health and well-being of the state’s youngest children - and ensure a brighter future for all.



“Providing healthy nutrition, starting even before a baby’s birth, is one of the smartest healthcare investments we can ever make.”

Diana B. Cutts, MD

Children’s HealthWatch

This brief was made possible by generous funding from Hunger-Free Minnesota.

Children’s HealthWatch would also like to thank Ellie Lucas, David Dayhoff, and Jason Reed of Hunger-Free Minnesota for their thoughtful and careful review of this work.

Authors: Nathan Goldman, Policy Intern; Stephanie Ettinger de Cuba, MPH, Research and Policy Director; Richard Sheward, MPP, Senior Policy Analyst; Diana Cutts, M.D., Principal Investigator; and Sharon Coleman, MS, MPH, Statistical Analyst.

Please contact Stephanie Ettinger de Cuba at sedc@bu.edu for more information.

-
- ¹ Coleman-Jensen, A., Nord, M., Andrews, M., and Carlson, S. (2012). Household food security in the United States in 2011. Economic Research Report no. 141. U.S. Department of Agriculture.
 - ² Ettinger de Cuba, S., Weiss, I., Pasquariello, J., Schiffmiller, A., Frank, D. A., Coleman, S., Breen, A., Cook, J. Children’s HealthWatch, (2012). The SNAP Vaccine: Boosting children’s health.
 - ³ Coleman-Jensen, A., Nord, M., and Singh, A. U.S. Department of Agriculture, Economic Research Service. (2013). Household Food Security in the United States in 2012. Economic Research Report no. 155.
 - ⁴ Hunger Solutions Minnesota. (2013). The State of Hunger in Minnesota 2013. Accessed October 31, 2013. Retrieved from http://www.hungersolutions.org/wp-content/uploads/2013/08/2013_HSM_SOH.pdf
 - ⁵ Gundersen, C., Waxman, E., Engelhard, E., Satoh, A., & Chawla, N. (2013). Map the meal gap: Child food insecurity 2013. Accessed October 31, 2013. Retrieved from http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap/~media/Files/a-map-2011/MN_AllCountiesCFL_2011.ashx?.pdf
 - ⁶ Food Research and Action Center. (2013). SNAP and Public Health: The Role of the Supplemental Nutrition Assistance Program in Improving the Health and Well Being of Americans. Accessed January 10, 2014. Retrieved from http://frac.org/pdf/snap_and_public_health_2013.pdf.
 - ⁷ Rosenbaum, D. (2013). SNAP is Effective and Efficient. Center on Budget and Policy Priorities. Accessed January 17, 2014. Retrieved from: <http://www.cbpp.org/files/7-23-10fa.pdf>.
 - ⁸ Cunnyngham, K. E. (2012). Reaching Those in Need: State Supplemental Nutrition Assistance Program Participation Rates in 2010. *Mathematica Policy Research. U.S. Department of Agriculture*. Retrieved from <http://www.fns.usda.gov/sites/default/files/Reaching2010.pdf>.
 - ⁹ Kiernan, K. E., & Huerta, M. C. (2008). Economic deprivation, maternal depression, parenting and children’s cognitive and emotional development in early childhood. *The British Journal of Sociology*, 59(4), 783-806.
 - ¹⁰ Hunger-Free Minnesota. (2010). Cost-Benefit Hunger Impact Study. Retrieved from: <http://hungerfreemn.org/media-coverage/publications/cost-benefit-hunger-impact-study/>.
 - ¹¹ Dean, S. & Rosenbaum, D. (2013). SNAP benefits will be cut for all participants in November 2013. Center on Budget and Policy Priorities. Accessed November 5, 2013. Retrieved from <http://www.cbpp.org/files/2-8-13fa.pdf>
 - ¹² Hager, E. R., Quigg, A. M., Black, M. M., Coleman, S. M., Heeren, T., Rose-Jacobs, R., ... & Frank, D. A. (2010). Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics*, 126(1), e26-e32.

