



ISSUE BRIEF

# THE EARLY CHILDHOOD HUNGER IMPERATIVE

Early childhood education must be the top priority for policymakers. Research is clear: Learning begins when a baby is born.<sup>1</sup> Nurturing a baby's brain with information is therefore very important. For a baby's brain to develop, fuel is needed to build strong neuron connections. That fuel comes in part from good nutrition. Too many of Ohio's babies are hungry and not receiving the fuel they need for their brains to reach their full potential.

Early childhood *hunger*. If you shudder to think of a hungry infant crying, this call to action is for you.

Thousands upon thousands of food insecure young children are scattered across the state, from our major cities to our rural municipalities. These children come from families where no one is employed and from families in which someone works full-time.<sup>2</sup>

The hunger and subsequent malnutrition of our youngest children is an urgent problem that needs immediate attention. The domino effects of early childhood hunger are enormous. A single instance of early childhood hunger has compounding physical, emotional, cognitive, behavioral, and educational consequences, a fact that recently spurred the American Academy of Pediatrics (AAP) into action.

"The link between good nutrition and health is absolute," said AAP President, Sandra Hassink, when the AAP called for pediatricians to ask two more questions of their patients' families.<sup>3</sup> These questions had one purpose: to better screen for childhood hunger.<sup>4</sup>

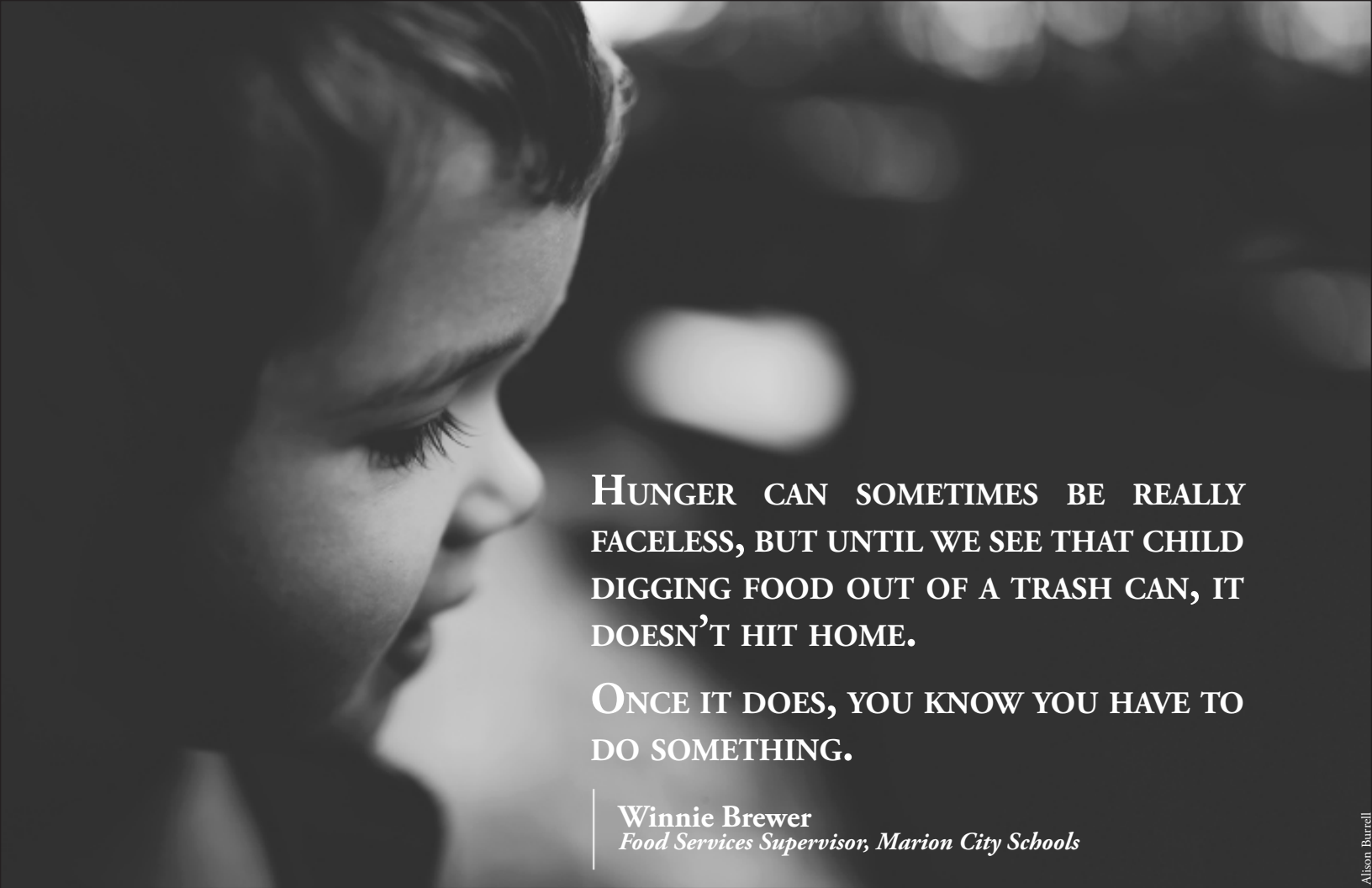


NUMBERS TO KNOW

**24.2** The percent of Ohio children who are hungry.

**1.9** Times more likely for a food insecure child under age three to have "fair or poor health."

**38** Ohio's rank, with 50 being the worst, for children under age six in poverty.



**HUNGER CAN SOMETIMES BE REALLY FACELESS, BUT UNTIL WE SEE THAT CHILD DIGGING FOOD OUT OF A TRASH CAN, IT DOESN'T HIT HOME.**

**ONCE IT DOES, YOU KNOW YOU HAVE TO DO SOMETHING.**

**Winnie Brewer**  
*Food Services Supervisor, Marion City Schools*

Alison Burrell

Winnie Brewer's heart breaks a little more every day.

As Food Services Supervisor in Marion City Schools, Brewer has a front-row seat to the challenges far too many Ohio children face when it comes to that essential foundation for development: having enough to eat.

The Summer Food Service Program she oversees helps many children. But it cannot serve them all.

Sarah is three years old. She and her six-year-old brother, Bryce, are inseparable except when it's time for him to visit the summer food program. Sarah's just too young to make the trip.\*

One morning after Bryce has had his fill of food for the day, he makes a detour before heading home. He walks over to one of the trash cans, and begins rummaging through food that others have tossed away.

Brewer sees this and walks over. She taps Bryce on the shoulder and asks why he's sifting through the garbage.

My little sister, he explains. She's hungry. And bringing her this leftover food is the only way he knows to help.

"We run into a lot of situations where kids will come and say they have younger siblings at home," Brewer says. "They always want to know if they can take something back."

After Brewer spoke with Bryce, members of the staff followed him home with a care package for Sarah. This was just a temporary solution to a huge problem Brewer worries about every day.

Brewer says she also worries for those old enough—and hungry enough—to walk, often several miles alone, to reach a summer feeding site.

While some young children in strollers or cars do visit the summer feeding sites, Brewer says, "It's nothing to see a six- or seven-year-old bringing a three-year-old sibling unattended."

"Hunger can sometimes be really faceless, but until we



see that child digging food out of a trash can, it doesn't hit home," Brewer says. "Once it does, you know you have to do something."

The ripple effects of early childhood hunger reverberate across a child's life, and across the communities in which hungry children live. The daily struggles of Sarah and her brother illustrate a problem that plagues far too many young children across Ohio and the rest of the country. And while hunger plagues children of all ages, this brief focuses on the effects of hunger on the youngest children—our infants, toddlers, and preschoolers.

As the adage goes, we are what we eat. And children who don't eat are not able to develop or perform as they should. The hunger and malnutrition of our youngest children is a serious problem in need of attention. The earliest years of life—before ever entering a class-

room—create the blueprint for a child's future during the years of major brain development.<sup>5</sup> Neglecting our children during this period of critical cognitive and physical growth leaves them vulnerable to the many negative long-term effects of early childhood hunger.

This is the first of a two-part issue brief that focuses on early childhood hunger from birth to age five. It highlights the breadth of childhood hunger and the negative consequences that reach across a child's earliest years, and through the arc of his or her life.

The second part will provide an overview of the only federal program focused exclusively on combating hunger for our youngest children, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). It will also provide recommendations on how Ohio can meet the basic needs for, and protect the futures of, our most precious resource: our children.



Ian D. Keating | Viv on Slide

## What is Meant by *Food Insecurity*?

The most severe form of food insecurity is “very low food security,” defined as when a child is hungry, skips a meal, or does not eat for a whole day. Food insecurity is defined as an observation of whether a person has consistent access to an adequate amount of quality food to live an active, healthy life.<sup>6</sup>

## THE BREADTH OF EARLY CHILDHOOD HUNGER IN OHIO

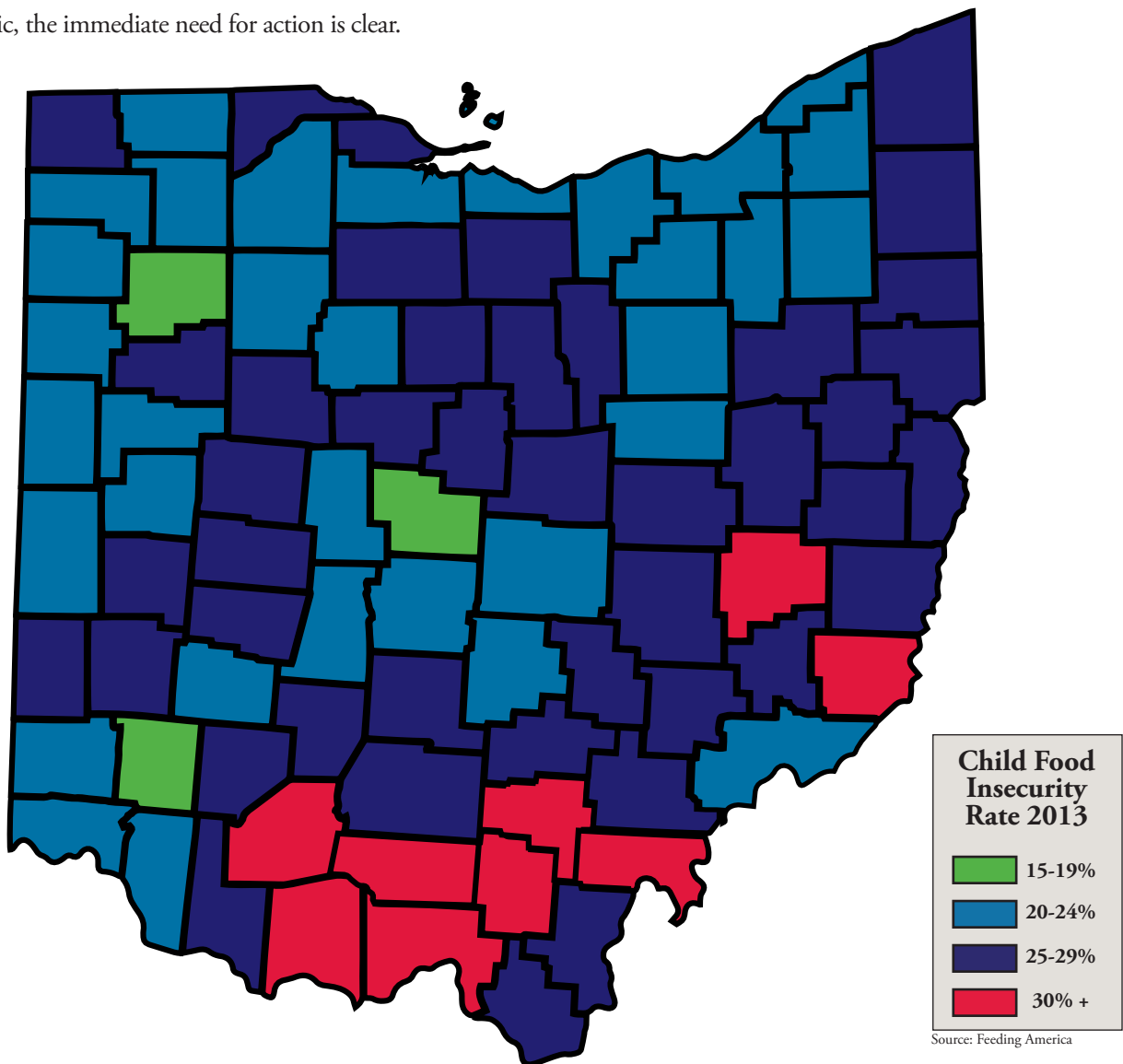
To combat hunger, the goal is to eliminate food insecurity no matter its severity. And in Ohio, the percentage of children who are food insecure is significant. *Nearly one in four Ohio children is food insecure.* That's 653,410 Ohio children of all ages, in every corner of our state.<sup>7</sup>

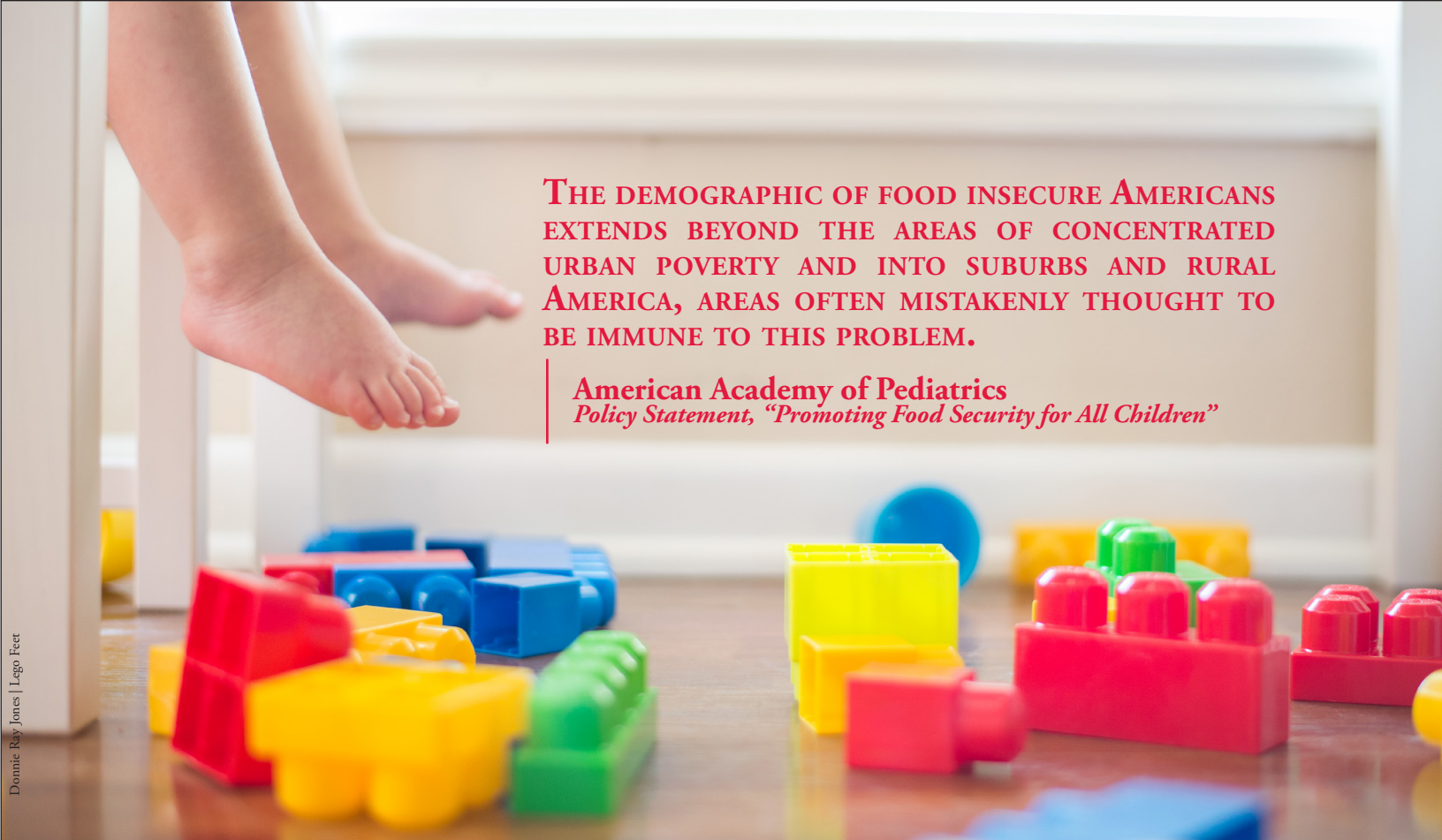
The exact number of Ohio's food insecure young children is unclear. A readily available figure from Feeding America, 170,640 hungry young children, is a once-used estimate based on data from 2005–07.<sup>8</sup> Given the current child population and the increase in child poverty since then, we suspect there are even more hungry infants, toddlers, and preschoolers today. While this report highlights the need for more and better data on this vulnerable demographic, the immediate need for action is clear.

The situation is particularly bad in Appalachian Ohio—almost one fourth of these counties are among the worst ten percent nationally for child food insecurity.<sup>9</sup>

The persistence of food insecurity makes this challenge all the worse. National studies indicate that 40 percent of children suffer through food insecurity for more than a year.<sup>10</sup>

The AAP reported in a recent policy statement that food insecurity's effects are felt all across the country: "The demographic of food insecure Americans extends beyond the areas of concentrated urban poverty and into suburbs and rural America, areas often mistakenly thought to be immune to this problem."<sup>11</sup>





**THE DEMOGRAPHIC OF FOOD INSECURE AMERICANS EXTENDS BEYOND THE AREAS OF CONCENTRATED URBAN POVERTY AND INTO SUBURBS AND RURAL AMERICA, AREAS OFTEN MISTAKENLY THOUGHT TO BE IMMUNE TO THIS PROBLEM.**

**American Academy of Pediatrics**  
*Policy Statement, “Promoting Food Security for All Children”*

#### **POVERTY IS AT THE ROOT OF THE PROBLEM**

Research shows that living in poverty strongly predicts whether a child will be food insecure, and how long that food insecurity will persist.<sup>12</sup>

Without enough money, caregivers either cannot afford food or cannot afford access to food for our youngest children. It’s not just about food deserts<sup>13</sup>—poverty makes it difficult to pay for food at the grocery store, just as poverty makes it difficult to live in neighborhoods that have grocery stores.

More than a quarter of Ohio children under age six live in poverty.<sup>14</sup> That’s nearly 220,000 young boys and girls. Among Black children under age six, the poverty rate is 55.5 percent; among Hispanics, 40.3 percent; among Whites, it is 19.1 percent.<sup>15</sup>

Among these impoverished children, 21 percent come from families in which at least one parent is employed full-time, year-round; 47 percent come from families in which at least one parent is employed either part-year or part-time; and 32 percent do not have an employed parent.<sup>16</sup>

#### **The Self-Sufficiency Standard**

For a sense of how easy it is to slip into food insecurity, consider the “Self-Sufficiency Standard.”

This is the amount of money needed to meet each basic need at a minimally adequate level without public or private assistance. It is extremely difficult to meet this standard in a family with two young children.

For example, in Cuyahoga County a family of two adults, one infant and one preschooler would have to earn \$64,081 annually to meet this standard. One of the largest annual costs would be food at \$8,640. The standard does not allow for any take-out or restaurant meals in estimating the cost of food.

Given costs like these, working low-income families have little choice but to rely upon public and private assistance. In Cuyahoga County, the Greater Cleveland Food Bank served 17,300 children under the age of five in 2013.

Sources: Ohio Association of Community Action Agencies’ Self-Sufficiency Calculator, available at <http://oacaa.org/self-sufficiency-calculator/>; “Hunger in America 2014: Report for Greater Cleveland Food Bank, Inc.” Feeding America, 2014.

## THE CONSEQUENCES OF EARLY CHILDHOOD HUNGER



Though the number of food insecure children in Ohio is staggering, the problems go well beyond the numbers. Food insecurity sets off a domino effect of negative outcomes in numerous directions.

As Winnie Brewer's story demonstrates, defining the causes and consequences of food insecurity is more complex than our usual measurements<sup>17</sup>—income, access to a grocery store, or days missed in school—can encompass.

### HEALTH AND WELL-BEING

Every instance of child food insecurity does not lead to malnutrition. But every instance of malnutrition leads to long-ranging and often chronic conditions like anemia and asthma, oral health challenges, and negative consequences for a child's overall health status.<sup>18</sup>

For infants born to food insecure mothers, the odds are stacked against them. These babies are more likely to have low birthweight, to be born pre-term, and to struggle with lower rates of breastfeeding initiation.<sup>19</sup> All of these negative consequences contribute to increased infant mortality rates.<sup>20</sup> Babies that survive are more likely to struggle with disabilities during their childhood and adolescence, and face higher risks of chronic disease as adults.<sup>21</sup>

Food insecure children under age three are nearly twice as likely to have “fair or poor” health.<sup>22</sup> Hungry children under three are also nearly two times more likely to develop iron-deficiency anemia, and are 2.3 times more likely to be hospitalized.<sup>23</sup>

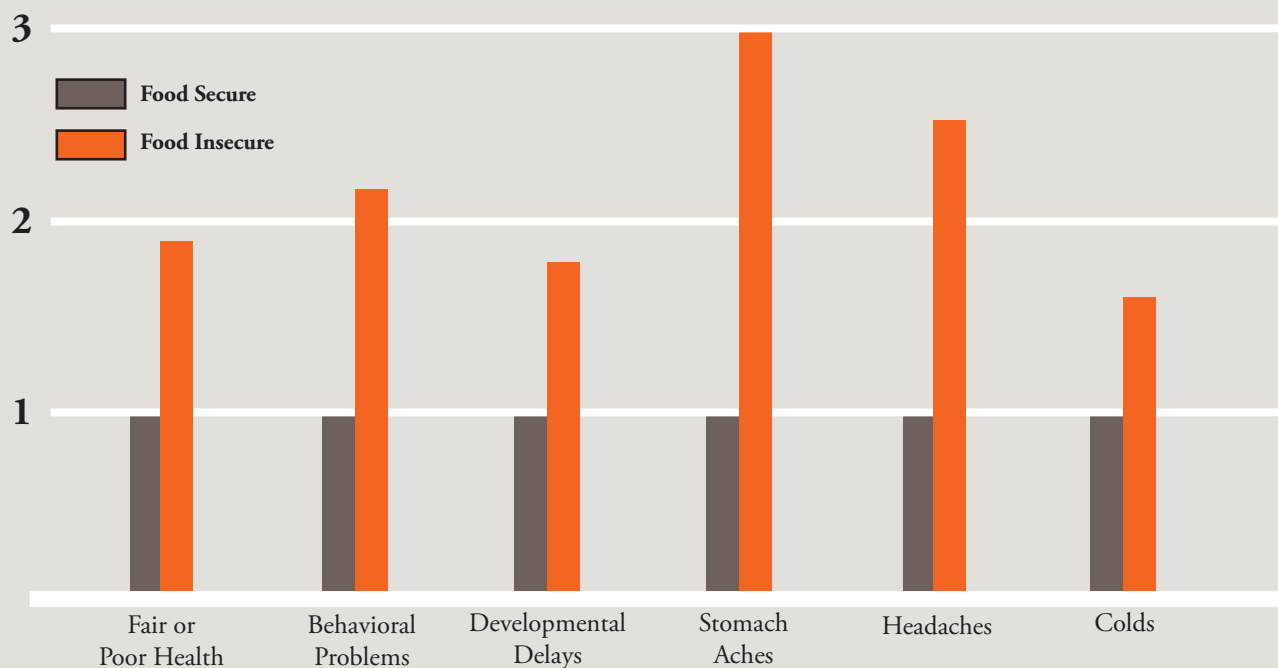
Food insecure preschool-aged children are more likely to suffer from dental disease, have three times as many stomach aches, 2.5 times as many headaches, and are 57 percent more likely to have had a cold within the previous year.<sup>24</sup>

By elementary school, hungry children are four times more likely to have a history of needing mental health counseling.<sup>25</sup> Malnutrition has also been linked to adult diseases ranging from diabetes and hyperlipidemia, to cardiovascular disease.<sup>26</sup>

Even the stress of being hungry has a detrimental effect. Anxiety caused by early childhood hunger increases the difficulty of learning skills that aid in later relationship development, school success, and workplace productivity.<sup>27</sup>

## Increased Odds of Negative Health Outcomes

### Food Insecure Young Children Face Multiplied Chances of Various Health Risks



Source: Coleman-Jensen et al., "Food Insecurity in Households with Children," Economic Research Service, USDA (2013).

#### COGNITIVE AND BEHAVIORAL DEVELOPMENT

The worsened health outcomes that food insecure children face create barriers to learning that can permanently alter their odds of succeeding in adulthood. This can result in exponential economic harm.<sup>28</sup>

Malnutrition during a mother's pregnancy leads to a number of worsened cognitive and behavioral outcomes for infants that last well beyond their first five years of life. Problems include developmental and cognitive delays,<sup>29</sup> and impaired memory and social functioning, which can last more than ten years after receiving treatment.<sup>30</sup> But the correlations between food insecurity and cognitive and behavioral health can also develop earlier in childhood.

By age three, children in food insecure families are twice as likely to have behavioral problems.<sup>31</sup> And preschool-aged children are almost two times more likely to be at risk of developmental delays.<sup>32</sup> In kindergarten,

they are more likely to be behind in social skills and reading performance than their food secure peers.<sup>33</sup>

To complicate matters, these cognitive and behavioral challenges vary by age and gender, and often occur before they can be identified as corresponding to traditional symptoms of food insecurity, such as being underweight or being obese.<sup>34</sup> Younger children experiencing food insecurity have more general negative health outcomes, while older children are more likely to have asthma and other chronic conditions.<sup>35</sup>

Early childhood hunger can result in development delays through the third grade for both sexes, but the adverse effects of food insecurity are more likely to persist for girls. Food insecure girls face more reading and social skill development barriers than food insecure boys.<sup>36</sup> Researchers are not sure why girls are more vulnerable to the adverse effects of food insecurity, stating that more study is needed to better understand this critical issue.<sup>37</sup>



Phillipe Pui | Toddler Window

## CONCLUSION

The urgent problem of early childhood hunger must be solved. Bryce, the six-year-old who carries the burden of his baby sister's hunger, is not atypical. One in four Ohio children is food insecure. Our state has an opportunity to elevate the conversation and end early childhood hunger.

In part two of this series, we will explore the primary program specifically geared toward meeting the nutritional needs of mothers and babies. It is the “Special Supplemental Nutrition Program for Women, Infants, and Children,” or WIC for short.

WIC provides maternal support, linking pregnant mothers to health care, nutritional guidance, and food

to encourage and support a healthy lifestyle for them and their young children. We have found that effective and accessible WIC services are crucial to reaching this age group, and ensuring improved nutritional, health, and educational outcomes. We will also explore food access for our youngest children in child care settings.

With the nation's ninth largest number of WIC program participants<sup>38</sup> and the knowledge that there are many more unserved hungry young children, Ohio has an opportunity to change the lives of its future citizens. By addressing food insecurity and child health outcomes in low-income children under age six, we can strengthen our future workforce and prepare for a robust state economy. We look forward to exploring this serious challenge and possible solutions in our next segment in this series.





## ENDNOTES

\* To ensure the confidentiality of the children named in this story, we have adapted this story and changed the names of the individuals.

1. Scientific research is clear that a baby's brain development begins at birth. Research at the University of Washington reveals further that "unborn babies are listening to their mothers talk during the last 10 weeks of pregnancy and at birth can demonstrate what they've heard." Previously, the study's authors indicate, research had shown that newborns were born ready to learn and begin to discriminate between language sounds within the first few months of life. See Molly McElroy, "While in Womb, Babies Begin Learning From Their Mothers," University of Washington, January 2, 2013. Available at: <http://www.washington.edu/news/2013/01/02/while-in-womb-babies-begin-learning-language-from-their-mothers/>. Beyond this, researchers at Johns Hopkins' Science of Learning Institute are currently immersed in a study that asks the question of whether associative learning begins before birth. See Dipietro et al., "Does Associative Learning Begin Before Birth." Available at <http://scienceoflearning.jhu.edu/research/does-associative-learning-begin-before-birth>.
2. Alisha Coleman-Jensen, William McFall, Mark Nord, "Food Insecurity in Households with Children: Prevalence, Severity, and Household Characteristics, 2010-11," Economic Research Service, United States Department of Agriculture (2013). This national study found that 60 percent of families with food insecure children have someone in the family that works full-time. See also, "Ohio Demographics of Young, Poor Children," National Center for Children in Poverty. Available at: [http://www.nccp.org/profiles/state\\_profile.php?state=OH&id=9](http://www.nccp.org/profiles/state_profile.php?state=OH&id=9) (last updated May 13, 2015).
3. Olga Khazan, "The New Way That Pediatricians Will Look Out for Hungry Kids," *The Atlantic*, Oct. 26, 2016. Available at: <http://www.theatlantic.com/health/archive/2015/10/pediatricians-urged-to-screen-for-hunger/412462>.
4. "Promoting Food Security for All Children," *Pediatrics*, Vol. 136, No. 5, December 2015, American Academy of Pediatrics. The two questions the American Academy of Pediatrics is asking pediatricians to inquire of patients' parents or guardians are as follows: 1) Within the past year, were you worried whether your food would run out before you got money to buy more? 2) Within the past year, did the food you bought not last, and you didn't have money to get more?
5. "Child Development," Feeding America, <http://www.feedingamerica.org/hunger-in-america/impact-of-hunger/child-hunger/child-development.html> (last visited January 22, 2016).
6. Measurement, Food Security in the U.S., United States Department of Agriculture (last updated Sept. 8, 2015), <http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx>.
7. Map the Meal Gap 2015, 28 Feeding America (2015). Available at: <http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/2013/map-the-meal-gap-2013-exec-summm.pdf>.
8. "Child Food Insecurity in the United States: 2005-07," Feeding America (2009). Available at: [http://www.childrenshealthwatch.org/wp-content/uploads/Feeding-America\\_ChildFoodInsecurity\\_2009.pdf](http://www.childrenshealthwatch.org/wp-content/uploads/Feeding-America_ChildFoodInsecurity_2009.pdf). The report notes that its estimates of the number of food insecure children under five years of age were new for their 2009 report. Since then, Feeding America has not published each state's estimates for food insecure children under age five.
9. *Supra* Map the Meal Gap, note 7, at 32.
10. Sheela Kennedy et al., "Food Insecurity During Childhood: Understanding Persistence and Change Using Linked Current Population Survey Data," University of Kentucky Center for Poverty Research (2013).
11. *Supra* "Promoting Food Security for All Children," note 4.
12. *Supra* Kennedy, note 10.
13. The United States Department of Agriculture defines "food deserts" as "urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food. Instead of supermarkets and grocery stores, these communities may have no food access or are served only by fast-food restaurants and convenience stores that offer few healthy, affordable food options." See <https://apps.ams.usda.gov/fooddeserts/fooddeserts.aspx> (last visited January 22, 2016).
14. "Child Poverty in America 2014: State Analysis," Children's Defense Fund, September 2015. Available at: <http://www.childrensdefense.org/library/poverty-report/child-poverty-in-america-2014-1.pdf>.
15. *Id.*
16. *Supra* National Center for Children in Poverty, note 2.
17. Craig Gundersen and James P. Ziliak, "Child Food Insecurity in the U.S.: Trends, Causes, and Policy Options," *The Future of Children* 4 (2014); "Feeding Our Human Capital: Food Insecurity and Tomorrow's Workforce," *Children's HealthWatch* 2 (2013).
18. Kirkpatrick et al., "Child Hunger and Long-Term Adverse Consequences for Health," *Archives of Pediatrics & Adolescent Medicine*, Vol. 164, Issue 8 (August 2010). Available at: <http://archpedi.jamanetwork.com/article.aspx?articleid=383613>; The Importance of Early Childhood Nutrition, WIC, and CACFP, Food Research and Action Center (2015); *supra*, "Child Development," note 5.
19. "The Surgeon General's Call to Action to Support Breastfeeding," U.S. Department of Health and Human Services 27 (2011); WIC Works: Addressing the Nutrition and Health Needs of Low-Income Families for 40 Years, Center for Budget and Policy Priorities 4 (2015); "Child Food Insecurity: The Economic Impact on Our Nation," *Feeding America* 12-16 (2009).
20. *Supra* WIC Works, note 19; *supra* "Child Food Insecurity: The Economic Impact on Our Nation," at 12-16, note 19; "Steps to Success: Improving Ohio's Infant Mortality Rate," Ohio Hospital Association, March 2014.
21. *Supra* Center for Budget and Policy Priorities, note 19.
22. *Supra* Coleman-Jensen, note 2; Carolyn Murphy et al., "Reading, Writing, and Hungry: The Consequences of Food Insecurity on Children, and On Our Nation's Economic Success," Partnership for America's Economic Success (2008).
23. *Supra* Coleman-Jensen, note 2.
24. *Id.*
25. *Supra* "Child Food Insecurity: The Economic Impact on Our Nation," note 19, at 23.
26. *Supra* "Promoting Food Security for All Children," note 4.
27. "Too Hungry to Learn: Food Insecurity and School Readiness," *Children's HealthWatch* 2 (2012).
28. *Supra* "Feeding Our Human Capital: Food Insecurity and Tomorrow's Workforce," note 17.
29. *Supra* "Too Hungry to Learn," note 28; *supra* "Feeding Our Human Capital," note 17.
30. *Supra* "Too Hungry to Learn," note 27. The impaired memory and social functioning stems from infants with anemia, as triggered by mothers that were food insecure during their pregnancy.
31. *Supra* Coleman-Jensen, note 2.
32. *Id.*
33. *Supra* "Too Hungry to Learn," note 27; *supra* "Feeding Our Human Capital," note 18; *supra* "Child Food Insecurity," note 19, at 21.
34. *Supra* The Importance of Early Childhood Nutrition, WIC, and CACFP, note 18, at 3; *supra* "Too Hungry to Learn," note 27.
35. *Supra* Kirkpatrick, note 18.
36. *Supra* The Importance of Early Childhood Nutrition, WIC, and CACFP, note 18, at 3; *supra* Kirkpatrick, note 19.
37. *Supra* Kirkpatrick, note 18.
38. WIC Program Facts, Ohio Department of Health, <https://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/ns/wic%20nutrition/wicfacts.pdf> (last visited January 22, 2016).

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The Children's Defense Fund Leave No Child Behind® mission is to ensure every child a *Healthy Start*, a *Head Start*, a *Fair Start*, a *Safe Start* and a *Moral Start* in life and successful passage to adulthood with the help of caring families and communities.

CDF provides a strong, effective and independent voice for *all* the children of America who cannot vote, lobby or speak for themselves. We pay particular attention to the needs of poor children, children of color and those with disabilities. CDF educates the nation about the needs of children and encourages preventive investments before they get sick, drop out of school, get into trouble or suffer family breakdown.

CDF began in 1973 and is a private, nonprofit organization supported by individual donations, foundation, corporate and government grants. The CDF-Ohio office was established in 1981.

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