

SERIES – HUNGER: A NEW VITAL SIGN

Doctor's Orders

Promoting Healthy
Child Development
by Increasing Food
Security in Arkansas



*"At Arkansas Children's Hospital,
we recognize alarming and
disappointing rates of food insecurity
among our vulnerable patients.
To improve the health of our patients,
we have implemented innovative
programs to alleviate food insecurity.
We urge other doctors and hospitals
to take similar steps to ensure that
young children are healthy and
nutritiously fed."*

Patrick H. Casey, MD

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Children's HealthWatch

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Executive Summary

Parents should be able to afford to meet basic needs, including rent, utilities, medical bills, and prescriptions, and still have enough each month to pay for adequate food for all family members. Unfortunately, this is not a reality for many families in Arkansas, especially those with young children. Even those with higher levels of education and employment report an inability to make ends meet. When bills, including rent and utilities, drain already tight household budgets, families often cut the only flexible budget item: food. Both mothers and children in families that lack enough money to provide food for all members to lead active, healthy lives—a condition known as food insecurity—face increased risk of health and development concerns. Food-insecure families are also at increased risk of being unstably housed and having inadequate home energy to keep warm in winter or cool in summer.

Compared with Arkansas children from food-secure families, those from food-insecure families were more likely to:

- Have been hospitalized
- Have developmental delays
- Be in fair or poor health

and their families were more likely to experience:

- Fair or poor maternal health
- Housing insecurity
- Energy insecurity
- Foregoing needed health care for household members due to cost
- Trade-offs between paying for other basic living expenses such as food, rent, or housing in order to pay for health care

Health providers around the state are in a unique position to both screen for, and rapidly respond to, food insecurity in families. Many health facilities in Arkansas—and across the country—are leading the way by offering innovative health care-based approaches to reducing food insecurity.

Options for connecting food-insecure families with assistance include:

- Sharing handouts or online listings of food assistance programs and local resources
- Establishing or partnering with a food pantry and/or farmer's market within the health facility to better connect patients with healthy foods
- Sponsoring an on-site USDA Summer Food Service Program or Child and Adult Care Food Program (CACFP)-funded meal to feed children while they attend their appointment
- Training in-house financial counselors to serve as SNAP/WIC application liaisons or establishing roles for SNAP/WIC outreach workers within the health facility to help enroll eligible patients

Household Food Insecurity: When households lack access to sufficient food for all members to lead active, healthy lives because of insufficient family resources.

Child Food Insecurity: When children experience reductions in the quality and/or quantity of meals because caregivers can no longer buffer them from inadequate household food resources (the most severe level of food insecurity).

Housing Insecurity: When households experience ANY of the following in the past year: frequent moves (two or more times), crowded housing situation, or doubling-up with another household for financial reasons.

Energy Insecurity: When households lack consistent access to enough of the kinds of energy (e.g. electricity, natural gas and/or heating oil) needed for a healthy and safe life.

Health-care Trade-offs: When a household is unable to pay for basic living expenses, including rent, utilities, or food, due to payment of medical expenses.

SNAP: The Supplemental Nutrition Assistance Program, formerly known as food stamps, is the United States' largest child nutrition program and is proven effective in reducing food insecurity.

WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children is a nutrition program specifically for low-income pregnant, postpartum and breastfeeding women, and infants and children under the age of five.

> HUNGER HURTS

The Impact of Food Insecurity on Children

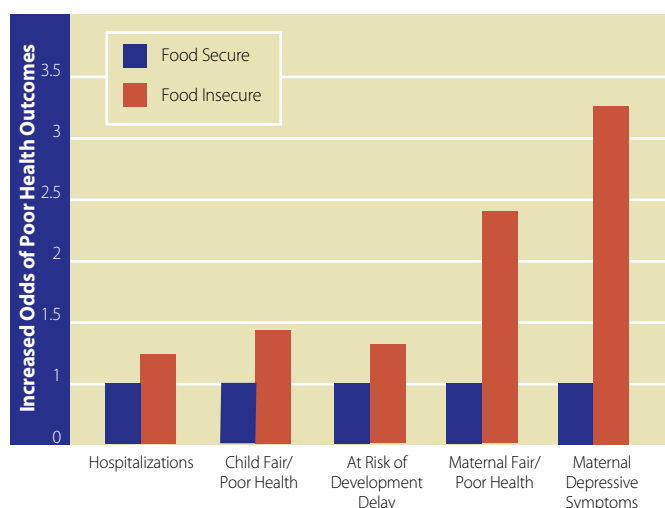
Arkansas has the second-highest overall population rate of food insecurity in the United States (19.7 percent or 570,000 people in 2013). The rate of food insecurity among Arkansas households with children is substantially higher at 27.7 percent (affecting approximately 196,950 children),¹ which is, in turn, well above the national average of 21.6 percent among households with children.²

Household and child food insecurity can harm every aspect of a child's well-being—growth and development,³ psychosocial functioning (e.g., ability to make friends, behavior, etc.),⁴ academic performance, and physical health.^{5,6,7} In particular, the first few years of life are critical because they are a significant time of brain and body growth, and establish the foundation for future physical and emotional health and school and workforce readiness. Deprivation of any length during this period can have harmful consequences that are remediable, but require much more effort and investment than is needed to prevent such deprivation in the first place.⁸

Parents do everything they can to protect their children from going hungry, including going without food themselves.⁹ This can lead to poor diets and negative physical and mental health outcomes for parents^{8,10,11} as well as diminished energy to work and/or care for the child.¹⁰

In 2013, 22.7 percent of families with children under the age of four who received care at the Arkansas Children's Hospital Emergency Department and participated in the Children's HealthWatch survey reported food insecurity. Among those families surveyed, 8.3 percent reported child food insecurity. In a sample of more than 8,800 interviewed between 2004 and 2014, families with a range of caregiver educational attainment and level of employment reported food insecurity. Some of the children in this sample had complex medical needs; medical costs associated with such needs can make it even more difficult for families to afford other basic necessities including food, rent and utilities.¹²

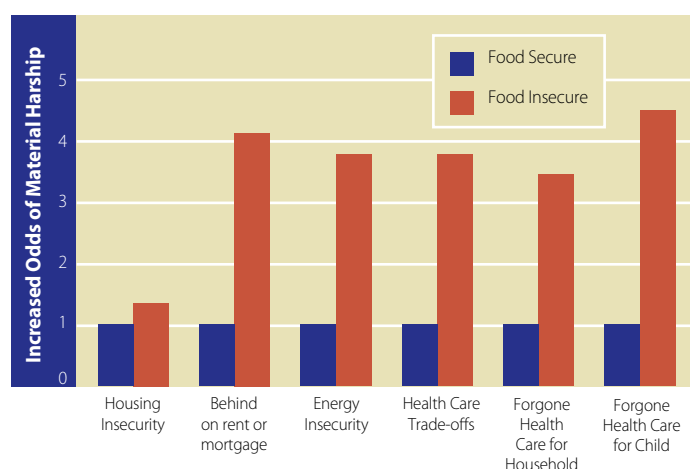
FIGURE 1.
Food-insecure families in Arkansas are more likely to have poor child and maternal health outcomes



Source: Children's HealthWatch Data, January 2004-June 2014. All increases statistically significant at $p < .05$.

FIGURE 2.

Food-insecure families in Arkansas are more likely to experience additional household hardships



Source: Children's HealthWatch Data, January 2004-June 2014. All increases statistically significant at $p < .05$.

Compared with young children in food-secure families, young children in food-insecure Arkansas families were:

- 19% more likely to be hospitalized, not including at birth
- 45% more likely to be in fair or poor health
- 31% more likely to be at risk of developmental delays
- Almost 5 times as likely to have foregone health care

Compared with food-secure families, mothers in food-insecure Arkansas families were:

- Over twice as likely to be in fair or poor health
- Over three times as likely to report depressive symptoms

Compared with food-secure families, food-insecure Arkansas families were:

- 37% more likely to be housing insecure
- Four times as likely to be behind on their rent or mortgage payments
- Almost four times as likely to be energy insecure
- Almost four times as likely to report making health care trade-offs
- Three and a half times as likely to have foregone health care

*"I am not hungry anymore,
my stomach has shrunk so I [am] used to it."*

Caregiver of patient at Arkansas Children's Hospital

"We can afford healthy food at the beginning of the month when we receive SNAP. By the end of the month we are eating a lot of noodles and carbs. Therefore, we are constantly losing and gaining weight."

Caregiver of patient at Arkansas Children's Hospital

> Stranded in Arkansas' Food Deserts

Poor access to food is a concern in Arkansas. "Accessibility" of food can refer to both affordability and physical proximity, and many Arkansas residents struggle with a lack of both.^{13,14} Food deserts—areas where people have limited access to a variety of healthy and affordable food—abound in Arkansas. Located far from supermarkets and grocery stores (defined as more than 1 mile away in urban areas and more than 10 miles away in rural areas),¹⁵ people living in a 'food desert' may have no food access or are served only by fast food restaurants and convenience stores. All regions of Arkansas have food deserts. The fact that many do not have reliable access to transportation creates an additional barrier to food access and adds to the cost of obtaining food.

The need for food assistance in Arkansas is large and growing. Between 2010 and 2014, there was a 103.7 percent increase in food distributed by the Arkansas Foodbank. Although food banks and pantries are an essential part of an emergency response, they are not designed to be a long-term solution and cannot match the rising tide of need.

"...food banking was started to provide people with immediate and temporary food. We have taken on a wider role because of need, and while we would love to provide for all needs, we cannot."

Rhonda Sanders, CEO Arkansas Foodbank

Food pantries are not able to meet the full need of families in Arkansas. In 2014, 29 percent of Arkansas food pantries did not have enough food to meet clients' needs, and 52 percent limited the number of times a household could receive food in order to conserve resources.¹⁶ When clients were able to get food from the pantries, 51 percent of them said they did not find fruits or vegetables at their pantry, and 40 percent could not find dairy products.

Shoring up food pantries with more supplies is helpful, but food pantries and banks report they do not have nearly enough resources to bring about permanent food security. At the root of food insecurity is an inability to access and afford food. Federal programs such as the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and the Supplemental Nutrition Assistance Program (SNAP) reduce food insecurity by allowing families to purchase food appropriate to their needs and at times that are convenient to them, while also contributing to the local economy.



Spotlight on Arkansas Children's Hospital in collaboration with the Arkansas Hunger Relief Alliance

Arkansas Children's Hospital (ACH) is the state's only pediatric medical center. Its mission is: "We champion children by making them better today and healthier tomorrow." To achieve this mission, ACH has implemented several innovative programs to address and alleviate food insecurity among its patients and families. ACH currently:

- Provides lunches to children visiting the hospital by acting as a sponsor site for the USDA Summer Food Service Program and Child and Adult Care Food Program.
- Offers cooking and nutrition education resources to caregivers in partnership with local organizations
- Employs financial counselors trained to assist families with SNAP applications on-site when they apply for Medicaid
- Enrolls mothers and children in WIC through an on-site office

> TRENDLINES: Is the American Dream Still Alive in the 'Natural State'?

While food insecurity rates are traditionally high among very low-income families, working families with higher education also struggle with food insecurity. Employment and higher education are usually seen as a solution to food insecurity, but when basic living expenses are greater than wages, even families with a working adult with a technical or college degree may face significant hardship.

The Great Recession and slow recovery affected families in Arkansas from across the economic spectrum; many struggled to make ends meet, experiencing food insecurity. Families with access to a wide range of financial resources continue to be impacted. Unfortunately, sometimes conditions are such that the traditional economic safeguards of education and employment do not guarantee food security.

In a sample of 2,566 Arkansas families with an employed caregiver who attended technical school, college, or higher, 13.4 percent reported household food insecurity and 5 percent reported child food insecurity.

Compared to young children in similar food-secure families, young children in food-insecure families with an employed caregiver with education beyond high school were:

- Nearly one-and-a-half times as likely to be in fair or poor health

Compared to mothers in similar food-secure families, employed mothers with education beyond high school in food-insecure families were:

- Over two-and-a-half times as likely to be in fair or poor health
- Almost three-and-a-half times as likely to report symptoms of depression

Compared to similar food-secure families, food-insecure families with an employed caregiver with education beyond high school were:

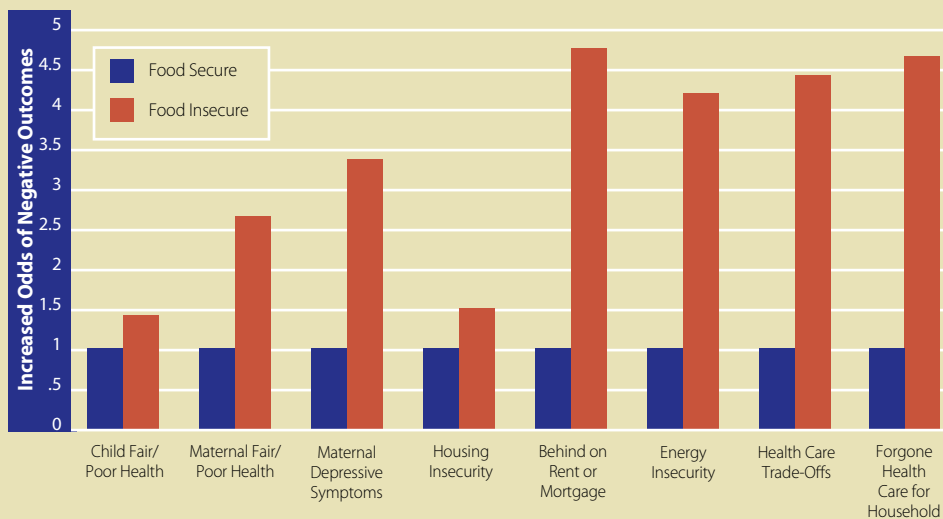
- One-and-a-half times as likely to be housing insecure
- Nearly five times as likely to be behind on rent or mortgage
- Over four times as likely to be energy insecure
- Almost four-and-a-half times as likely to have made health care trade-offs
- Nearly five times as likely have foregone health care due to inability to pay

Mind the Gap—Ensuring Families Across the Entire Economic Spectrum Receive the Help They Need

Health providers must be aware that even caregivers who are employed and have education beyond high school may have a difficult time providing enough food for their families. Screening all families and ensuring that all have access to enough healthful food is crucial for the health and well-being of Arkansas' children and families.

FIGURE 3.

Food-insecure, working families with education beyond high school are at increased risk of poor health outcomes and difficulty paying for housing, utilities and health care



Source: Children's HealthWatch Data, January 2004-June 2014. All increases statistically significant at $p < .05$.

> Opportunities to Improve Access to Food at Health Facilities

Many clinics and hospitals around the country, recognizing the difficulty of improving their patients' health if patients and their families are food insecure, have taken a preventive health approach by actively screening for food insecurity and offering services to combat it. A variety of healthcare-based approaches to addressing food insecurity can be tailored for the needs of individual healthcare settings.^{17,18} Many health providers in Arkansas routinely work with their patients to solve and control acute and chronic health problems, but typically may not consider assessing and addressing food security as part of routine care. An Internal Revenue Service (IRS) ruling may spur additional conversation and innovation among non-profit health facilities seeking ways to reduce patients' food insecurity. Recognizing the importance of such efforts, the IRS now allows non-profit health facilities to claim an exemption on federal tax returns for services related to improving nutrition access.¹⁹

The Children's HealthWatch Hunger Vital Sign™

Children's HealthWatch validated the Hunger Vital Sign™, a 2-question screening tool based on the US Household Food Security Survey Module and suitable for clinical or community outreach use. The Hunger Vital Sign™ identifies families with young children as at risk for food insecurity if they answer that either or both of the following two statements is 'often true' or 'sometimes true' (vs. 'never true'):

"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."



Listed are various ways health facilities have improved their patients' access to food. These options are grouped by level of effort involved (Level 1 being the most easily achieved and Level 3 being more involved) so any health facility, regardless of size or resources, will be able to find a way to help connect vulnerable patients with food resources.

LEVEL 1: Preparing the Ground

- Use the Children's HealthWatch Hunger Vital Sign™²⁰ during intake to determine whether a family is at risk of food insecurity
 - If the caregiver responds affirmatively to either question, clinic/hospital staff can direct them to food assistance services
For example:
 - provide a handout with information on how and where to apply for SNAP and/or WIC as well as where to find emergency food assistance
 - refer patients to a designated in-house outreach worker or partner organization
- Provide information on hospital/clinic's website with links to instructions and applications for SNAP/WIC

LEVEL 2: Planting Seeds

- Include the Hunger Vital Sign™ in the hospital/clinic electronic medical record, simultaneously providing health professionals with documentation of individual patient needs and the ability to track the level of need across the hospital/clinic population
- Partner with a trusted, local non-profit organization for electronic or faxed referrals for assistance. Once families are identified as at risk for food insecurity, an electronic 'prescription' for outreach services can be sent to the partner organization, which then follows up with the family
- Partner with, or establish on-site, a food pantry or farmer's market
- Partner with the state's Department of Human Services or the state Health Department to outstation a SNAP and/or WIC enrollment worker at the health facility each week

LEVEL 3: Putting Down Roots

- Sponsor an on-site Summer Food Service Program and/or Child and Adult Care Food Program (CACFP)-funded meal to provide nutritious meals to children while visiting the health facility
- Raise philanthropic support to feed parents as well as children during visits
- Train financial counselors or other relevant staff to act as SNAP/WIC application liaisons and/or establish a role for SNAP/WIC establish a role for SNAP/WIC in the healthcare facility

> BEST PRACTICES TO ENSURE SUCCESS

Implementing tailored health care-based responses to hunger requires planning to ensure all stakeholders will work toward success. Below are proactive steps to take when implementing new programs or changes to existing programs.

- *Talk with other health facilities that have undertaken similar efforts to learn how they implemented their nutrition access programs, garnered support from key stakeholders, and effectively reached out to families.*
- *Engage medical staff early and provide them with information on the connections between food insecurity and health.*
- *Reach out to hospital/clinic administrators to discuss potential ways to assist patients at various levels of effort and cost. Non-profit health facilities can report on tax returns some efforts to improve patient nutrition access.*
- *Determine where nutrition access fits into the clinic/hospital's organizational structure and who will be responsible for implementation of new programs and future sustainability.*
- *Engage Arkansas' DHS/DSS¹ and/or the local health unit in efforts to train the health facility's financial staff (who already assist families with state health insurance applications) to assist caregivers through the SNAP and WIC application processes.*
- *Partner with Arkansas' DHS/DSS and/or the State Health Department offices and solicit support from local stakeholders to increase the likelihood of approval from the USDA for implementing food assistance programs onsite.*
- *Partner with local non-profit agencies and individuals with an interest in addressing food insecurity at the neighborhood, county or state level.*



¹The Arkansas Department of Human Services/Department of Social Services (DHS/DSS) is the state department responsible for administering benefits, including SNAP, to families.

About Children's HealthWatch

Children's HealthWatch is a nonpartisan network of pediatricians, public health researchers, and children's health and policy experts. Our network is committed to improving children's health in America. We do that by first collecting data in urban hospitals across the country on infants and toddlers from families facing economic hardship. We then analyze and share our findings with academics, legislators, and the public. These efforts help inform public policies and practices that can give all children equal opportunities for healthy, successful lives.

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- ¹ Feeding America. (2014). *Map the Meal Gap*. Retrieved from: <http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/>
 - ² Coleman-Jensen, A., Nord, M., and Singh, A. (2013). Household Food Security in the United States in 2012, Economic Research Report no.155. U.S. Department of Agriculture, Economic Research Service. Retrieved from: <http://www.ers.usda.gov/publications/err-economic-research-report/err155.aspx#.UuARENo7Gg>.
 - ³ Casey, P.H., Szeto, K.L., Robbins, J.M., Stuff, J.E., Connell, C., Gossett, J.M., and Simpson, P.M. (2005) Child Health-Related Quality of Life and Household Food Security. *JAMA Pediatrics*, 159(1),51-56.
 - ⁴ Alaimo, K, Olson, C.M., Frongillo Jr, E.A. (2001) Food Insufficiency and American School-Aged Children's Cognitive, Academic, and Psychosocial Development. *Pediatrics*. 108(1),44-53.
 - ⁵ Casey, P.H., Szeto, K., Lensing, S., Boogle, M., Weber, J. (2001) Children in Food-Insufficient, Low-Income Families: Prevalence, Health, and Nutrition Status. *Archives of Pediatric and Adolescent Medicine*, 155(4):508-14.
 - ⁶ Alaimo K, Olson, C.M., Frongillo Jr, E.A. and Briefel, R.R. (2001) Food Insufficiency, Family Income, and Health in U.S. Pre-School and School-Aged Children. *American Journal of Public Health*, 91(5),781.
 - ⁷ Cook, J.T., Black, M., Chilton, M., Cutts, D., Ettinger de Cuba, S., Heeren, T.C., Rose-Jacobs, R., Sandel, S., Casey, P., Coleman, S., Weiss, I., Frank, D.A. (2013) Are Food Insecurity's Health Impacts Underestimated in the U.S. Population? Marginal Food Security Also Predicts Adverse Health Outcomes in Young U.S. Children and Mothers. *Advances in Nutrition*. 4(1), 51-61.
 - ⁸ Shankoff JP, Garner AS, et al. (2012) The Lifelong Effects of Early Childhood Adversity and Toxic Stress. *Pediatrics*. 129(1)e232-e246.
 - ⁹ Bickel, G., Nord, M., Price, C., Hamilton, W., Cook, J. (2000) Guide to Measuring Household Food Security. United States Department of Agriculture, Food Nutrition Service. Retrieved from: <http://www.fns.usda.gov/sites/default/files/FSGuide.pdf>.
 - ¹⁰ Cristofar, S.P. and Basiotis. (1992) Dietary Intakes and Selected Characteristics of Women Ages 19-50 Years and Their Children Ages 1-5 Years by Reported Perception of Food Sufficiency. *Journal of Nutrition Education*. 24(2),53-58.
 - ¹¹ Cook, J. and Jeng, K. (2007) Child Food Insecurity: The Economic Impact on our Nation. Feeding America and the ConAgra Foods Foundation. Retrieved from: <http://www.nokidhungry.org/sites/default/files/child-economy-study.pdf>.
 - ¹² Parish, S.L., Rose, R.A., Grinstein-Weiss, M., Richman, E.L., Andrews, M.E. (2008) Material hardship in US families raising children with disabilities. *Exceptional Children*, 75(1):71-92.
 - ¹³ Krukowski, R., Smith West, D., Harvey Berino, J., and Prewitt, T.E. (2010) Neighborhood Impact on Healthy Food Availability and Pricing in Food Stores. *J Community Health*. 35(3): 315-320.
 - ¹⁴ Connell, C.L., Yadrick, M.K., Simpson, P., Gossett, J., McGee B. B., Bogle, M.L. (2007) Food Supply Adequacy in the Lower Mississippi Delta. *Journal of Nutrition Education and Behavior*. 39(2): 77-83.
 - ¹⁵ United States Department of Agriculture, Agricultural Markets Service. Food Deserts. Retrieved from: <http://apps.ams.usda.gov/fooddeserts/fooddeserts.aspx>
 - ¹⁶ Weinfield, N.S., Mills, G., Borger C., Gearing, M., Macaluso, T., Montaquila, J., Zedlewski, S. (2014) Hunger in America 2014. Feeding America. Retrieved from: http://help.feedingamerica.org/HungerInAmerica/hunger-in-america-2014-full-report.pdf?s_src=W151DIRECT&s_subsrc=http%3A%2F%2Fwww.feedingamerica.org%2Fhunger-in-america%2Four-research%2Fthe-hunger-study%2F&_ga=1.214648471.1063929397.1409241861
 - ¹⁷ Project Bread and University of Massachusetts Memorial Health Care. (2009). Hunger in the Community: Ways Hospitals Can Help. Retrieved from: <http://www.projectbread.org/reusable-components/accordions/download-files/hospital-handbook.pdf>
 - ¹⁸ Share Our Strength, No Kid Hungry. (2012) Fighting Hunger Through Health Care: A Seamless Solution. Retrieved from: <http://bestpractices.nokidhungry.org/sites/default/files/resources/Health%20Care%20Issue%20Brief.pdf>
 - ¹⁹ The Hagstrom Report. (2015) IRS Nonprofit hospitals can claim nutrition access aid to avoid taxes. 5(1). Retrieved from <https://madmimi.com/p/d6d0c5?fe=1&pact=27429225056>.
 - ²⁰ 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.

