

Food for Thought: An Evaluation of Food Insecurity Screening Methods and Location

Statement of Problem

When kids go hungry, it takes a toll on nearly every aspect of their health. From [increased risk of asthma and anxiety to cognitive delay and hospitalization](#), [food insecurity](#) is a strong predictor of poor health outcomes. In Philadelphia, nearly [1 in 4 children](#) was food insecure in 2019, a number that continued to climb during the COVID-19 pandemic.

For these reasons, medical providers have been increasingly interested in screening for food insecurity and other [social determinants of health](#). However, little is known about how to screen families for a social need like food insecurity in a way that is comfortable and elicits an accurate report of the challenges they face. Furthermore, few studies have examined why rates of engagement with resources are low even after a referral is provided.

Description

We conducted a three-part study to learn more about these issues:

- First, we randomized caregivers arriving with patients to Children's Hospital of Philadelphia's (CHOP) Emergency Department (ED) to either a written, tablet-based screen for food insecurity, or the identical [screening tool](#) asked verbally.
- Second, we conducted surveys and telephone interviews to explore caregivers' experiences with food insecurity screening and resource referral
- Third, we partnered with a community food resource agency to provide a "warm handoff" through which caregivers were contacted directly within two weeks of the ED visit for resource navigation.

Our findings highlighted caregiver preferences and perceptions related to screening and social resource referral, addressing three main questions:

1) How should we screen for social risk?

Our randomized controlled trial found a significantly higher rate of reported food insecurity among caregivers screened by tablet (24%) compared to those screened verbally (18%). Caregivers shared during phone interviews that the tablet provided a level of anonymity that helped them feel less "judged," as food insecurity can be a stigmatizing condition and disclosure of this sensitive information can raise fears of negative repercussions such as the involvement of Child Protective Services.

Furthermore, while there was a high level of comfort with screening regardless of the clinical setting, more participants reported comfort completing the screen in the ED compared to their child's doctor's office (86% vs. 80%). Caregivers described a close relationship with a physician as both a facilitator and a barrier to relaying

social need. It is also important to note that experience of food insecurity was associated with lower levels of screening comfort.

2) What gets in the way of caregivers engaging with social resources?

Caregivers often refused resources because they did not see their situation as “bad enough” to require additional help. Many reported discomfort taking resources that other families might need more. Others reported negative past experiences with social resources and expectations that their income or employment status would disqualify them from receiving additional support. Caregivers also explained that competing life priorities are often a barrier to resource engagement.

3) How do caregivers think the referral process could be improved?

Several caregivers suggested that keeping track of a physical list of resources was difficult for them and that electronic platforms provided an additional sense of privacy. Caregivers also stressed the importance of providing geographically appropriate resources and ensuring that instructions for accessing them are widely available.

Next Steps

These findings have influenced social risk screening protocols at CHOP and throughout southeast Pennsylvania via the [COACH collaborative](#), with implementation of social risk screening tools using a tablet. While we found overall high levels of comfort with screening, it is notable that comfort levels were lower among those reporting food insecurity, with caregivers expressing fear of stigma or negative repercussions as a consequence of reporting social risk.

This and other emerging literature emphasize the potential for unintended consequences with social risk screening and have led to a growing interest in a model of universally offered social assistance, rather than one of screening and intervention. Our team will be launching a new [study](#) to further elevate the caregiver perspective, systematically exploring how screening affects families’ acceptance, perception and engagement with social resources.

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Danielle Cullen (she/her) is a faculty member at PolicyLab at Children's Hospital of Philadelphia (CHOP) and assistant professor of pediatrics and pediatric emergency medicine at CHOP and the Perelman School of Medicine at the University of Pennsylvania. She is also a senior fellow of the University of Pennsylvania Leonard Davis Institute of Health Economics and co-course director for Master Level Introduction to Implementation Science at the University of Pennsylvania.

Dr. Cullen's research focuses on socio-economic health disparities, in particular childhood food insecurity. Her long-term goal is to improve health equity among socially disadvantaged children through the development of effective, acceptable, and feasible strategies to identify social risk and improve family engagement with resources. She is dedicated to community involvement in research and programmatic design, and leveraging methods from Community-Based Participatory Research and Implementation Science to enhance reach and sustainability of developed programs. Her current interdisciplinary research portfolio includes: mixed-methods evaluations of social determinant screening modalities, locations and referral processes; a hybrid implementation-effectiveness study of the USDA's summer food service program across five CHOP clinical settings; and a qualitative evaluation of low-income families' experiences with a clinically-based subsidized organic produce box program.

In addition to her research, Dr. Cullen is a member of the advisory board for the hunger pillar of CHOP's Healthier Together initiative and CHOP's social risk screening and resource map sponsorship board. She serves on multiple city-wide committees, including as co-chair of the food insecurity workgroup for the multi-institutional COACH (Collaborative Opportunities to Advance Community Health) initiative to address social determinants of health in southeastern Pennsylvania.

Dr. Cullen earned her Master of Public Health in Maternal and Child Health at the Johns Hopkins Bloomberg School of Public Health and her medical degree from Jefferson Medical College. She completed residency in General Pediatrics at the Children's Hospital of Pittsburgh of UPMC. There, with support from the American Academy of Pediatrics, she developed a screening and intervention protocol for food insecurity in the Children's Hospital of Pittsburgh Emergency Department. This protocol was integrated into the electronic medical record system as the standard of care and has now been expanded to the hospital's inpatient and outpatient settings. She completed Pediatric Emergency Medicine fellowship at CHOP while also serving as a T32 research scholar, earning her Master of Health Policy Research from the University of Pennsylvania.



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Related Tools & Publications

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[Food for Thought: How We Screen for Food Insecurity Matters
Blog Post](#)

May 15, 2019

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[Food for Thought: A Randomized Trial of Food Insecurity Screening in the Emergency Department
Article](#)

Jan 2019

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[Food for Thought: A Qualitative Evaluation of Caregiver Preferences for Food Insecurity Screening and
Resource Referral
Article](#)

Apr 2020

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[Young Children's Development and Behavior: Associations with Timing of Household Food Insecurity in a
Racially and Ethnically Diverse Early Head Start Sample
Article](#)

Dec 2023

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[Competitors Unite: A Cross-Health System Collaboration to Address Community Food Insecurity
Article](#)

Nov 2025