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The Effect of Food Insecurity Training on Knowledge, Awareness, Screening, and Intervention Practices within Two Pediatric Wards at an Academic Medical Center

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Background and Introduction

- Food insecurity is a major driver of preventable disease.[1,2] Providers can screen to identify patients at risk for food insecurity using a two-question survey tool called "The Hunger Vital Sign".[3,4] Screening barriers identified in the literature include lack of provider knowledge, comfort, and capacity for effective intervention. Addressing this provider knowledge gap through training is essential for implementing robust and sustainable clinical food insecurity screening practices.[5]
- This study aims to evaluate the effect of food insecurity education on providers' knowledge and awareness of food insecurity and their likelihood to screen and make referrals for at-risk patients, as well as to encourage healthcare providers to foster a culture of food insecurity screening and intervention in their practices.

Objectives

1. To determine providers' knowledge of food insecurity and awareness of referral practices and resources to help patients experiencing food insecurity.
2. To determine if providers' participation in formal food insecurity training influences their likelihood of incorporating food insecurity screening into their patient interviews.
3. To determine if providers' action following a positive screen is affected by participating in food insecurity training.

Methods

- A 15-question survey was distributed to MDs, NPs, PAs, RNs, LNAs, and social workers/case managers in in-patient pediatrics (Group A) and the NICU (Group B) at an academic medical center
  - Group A (trained group) providers received food insecurity training in Fall 2017 from HFVT, a local nonprofit dedicated to ending hunger and malnutrition
  - Group B has had no formal training (untrained group)
- Survey results were analyzed using Wilcoxon signed-rank tests and $\chi 2$ tests. Additionally, text responses were read, sorted, and analyzed by theme.
- Survey respondents were given the option to participate in a semi-structured interview about food insecurity screening and training

Results

Differences in Screening Behaviors Between Groups

	Group A	Group B	*p*-value
Ever screened (percentage of respondents)	81%	50%	0.01
Part of regular patient interview (percentage of respondents)	81%	37%	< 0.001
Percentage of patients screened (median)	75%	6%	< 0.001
Frequency of action taken in response to a positive screen (median)	98%	32%	0.002

Table 1: Statistically significant variation was seen between trained (Group A) and untrained (Group B) providers with respect to screening behavior, incorporation of screening into interview practice, percentage of patients screened, and frequency of action taken in response to a positive screen with higher values seen in trained providers for all items.

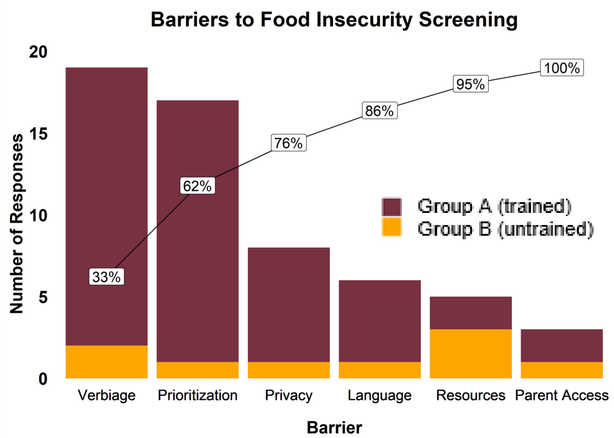

Figure 1: Trained (Group A) and untrained (Group B) providers reported different barriers to food insecurity screening. Line represents cumulative percentage of responses.

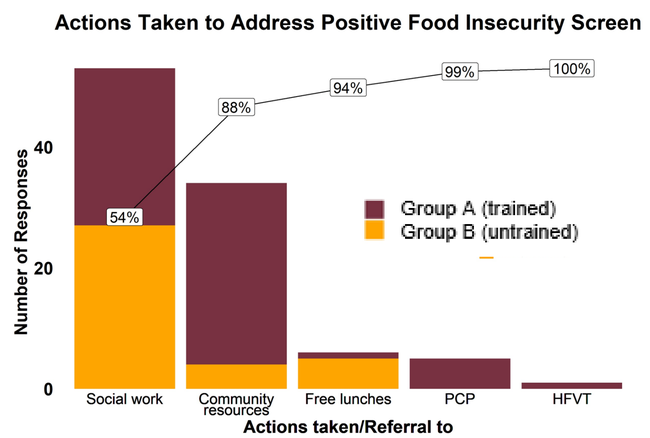

Figure 2: Trained (Group A) and untrained (Group B) providers report taking different actions to address positive food insecurity screens. Line represents cumulative percentage of responses.

Discussion

- Differences in screening rates and behaviors are likely due to the variation in screening protocol and food insecurity training between the two groups
- Overall, trained respondents were more likely to have encountered barriers to screening, likely due to increased screening rates
  - Some of the barriers cited by trained providers were structural (lack of time to screen, privacy concerns, parents unavailable for screening), which are not education-oriented factors
  - Untrained respondents were more likely to cite scarcity of resources as a barrier, likely due to lack of training
- Trained respondents were much more likely to take action in response to a positive food insecurity screen
  - Untrained respondents were more likely to discuss/provide free lunches whereas trained providers were likely to address the root cause by referring their patients to social work or community resources (such as HFVT), likely training-related
  - Trained providers have an information packet on food insecurity resources that they can provide patients
  - The residents on the trained unit have begun a quality assurance process to follow-up with the PCP for positive food insecurity screens

Provider Perspectives

"We should include online modules on food insecurity screening into our yearly mandatories. There are already mandatory modules on other social determinants of health, such as sleep, so adding one more wouldn't be a big deal. The biggest barrier is medical acuity. Time is not a valid barrier to food insecurity screening."

-- Baird 5 Physician

"Often moms come into NICU not feeling or perceiving themselves to be food insecure, but once they get the medical bills from their NICU stay, their financial circumstances can change. Many babies go home needing speciality care, and the formulas for them are very expensive!"

-- NICU Nurse

"I don't like screening when I don't know any interventions. Even though I know resources and food banks to refer to, I think most of the patients already know these. It seems silly to me to tell a patient something that they are already aware of."

-- Baird 5 Social Worker

"In the hospital setting, I don't feel like I have resources to offer patients who screen positive for food insecurity. The best we can do is refer to social work, they are the ones that know everything. If we are in a community setting, I would refer to their primary provider."

-- Baird 5 Nurse

Recommendations

- Provide food insecurity training to untrained units/groups to address screening and intervention discrepancies
  - Hold brief yearly continuing education sessions
  - Training methods should include informal, interactive presentations and online education modules
- Address verbiage concerns with a screening script for providers
- Use paper screening tools in a variety of languages to alleviate patient privacy and language barrier concerns
- Make food insecurity materials readily available to providers and ensure communication between members of the healthcare team who screen and those who intervene to address concerns about lack of resources
  - Facilitate efficient documentation of screening and intervention results in the patient health record

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