The following abstract was accepted into the Pediatric Academic Societies Meeting 2018 for poster presentation.

TITLE: Who's Asking? Improving Pediatric Subspecialty Clinic Food Insecurity Screening

KEYWORDS: Food insecurity, screening, quality improvement.

AUTHORS (LAST NAME, FIRST NAME): Vu, Michael[2]; Ruiz, Jen[3]; Pierce, Heather[1]; Glynn, Marcus[4]; Gottschalk, Michael[1]; Fisher, Erin S.[1]
INSTITUTIONS (ALL):
1. Department of Pediatrics, UCSD, San Diego, CA, United States.
2. UC San Diego School of Medicine, San Diego, CA, United States.
3. Ambulatory Clinics, Rady Children's Hospital and Health Center, San Diego, CA, United States.
4. Clinical Informatics, Rady Children's Hospital and Health Centers, San Diego, CA, United States.

Background: Food insecurity is associated with worse health, education, and socioeconomic status. In 2015, United States Department of Agriculture (USDA) reported 3 million households with children were food insecure. The USDA defines food insecurity as "the limited or uncertain availability of nutritionally adequate and safe foods." A recent American Academy of Pediatrics policy statement advises food insecurity screening for children. While this is embraced by primary care, locally we identified a gap in screening by subspecialty practice and aimed to address this in one pediatric subspecialty clinic within a busy tertiary referral center.

Objective: By 5/18, > 75% of diabetes clinic patients will receive standardized food insecurity screening and > 75% of those screen-positive will be offered nutritional support resources

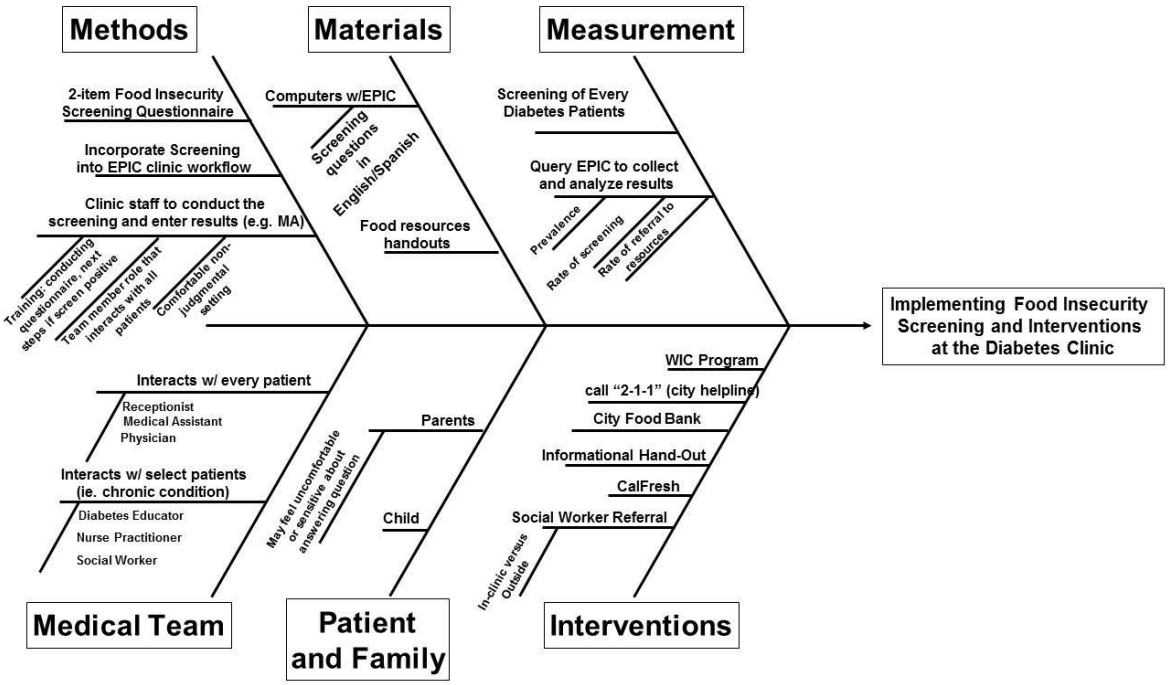
Design/Methods: Plan-Do-Study-Act (PDSA) cycle (C): P: Medical student lead interdisciplinary team created 4/17; stakeholders identified. Ishikawa, survey, and process map used to identify baseline processes and barriers to screening. Interventions chosen by team due to validity, feasibility and perceived likely impact: validated 2-item food insecurity questionnaire ("2IFIQ") chosen; screening by medical assistants (MAs) with "scripts" developed by social work to address concern with sensitive nature of questions; local community food resources provided real-time in clinic; medical team discussion with positive screen families. D: 2IFIQ developed in Electronic Medical Record (EMR) 6/17. Handout created (local food banks, CalFresh, WIC, and 2-1-1 city helpline). MAs trained on screening, documentation, and handout 8/17. Go-live 9/17. S: Reports reviewed weekly; team identified need for EMR automation. A: Handout integrated into EMR and printed in after visit summary.

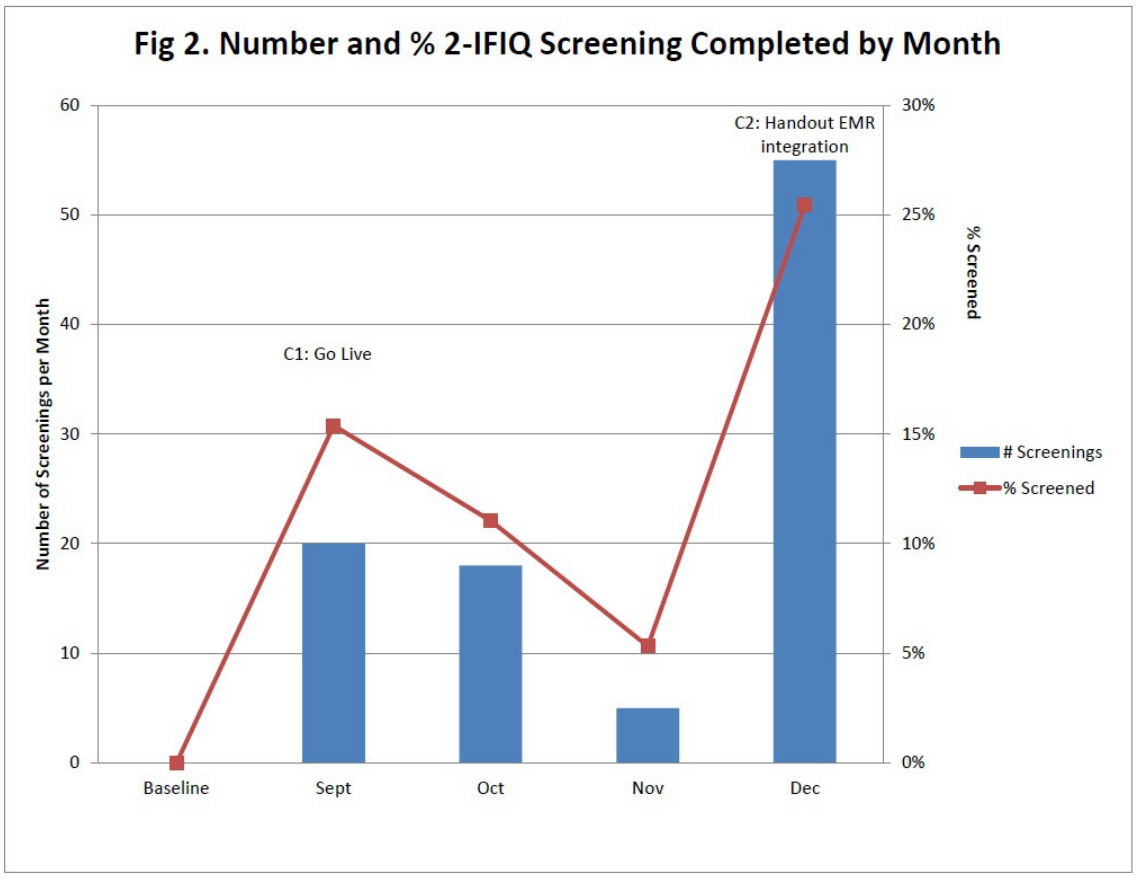
Results: QI tools (Ishikawa shown, Fig 1) identified lack of process and training, and concern for parent discomfort with topic. Of 98 screenings over 13 weeks, all 5 screen-positive (6%) were given resources; 4 responded "don't know". Screening increased from 0% to 25% to date (Fig 2).

Conclusion(s): Our interdisciplinary team used a simple EMR-embedded screening tool and existing workflows to launch food insecurity screening and referral with early evidence of success. To reach our 5/18 aim, next cycle will address how to pursue "don't know" responses, and will survey the team on perceived competency, confidence, value, challenges to current process.

Fig 1: Ishikawa Diagram

Problem statement: How to implement food insecurity screening at the Diabetes clinic?





Who's Asking? Improving Pediatric Subspecialty Clinic Food Insecurity Screening

Michael Vu[2], Jen Ruiz[3], Dr. Heather Pierce[1], Marcus Glynn[4], Dr. Michael Gottschalk[1], Dr. Erin S. Fisher[1]

[1]Department of Pediatrics, UCSD, San Diego, CA, United States.
[2]UC San Diego School of Medicine, San Diego, CA, United States.
[3]Ambulatory Clinics, Rady Children's Hospital and Health Center, San Diego, CA, United States.
[4]Clinical Informatics, Rady Children's Hospital and Health Centers, San Diego, CA, United States.

Background

- Food insecurity is associated with worse health, education, and socioeconomic status[1]
- In 2016, United States Department of Agriculture (USDA) reported 3 million homes with children were food insecure.
- The USDA defines food insecurity as "the limited or uncertain availability of nutritionally adequate and safe foods"[3]
- In 2015 American Academy of Pediatrics policy statement advises food insecurity screening for children[1]
- Locally we identified a gap in screening by subspecialty practice and aimed to address this in one pediatric subspecialty clinic within a busy tertiary referral center

Goals

- To complete standardized food insecurity screening for >75% of diabetes clinic patients and to offer nutritional support resources to >75% of those screen-positive by the end of May 2018

Methods

- Stake-holders identified included a multi-disciplinary group of medical assistants (MAs), dieticians, nurse managers, social workers, and physicians
- A validated 2-item food insecurity questionnaire ("2FIQ") was used to screen patients and developed into the electronic medical record (EMR) for data entry[4]

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

- Screening conducted on all patients of the clinic by MAs during patient intake
- Patients screening positively were provided with real-time in clinic informational handout detailing local community food resources

Plan-Do-Study-Act (PDSA)

Plan

- Surveyed stakeholders on baseline processes:
  - Developed a fishbone diagram detailing factors required to implement screening (Figure 1)
- Interventions chosen by team due to validity, feasibility and perceived likely impact:
  - 2FIQ
  - Screening by MAs with "scripts" developed to address concern with sensitive nature of questions
  - Local community food resources provided real-time in clinic and medical team discussion with positive screening families

Do

- 2IFIQ developed in Electronic Medical Record (EMR)
- Handout created with information on local food banks, CalFresh, WIC, and "2-1-1" city helpline
- MAs trained on screening, documentation, and handout intervention
- Go-live on 9/17/2017

Food Resources

	2-1-1 San Diego	Women Infants and Children (WIC)	CalFresh ("Food Stamps")	San Diego Food Banks
What is it?	• A free, 24 hour, phone service in 200+ languages • Connects you to programs that help including CalFresh, food banks, and WIC. • Many other resources are available too!	• The WIC program provides supplemental foods, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five.	• Serves low-income individuals who meet federal income eligibility. • Monthly issuing of benefits to purchase foods • Provides Electronic benefit transfer (EBT) cards to be used in groceries stores	• Distributes food to those in need at the 103 distribution sites throughout the county. • Open to everyone. No ID or documentations required.
Highlight services	Speak with a live person. Connects you to many available local resources.	Financial assistance for food for mothers, infants, and children. Breastfeeding support.	Receive a monthly financial support to purchase foods.	Free food, fresh fruits and vegetables. Multiple distribution sites.
How to contact?	Dial "2-1-1" http://211sandiego.org	(800) 508-4411 http://sandiegowic.org	1-(866) 262-9881 Apply: http://www.benefitscal.org	1-866-350-FOOD (3663) http://sandiegofoodbank.org/programs/

Study

- Reports on screening rates reviewed weekly
- Team identified need for EMR automation
- Surveyed MAs for feedback on processes after 2 months since go-live (Table 1)

Act

- Handout integrated into EMR and printed in after visit summary

Fig 1: Ishikawa Diagram

Problem statement: How to implement food insecurity screening at the Diabetes clinic?

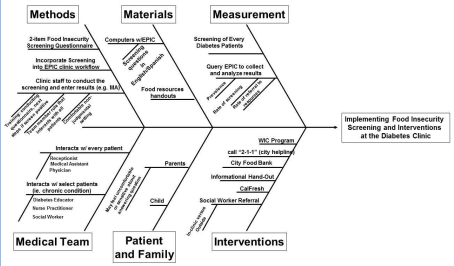
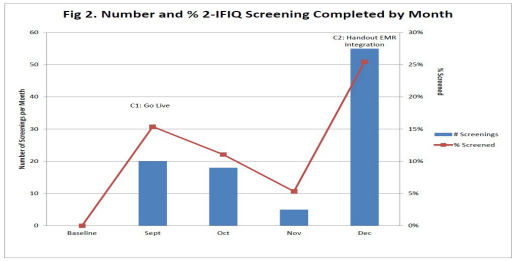


Table 1: Survey responses, based on likert-scale, by MAs on perceived competency, confidence, value, and challenges to current process. (N=4)

Statement	Response
"I feel confident and properly trained on how to conduct the 2-question food insecurity screening with patients."	3- Strongly Agree 1- Neutral
"I feel confident and properly trained on how to provide resources for those patients found to screen positively for food insecurities."	3-Strongly Agree 1- Neutral
"I believe it is valuable to screen patients for food insecurities."	1- Strongly Agree 1- Agree 2-Neutral
"Parents and patients are reacting to the food insecurity screening positively and perceive it to be important."	1- Disagree 3- Neutral
Before this project and the beginning of screening, I understood and was knowledgeable about food insecurities.	2- Agree 2- Neutral
After the start of this project, I now am better aware and understand food insecurities.	1- Strongly Agree 1- Agree 2- Neutral
What is the most challenging or difficult part about the food insecurity screening process?	"Sensitivity of the questions" "Offending parents"

Results

- At baseline there was no standardized food insecurity screening being conducted
- Since implementation, screening has increased from **0% to 25%** of clinic patients, which does yet meet the target of >75% (Figure 2)
- Of 98 screenings, 5 screened positive (6%) and all were given resources



Conclusion & Discussion

Our interdisciplinary team used a simple EMR-embedded screening tool and existing workflows to launch food insecurity screening and referral with early evidence of success.

Learning Points:

- Feedback revealed concerns of the sensitive nature of the screening questions and parental discomfort
- Gaining buy-in from those at the front-line conducting screening is essential for sustainability
- Food insecurity is a technical term that requires increased education and awareness for both patients and healthcare providers

Next Steps:

- Continue additional PDSA cycles to continue efforts to reach screening of >75% of clinic patients
- Follow-up positive screening patients to assess rate of completing referrals to resources

References

1. Security for All Children. Pediatrics Oct 2015, peds.2015-3301; DOI: 10.1542/peds.2015-3301
2. Coleman-Jensen, Alisha. Rabitt, Mathew. Gregory, Christian. Singh, Anita. Household Food Security in United States in 2016. US Department of Agriculture.
3. Life Sciences Research Office, S.A. Andersen, ed., "Core Indicators of Nutritional State for Difficult to Sample Populations," The Journal of Nutrition 120:1557S-1600S, 1990
4. Hager, Erin et al. Development and Validity of a 2-item screen to identify families at risk for food insecurity. Pediatrics. Aug 2010