Addressing the Social Determinants of Health: Screen and Intervene in Childhood Food Insecurity

Jill Christensen, MD, MPH
Charlotte Navarre, RN-BC
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AMERICAN ACADEMY OF FAMILY PHYSICIANS

Disclosures

- We have no conflicts to report
- We have nothing to disclose
- We have nothing to confess

Objectives

- Use a targeted, brief tool to initiate the process of screening for social determinants of health in the clinic setting
- Identify 2 ways to partner with community agencies to connect patients to needed resources
- Leverage your relationship with the health system and/or sponsoring institution to access funding and resources

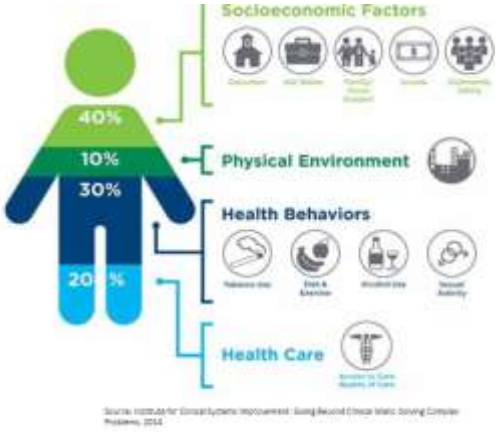
Providence Oregon FMRP

- Community-based program in Portland, OR
- 6-6-6 and 6-6-7 residents in two Family Medicine Residency Practice sites in Portland
- 12 MD faculty, 4 Clinician Mentor faculty and 4 non-physician core faculty

<u>The Clinics</u>

- Tier 3 Oregon Health Authority Certified PCMH since 2011
- CPCi/CMS Grant Funded Clinics 2012-2016
- CPC +/CMS Initiative 2017-2021
- Team-based, co-located care (PA, MA's, PRR, Care Coordinators)
- Extended team members: Care Managers, PharmD, Behavioral Health

Health and Well-Being outside our clinical walls



Health Care Transformation

Flexible Services
AKA - Air Conditioner Bill

What are flexible services?

Flexible services are health related non-State plan services intended to improve care delivery and member health. They are cost effective alternatives to traditional services.

Must Support the Following:	Examples:
Achieving Treatment Goal	Small Refrigerator Shoes
Preventing Decompensation	Temporary housing/utility assistance
Diverting From Higher Level of Care	Food Assistance Certain CM/Pt. Navigation supports
Assisting in Environmental Stability	
Managing a Chronic Condition	Scales or BP Monitor for home
	Support Groups/Wellness activities

Key Definitions

- Food Security: "Access by all people at all times to enough food for an active, healthy life."
- Food Insecurity: "limited of uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways."
- Hunger: "The uneasy or painful sensation caused by a lack of food. The recurrent and involuntary lack of access to food."

Economic Impacts of Hunger

- The cost of hunger to our nation is at least $167.5 **billion**
- Healthcare costs alone related to hunger nationwide are $130.5 **billion** annually
- The annual cost of hunger to every U.S. citizen is on pace to amount to roughly **$42,400 per citizen over a lifetime**
- Federal nutrition programs like SNAP (food stamps), WIC and school breakfast/lunch programs help feed our families and bring millions of dollars into our local economies
- However, almost ½ of all eligible people are not signed up for these programs
- These programs were designed as supplements, not the total of a families food budget. Food Stamps run out 2-3 weeks into the month

Food Insecurity in Oregon

- **16% of Oregonians are food insecure.**
  - That's over 619,040 people (or more than the population of Seattle).
- **26% of Oregon children are food insecure.**
  - More than 223,480
- **In 2013, an average of 815,000 Oregonians used SNAP (food stamps)**
  - That's more than 1 in 5 Oregonians.
- **On average, 270,000 people per month received an emergency food box**
  - That's over half the population of Portland.

Data taken from Feeding America's Map the Meal Gap, 2013

Children in Poverty

- 1 in 5 children in the US grow up in poverty
- Nearly 1 in 2 (42%) are poor or near poor (living under 200% of the Federal Poverty Line)
- Compared to 35 other developed countries, we are second to last - only Romania is worse.

Food Insecurity in Our Clinic Communities

- 20% of children in Clackamas County are food insecure
- More than 18,000 children
- 24% of children in Multnomah County are food insecure
- More than 35,000 kids

Food Insecurity is a Health Problem in Children

- **Developmental delay**, poor attachment
- Increased risk of **anemia**
- Increased accidental injury and death
- Increased **obesity** and **high cholesterol** and its' complications, including **diabetes**
- More **hospitalizations**
- Greater likelihood of experiencing **stomachaches, headaches and colds** among 1-5 year olds
- In one study, children under 12 years who were hungry or at risk of hunger were **2x** as likely as not-hungry children to be reported as having **impaired functioning**
- At higher risk of chronic illnesses such as **asthma**
- More frequent occurrence of **oral health problems**

Effects on Children's Mental and Social Health

- **Depression**
- More likely to have thoughts of death, desire to die or attempted suicide
- **Anxiety**
  Strong association with food insecurity in children
- **Aggression**
  7x more likely to get into fights frequently
- **ADHD**
  Higher rates of diagnosis in food insecure children
- **Impaired social skills and problems with social adjustment**
  More difficulty getting along with other children
- **Increased conduct problems**
  Stealing: **12x** more likely to steal
  Bullying
  Truancy

Educational Effects

<u>Negative effect on cognitive development and academic performance</u>

- Impaired concentration and ability to retain information
- Lower math scores
- Lower reading scores
- Learn at a slower rate
- 2x more likely to receive special ed
- More likely to repeat a grade
- Increased absenteeism
- Earlier dropout rates

Effects on Teens

A report published in October 2016 by the Urban Institute and Feeding America found:

- Many take an active role in feeding their families by taking jobs or selling possessions
- In 13 out of 20 focus groups, teens mentioned “sex for money” as a viable strategy to get food
- Many go hungry so younger siblings can eat
- Typically exercise less and eat more poorly
- Higher risk for anxiety, depression and substance abuse
- Higher drop out rates

Long Term Effects of Hunger

National Cancer Institute and University of Calgary completed a long term study of effects of hunger on general health, tracking children from birth to 21 years.

Likelihood to have overall poor health 10- 15 years later:

One episode hunger: 2.5 x more likely

Two episodes hunger: 4 x more likely

- More likely to be poor when adults with lower productivity and low earnings
- More chronic disease (diabetes, high blood pressure, high cholesterol, heart disease)
- More likely to be overweight or obese with associated morbidity and mortality

Screen and Intervene in Childhood Food Insecurity

- 2 year project funded by the Providence Milwaukie Hospital Foundation and the Meyer Memorial Trust
- Partnership with the Providence Community Health Division and the Providence Center for Outcomes and Research
- Community partnerships with Impact NW and Familias en Accion for language appropriate patient navigators and the Oregon Food Bank for training and food resources

Goals

- Screen for Food Insecurity at every Well Child Check: incorporate into workflows
- Use validated screening questions
- Create EMR based tools and resources for providers
- Utilize a community based agency to assess for additional basic needs and connect to resources
- Collect demographic and outcome information to help with planning and other program development
- Spread to all ages, other clinics in the medical group, and to the inpatient setting

Three Major Components

1. Screening
2. Direct connection to resources for those experiencing hunger and/or food insecurity
3. Standard protocol, coding & documentation in EMR for those screening positive

Program Evaluation Component

Children & Families	Staff and Providers
Change in Food Security Status	Awareness of the issue and its importance
Knowledge of community resources	Comfort levels with addressing this issue
Confirmed connection to programs and resources – Food, early childhood, dental, Soc. Serv.	Equipped with tools and knowledge needed to address the issue
Impact on depression & anxiety	
Impact on parental level of distress	

The Questions

1.) “Within the past 12 months we worried whether 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.”

- Responses are: “Often True” “Sometimes True” or “Never True”
- “Often” or “Sometimes” considered positive screens
- Diagnosis in Problem List: Food Insecurity ICD 10: Z59.4 or ICD 9: 994.2

EMR Tools:

Screening, Documentation and Resources

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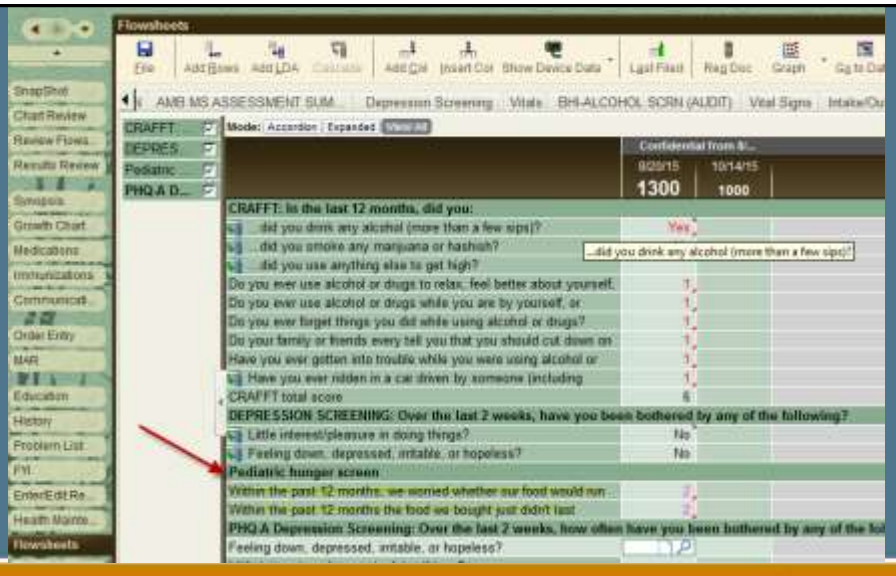

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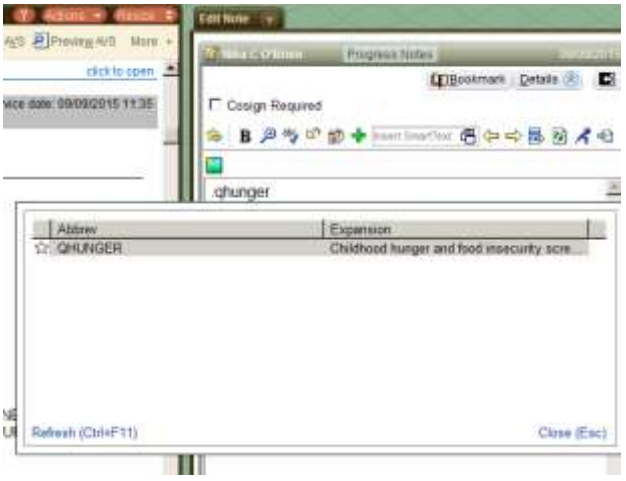
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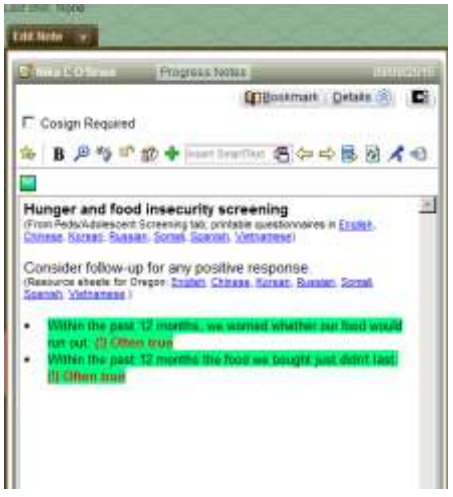
Edit Note
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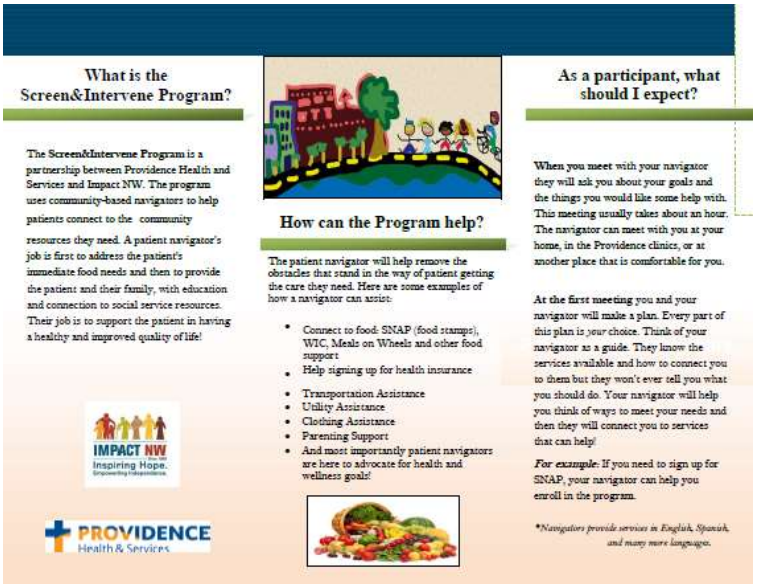
Cosign Required
Hunger and food insecurity screening
Consider follow-up for any positive response
Within the past 12 months, we worried whether our food would run out (1) Often true
Within the past 12 months the food we bought just didn't last (1) Often true

Food Resources: Portland Metro

You might qualify for SNAP (Supplemental nutritional Assistance Program, formerly known as Food Stamps)
• Go to www.211info.org or call 211
If you are pregnant or have children under five, you may qualify for WIC
(The Special Supplemental Nutrition Program for Women, Infants, and Children)
• Go to www.211info.org or call 211
Most farmer's markets accept SNAP & WIC vouchers, several will match/add to SNAP dollars so you can buy more!
• http://bit.ly/PYvyoN. (list of matching programs)
• http://www.oregonfarmersmarkets.org/market-finder/ (find market near you that takes SNAP/WIC)
There may be a food pantry in your neighborhood where you can get a box of food for free!
• Go to www.211info.org or call 211
Summer meals for kids –
• Go to http://www.summerfoodoregon.org/ or call 211
Take free gardening classes and learn to grow a portion of your own food!
• www.oregonfoodbank.org/takeaclass or call 503-282-0555 and ask about "Seed to Supper."
Learn to cook healthy food and shop on a budget-(stove or oven not required!)
• www.oregonfoodbank.org/takeaclass or call (503)-282-0555
For more nutrition information & low-cost healthy recipes visit:
https://www.foodhero.org/

***What is 211?** 211 is a free multi-lingual phone or online service in most areas of the United States for the purpose of providing quick and easy access to information about health, human services and employment assistance. They constantly update local information. Professional Information and Referral Specialists work with callers to assess their needs, determine their options and provide appropriate programs/services, give support, intervene in crisis situations and advocate for the caller as needed.



What is the Screen&Intervene Program?

The **Screen&Intervene Program** is a partnership between Providence Health and Services and Impact NW. The program uses community-based navigators to help patients connect to the community resources they need. A patient navigator's job is first to address the patient's immediate food needs and then to provide the patient and their family, with education and connection to social service resources. Their job is to support the patient in having a healthy and improved quality of life!

IMPACT NW
Inspiring Hope.

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Health & Services

How can the Program help?

The patient navigator will help remove the obstacles that stand in the way of patient getting the care they need. Here are some examples of how a navigator can assist:

- Connect to food: SNAP (food stamps), WIC, Meals on Wheels and other food support
- Help signing up for health insurance
- Transportation Assistance
- Utility Assistance
- Clothing Assistance
- Parenting Support
- And most importantly patient navigators are here to advocate for health and wellness goals!

As a participant, what should I expect?

When you meet with your navigator they will ask you about your goals and the things you would like some help with. This meeting usually takes about an hour. The navigator can meet with you at your home, in the Providence clinics, or at another place that is comfortable for you.

At the first meeting you and your navigator will make a plan. Every part of this plan is *your* choice. Think of your navigator as a guide. They know the services available and how to connect you to them but they won't ever tell you what you should do. Your navigator will help you think of ways to meet your needs and then they will connect you to services that can help!

For example: If you need to sign up for SNAP, your navigator can help you enroll in the program.

**Navigators provide services in English, Spanish, and many more languages.*

Here's What Our Process Looks Like

- http://www.providenceoregon.org/video/?view=3c6108358fb00x480x293

Our Hypotheses and Outcomes

- Screening for social determinants of health belongs in the patient-centered medical home
- Using a validated screening tool for food insecurity can be the door into other social needs
- Partnerships with community agencies is cost effective, avoids duplication of services and does not burden primary care
- Community Benefit Funds or Medicaid Funds can be leveraged to address social determinants of health

Provider and Staff Training

Provider/Staff Job Type (n=95)	
Medical Assistant (MA)	29%
Resident MD	23%
Faculty MD	18%
Patient Relations Representative (PRR)	9%
Other	8%
Physician Assistant/Family Nurse Practitioner (PA/FNP)	7%
Registered Nurse (RN)	4%

Provider/Staff Pre and Post Survey Results

Table 2. Provider Pre-Post Survey Results

Survey Question	Pre n=62	Post n=40	Δ	p-value
Food security is a medical issue (1) vs. food security is a social problem (5)	1.61	1.13	-0.48	0.001*
Food insecurity is important enough that it's worth taking the time to screen (1) vs. actual food insecurity is rare (5)	1.89	1.33	-0.56	0.003*
Most patients will be comfortable talking about food security (1) vs. patients will be uncomfortable talking about food security (5)	3.36	2.73	-0.63	0.002*
I am comfortable having a food security conversation with patients (1) vs. I am worried that asking about food security will feel awkward (5)	2.28	1.69	-0.59	0.001*
I am confident I have the knowledge and tools to help patients with food security (1) vs. I am worried about what I can actually do to help patients (5)	3.33	2.13	-1.2	<0.001*

NOTE: Each survey question was posed as two opposite statements. Providers and staff identified which statement they most agreed with using a five-point Liker scale. A score closer to 1 indicated stronger agreement with the first statement, a score closer to 5 indicated stronger agreement with the second statement. The change between pre and post survey results is not a reduction, rather an indication of movement on the five-point Likert scale.

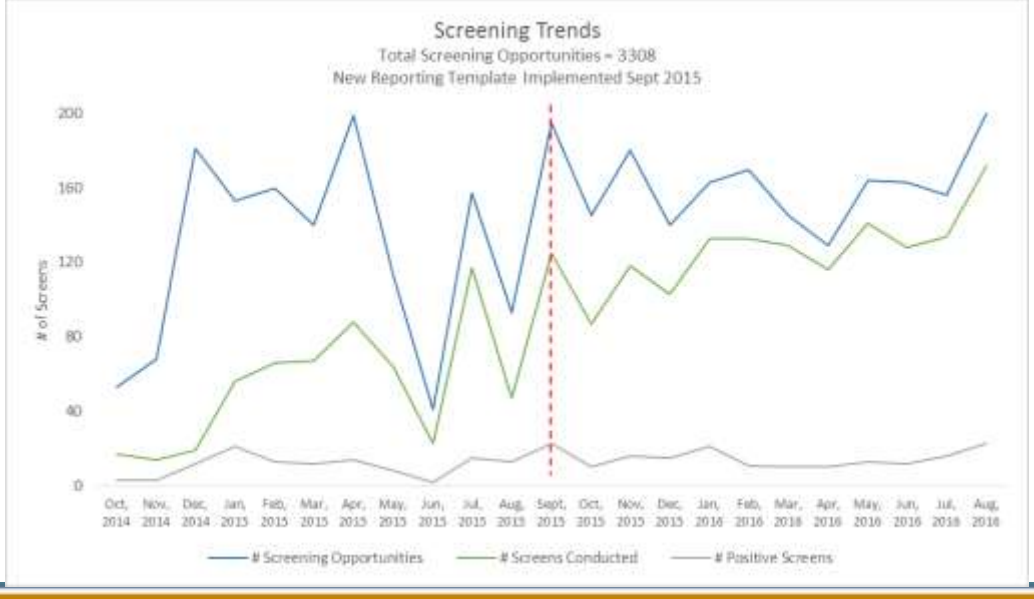
*denotes a significant difference between pre and post survey results at p=0.05.

Screening Demographics

Table 3. Screening Demographics from Epic

Demographic Category	**All WCCs** n=3308	**Those Screened** n=2097	**Screened Positive** n=296
Age (ave, yrs.)	4.4	4.8	5.7
Sex, female	50.9%	50.9%	53.7%
Language			
English	80.4%	79.3%	67.2%
Spanish	11.7%	13.3%	29.7%
Russian	1.7%	1.8%	0.0%
Vietnamese	1.1%	1.0%	0.0%
Cantonese	1.3%	1.6%	0.0%
Unknown*	2.7%	2.2%	2.7%
Other**	1.1%	0.8%	0.3%
Ethnicity			
Hispanic/Latino	17.7%	19.6%	35.5%
Insurance			
Medicaid	66.7%	67.2%	81.1%
Commercial	26.9%	26.9%	12.2%
Managed Care	0.2%	0.2%	0.0%
Self-pay	5.4%	4.8%	6.8%
Other Government	0.8%	0.9%	0.0%

*Other includes Arabic, Cambodian, Korean, Mandarin, Somali, Thai, Ukrainian, Other, Burmese, and Sign Language.
**Unknown is a category pulled from Epic



Screening Rates by Clinic and Year

	OVERALL SUMMARY October 2014-August 2016 3308 Screening Opportunities 63.4% Completed Screens 14.1% Screened Positive			YEAR 1 SUMMARY October 2014-August 2015 1358 Screening Opportunities 42.6% Completed Screens 20.1% Screened Positive			YEAR 2 SUMMARY September 2015-August 2016 1950 Screening Opportunities 77.9% Completed Screens 11.8% Screened Positive		
	Milwaukie Clinic (n=1444)	Southeast Clinic (n=1820)	Unknown (n=44)	Milwaukie Clinic (n=577)	Southeast Clinic (n=737)	Unknown (n=44)	Milwaukie Clinic (n=867)	Southeast Clinic (n=1083)	Unknown (n=0)
Completed Screens (%)	60.9%	65.5%	56.8%	45.4%	39.5%	56.8%	71.3%	83.2%	0.0%
Positive Screens (%)	12.6%	15.2%	16.0%	18.7%	21.6%	16.0%	10.0%	13.1%	0.0%

Caregiver's Demographic Information

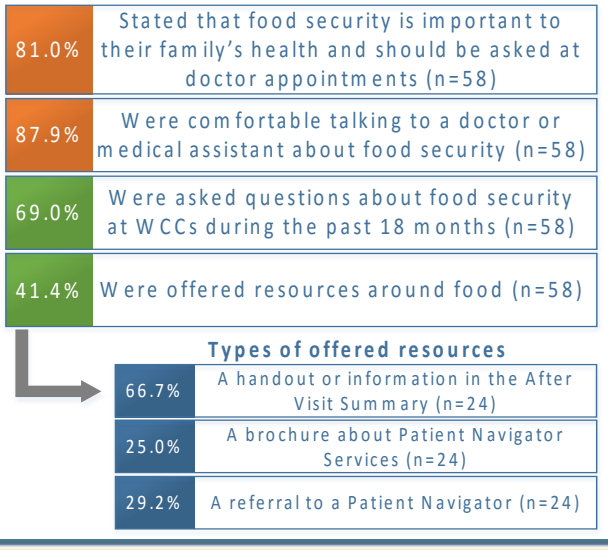
Demographic Category	
Sex, female (n=37)	94.6%
Age, ave. yrs (n=37)	35.7
Education (n=36)	
Less than high school	38.9%
High school diploma/GED	33.3%
Vocational training or 2-year degree	25.0%
4-year degree	2.8%
Ethnicity (n=37)	
Hispanic or Latino	40.5%
Race (n=35)	
American Indian or Alaskan Native	5.7%
Asian	5.7%
Black or African-American	8.6%
White	62.9%
Other	17.1%
Multirace	5.7%
Number in Household (ave.) (n=36)	
Total Adults & Kids (including self)	5

Caregiver's pre-post survey results

Survey Question	N	Pre	Post	Δ	p-value
Did your children get all the care they needed?[1]	29	0.93	1.00	0.07	0.161
Did your children get all the prescription medications they needed?[1]	28	0.89	0.93	0.04	0.663
Did your children get all the dental care they needed?[1]	30	0.87	0.83	-0.04	0.712
Did your children need help with housing or a place to stay?[1]	36	0.11	0.11	0.00	1.000
How much of a problem was it for you to get transportation to take your children where they needed to go?[2]	29	0.62	0.41	-0.21	0.083**
How often did you worry whether food would run out?[2]	37	1.30	1.05	-0.25	0.083**
How often did you actually run out of food?[2]	34	0.94	0.76	-0.18	0.160
How sure are you that you can meet…[3]	34				
General health needs		2.06	2.03	-0.03	0.838
Food & Nutrition		1.50	1.94	0.44	0.001*
Other Basic Needs (Transportation & Housing)		1.68	1.94	0.26	0.174

*Denotes a significant difference between pre and post responses at p=0.05
**Denotes a significant difference between pre and post responses at p=0.10
[1]Responses were binary: Yes=1 and No=0; [2]Responses on scale, Less=0, More=2;
[3]Responses on scale, Less Sure=0, More Sure=3

Point of care survey



Barriers and Challenges in Initial Implementation

- No EMR tools until second year of program =workarounds for data entry and collection
- Workarounds = low screening rates and frustration for the MA's
- Difficulty getting competent analyst support for building a reliable report = initial inaccurate data pulling
- Residency Clinic = high provider turnover and need for ongoing education
- High MA staff turnover
- Small sample size of families enrolled with navigators

Current State of S&I

- We continue to screen at all well-child checks. Screening rates average 85% across the 2 clinics, positive screens at 12-17%
- Screening Questions in all WCC forms across 5 state health system
- Screening questions in adult flow sheets
- Program development to screen seniors at annual wellness visits
- Grant to study food insecurity in diabetic patients in poor control
- 4 additional Providence clinics are screening children
- 2 FQHC clinics on Providence campuses are screening all ages
- Discharge planners at our hospital are screening adults
- Provider and staff satisfaction with the program remains high

Unexpected Outcomes

Community Teaching Kitchen and Food Pharmacy on campus 2016

- Emergency Food Boxes
- Nutritional Counseling
- 6 week free Cooking Matters course

Community Resource Desk on campus, staffed by navigators, and available to any clinic or hospital department and members of the community

- Access to available programs and resources
- Assistance filling out forms
- Ability of clinics to refer out of EMR and a feedback loop on outcomes in development

New Community Teaching Kitchen

New Community Teaching Kitchen

Family Market

CTK Cooking Matters

YSICIANS

Resources for Teaching:

- A Place At The Table https://www.youtube.com/watch?v=fzEKhYqnPHs
- http://map.feedingamerica.org/county/2014/overall/oregon
- https://pace.oregonstate.edu/catalog/childhood-food-insecurity
- http://childrenshealthwatch.org/
- Health Care's Blind Side: Robert Woods Johnson Foundation
  http://www.rwjf.org/en/library/research/2011/12/health-care-s-blind-side.htnl
- AAFP: Social Determinants of Health Policy
  http://www.aafp.org/about/policies/all/social-determinants.html
- Kaufman, A: Theory vs Practice: Should Primary Care Practice Take on Social Determinants of Health Now? Yes; Annals of Family Medicine, 3/2016
  http://www.annfammed.org/content/14/2/100.full
  http://pediatrics.aappublications.org/content/126/1/e26

Questions?

- Thanks for your attention!

Please…

Complete the session evaluation.

Thank you.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