The Hunger Vital Sign™:
Best Practices for Food Insecurity Screening in Clinical Settings

By Rebecca Rottapel, MS, MPH
Fall 2016
A food secure household has access, at all times, to enough food for an active, healthy life for all household members.

- 15% of American households or 52 million individuals

- Food insecurity is a social determinant of health

- The healthcare system is largely blind to food insecurity

Source: Flickr, Creative Commons
A Solution...

...SCREEN AND INTERVENE

Make the invisible health issue of food insecurity visible by screening for food security in clinical settings
The Hunger Vital Sign™

A validated 2-question food insecurity screening tool:

- 97% sensitivity and 83% specificity compared to gold standard

“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.”

Answer options: often true/sometimes true (vs. never true)

Source: http://www.childrenshealthwatch.org/public-policy/hunger-vital-sign/

Slides by: Rebecca Rottapel, MS, MPH       November 2016
PROJECT AIM:
Identify and promote best practices for screening and intervening in food insecurity using The Hunger Vital Sign™
Methods

July

- Review key informant interviews: identify themes

August

- Survey (n=20) → White paper
- Key informant interviews (n=2) → Case studies (2)

November

- American Academy of Pediatrics online ‘Food Insecurity Screening Toolkit’
Organization and Partners

[Logos of Children's HealthWatch, Boston Children's Center, American Academy of Pediatrics, and FRAC (Food Research & Action Center)]
Case Studies:

Boston Medical Center in partnership with the Greater Boston Food Bank

Why did you begin screening for food insecurity?

In 2012, IADP pilot tested a universal screen for food insecurity at the Greater Boston Food Bank, which has been a very useful tool. It helped us to identify patients who were not aware of food insecurity and helped us to link them with resources.

Quick Facts

- Boston Medical Center (BMC) is a large, public hospital with a diverse patient population.
- The BMC Pediatric Health Center is located in the same building as the Food Bank.
- The Food Bank has a long history of working with hospitals to address food insecurity.
- The BMC Pediatric Health Center has a partnership with the Food Bank to provide food for patients.

Eating a sensitive subject...

Food insecurity is a serious public health issue. It affects children and adults across the United States. Universal screening for food insecurity can help identify and address this issue. In many cases, patients may not even be aware of their own food insecurity.

Screening for Food Insecurity

Medical care providers, including nurses, are aware of the link between food insecurity and health outcomes. By asking patients about their food security status, providers can help to identify those at risk for food insecurity.

Intervening in Food Insecurity

The intervention involves several steps. Providers refer patients to the Food Bank for assistance. The Food Bank provides food and other resources, such as toiletries. Providers follow up with patients to ensure that they are receiving the necessary support.

Keys to success

- Identifying clinical encounters is key for hospital settings.
- Engaging and educating patients is essential.
- Effective communication is critical.
- Follow-up is necessary.
- Referrals to community resources are important.

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Case Studies: 
BMC’s Preventative Food Pantry

**Intervention steps:**

1. Screen positively
2. Receive e-referral for food prescription
3. Pick up 3-4 days of food for household every two weeks

“We want patients who feel shame to know that food is part of their medical care and we are here to provide it.”

-Latchman Hiralall, Preventive Food Pantry Manager

Source: [http://www.bmc.org/nutritionresourcecenter/foodpantry.htm](http://www.bmc.org/nutritionresourcecenter/foodpantry.htm)
Survey: Results and Discussion

- Survey sample and generalizability
- Verbal vs. written screening
- Diverse approaches
- Factors that contribute to success
- Challenging factors
### Table 1: Demographics of survey respondents.

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percent (%)</th>
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</thead>
<tbody>
<tr>
<td>Total Responses</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Out-patient clinic</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>Healthcare network</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>Food bank</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Nutrition organization</td>
<td>2</td>
<td>10.5</td>
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<tr>
<td>Other</td>
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<td>32</td>
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<td>Northeast</td>
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<td>21</td>
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<td>6</td>
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<td>Urban</td>
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<tr>
<td>Suburban</td>
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<td>19</td>
</tr>
<tr>
<td>Size (# of patients served annually)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low socio-economic status</td>
<td>15</td>
<td>83</td>
</tr>
<tr>
<td>Med socio-economic status</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>High socio-economic status</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>
Survey: Results and Discussion

- Survey sample and generalizability
  - 50% response rate
  - Professionally diverse
  - Geographically diverse
  - More investigation of rural context needed

- Verbal vs. written screening
  - Majority screening verbally
  - More research to determine if there are differential response rates when screening verbally compared to written

- Diverse approaches
- Factors that contribute to success
- Challenging factors
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- Diverse approaches
  - Some screen all patients, others screen subgroups
  - Many professionals are suited for screening
  - Many professionals are suited for intervening

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Survey: Results and Discussion

Diverse approaches to screening

The role of health professionals in screening for food insecurity

- Nurse practitioner or physician assistant: Currently screening 80%, Optimally suited to be screening 60%
- Nurse: Currently screening 70%, Optimally suited to be screening 60%
- Social worker: Currently screening 60%, Optimally suited to be screening 50%
- Community health worker: Currently screening 50%, Optimally suited to be screening 40%
- Registered dietitian or nutritionist: Currently screening 40%, Optimally suited to be screening 30%
- Physician (specialist): Currently screening 30%, Optimally suited to be screening 20%
- Other: Currently screening 20%, Optimally suited to be screening 10%

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Survey: Results and Discussion

Diverse approaches to intervening

The role of professionals in intervening in food insecurity

[Diagram showing percentages of professionals currently intervening and those optimally suited to intervene.

- Anti-hunger community based-organization
- Patient navigator
- Community health worker
- Case manager
- Nurse
- Registered dietitian or nutritionist
- Social worker
- Food bank
- Physician (specialist)
- Physician (primary care provider)
- Other

Current

Optimally suited to be intervening

Percent 0 10 20 30 40 50 60 70 80 90 100

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Survey: Results and Discussion

Diverse approaches to intervening

Programs and services that patients or clients are encouraged to or assisted with signing up for

Federal and Local Nutrition Assistance Programs and Services

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- Factors that contribute to success
  - Collaboration with partners and allies
  - Passionate individuals

- Challenging factors
Survey: Results and Discussion

Factors that contribute to success

Factors that have contributed to program success

- Collaboration with partners and allies: 100%
- Passionate individuals: 90%
- Available resources/assistance: 80%
- Screener embedded in the EMR/EHR: 70%
- Team work: 60%
- Leadership buy-in/support: 50%
- Stable and/or adequate funding: 40%
- State policy: 30%
- Support from regional USDA office: 20%
- Other: 10%

Contributing factors

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Survey: Results and Discussion

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- **Verbal vs. written screening**
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  - More research of differential response rates of screening verbally compared to written

- **Diverse approaches**
  - Some screen all patients, others screen subgroups
  - Many professionals are suited for screening
  - Many professionals are suited for intervening

- **Factors that contribute to success**
  - Collaboration with partners and allies
  - Passionate individuals

- **Challenging factors**
  - Lack of time for providers
  - Lack of funding for screening and intervening
    - Research potential funding streams: Hospital community benefits; Medicare/ Medicaid quality standard
Survey: Recommendations

- Survey sample and generalizability
  - More investigation of rural context needed

- Verbal vs. written screening
  - More research of differential response rates of screening verbally compared to written

- Diverse approaches
  - Choose the best model for your context

- Factors that contribute to success
  - Work closely with allies and community partners

- Challenging factors
  - Research potential funding streams: Hospital community benefits; Medicare/ Medicaid quality standard
Discussion: Research context

- JAMA: Avoiding the unintended consequences of screening for social determinants of health
- JAMA: Collecting and Applying Data on Social Determinants of Health in Health Care Settings
- JABFM: Addressing Social Determinants of Health in a Clinic Setting: The WellRx Pilot in Albuquerque, New Mexico
- Center for Medicare and Medicaid Services (CMS): Accountable Health Communities Model
- Adverse Childhood Experiences Study (ACES)
Food is Medicine

Triple Aim of Health Care

Lower Costs

Better care for the whole population at the lowest cost

Improve Patient Care

Improve Health at a Population Level

Source: See Donald M. Berwick et al. The Triple Aim: Care, Health and Cost. 27 Health Affairs 759-769 (2008); Institute for Health Care Improvement
References

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  Addressing social determinants of health in a clinic setting: The WellRx pilot in albuquerque, new mexico. 
Thank you!

The Children's Health Watch team

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