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Screening for and Intervening in Food Insecurity in Vermont Pediatric Primary Care

Gussie Belisle, RN
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Site Mentor: Alicia Veit MD
Conflict of Interest

- I declare that there are no relationships, conditions, or circumstances that present a conflict of interest relevant to the content of this presentation
- No funding
• Food insecurity places patients at risk for adverse health outcomes, and in VT, one in six children are food insecure.

• The validated 2-item food insecurity screening tool is not routinely being utilized in the pediatric primary care setting.
Rationale

• The 2-item food insecurity screening tool has proven to be sensitive, specific, and valid (Addressing Food Insecurity: A Toolkit for Pediatricians, 2017).

• The providers at Timber Lane Pediatrics agree it is necessary to routinely screen families at all health maintenance visits and perceive a need for a protocol on how to respond to a positive food insecurity screening.
Purpose & Aims

• The purpose of this project was to increase rates of food insecurity screening and subsequent connection to appropriate resources.
Ethical Considerations

• No inherent risk to children and caregivers has been identified with the use of the screening tool.
• Interactions are between caregiver and provider, with no direct questioning toward children under 18, who are considered a vulnerable population.
• Participation in screening and referrals were voluntary.
• No patient identifiers
• IRB determined not research
Methods – Context

• Quality improvement project

• Setting:
  • Pediatric practice – Burlington, South Burlington, and Milton, VT
  • 14 providers, serving 8,000 patients

• Utilized a community health team social worker, HelpMeGrow VT and electronic health record (EHR)
Interventions

At Timber Lane Pediatrics, we believe that food is important to health.

We want to make sure that your family has enough food and access to the right types of food. We are asking all families the following questions, so that we can provide appropriate resources if needed.

Please answer these questions about your family.

1. Within the past 12 months, we worried whether our food would run out before we got money to buy more.

   □ often true □ sometimes true □ never true □ don’t know/refused

2. Within the past 12 months, the food we bought just didn’t last and we didn’t have money to get more.

   □ often true □ sometimes true □ never true □ don’t know/refused

Would you like any information on local food resources?  YES / NO
Interventions

- Implemented the food insecurity screening tool at all health maintenance visits
- In person educational session for nurses – via email to providers
- Food resource care plan created and introduced into EHR
Workflow

- Nurse gives screening tool
- Provider reviews screening tool in patient room
- Negative screen
- Positive screen

- Parent self refers to Help Me Grow/VT 2-1-1
- Provider referral to Help Me Grow/VT 2-1-1
- Provider referral to CHT social worker
- Parent declines referral, already receiving eligible entitlements
- No referral necessary

- Discuss results with parents

- DOCUMENT plan/intervention + ICD 10 code added (Z59.4)

- Nurse will document screening tool results in EHR
Measures

• Food Insecurity Screening Tool
Analysis & Study of Intervention

• Data was analyzed for frequency of screening tool completion, positive screenings, and intervention options
• Variance and statistical significance of screening rates over time were analyzed using descriptive statistics
• Data analyzed examining trends over time, by provider, location, zip code and age.
Results

Total of 4243 patients seen for HMV and of those 2006 patients were screened (47.28%)

127 screened positive (6.33%)
Results

- Location:
  - 9.59% positive screens at Burlington
  - 8.97% positive screens at Milton
  - 3.53% positive screens at South Burlington
- Zip code: Burlington zip codes, followed by Milton and South Burlington
- Age: no one age had alarmingly higher numbers than another.
## Results: Food Resource Action Plan

<table>
<thead>
<tr>
<th>Food Action Plan (Sept-Dec)</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1936</td>
<td></td>
</tr>
<tr>
<td>Screened</td>
<td>1152</td>
<td>59.50%</td>
</tr>
<tr>
<td>Screened Positive</td>
<td>79</td>
<td>6.86%</td>
</tr>
<tr>
<td><strong>Food Action Plan</strong></td>
<td>16</td>
<td>20.25%</td>
</tr>
<tr>
<td><strong>Connected with Resources/Declined</strong></td>
<td>5</td>
<td>31.25%</td>
</tr>
</tbody>
</table>

### Food Resources Action Plan

<table>
<thead>
<tr>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food Resources Action Plan</strong></td>
<td>16</td>
</tr>
<tr>
<td>Self Refer</td>
<td>7</td>
</tr>
<tr>
<td>Provider Refer</td>
<td>0</td>
</tr>
<tr>
<td>CHT Refer</td>
<td>7</td>
</tr>
<tr>
<td>Refer Not Needed</td>
<td>0</td>
</tr>
<tr>
<td>Refer Declined</td>
<td>3</td>
</tr>
<tr>
<td>Connected with Resources</td>
<td>3</td>
</tr>
</tbody>
</table>
Interpretation

• Chi-square analysis of screening rates over time and by location showed statistical significance and not due to chance.

• ANOVA analysis showed medium variance based on screening rates over time and large variance based on location.
Discussion & Impact

• Timber Lane Pediatrics is now providing universal screening at all health maintenance visits
• The project identified locations/providers/nurses that need further support to even further increase screening rates
• The project identified office locations and zip codes with greater need
Barriers & Limitations

• Study was not intended to be generalizable
• Unforeseen factors affecting internal validity
  • Change in EHR
  • Use of email vs in person
  • Additional form
  • Variability in provider/location screening rates
  • Low use of food resource care plan
Facilitating Factors

• Supportive clinical staff with practice buy-in prior to and during project
• Existing relationship with practice
• Supportive IT department
Conclusions

• Implementing the food insecurity screening tool increases screening rates and facilitates connection of food insecure patients with appropriate resources.

• Further study is necessary to know if identifying food insecurity and subsequent intervention leads to improved health outcomes.
Selected References


Feeding America. (2018). Hunger in Vermont. Retrieved from http://www.feedingamerica.org/hunger-in-america/vermont/?gclid=Cj0KCQjwnbWBRDGARIsAPS1svtdpPw5iw3Xuh5dFh0KxeVMTDg3Fv1zhtssHcUoZH4BGLmA4HxmHL8aAqWfEALw_wcB