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Identifying Food Insecurity in a Rural Vermont Primary Care Setting

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Waterbury Family Medicine
Mentor: Dr. Christine Payne

What is food insecurity? How is it identified?

- ▶ The U.S. Department of Agriculture (USDA) defines food security as
 - ▶ “access by all people
 - ▶ at all times
 - ▶ to enough food
 - ▶ for an active, healthy life.” (1)
- ▶ Methods of identifying food insecurity
 - ▶ Patients seek help themselves
 - ▶ Providers suspect food insecurity based on conversation
 - ▶ Formal screening

The Hunger Vital Sign

- ▶ A 2-question screening tool that identifies households as being at risk for food insecurity if respondents answer “true” to either or both statements.
 - ▶ “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.”
- ▶ The proof behind the sign (2)
 - ▶ Derived from the US Household Food Security Scale (HFSS)--the ‘gold standard’ in evaluating food insecurity.
 - ▶ Validated with a sample of 30,000 caregivers seeking care for children at seven urban medical centers
 - ▶ Sensitivity of 97%
 - ▶ Specificity of 83%

Food Insecurity in Washington County and Beyond

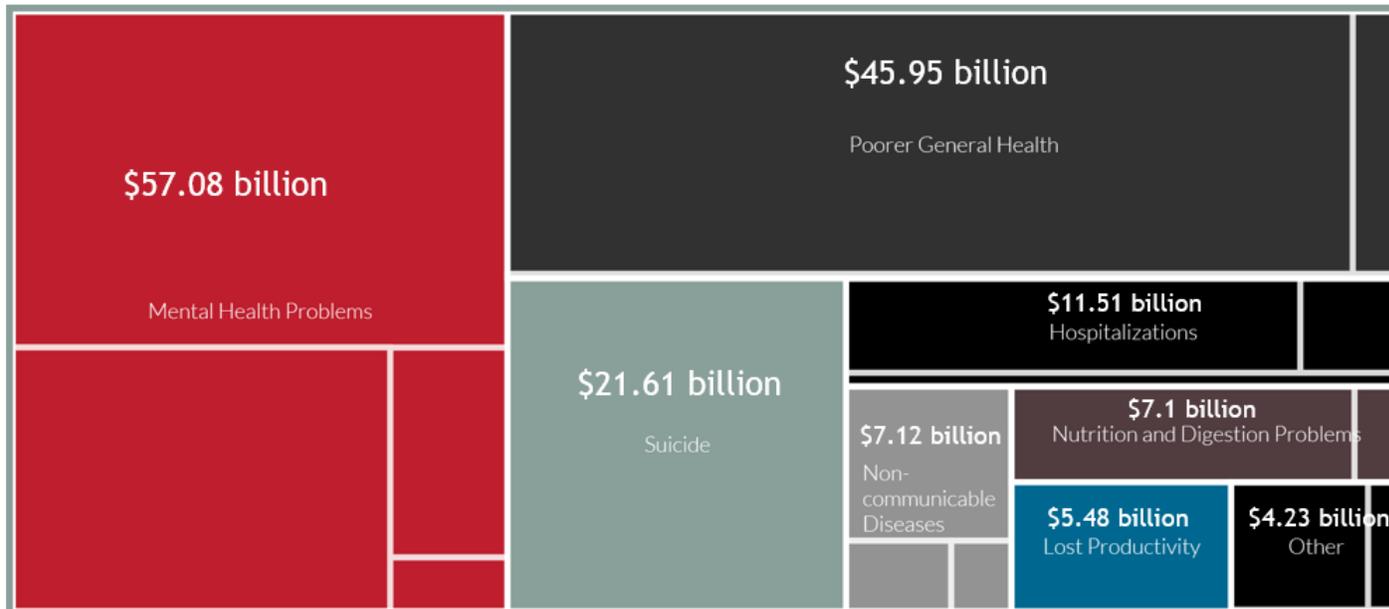
► Prevalence

- 11.1% nationally (1); Vermont 12%; Washington County 11% (3)
- >35% of Washington County’s population receives aid from food banks (4)

► Effect on health

- >48% of Washington County residents utilizing food related community agencies had poor or fair health (as opposed to good, very good, or excellent) (4)

► **\$160 billion** the estimated health related financial cost of US food insecurity in one year (6)



2016 Hunger Report- Bread for the World

Children	<ul style="list-style-type: none"> Some birth defects Anemia Lower nutrient intake Hospitalization Asthma Behavioral problems Depression Cognitive problems Aggression Anxiety Worse oral health
Adults	<ul style="list-style-type: none"> Diabetes Hypertension Hyperlipidemia Decreased nutrient intake Depression and other mental health problems worse outcomes on health exams poor sleep Worse oral health
Seniors	<ul style="list-style-type: none"> lower nutrient intake Depression limitations in activities of daily living <p style="text-align: right;">(5)</p>

The Community Perspective

▶ Waterbury Food Shelf- Linda Parks

- ▶ On average, 130 visits (serving 470 people) are made to the food shelf per month
 - ▶ However, Linda Parks believes all people who need food shelf services aren't accessing them... why?
- ▶ Barriers to access
 - ▶ People are unaware they are food insecure
 - ▶ People think that the food shelf isn't a short term solution
 - ▶ Feelings of embarrassment and failure
 - ▶ Lack of transportation
- ▶ Role of medical providers
 - ▶ Identify people who are nutritionally compromised
 - ▶ Tell patients about the food shelf



▶ Central Vermont Council on Aging- Kathy Paquet

- ▶ Trends in food insecurity
 - ▶ Higher demand for food related services since recession of 2008
 - ▶ Increasing number of 60-64 year olds utilizing CVCOA meal services
- ▶ Barriers to access
 - ▶ People unaware they are food insecure
 - ▶ People don't want to ask for help
 - ▶ Lack of transportation



5 Goals and Methods

▶ The Goals

- ▶ To compare the effectiveness of informal methods of food insecurity screening with formal screening.
- ▶ To provide patients with information on food insecurity resources.

▶ Methods- 4 months of data

▶ October 2019

- ▶ Providers relied on informal method of gauging food insecurity through natural conversation with patients during office visits and proceeded with their preferred method of referral/management.
- ▶ Office community health team (CHT) member recorded the number of food related patient encounters she had over the month.

▶ November 2019

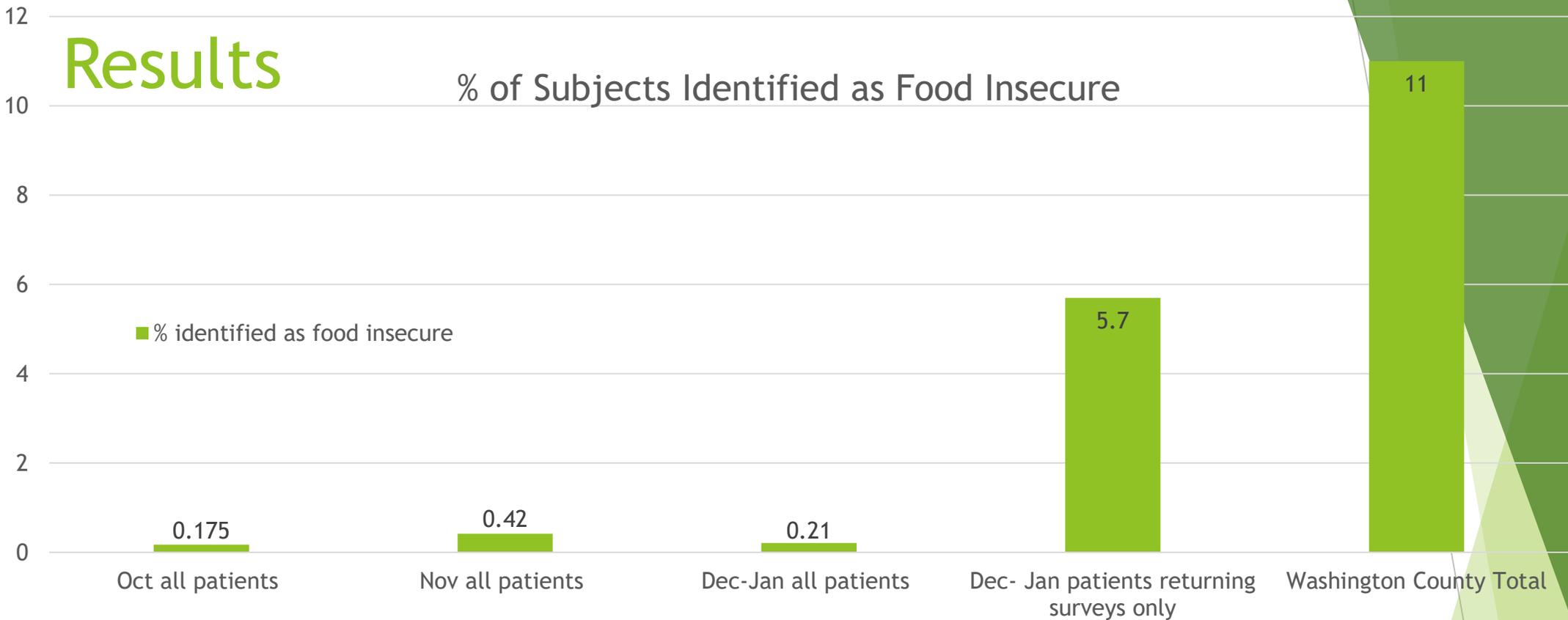
- ▶ I created a list of governmental food assistance programs and local food related resources/services along with basic descriptions and contact/application information for each. This included instruction to ask to speak with the office CHT member if patients had any further questions.
- ▶ I set up a corner in the Waterbury Family Medicine lobby with an informational poster, food related organization brochures, and printed resource lists for patients to take.
- ▶ Providers continued informal screening and CHT member continued recording her encounters.

▶ December 2019- January 2020

- ▶ I created a paper survey containing the Hunger Vital Sign with room for patients to leave contact information if they desired a phone call from the CHT member to discuss food resources.
- ▶ Surveys were offered to patients by front desk and nursing staff, collected before check out, and responses recorded. Surveys on which patients left contact information were given to the CHT member for follow up.
- ▶ Percentage of all patients visiting the office and having a subsequent food encounter with CHT member was calculated for each month/intervention.

Results

% of Subjects Identified as Food Insecure



Month	Total # pt visits	# pts identified as food insecure	# pts/percent of total pt visits formally screened	# pts/percent of formally screened pts leaving contact info
Oct	1142	2	n/a	n/a
Nov	956	4	n/a	n/a
Dec-Jan	1414	3	53/3.7%	7/13.2%

- ▶ No statistically significant difference in percentages of patients screening positive for food insecurity between the three screening methods, BUT
- ▶ The percentage of patients screening positive amongst those formally surveyed is statistically higher than those not formally surveyed (p value= 0.042)

Conclusions and Limitations

▶ Conclusions

- ▶ Formal screening works
 - ▶ Formal screening uncovered more than 30 times the percentage of food insecurity identified by informal screening.
- ▶ Formal screening without protocol doesn't work
 - ▶ Only 3.7% of patients visiting during Dec-Jan were formally screened.
 - ▶ Optional formal screenings uncovers roughly the same amount of food insecurity as no formal screening at all.

▶ Limitations

- ▶ Staff
 - ▶ Deficits in awareness of and dedication to survey distribution
 - ▶ Semifrequent floats
 - ▶ Recent EPIC transition
 - ▶ Poorly informed by study designer
 - ▶ Intervention occurred over partially during the winter holidays
 - ▶ Potential lack of knowledge regarding food insecurity and associated health consequences
- ▶ Patients
 - ▶ Partial self selection bias
- ▶ Lack of Waterbury specific food insecurity data to compare results to
 - ▶ Our patient population may be less food insecure than the remainder of Washington County

Recommendations and Further Research

▶ Recommendations

- ▶ Establish food insecurity screening as routine rooming procedure at every patient visit
 - ▶ Epic has the Hunger Vital Sign built in
- ▶ Host food insecurity training at each office
 - ▶ Hunger Free Vermont will travel and provide free training upon request

▶ Further research

- ▶ Evaluate efficacy of screening via Epic as part of routine rooming procedure
 - ▶ Compare percentage of patients screening positive with Washington County statistics
 - ▶ Compare percentages of food insecurity identified verbally and entered into Epic with percentages of food insecurity identified via paper screener
- ▶ Gauge effect of food insecurity training on staff and provider attitudes regarding screening
 - ▶ Survey providers and staff about their attitudes regarding and perception of the importance of food insecurity both before and after training by Hunger Free Vermont
- ▶ Explore the most productive methods of advertising for the Waterbury Food Shelf

The screenshot shows the Epic EHR interface with the 'History' tab selected. The 'Socioeconomic' section is expanded, showing the following fields:

- Employment:** A table with columns for Occupation, Employer, and Comments. Row 1 is empty.
- Demographics:**
 - Marital Status: Single, Married, Legally Separated, Divorced, Widowed, life partner, Civil Union
 - Primary Language: [Search]
 - Ethnicity: [Search]
 - Spouse Name: [Text]
 - Race: [Text]
 - Number of Children: [Text]
 - Years of Education: [Text]
 - What is the highest level of school you have completed or the highest degree you have received?: [Text]
- Financial Resource Strain:**
 - How hard is it for you to pay for the very basics like food, housing, medical care, and heating?
 - Not hard at all | Not very hard | Somewhat hard | Hard | Very hard | Patient refused
- Food Insecurity:**
 - Patient refused all
 - Within the past 12 months, you worried that your food would run out before you got money to buy more.
 - Never true | Sometimes true | Often true | Patient refused
 - Within the past 12 months, the food you bought just didn't last and you didn't have money to get more.
 - Never true | Sometimes true | Often true | Patient refused

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