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Screening for Food Insecurity, Accessing Healthy Foods, and Resources for Patients

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Food insecurity in America:

- An estimated 12.3% of American households were food insecure at least some time during the year in 2016, lacking access to enough food for an active, healthy life for all household members[1]
- 15.6 million households were food insecure in 2016[1]; with an average household size of 2.58 people[2] this means approximately **40 million people** were food insecure in America
- To put this into a health care perspective – there are 30.3 million people in America with diabetes (9.4% of the pop.); 23 million diagnosed and 7.2 undiagnosed[3].
- **There are more people dealing with food insecurity than diabetes in the United States!**

Food Insecurity in Vermont:

- In the Northeast, Vermont ranks second to last for food insecurity rates with 12.1% of residents being food insecure; NH has the least food insecurity at 9.0%, and Maine is the worst with 13.8% food insecurity[1]
- Chittenden County ranks 7th out of 14 in food insecurity with a rate of 11.7%; Grand Isle is 1st with 9.8% of residents being food insecure and Essex County is worst with 13.3% of residents being food insecure[4]
- There are dozens of resources to help people, however access to resources requires provider screening for insecurity as well as knowledge of the resources that are available in the local community
- More frequent effective screening and provider awareness of these resources in necessary to decrease the burden of food insecurity in Vermont

The cost of food insecurity:

- Children in food insecure homes are more likely to have reported poor health and more likely to be hospitalized[5]
- After multiple risk factors are considered, children who live in households that are food insecure, even at the lowest levels, are likely to be sick more often and recover more slowly from illness[6]
- Lack of adequate healthy food can impair a child's ability to concentrate and perform well in school and is linked to higher levels of behavioral and emotional problems from preschool through adolescence[6]
- Food insecurity has been associated with many chronic and costly health conditions including asthma, cancer, COPD, CHD, depression, diabetes, hypertension, obesity, pregnancy complications, and vascular disease in adults, as well as decreased functional status and cognitive function in the elderly[7]

Food Insecurity cost in Vermont:

- It's estimated that Vermont's food insecurity related healthcare costs for the year 2015 were between 170 - 324 million dollars![8]
- With its many farms, farmer's markets, and programs for people struggling with food insecurity, Vermont is in a unique situation where it could not only provide food for those in need, but also provide healthy locally grown produce to these people
- With 'healthy food choices' being a top ten priority in the 2016 Chittenden and Grand Isle County Community Health Needs Assessment[9], it is important to not only screen for food insecurity, but to make providers aware of the healthy food resources out there for people in need

Community Perspectives:
“We’re here and people need us”

- I spoke with the founder of the Colchester Summer Lunch Program, Mary Lou DeCosta. Her program (via the Mallett’s Bay Congregational Church) has been running for 18 years and has provided over 25,700 meals for children. The program delivers food each week to people’s homes to provide lunch and a snack Monday through Friday for each child within a household over the summer when kids aren’t in school. She started this program after struggling with food insecurity and realizing there were very few resources in Colchester at the time. Although Colchester is perceived as relatively affluent, there are many families struggling to put food on the table. Although there is free lunch over the summer at Colchester schools, Colchester is very large and many people lack transportation to take advantage of this program. She states there is room for at least a 50% increase in size in her program – a sign that providers could be screening more people for food insecurity and referring more people to the program!

Community Perspectives:

- I spoke with Stephany Yahn, RN a member of the UVMMC Community Health Team that travels to multiple clinics throughout Chittenden County helping patient access services for housing, job placement, food, and other resources. She states that approximately 50% of the patients she sees are aware of the resources for people with food insecurity. Of those that are aware of resources, fewer are aware that supplemental nutrition assistance programs allow you to use funds at farmers markets; some fear that doing so will make them lose their resources. She also believes that there is underreporting of food insecurity because of the stigma and shame patients feel about asking for help and people need to be screened in a non-confrontational way
- I also spoke with Catherine Caum, Grants Manager for Hunger Free Vermont. She echoed other's view that Colchester is perceived as affluent, but that there are several pockets in town of people struggling with food insecurity. She emphasized how senior hunger is underreported as the elderly can be stoic and want to avoid the stigma of asking for help, however paradoxically that accessing resources helps elderly residents live more independently, not have to make the decision between budgeting for medication versus food, and that it brings money into the Vermont economy. She informed me of new grants for 'food is medicine' campaign to train and educate providers to think more about how healing and living healthy is dependent on social determinants of health and also how providers can follow up and provide resources for when you do encounter a person with food insecurity. She also stated that *HOW* you screen people makes a difference, and that people are more likely to report being food insecure if given a questionnaire before a doctors appointment rather than being asking face to face.

Intervention and Methodology:

- Presentation given to 12 medical providers at Colchester Family practice with the following information:
- Statistics on food insecurity in the USA, Northeast, and Vermont
- How to use Epic social determinants of health tab, hunger vital signs smartphrases, and food insecurity handouts within the EPIC system
- Information on local resources for those with food insecurity with an emphasis on those resources providing farm fresh food and healthy food options for individuals
- I provided an all inclusive list of resources for patients with food insecurity for providers and patients as a paper document, as well as created a smart-phrase with this information that providers can use as patient instructions after the visit
- Participants were given a questionnaire pre and post presentation about their knowledge of food insecurity, ability to screen patients for food insecurity, and knowledge of resources available for food insecure patients

Results:

Likert scale with the following options:

0 = strong disagree; 1 = disagree; 2 = neutral; 3 = agree; 4 = strong agree

Question	Pre (average)	Post (average)
I am aware of the tools and resources in EPIC to screen for food insecurity	1.75	3.80
I am aware of patient populations that are highest risk for food insecurity	2.83	3.90
I am aware of the local resources available for people struggling with food insecurity	2.17	3.90
Food insecurity is an important issue in Vermont and should be screened for during patient' preventative health care visits	3.42	3.80

Effectiveness and limitations:

- Multiple providers prior to presentation admitted to not knowing what resources were available to people and that they should more regularly ask patients about social determinants of health
- Providers after presentation were very grateful and anecdotally stated that this information was extremely helpful
- Pre vs post questionnaire showed providers increasing awareness of food insecurity, ability to use tools within Epic, and knowledge of available resources to patients

LIMITATIONS:

- Small sample size and convenience sample could lead to possible bias
- Time constraints prohibit ability to collect data over long period of time
- Data is qualitative and I was unable to measure sceening rates pre and post intervention to see if this presentation changed provider acutal behavior with patients

Future Projects

- Collect quantitative data on how frequently providers asked the hunger vital signs screening questions and what percentage of patients are being screened for food insecurity
- With the social determinants of health questions being incorporated into patients pre-visit questionnaires in the near future via myhealthonline; it would be interesting to assess if patients report food insecurity more or less often
- Collect information on which programs/resources providers refer patients to in order to see if all resources are being utilized equally
- Observe whether patients who've been referred to and utilize healthy food resources have improvement or decline in their health and chronic health conditions (i.e. changes in HgA1c, BMI, Hemoglobin count, etc.)
- Create a smart-phrase for other clinics that highlights the specific resources available in their community. Ideally a phrase would be customized for each clinic/town as the resources change depending on where you are

Informed consent:

- Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview. Yes_X_/ No ___
- Name:

Mary Lou DeCosta; Colchester Summer Lunch Program founder

Stephany Yahn, RN; UVMMC Community Health Team member

Catherine Caum; Grants manager – Hunger Free Vermont

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