Food insecurity and its association with chronic health problems during the COVID-19 pandemic

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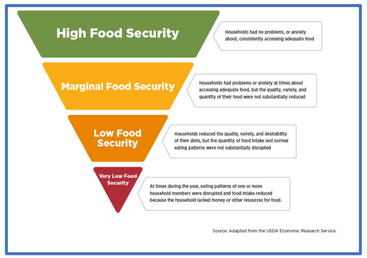
Background

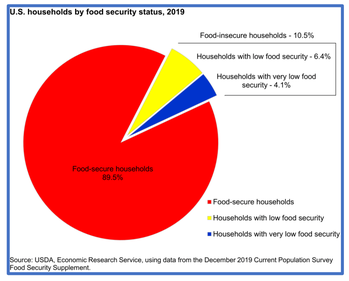


Food insecurity (FI)

- Lack of available financial resources for food at the household level
- Social determinants of health are barriers
- **Hunger:** personal physical sensation of discomfort[2]

In the U.S. annually:

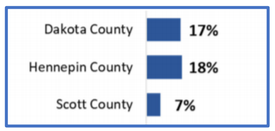
- **40 million** people face hunger
- **10.5%** of households are FI[3]
- In MN 461,200 people are struggling with hunger (161,880 are children)
- 1 in 12 people suffer from hunger[2]



Community Assessment

Creekside Family Medicine Clinic and Park Nicollet Methodist Hospital serve patients from St. Louis Park, Hopkins, Edina, and Minnetonka. Seniors (65+) are a population of focus from the Park Nicollet Foundation as a fast-growing demographic in the area[4].

- Patients by county:78.1% Hennepin County, 5.9% Dakota County, 3.0% Scott County
- Creekside Clinic screening shows **14.7%** FI (above national average)[4]



Percent food insecure populations in each county based on MetroSHAPE data[4]

Objectives

- Assess FI in the Creekside Clinic population and offer assistance (MATTERbox or Social Work consult)
- Understand patterns amongst FI patients during the COVID-19 pandemic and compare to pre-pandemic data

Methods

6-week screening of all new patients at the clinic in December 2020 for FI using USDA questionnaire and third question about immediate need.

1. Within the past 12 months have you ever worried that your food would run out before you got money to buy more? **Yes/No**
2. Within the past 12 months the food that you bought just didn't last and you didn't have enough money to get more. **Yes/No**
3. If you answered yes to both of these questions, do you need help now? **Yes/No**

Methods (continued)

If yes to any question, offer meeting social worker. If yes to the 3rd question, patient sent home with a MATTERbox the same day or offered assistance via local organizations. Subsequent chart review of positive respondents was done with de-identified patient data.

Pre-pandemic: 100 total survey respondents, 14 positive for FI

Pandemic: 115 total survey respondents, 17 positive for FI

Results

- Pre-pandemic: 14% positive responses n=14, Pandemic: 14.7% positive respondents n=17
- In pre-pandemic respondents, 15% had migraines, 0% pandemic respondents had migraines
- 36% of pre-pandemic respondents had a BMI >30 vs. 59% of pandemic respondents
- Rates of depression, type II diabetes and asthma are stable, GERD and hypertension have seen ~5% increase
- 20% more new FI patients during pandemic are taking assistance, but 35% still not

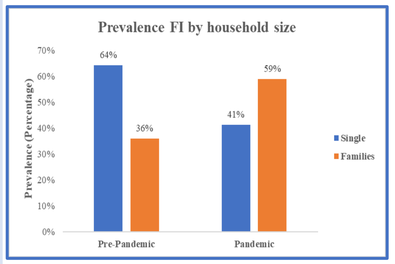


Figure 1. Chart review of FI patients shows more families faced FI during the pandemic compared to more single people in pre-pandemic screenings

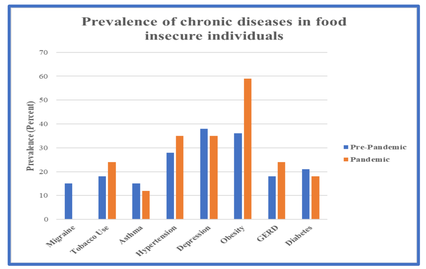


Figure 2. Chart review prevalence of common chronic diseases in problem list in the EMR of respondents before vs. during the pandemic

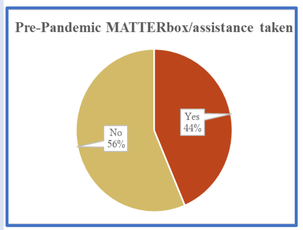


Figure 3a. Pre-pandemic MATTERbox/assistance use after yes to all 3 questions

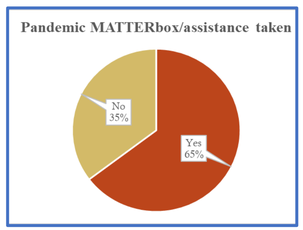


Figure 3b. Pandemic MATTERbox/assistance use after yes to all 3 questions

Conclusions

- FI rate in Creekside Clinic community > than national average- screening important to assess needs and destigmatize
- FI patients have elevated rates of common chronic illnesses, and some of these illnesses are more common in positive respondents during the pandemic
- Increased rate of tobacco use in FI population during the pandemic indicates need for smoking cessation motivational interviewing
- Stigma can prevent FI patients from accepting assistance

Future Directions

- Longer survey (or a second survey for positive respondents) asking about
  - Knowledge/use of SNAP, WIC or local programs
  - Other SDOH (transportation, unemployment, safety, etc)
  - Specific food needs of children
- For chronic diseases patients (e.g. diabetes) ask if current MATTERboxes or assistance meet needs
- Increase screening frequency
- Partner with other clinics or local food shelves to gather data and identify community specific needs

Acknowledgements

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