Scoping Review: Addressing Food Insecurity in Health Settings

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Food secure, 87.4%

Marginal food insecurity, 4.1%

Moderate food insecurity, 6.0%

Severe food insecurity, 2.6%

Household food insecurity in Canada 2012 (12.6%)

Source: Canadian Community Health Survey, 2012, data rounded
Food insecurity has clinical significance

- Nutrient inadequacies (milk & milk products, fruits & vegetables)
- Stress pathway and ill-health
- Bi-directional relationship with mental health problems
- Contribution to increased chronic disease occurrence
- Challenges in chronic disease management, particularly diet-sensitive conditions, e.g., diabetes mellitus
- Food budget competition with medication adherence

YET...
Little is know about food insecurity in health care settings

- Prevalence and severity?
- Screening tools?
- Interventions?

Relevant to public health programming and as advisor to regional health authorities
Purpose

- Using a **scoping review**, examine the literature on food insecurity prevalence, screening methods, and interventions to address it among adults with chronic conditions accessing the health care system in OECD countries.

- Focus on ‘**mainstream services**’ for clients with chronic conditions.


Stage 1 - Identify research questions

1. What studies have explored the prevalence of food insecurity in adults with chronic disease in a health care setting?

2. What food insecurity assessment/screening tools have been utilized or tested in a health care setting?

3. What intervention strategies have been identified to provide clinical care, including therapeutic counselling, for food insecure adults with chronic disease in the health care system?
Stage 2 - Identify relevant studies

- Peer-reviewed literature
  - Ovid MEDLINE; Cochrane library
  - Search of reference lists of identified papers

- Grey literature
  - Databases: Canadian Research Index, OpenGrey, Grey Lit Report, PEN
  - Google
  - Websites of 20 organizations
Stage 3 - Study Selection

1) Abstract screening: (at least) two independent screeners and arbitration by LM
   - basically adults; food insecurity; chronic disease; health care setting

2) Full-text screening: two independent screeners and arbitration by LM
**FLOW CHART Scoping Review on Food Insecurity in the Healthcare Setting**

**Scoping Review Steps**

1. **MEDLINE search of peer-reviewed articles; n= 5,231**
   - n= 487 review articles

2. **Grey literature database searches n= 571**

3. **Relevant from abstract screening n= 134 peer-reviewed papers**
   - n= 6 grey literature papers

4. **Additional papers identified through stakeholders, reference list searching or Google n= 14**

5. **Total number of papers for full-text screening n= 196**
   - (n= 148 peer-reviewed & n= 48 grey literature papers)

6. **Included for charting/data extraction (n= 39)**

7. **Final for charting/data extraction n= 27**
   - (n=1 grey literature)
   - *Multiple papers on same sample are counted as one (total n=33)*
Stage 4 - Charting Data
Stage 5 - Summarizing & Reporting Data
Stage 6 - Consultation(s)
Results

n= 27 studies (n=1 from grey literature)
Q1=26  Q2=27  Q3=4
United States 22, Canada 4, Israel 1
Mostly specialized clinical settings or with underserved, vulnerable populations, e.g., low-income diabetics or HIV cohorts
1. Prevalence*

- Food insecurity (including food insufficiency and hunger) prevalence rates 13 -71%; highest hunger rate 47%
- Psychiatric/mental health patients highest rates:
  - 41% (and 22% with hunger) in Israel study
  - 71% (27% mild, 44% severe) in urban community mental health clinic

- However, even the lowest rates are at least twice those reported in Canadian/US average general population

* US and Canada use different FI classifications for HFSSM.
2. Screening

<table>
<thead>
<tr>
<th>Screening tool (n=26)</th>
<th>Screening mode (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Radimer-Cornell (6)</td>
<td>▶ In person (12)</td>
</tr>
<tr>
<td>▶ HFSSM (14)</td>
<td>▶ Phone (2)</td>
</tr>
<tr>
<td>- 18-item (full scale) (4)</td>
<td>▶ Person &amp; phone (2)</td>
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<tr>
<td>- 10-item (adult scale) (3)</td>
<td>▶ Self-report questions (3)</td>
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<td>- 6-item (short form) (6)</td>
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<td>- 2-item (1)</td>
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<tr>
<td>▶ Food insufficiency (1)</td>
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<td>▶ Other (5)</td>
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**Screener**

- Research assistant(s) (5)
- Clinicians (1)
- Med students/residents/clerks (3)
3. Interventions

- 3 of 4 intervention were solely education and communication initiatives

- *Feeding America - Diabetes Initiative*: Wellness box handed out by food banks to food bank clients living with diabetes; plus resources - handout, list of low cost clinics in area, referral if needed, diabetes education classes, assistance finding low cost testing supplies; project ongoing

- In these studies, food insecurity itself was not specifically targeted (outcomes stratified by FI status). We could find no study that evaluated FI as an outcome
Conclusions and Recommendations
Food insecurity prevalence among adults in the health care setting

- We still don’t know the prevalence of food insecurity among adults in the general health care seeking population; likely >2x general population
- “Told you so research” seems to dominate
- Medication adherence is prominently important for all of the chronic conditions examined - this could be a problem because of food insecurity
Recommendations re screening

- No need to screen populations with very high expected prevalence; a case-finding approach might be used for FI severity.
- Screening of other patient populations depends on health care setting; determine if FI is severe as this is most clinically harmful.
- In-person by clinically responsible provider.
- **Screening tool?** Likely something from HFSSM. Avoid made up questions.
Interventions related to food insecurity in the health care setting

- Evidence informing practice is not founded in the literature; evaluation of interventions needed
- **Short term:**
  - For those screened FI, clinicians may wish to tailor advice and consider referrals to income supports, other benefits
- **Longer-term:**
  - Bring this problem to the attention of decision makers in the health care setting who may be in a position to advocate for structural responses at the population level
Thank you.