
Developing and Implementing a Food Insecurity Screening Initiative for Clients Living with Diabetes



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Agenda

Background

Development

Implementation

Results

Implications for Practice

Next Steps

Lessons Learned

Intersection of Food Insecurity and Diabetes

Prevalence of household food insecurity:

- Higher among those with diabetes than those without diabetes (9.3% vs 6.8%) in Canada
- 4% increased risk each year earlier diagnosed
- Household with a child with diabetes (21.9%), an adult with diabetes (14.6%) in Nova Scotia.

Food Insecurity Compromises Diabetes Self-Management

- Poor quality diet
- Poor adherence to oral medications
- Poor glycemic control (higher A1C)
- More emergency room visit for hypoglycemia



**Screening for food insecurity is
being recommended in routine
diabetes care**

**This can lead to a more realistic &
tailored diabetes management care
plan to best support clients**

Research Objectives

- Identify screening questions used in clinical setting
- Identify evidenced-based recommendations for diabetes management for those experiencing food insecurity
- Pilot a food insecurity screening initiative with the Diabetes Education Community Network of East Toronto (DECNET) at the South Riverdale CHC
- Assess the feasibility and acceptability of implementing the screening initiative



Screening Initiatives Components

- **Food Insecurity Screening Questions**
- **Practice care Algorithm**
- **Community Resource Package**
- **Posters to Reduce Client Stigmatization**

Methods

- Selected 3 validated screening questions (US Department of Agriculture Economic Household Food Security Survey Module)
- Consulted with care providers at SRCHC regarding the questions & care algorithm we developed
- Consulted with clients about acceptability & comprehension of the screening questions & helpfulness of recommendations in algorithm
- Finalize all screening components based on client & provider feedback
- 5 providers from the DECNET team implemented screening initiative over 2 week period
- 33 clients screened during pilot, 39% screened positive for food insecurity

Screening Questions

Screening Questions

1. Within the past 3 months, did you **ever worry** whether your food would run out before you got money to buy more?
2. Within the past 3 months, was there **ever a time** when the food you bought just didn't last and you didn't have money to get more?
3. Within the past 3 months, did you or others in your household **cut the size** of your meals or **skip meals** because there wasn't enough money for food?



Practice Care Algorithm

Food Insecurity Screening & Care Algorithm for Clients Living with Diabetes

Helpful Communication Strategies

- Non-judgmental approach
- Compassion and empathy
- Motivational interviewing
- Involve client in decision-making

Screen Client for Food Insecurity (at discretion of care provider)

Ask all three screening questions:

- 1) Within the past three months, did you ever worry whether your food would run out before you got money to buy more?
- 2) Within the past three months, was there ever a time when the food you bought just didn't last and you didn't have money to get more?
- 3) Within the past three months, did you or others in your household cut the size of your meals or skip meals because there wasn't enough money for food?

NO to all questions =
Low risk for food
insecurity

Provide usual care
and re-screen as
needed

Food Insecurity = YES to at least
one question

Assessment

- Medical history
- Diabetes knowledge
- Diabetes self-management skills
- Mental health
- Literacy level
- Physical limitations
- Housing
- Financial support
- Social support
- Access to food
- Cultural influences
- Smoking habits

Screen for Risk and Occurrence of Hypoglycemia

Risk for Hypoglycemia

- Review treatment for hypoglycemia
- Replace glucose lowering medications that cause hypoglycemia
- Schedule medications with meals
- Consider a more flexible insulin regimen
- Consider adjusting glycemic target upwards

NOT at Risk for Hypoglycemia

- Proceed with assessment & plan

Individualize Care

- Develop collaborative & realistic treatment plan
- Encourage inclusion of family members in education
- Consider client's medication coverage

Education Strategies

- Low literacy, visual education materials
- Participatory, hands-on learning opportunities
- Problem-solving based learning
- Tailoring education to cultural and socioeconomic status

Referrals

- Dietitian
- Nurse
- Social worker
- Respiratory Therapist for smoking cessation
- Local community food resources (food banks, community kitchens, low cost grocery stores)
- Food skills classes
- Assess if eligible for Special Diet Allowance funding

Diet

- Individualize nutrition recommendations based on the client's budget, food skills, and available food storage and cooking equipment
- Provide information on low cost community foods recourses and meals
- Provide low cost ideas for treating hypoglycemia

Community Resources Package

Community Food Resources - Toronto



	Resource	Website	Telephone/ Email
1	Food Assets and Opportunities in Toronto (Toronto Food Policy Council)	http://tfpc.to/food-by-ward/food-by-ward-resources	Lauren Baker Food Policy Specialist Phone: 416-338-8154 Email: lbaker2@toronto.ca
2	<u>FoodShare</u> Toronto: <u>Foodlink</u> hotline	www.foodshare.net	(416) 392-6655
3	Food Buying Clubs (eg. The Good Food Box)	http://www.foodshare.net/good-food-box	
4	Mobile Food Markets	http://foodshare.net/program/mobile/	
5	Food Banks Free/Low cost meal programs	https://www1.toronto.ca/city_of_toronto/shelter_support_housing_administration/files/pdf/weeklymeals.pdf	211
6	Red Cross Mobile Food Bank (Delivers meals to individuals living with disabilities)	https://www.caredove.com/canadianredcross/service/detail/sid/6463/refr/search	416-236-3180

Posters

What will be on your dinner plate tonight?



More than 4 million Canadians struggle to afford food.

Do you struggle?

Let your care provider know at your next visit, so they can better support you.



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Results

Acceptability

- Screening questions were clear & easy to understand
- Most participants (71%) reported feeling “comfortable” or “somewhat comfortable” answering the screening questions
- 29% of participants reported feeling “somewhat uncomfortable” answering the screening questions
- Familiarity & relationship with care providers helped to increase comfort in answering screening questions about this sensitive topic
- Screening can strengthen rapport
- Clients perceived screening as relevant in the context of an RD visit
- Felt that strategies/recommendations were helpful

Feasibility

Facilitators:

- Adding the screening questions to the EMR increased uptake
- Screening for food insecurity fits into the context of a nutrition assessment
- Prior or assumed knowledge that a client is not food insecure

Barriers:

Logistical challenges: Extra time needed; using an interpreter; forgetting to screen, no EMR access

Discussion

- Screening is feasible and acceptable
- Intended to give care providers a standardized and respectful method of assessing food insecurity
- Facilitates discussion about food access and reveals rich information to better assist care provider with management plans
- Fits naturally into a nutrition assessment
- Food insecure clients are very resourceful and care providers can learn from them
- Does not address root cause of food insecurity



Implementation

- Any provider using the EMR can access screening question template (use currently optional)
- Created a consistent place in the EMR to indicate food security status
- Ensuring “pull-able” data sources to highlight how we are addressing food insecurity
- Displayed posters around the centre (staff have asked for copies in their offices)
- Presented study results at an all staff meeting at SRCHC and at the regional network meeting for diabetes educators (CDENT)
- Disseminated the care algorithm to all clinical team members at SRCHC (physicians, NPs, RNs)
- RDs on the DECNET team have been asked to screen for FI during all initial nutrition assessments

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Next Steps

- Plan to meet with other teams at SRCHC to discuss implementation of FI screening in other groups & points of contact (eg. outreach)
- Compilation and dissemination of community resources to staff at SRCHC and the community
- Implementation of the screening initiative in other healthcare settings

References

- Bawadi, H. A., Ammari, F., Abu-Jamous, D., Khader, Y. S., Bataineh, S. 'a, & Tayyem, R. F. (2012). Food insecurity is related to glycemic control deterioration in patients with type 2 diabetes. *Clinical Nutrition (Edinburgh, Scotland)*, 31(2), 250–4
- Bawadi, H. A., Ammari, F., Abu-Jamous, D., Khader, Y. S., Bataineh, S. 'a, & Tayyem, R. F. (2012). Food insecurity is related to glycemic control deterioration in patients with type 2 diabetes. *Clinical Nutrition (Edinburgh, Scotland)*, 31(2), 250–4.
- Dietitians of Canada. (2016). Addressing Household Food Insecurity In Canada. Members only access:
www.dietitians.ca/foodinsecurity
- Gucciardi, E., Vahabi, M., Norris, N., Monte, J. P. D., & Farnum, C. (2014). The Intersection between Food Insecurity and Diabetes: A Review. *Current Nutrition Reports*, 3(4), 324–332. <http://doi.org/10.1007/s13668-014-0104-4>
- Gucciardi, E., Vogt, J. A., DeMelo, M., & Stewart, D. E. (2009). Exploration of the Relationship Between Household Food Insecurity and Diabetes in Canada. *Diabetes Care*, 32(12), 2218–2
- OSNPPH. (2015). Position Statement on Responses to Food Insecurity.
<http://c.ymcdn.com/sites/www.alphaweb.org/resource/collection/9A2C0D77-00C6-42B8-9C89-1EE3AA5A255C/OSNPPHposition-statement-2015-final.pdf>
- Sattler, E. L. P., Lee, J. S., & Bhargava, V. (2014). Food insecurity and medication adherence in low-income older Medicare beneficiaries with type 2 diabetes. *Journal of Nutrition in Gerontology and Geriatrics*, 33(4), 401–17.
- Seligman, H. K., Davis, T. C., Schillinger, D., & Wolf, M. S. (2010). Food insecurity is associated with hypoglycemia and poor diabetes self-management in a low-income sample with diabetes. *Journal of Health Care for the Poor and Underserved*, 21(4), 1227–1233.
- Seligman, H. K., Laraia, B. A., & Kushel, M. B. (2010). Food insecurity is associated with chronic disease among low-income nhanes participants. *Journal of Nutrition*, 140(2), 304–310. <http://doi.org/10.3945/jn.109.112573>

Questions

