

Building Nutrition into a Falls Risk Screening Program for Older Adults in Family Health Teams in North Eastern Ontario

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RÉSUMÉ

Environ 30 % des personnes de plus de 65 ans vivant dans la communauté chutent au moins une fois par an, et une proportion similaire présente un risque nutritionnel. Le dépistage des risques est un élément important de la prévention des chutes. L'objectif de cette étude était d'examiner la possibilité d'ajouter un dépistage du risque nutritionnel dans un programme de dépistage du risque de chutes mis en place par des Équipes de santé familiale (ESF). Les participants aux entrevues ($n = 31$) étaient des membres du personnel et de la direction, des représentants régionaux et des clients de six ESF qui avaient débuté l'intégration du dépistage. Une analyse thématique a été menée. Les thèmes recueillis incluent les moyens pour élaborer des programmes de dépistage, pour assurer un dépistage efficace, faire en sorte qu'il fonctionne correctement, et le suivi des risques identifiés. Un thème dominant est ressorti au cours des entrevues, soit « développer des relations ». L'intégration d'un volet sur le risque nutritionnel dans un programme de dépistage des risques de chutes exige des efforts. Il peut varier selon l'ESF, le flux de travail et la clientèle. Il apparaît nécessaire de déterminer les moyens favorisant l'intégration du dépistage dans le processus de travail et la planification de la gestion des risques identifiés.

ABSTRACT

Approximately 30 per cent of those over the age of 65 living in the community fall at least once each year, and a similar proportion are at nutrition risk. Screening is an important component of prevention. The objective of this study was to understand how to add nutrition risk screening to a falls risk screening program in family health teams (FHTs). Interview participants ($n = 31$) were staff/management, regional representatives, and clients from six FHTs that had started integrating screening. Thematic analysis was conducted. Themes identified how to develop screening programs: setting up for successful screening, making it work, and following up with risk. An overarching theme recognized "it's about building relationships". Adding nutrition risk to a falls risk screening program takes effort, and is different for each FHT based on their work flow and client population. Determining how to integrate screening into the work flow and planning to address identified risk are necessary components.

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Introduction

Approximately 30 per cent of older adults (i.e., ≥ 65 years of age) living in the community fall at least once each year (Pearson, St-Arnaud, & Geran, 2014). Falls are associated with morbidity and mortality, are linked to poorer overall health, and can lead to earlier admission to long-term care facilities (Ambrose, Cruz, & Paul, 2015; Ambrose, Paul, & Hausdorff, 2013; American Geriatrics Society & British Geriatrics Society, 2011; Brown, 1999; Rubenstein, 2006; Rubenstein & Josephson, 2002). Older adults living in the community are also nutritionally vulnerable, with 34 per cent at nutrition risk (Ramage-Morin & Garriguet, 2013). Nutrition risk is associated with: level of disability, poor oral health, medication use, living alone, depression, not driving regularly, low social support and infrequent social participation (Ramage-Morin & Garriguet, 2013). Nutrition and falls risk are associated and often co-occur; poor diet quality can perpetuate muscle mass and strength loss, which can lead to frailty and potentially a fall (Boulos, Salameh, & Barberger-Gateau, 2016; Chien & Guo, 2014; Lorenzo-López et al., 2017; Vivanti, McDonald, Palmer, & Sinnott, 2009; Westergren, Hagell, & Sjö Dahl Hammarlund, 2014). Those with a history of falls typically have more nutrition risk than those who have not fallen (Johnson, 2003; Meijers et al., 2012; Vivanti et al., 2009). Based on this overlap, connecting falls and nutrition prevention initiatives is encouraged, and falls prevention programs recommend nutrition screening (Registered Nurses' Association of Ontario & Canadian Patient Safety Institute, 2013).

Many studies have explored the effectiveness and implementation of falls screening and prevention programs (Cheng et al., 2018; Guirguis-Blake, Michael, Perdue, Coppola, & Beil, 2018; Tricco et al., 2017), and have used the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework (Shubert, Altpeter, & Busby-Whitehead, 2011) or the Kotter model of change management (Casey et al., 2016). Despite the importance of nutrition to falls risk and inclusion of determination of nutritional status in a multifactorial evaluation of a variety of risk factors (Registered Nurses' Association of Ontario & Canadian Patient Safety Institute, 2013), few studies have explored how to add nutrition screening to falls risk screening programs. Examining the perspective of those implementing the program in primary care, and understanding the challenges and strategies they employed to implement nutrition risk screening, could support others to include nutrition screening in their falls risk programs.

At the time of this study in Ontario, 14 Local Health Integration Networks (LHINs) were responsible for planning, integrating, and funding health care services

(Ministry of Health and Long-Term Care, 2018). The North East (NE) LHIN was one of the largest geographically, including 44 per cent of Ontario's land mass, yet only 4.1 per cent of Ontario's population (North East Local Health Integration Network, 2018). The proportion of the population ≥ 65 years of age in this catchment area is projected to increase from 19 per cent to 30 per cent by 2036, and rates of heavy drinking, smoking, obesity, and chronic disease, including diabetes, are higher than the provincial average (North East Local Health Integration Network, 2018).

A family health team (FHT) is a primary health care provider with an interprofessional team approach to providing care (Rosser, Colwill, Kasperski, & Wilson, 2011). The size and composition of each FHT varies and may include family physicians, nurse practitioners, registered nurses, dietitians, occupational therapists, and other health professionals (Rosser et al., 2011). There are more than 3,000,000 people enrolled in FHTs in more than 200 communities across Ontario. The NE LHIN had 27 FHTs, each with an executive director (ED) (North East Local Health Integration Network, 2018).

In 2015, the NE LHIN launched the Stay on Your Feet (SOYF) strategy, which supports the aging population in Northern Ontario to stay healthy and live independently for as long as possible. The strategy is a population-based comprehensive approach to preventing falls by reducing the modifiable risk factors that lead to falls (Kempton et al., 1997; North East Local Health Integration Network, 2018; Van Beurden, Kempton, Sladden, & Garner, 1998). SOYF follows the Ottawa Charter for Health Promotion, with a focus on building awareness and skills among older adults and care providers, shifting health care processes to incorporate prevention, and developing supportive public policies by engaging multiple partners (Bedard, 2017; Van Beurden et al., 1998). The SOYF strategy promotes the use of the Staying Independent Checklist, a falls risk screening tool (Rubenstein, Vivrette, Harker, Stevens, & Kramer, 2011; Stay On Your Feet, 2018), and provision of exercise programs designed for older adults (North East Local Health Integration Network, 2018). Funding from Improving & Driving Excellence Across Sectors (IDEAS), a province-wide initiative offered through the University of Toronto, the Ministry of Health and Long-Term Care, and Health Quality Ontario (Bedard, 2017; Government of Ontario, 2018), provided electronic tablets for falls screening pilot sites along with a 1 year subscription to the Ocean platform, which the FHTs could decide to renew. Ocean, by CognisantMD (2018), is a system that facilitates use of secure client forms, screening tools, and surveys that can be completed by the client. Results are integrated directly into

the electronic medical record (EMR). In 2017, with the increasing evidence and recognition of the connection between falls and nutrition risk, a nutrition screening tool, Seniors in the Community Risk Evaluation for Eating and Nutrition-II-Abbreviated (SCREEN II-AB) was added to the Ocean tablets. The aim of this study was to describe and understand how FHTs added nutrition risk screening to a falls risk screening program that included the integration of screening into routine practice and the facilitation of follow-up for at-risk clients. Results provide direction on how to connect falls and nutrition risk screening in primary care.

Methods

To further explore the process for setting up falls and nutrition screening within North East Ontario, six FHTs were selected to participate in this qualitative study. Perspectives of FHT staff, management, clients, and regional representatives were provided through in-depth interviews.

Falls and Nutrition Risk Screening

In the falls risk screening program, the 12-question Staying Independent Checklist was used, as it is recommended by SOYF and has been validated against clinical evaluation (Bedard, 2017; Rubenstein et al., 2011). Some sites used two-part screening, initially asking about a history of falls, feeling unsteady, and being worried about falling, with an answer of “yes” to any of these three questions leading to use of the full checklist or referral to a falls risk assessment. Other sites began with the checklist and referred based on the scoring (Bedard, 2017). The follow-up included a multi-factorial falls assessment, which varied by site and profession completing the assessment (typically a nurse or occupational therapist). Following some success with building the falls risk screening into the routine of pilot FHTs (Bedard, 2017), the next step was to incorporate nutrition risk screening. SCREEN II-AB was selected because it is brief (8 items), self-administered, and the preferred tool for determining nutrition risk in community-living older adults (Keller, Goy, & Kane, 2005; Keller & Østbye, 2003; Keller, Østbye, & Goy, 2004; Power et al., 2018). Both screening tools were embedded in the Ocean system with SCREEN II-AB use starting in 2018. As a follow-up to nutrition risk screening, a customized handout with suggestions for improvement based on individual responses was developed by a SOYF working group. The handout was provided automatically to the clients after completing the nutrition screening on the Ocean tablet. In addition to this handout, FHTs had to plan how those at risk would be treated. To follow ethical screening, treatment or services such as access to a trained professional

(e.g. dietitian, occupational therapist), must be available for those at risk (Keller, Brockest, & Haresign, 2006; Kondrup, Allison, Elia, Vellas, & Plauth, 2013; Wilson & Junglier, 1968). Screening with provision of subsequent services or referrals is described here as a screening program (Keller et al., 2006).

Development of Interview Guides

Interviews were conducted with FHT staff, management, regional representatives, and clients. The semi-structured interview guides explored how sites developed and implemented the falls risk screening program, how they added nutrition risk screening, and if/how they were informed by implementation frameworks or theories. The guide followed frameworks focused on the implementation process (Laur, Valaitis, Bell, & Keller, 2017) and behaviour change (Michie, van Stralen, & West, 2011) with the Consolidated Framework for Implementation Research used as an overall guide (Damschroder et al., 2009). Questions specific to teamwork were informed by the work of Salas and colleagues (Salas, Shuffler, Thayer, Bedwell, & Lazzara, 2015; Salas, Sims, & Burke, 2005).

The interview guide was reviewed by two FHT staff, one researcher and one regional representative. The first interview was used as a pilot, and minor modifications were made to the guide before finalization (Table 1), including the addition of questions on the specific auditing practices used by the FHTs. Five of the six FHTs were involved in the initial falls screening pilot, with the sixth starting a short time later. Several sites had not maintained the initial falls screening and were restarting, or an original team was piloting falls and nutrition screening in a new site.

Sampling and Recruitment

In early 2018, six FHT sites were selected by the primary care workgroup of the SOYF strategy to be participant sites. Eligibility included: previous participation in the falls risk screening pilot, interest in including nutrition risk screening in the falls screening process, using a tablet for screening, having at least one subscription to Ocean, and having access to a dietitian.

Two to five staff or management involved with the screening program were interviewed per site; clients were recruited from three sites. Regional representatives were recruited based on their familiarity with the SOYF initiative. A site representative (ED, dietitian, or receptionist) facilitated recruitment with staff and clients. Purposive sampling was used to elicit valuable insights, both positive and negative. Snowball sampling was used when key contacts were identified during a site visit or interview. Some individuals declined

Table 1: Interview guides for the FHT staff/management, regional representatives and FHT client participants

Staff/Management Questions	Regional Representative Questions	Client Questions
What does this FHT do well for providing support for older adults at risk of falling? For those at nutrition risk?	How does this LHIN and FHT provide support for older adults at risk of falling? For those at nutrition risk?	What sorts of things do you do to stay healthy? How did you feel about answering the questions about falling?
What are the challenges with providing care to prevent a fall? Providing care to address nutrition risk?	What are the challenges with providing care to prevent falls in your region? To provide care to address nutrition risk?	Were you also asked any questions about food and nutrition? If so, what did you think about answering those questions?
How is the falls screening program going? What is the process? What are the challenges?	How is the falls screening program going? What are the challenges?	Did someone ask you those questions or did you fill them out yourself on the tablet? How easy was it to answer those questions?
What is being done to keep this screening going?	How did you work towards sustaining falls screening? How did spreading falls screening to other FHTs go?	After you answered the questions, did anyone talk to you about your answers? If yes, whom did you speak with?
What was your reaction to nutrition risk screening being added? Why?	Why did you think it was time to add nutrition risk screening?	Were you provided any information about falls or nutrition during your visit to the FHT?
Who is involved in the discussions about implementing nutrition screening?	What were the similarities between implementing nutrition screening and implementing falls screening? What were the differences?	If so, what information was provided? Did you follow that information?
What is the process for nutrition screening?	Who is involved in the wider discussions about implementing and spreading the screening?	Did you read the material provided? What did you think of it? If you did not read it, why not?
How is the team working to make nutrition screening routine?	How is the regional team supporting FHTs to integrate nutrition screening into the routine?	Have you made any changes to your lifestyle since receiving this information? If so, what did you change? If not, why not?
How do you think the way things work around here is influencing your ability to implement screening?	How do you balance meeting the regional requirements and local FHT requirements when each site is unique?	Did you go to any of the suggested programs? If not, why not? If so, what did you think about them?
What were the similarities between implementing falls versus nutrition screening? What were the differences?	How do you think the wider regional and local organizational culture is influencing the ability of FHTs to implement nutrition screening?	Did you speak with an expert about nutrition (dietitian) at the FHT?
What else should I know about your organisation, clients, location?	What else I should know about your region, organisation, clients, location?	Would you have liked to receive information about how to prevent a fall? About food and nutrition? If so, what kind of information?
What advice do you have for other FHTs interested in implementing falls or nutrition screening?	What advice do you have for other FHTs interested in implementing falls or nutrition screening?	

Note. Questions were designed for FHTs that had started falls risk screening in the initial pilot, and were now adding nutrition risk screening. Questions were adapted for FHTs that were implementing falls and nutrition risk screening together. FHT = family health team; LHIN = local health integration network.

participation because of lack of time or permission to participate; because of the recruitment strategy, the number of people who declined is unknown.

Data Collection

All interviews (15–70 minutes each; 1 by phone) were conducted by C.L. during 2 day site visits at the six FHTs in June, 2018. For two small group discussions, two people were interviewed together using the interview guide. Site visits increased depth of understanding, and these insights were recorded through context memoranda about the FHT and broader community, such as proximity of other health care services, availability of food, access to public transportation, and any visible ways a community aimed to support their older adults who were at nutrition or falls risk. At the time of the interviews, C.L. was a Ph.D. candidate in health studies with a background in public health nutrition and implementation science/practice. C.L. has experience conducting interviews with health professionals but had no previous relationship with the participants. All digitally recorded interviews

occurred during work hours and participants could leave at any time.

Analysis

After all interviews were completed, a preliminary summary of key points was sent to all sites. As a first-level form of member checking, each FHT was requested to respond to the summary if it did not accurately represent their screening process and program. The table of key characteristics and screening program for each site was checked with FHT contacts.

Verbatim transcription was completed by a professional service for interviews with FHT staff and management. Summaries and verbatim quotes were used for the client interviews; these were not transcribed. One researcher (C.L.) conducted initial thematic analysis of interview transcripts and context memoranda using NVivo 12. The Saldana et al. inductive approach of first and second cycle coding was used, with one idea per first level “code” (Miles, Huberman, & Saldana, 2014). Second level codes were formed by grouping first level codes that had the same ideas. After line-by-

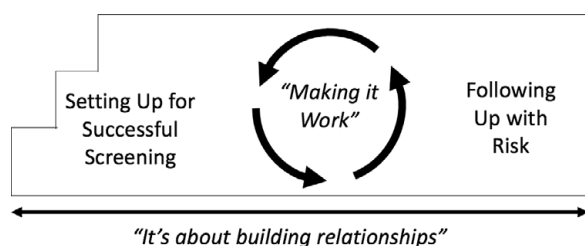


Figure 1: Summary of themes from the Family Health Team staff, management, and client interviews

line coding, thematic analysis was conducted and a diagram was created to summarize findings (Figure 1). To increase trustworthiness and triangulate findings, a table of suggested themes supported by key quotes and the diagram were shared with H.K. to check against transcripts ($n = 3$). The table and diagram were also shared with W.C. to compare with her experience with the NE SOYF strategy. Modifications to the diagram and themes resulted from this analytical step. Results were presented by webinar to representatives from participating FHTs to confirm themes and inform next steps.

This manuscript uses the term “client” to refer to an individual who receives care from the FHT. Several interview participants used “patient” and “client” interchangeably, and therefore quotes may include either term.

Ethics

Ethical approval was obtained from the University of Waterloo Research Ethics Board (ORE #22965). The NE LHIN agreed that all FHTs were covered by the University of Waterloo ethics. All participants signed written consent forms before the interview and were orally reminded that it would be audiorecorded.

Results

A total of 29 interviews with 31 participants (two small group discussions) were conducted with FHT staff and management (20 interviews; $n = 21$), regional representatives ($n = 3$) and clients (6 interviews; $n = 7$). Demographics of FHT staff, management, clients, and regional representatives are provided in Table 2. Details regarding the screening process for each FHT are in Table 3. Participants described three steps in building the falls risk screening program and adding nutrition risk screening: needing to set up for successful screening, making it work by building a system customized for their team, and facilitating at-risk clients to attend follow-up. An overarching theme was the need for strong relationships and to work as a team, recognizing that FHTs are uniquely positioned to support their clients in prevention of injury and need to connect to

Table 2: Demographics of family health team staff, management, regional representatives and clients

Demographic Information		Interviews; n (%) [*]
Family Health Team Staff, Management and Regional Representatives		
No. of participants		24
Gender	Female	22 (92%)
	Male	2 (8%)
Age group	<30 years	7 (29%)
	30-39 years	6 (25%)
	40-49 years	6 (25%)
	50-59 years	4 (17%)
	≥ 60 years	1 (4%)
Time in current role	<6 months	1 (4%)
	~ 1 year	8 (33%)
	~ 2 years	1 (4%)
	~ 3 years	0
	≥ 3 years	14 (58%)
Profession	Dietitian	6 (25%)
	Registered nurse	3 (12.5%)
	Executive director	5 (21%)
	Office administration (receptionist, office manager)	5 (21%)
	Other	5 (20.8%)
Client Interview Demographics		
No. of participants		7
Gender	Female	5 (71%)
	Male	2 (29%)
Age group	65-70 years	1 (14%)
	71-75 years	3 (43%)
	76-80 years	2 (29%)
	81-85 years	1 (14%)
	≥ 86 years	0
Time at current family health team	<6 months	2 (29%)
	~ 1 year	0
	~ 2 years	0
	≥ 2 years	5 (71%)
Spoke with at last visit	Dietitian	1 (12.5)
	Physician	2 (25%)
	Registered nurse	4 (50%)
	Nurse practitioner	1 (12.5)
Highest level of education	Some high school (e.g., grades 9 through 12)	2 (20%)
	Graduated high school	4 (40%)
	Some post-secondary education (e.g., college, university)	3 (30%)
	Graduated post-secondary	1 (10%)
Living situation in the community	Live alone	2 (29%)
	Live with spouse	4 (57%)
	Live with other family/friends	1 (14%)

Note. Some participants selected more than one response, so values may not add up to 100%. ^{*}Includes one small group discussion with two participants.

organizations with shared values. Additional quotes for each theme are provided in Table 4 and summarized in Figure 1. Superscripts accompanying each quote refer to their role and site. The letters “A-F” represent the label for each FHT. “Regional” represents an individual with an overall perspective, rather than from one FHT.

Table 3: Family health team characteristics by case

Site	No. of Physicians	When Did Falls Risk Screening Start?	When Did Nutrition Risk Screening Start?	How Are Falls Risk Screening Questions Asked?	Who Conducts the Multifactorial Falls Assessment?	Who Conducts The Nutrition Risk Screening?	How is the RD Informed if a Person Screened Is at High Risk?	Criteria for Nutrition Risk Screening	Other Comments
1	7	Restarted ~2-3 months before interviews	Same time as falls screening	On tablet by "runner" (who takes vitals)	OT (shared between 2 sites)	OT	Referral from OT	65+ and at falls risk	Started recently so still figuring out the process.
2	1	Restarted ~2-3 months before interviews	Same time as falls screening	On tablet by Health Promoter	Health Promoter	Health Promoter	Recommended by Health Promoter	65+ and at falls risk	Still deciding final process. A different process was used originally, but stopped when funding for previous health promoter ended
3	1	~3 years ago	Within the past month	By the client before an appointment	OT (shared between 2 sites)	By client before an appointment	RD referral after screening	All clients 65+	Challenges with RD capacity as many are screening at nutrition risk
4	3	~2-3 months before interviews; (team had previous experience with set-up)	Started with "Stand Up" participants; ~2-3 months before interviews	Everyone ≥ 65 years of age who sees the nurse is screened for falls risk	Nurse	By client before falls risk appointment	Before falls assessment	All clients ≥ 65 years of age who see the nurse + those at falls risk	As only those who see the nurse are screened, there is some discussion about a "blitz" to screen remaining clients
5	4	Unknown	~2-3 months before interviews	Answered on tablet by everyone 65+ (currently for 1 physician)	Nurse	Answered on tablet by everyone 65+ (currently for 1 physician)	ALL screen responses go to the RD who checks for high risk	All clients ≥ 65 years of age	The plan is to adapt so only high-risk screens are sent to the RD. Those at high risk and have diabetes are referred to the diabetes RD
6	6	Feb. 1, 2018	~2-3 months before interviews	Long falls questionnaire completed before appointment	Nurse	By nurse during falls risk follow-up appointment	Positive screens sent to the RD	All clients ≥ 55 years of age who are at falls risk	Originally asked the brief falls questionnaire but too many false negatives, so now use the longer version. ≥ 55 years of age is used as the screening age because of a large Indigenous population.

Note. RD = registered dietitian; OT = occupational therapist.

Table 4: Summary of themes and applicable quotes based on interviews

Theme	Quotes
Setting Up for Successful Screening: Being able to demonstrate the importance of falls and nutrition screening to FHT staff, management, and clients, then seeking opportunities to support the screening process.	<p>"If we can prevent a fall of an elder, then we're going to increase their health outcomes. Because we know through research, through evidence, we know that when an elder falls, then they tend to become frail and their outcomes are generally not very positive. So, if we can back the system up and go upstream and say, 'Let's prevent it here', then we do so." D-15 (Executive Director)</p> <p>"I often stress that the tablets help increase patient engagement. It makes them more of a member of their healthcare team. So, they're giving their responses, and they can see directly how that impacts that encounter that they will have with the healthcare provider." I1 (Quality Improvement)</p> <p>"One of the questions in the falls risk screen is, 'Do you sometimes feel sad and lonely?' You know what? If they say yes, we want to connect them with Mental Health. That's not necessarily something that we would pick up just in a general appointment. You don't ask those questions. So, I think the screening is really important. It leads to other things." E-11 (Executive Director)</p> <p>"We had been using Ocean previously here at [FHT] before the falls prevention pilot. So, there was already knowledge, and they were just looking for ways to expand it. So, the falls prevention was just a natural way. And it also came with the tablet and subscription. So, kind of, it enables teams to test the technology out and ways that they might use it, and then decide, do I want to continue it? And [FHT] had decided to continue it." I1 (Quality Improvement)</p> <p>"I do recall feedback from staff in the past, that 'Why are we involved in this when we didn't have capacity to do it?' But the view was always 'We should be looking at it, and had we not even started, we wouldn't have got the [grant name] award, we wouldn't have got the funding for the OT [occupational therapist].' So, I guess that's another piece of this, is that you have to work outside of what you think might possible, which I guess that is what a culture of change is, right?" F-15 (Executive Director)</p>
Making it Work: Building a system that works for your team. The work flow for each FHT will be different and needs to meet the needs of the staff and clients. To complete the work flow, the customizability of the technology is used, clients need to be supported to answer the screening questions, and a system needs to be in place for those at risk.	<p>"If they're not sure kind of how it works with their providers in terms of the multifactorial... because a lot of times, they get pushed back because people are thinking, 'I already have so much to do. I can't possibly take this on.' So, it helps to hear from someone who's doing it. We're a small team. We have very limited resources. So, if we can do it, you can do it. [laughs]" E-11 (Executive Director)</p> <p>"I usually go to the providers and say, 'Hey, want to do this? Want to try this out? Are you willing?' And the answer generally is yes, right? So, I don't typically run into any barriers to that. The only challenge if you want to say is figuring out how. Everybody's like, 'Yeah, let's do this, but how? How does it fit in? How do we make these things happen? What's the workflow?'" D-15 (Executive Director)</p> <p>"The IT department really wanted to get a really good understanding of what this was and how it was going to work. ... So, taking the time to set up specific parameters around what the functionality of the tablet is... What was that going to look like? Who was going to be responsible for cleaning it? Cost of replacement? Staff knowledge on how to triage out who should be essentially receiving the tablet and for what? For the reception staff, the reminder to actually be giving them out, and what that was going to look like. When were we going to determine when the screener would be appropriate?" A-13 (Executive Director)</p> <p>"I would recommend letting the patient know 'Can you please come ten minutes early' in order to complete this screen. Kind of give them a heads up and know that the doctor wants it done, so come early." A-12 (Office Administration)</p> <p>"It [nutrition screening] makes it much easier for me to sell the dietary part now after they read those questions, or I read them for them, and they answer them. You know, when you ask them 'Do you ever skip a meal?' They might think they don't, but then when actually are thinking about it, they're like 'Well, sometimes.' ... I think it [nutrition screening tool] just does a better job than I did and, certainly, is a better entry point into them seeing her [the dietitian]." D-13 (Nurse)</p> <p>"I do a weekly column in [name of newspaper], a local newspaper. So, any of our programs and services – so, the screen tool, the falls prevention screening, anything like that – I will include in an article. ... We're always trying to keep things visible and keep that awareness out there at all times." E-11 (Executive Director)</p> <p>"It [the handout] gives them some immediate feedback, even for the ones that aren't high risk. ... They get one check that they aren't high risk and they might not see anyone after that. That's the extra added benefit of doing the screen. Not only are we identifying the high risk that do need that extra support, but someone might learn something along the way that aren't high risk." A-11 (Dietitian)</p> <p>"Until we actually did some reading about it [falls prevention], it didn't feel like it was our problem because we have so many other things to deal with, and quite frankly there's not a lot of time to add in this upstream work, which is exactly what this is. But now that we have [occupational therapist], we can further make this happen the way it should." F-15 (Executive Director)</p>

Continued

Table 4: Continued

Theme	Quotes
Following Up With Risk: Once clients have been identified as at falls or nutrition risk, they need to be supported to attend appropriate follow-up, such as an appointment at the FHT, and/or to attend a community- based program, such as "Stand Up".	<p>"You just see if the patients are engaged. ... I think the program[s] kind of speaks for themselves. If it's something that is working for patients they're going to continue to sign up and come." C-11 (Dietitian)</p> <p>"When I was trained to do it [Stand Up], I wasn't sure what the validity of the whole program was going to be. I've been involved in it now for four years, and have seen major, major results. ... I refer everybody to that program, whether they think they need it or not. We are now getting people in that program who don't have any balance issues or any issues with their stability per se, but they are getting prepared for future, which is good." D-13 (Nurse)</p> <p>"Some people wouldn't be willing to come see a dietitian yet. They may not be ready for that change. They may have other health goals that are more important right now." D-16 (Dietitian)</p> <p>"We don't have public transportation here, so if you don't drive or don't know anybody who drives or can't get a ride, you're not going to come. If you have to pay somebody to come here to do a screening, ah, not going to do it." D-15 (Executive Director)</p> <p>"We're starting a walking group shortly that specifically targets our geriatric population that cannot walk long or far or fast or anything. We do a bit of an education piece with them, but part of it is just to get them out and going." D-15 (Executive Director)</p> <p>"When I think about SCREEN II and I think about falls risk, it's from clinical assessment to community intervention. Public Health are community intervention. If we're identifying people, they need to have easy access to resources in the community. That's where Public Health comes in." I1 (Regional)</p> <p>"But the engagement of the patient in terms of the spread for us was themselves. They are the greatest advocates for the program." D-15 (Executive Director)</p>
"It's about building relationships" I1 (Regional) Building strong relationships and working as a team, including the impact of screening on teamwork.	<p>"It goes back to relationships. Mainly the relationships. I find that people do want to participate in working together in a group setting. It's interesting to see how things happen. Sometimes you're surprised by what people agree to do. [laughs] I find that when we do meet though, like to work on things like this, it's almost empowering too because everyone has an opinion. It doesn't matter what your title is, you all have an opinion when you're working as a QI [quality improvement] team." F- 15 (Executive Director)</p> <p>"Having a relationship with a person makes it easier to approach them with... the importance of personal relationships and actually not just emailing all the time or talking on the phone but actually knowing somebody, who they are, and seeing their face and having the connection I think helps to make this work easier." I2 (Regional)</p> <p>"In terms of that partnership, we all say the words. We say, we should be collaborating. We should be partnering. And every document we produce has those buzz words in it. But why don't we actually do it? ... Even if I wanted to, I don't know who to call. And so we were saying that maybe there needs to be sort of a grassroots thing where all the frontline sort of providers get together and we just... even if it's just a day of sort of reporting on projects that you're doing. At least that might give people an idea of what's going on in the area. And then if you have similar interests or similar projects, who you can connect with." B-11 (Dietitian)</p> <p>"I think we'd like to function as a multidisciplinary team and I think identifying with the programs, identifying with the physician lead who's responsible from an IHP perspective, and then working together on moving a program forward will help to create that multidisciplinary approach. I think our team members are really busy. I think they're pulled in different directions. ... It's tough to integrate fully when the whole team's not here all the time. ... Unless you're needing to focus on a specific shared goal, it's hard to build a multidisciplinary team. I think everybody's like collegial and friendly, but to say we're really functioning as a multidisciplinary team, we got work." F-15 (Executive Director)</p> <p>"I suppose it depends on the team. I think when you use the screening tools and things that, that, especially if it was a team that didn't communicate well, you now have to communicate more about this. You do, because 'This is coming up, and I have to talk to you about this, that and the other thing.' I think that it could potentially strengthen communication. It is interdisciplinary, most of the time, the screenings. It would require more conversations surrounding that. If you had a weak communication, it could strengthen it, I would think." A-11 (Dietitian)</p>

Note. FHT = family health team; SCREEN II = Seniors in the Community: Risk Evaluation for Eating and Nutrition, Version II. Notation accompanying each quote refer to the FHT, interview number and role within the FHT. The letters "A-F" each represent one FHT.

"Client" refers to an individual who receives care from the FHT. "ED" is the Executive Director of an FHT. Other roles include dietitian, office administration and nurses.

Setting Up for Successful Screening

Participants described the need to set up for successful screening by demonstrating the importance of falls risk identification and prevention, and later for nutrition risk, to FHT staff, management, and clients. First, screening needed to be seen by the team and the client as a benefit to the client's care. "I would say it's about patients first, and it's about helping people understand that they don't have to fall, that they can do things to make sure they can live independently and stay active and vibrant in their community." I1 (Regional) Using evidence-based screening tools for both falls and nutrition screening was thought to help clients by "identifying needs within the seniors that they wouldn't have otherwise identified" I3 (Regional); as well as making clinical appointments more efficient, "if we can move that [answering checkbox questions] into the hands of the patient [before the appointment], then they [the physician or allied health] have more time to focus on the actual patient encounter instead of the computer." I3 (Regional) Given the practical nature of the tools, clients also recognized the importance and benefits of screening. As one client noted: "I got half way through it [nutrition questions on tablet] and I realized, umm, it was an awakening call because I realized how poorly I was beginning to eat. So, it was a positive experience for me. But I also knew by the end of it that I was in trouble. That I would be getting a call from somebody." C-I3 (Client)

Demonstrating the importance of falls and nutrition screening, to prevent falls and other adverse events, also laid a strong foundation on which to build the reason for screening. FHTs have a unique and valuable role in disease and injury prevention and health promotion, including through screening. "We shouldn't be in the business of chronic disease management, we should be in the business of health and wellness as a society." F-I5 (ED) However, if the steps in screening through to referral did not happen, this was discouraging for staff, as it did not lead to a proactive change for the client. For example, as described by a team member, "I asked the one girl before I came in [to the interview] 'Any input?' She said...you asked. She finds it a waste of time, she feels like no one looks at it, no one follows up on it, and the tablets don't always work." A-I2 (Office Administration) Setting up for success means that the full process from screening through to referral is planned, negotiated, and acted out to benefit the clients.

Setting up screening for success was also about seeking opportunities and being innovative, such as

participating in pilot projects or connecting with existing practices. "We also talked about doing, like, flu shot clinics when they're here sitting and waiting, that ten minutes after they got the shot, that we can optimize that time to do screening." I3 (Regional) Opportunities also came through using and sharing existing resources such as tablets, customized handouts, or funding. "We've developed the tools and they're available for anyone to use." I1 (Regional) There were several examples of sharing funding, including sharing allied health time across sites. "Although one person gets funding for it, all three FHTs get access to it." I3 (Regional) Such sharing of resources provided the capacity for FHTs to develop a screening program that promoted follow-through for at-risk clients.

In recognizing the need to monitor progress, the 27 FHT EDs agreed to submit standardized outcomes in their mandatory reports to the ministry, including for falls risk. "We work[ed] together to create a standardized list of indicators and one of the common things was falls. So yes, we are measuring that and we're tracking our data on falls." C-I5 (ED) The setting up of this standardized system aimed to facilitate monitoring of change over time for prevalence of risk and provision of support. As this system was set up for falls risk, it was thought that a similar model could be followed to allow for monitoring and evaluation of nutrition risk.

Getting started with screening sometimes required the endorsement and support from others outside of the particular FHT. Promotion of falls and then nutrition risk prevention from reputable organisations helped to build a foundation for screening: "If the Association of Family Health Teams is recommending that you do it, then it's probably more likely to move in that direction." I2 (Regional) Looking to exemplars and other FHTs also provided an incentive: "I think there may start to be a bit of peer pressure once they realize the things that other teams are able to achieve. I mean, eventually you're going to become a late adopter and sort of get pressured into the system." B-I1 (Dietitian) Sometimes garnering support and resources from a regional agency was a way to get screening started, and once initiated, it was considered an important part of care. This dietitian involved in the initial fall risk screening also indicated "I always suggest that they approach their LHIN or their health unit, someone else who might have that mandate of falls prevention and might be able to contribute to paying for the services. Even if it's just a pilot to get it started. We found here that once our staff and physicians saw how it [the tablet system] worked, they wanted to keep using it." B-I1 (Dietitian). Although the tablet cost was upfront and could be supported by any of the previously suggested methods, annual renewal of the Ocean subscription was also required. Many sites found that if the tablet had improved efficiency in delivery of care, they could

justify the renewal cost. Sites that did not have an efficient system could stop the subscription and restart; for example, after they had set up a process for those at risk.

Making it Work

When starting to build the screening program, the FHT had to figure out how to “make it work” I3 (Regional) for their particular service; a “cookie-cutter” approach was recognized as not being sufficient. Every FHT was unique, and the screening process needed to adapt to their own work flow. “They [FHTs] don’t have the same work flows because of different people and different patient loads. So, it’s really dependent on the team and how they’re built and what the capacity is for this.” I1 (Regional) The emphasis for both falls and nutrition screening was on starting small and following quality improvement methodology, testing out the work flow, and adapting as needed. “Implement slowly and learn from that and evaluate it as you go.” F-I5 (ED)

Each FHT had to determine their own screening process, and this required decision making and negotiation on how the screening would look. When planning the work flow, key decisions needed to be made about who would be screened (e.g., over age 65, only those at falls risk), when the screening would occur (e.g., in the waiting room, during a falls risk appointment) and who would facilitate the process (e.g., clients themselves, allied health at a different appointment). One FHT “decided we wanted to screen all patients 65 and older [for nutrition risk], not just our high-risk falls people, ... we know that a lot of our seniors have issues with nutrition. They don’t necessarily score high for falls risk. So, I didn’t want to lose anybody in that process.” E-I1 (ED) In another site, “the nutrition screening was more of a follow-up screen from the falls screen.” D-I6 (Dietitian) Other examples are provided in Table 4.

Once these process decisions were made, the tablet needed to be “customized to the workflow of the team.” I3 (Regional) A common phrase when discussing the technology was: “I’m told it can be done, but I just don’t know how” A-I2 (Office Administration), suggesting that it took some time for communication and planning with regard to the tablet to make screening work. Those implementing screening (the “change team”) needed to figure out what was technically possible and what would work best for their work flow. “We have to figure out ways to have the process work. So, we have to do it and then evaluate it to make sure it’s as efficient as we can make it.” F-I5 (ED) Sites that had gone beyond the initial set-up found that their screening process was easy to use, and what was learned along the way encouraged other FHTs to get started. “Once all the kinks have sort of been worked out of this process and

it’s easy and simple to do, I’m hopeful that the others will come on board.” I2 (Regional) Sites that had a functioning falls risk screening program typically found it easier to add nutrition risk screening, because they were adapting an existing system.

As clients are a key part of the team, a component of making it work was ensuring that clients were informed about why they were being asked these questions, and to understand that their FHT was using screening to support them to stay independent in their own homes. “I think people just need to be... Have their attention drawn to it [falls and nutrition risk].” D-I1 (Client) Clients also needed to feel comfortable with using the tablet technology, as it was integral to the screening process for FHTs. However, there were mixed opinions about how easy it was for clients to use the tablets. Clients discussed the importance of technology in their lives: “A lot of seniors, that’s how they keep in touch with their families. They’ll have an iPad or computer – oh yeah!” C-I3 (Client), indicating “I bet ya 90% of people would be able to use it [the tablet in the FHT].” C-I3 (Client) One client indicated, “The tablet is a bit of a hard thing to use, only because of the contrast issues for those with low vision.” D-I2 (Client) With a little support, clients became more comfortable using the tablet: “[I went] over the first couple of questions with them [the client] and showed them how to input the information. And they realize how easy it is, and then they sit down and complete the rest.” B-I4 (Office Administration)

Part of developing a screening program for both falls and nutrition risk was determining the work flow and how those identified as being at risk would be treated. “If we start to do these risk assessments and they’re at risk, if we don’t have somewhere for them to go for care and management, then that’s unethical.” F-I5 (ED) The support available for those at risk varied based on staffing, capacity, and availability of FHT and community resources. One site had originally started screening for falls risk but then stopped until they were able to provide enough support for at-risk clients. Some sites modified the process based on their capacity. For example, switching the falls risk questions so that the longer version was used on all clients, leading to more appropriate referrals, indicating that it “will be a more accurate reflection of who we do need to see. ... I think we’re going to get to the people that we actually can do something about.” D-I5 (ED) Another strategy for ensuring time for those at risk was “to put predetermined spots in my schedule [for clients at falls risk]” B-I3 (Nurse), and have trainees conduct follow-up assessments.

Following Up with Risk

Once clients had been identified as being at falls or nutrition risk, they needed to be supported to attend

the organized follow-up, such as an appointment at the FHT with a nurse, occupational therapist or dietitian), and/or to attend a community-based program, such as "Stand Up". "Stand Up" is "an exercise program for older adults with concerns about balance or mobility" B-I1 (Dietitian) that also includes a section about nutrition delivered by a dietitian. Participants mentioned that their clients were not always interested in nor did they understand why they were being asked to a follow-up appointment for either falls or nutrition risk screening. "I think the biggest challenge with some of our elderly people ... is a matter of getting them in for another appointment. It's like pulling teeth to get them to come in. ... They want to know what is going to help them and what is the benefit for them to come in and do this." D-I3 (Nurse) One site indicated, "I think the main thing that was discouraging is that all these people are testing positive for falls but, I would say, 90% decline an appointment... We have very, very low numbers on people that actually want the falls prevention appointment." A-I2 (Office Administration) Many reasons for lack of follow-up were suggested. "I think it comes back to the greatest barriers and the reason why it doesn't happen is the social determinants of health, honestly. Education is not that high here. We have a huge unemployment rate. All of those factors come into play to the point where how can it be important to them? ... And there's also the fear. There's a great deal of fear, and how do you combat that? Right? If you can't get to them, how do you combat it? You can't. So, you do what you can." D-I5 (ED).

To encourage more clients to attend follow-up, one participant indicated that, "I'm not sure they [the clients] understand that there's a lot of things that we can do to minimize their [falls or nutrition] risk and actually keep them there [at home]. ... I think if they did have a bit of information before they came in, that might help." D-I3 (Nurse) FHT staff who book the appointments were an important source of information for the clients when making their decision to attend the follow-up. "If we [staff booking the appointment] can't sell it, why are they are going to want to go to it." A-I2 (Office Administration) Suggestions to improve this process included ensuring that the staff booking the appointments had "information on what's going to happen in the falls prevention appointment, because I know we've been asked that. We kind of say "No, she's going to go over things with you." But, really, we don't know. We don't know what she's talk[ing] about and what she does." A-I2 (Office Administration) Some sites have developed a script for office administration that could also be used by any member of the FHT staff as a guide when speaking with at-risk falls or nutrition risk clients as a way to incorporate key messages into the conversation and help mitigate some of the fear. "Our dietitian had created a

script for what the front office could use to communicate." F-I5 (ED) Having allied health staff ask the questions during clients' falls risk follow-up appointments was also suggested to encourage follow-up.

Another reason for lack of follow-up for nutrition risk may be concern regarding whether clients understood the role of a dietitian. When asked if she thought that people know what a dietitian does, one client responded: "No! Absolutely not! I think most people figure that the dietitian is just there to tell you what to eat and how you're eating wrong." D-I1 (Client) Further explaining the role of dietitians and increasing their visibility in the community was thought to support follow-up attendance with a dietitian for those at nutrition risk.

The customized handout available with SCREEN-II-AB was seen as valuable for all clients, whether at nutrition risk or not. By using the handout, those who were not at risk were provided helpful suggestions for prevention, and those at risk received specific feedback for why they should see a dietitian. "I think it [the handout] might even be more worthwhile for the patient, because that way they're not just filling it out and being done with it, they actually get the reason for doing it." A-I2 (Office Administration) For those at risk, seeing their answers was thought to help them understand why it would be beneficial to see a dietitian. There were mixed opinions regarding the benefit of creating a customized handout for those at falls risk. Some staff indicated that they already used an individualized approach, only providing relevant resources to the client. Another participant indicated: "I think it [falls risk handout] will be immensely helpful for the team," I3 (Regional) with potential for the same benefits to improve follow-up as the nutrition handout. When asked about the value in receiving the individualized handout, one client indicated: "Absolutely, because I'm trying to change things ... I think that would be really, really helpful." A-I6 (Client)

Strong relationships among all staff and clients were described as impacting screening and follow-up compliance. One participant compared the relationship between two sites, indicating that at a site with stronger relationships with their clients, older adults were less likely to decline to answer screening questions or attend follow-up: "Our admin staff in [FHT name] have a really good relationship with all our patients. ... I would see it being more of a possibility for someone to decline to do the screening here just because of who's asking them, because they don't have that same connection." F-I2 (Dietitian)

Several FHTs ran their own falls risk support programs and/or connected clients with other local opportunities. "If they have questions they can ask me right at the visit or any time I see them and then I tell them about all our

programs that we're doing. ... If there's anything that's applicable outside of what we offer that might be good for our patients then we just tell them about that program." C-I4 (Allied Health) "Stand Up" was mentioned frequently with one client indicating "the Stand Up program is excellent. I would advise anyone over 70 to take it" D-I1 (Client), and that, "it [Stand Up] gave you strength in the exercises. Showed you the proper way to get up when you fall. ... I do some of those exercises still." D-I2 (Client) A nurse involved indicated, "It's unreal how the social aspect [of Stand Up] is getting people out of their... they're feeling down in the dumps and just coming twice a week with people that are now their new friends, is making a huge difference." B-I3 (Nurse) Unfortunately, "Stand Up" was "a bit resource-intensive" I2 (Regional) as it is a 12-week program, 2.5 hours per week, and run by health professionals, therefore needing time, space, and money to operate, and transportation was an issue for many participants.

Another program mentioned frequently was "From Soup to Tomatoes," in which an instructor broadcast and recorded an exercise program for older adults to be viewed from anywhere, including their own homes. "Now they have all the exercise classes on a USB. It's sustainable because it's peer-led older adults coming together in a donated location, and they just invite all their friends. They do exercise when they want, for how long they want, and how often they want." I1 (Regional) Another benefit "is we really are promoting it as a peer-led initiative, so you physically come together with your peers so that there's that reduced... the social isolation. What we're hearing is that if Mrs. Smith doesn't show up for exercise class in [location], everybody notices she's not there, and someone takes on the responsibility of following up and seeing if she's okay. So, it's community care." I1 (Regional) At the point of interviews, nutrition has been included in "Stand Up", but few community nutrition programs were available. Based on the benefits to clients beyond physical activity, similar community-based activities focused on nutrition were encouraged.

When an FHT was running a falls prevention program and recruiting participants, it was noted that "around here it's a lot of word of mouth." C-I4 (Allied Health) Other strategies were also used to promote attendance. "We've done actual personal invitations. ... [with a letter saying] 'Your doctor is recommending that you attend this program,' and that is the key." E-I1 (ED) There are many identified barriers to attending a follow-up appointment or programs, including transportation, cost, and the weather, which were particularly strong barriers in Northern Ontario. "You can have all these nice classes, but when it's like minus 30 outside and there's a storm and stuff like that, then people who are

more at risk of falls, well, they don't really want to adventure out." F-I3 (Allied Health) Another participant indicated that when setting up a new program, "trying to make most of my programs either low cost or free of cost is my number one goal." C-I4 (Allied Health) FHTs also connected with other community organisations and programs, such as other FHTs, public health units (PHUs), or local gyms to work together to meet the needs of their population. Some of these models should be considered in developing nutrition-focused community activities for those at risk.

"It's About Building Relationships"

Throughout all of these themes is the need for FHTs to build strong relationships and work as a team to meet the needs of their clients. "The thing is, and it's not a secret, it's about building those relationships, it's about non-competition, it's about looking [at] what's best for all. We're all going to benefit from this. There's not a downside to these things. In fact, what happens to one place is going to be better for the next place and the next place. So that is the key to the success. It's the relationships and the mutual respect and the trust that, when we come together, we want the best for our patients." D-I5 (ED) These relationships were essential within the FHTs, working together as a team and with others in the community, all learning from each other and sharing resources, ideas, and staff in a non-competitive environment. There was emphasis on having FHTs, the LHIN, and PHUs work together because they share a common goal. "We're both [FHTs and PHU] in the same business seeing the same patients, so there's no reason that we shouldn't be trying to work on things together to come up with creative solutions in a rural environment where we're under-resourced. We need to maximize everything that we have." A-I3 (ED) There were mixed views on the strength of these connections. "I know there's often a disconnect across say primary care, public health and the other sort of healthcare sectors, that generally we just kind of work in our silos. We might have the same goals and the same objectives, but we're not necessarily working on them together." B-I1 (Dietitian) The dietitian further indicated: "I think the challenge is that often we don't know who to call. ... we're kind of working on the same things, but we don't really know what each other is doing or who is in each office." B-I1 (Dietitian) Another participant indicated: "People already know who everybody is and who's working on what and how to contact people" I2 (Regional), so perception on the strength of relationships depended on the community and those involved in making these linkages.

Within the FHTs, there was a need to work as a team, treating each other as equals. When implementing

screening, the whole team needed to be aware and know their role. “I think the definition of the relationship needs to be clear in that it’s not just the champion or the management... It’s everyone involved. ... If we are looking at that patient, they are key driver in the success and the spreadability of anything that we do.” D-I5 (ED) It was also thought to be easier to implement and sustain something new, such as falls or nutrition risk screening, when the full team could see the benefit. “Trying to get the whole team involved as much as possible and have everyone understand.” F-I2 (Dietitian) The culture of the team played a role, and each FHT was different. “We have one small team in a rural community, and the culture is different because of the leadership and the lack of buy-in by the physicians, whereas other teams have much more positive culture, might have buy-in by one physician, or two, but they’re all making it happen.” I1 (Regional)

Screening was mentioned to have an impact on teamwork in two ways. For one, screening using an evidence-based tool helped connect the team and have more appropriate referrals. “I think it’s [screening] a good excuse to refer within our own team, because sometimes you get in your little chute and just do your thing.” D-I3 (Nurse) It was also explained that use of the tool helped build trust. “It’s about trust; and having standardized tools would help because then you’d know that these things are being done, and they would help build the trust.” I1 (Regional) The process of implementing screening also improved teamwork. “I think working together on whatever project it might be just automatically sort of brings the team a little bit closer together and helps to build some communication.” F-I2 (Dietitian) When asked if screening changed the way the team worked, a participant indicated “I think it, sometimes, brings awareness to our inner professional practice in that it helps us understand better what our colleagues are looking at, and what are they assessing. ... That then broadens our knowledge and our awareness of those factors, if we’re screening.” D-I6 (Dietitian)

Key components within teamwork were effective communication, trust, and having shared values. “It starts with trust. It starts with the ability to agree that you’re going to look at something and know that you don’t have all the answers, but together you’ll figure it out, even if you fail a little bit, as long as you pick up and keep on trying some more. And when you have a team of people that actually care about the same thing and just care about trying to make something work, you can go far. It may take time, but you can make a difference. So yeah, you can’t do this work in isolation. There’s no way.” F-I5 (ED)

When asked for advice for other FHTs thinking about starting nutrition screening, one participant answered:

“Please do. Add the nutrition screening in some way, shape or form to your practice. Whatever that looks like will be different based on your organization’s needs, your population’s needs and your location, but I think it’s a great thing to be pursuing, and I think it should be pursued, which is why I’m now making the effort to try and find opportunities to incorporate it in the other places where I work.” D-I6 (Dietitian)

Discussion

FHTs in this study started building a falls and then a nutrition risk screening program by setting up for success with a strong foundation, figuring out how to make the process work for their specific team and work flow, and encouraging at-risk clients to attend a follow-up appointment or program. Throughout, there was the need to work effectively as an interdisciplinary team and to build strong relationships with other individuals and organisations with shared values and goals. The screening program aimed to support older adults so that falls and nutrition risk could be identified, and preventative interventions provided and utilized. FHTs have a valuable role in prevention, and this study provides guidance for others working towards developing their own screening program or adding nutrition risk screening to an existing program.

In setting up an ethical screening program for falls and nutrition risk prevention, resources within the FHTs were needed, including having a trained or relevant allied health professional as part of the team with the capacity to provide follow-up for clients screened who were at risk (Kondrup et al., 2013). Having these trained professionals was part of *setting up for successful screening and making it work*. Beyond these appointments with allied health, connections to community programs provided additional support (i.e., attendance at “Stand Up” or a Tai Chi class that had the facilities and instructors to run the course). Setting up these connections was part of *making it work*, facilitating *follow-up with those at risk*, which were strengthened through *building relationships*. Although teams did not have the opportunity to fully develop these connections for those at nutrition risk as they were only at the beginning stages of developing a screening program, learning from successful exercise and falls prevention activities (e.g., including a socialization component, bringing the program to the older adults where they live) will promote successful uptake.

Community activities are essential for screening programs in primary care. Even when follow-up appointments were available for a falls assessment or to see a dietitian with the FHT, many at-risk older adults declined this medical visit follow-up. In acute care, when risk is identified, treatment is provided or initiated when the patient is hospitalized. Providing

services to meet the needs of at-risk clients in the community is more difficult, as this at minimum requires a new appointment with a member of the team, and clients often have challenges attending such appointments. As demonstrated in this study, activities provided to the older adults where they live or in other accessible locations where they are already visiting (e.g., a recreation centre) is one strategy to promote follow-up. For those at nutrition risk in this study, a customized handout not only met the need for follow-up but also demonstrated to clients the types of strategies that they could undertake, potentially with further guidance and counselling by a dietitian.

FHTs suggested strategies to facilitate follow-up including having a phone conversation to discuss next steps, or connecting follow-up appointments with pre-existing appointments. Declining follow-up has been reported in other studies, with one indicating that 66 per cent of dietitians reported clients at nutrition risk “sometimes/often” declining an appointment with a nutrition professional (Craven, Pelly, Lovell, Ferguson, & Isenring, 2016). Also, when learning that they were at nutrition risk post-screening, some older adults have reported they were surprised or upset by the results, others were unconcerned, and some did not understand what it meant to be at risk (Reimer, Keller, & Tindale, 2012). For some clients, education, such as through the customized nutrition handout, may be the start of behaviour change (Southgate, Keller, & Reimer, 2010) and may be the preferred post-screening activity (Keller, Haresign, & Brockest, 2007). Screening practices should also include monitoring of those at risk (Kondrup et al., 2013); however, this is more difficult in the community than it is in acute care, as follow-up and monitoring are more challenging when clients live at home. Regular re-screening is also encouraged (Kondrup et al., 2013), and several of the FHTs in this study had or were planning to re-screen annually.

Sites recognized the benefits of collaboration with individuals and organisations with shared values and goals for health care post-screening. For example, community services and programs provided or supported by other organisations could benefit at-risk clients screened in FHTs. Opinions were mixed regarding the strength of that collaboration, particularly with PHUs. These varied opinions may be because of differences in the awareness of collaborations, as within an FHT, some participants indicated strong collaborations of which others were unaware. The relationship between primary care and public health has been explored, indicating ways that it can be mutually beneficial and strategies for collaboration (Martin-Misener et al., 2012; Stevenson Rowan, Hogg, & Huston, 2007; Valaitis et al., 2018). The current study reinforces the importance of such collaborations, as not all clients at risk can be

met with or want individualized primary care treatment. Relatively few participants in this study were from PHUs, and further interviews with health professionals in this sector would increase understanding of how collaboration can be fostered with primary health care clinics.

Several reviews have explored falls prevention interventions (Cheng et al., 2018; Guirguis-Blake et al., 2018; Tricco et al., 2017). One example of a comprehensive project exploring the implementation and sustainability of a falls prevention program with general practitioners is underway in Australia in the Integrated Solutions for Sustainable Fall Prevention (iSOLVE) project (Clemson, 2018; Clemson et al., 2017). iSOLVE is similar to this work in that it includes screening of clients over 65 years of age, using tablets with the Staying Independent Patient Checklist, among other components (Clemson et al., 2017). The evaluation of iSOLVE is a large study (28 general practices) exploring practitioner practices to reduce client falls, cost effectiveness, and change in use of medications known to increase falls risk. iSOLVE also included allied health interviews that indicated that falls prevention was complex, with challenges of: working with clients with varied needs, working with allied health with varied understanding of roles, competition, and communication (Liddle et al., 2018). Forthcoming results from iSOLVE, including outcomes, barriers to, and facilitators of falls prevention program implementation and sustainability, will likely be applicable to the FHT falls prevention and screening programs. Other programs can also be considered to address needs of individuals in more rural locations, such as through telephone-assisted peer coaching or other types of virtual care.

Although a key component of this study was use of the tablet system, many of the same strategies are thought to apply to building or adding any screening program. Not all FHTs have access to tablets; however, they are becoming more common in health care, with literature suggesting that older adults have overall high ratings for satisfaction with using tablets, including helpfulness and usability (Ramprasad, Tamariz, Garcia-Barcena, Nemeth, & Palacio, 2017).

Strengths and Limitations

The FHTs in this study were at different stages of setting up their screening program. A few FHTs had been conducting falls risk screening for several years and were able to discuss how they sustained the program. Others had started during the initial falls pilot but recently restarted when support for those at risk became available, and, therefore, falls and nutrition risk screening were begun simultaneously. This variation in stages provided the opportunity to explore perspectives from

the first steps of adding nutrition screening to an established program as well as starting falls and nutrition screening together. This variation may have limited depth of understanding of each stage, particularly understanding how screening was sustained; however, saturation of themes was still achieved around initially building a screening program in FHTs. Further work is encouraged for understanding if and how this screening program was sustained and spread to other settings.

Client opinions were included and provided a unique perspective; however, they were not from all FHTs, as client recruitment was a challenge for some sites, particularly those at the early stages of building their program. Some client participants had been screened, however not always as part of an established FHT process. Several clients who were participants were not at risk, and therefore had not experienced the full ethical screening program to attend a follow-up appointment, nor had they attended community programs. However, client participants were still aware and had opinions about the reasons why some clients may decline follow-up, and had experience with various programs, particularly for falls prevention. Further interviews with falls and/or nutrition risk clients who accept and decline follow-up, including declining to attend a community follow-up program, would add further insight.

FHTs in the NE LHIN may have different experiences than those in more urban areas. For example, one FHT in a small community benefited from strong relationships with their clients; however, food access was a challenge, as the small grocery store was only open in the summer, and the next closest was a 45 minute drive away. Comparison between urban and rural FHTs was not made, because these FHTs typically had large catchment areas that included clients from rural and urban areas, making comparison difficult. Differences in collaboration with services in more urban centres may have resulted in further findings with respect to building a screening program that is linked to these services in the community.

Mapping qualitative findings to quantitative data was not within the remit of this study. Further analysis should explore how many older adults were: screened for falls and/or nutrition risk, were at risk, attended a follow-up appointment, and attended a community program. Further exploration is also needed for if/how sites without a dietitian would ethically screen for nutrition risk.

Conclusion

With the high prevalence of falls and nutrition risk among older adults living in the community, building and sustaining a screening program with both of these aspects is an important aspect of FHT care. Primary care

providers have a unique opportunity to identify those at risk and link the client to prevention resources and programs. FHTs indicated the need to set up for success, to make the process work for them, and to follow up with those at risk, recognizing the beneficial impact of strong relationships, collaboration, and teamwork. Understanding how FHTs add nutrition risk screening to a falls risk screening program can help support other FHTs interested in supporting the needs of their older adult clients in this way.

References

- Ambrose, A. F., Cruz, L., & Paul, G. (2015). Falls and fractures: A systematic approach to screening and prevention. *Maturitas*, 82(1), 85–93. <https://doi.org/10.1016/j.maturitas.2015.06.035>.
- Ambrose, A. F., Paul, G., & Hausdorff, J. M. (2013). Risk factors for falls among older adults: A review of the literature. *Maturitas*, 75(1), 51–61. <https://doi.org/10.1016/j.maturitas.2013.02.009>.
- American Geriatrics Society & British Geriatrics Society. (2011). Summary of the updated American Geriatrics Society/British Geriatrics Society clinical practice guideline for prevention of falls in older persons. *Journal of the American Geriatrics Society*, 59(1), 148–157. <https://doi.org/10.1111/j.1532-5415.2010.03234.x>.
- Bedard, A. (2017). Falls prevention in primary care: Assessment to intervention (project report). Stay on your feet. Retrieved September 2018 from <http://www.nelhin.on.ca/~media/sites/ne/soyf/Report%20on%20Falls%20prevention%20in%20Primary%20Care%20March%202017.pdf> date accessed 8 Nov 2017.
- Boulos, C., Salameh, P., & Barberger-Gateau, P. (2016). Malnutrition and frailty in community dwelling older adults living in a rural setting. *Clinical Nutrition*, 35(1), 6–11. <https://doi.org/10.1016/j.clnu.2015.01.008>.
- Brown, A. P. (1999). Reducing falls in elderly people: A review of exercise interventions. *Physiotherapy Theory and Practice*, 15(2), 59–68. <https://doi.org/10.1080/095939899307775>.
- Casey, C. M., Parker, E. M., Winkler, G., Liu, X., Lambert, G. H., & Eckstrom, E. (2016). Lessons learned from implementing CDC's STEADI Falls Prevention Algorithm in primary care. *The Gerontologist*, 57(4), 787–796. <https://doi.org/10.1093/geront/gnw074>.
- Cheng, P., Tan, L., Ning, P., Li, L., Gao, Y., Wu, Y., et al. (2018). Comparative effectiveness of published interventions for elderly fall prevention: A systematic review and network meta-analysis. *International Journal of Environmental Research and Public Health*, 15(3), 498. <https://doi.org/10.3390/ijerph15030498>.
- Chien, M. H., & Guo, H. R. (2014). Nutritional status and falls in community-dwelling older people: A longitudinal study of a population-based random sample. *PLoS One*, 9(3), e91044. <https://doi.org/10.1371/journal.pone.0091044>.

- Clemson, L. (2018). iSOLVE. Retrieved September 2018 from <https://www.isolvefallprevention.com/> date accessed 31 August, 2019.
- Clemson, L., Mackenzie, L., Roberts, C., Poulos, R., Tan, A., Lovarini, M., et al. (2017). Integrated solutions for sustainable fall prevention in primary care, the iSOLVE project: A type 2 hybrid effectiveness-implementation design. *Implementation Science*, 12(1), 12. <https://doi.org/10.1186/s13012-016-0529-9>.
- CognisantMD. (2018). CognisantMD. Retrieved from <https://www.cognisantmd.com/> date accessed 2 July, 2018.
- Craven, D., Pelly, F., Lovell, G., Ferguson, M., & Isenring, E. (2016). Malnutrition screening of older adults in the community setting: Practices reported by Australian dietitians. *Nutrition & Dietetics*, 73(4), 383–388. <https://doi.org/10.1111/1747-0080.12269>.
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*, 4(50). <https://doi.org/10.1186/1748-5908-4-50>.
- Government of Ontario. (2018). IDEAS—Improving & Driving Excellence Across Sectors. Retrieved August 2018 from <https://www.ideasontario.ca/> date accessed September 24, 2018.
- Guirguis-Blake, J. M., Michael, Y. L., Perdue, L. A., Coppola, E. L., & Beil, T. L. (2018). Interventions to prevent falls in older adults. *JAMA*, 319(16), 1705–1716. <https://doi.org/10.1001/jama.2017.21962>.
- Johnson, C. (2003). The association between nutritional risk and falls among frail elderly. *The Journal of Nutrition, Health & Aging*, 7(4), 247–250.
- Keller, H., Brockest, B., & Haresign, H. (2006). Building capacity for nutrition screening. *Nutrition Today, Clinical & Community Trials*, 41(4), 164–170.
- Keller, H., Goy, R., & Kane, S. (2005). Validity and reliability of SCREEN II (Seniors in the Community: Risk Evaluation for Eating and Nutrition, Version II). *European Journal of Clinical Nutrition*, 59(10), 1149–1157. <https://doi.org/10.1038/sj.ejcn.1602225>.
- Keller, H., Haresign, H., & Brockest, B. (2007). Process evaluation of Bringing Nutrition Screening to Seniors in Canada (BNSS). *Canadian Journal of Dietetic Practice and Research*, 68(2), 86–91. <https://doi.org/10.3148/68.2.2007.86>.
- Keller, H., & Østbye, T. (2003). Nutritional risk and time to death; predictive validity of SCREEN (Seniors in the Community Risk Evaluation for Eating and Nutrition). *Journal of Nutrition, Health & Aging*, 7(4), 274.
- Keller, H., Østbye, T., & Goy, R. (2004). Nutritional risk predicts quality of life in elderly community-living Canadians. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 59(1), M68–M74. <https://doi.org/10.1093/gerona/59.1.M68>.
- Kempton, A., Garner, E., Van Beurden, E., Sladden, T., McPhee, L., Steiner, C., et al. (1997). Stay on Your Feet: Final report 1992–1997. Lismore. Retrieved August 2018 from <https://nswlhd.health.nsw.gov.au/health-promotion/files/2014/01/93.pdf> date accessed August 24, 2018.
- Kondrup, J., Allison, S., Elia, M., Vellas, B., & Plauth, M. (2013). ESPEN guidelines for nutrition screening 2002. *Clinical Nutrition*, 22(4), 415–421.
- Laur, C., Valaitis, R., Bell, J., & Keller, H. (2017). Changing nutrition care practices in hospital: A thematic analysis of hospital staff perspectives. *BMC Health Services Research*, 17(1), 498. <https://doi.org/10.1186/s12913-017-2409-7>.
- Liddle, J., Lovarini, M., Clemson, L., Mackenzie, L., Tan, A., Pit, S., et al. (2018). Making fall prevention routine in primary care practice: Perspectives of allied health professionals. *BMC Health Services Research*, 18(1), 598. <https://doi.org/10.1186/s12913-018-3414-1>.
- Lorenzo-López, L., Maseda, A., de Labra, C., Regueiro-Folgueira, L., Rodríguez-Villamil, J. L., & Millán-Calenti, J. C. (2017). Nutritional determinants of frailty in older adults: A systematic review. *BMC Geriatrics*, 17(1), 108. <https://doi.org/10.1186/s12877-017-0496-2>.
- Martin-Misener, R., Valaitis, R., Wong, S., MacDonald, M., Meagher-Stewart, D., Kaczorowski, J., et al. (2012). A scoping literature review of collaboration between primary care and public health. *Primary Health Care Research & Development*, 13(4), 327–346. <https://doi.org/10.1017/S1463423611000491>.
- Meijers, J. M., Halfens, R. J., Neyens, J. C., Luiking, Y. C., Verlaan, G., & Schols, J. M. (2012). Predicting falls in elderly receiving home care: The role of malnutrition and impaired mobility. *The Journal of Nutrition, Health & Aging*, 16(7), 654–658.
- Michie, S., van Stralen, M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(42). <https://doi.org/10.1186/1748-5908-6-42>.
- Miles, M., Huberman, A., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: Sage.
- Ministry of Health and Long-Term Care. (2018). Family health teams. Retrieved August 2018 from <http://www.health.gov.on.ca/en/pro/programs/fht/> date accessed July 2, 2018.
- North East Local Health Integration Network. (2018). Stay on Your Feet. Retrieved August 2018 from <http://www.nelhin.on.ca/stayonyourfeet.aspx> date accessed July 2, 2018.
- Pearson, C., St-Arnaud, J., & Geran, L. (2014). *Understanding seniors' risk of falling and their perception of risk*. Ottawa: Statistics Canada.

- Power, L., Mullally, D., Gibney, E. R., Clarke, M., Visser, M., Volkert, D., *et al.* (2018). A review of the validity of malnutrition screening tools used in older adults in community and healthcare settings—A MaNuEL study. *Clinical Nutrition ESPEN*, 24, 1–13. <https://doi.org/10.1016/j.clnesp.2018.02.005>.
- Ramage-Morin, P., & Garriguet, D. (2013). Nutritional risk among older Canadians. *Health Reports*, 24(3), 3–13.
- Ramprasad, C., Tamariz, L., Garcia-Barcena, J., Nemeth, Z., & Palacio, A. (2017). The use of tablet technology by older adults in health care settings—Is it effective and satisfying? A systematic review and meta analysis. *Clinical Gerontologist*, 42(1), 17–26. <https://doi.org/10.1080/07317115.2017.1322162>.
- Registered Nurses' Association of Ontario, & Canadian Patient Safety Institute. (2013). Reducing falls and injuries from falls. Retrieved August 2018 from https://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/providers/Documents/Falls%20Prevention%20Injury%20Reduction%20GSK%20EN%20June%202013%20OFW.pdf date accessed July 16, 2018.
- Reimer, H., Keller, H., & Tindale, J. (2012). Learning you are "at risk": Seniors' experiences of nutrition risk screening. *European Journal of Ageing*, 9(1), 81–89. <https://doi.org/10.1007/s10433-011-0208-2>.
- Rosser, W., Colwill, J., Kasperski, J., & Wilson, L. (2011). Progress of Ontario's family health team model: A patient-centered medical home. *Annals of Family Medicine*, 9(2), 165–171. <https://doi.org/10.1370/afm.1228>.
- Rubenstein, L. (2006). Falls in older people: Epidemiology, risk factors and strategies for prevention. *Age and Ageing*, 35 (Suppl. 2), ii37–ii41. <https://doi.org/10.1093/ageing/afl084>.
- Rubenstein, L., & Josephson, K. (2002). The epidemiology of falls and syncope. *Clinics in Geriatric Medicine*, 18(2), 141–158.
- Rubenstein, L., Vivrette, R., Harker, J., Stevens, J., & Kramer, B. (2011). Validating an evidence-based, self-rated fall risk questionnaire (FRQ) for older adults. *Journal of Safety Research*, 42(6), 493–499. <https://doi.org/10.1016/j.jsr.2011.08.006>.
- Salas, E., Shuffler, M., Thayer, A., Bedwell, W., & Lazzara, E. (2015). Understanding and improving teamwork in organizations: A scientifically based practical guide. *Human Resource Management*, 54(4), 599–622. <https://doi.org/10.1002/hrm.21628>.
- Salas, E., Sims, D., & Burke, C. (2005). Is there a "Big Five" in teamwork? *Small Group Research*, 36(5), 555–599. <https://doi.org/10.1177/1046496405277134>.
- Shubert, T. E., Altpeter, M., & Busby-Whitehead, J. (2011). Using the RE-AIM framework to translate a research-based falls prevention intervention into a community-based program: Lessons learned. *Journal of Safety Research*, 42(6), 509–516. <https://doi.org/10.1016/J.JSR.2011.09.003>.
- Southgate, K. M., Keller, H. H., & Reimer, H. D. (2010). Determining knowledge and behaviour change: After nutrition screening among older adults. *Canadian Journal of Dietetic Practice and Research*, 71(3), 128–133. <https://doi.org/10.3148/71.3.2010.128>.
- Stay On Your Feet. (2018). Staying Independent. Retrieved August 2018 from www.nelhin.on.ca/stayonyourfeet.aspx date accessed August 1, 2018.
- Stevenson Rowan, M., Hogg, W., & Huston, P. (2007). Integrating public health and primary care. *Healthcare Policy; Politiques de Sante*, 3(1), e160–e181.
- Tricco, A. C., Thomas, S. M., Veroniki, A. A., Hamid, J. S., Cogo, E., Striffler, L., *et al.* (2017). Comparisons of interventions for preventing falls in older adults. *JAMA*, 318(17), 1687. <https://doi.org/10.1001/jama.2017.15006>.
- Valaitis, R., Meagher-Stewart, D., Martin-Misener, R., Wong, S., MacDonald, M., & O'Mara, L. (2018). Organizational factors influencing successful primary care and public health collaboration. *BMC Health Services Research*, 18(1), 420. <https://doi.org/10.1186/s12913-018-3194-7>.
- Van Beurden, E., Kempton, A., Sladden, T., & Garner, E. (1998). Designing an evaluation for a multiple-strategy community intervention: The North Coast Stay on Your Feet program. *Australian and New Zealand Journal of Public Health*, 22(1), 115–119.
- Vivanti, A. P., McDonald, C. K., Palmer, M. A., & Sinnott, M. (2009). Malnutrition associated with increased risk of frail mechanical falls among older people presenting to an emergency department. *Emergency Medicine Australasia*, 21(5), 386–394. <https://doi.org/10.1111/j.1742-6723.2009.01223.x>.
- Westergren, A., Hagell, P., & Sjö Dahl Hammarlund, C. (2014). Malnutrition and risk of falling among elderly without home-help service—A cross sectional study. *The Journal of Nutrition, Health & Aging*, 18(10), 905–911. <https://doi.org/10.1007/s12603-014-0469-5>.
- Wilson, J. M. G., & Junglier, G. (1968). Principles and practice of screening for disease. Retrieved August 2018 from <http://apps.who.int/iris/handle/10665/37650> date accessed August 1, 2018.