Malnutrition & Older Adults:
Local Findings, Successful Strategies, and Research & Practice Collaborations

November 10, 2016

Full Report
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Acknowledgements
Funding for this event was provided by Abbott Nutrition. In-kind contributions were provided by Vancouver Island University and Island Health. Thank you to Marc Belanger for organizing logistics for the event. Thank you to our Research and Capacity Building (RCB) volunteers and to Island Health’s Volunteer Resources Department for providing the support of Erin Coates.

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ISBN 978-0-9950533-4-2
Background

A 2016 study by the Canadian Malnutrition Task Force has shown that 1 in 2 older adults admitted to hospital in Canada meets the criteria for malnutrition, which is associated with poorer outcomes. In order to share and address the study's local findings, Island Health and Vancouver Island University held a half-day workshop on November 10, 2016 with academics, clinicians, researchers, and community leaders. This report summarizes the presentations and discussions at the event, and identifies next steps.

Purpose

Every November, Island Health’s Knowledge-to-Action (K2A) Month brings together leaders and researchers, knowledge-users and patients to learn about translating evidence into practice to improve care and outcomes. The November 10th event was part of Knowledge-to-Action Month 2016. The objectives of the workshop were:

- To increase participants’ knowledge of research related to malnutrition and older adults (nationally, provincially and locally)
- To increase participants’ knowledge of successful local strategies that are addressing malnutrition and older adults
- To give participants an opportunity to share their thoughts about possible next steps for Research and Practice Collaborations

Welcome

Carol Stuart (former Dean, Health and Human Services, Vancouver Island University) welcomed attendees and provided opening comments. Geraldine Manson, the Snuneymuxw First Nation Elder in residence, graciously welcomed attendees to the Snuneymuxw traditional territories and provided opening prayers and comments. Event organizers were delighted to see academics and community researchers, representatives from the First Nations community, a representative of the municipality, leaders from community organizations, and clinicians from a variety of health care disciplines in attendance. Carol and Geraldine thanked participants for coming together to explore strategies for addressing this pressing issue regarding the health and wellbeing of older adults in Nanaimo.

Dr. Paul Hasselback (Medical Health Officer, Island Health) spoke about the general trends in seniors’ wellbeing, and provided foundational information on the issues of nutritional risk. He focused on the elderly patient’s experience of malnutrition by describing the personal experiences of his family members. Dr. Hasselback spoke about socioeconomic factors that could impact the nutritional status of older adults, which include poverty, aging in place, age-friendly communities, social connectedness, healthy living practices, and health literacy (Public Health Agency of Canada, 2010; Ramage-Morin & Garriguet, 2013). He also outlined the demographic factors that could impact the nutritional status of older adults: being female, being of Aboriginal heritage, aging in a rural location, and being first generation Canadian (Public Health Agency of Canada, 2010; Ramage-Morin & Garriguet, 2013). Dr. Hasselback highlighted the increasing proportion of seniors in the Canadian population (Public Health Agency of Canada, 2010), and touched on the high prevalence of chronic disease in the elderly, as well as the issue of polypharmacy.

Dr. Hasselback explored the idea that well-nourished seniors are more resilient in recovering from illness and injury, and may be more resistant to some diseases (Public Health Agency of Canada, 2010). Conversely, malnutrition can impact health by reducing cognition, decreasing mobility, and reducing independence. Dr. Hasselback discussed historical nutritional surveys which show that the prevalence of Canadian seniors at nutritional risk is approximately 30-40% (Statistics Canada, 2009; Forster-Coull, Barr, & Levy-Milne, 2004), with increases to 60% for more vulnerable seniors (Nestle Nutrition Institute, 2016). Dr. Hasselback discussed a review that suggested that increasing health literacy related to nutrition and increasing motivation can address malnutrition in seniors (McMaster University, 2015). He also discussed literature that demonstrated combining exercise with nutritional supplementation may be beneficial in reducing the risk of becoming frail or dependent. Literature was presented that recommended better practices, including: improving access to food, identifying those at risk more formally, and educating health care providers more broadly (Ramage-Morin & Garriguet, 2013). These practices were recommended in conjunction with increasing cooperation, compassion, and holism in the health care system.

Monica Liefhebber (Registered Dietician, MPA, Clinical Coordinator, Chronic Disease Management & Nutrition Therapy Services, Island Health) gave a presentation on malnutrition in Island Health as illustrated by the Canadian Malnutrition Task Force (CMTF) survey. The CMFT survey was a prospective cohort study that looked at malnutrition on admission to hospital, and effects on the patients’ length of stay from the period of July 2010 to February 2013. 60 NRGH patients admitted to medical/surgical areas were included in this study. This study included nutrition and medical indicators, focus groups with clinical dieticians, patient meal satisfaction surveys, and physician and nurse surveys.
The study found that almost half of the participants met the criteria for being malnourished. Malnourishment resulted in longer hospital stays, a greater average cost per patient, increased likelihood of repeat admission, and greatly increased likelihood of dying. The mean age of NRGH patients included in the study was 70.6. 55.9% of patients at NRGH were found to be malnourished. 33.9% of those patients were moderately malnourished and 22.0% were severely malnourished. It was found that 63% of moderately malnourished patients and 81% of severely malnourished patients at NRGH were not offered a dietician consult. During the hospital stay of these NRGH patients, 5.3% had worsened nutritional status, 73.7% had no change in nutritional status, 21.1% experienced an improved nutritional status, 53% lost weight, and 4% died. One in six of these patients were readmitted to the hospital within thirty days.

In the study, patients identified several issues that affected their ability to receive adequate nutrition while in hospital. In order of prevalence, these were: not given food when they missed their food tray; did not get help when needed; interrupted by staff; disturbed at meals; avoiding food for tests; difficulty opening packages; poor position for eating; unable to reach meals. The key messages of the study included: malnutrition is an independent predictor of length of stay; food is important for recovery—missing a meal is like missing medication or treatment; nutrition screening and intervention is essential; malnutrition is preventable, treatable, and perpetuated by hospital admission.

Since the study’s release, clinicians have been raising awareness about malnutrition. Patients are now screened on admission for nutrition, weight, function, intake, finances, medication and pain; enhanced recovery after surgery guidelines are being implemented; and care standards are being implemented to ensure appropriate dietician referrals. Further, a malnutrition screening tool has been imbedded in the new electronic health record (IHealth) to document the rates of malnutrition and malnutrition risk. Protected meal times and culturally familiar foods are being ensured at new North Island hospitals. There has also been liberalization of therapeutic diets, ensuring that they are evidence-based. In Port Alberni, there is a combined acute care/Home and Community Care (HCC) dietician position to facilitate care transitions for the frail elderly. A research project has been initiated on nutrition risk in the HCC population. Lastly, the efficacy of giving medications with a high calorie drink rather than water is being evaluated.

The presentation concluded by stressing the importance of finding solutions and working differently to achieve the goal of reducing malnutrition in older adults. This will include an awareness of the extent of malnutrition in our communities; a culture that supports nutritional needs across the continuum of care; reducing barriers to food access and intake; hospitals embracing the importance of “food as medicine”; nutritional screening, assessment and prompt nutrition care; connecting to community services and better nutrition discharge planning; and involving the patient and family.

Raising the Profile Project

Marcy Cohen (Research Associate and Adjunct Faculty at CCPA and SFU) described the Raising the Profile project, which arose from concerns from participants at a workshop on Seniors Centres. It was agreed by
these participants that seniors services needed to have a much higher profile and more support if British Columbia is going to meet the challenges of its aging population effectively. The Raising the Profile project includes all community-based, not-for-profit and municipal services that provide programs for older adults. A provincial network of service providers, organizations that support these providers, and a Seniors Reference Group was developed. The goal of this network is to build the capacity of the sector to address the growing needs of the aging population. One of the aims is to build a business case for greater investment in the sector. This project received funding from United Way, the Seniors Advocate, Van City, the Centre for Non-Profit Management and Sustainability, and the Government of BC/Ministry of Health.

The following findings were presented related to malnutrition and older adults:

- Malnourished patients had longer hospital stays, increased risk of readmission, increased risk of complications and mortality, and increased risk of hospitalization (Lim et al., 2012; Isabel, Correia, & Waitzberg, 2003; Buys et al., 2014; Baumeister et al., 2011).
- 35% of community-dwelling seniors in Canada are at nutritional risk, with the risk factors including female gender, low income, living alone, low social support, depression, poor oral health, disability, and taking prescription drugs (2008/9 Canadian Community Health Survey, Ramage Morin et al., 2013).
- Food insecurity is influenced by financial constraints, social isolation, and functional disability, and can be significantly reduced with community interventions (Keller et al., 2007; Hamirudin et al., 2015).
- In surveys of senior center users in the US, meal programs were recognized as the most frequently used services with ¾ of centres offering meal programs on site (Pardasani, 2004; 2010).
- Most users of meal programs are low income, female, from racial and ethnic minority communities, and are living alone (Gitleson et al., 2008).
- There is a shift away from the traditional “Meals on Wheels” models and towards providing meals in social settings that provide people with both the nutritional benefits and socialization opportunities (Winterton, Warburton, & Oppenheimer, 2013).
- Seniors eating alone is associated with poor nutritional health (Fulkerson et al., 2014).
- There has been an increase in the poverty rate in the seniors’ population since 1995 (Statistics Canada, accessed 2016).
- Seniors living alone are four times more likely to live in poverty as seniors living in couples with the poverty rate for single women being 34% and for single men being 22.5% (CANISM, Statistics Canada, accessed 2016).
- More than 60% of senior women living alone have incomes of $25 000 and less.

The programs provided by the Silver Harbour Seniors Centre in North Vancouver were described. Hot lunches, snacks, and drinks are provided five days per week in a welcoming social environment. This has been a part of the Centre’s programming for 40 years and they currently serve approximately 350 meals per week. The program is subsidized by the Centre, with participants paying $8 for a meal that costs $11 to prepare. One full-time and one part-time cook are employed and at least four volunteers work in the
program daily. The major benefits of this program include nutritional benefits, quality/taste/variety of food, opportunities to socialize, convenience, and good price.

The Share and Care Program in Surrey is a partnership between the Food Bank, Surrey Parks and Recreation, and the Come Share Society. It is a low barrier, free program for seniors using the food bank where they can socialize, participate in wellness programming, listen to guest speakers, and have refreshments and access the food bank at a specific time-slot for seniors. It has been very successful, with 30 to 40 seniors attending regularly. There are plans to expand the program to other communities within Surrey.

A survey comparison was done between Nanaimo and other communities with populations from 70 000 to 90 000. Both Maple Ridge and New Westminster run two lunch programs five or more days per week; Nanaimo does not have a lunch program five or more days per week, and data was not available for Chilliwack. New Westminster and Chilliwack also run three lunch programs four or more days per week. Nanaimo has one lunch program four or more days per week. This data was not available for Maple Ridge.

Community-Based Adult Day Programs were described as being available to people who are not in the home and community care system but have higher needs, and thus could benefit from a more structured program that includes lunch and modified exercise activities. These programs include the Mt. Waddington adult day program, the Creston TAPS program, the Campbell River volunteer-run seniors centre, and an adult care program located in a not-for-profit seniors residence in Campbell River that offers meals.

The roles of the Ministry of Health and the Health Authority were explored. Historically, the Health Authority funded home support services that included meal preparation, and this model started to change in the late 1990s. Presently, home support services can provide only very limited assistance with meal preparation to people who need support. B.C. was described as having the most restricted access to government-funded meal preparation of any Canadian province (Keefe, 2014). Currently, the Better at Home program provides assistance with grocery shopping and transportation, but not meal preparation, and this program is still relatively small. Home Support workers are not supposed to link their clients to community programs due to concerns about overstretching limited resources.

Some potential actions to address the Ministry of Health’s priority of improving care for seniors with moderate/significant health challenges and reduce unnecessary use of hospital services were proposed:

- Make reducing malnutrition for seniors and other vulnerable populations a public health priority.
- Provide more funding support for nutritional programming in community/seniors centres, particularly for seniors who are at greater risk.
- Provide increased support for home-bound seniors to access nutritious meals through Meals on Wheels, assistance with grocery shopping, transportation to a seniors’ centre, etc.
- Put more emphasis on nutritional assessment as part of the intake process of HCC, including how these supports could best be provided.
Peter Sinclair (Executive Director, Loaves and Fishes Food Bank) and John Horn (Social Planner, City of Nanaimo) gave a presentation on the evolution of the role of Loaves and Fishes Food Bank, and their collaboration with other non-profit organizations to combat malnutrition in Nanaimo. The traditional “Food Bank Scarcity Narrative” was described as “there are lots of hungry people; there is a scarcity of food; please give food; we will give food to hungry people.” The “Food Bank Abundance Narrative” was described as “there are lots of hungry people; there is an abundance of food; please give food and money; we will give food to hungry people and other non-profits.” In 2011, Peter Sinclair was involved in a tour of other food banks in the province and discovered the potential to use food recovery to increase the amount of food at Loaves and Fishes. Food recovery accesses food being thrown out at the retail and wholesale level. Peter Sinclair and the team at Loaves and Fishes decided to invest strategically in resources that would help them participate in food recovery. These resources included storage containers, storage space, and a large truck.

In September 2012, the Loaves and Fishes food recovery program, named “Food 4U,” was launched with Thrifty Foods. At the beginning of the program, $10,000 per month in milk purchases stopped, additional staff hours were added, and $1 in cash produced $1.78 worth of food. Between 2012 and 2014, Food4U was able to double the amount of food going to clients, from $800,000 to $1,600,000. In 2013/14, further investments were made in infrastructure, supported by donations made by Kraft ($7,000) and the City of Nanaimo ($65,000). The food recovery program was then joined by Country Grocer, Target, and Paradise Island, providing the Food4U program with a net of $2,000 to $12,000 worth of food daily. At this point, $1 in cash was producing $3.50 worth of food. The Loaves and Fishes food recovery program had expanded so much that there was an abundance of food, but a lack of space to sort, store, and distribute it. To address this issue, Loaves and Fishes took possession of a 6,000 square foot warehouse in 2015. To make this possible, the City of Nanaimo invested $275,000, the Nanaimo Port Authority invested $50,000, and Regional Recycling invested $25,000 in kind. The Real Canadian Superstore then joined the food recovery program, providing Food4U with an $800,000 annual increase in food. In 2014, Food4U managed $1,600,000 worth of food and in 2015, it managed $2,400,000 worth, so that $1 cash produced $4.30 worth of food. Superstore then invested $25,000 so that the organization could purchase another truck. Cold Start Freight Systems Inc. joined the food recovery program, donating between five and ten pallets of food every Friday with a value between $8,000 and $30,000.

This rapid expansion has meant that every month, over forty non-profits and schools receive food from Loaves and Fishes and no charge. These non-profits include Nanaimo 7-10 Club, Boys and Girls Club of Canada, The Salvation Army, Island Crisis Care Society, Nanaimo Foodshare, Nanaimo Affordable Housing Society, Nanaimo Community Kitchens Society, Nanaimo Region John Howard Society, Nanaimo Ladysmith Public Schools, and Nanaimo Youth Services Association. Any non-profit or school in Nanaimo is able to shop in the Loaves and Fishes warehouse for free. In 2014, over $280,000 worth of food was provided to other agencies. In 2015, over $430,000 worth of food was provided to other agencies. In 2016, they are anticipating that $700,000 worth of food will be provided to other agencies.
The focus of Loaves and Fishes is to disrupt the cycle of poverty. To do this, they focus on their core area of expertise and enable others to focus on their area of expertise. An example of this model is the Aboriginal Education Room at Nanaimo District Secondary School (NDSS). Here, an old storeroom was converted into a self-serve kitchen for students. 268kg of food, with an estimated value of $1,600, was used by the students over two months. Cultural events at NDSS were also supported with food by Loaves and Fishes.

In providing this service, Loaves and Fishes has changed the “Food Bank Abundance Narrative” to “fewer hungry people; there is an abundance of food; please give food and money; we will give food to hungry people and other non-profits.” In the next year of food recovery with Loaves and Fishes, the organization plans to expand to include recovery from three to four more partner stores, install a walk-in freezer, and help communities outside of Nanaimo.

**Round Table**

**Breakout Session: Next Steps for Research and Practice Collaborations**

**Erin Coates** (Research Volunteer, Medical Student, Island Medical Program, UBC) invited participants to discuss in small groups the following questions:

1) What specific actions could be taken to address malnutrition? In what time period?
   2) What are the opportunities for academic, health services, and community partnerships?
   3) How will we know if we are making an impact?

**Facilitated Report Back**

**Erin Coates** (Research Volunteer, Medical Student, Island Medical Program, UBC) invited participants to share their answers to the breakout session questions. Ideas were discussed as a large group, and written responses were collected to be included in this summary report. The full comments are included in Appendix 8.4.

**Next Steps**

Attendees generated suggestions to further improve nutrition for older adults in our communities, including:
- Increased collaboration within and between agencies;
- Increased efficiency of resource use; and
- The creation and use dedicated seniors’ spaces for food or meal distribution.

As a result of this workshop, we will:
- Distribute a report throughout Island Health, to workshop participants, and other interested parties.
- Hold an event in Nanaimo with older adults to co-develop an action plan to promote healthy aging and wellbeing.
References


