

Canadian Malnutrition Task Force

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Toronto, Ontario, Canada

Canadian Malnutrition Primary Care Knowledge Exchange Report



Acknowledgements

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1. Background

The Canadian Malnutrition Task Force (CMTF), a standing committee of the Canadian Nutrition Society, is a group of clinicians, decision makers and investigators whose mission is to reduce malnutrition by promoting nutrition care knowledge and optimal practice through research and education activities focused on preventing, detecting and treating malnutrition in Canadians. Between 2010 – 2013 the CMTF conducted a national study that included eighteen hospitals from eight provinces to determine the prevalence of malnutrition in Canadian hospitals. Other data were collected to determine what happens post-hospitalization with respect to nutrition care.

Subsequent to the study, CMTF engaged in a variety of knowledge translation activities that raised awareness of the problem in hospitals designed to bridge the knowledge to action gap. Activities included: the annual Canadian Malnutrition Week campaign, dissemination of tools and resources on the web site, training and advocacy (see nutritioncareincanada.ca). There has been

substantial success with raising awareness of malnutrition in hospital, as well as how to prevent, detect and treat the problem. Current activities include supporting hospitals across Canada with implementing best practices, as well as developing hospital food standards to prevent malnutrition and understanding the problem of paediatric malnutrition.

In the spring of 2018, CMTF decided to begin to focus on nutrition care outside of hospital as it was evident that malnutrition often began in the community and that a hospital stay could not resolve this condition. CMTF determined that a national knowledge exchange would be a good starting point for developing a research and knowledge translation agenda. Specifically, a knowledge exchange could help inform our understanding of: a) the current practices for detecting and treating malnourished patients in Canadian communities, b) the current status of nutrition care, barriers to care and how patients are prioritized. CMTF plans to leverage this knowledge into advocacy and research activities. For this initial exchange, the focus was on **Primary Care** defined as the point of ‘first-contact’ care, where most health conditions/ailments are managed or treated (University of Ottawa accessed from http://www.med.uottawa.ca/sim/data/primary_care.htm) e.g. family physician or nurse practitioner practices, community health centres and community based prevention and/or treatment programs (e.g. falls prevention). **Primary Health Care**, is a more encompassing concept including primary care services, as well as health promotion and disease prevention, and population-level initiatives e.g. income, housing, education, illness and injury prevention (Health Canada accessed from <https://www.canada.ca/en/health-canada/services/primary-health-care/about-primary-health-care.html>). Although understood as relevant to our

Hospital Malnutrition:

- 45% of medical or surgical patients who stay 2+ days are malnourished at admission to hospital (Allard et al., 2015).
- Contributors to malnutrition at admission were: Charlson comorbidity index > 2, having 3+ diagnoses, relying on adult children for grocery shopping, and living alone (Allard et al, 2016).
- 2/3 of patients left hospital in the same nutritional state as admitted while 1 in 5 were discharged in a worse nutritional state (Allard et al., 2016)
- 26% of patients report weight loss 30 days after discharge (Keller et al 2017)
- Weight loss after discharge was associated with being on a special diet and reporting fair/poor appetite (Keller et al 2017)

understanding of nutrition risk/malnutrition prevention, Primary Health Care was not the focus of the exchange.

CMTF Advisory Committee members who represent seven provinces, were asked to identify key people they knew who had some knowledge of primary care and could link us to appropriate representatives to invite to a one-day knowledge exchange. Attempts were made to cover most provinces of Canada and invite participants from medical, nursing, dietetics and pharmacy disciplines. The Primary Care Knowledge Exchange was held on June 1, 2018 from 8:30a.m. - 3:30 p.m. at a hotel close to the Toronto Pearson Airport.

2. Objectives of the Knowledge Exchange

1. To gather knowledgeable representatives from across Canada to share current models of malnutrition care in primary care.
2. To discuss common areas of practice and resource use, as well as knowledge gaps.
3. To determine steps that can be taken by CMTF to improve the prevention, detection and treatment of malnutrition in the community sector, e.g. development of a primary care working group.
4. To identify opportunities for research and collaboration across Canada that can move an advocacy agenda to prevent, detect and treat malnutrition in primary care.

3. Attendees

Twenty-four health care professionals (2 physicians, 1 medical student, 1 pharmacist, 2 nurses, 17 dietitians and 2 graduate students) attended the session, representing eight provinces. The range of community workplaces varied from family physician clinics, public health, home care, to regional and provincial health authorities (see appendix for contact details).

4. Preparation for the Knowledge Exchange

Key Questions in the Slide Template

- How is nutrition care currently provided for malnourished patients in the primary care (community) setting?
- What are the gaps in your region for detecting and treating malnutrition?
- What are some new (mal)nutrition initiatives that are happening in your region?
- What are the threats... things that make it hard to change the status quo?
- What can be done to move our shared agenda of preventing detecting and treating malnutrition forward in your region?

The participants were asked to develop their regional/provincial presentations using a pre-defined slide template based on key questions.

To answer these questions, participants were asked to contact other provincial and community health care professionals to learn what was being done with respect to nutrition risk/malnutrition care. The expectation was to keep the presentation to 20 minutes in length for each region. Additionally, participants submitted a short biography and a photograph to share with the other attendees prior to the meeting. Resources from each province were sent to the coordinating team and assembled into a Drop-box folder for all to access.

The participants were also asked to send in one idea or priority that they considered the foremost activity that needed to occur for community malnutrition to be properly recognized and addressed. This list was compiled with overlapping ideas condensed, then used for priority setting during the knowledge exchange.

5. Abbreviated Agenda for the Knowledge Exchange

Regional presentations Group 1: BC, AB, SK, MB
Regional presentations Group 2: ON, QC, NS, NB
Summary/Priority Identification
Priority voting
Solution focused brainstorming on Top 5 Priorities
Moderator Feedback
Wrap-up

6. Key Points from Regional Presentations

Current Status of (Mal)Nutrition Care in Primary Care

1. Malnutrition is poorly identified and treated in all regions of the country, although there are some groups completing screening and treatment/service provision.
2. Community-based dietitians are predominately involved in chronic disease management (e.g. diabetes).
3. Screening using valid tools is rare (often as part of a pilot or project); exceptions were Home Health and Ambulatory Care across 6 Vancouver Community Health Units which will be rolling out screening in Sept 2018 and some Family Health Teams in Ontario.
4. The prevalence of malnutrition in the population at a national level is unknown; some regional /single site studies have been completed in primary care clinics (e.g. Vancouver Community Health Care Clinics, Hamilton Family Health Team etc.).

Opportunities

1. Pilot and emerging activities demonstrate potential capacity and interest in making improvements in (mal)nutrition care using standardized tools or processes (e.g. risk screening (BC), CHANGE program (BC), Family Health Team nutrition risk screening (ON), Stay on Your Feet program for falls and nutrition screening (ON)).

2. Some funding priorities were identified that could be capitalized to promote a malnutrition agenda (e.g. Primary Care Networks (BC, SK), Strategic Clinical Networks (AB), funding for supplements and meals delivery programs (NB), Collaborative Practice Teams (NS), seniors/frailty).
3. There are diverse models and opportunities for partnership with community service providers that support nutritional health (e.g. transportation, meal programs, recreation centres).
4. There is potential and interest in interprofessional care to address community malnutrition and/or nutrition risk. There was recognition that a dietitian may not always be the preferred or available option to meet the needs of clients and address root causes of nutrition risk or malnutrition.
5. Some models of malnutrition/ nutrition risk screening and subsequent care have been piloted (BC, ON) and there was the view that a feasible pathway would go a long way to promoting nutrition care.
6. There is recognition that local data on prevalence will stimulate interest in the issue of malnutrition and/or nutrition risk.

Challenges

1. Workforce shortages (including dietitians) that affect capacity to meet current needs or move into new areas such as malnutrition.
2. Shifting governance and transformation of health services; closing of services (e.g. Emergency rooms (NS)).
3. Emergence of competing unregulated health care providers.
4. Knowledge gap with respect to health care providers and patients on the importance of malnutrition; attitudes and perceptions on the importance of malnutrition.
5. Geography for many regions (rural and remote) results in limited or varied services, including community services that are available to meet nutrition needs (e.g. transportation, grocery stores).
6. Diverse models of primary care, even within a province; uncoordinated care.
7. The multifactorial nature of malnutrition and barriers to prevention and treatment (e.g. poverty, isolation, food skills or capacity), health inequities.
8. Communication within and between health sectors for a particular patient that is malnourished.
9. Malnutrition terminology.
10. Reluctance to be referred to a dietitian.

7. Priority List

A priority list for more detailed discussion was created before the Knowledge Exchange and expanded during the meeting. The initial list included the issues or problems identified by the attendees prior to the meeting that, if resolved, could move ahead the agenda for preventing, detecting and treating nutrition risk and/or malnutrition in the community. These issues were synthesized into a list that was the basis for voting prior to the afternoon discussion. After the morning presentations, attendees were asked to add any further issues they thought should be discussed (the last 5 in the following list). Items that are bolded in the list below were voted most highly by attendees and became the basis for the afternoon discussion.

Table 1: A priori issues identified by attendees. Items voted as highest priorities are bolded.

Lack of...

- **Interprofessional model for preventing, detecting, and treating malnutrition/nutrition risk**
- Health professional and community service providers' awareness/education of malnutrition/nutrition risk prevalence and its consequences
- Physician awareness/education of malnutrition/nutrition risk prevalence and its consequences
- **Awareness among the general population (i.e., patients) about malnutrition/nutrition risk**
- **Capacity to make nutrition care part of routine practice (e.g., intake for community services/programs; routinely completed in primary health care)**
- Access to primary health care models that target potentially at risk/malnourished (e.g., seniors house call program where more patients are linked post-discharge).
- Incentives (billing bonus) to address malnutrition/nutrition risk
- Access to dietitians
- Integration with community based services to provide solutions (e.g. programs offered by public health units to increase food preparation skills)
- Relevance of the registered dietitian
- **Research.**
- Policy
- Systematic data collection
- **Understanding on the importance of (mal)nutrition; why should other people care?**

These issues were then restated as questions for attendees to identify potential solutions during a small group activity.

1. How do we get health practitioners/service providers to care about nutrition risk/malnutrition in the community?
2. How do we build capacity for (mal)nutrition care in primary care?
3. What does an interprofessional model of care to address nutrition risk/malnutrition look like?
4. How do we get patients involved and aware of their nutrition risk?
5. What are key research questions to advance a (mal)nutrition agenda in primary care?

Attendees were assigned to one of five tables to promote diversity of ideas and solutions. Each table was assigned one of the above questions to develop potential solutions.

A step-wise process (e.g., Affinity Diagram) was used to generate potential solutions, categorize and develop labels for these solutions. The teams then generated specific ideas for activities that could move this solution into action in the next 6-12 months. Each group worked collectively towards this goal and then presented highlights from the discussion to the greater group for further solution ideas and activities. Only the first solution theme discussed with the respective 6 and 12 month activity goals is provided in this report.

8. Key Points from Priority Discussions

1. *How do we get health practitioners/service providers to care about nutrition risk/malnutrition in the community?*

- Integrate nutrition into health practitioner education (formal and when practicing)
 - Embed malnutrition into medical school, nursing and pharmacy undergraduate education
 - Integrate nutrition courses regarding malnutrition (causes and treatment) into medical programs, nursing, physiotherapy, occupational therapy and other curricula
- Develop key messages (“what need to know”)
 - Food is medicine
 - Show inequities (e.g., access)
 - Identify spokesperson in the community, and share with peers and colleagues, etc.
 - Discuss savings (\$) and patient flow in the healthcare system if malnutrition is addressed in the community

- Show the financial impacts of malnutrition in hospital and in the community
 - Show the consequences of (mal)nutrition through diseases and conditions that are comorbid or malnutrition is a potential cause (e.g. falls)
 - Focus message on team approach to manage malnutrition
 - Involve professional associations to build awareness
 - People who do not have access to food cannot get better
- Developing the standard or goal (“what is desired practice”)
 - Conduct more research on malnutrition care activities (e.g. prevalence, gaps in care, outcomes of untreated malnutrition) and carry out knowledge translation (which will influence key messages)
 - Research showing data on best practice (which will influence key messages)
 - Engage government or regulatory bodies in developing standard
 - Linking it to incentives (financial or other)
- Developing an integrated communication strategy (“how to communicate”)
 - Pick nursing, physician and pharmacy champions
 - Develop malnutrition awareness into media campaign
 - Involve a rock star or vocal well-known figure in the issue
 - Raise awareness that malnutrition exists in Canada in people of all ages
 - Encourage champions to talk with teams, colleagues and patients
 - Text, email, share malnutrition research, evidence and efforts
 - Health care practice awareness campaign, and disseminate key statistics/prevalence
 - Develop documentaries to be broadcast on national TV on malnutrition, the research, costs related, and interventions
 - Integrate (mal)nutrition awareness into existing community programs such as cooking classes, lifestyle classes, healthy living classes with a section on malnutrition
 - Conferences for health practitioners
 - Share patient stories
 - Share outcome data on malnutrition screening
 - Target family members and patient communities to identify nutrition risk and support treatment
 - Create a depot of resources/evidence to share
 - Create advocacy campaign targeting clinicians, government

- Having the solution process or “next step” ready after awareness of the issue has been raised
 - Systematic assessment given to high risk groups e.g. older adults
 - Evaluate research and process
 - Research on how to screen
 - What is the trade-off if starting something new?

- Building partnerships with buy-in
 - Proximity, interprofessional clinic work
 - Meetings between RD and service provider
 - Link key groups (Health Quality Ontario, Ontario College Family Physicians etc.)
 - Link with other provincial and community groups (e.g. meal program providers)
 - Create malnutrition networks for clinicians
 - “Sell” of work
 - Include public/patient voice
 - Involve practitioners (other than dietitians) to speak about malnutrition
 - Share research findings at non-dietitian conferences, exhibitions and meetings

Top Priority	6-Month Actions	12-Month Actions
<i>Develop key health practice messages</i>	<ul style="list-style-type: none"> • Review messages from other key organizations focused on primary care malnutrition • Develop communications strategic plan → develop messages, and top targets for communication • Come back to CMTF PC-KE members for input, and to narrow down key messages • Gather Canadian insights from health practitioners on how to target malnutrition, what they need to hear and how/what they already know 	<ul style="list-style-type: none"> • Review of the evidence (potentially just Canadian evidence) • Identify the “what’s” to communicate from the evidence • Develop a knowledge, attitudes and practices (KAP) survey for primary care providers

2. How do we build capacity for (mal)nutrition care in primary care?

- What:
 - Bring awareness of importance
 - Bring knowledge to key stakeholders
 - Elevate the importance of malnutrition among general practitioners through social media
 - Educate consumers on malnutrition prevalence with their family physician
 - Develop a public relations campaign
 - Use a variety of knowledge dissemination strategies within and across disciplines
 - “Brand” (mal)nutrition
 - Use local/national data to tell a story
 - Digest data. Do not shower others with data
 - Tie data to actions or opportunities
 - Demonstrate the financial impact of malnutrition
 - Show the impact of nutrition care (research)
 - Use data that is there and apply to your reality
 - Find “what’s in it for me” for each public audience
 - Provide funding for services and personnel (e.g. more FTE registered dietitians)
 - Advocate at the provincial level for the importance of nutrition care
 - *A multi-faceted public relations campaign (evidenced-based, variety of knowledge users; including public health care professionals and decision makers)*
- How:
 - Develop work standards to address malnutrition
 - Nutrition screen done by multiple professions (e.g. pharmacy, nursing, MD, RD, etc.)
 - Create standard list of resources in the community
 - Have quality indicator about nutrition care in Long Term Care (LTC), acute care and the community
 - Develop a simple tool kit for screening and nutrition intervention
 - Educate public/healthcare workers on the consequences of malnutrition
 - Identify and specify screening standards for malnutrition
 - Teach learners (e.g. students, residents) on nutrition services available and potential to improve malnutrition both in class and in practice
 - Teach multiple healthcare providers about nutrition service and care
 - Start small then spread success
 - Focus on high risk populations (e.g. seniors)
 - Identify vulnerable populations
 - Use top-down-bottom-up strategies
 - Have mandatory policy for safer malnutrition in home care
 - Have a ministry policy for screening and treating malnutrition in LTC

- Have ministry policy for patient safety based on malnutrition in acute care
- Have ministry policy for patient safety based on malnutrition in the community
- Provide financial incentives (or other incentives) for providing nutrition care
- *Create tool-kit – screening, community resources, strategies in support of policy and identify vulnerable populations*
- Who
 - Act local, think local (building national capacity)
 - Share good ideas and practices
 - Build on existing capacity, or current activities
 - Work with a national community of approaches
 - Identify target audiences/public
 - Find patient representatives as champions
 - Find healthcare champions
 - Develop programs that bring people together for meals
 - Build and appoint champions for change to drive accountability
 - Get professional colleges involved
 - Target approaches to dietitians
 - Target approaches to doctors
 - Target approaches (messages) for leaders/managers
 - *Identify/mobilize the community of practice, with a unique focus on: RDs, MDs, decision makers, and other healthcare professionals, and also define champions/roles*

Top Priority	6-Month Actions	12-Month Actions
<i>Public relations campaign to mobilize</i>	<ul style="list-style-type: none"> • Gather information in primary care regarding code of practice • Brand • Define and refine code of practice • Create pull/need • Political awareness • Identify knowledge users 	<ul style="list-style-type: none"> • Create need • Disseminate lecture series <ul style="list-style-type: none"> ○ Canadian Malnutrition Week ○ Local in series ○ Mix national and local

3. What does the interprofessional model of care to address nutrition risk look like?

- Setting the stage with stakeholder engagement/what does each stakeholder bring?
 - Determine stakeholders to include in the model
 - Establish patient-centred care as overall practice
 - Build model with stakeholders
 - Determine who makes up the interprofessional team
 - Understand whether the model will be used by stakeholders

- Define target audience for model (what risk will we address?)
 - Decide how success will be measured
 - Define the goal of care that the team shares
 - Communicate regularly with whole team throughout
 - Create buy-in for the process – why should they care
 - Educating all team members on nutrition (why it matters)
 - Determine which tools/initiatives in primary care can be built on (or start fresh)
 - E.g. CHANGE or INPAC or Ontario algorithm
 - Decide who will lead the initiative
 - Get high level support and approval
 - Confirm the role of each member as they see it, and how they perceive it (gap analysis)
- Nationally define the components/tool-kit development
 - Identify nutrition risk screening tool to use (e.g., SCREEN II)
 - Who will screen the patients (patient vs. family vs. healthcare provider)
 - Screening at intake by any provider
 - Simplify standard assessment
 - Embed nutrition questions into all providers' care
 - Use standard questions/forms
 - Connect patients to community resources
 - Community participation and programs
 - Standard referral protocol
 - Educate all team members on process
 - Decide what level of education others provide vs. what an RD provides
 - Create awareness of malnutrition risk with team
 - Prioritize malnutrition risk assessment
 - Educate team around disease conditions
 - Make incorporating nutrition risk in basic care mandatory
 - Availability and accessibility of dietitians on the team
 - Provide evidence that a nutrition risk model is best practice
 - What evidence-based practices should occur after screening
 - Develop tools to support nutritional interventions
- Evaluate and publish
 - Identify patient goals for care
 - Patient voice and education on malnutrition
 - Provide guidance to health professionals on additional steps if risk continues
 - Decide how success will be measured
 - Collect data using agreed-on methods

- Pilot model (with primary care providers)
- Enable building and generating strategies
- Brainstorm possibilities for implementation
- Communicate regularly with team regarding success/failures/barriers
- Validate model
- Standard follow-up of clients in different settings
- Build awareness of existence of a model
- Create buy-in for the process, why should they care?

Top Priority	6-Month Actions	12-Month Actions
<p><i>Engage and convince stakeholders</i></p> <p><i>a. Define components of a model</i></p> <p><i>b. Develop toolkit, evaluate and publish</i></p>	<ul style="list-style-type: none"> • Collect tools • Gap analysis • Pool today’s findings (from PC KE) • Develop “straw dog” tool kit 	<ul style="list-style-type: none"> • Convene national, interprofessional/public groups of stakeholders

4. How do we get patients involved, and aware of their nutrition risk?

- Education of patients
 - Show them local statistics/incidence
 - Education regarding the benefits of nutrition (increased healing times, decreased hospital stay etc.)
 - Educate patients on role nutrition plays and how it can reduce risk
 - “Meet your RD” – explain the role of the dietitian
- Engaging allied health
 - Integrating nutrition into clinical care pathways (e.g. CHF, COPD)
 - Setting patient centred goals as part of their care
 - Including nutrition as part of their health management plan/care plan
 - Create opportunities for follow up to see progress
 - Involve their family MD (or allied health) who can influence patients
 - Simplify process for family MDs to “nudge” patients
 - Provide easy to use resources to assess risk
- Remove stigma
 - Remove stigma around “mal” nutrition
 - Remove stigma by clarifying the role of nutrition

- Change “malnutrition” to a positive word
- Create a burning platform that shows why healthy eating is important
- Share patient(s) stories
- Connecting with existing organizations
 - Identify potential areas where patient can fall through the system
 - Create community or volunteer partnerships for ongoing support
 - Work with multiple partners to provide better transition of care
 - Start the education with nutrition in schools. Start with young people
- Empowering patients/patient engagement/questions for patients use to ask their MD and RD
 - Empower patients on how they can make a difference
 - Encourage patients to advocate for themselves
 - Create patient-led revolution to focus on adding years to lives
 - Understanding what patient priorities are
 - Create patient friendly tools to educate them
 - Use of technology (app) to track risk over time
- Increasing public awareness/communicating to the public
 - Use patient stories
 - Offer public awareness ads on nutrition during Nutrition Month (similar to Participaction)
 - Social media strategy
 - Public awareness through social media
 - Create education campaign regarding nutrition (similar to smoking cessation)

Top Priority	6-Month Actions	12-Month Actions
<i>Educating and empowering patients</i>	<ul style="list-style-type: none"> • Develop a “tag line” (motivational and personal) • Identify a snapshot of what is available, and what has been done • Ask patients what matters to them • Identify private and public partners (being aware of potential conflicts of interest) 	<ul style="list-style-type: none"> • Find physician champions • Work with relevant partners • Develop a communication plan • Developing ideas for ways for patients to advocate for themselves

5. What are key research questions to advance a (mal)nutrition agenda in primary care?

- Risk factors, prevalence and populations affected by malnutrition
 - What is the prevalence of nutrition risk/malnutrition by province?
 - What does nutrition risk/malnutrition look like; what are the characteristics of patients?
 - What are the root causes of nutrition risk/malnutrition in community living individuals (low intake, low income, etc.)?
 - What are the current research gaps in (mal)nutrition care? Systematic review of the literature
 - Who is most at risk of malnutrition (key risk factors to target screening)

- Perceptions of malnutrition
 - Health professionals' perception of malnutrition
 - What are the perceptions, behaviours and attitudes of primary care physicians towards (mal)nutrition, screening and intervention?
 - How do gender roles and “profiling” play a role in physician screening and intervention for nutrition?

- Who, when and how to screen
 - Where do we screen? (e.g. ERs, family physician's office)
 - When should screening be done?
 - Where would be the best place to do nutrition risk/malnutrition screening? (hospital, homecare)
 - Who should do the screening?
 - Who should be screened?
 - How can (mal)nutrition status be tracked at a national level? Flag of charts entered in CIHI
 - What tool should be used to identify or screen for malnutrition/risk in primary care?
 - What tools/resources currently exist (national/international) that are successful?
 - What are the most effective methods for increasing/implementing practice change in primary care? Interviews and audits
 - What community resources exist?

- Effective interventions to prevent and treat nutrition risk/malnutrition
 - How can medical education be improved to promote (mal)nutrition screening? Intervention?
 - How can ongoing gaps in nutrition care be identified over time? Implementation of audit and feed back in primary care

- What supports/resources do people who are malnourished feel they require?
- What should be done when nutrition risk and/or malnutrition is identified?
- What are the most effective interventions for treating malnutrition?
- What are the most effective interventions for preventing malnutrition upstream?
- How much would we save the healthcare system by decreasing nutrition risk/malnutrition?
- What is the cost-effectiveness of (mal)nutrition screening?

Top Priority	6-month Actions	12-month Actions
<i>Risk factors, prevalence and populations affected by malnutrition</i>	<ul style="list-style-type: none"> • Systematic review of current literature <ul style="list-style-type: none"> ○ Scoping review looking at prevalence (primary outcome) and risk factors and populations (secondary outcome) • Subgroup analysis to determine methods used by other countries to determine prevalence and risk factors 	<ul style="list-style-type: none"> • Determine gaps in literature, and multi-stakeholder working groups • Conduct a multicentre pilot project (including rural and urban areas) for prevalence, risk factors and populations affected across Canada <ul style="list-style-type: none"> ○ From this, also determine costs of nutrition risk/malnutrition on healthcare, and how much money can be saved through prevention.

9. Final Discussions

As each group presented their solutions and potential early actions to address the problem they were assigned, further ideas arose. It was noted that targeting CMTF efforts to priority groups in the population might be a good place to start with applying any of the identified solutions. Specifically, patients just discharged from hospital, older adults, and current primary care clinics (e.g. memory clinics, falls prevention clinics etc.) were considered good areas to focus early attention with respect to preventing, detecting and treating malnutrition. It was also noted that the InterRAI includes nutrition items and this standardized assessment and care program is being mandated for use in home care in many regions. This raised the opportunity of working with InterRAI to develop screening triggers for malnutrition beyond the current items that are available.

10. Next Steps

The following steps will be/were taken as a result of the CMTF Primary Care Knowledge Exchange meeting:

1. Attendees and invitees were provided a copy of this report. They provided further clarification or feedback on aspects of the report resulting in this final version.
2. CMTF will establish a primary/community care working group in 2018/2019 to begin working towards some of the priorities identified in the knowledge exchange.
3. The organizing committee will spearhead a peer reviewed publication based on the knowledge exchange results.

Appendix

Attendees of the Canadian Malnutrition Primary Care Knowledge Exchange

Name	Role	Profession	Province	E-mail
Marlis Atkins	Nutrition Services Director in Alberta Health Services	RD	AB	Marlis.Atkins@albertahealthservices.ca
Paule Bernier	President of the Ordre professionnel des diététistes du Québec	RD	QC	pbernier@opdq.org
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Nanette Giswold	Registered Dietitian - Extra Mural Program	RD	NB	Nanette.Giswold@horizonnb.ca
Leila Goharian	Registered Dietitian	RD	BC	Leila.Goharian@vch.ca
Leah Gramlich	CMTF Co-chair Professor of Medicine at University of Alberta and Provincial Medical Advisor for Nutrition Services in AHS.	MD	AB	lg3@ualberta.ca
Victoria Gray	Registered Dietitian - Nova Scotia Health Authority	RD	NS	victoria.gray@nshealth.ca
Heather Keller	Schlegel Research Chair in Nutrition & Aging; Professor, Kinesiology, University of Waterloo Research Scientist, Agri-food for	RD	ON	hkeller@uwaterloo.ca

Name	Role	Profession	Province	E-mail
	Healthy Aging, Schlegel-UW Research Institute for Aging			
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Michele MacDonald Werstuck	Nutrition Program Coordinator, Hamilton Family Health Team Assistant Professor, Department of Family Medicine, McMaster University Chair, Dietitians of Canada Ontario Primary Health Care Action Group	RD	ON	mmwerstuck@gmail.com
Melissa Mercier	Registered Dietitian	RD	QC	melissa.mercier.ciusscn@ssss.gouv.qc.ca
Roseann Nasser	CMTF Co-chair Research dietitian in the Saskatchewan Health Authority	RD	SK	Roseann.Nasser@saskhealthauthority.ca
Onuora Odoh	Family physician and one of the physicians leading CHANGE BC program in BC	MD	BC	nicod.prayer4sure@yahoo.ca
Cynthia Richard	Clinical Lecturer, University of Waterloo School of Pharmacy	Pharmacist	ON	c25richard@uwaterloo.ca
Sarah Ross	Registered Dietitian - Manitoba HIV Program	RD	MB	sross4@exchange.hsc.mb.ca
Caroline Sheppard	Medical school at the Cumming School of Medicine in Calgary, Alberta	Medical Student	AB	
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Invitees Unable to Attend

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Ingrid Verduyn	Home Health and Primary Care Raven Song CHC	RD	BC	Ingrid.verduyn@vch.ca

Four guests from Abbott Nutrition also attended the Knowledge Exchange: Anne Dumas, Senior Manager Medical Affairs; Charles Addington, Senior Product manager; Nadia Dubuc, Marketing manager; Maria Karounis, Director of Marketing.

References

Allard, J.P., Keller, H.H., Teterina, A. Jeejeebhoy, K.N., Laporte, M., Duerksen, D. et al. Factors associated with nutritional decline in hospitalised medical and surgical patients admitted for 7 d or more: a prospective cohort study. *BJN*. 2015, 114(10), 1612-1622.

Allard JP, Keller H, Jeejeebhoy KN, Laporte M, Duerksen D, Gramlich L, Payette H, Bernier P, Vesnaver E, Davidson B, Terterina A, Lou W. Malnutrition at hospital admission: contributors and impact on length of stay. A prospective cohort study from the Canadian Malnutrition Task Force. *J Parenter Enteral Nutrition*. 2016;40(4):487-97.

Curtis L, Bernier P, Jeejeebhoy KN, Allard JP, Duerksen D, Gramlich L, Laporte M, Keller H. Costs of hospital malnutrition, *Clinical Nutrition*. 2016. doi.org/10.1016/j.clnu.2016.09.009

Keller H, Allard J, Vesnaver M, Laporte M, Gramlich L, Bernier P, et al. Barriers to food intake in acute care hospitals: A report of the Canadian Malnutrition Task Force. *J Hum Nutr Diet*. 2015;28(6):546-557.

Keller H, Laporte M, Payette H, Allard J, Bernier P, Duerksen D, Gramlich L, Jeejeebhoy K. Prevalence and predictors of weight change post discharge from hospital: a study of the Canadian Malnutrition Task Force. *Eur J Clin Nutr*. 2017 Jun;71(6):766-772.