

Submission to the Select Standing Committee on Health

DECEMBER 2014

British Columbians can be proud of our ranking as best in Canada in terms of life expectancy, cancer mortality and mortality related to heart disease. We are fortunate to have so many innovative government programs and policies that have contributed to this accomplishment.

At the same time, we cannot be complacent if we wish to continue to have positive population health outcomes while maintaining an affordable rate of health spending per capita in the long term. If unaddressed, these major nutrition challenges will increase health care costs:

- Malnourishment in frail and vulnerable populations – 45% of seniors admitted to Canadian hospitals are malnourished [1]
- Compromised growth and development - 40% of children with complex health needs are at risk for nutrition concerns [2].
- Nutrition-related chronic diseases –it is estimated that the prevalence of diabetes in BC will be 1 in 10 2020. [3]
- Limited access to healthy foods – 45% of BC First Nations on reserve households with children experience food insecurity [4] and while child poverty rates in BC have decreased, 1 in 5 children continue to live below the poverty line in BC, which is higher than the national average [5].

Thank you for the opportunity to contribute to the Select Standing Committee on Health deliberations and to help identify potential strategies to maintain a sustainable health care system for British Columbians. Our submission will focus on the following two questions identified by the Committee:

- How can we create a cost-effective system of primary and community care built around interdisciplinary teams?
- How can we improve health and health care services in rural British Columbia? In particular, what long-term solutions can address the challenges of recruitment and retention of health care professionals in rural British Columbia?

Our key recommendations and suggestions for action are outlined on the following pages. We would be pleased to discuss these in more detail with the committee.

Key recommendations to maintain a sustainable health care system:

- 1. Provide services that improve the nutritional status of the frail and most vulnerable**
 - Allocate funding with mechanisms that ensure there are inter-professional teams, including dietitians, in public health, primary and community care
 - Expedite amendments to regulations that will enable professional groups to work to their full scope of practice to improve program delivery and services.
- 2. Make the healthy food choice the easier choice for all British Columbians**
 - Improve access to healthy foods for people living on a low income or in poverty
 - Continue to support the implementation of policies and programs that support healthy eating.
- 3. Ensure a qualified workforce capable of providing evidence-based nutrition intervention**
 - Create more opportunities for dietetic education and practicum training, including support for coordination in practicum training.
 - Provide incentives to address the challenges of recruitment and retention of health care professionals in rural British Columbia

Proposed Actions to Realize Key Recommendations

Dietitians of Canada (BC) appreciates the opportunity to provide input to the Select Standing Committee on Health and understands that the Province of British Columbia's strategic direction is to improve health outcomes for the best possible value. To that end, we encourage the Committee to consider the following actions to achieve our key recommendations for a sustainable health system:

1. Provide services that improve the nutritional status of the frail and most vulnerable

A systematic review focused on outpatient settings found that "Nutrition interventions that include nutrition counselling by a registered dietitian targeting at-risk groups have been demonstrated to improve health outcomes and be delivered at a low cost or be cost-effective" [6]. Furthermore, nutrition services in primary healthcare settings across Canada provide evidence of cost-effectiveness [7].

A combination of cost effectiveness studies summarized by The Academy of Nutrition and Dietetics shows nutrition counselling provided by a dietitian saves a minimum of \$350 per person with type 2 diabetes, \$4.28 for every dollar spent on lipid reduction (i.e. healthy heart) counselling by a dietitian, \$8.00 for each dollar invested in a prenatal nutrition program and 8.6% reduction in hospital utilization [8]. Combining advanced skills such as nutrition counselling, navigation, nutrition focused physical examinations, dysphagia management and diagnosing and treating nutrition related problems has the potential to fill gaps in service for these chronic conditions. The benefits are improved quality of life for these people as well as a reduction the financial burden on healthcare [6].

The Ministry of Health has identified population groupings according to health status and service needs. This can be used to demonstrate where services are currently available for these groups who are more likely to be at nutritional risk.

Table 1: Estimated access to dietitian services for each Ministry of Health population groupings

Population groupings	Current access to dietitian services
Healthy non-users; healthy with minor episodic health needs; low complexity chronic conditions;	 Some access – HealthLink BC dietitians are available by phone or email
Maternity and healthy newborns (healthy children might also be considered part of this grouping given the key role of nutrition in healthy development)	 Limited access – no direct client services are available through public health dietitians
Medium complexity chronic conditions; complex mental health and substance use need; disability in the community; high complexity chronic conditions; frail in the community; (including Newborns discharged from Neonatal Intensive Care Units)	 Limited access – there are very few dietitians as part of primary and community care teams. Mental health clients rarely have access to dietitians, and there is virtually no access to community based pediatric dietitians.
Frail in residential care	 Limited access – there are very few dietitians in assisted living providing nutritional screening and assessments, tube feeding and insulin supports
Major or significant time-limited health needs; cancer	 Some access – most hospitals have some clinical and outpatient dietitian services; the 48/6 Model of Care is an opportunity to identify nutrition and hydration concerns in seniors

a) Allocate funding with mechanisms that ensure there are inter-professional teams, including dietitians, in public health, primary and community care

There are vulnerable populations living in the community that require targeted population based and individual nutrition interventions. Access to registered dietitians within a community-based health system of inter-professional teams providing population health, community and primary care will improve the nutritional status of these vulnerable populations and decrease the downstream medical costs (e.g. for treating complications, preventing emergency room visits and hospitalization, long term care placement).

i) Strengthen public health nutrition services to effectively support community based health promotion programs and the Healthy Families BC strategy.

The Ministry of Health has acknowledged the importance of targeted and effective primary prevention and health promotion. Inter-professional teams in public health, including dietitians, provide strategic support such as working with community partners to identify evidence-based policy and program based interventions.

Public health nutrition services have been reduced in several health authorities in the past several years (e.g. Fraser Health, Vancouver Coastal and most recently Island Health). This limits the ability to fully realize the potential of the food and nutrition component of the Healthy Families BC strategy as public health dietitians bring unique expertise for effective development and implementation of policies within communities. For example, community dietitians contributed to the Guidelines for School Food and Beverages Sales in BC Schools by providing practical feedback throughout the development of this provincial initiative and bringing the perspective of their schools and communities. Schools would be better able to effectively implement the policy if they had access to public health dietitians who could encourage and support them to promote healthy eating within the context of a healthy school environment. The education and practicum training of dietitians includes the requirement to meet nationally established population and health promotion competencies, as well as the ability to translate complex scientific evidence into practical solutions to promote health and manage special health conditions. This is an important consideration as the Ministry of Health develops its health human resource strategy.

A good example of the strategic support role of community dietitians in targeted primary prevention programs is the establishment of community based pregnancy outreach programs, which provide free prenatal and early parenting support to women throughout the province. The level of support for these programs available at a regional level from public health dietitians is inconsistent and has declined over the years and warrants a review.

Even prior to the public health nutrition service reductions, there was limited or no capacity within public health to provide direct client services for primary prevention. For example when parents are struggling to meet the nutrition needs of their child as a result of multiple allergies and a limited income or if a public health nurse identifies a baby is not gaining sufficient weight and the mom is afraid to offer solid foods. Rather than relying on the family physician to provide dietary counseling for the family, there is an opportunity for primary prevention in some of the most nutritionally vulnerable families through inter-ministerial collaboration (i.e. the Ministries of Social Development and Social Innovation, Health and Children and Families Development). The Healthy Kids program within the Ministry of Social Development and Social Innovation currently helps low-income families with costs associated with basic dental care and prescription glasses for their children. This could be expanded to include nutrition counselling by dietitians to support parents on low-incomes and clients on income assistance.

ii) Build capacity within communities for better managing nutritional risks related to complex chronic conditions.

Children with complex health needs or special health needs refer to children with acquired or congenital conditions that affect their cognitive and/or physical development [9]. These children are at higher nutritional risk because of psychosocial, environmental, and biological factors that may hinder their development, affect their feeding, intake, and nutritional status. When these children are discharged from the hospital or identified in the community, there are few specialized nutritional support services available in the community to do follow up in the homes or

schools. The Nursing Support Services teams could better support these families with increased access to dietitians. In addition, these families would benefit from an expansion of the Healthy Kids program include nutrition counselling for clients on income assistance, as recommended above.

The medical complexity of these children requires specialized care often outside the scope of practice of dietitians who have not received specialized pediatric nutrition training. The BC Children's Hospital dietitians are equipped with the necessary skills and provide specialized nutrition support to this population, but only as part of a specific outpatient clinic (i.e. the Cardiac Clinic, the complex feeding team). However, many children are not followed by a clinic and rely on one general outpatient clinic, where the waitlist is long, ranging from weeks to months. Advanced practice education and training of dietitians in paediatrics would build capacity in the community and best meet these families' needs.

Often as a result of extraordinary efforts of parents and other caregivers, these children with complex health needs become adults and are able to have increased independence. The ongoing involvement of dietitians is essential to support this transition and continue to optimize their health and prevent complications. Some of these adults will be eligible for Health Services for Community Living, but nutritional support is still very limited. There are also challenges for the adults with these complex chronic conditions who live residential facilities, as these facilities do not always have staff with sufficient training to address nutrition concerns arising from tube feeds, dialysis or dysphagia. Increased access to community dietitians in residential facilities is needed to support these adults and their caregivers.

iii) Ensure adequate service levels to provide effective nutrition interventions within primary and community care and mental health services.

Unfortunately, there are very few positions for dietitians in the community at the primary care level to plan, monitor or provide nutrition counseling for patients or strategic support for the interdisciplinary team. For example, Fraser Health, serving a population of more than 1.6 million, includes fewer than 1.5 FTE dietitians as part of their Home and Community Care program that provides about 630 home care nursing visits every day [10]. It is not possible to meet patients' needs or support the health care team with this extremely low ratio of dietitians to patients.

For example, a home care nurse may suspect malnutrition if there is delayed wound healing, unexplained weight loss or difficulty swallowing, but will have limited or no ability to consult with a dietitian about these concerns or to request a nutritional assessment.

Individuals discharged from hospital on home tube feedings also have limited access to dietitians despite the nutritional risks. Support within Mental Health Services is almost non-existent, and as noted in the previous section, most families with children with complex health conditions have no specialized nutrition supports in their communities. Patients with unidentified and untreated poor nutritional status will not have optimal response to treatments and are at higher risk for hospital re-admissions, increasing cost to the health system and impacting quality of life for the patient and their family.

Leadership at the provincial level is needed to optimize investments designed to improve the nutritional status of the most vulnerable population groupings in the community. Investment in a consistent and coordinated delivery of

67% of the population I worked with in the seniors rehabilitation unit is malnourished; I have had three cases of scurvy in the last year. We do not have dietitians in home care anywhere in central or north Vancouver Island.

T. Lister, RD, Nanaimo

service, which would include the use of standardized screening tools, data collection and monitoring to evaluate the health impact and cost-effectiveness is required. Further cost benefits and improved service delivery could be realized by aligning the services and programs specific to meeting the nutritional supplement needs of targeted populations that are currently provided by the Ministry of Children and Families, the Ministry of Social Development and Social Innovation and the Ministry of Health.

b) Expedite amendments to regulations that will enable professional groups to work to their full scope of practice to improve program delivery and services.

A strong health system is built upon health professionals working to their full scope of practice and in collaboration with other providers to provide patient-centred care. Registered dietitians fully support inter-professional models where each team member brings valued expertise to the table. Supports for all health professionals to work to their full scope of practice are needed within the system to provide optimum care and decrease costs by increasing efficiency. A recent assessment conducted by the Canadian Academy of Health concluded that:

The various elements of the current system were largely created to respond to acute, episodic care provided in hospitals and most often by individual physicians. Over the decades, these elements have become enshrined in legislative, regulatory, and financial schemes that challenge adaptation to shifts in population health care needs. Health care organizations and personnel seeking innovative solutions must often work around these barriers in order to optimize resources and improve quality of care [11, p.8].

For example, registered dietitians are currently authorized to give written confirmation for some, but not all Nutritional Supplement Programs that are available through the Ministry of Social Development and Social Innovation [12]. Dietitians typically conduct the nutritional assessment for Short Term Supplement, Enteral Formula and Infant Formula requests and then the doctor or nurse practitioner provides signing authority. Unnecessary costs and patient inconvenience are incurred, as the doctor must bill the health system or the patient for this second signature. Dietitians are regulated through the Health Professions Act [13] and are already entrusted to sign for costly tube feeding products and for the Monthly Diet Allowances.

Another area for improvement is the Dietitians Regulation, which needs updating to include dietitians as authorized prescribers for a limited list of medications that are directly related to the design of therapeutic diets. Until the relevant regulations are amended to permit this practice, there are a barriers to cost efficient and effective care. For example, currently a dietitian cannot even prescribe a multivitamin for malnourished, hospitalized patients. In this case, as an interim measure in the absence of updated regulations, the College of Dietitians of BC, in collaboration with the Colleges of Pharmacists, Registered Nurses, Registered Psychiatric Nurses and Licensed Practical Nurses, developed a Joint a Position Statement on *Dietitians Authority to Recommend Vitamins and Minerals for Therapeutic Diets* [14].

At the same time as removing barriers to enable regulated health professionals to work to their full scope of practice, there continues to be a need for rigor in ensuring public safety and quality of care. Use of unregulated health professionals can lead to dangerous advice and patient safety risks. Dietitians of Canada and the College of Dietitians of BC have alerted the Minister of Health of patient safety concerns resulting from nutrition advice from unregulated nutrition professionals and recommended amendments to the Health Professions Act that would limit the use of the title 'registered' and 'certified' to regulated health professionals.

Expediting amendments to regulations would result in improved patient-centred care, increase efficiency and effectiveness of service delivery and ultimately improve nutritional status of these vulnerable populations.

2. Make the healthier choice the easier choice for all British Columbians.

One's ability to make healthy food choices is contingent upon their ability to access a healthy diet, which is determined by factors such as income level, purchasing power, proximity to places where food is sold (especially those in remote locations), mobility, and knowledge or space for food preparation and storage. These factors become barriers when living on a low income or in poverty: nutritious food can become expensive, impossible to reach without a car, or difficult to cook and store [15].

a) Improve access to healthy foods for people living on a low income or in poverty

Food insecurity is associated with adverse health effects, including developmental (among children) and mental health problems, greater risk for acute illness (often requiring treatment through the health care system) and greater prevalence of non-communicable diseases [16]. Each day in their work, dietitians see the causal relationship between diet and health and know that current income assistance rates are not high enough for nutritious food to be purchased regularly [17]. Dietitians are also aware that people with low incomes and living in poverty in BC will forgo nutritious food options to put their limited funds toward other needs such as housing [16]. Food becomes the “elastic” portion of the budget: whatever money is left in the budget after other expenses is put toward food.

I feel powerless to help many of the clients that are referred to me because of their financial limitations.

C. Maddigan, RD, Fort St. John

i) Use Health Canada's Nutritious Food Basket as starting point for identifying appropriate rates for setting the minimum wage and income assistance rates.

The Nutritious Food Basket describes the quantity and purchase units of over 60 foods that represent a basic nutritious diet for people of different ages and sexes [18]. By collecting data from across the province, we can estimate the cost of a basic nutritious diet, while recognizing that the high cost of housing contributes to food insecurity. Therefore, there must be consideration of measures to ensure that any upward adjustment to social assistance is accompanied by a concurrent freeze on rental rates to ensure that additional funding is able to improve food security.

ii) Expand programs that contribute to all British Columbians having sufficient income to purchase healthy foods to meet nutritional needs.

In the absence of a rate increase that makes it feasible to cover food and other costs of living, continue to implement policies that increase the disposable income of low-income families. The recent announcement of annualized earnings exemptions for people with disabilities is an encouraging move that will likely have a positive impact on their food security, as well as remove barriers to employment.

Building on the experience and success of this program by increasing the earning exemption for all income assistance clients would likely have similar benefits. The \$200 monthly earnings exemption for all expected-to-work clients instituted in 2012 is good start, and, if increased, could offer individuals a better opportunity to get job skills

and experience to transition to employment, take advantage of short-term or temporary work, and better provide for their families while receiving assistance.

Another opportunity would be to build on the Farmers Market Nutrition Coupon Program, which currently promotes buying local and encourages vegetable and fruit consumption in vulnerable populations, but as a result of the limited reach and amount, does not address food security on a broader scale.

b) Continue to support the implementation of policies and programs that support healthy eating.

The BC Ministry of Health has successfully implemented several inter-sectoral, targeted and effective disease prevention and health promotion initiatives such as the Informed Dining program, the Guidelines for School Food and Beverages Sales in BC Schools, the Nutritional Guidelines for Vending Machines in B.C. Public Buildings, and the BC School Fruit and Vegetable Nutritional Program. These programs require ongoing support, including public health nutrition supports at a local level, to remain effective. Ongoing evaluation of these programs will ensure they are meeting their goals and help identify best practices to enhance the evidence base for healthy public policy.

3. Ensure a qualified workforce capable of providing evidence-based nutrition intervention.

Dietitians are highly skilled health professionals with unique expertise. We want to work with government to ensure an engaged, skilled, well-led and healthy dietetic workforce. In BC, we are dependent on importing our dietetic expertise, largely from other provinces (see Table 2). The limited availability of dietitians seems to be contributing to a trend to use less qualified and unregulated nutrition practitioners (e.g. healthy living coordinators, registered holistic nutritionists™).

Table 2: A provincial comparison of the number of graduates in 2011 from Canadian universities with accredited dietetic programs, the size of the dietetic workforce and the resulting training capacity indicator

Province	Total Intern Graduates	RD Workforce	Training Capacity Indicator
PEI	23	68	33.8%
NS	117	490	23.9%
MB	46	412	11.2%
ON	267	3,331	8.0%
SK	20	310	6.5%
QC	165	2,790	5.9%
NB	20	339	5.9%
AB	60	1,048	5.7%
BC	32	1,148	2.8%

a) Create more opportunities for dietetic education and practicum training, including support for coordination in practicum training.

British Columbia's dietetics education and training system already gives young people a clear and seamless path right from school through to the workplace. Unfortunately this path is extremely narrow with only 34 graduates a year from the University of British Columbia (UBC) as the sole dietetics degree-granting program in the province. This is in comparison to the University of Alberta that graduates 60 dietitians for a similar sized workforce.

Graduates from the UBC program fare well - 92% obtained their first position within 3 months of completing internship and 83% of those who applied to their internship health authority were offered employment [19]. Few internationally trained dietitians are eligible to practice in BC and re-entry into the workforce can be difficult as a result of the limited practicum placements.

Expansion of the UBC Dietetics program would support this government's value of a highly skilled and well-trained workforce, as would a more efficient system of training that addresses competency standards for out of province and internationally trained dietitians entering the profession.

The budget letters from the Minister of Advanced Education to the Universities are one mechanism to help build a workforce of health professionals with the necessary skills for the health system. For reasons that aren't clear, Dietetics is currently not included on the UBC letter with other health sciences training programs (e.g. physiotherapy, occupational therapy, pharmacy) offered by the institution. In order to achieve a sustainable dietetics workforce in BC, it would be helpful for the Ministry of Health to identify the need for increasing the number of dietetics graduates from the UBC program and encourage the Minister of Advanced Education to include dietetics along with other health sciences training programs in the budget letters.

b) Provide incentives to address the challenges of recruitment and retention of health care professionals in rural British Columbia.

Dietitians of Canada concurs with the Select Standing Committee on Finance and Government Services recommendation #15: Develop new incentives and programs to encourage recruitment and retention of doctors, nurses, and other medical professionals to rural-remote regions of the province.

There continues to be a high demand for dietitians in the more urban settings. This makes dietetic positions in rural and remote areas of BC even more challenging to fill, especially for positions that are not full time. These rural and remote positions are often vacant for long periods of time and the tendency is for new graduates to apply for these positions but stay only until they find work in a more urban setting. As a result inexperienced dietitians are often in positions that require working in isolation with high risk populations without mentoring and guidance.

Expansion of the UBC dietetics program will help address some of the recruitment challenges, especially if there can be incentives specifically built in to support expansion of the practicum training in rural and remote areas.

More internship placements for all disciplines need to be in the north to expose people to us. Many people have no idea what it is like up here and would never think of living here, but after coming realize the wonderful opportunities and stay.

R. Larson, RD, Vanderhoof

Currently, Northern Health dietitians preceptor two dietetic interns per year. Establishing a regional clinical practice lead to seek out and support under-utilized practicum opportunities and providing funding to cover dietetic interns' travel are examples of incentives that would contribute to the recruitment of dietitians to this area, as graduates often stay with the health authority providing their internship experience.

The Student Loan Forgiveness program is another existing mechanism for recruitment and retention to rural/remote areas. We understand that the list of eligible professions is reviewed periodically and hope that the next review will happen in a timely fashion and take into consideration the additional financial obligations resulting from rural and remote practicums.

A recruitment and retention study conducted in Australia showed that dietitians value flexible work conditions, a variety of experiences, engaged managerial support and autonomy [20]. The Australian study showed that dietitians find working in autonomy with diversity desirable if they are well supported by management and strong professional networks. Dietitians also want opportunities to advance their skills, which benefits rural areas where a full complement of healthcare professionals is often lacking. Identifying these gaps and providing training and skill development for dietitians to optimize their scope of practice provides increased work satisfaction and retention.

Clinical dietitians in smaller communities often operate as generalists, as they may be the only clinical dietitian in their community (or for several communities). This means they would often do all inpatient work, outpatient and group visits (within or separate from diabetes clinics), and residential care. As many remote and isolated communities have populations with limited services and high nutrition needs, mechanisms to entice dietitians with advanced practice skills into these areas would be desirable. Recruiting and preparing dietitians with advanced practice to work in remote and isolated communities not only improves the nutrition care for the residents of these communities but also provides a career ladder opportunity for dietitians. For example, support for a pediatric post-graduate fellowship as an incentive to work in rural and remote areas would be especially helpful in building community capacity.

Utilizing isolated communities to increase opportunities for career progression not only improves work and career choice satisfaction but also increases the desirability for working in an isolated community position [21]. It also creates another opportunity for an intern placement with a highly skilled dietitian preceptor. Providing dietetic interns with guidance from advanced practice dietitians displays to the future workforce how they can advance in their careers when they are properly prepared with advanced skills.

Monetary incentives such as increased support for professional development, higher pay for advanced practice skills, isolation pay, and more paid annual vacation increases the desirability of positions that are located in remote and isolated communities or in any position that is hard to fill. Providing expanded leadership responsibilities is an example of a creative approach to providing permanent full time positions which is another recruitment incentive as there are often no opportunities to pick up additional work in rural and remote areas.

In summary, dietitians have unique expertise in food and nutrition issues, improving the nutritional status of BC is a smart investment; and dietitians in collaboration with government and other stakeholders are part of the solution for a sustainable health system.

Dietitians of Canada (BC) welcomes further dialogue on these recommendations and actions to maintain a sustainable health care system:

- 1. Provide services that improve the nutritional status of the frail and most vulnerable**
 - Allocate funding with mechanisms that ensure there are inter-professional teams, including dietitians, in public health, primary and community care
 - Strengthen public health nutrition services to effectively support community based health promotion programs and the Healthy Families BC strategy.
 - Build capacity within communities for better managing nutritional risks related to complex chronic conditions.
 - Ensure adequate service levels to provide effective nutrition interventions within primary and community care and mental health services.
 - Expedite amendments to regulations that will enable professional groups to work to their full scope of practice to improve program delivery and services.
- 2. Make the healthy food choice the easier choice for all British Columbians**
 - Improve access to healthy foods for people living on a low income or in poverty
 - Use Health Canada's Nutritious Food Basket as starting point for identifying appropriate rates for setting the minimum wage and income assistance rates.
 - Expand programs that contribute to all British Columbians having sufficient income to purchase healthy foods to meet nutritional needs.
 - Continue to support the implementation of policies and programs that support healthy eating.
- 3. Ensure a qualified workforce capable of providing evidence-based nutrition intervention**
 - Create more opportunities for dietetic education and practicum training, including support for coordination in practicum training.
 - Provide incentives to address the challenges of recruitment and retention of health care professionals in rural British Columbia

Submitted on behalf of Dietitians of Canada, BC Region by:

Sonya Kupka, MAdEd, RD

DC Regional Executive Director for BC

sonya.kupka@dietitians.ca

778 241 8337

About Dietitians of Canada

Dietitians of Canada is the national professional association for dietitians, representing close to 6,000 members at the local, provincial and national level. As the voice of the profession, Dietitians of Canada strives for excellence in advancing health through food and nutrition.

Source Documents

1. Dietitians of Canada, Ontario Clinical Nutrition Leaders Action Group (2014). An Interprofessional Approach to Malnutrition in Hospitalized Adults. <http://www.dietitians.ca/Downloadable-Content/Public/Interprofessional-Approach-to-Malnutrition-in-Hosp.aspx> Accessed 13 Oct 2014.
2. Hine, R.J., Cloud, H.H., Carithers, T., Hickey, C., & Hinton, A.W. (1989). Early nutrition intervention services for children with special health care needs. *Journal of The American Dietetic Association*. 89 (11), 1636-1640.
3. British Columbia Ministry of Health. The impact of diabetes on the health and well-being of people in British Columbia. Website. <http://www.health.gov.bc.ca/pho/pdf/phoannual2004.pdf> Accessed 15 Dec 2014.
4. Laurie Chan, Olivier Receveur, Donald Sharp, Harold Schwartz, Amy Ing and Constantine Tikhonov. First Nations Food, Nutrition and Environment Study (FNFNES): Results from British Columbia (2008/2009). Prince George: University of Northern British Columbia, 2011. Print.
5. First Call: BC Child and Youth Advocacy Coalition (2014). 2014 Child Poverty Report Card. <http://still1in5.ca/wp-content/uploads/2014/11/First-Call-Coalition-Report-Card-2014-FINAL-WEB.pdf> Accessed 15 Dec 2014.
6. Dietitians of Canada (2009). A systematic review of the effectiveness of nutrition counselling interventions by dietitians in outpatient and in workplace settings. Available from <http://www.dietitians.ca/Secondary-Pages/Public/Dietitians-make-the-difference.aspx>
7. Crustolo A, Kates N, Ackerman S, Schamehorn S (2005). Integrating nutrition services into primary care. *Can Fam Physician*; December 10;51(12):1647–1653.
8. Academy of Nutrition and Dietetics. Medical Nutrition Therapy. MNT providing return on investment. <http://www.eatright.org>. Accessed 14 Nov 2014.
9. American Dietetic Association. (1995). Position of The American Dietetic Association: services for children with special health needs. *Journal of The American Dietetic Association*, 95 (7), 809-812.
10. Fraser Health. About Us: Quick Stats. http://www.fraserhealth.ca/about_us/quick-facts/ Accessed 13 Oct 2014.
11. Nelson, S., Turnbull, J., Bainbridge, L., Caulfield, T., Hudon, G., Kendel, D., Mowat, D., Nasmith, L., Postl, B., Shamian, J., Sketris I. (2014) Optimizing Scopes of Practice: New Models for a New Health Care System. Canadian Academy of Health Sciences. Ottawa, Ontario.
12. Province of British Columbia (Updated 2014) Overview of BC Provincial and Federal Nutrition Benefits Program. Healthlink BC and PEN. <http://www.dialadietitian.ca/viewhandout.aspx?Portal=UbSb&id=IM3mXO0=> Accessed 13 Oct 2014.
13. College of Dietitians of British Columbia. About Dietitians. <http://www.collegeofdietitiansbc.org/employers-a-the-public> Accessed 13 Oct 2014.
14. College of Dietitians of British Columbia (2013). Joint Statement: Dietitians' Authority to Recommend Vitamins and Minerals for Therapeutic Diets <http://www.collegeofdietitiansofbc.org/documents/2013/joint-statement-rd-pharmd-rn-mar-15-13.pdf> Accessed 13 Oct 2014.
15. Dietitians of Canada, BC Region (2013). Submission to Auditor General. <http://www.dietitians.ca/Downloadable-Content/Public/BC-AG-Submission-Nov-12-FINAL.aspx>
16. Seligman, HK, Laraia, BA, Kushel, MB (2010). Food Insecurity Is Associated with Chronic Disease among Low-Income NHANES Participants. *J Nutr* 140(2): 304-310.

17. Dietitians of Canada, BC Region. Cost of Eating in British Columbia (2011).
http://www.dietitians.ca/Downloadable-Content/Public/CostofEatingBC2011_FINAL.aspx Accessed 14 Oct 2014
18. Health Canada. National Nutritious Food Basket. <http://www.hc-sc.gc.ca/fn-an/surveill/basket-panier/index-eng.php>. Accessed 13 Oct 2014.
19. University of British Columbia Dietetics Program (2013). A Survey of UBC Dietetic Program Graduates (2007-2011).
20. Brown L, Williams L, Capra S. Going rural but not staying long: Recruitment and retention issues for the rural dietetic workforce in Australia. *Nutrition and Dietetics*. 2010;67:294-302.
21. Cody S, Ferguson M, Desbrow B. Exploratory investigation of factors affecting dietetic workforce satisfaction. *Nutrition and Dietetics*. 2011;68:195-200.