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Environmental Scan/ Needs Assessment Report

Supporting Educators and Practitioners to Achieve Dietetic Competencies in Population/Public Health for Entry Level Practices

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Table of Contents

Executive Summary

In 2006, a Pan Canadian Task Force on Public Health Nutrition Practice, funded by the Public Health Agency of Canada [PHAC], developed a framework for the enhancement of public health nutrition practice in Canada. The Task Force developed specific competency statements for population/public health nutrition and these were included in the framework.

Between 2009 and 2012, a Partnership for Dietetic Education and Practice (PDEP), comprised of representatives of the 10 provincial regulatory bodies, Dietitians of Canada and 47 academic and practical dietetic training programs across Canada, enhanced the competency statements that the Task Force had developed. PDEP focused the competencies on entry-level practice and added Performance Indicators. Beginning in the 2014-15 course year, these new Integrated Competencies for Dietetic Education and Practice [ICDEP] will serve as the standard for education and training for dietitians, practice registration and accreditation in Canada. More detail on the ICDEPs is available at www.pdep.ca.

Not all academic and practicum programs across Canada currently have the required population/public health resources and tools available that students need to meet these new ICDEPs. The gap analysis of the ICDEPs[1] revealed that, within the practice competency under Population/Public Health *4.01 Assess food and nutrition–related issues of groups, communities and populations*, there were two performance indicators that some programs currently do not assess, nor do they foresee that their program will be able to do so by 2015-16. These performance indicators are:

(n) Identify relevant group, community or population assets and resources, and
(p) Integrate assessment findings to identify priorities for population/public health approaches to food and nutrition[2].

New national tools will be developed to address these defined gaps and ensure that dietitians entering population/public health practice have the appropriate knowledge, skills and abilities to meet workforce needs.

Project Goal

To develop bilingual, nationally accessible & validated web-based tools & resources that will support the attainment of new *entry–level* dietetic competencies in population/public health nutrition.

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[1] Cane D. Gap Analysis Report. Integrated Competencies for Dietetic Education and Practice. January 2013. Available from: http://www.pdep.ca/files/Report_on_gap_analysis_survey_and_ICDEP_Version_2_March_2013_ENG.pdf

[2] Within the Population/Public Health Category there are four Practice Competencies (PCs), and within the PC 4.01 there are 16 Performance Indicators (PIs) (a to p).

Objectives

- Identify and address gaps in educational learning resources and tools relative to population/public health
- Identify existing population/public health nutrition content, learning tools and experiential learning opportunities in undergraduate and practicum dietetic education programs across Canada that could be shared with other programs or used to develop new resources that will fill identified gaps
- Consult with educators & students/interns to determine the range and types of tools that are needed to fill identified gaps and enhance population/public health nutrition education (didactic & practical)
- Develop, test and release a series of bilingual nationally accessible web-based tools & resources for use in population/public health dietetics and nutrition education programs across Canada

Methods

To address these objectives, three activities were undertaken, namely:

- *An online survey of educators and practitioners to assess their resource needs and preferences* – over 90% of academic/internship programs and just under 100 community-based practitioners/preceptors responded to the online survey, providing a nation-wide cross section of feedback on the kinds of resources that are currently being used by educators as well as those that respondents would like to see developed through this project.
- *Interviews with key informants from other health professional organizations, agencies and groups to gather information on their best practices and success factors for supporting the development of professional competencies* – 17 telephone interviews were carried out and data synthesized.
- *An environmental scan of existing online tools and best practices in development of e-learning resources* that could be recommended for educators, students and practitioners to address competencies in population/public health. The scan was further refined by a National Advisory Committee recruited from Dietitians of Canada members across Canada with expertise in dietetic education and practice focusing on population/community health.

Conclusions and Recommendations

The following conclusions and recommendations are drawn from the findings of the online survey, interviews with key informants and the environmental scan. These recommendations will guide the next steps in development of the e-learning materials to meet identified needs. Recommendations 1- 11 are specific to this present initiative and will be completed within the project time frame by March 2015; recommendations 12-15 are considered to be outside the scope of this current project.

1. Facilitate the development of e-learning tools to assist in filling identified gaps for assessing the performance indicators (PIs) in the Integrated Competencies for Dietetic Education and Practice (ICDEP) for population/pubic health. While many academic and internship programs are currently able to assess these PIs, there are sufficient numbers of programs that cannot, therefore warranting the development and/or

adaptation of existing support tools. Community-based, experiential learning is considered by educators to be one of the best means to develop competency and assess the pertinent PIs, whereby learners can work along side of a practitioner to develop the required knowledge and skills. However, given that these community-based opportunities are not universally available across Canada, and possibly will become even less so over time, effective online tools can play a key role in supporting students to achieve entry-level competency.

2. **Ensure the content of e-learning tools, is evidence-based and that the learning tools use simulated, "real-life," interactive approaches to engage learners.**

3. **Explore the potential of collaborating with national and/or international partners to augment existing population/public health resource websites that host interactive e-learning tools addressing identified gaps in ICDEP PIs.** An advantage to exploring this approach is that it could extend the existing resources that are available in the current initiative and perhaps allow us to do more by addressing other identified gaps in PIs. Examples of these websites, where appropriate content and e-learning activities have been developed and thoroughly evaluated, include the University of Kansas Community Toolbox http://ctb.ku.edu/en/default.aspx, The Health Communications Unit (THCU) http://www.thcu.ca/ and the National Collaborating Centre on Methods and Tools (NCCMT) http://www.nccmt.ca/. In the case of the Community Toolbox, there has been interest expressed in a collaboration that could result in English/French materials (such as case studies) adapted to a Canadian context and with a nutrition focus. Likewise, with The Health Communications Unit and the NCCMT, a limitation identified by educators is that materials are not nutrition-specific and this could be explored with THCU and NCCMT.

4. **Ensure that the design of new e-learning tools or revisions to existing ones is compatible with commonly used web browsers and Internet connections.** Consider how tools could be augmented for an off-line version where accessibility concerns are an issue (such as remote and rural communities). Also consider what adaptations may be needed for mobile access through smart phones and tablets to maximize accessibility.

5. **Build commitment and strengthen "buy-in" to use the e-learning tools by engaging educators and practitioners in telling their stories about their practices. These stories could then be developed into real-life case studies, videos and other interactive tools.** Pilot test the tools with a broader group of students, educators and practitioners to validate their applicability to practice.

6. **Establish an online community of practice for educators to share resources and learning tools that they have either developed or that they recommend from other agencies/organizations.** A process should be developed that engages the educator community in keeping the site current. Learning activities and tools, assigned reading and links to online resources could be grouped according to the appropriate competencies/performance indicators.

7. Investigate the costs of hosting and maintaining this community of practice site on a newly developed "resource hub" of the DC Knowledge Centre for on-learning tools to support attainment of dietetic competencies. It is recommended that the site be open to all educators, students and practitioners, and not be restricted to DC members only.

8. Should the cost of developing the community of practice on the DC site be more than the financial resources available, an alternative approach to be considered is to collaborate with other existing platforms. One such model is on the AFMC website – The Canadian Healthcare Education Commons http://www.afmc.ca/projects-chec-e.php. A section of the AFMC platform could be built out specifically for dietetic educators and students. AFMC has expressed interest in supporting this addition to the site. An advantage of using this AFMC platform is that, as it already exists, it would be faster to begin posting and sharing resources and it may be more cost effective than building a new site. The downside to this approach is that resources may not be as visible and accessible to dietetic educators and students as they might be on a DC site that is already familiar to the intended users.

9. Promote the long-term sustainability of the e-learning tools with dedicated resources to keep the content current and to maintain the platform technology. Cost is considered a significant barrier to accessing these materials. While the current grant from PHAC covers the development costs of some learning materials for this project, how future developments and maintenance will be resourced, needs to be considered. Educators have expressed concern that there is now a fee to access many of the modules in the Online Skills program offered by PHAC, formerly available for free. However, in the interest of long-term sustainability for tools developed for this project, it is important to consider cost recovery options.

10. Consider if/how facilitation could be incorporated into the e-learning tools, either through a synchronous or asynchronous process. Facilitation has been shown to support sustained interest and completion of online learning programs. In the situation where learning tools are being designed for the academic/internship environment, a guide for instructors/leaders could be an element of the learning tools. Alternatively a regularly scheduled discussion forum could be considered, where students/interns and new practitioners could register ahead of time and have access to a subject expert to address questions. A "post-a-question" email box that was answered regularly by a subject expert could also be employed where all questions and answers were available as a reference to learners.

11. Ensure that evaluation is an integral component of web-based learning tools. An evaluation strategy should include feedback from the users on the appropriateness of the tools for addressing the intended performance indicators. It should also include learner assessment that providers the user with feedback on whether they have attained the required knowledge and skills. A certificate of completion is considered a desirable incentive for learners to complete learning modules.

12. **Ensure the communication plan for the learning materials doesn't end with the initial release and promotion.** It is important to provide regular, ongoing communication to educators and students, planned at relevant times for the academic and internship programs, to reach new students, interns and educators, as well as to remind the current audience and inform them of new developments.

13. **Develop an implementation guide for ICDEP, providing examples of appropriate learning activities for assessing each PI.** Many educators are uncertain as to whether the kinds of learning activities they are currently providing, or intend to provide, to address the PIs will be considered appropriate by an accreditation committee. This recommendation could be addressed through the online community of practice described in Recommendation 6, or it could be an actual guidance document, although the latter may be more difficult to keep current.

14. **Develop a plan and presentation materials for educating employers of public health/community dietitians about the ICDEPs in population/public health.** Many health professional groups have placed their focus on this aspect of implementation of their professional competencies. It has been identified as a cornerstone for raising the profile of population/public health competencies and also for supporting practitioners to take advantage of professional development as part of their workday.

15. **Work with educators to prioritize additional gaps identified in the ICDEP performance indicators and to identify existing resources and support tools that can be shared to address those gaps.** Many gaps were identified through the online survey of educators and practitioners and are detailed elsewhere in this report. Two gaps identified by both educators and practitioners include 4.01 k – *Demonstrate knowledge of resources and methods to obtain information related to food systems and food practices* and 4.01l – *Obtain and interpret information related to food systems and food practices*. These could be a starting point for future work on resource sharing.

1. Background

In 2006, a Pan Canadian Task Force on Public Health Nutrition Practice, funded by the Public Health Agency of Canada [PHAC], developed a framework for the enhancement of public health nutrition practice in Canada. The Task Force developed specific competency statements for population/public health nutrition and these were included in the framework.

Between 2009 and 2012, a Partnership for Dietetic Education and Practice (PDEP), comprised of representatives of the 10 provincial regulatory bodies, Dietitians of Canada and 47 academic and practical dietetic training programs across Canada, enhanced the competency statements that the Task Force had developed. PDEP focused the competencies on entry—level practice and added Performance Indicators. Beginning in the 2014-15 course year, these new competencies, the Integrated Competencies for Dietetic Education and Practice [ICDEP] will serve as the standard for education and training for dietitians, practice registration and accreditation in Canada.

Not all academic and practicum programs across Canada currently have the required population/public health resources and tools available that students need to meet these new ICDEPs. Therefore, new national tools will be developed to address the defined gaps in educational resources and ensure that dietitians entering population/public health practice have the appropriate knowledge, skills and abilities to meet workforce needs.

The Public Health Agency of Canada has provided funding for the development of new tools and resources to address identified gaps in education, thereby enabling students and practitioners to meet the new ICDEPs. Funding for the initiative has been allocated for a 27-month period [February 2013 to March 31st, 2015].

2. Goals and Objectives

Goal

To develop bilingual, nationally accessible & validated web-based tools & resources that will support the attainment of new *entry–level* dietetic competencies in population/public health nutrition.

Objectives

- Identify and address gaps in educational learning resources and tools relative to population/public health
- Identify existing population/public health nutrition content, learning tools and experiential learning opportunities in undergraduate and practicum dietetic education programs across Canada that could be shared with other programs or used to develop new resources that will fill identified gaps
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3. Methods

3.1 Needs Assessment Consultation

The gap analysis of Integrated Competencies for Dietetic Education and Practice[3]revealed that, within the practice competency under Population/Public Health *4.01 Assess food and nutrition–related issues of groups, communities and populations*, there were two performance indicators that some programs currently do not assess, nor do they foresee that their program will be able to do so by 2015-16. These performance indicators are:

> (n) Identify relevant group, community or population assets and resources, and
> (p) Integrate assessment findings to identify priorities for population/public health approaches to food and nutrition[4].

An on-line, self-completed survey[5] designed by the Project Consultant with input from the National Advisory Committee was conducted to collect data in the following areas:

- Existing tools/resources and experiential learning opportunities being used by academic and internship/practicum programs that currently *are or will be* assessed in the 2013-14 Academic/Practicum Program Year for the two performance indicators identified as gaps by some programs
- Needs assessment for supportive learning tools, resources and technologies to fill defined gaps at both the educational program and practitioner levels
- Existing periodic/permanent continuing education programs in population/public health nutrition that may fill defined gaps in assessing performance indicators

The survey was pilot tested by educators of academic and internship programs for appropriateness of questions, clarity and ease of response. The pilot testing took place at the educators' meeting held in conjunction with the 2013 DC Annual Conference. Revisions to the survey were incorporated based on the feedback obtained. Prior to their administration, the surveys were approved by the National Advisory Committee. Copies of the final online surveys are included as Appendix I in this report.

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[3] Cane D. Gap Analysis Report. Integrated Competencies for Dietetic Education and Practice. January 2013. Available from: http://www.pdep.ca/files/Report_on_gap_analysis_survey_and_ICDEP_Version_2_March_2013_ENG.pdf

[4] Within the Population/Public Health Category there are four Practice Competencies (PCs), and within the PC 4.01 there are 16 Performance Indicators (PIs) (a to p).

[5] Canadian Public Health Association. Guide to Questionnaire Construction and Question Writing. 2012. Available from: http://publications.cpha.ca/products/3-1bk04221. The *Fluid Survey online tool* was used to format the survey and collect responses.

- The survey was administered and data collected between July 3rd and August 31st, 2013. While initially the deadline set for closing the survey was August 15th, due to many respondents being on vacation, the survey closing date was extended to the end of August.

- Direct invitations were sent electronically (via email) in both English and French to academic and internship program directors listed in Appendix IV, while potential preceptor/practitioners were invited to participate through messages sent to the Dietitians of Canada Community/Public Health Network, the Ontario Society of Nutrition Professionals in Public Health, the DC Members in Action Newsletter, and targeted contacts sent by National Advisory Committee members.

- The invitational email message to stakeholders included a brief background about the overall initiative, the objectives of the consultation, the timeframe for a response and a link to the on-line survey. The email also informed respondents as to when a summary report of the consultation would be made available.

- Reminder messages were sent at three weeks and four weeks from the initial invitation. The Project Consultant also followed up with personal reminders to the Academic and Internship Directors/ Coordinators to enhance the response rate. See Appendix II for the content of the communications.

- Informed consent was considered to have been given by the respondents when they followed the survey link and completed the survey. As there was little or no risk to participants for responding to the survey, ethics approval was not sought.

- Those respondents that indicated they had adequate learning materials and resources to enable students to meet competencies, and would be willing to share these resources with the Project Consultant for potential use in this present initiative, were followed up by email and telephone to arrange for their materials to be collected.

3.2 Environmental Scan of Existing E-Learning Tools

In addition to collecting information from educators via the online surveys about the types of resources they currently use to assess the performance indicators in population/public health, an environmental scan of web-based continuing education/professional development learning tools was conducted. While there are many definitions of e-learning or online learning in the literature[6], for the purpose of this project e-learning was defined as *instruction accessed through computerized electronic technologies including the internet, intranet, CDs, mobile devices or other digital media*[7]. More specifically, the following types of materials were considered[8]:

- Self-paced online courses or tutorials (i.e. those that could be taken at the convenience of the learner without any facilitation) and with interactivity features

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[6] The terms "e-learning" and "online" learning are used interchangeably in this report.

[7] CDC's E-Learning Essentials. A Guide for Creating Quality Electronic Learning. Centers for Disease Control and Prevention. Scientific Education and Professional Development Program Office. January 2013. Available from: http://www.cdc.gov/learning/local/pdf/ElrngEsstls.pdf

[8] LeCavalier, J. An Environmental Scan and Assessment of Online Learning Opportunities Related to Health Equity and Social Determinants of Health, for Public Health Practitioners in Canada. Report prepared for National Collaborating Centre for Determinants of Health. March 30, 2013.

- Facilitated online courses and tutorials
- Online courses of any length as long as they allowed the learner to interact meaningfully with the content
- Power Point Presentations that engaged the learner through interactive quizzes, self-reflection activities
- Archived webinars

Websites that were mainly collections of information resources and documents were not included.

Two existing environmental scan documents were invaluable for identifying potentially appropriate online tools – Environmental Scan of Online Continuing Education Resources to Support Public Health Competencies commissioned by the Public Health Agency of Canada[9] and Recommended Online Learning Opportunities Related to Health Equity and Social Determinants of Health for Public Health Practitioners in Canada prepared by the National Collaborating Centre for Determinants of Health (NCCDH).[10] While these two scans were not specific to population/public health nutrition, nonetheless many resources identified could readily be applied or adapted to the nutrition context.

The findings of these scans were narrowed to focus on e-learning materials pertinent to the ICDEP performance indicator gaps in population/public health[11].

A further search of the internet, using many of the search terms defined for the above-mentioned scans (online learning; e-learning; elearning; online courses; distance education; continuing education; professional development; public health; population health; community needs assessment; situational analysis; community assets; nutrition) was conducted by the Project Consultant to determine if there were any more recently developed online materials not captured in these scans that should be considered.

As cost to access online materials was identified by survey respondents as a potential barrier for students and practitioners, only those tools that were available for access free of charge, or for a very nominal fee (less than $25), were included in the final scan report. This excluded online courses offered by universities or colleges for credit where pre-requisites and registration fees were required. Materials also had to be relevant to educators and students in undergraduate dietetic programs or internships, public health, community health or primary care professionals.

Only English language resources were searched in this scan since other language resources could not be evaluated for potential relevance by the project consultant. Search efforts focused on content from Canadian and US sources, although materials from other countries were reviewed if they seemed to have potential for the Canadian setting.

Based on these criteria, a program profile was created by the Project Consultant for 20 online resources out of a total of 42 that were originally identified. These profiles are summarized in Appendix VI and were provided to members of the National Advisory Committee for further assessment using the following criteria:

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[9] Pyra Management. Environmental Scan of Online Continuing Education Resources to Support Public Health Competencies. Internal Document Prepared for the Public Health Agency of Canada. February 2013.

[10] Lecavalier, J & Associates Inc. An Environmental Scan and Assessment of Online Learning Opportunities Related to Health Equity and Social Determinants of Health, for Public Health Practitioners in Canada. Report prepared for National Collaborating Centre for Determinants of Health. May 30, 2013.

[11] Cane D. Gap Analysis Report. Integrated Competencies for Dietetic Education and Practice. January 2013. Available from: http://www.pdep.ca/files/Report_on_gap_analysis_survey_and_ICDEP_Version_2_March_2013_ENG.pdf

- High relevance of content to the Canadian population/public health setting and specifically to performance indicators 4.01 n and/or 4.01 p
- E-learning content is accurate and reading level is appropriate for the audience.
- Information is succinct and logical.
- Good to excellent quality of instructional design based the following criteria adapted from Centers for Disease Control and Prevention (CDC) Key Instructional Components and Best Practices[12]
    - Effective use of colour, graphics, borders and white space
    - Learning is facilitated through the application of interactive strategies that engage learners and stimulate recall of prior knowledge. Different levels of interactivity may be used to suit content and audience needs. All interactions work well within the organization's web architecture.
    - Interface is learner-friendly with a main menu and other navigational elements that help learners know where they are within the course and move easily through it.
    - A learning assessment is included and is designed to determine if the intended learning outcomes have been met.

Reviewers were also asked to rank each online resource on the following scale:

A – resource is recommended as is or with minor modifications

B – instructional design quality is good but needs adaptation to a Canadian context

C – content has merit but is weak in some key instructional design areas

D – not recommended

3.3 Identification of Best Practice Tools, Resources and Approaches from other Population/Public Health Disciplines, Agencies and Professional Associations

Telephone interviews were conducted by the Project Consultant with selected key informants from other population/public health disciplines, agencies and professional organizations to determine what approaches they have used to address gaps in meeting professional competencies. Key informants were also asked to identify what they considered to be best practices or success factors for DC to consider in developing and/or adapting new online tools. Key informants were identified through various sources including the Project Consultant, the National Advisory Committee and recommendations made by key informants themselves.

Potential informants were sent an email explaining the initiative and provided with the questions that would be posed in the interview. They were asked to consent to an interview via return email to the Project Consultant. All potential informants contacted agreed to participate in an interview. At the time of the interview, their verbal consent was also obtained for audio recording the interview. Interviews were audio-recorded to improve accuracy of reporting

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[12] CDC's E-Learning Essentials. A Guide for Creating Quality Electronic Learning. Centers for Disease Control and Prevention. Scientific Education and Professional Development Program Office. January 2013. Available from: http://www.cdc.gov/learning/local/pdf/ElrngEsstls.pdf

and the summary transcript was provided back to interviewees to ensure the transcribed information was correct. Common themes and unique findings with respect to best practices and success factors were summarized and used to formulate recommendations on resource development for the present initiative.

Additionally, several guidance documents and literature reviews on best practices for creation of e-learning materials were identified from a web-based search[13],[14],[15],[16],[17],[18],[19],[20],[21],[22] and these were consulted, along with the findings from the key informant interviews, to formulate recommendations on developing e-learning materials for this initiative.

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[13] CDC's E-Learning Essentials. A Guide for Creating Quality Electronic Learning. Centers for Disease Control and Prevention. Scientific Education and Professional Development Program Office. January 2013. Available from: http://www.cdc.gov/learning/local/pdf/ElrngEsstls.pdf

[14] CDC;s E-Learning Essentials Interactive. Centers for Disease Control and Prevention. Scientific Education and Professional Development Program Office. Version 1, 07.26.13. Available from http://www.cdc.gov/learning/quality/EssentialsHTML_072413/index.html

[15] OutStart Trainer. Best Practices for Creating E-Learning for OutStart Trainer Development. 2006

[16] Association of Faculties of Medicine of Canada (AFMC). An Environmental Scan of Best Practices in Public Health Undergraduate Medical Education. Reports 1-5. 2009. Available from: http://www.afmc.ca/social-public-health-e.php

[17] Moore, Cathy. Designing Powerful E-Learning. Certificate Program. Atlanta. 2012. Available from: http://blog.cathy-moore.com/wp-content/certprogram/cert-prog-handout-Moore.pdf

[18] Author. Research on the Effectiveness of Online Learning. A Compilation of Research. Sept 2011. Available from: http://www.academicpartnerships.com/docs/default-document-library/white-paper-final-9-22-2011-(1).pdf?sfvrsn=0

[19] Ballew P, Castro S, Claus J. et al. Developing web-based training for Public Health Practitioners: What Can We Learn From A Review of Five Disciplines? Health Educ. Res 2012; 28(2) 276-87. Abstract available from: http://www.ncbi.nlm.nih.gov/pubmed/22987862

[20] Abel R. Implementing Best Practices in Online Learning. Educause Quarterly 2005; Number 3: 75-77. Available from: http://net.educause.edu/ir/library/pdf/eqm05312.pdf

[21] Gutiérrez, Karla. The 9 Secrets of Effective e-learning Courses. Shift Publications. Undated. Available from: www.shiftelearing.com

[22] Wright, CR. Criteria for Evaluating the Quality of Online Courses. Instructional Media and Design. Grant MacEvan College. Edmonton, AB. (Undated). Available from: http://elearning.typepad.com/thelearnedman/ID/evaluatingcourses.pdf

4. Results

4.1 Needs Assessment Survey – Academic/Internship Programs

4.1.1 Response

Overall there were 32 responses from a potential of 35 academic/practicum programs, a response rate of 91%. See Appendix IV for the list of contacts that received the invitation to complete the survey. Respondents indicated whether they represented an Integrated, Stand-Alone Academic, Stand-Alone Internship or Combined Masters/Practicum Program. Table 1 summarizes the response distribution by program type.

Table 1: Response Distribution

Response	Chart	Percentage	Count
Integrated		41%	13
Stand-Alone Academic		12%	4
Stand-Alone Internship		38%	12
Combined Masters-Practicum		9%	3
	Total Responses		**32**

4.1.2 Respondents Who Will Assess Performance Indicator 4.01-*n Identify relevant group, community or population assets and resources*

The majority of respondents who answered this question, 25 of 30 respondents (83%), indicated that they will assess this performance indicator (PI) in the 2013-14 Academic/Practicum course year. The one respondent that indicated that the program would not assess this performance indicator (PI) said that it is was not the required setting for assessment, however any materials that could be used in courses would be welcome. See Table 2 for the data summary.

Table 2- Respondents Who Will Assess Performance Indicator 4.01-n Identify relevant group, community or population assets and resources

Response	Chart	Percentage	Count
Yes		83%	25
No. Please explain what the barriers are.		3%	1
Uncertain		13%	4
	Total Responses		**30**

4.1.3 Types of Resources Used by Educators to Address Performance Indicator 4.01-*n Identify relevant group, community or population assets and resources*

For this question respondents were asked to indicate all the types of resources/learning activities that they use to assess the PI, so all resource formats could potentially be selected. Of those respondents that will assess this PI, the majority (72%) favoured the use of experiential learning activities. These respondents have access to community-based placements and cited such settings as food banks, public health units, community health centres, farm to childcare programs, school class rooms, community nutrition fairs, experiences with immigrant families, grocery stores, as examples of where they place students to address this performance indicator. Some programs also indicated that they have students review and apply the findings from current federal/provincial/local reports on community health assessment. Experiences may vary each year depending on what is available in the community.

Fifty-five percent (55%) of respondents use assigned reading, including textbooks[23],[24] and journal articles. Websites such as Dietitians of Canada, Public Health Agency of Canada, Health Canada, Agriculture Canada, Canadian Public Health Association, Institutes of Medicine, Food and Agriculture Organization of the United Nations, Food Secure Canada, provincial ministries of health, regional health authorities were also cited as examples of assigned reading. Many programs have developed their own reading lists for students that they update regularly.

Thirty-one percent (31%) use resources from other agencies/organizations. These included National Collaborating Centres for Public Health: Methods and Tools[25], Community Toolbox from the University of Kansas[26], and resources from The Health Communication Unit of Public Health Ontario[27] - all of which were cited by several respondents.

Just over ¼ (28%) of respondents use simulated learning activities such as videos, tutorials, project work and case studies to address this performance indicator.

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[23] *Contento, Isobel. Nutrition Education: Linking Research, Theory, And Practice; Boyle, MA & Holben, DH. (2010).*

[24] Boyle, MA and Holben, DH. (2013). *Community Nutrition in Action-An Entrepreneurial Approach. Wadsworth, Cengage Learning. 6th Edition.*

[25] National Collaborating Centre for Methods and Tools. http://www.nccmt.ca/

[26] University of Kansas. Community Toolbox http://ctb.ku.edu/en/online-courses.aspx

[27] Public Health Ontario. The Health Communication Unit (THCU). www.thcu.ca

Of those respondents that selected the "other" option for resources (24%), they cited situational assessment assignments, case studies as group project work, and resources from other agencies as outlined above. See Table 3 for a summary of these data.

Table 3 – Types of Resources Used by Educators to Address Performance Indicator 4.01 n -Identify relevant group, community or population assets and resources

Response	Chart	Percentage	Count
Simulated learning activities		28%	8
Experiential learning activities		72%	21
Assigned reading		55%	16
Resources/activities from other agencies/organizations		31%	9
Other		24%	7
Not Applicable		10%	3
Total Responses			**29**

4.1.4 Willingness to Share Learning Resources

Of those respondents that have developed learning resources pertinent to assessment of this PI, most were willing to share them for potential adaptation by other programs and/or for use in this project. The Project Consultant will follow up with these contacts and collect pertinent materials. Those programs that indicated that they wouldn't/couldn't share materials indicated that their current learning activities were under revision and not suitable for sharing at this time. See Table 4 for a summary of these data.

Table 4 – Willingness to Share Learning Resources

Response	Chart	Percentage	Count
Yes. Please provide your name and email contact to enable the Project Consultant to contact you.		57%	16
No		4%	1
Not Applicable		39%	11
Total Responses			**28**

4.1.5 Kinds of Resources Recommended for Development

Respondents who currently are not able to assess this PI were asked what kinds of materials they would like to see developed for their use. Just over ¼ of respondents (27%) favoured simulated learning activities such as online self-directed modules, video tutorials and case studies, followed closely by experiential learning activities (20%), including community-based placements where available, project work, field trips etc. Resources from other agencies/ organizations were also suggested by 20% of respondents, while 33% indicated that other kinds of resources/activities would also be suitable. See Table 5 for a summary of these data.

Table 5 – Kinds of Resources Recommended for Development

Response	Chart	Percentage	Count
Simulated learning activities		27%	8
Experiential learning activities		20%	6
Assigned Reading		10%	3
Resources/activities from other agencies/organizations.		20%	6
Other		33%	10
Not applicable		37%	11
Total Responses			**30**

4.1.6 Awareness of Other Professional Development/Continuing Education Programs for Performance Indicator 4.01-n *Identify relevant group, community or population assets and resources*

The majority of respondents (83%) were unaware of other professional development/continuing education programs that would address this performance indicator. Of those that were, the online Community Tool Box from the University of Kansas, The National Collaborating Centre for Methods and Tools and The Health Communication Unit (THCU) with Public Health Ontario, as well as regional/organization-specific workshops, were cited. Data are summarized in Table 6.

Table 6 – Awareness of Other Professional Development/Continuing Education Programs for Performance Indicator 4.01 n

Response	Chart	Percentage	Count
Yes		17%	5
No		83%	25
Total Responses			**30**

4.1.7 Respondents Who Will Assess Performance Indicator 4.01-p *Integrate assessment findings to identify priorities for population health approaches related to food and nutrition*

Of those respondents who answered the question (25 respondents) as to whether or not they will assess this PI in the 2013-14 course year, 20 (80%) indicated that they will, while three respondents indicated they would not be assessing it and two others were uncertain. One respondent that indicated they would assess this PI added the proviso that it would be on a small-scale basis, and there was no guarantee that the topic taught to the small group would relate exactly to the priorities of that population. Another respondent who indicated that they would not assess the PI felt that mentors would require more guidance than they had capacity to provide. There were no reasons offered by those who indicated they were uncertain about being able to assess the PI. Data are summarized in Table 7.

Table 7 – Respondents Who Will Assess Performance Indicator (4.01-p)

Response	Chart	Percentage	Count
Yes		80%	20
No. Please explain what the barriers are.		12%	3
Uncertain		8%	2
	Total Responses		25

4.1.8 Types of Resources Used by Educators to Address Performance Indicator 4.01-p *Integrate assessment findings to identify priorities for population health approaches related to food and nutrition*

Of those respondents that will assess this PI, the majority (79%) favoured the use of experiential learning activities. As is the case for respondents who will assess PI 4.01-n, respondents to this question have access to community-based placements and cited similar community settings as examples as to how they address this PI.

Assigned reading is used by 45% of respondents using similar reading material as mentioned previously. Thirty-three percent (33%) use resources from other agencies/organizations previously cited as well as Statistics Canada reports. Over 1/3 (38%) use simulated learning activities such as videos, tutorials and case studies as well as invited guest experts and online tutorials selected by the course instructor. Of those respondents that selected the "other" option for resources (42%), they cited situational assessments assignments, case studies group project work, and resources from other agencies as outlined above. See Table 8 for a summary of these data.

Table 8 – Types of Resources Used by Educators to Address Performance Indicator (4.01-p)

Response	Chart	Percentage	Count
Simulate learning activities		38%	9
Experiential learning activities		79%	19
Assigned reading		46%	11
Resources/activities from other agencies/organizations.		33%	8
Other		42%	10
Not applicable		4%	1
Total Responses			**24**

4.1.9 Willingness to Share Learning Resources

Of those respondents that have developed learning materials for PI 4.01-p, all indicated they were willing to share with others. See Table 9.

Table 9 - Willingness to Share Learning Resources

Response	Chart	Frequency	Count
Yes. Please include your name and email address to enable the Project Consultant to contact you.		52%	12
No		0%	0
Not Applicable		48%	11
Total Responses			**23**

4.1.20 Kinds of Resources Recommended for Development

Simulated learning activities such as self-directed online tools, videos, and case studies are the preferred format, selected by 40% of respondents, for addressing this PI, followed by experiential learning and "other" formats – both selected by 32% of respondents. Resources from other agencies were also felt to be highly appropriate (32%). See Table 10.

Table 10 – Kinds of Resources Recommended for Development 4.01p - Integrate assessment findings to identify priorities for population health approaches related to food and nutrition

Response	Chart	Percentage	Count
Simulated learning activities		40%	10
Experiential learning		32%	8
Assigned reading		20%	5
Resources/activities from other agencies/organizations.		24%	6
Other		32%	8
Not applicable		32%	8
	Total Responses		**25**

4.1.25 Awareness of Professional Development/Continuing Education Programs

Only a small percentage of respondents (14%) were aware of other professional development or continuing education programs that could be used to address this PI. Programs cited included Public Health Agency of Canada Skills Online course as well as other programs cited for addressing PI 4.01-n. See Table 11.
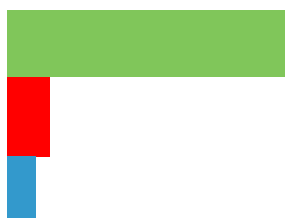
Table 11 – Awareness of Other Professional Development/Continuing Education Programs for Addressing Performance Indicator 4.01p

Response	Chart	Percentage	Count
Yes - Please specify the course/program name, contact and/or URL.		14%	3
No		86%	19
	Total Responses		**22**

4.1.26 Perceived Gaps in Ability of Academic/Internship Programs to Assess for Other Performance Indicators Not Previously Identified

In addition to the gaps in ability to assess PIs identified by an earlier survey, the majority of respondents (62%) felt there were no further gaps for performance indicators in population/public health. Nonetheless, over 1/3 of respondents (38%) perceived there were additional gaps in their programs' ability to assess other PIs. See Table 12.

Table 12 – Other Perceived Gaps in Ability to Assess for Performance Indicators

Response	Chart	Percentage	Count
Yes, I believe there are other gaps. Please specify.		38%	9
No, I'm not aware of other gaps.		62%	15
	Total Responses		24

A number of respondents provided specific feedback regarding perceived gaps as follows:

- *"There are no population health placements in that province so ALL indicators will be problematic unless small group experiences qualify to meet these indicators."*
- *"I would appreciate more fully developed case studies than the ones I have developed. I believe there are many resources already available related to these competencies. The Community Toolbox [from University of Kansas], the National Collaborating Centre for Methods and Tools and the Public Health Agency of Canada [Skills Online] are all excellent resources. Perhaps a resource list for individuals would be a big help."*
- *"In the academic course, the professor is a PhD, but may not be an RD, and may be variable from year to year in terms of who is teaching that year, and often is not a dietitian or public health nutritionist. If the topic of health systems in Canada, or public health nutrition needs to be taught, then it would be good to have some modules to assist the professors who need to teach the topic, even when it is not in their area of expertise. The areas such as 4.01-c [Demonstrate knowledge of ways to determine key stakeholders and obtain relevant information], 4.01-m [Demonstrate knowledge of group, community and population assets and resources, and 4.02-f [Obtain and interpret food and nutrition surveillance, monitoring and intake data] may not be obvious how to teach this."* The Foundational Knowledge Sections 7 and 17 were also perceived as gaps by this same respondent.
- *"Uncertain depending on what the expectations are re: scale/extent of population/public health approaches interns are exposed to/involved with."*

In addition to the comments above, other perceived gaps flagged without comments included:

- 4.01-e Demonstrate knowledge of sources of and methods to obtain food and nutrition surveillance, monitoring and intake data. [Mentioned by 1 respondent]
- 4.01-f Obtain and interpret food and nutrition surveillance, monitoring and intake data. [Mentioned by 2 respondents]
- 4.01-g Demonstrate knowledge of sources of and methods to obtain health status data. [Mentioned by 1 respondent]
- 4.01-h Obtain and interpret health status data. [Mentioned by 3 respondents]
- 4.01-i Demonstrate knowledge of sources and methods to obtain information relating to the determinants of health. [Mentioned by 2 respondents]
- 4.01-k Demonstrate knowledge of sources of and methods to obtain information related to food systems and food practices. [Mentioned by 1 respondent]
- 4.01-l Obtain and interpret information related to food systems and food practices. [Mentioned by 1 respondent].

4.1.27 Potential Barriers to Accessing Online Tools

Half the respondents to this survey question did not perceive there would be barriers for students to access online learning tools. A small percentage (14%) felt that firewalls would prevent access by some students, while 33% of respondents were uncertain as to whether or not there would be barriers. Of those that were uncertain, one respondent mentioned that if DC created the materials and they were only available to DC members this would be problematic. This is not the intention and online tools developed will be fully accessible to all. Another respondent mentioned that if there were a cost to access the resources this would also be a barrier. Again, this is not the intention for any newly created e-learning tools developed through this initiative. Firewalls were also cited as a barrier by two "uncertain" respondents, although one of these respondents speculated that since current course work utilizes online resources it was not likely to be a major concern. See Table 13.

Table 13 – Potential Barriers to Accessing Online Tools

Response	Chart	Percentage	Count
Yes		17%	4
No		50%	12
Uncertain		33%	8
	Total Responses		24

4.1.28 Additional Comments

Respondents were invited to provide any additional comments. These are categorized under common themes and included verbatim below.

- ### Lack of public health placements

  "There is no opportunity to gain exposure to population needs assessment, which is the cornerstone of population health."

  "The half-day Public Health Dietitian group presentation (includes case study work and discussion) was added to our internship program a few years ago to ensure all dietetic interns had exposure to population/public health nutrition issues/intervention strategies/community development projects. It was our experience that each dietetic intern could be scheduled with a primary care community dietitian, however, less population/ public health placements were available. An opportunity for our interns to gain/obtain further learning through a continuing education program (similar to the DC online Dysphagia Management program) would be welcomed."

  "Consistent problem is lack of population health placements."

  "Able to meet these competencies with the support of external partners however concerned that access to these resources will become more challenging as the number of internship programs expand."

  "While technology is great I find that my Dietetic Interns are more motivated to learn and learn deeper when they experience and contribute to public health nutrition vs reading about it or discussing."

- ### More clarity needed as to the kinds of experiences that are considered suitable to assess Performance Indicators (PIs)

  "Will the accreditation process accept small group needs assessment as a proxy for population health?"

  "Students do this, but on a very small scale, in our program. "Assets and resources" sounds big, most often they are actually simply finding out whether the room has a powerpoint projector, plugs, chalk board, flip chart, or smart board, etc."

  "Uncertain if the x indicators in the assessment columns are just guidelines or minimum requirements."

  "I have an ongoing concern that clarification of enabling activities that would be appropriate to meet these PI's is needed. I am working with the understanding that the use of population health refers to "uses a population health approach". The situational assessment assignment can be applied to a small group in a CHC or a larger population served by Public Health Department. I am assuming that either would be considered appropriate. One component of the approach we plan to take is to sort out what constitutes entry-level competency. The

situational assessment assignment is currently set to measure readiness to enter practicum. Identification of rubric components and determination of the appropriate process to define competent entry level performance of the PI within a formal course structure is something we need to sort out."

"The significant challenge for the IDPP in moving forward to assure that the rubric for the situational assessment assignment clearly identifies and defines the level and quality of performance needed to designate achievement of entry level on the PI. Identification of enabling activities appropriate to demonstrate and assess the PI would be helpful. The above answers assume that population health in the ICDEP refers to "uses a population health approach" and can be applied to a small group in a CHC or to a wider population served by a Public Health Unit."

"Although some students get exposure to larger community health systems and public health nutrition, from a practical point of view we can only guarantee that everyone gets a small population to assess, we can't guarantee a large population. Otherwise, it seems to work on a small scale."

"It would be useful to have an interpretation guide outlining expectations or examples of learning/enabling activities and settings for each PI, to ensure we are providing the appropriate learning experiences and also assessing interns appropriately (ex: what is meant by food systems and food practices in 4.01 (l); expectation re: scale/extent of population/public health approaches or depth of involvement in population health plans, responsible for a small scale activity such as a group session vs. involved in some activities related to a larger scale initiative/action plan)."

- ## Desire for supportive learning materials to be developed

"I would like to see more fully developed case studies that could be used in the classroom."

"Il est important de développer ce domaine qui est très pertinent et de plus en plus en demande dans le milieu du travail et par les étudiants.   Il faudrait nommer ce secteur Nutrition publique, Public Nutrition or at least Public health nutrition. Il faut s'assurer d'avoir plus de milieux de stage."

"Looking ahead, would like to consider alternate strategies beyond the current model."

"L'accès aux technologies n'est pas un problème mais pour le développement d'outil c'est plus difficile. Il sera important que les outils développés soient en français."

"The opportunity to access additional resources and learning activities related to this practice area are welcomed. As our region/province does not have a large number of Population/Public Health Dietitians who are employed in this setting full-time, our program organizes learning/exposure to this area through group education as well as practical experience placements as available."

"Recognizing that ability to access placements in Public Health organizations can be challenging, would appreciate strategies that can support other approaches to meeting this competency."

- **Perception of barriers in accessing online materials**

"Many of our program preceptors and therefore interns would have difficulty accessing online resources due to fire walls, etc."

4.2 Needs Assessment Survey – Practitioners/Preceptors

Overall there were 146 responses from practitioners/preceptors working in population/public health. Of those surveys submitted, 48 contained no data – neither identification information, nor answers to the survey questions. It is not clear why this occurred. One can speculate that possibly these potential respondents, having accessed the survey, felt they were not qualified to answer the questions. There may also have been technical problems encountered with the survey by some people. These responses were therefore eliminated, leaving 98 responses for analysis.

As this target audience was recruited through an open invitation process, it is not possible to determine the response rate. Of those that did respond, only 58.4% completed all parts of the survey. Some only provided contact information and no other data; some provided contact information and completed the first set of questions pertaining to one performance indicator (4.01-n) but did respond to the set of questions about the second performance indicator (4.01-p). Others completed all or part of the survey but did not share contact information, seemingly preferring to be anonymous.

All those that provided contact information, but did not complete other sections of the survey, were followed up by email to determine if they had experienced any technical issues with the survey. Only three respondents indicated they encountered a technical problem with the survey. Of those other respondents that replied to the email, all indicated that they either started the survey, and due to time constraints did not complete it, or they felt they were not the appropriate person to respond and therefore did not continue. Possibly some respondents, who didn't provide any information to enable the Project Consultant to follow up with them, were in this latter category.

4.2.1 Name of Agency/Organization Completing the Survey

Overall, 67 respondents (68%) reported their agency/organization; these are listed in Appendix V. In some cases more than one respondent from an agency/organization completed the survey.

4.2.2 Responses by Province/Territory

Ninety-one (91) respondents indicated their province/territory of origin. Data demonstrates a good distribution of responses Canada-wide, with over half (54%) of the surveys completed by practitioners in Ontario. This is understandable given the higher population of public health practitioners from that province compared to others. Additionally, the Ontario Society of Nutrition Professionals in Public Health (OSNPPH) helped to disseminate information to their members about the survey and this likely enhanced the response rate from that province, perhaps

reaching some non-DC members that may not have received the communication from other channels. As other provinces do not have a similar organization, it was not possible to disseminate the survey in that manner elsewhere. In the case of New Brunswick, one of the National Advisory Committee members distributed it to public health nutritionists through her own network.

British Columbia (12%), Alberta (8%) and New Brunswick (7%) had the next highest response rates. Table 14 summarizes the response distribution by province and territory.

Table 14 – Response Distribution of Preceptors/Practitioners

Response	Chart	Percentage	Count
Alberta		8%	7
British Columbia		12%	11
Manitoba		4%	4
New Brunswick		7%	6
Newfoundland and Labrador		4%	4
Northwest Territories		1%	1
Nova Scotia		1%	1
Nunavut		2%	2
Ontario		54%	49
Prince Edward Island		2%	2
Saskatchewan		3%	3
Yukon		1%	1
Total Responses			**91**

4.2.3 Practice Settings of Preceptor/Practitioner Respondents

Over 1/3 (37%) of respondents who answered this question on the survey selected "Other" as their practice setting. These settings included public health/public health unit, education, university, Aboriginal wellness centre, diabetes centre, hospital and rehabilitation. About ¼ of respondents (28%) indicated that they work in practice settings best described as a health authority, while 16% and 12% of respondents described their work setting as community health

centre or primary health care, respectively. Eight percent (8%) of respondents work at the population health policy level of the federal/provincial/territorial governments. None of the respondents indicated that they work for a non-government organization, nor for industry such as grocery retail or commodity boards. These data are summarized in Table 15.

Table15 – Practice Settings of Preceptor/Practitioner Respondents

Response	Percentage	Count
Community Health Centre	16%	14
Primary Health Care	12%	11
Health Authority	28%	25
Industry (e.g. commodity boards, grocery retail, etc).	0%	0
Non Governmental Organization	0%	0
Population Health Policy Level (F/P/T Government)	8%	7
Other, please specify	37%	33
	Total Count	90

4.2.4 Length of Time in Practice

Sixty-nine percent (69%) of respondents have been in practice for more than 5 years. This survey attempted to engage new practitioners, as well as those who had been in practice for a longer period, as it was perceived that more recent graduates may be able to reflect on their recent academic and/or internship experience and thereby provide insight into the kinds of learning activities that would be suitable for filling perceived resource gaps. The survey was moderately successful at reaching the newer-to-practice dietitians with a combined total of 22% of respondents indicating that they had been in practice for less than one year or one to two years. See Table 16 for a summary of these data.

Table 16 – Length of Time in Practice

Response	Chart	Percentage	Count
Less than one year		9%	8
One to three years		13%	12
Three to five years		9%	8
More than five years		69%	63
	Total Responses		91

4.2.5 Respondents Who Are/Have Been a Student Practicum/Internship Preceptor

The majority of respondents answering this question (88%) are, or have been, a preceptor for students/interns as summarized in Table 17.

Table 17 – Number of Respondents Who Are Or Have Been A Preceptor

Response	Chart	Percentage	Count
Yes		88%	80
No		12%	11
	Total Responses		**91**

4.2.6 Respondents Who Are Able to Assess Performance Indicator 4.01-n *Identify relevant group, community or population assets and resources*

A majority of respondents who answered this question (71%) indicated that they are currently, or have been able to, assess this PI. This is slightly lower than the Academic/Internship respondents (83%) but overall it appears that the majority of respondents are able to assess this PI. Another 12% of the individuals who were preceptors/practitioners and who responded to this question indicated that they are not able to assess this PI. Seventeen percent (17%) indicated that this question did not apply to them, presumably as they had not been preceptors for students/interns. See summary data in Table 18.

Table 18 – Ability to Assess Performance Indicator (4.01-n)

Response	Chart	Percentage	Count
Yes		71%	51
No		12%	9
Not Applicable		17%	12
	Total Responses		**72**

4.2.7 Types of Resources Used by Preceptors to Address Performance Indicator 4.01-n *Identify relevant group, community or population assets and resources*

Of those respondents that currently assess, or have been able to assess this performance indicator in the past, the majority (79%) favour the use of experiential learning activities (such as community-based placements, project work, field trips, etc) to address this competency and assess the PI. This is similar to the response from Academic/Internship Directors where 72% favoured the use of experiential learning activities for assessing this PI. Types of settings for these placements cited by practitioners/preceptors included:

- Creating resources to be used by a public health nurse for an Old Order Mennonite community; participation in foods systems needs assessment and consultations
- Participation in determinants of health/food security-related project work
- Reviewing needs assessment reports and consultation with staff of Best Start Resource Centre/Baby Friendly initiative www.beststart.org/courses
- Reviewing Nutrition Tools for Schools from the Ontario Society of Nutrition Professionals in Public Health www.nutritiontoolsforschools.ca
- Reviewing the Student Body website and resources http://thestudentbody.about kidshealth.ca/ for healthy weights initiative in schools/classrooms from Hospital for Sick Children.
- Discussion how local health Baby Clubs developed in response to nutrition-related issues of this section of the population
- Exploration of Community Accounts http://nl.communityaccounts.ca/
- Reviewing Social Determinants of Health http://www.thecandianfacts.org/
- Reviewing Circle of Health http://www.circleofhealth.net/
- Discussion with interns regarding several scenarios and real-life examples of how needs are identified and responded to in a community
- Participation in school health fairs, observation at child health clinics (screening), assigned readings and case studies – Isabelle Girou/s book – Applications and Case Studies in Clinical Nutrition; Ellyn Satter's webinars and resources
- Utilizing case studies from The Health Communication Unit, Ontario Public Health regarding health promotion planning
- Reviewing Alberta Health Services required readings list; spending time with other public health disciplines
- Participation in project work, community events, education sessions, www.healthyeatingatschool.ca
- Reviewing comprehensive workplace wellness, Good Food Box, EatRight Ontario website
- Utilizing case study about starting a new position in a new community…where would you begin learning about your community's needs; who would you connect with; needs assessment assignment (e.g. what are the needs of alternate schools in regards to providing healthy foods for students); reading past needs assessment reports; participating in projects that occur during student's rotation

Fifty-seven percent (57%) also use assigned reading (compared with 55% by academic/internship respondents). Examples included reviewing the most recent research and statistics from Health Canada, Public Health Agency of Canada, Statistics Canada.

About 1/3 of respondents indicated that they use resources from other agencies/organizations, a similar number to the academic/internship respondents. Just over ¼ (29%) of respondents use simulated learning activities such as videos, tutorials, case studies to address this performance indicator. This percentage corresponds with that from the academic/internship respondents. See Table 19 for a summary of these data.

Table 19 – Types of Resources Used to Assess Performance Indicator 4.01-n Identify relevant group, community or population assets and resources

Response	Chart	Percentage	Count
Simulated learning activities		29%	18
Experiential learning activities		79%	50
Assigned reading		57%	36
Resources/activities from other agencies/organizations.		33%	21
Other, please specify...		17%	11
Not applicable		11%	7
Total Responses			**63**

4.2.8 Willingness to share resources for performance indicator 4.01-n *Identify relevant group, community or population assets and resources*

Most practice settings (77%) do not have resources that they have developed themselves for addressing this performance indicator. Of those that do (18%), most were willing to share their materials with the project consultant. Only a handful of programs (5%) indicated that they would not share their materials, but no comments were provided in that regard. These data are summarized in Table 20.

Table 20 – Willingness to Share Resource Materials 4.01 n Identify relevant group, community or population assets and resources

Response	Chart	Percentage	Count
Yes		20%	12
No		5%	3
Not Applicable		75%	46
Total Responses			**61**

4.2.9 Kinds of Resources Recommended for Development 4.01-n *Identify relevant group, community or population assets and resources*

Respondents who currently are not able to assess this performance indicator were asked what kinds of materials they would like to see developed. The majority of these respondents (66%) favoured simulated learning activities such as videos, tutorials with built-in case studies, and realistic case studies using population health approaches for students who don't get the opportunity to experience public health placements. A smaller number of academic/internship educators (27%) supported the development of simulated activities for assessing this PI. A resource that summarizes public health/population health structure nationally, as well as the differences in provincial/territories structures would be of interest.

Experiential learning activities were selected by 55% or respondents including community-based placements, project work, field trips etc. Again, fewer respondents from academic/practicum programs (20%) supported more experiential learning activities being developed to assess this PI.

Assigned readings were suggested by 39% of respondents and 32% indicated that resources/activities from other agencies/organizations would also be suitable. See Table 21 for a summary of these data.

Table 21 – Kinds of Resources Recommended for Development for Performance Indicator 4.01-n Identify relevant group, community or population assets and resources

Response	Chart	Percentage	Count
Simulated learning activities		66%	37
Experiential learning activities		55%	31
Assigned reading		39%	22
Resources/activities from other agencies/organizations		32%	18
Other, please specify		18%	10
Not applicable		9%	5
Total Responses			**56**

4.2.20 Suggested Sources of Resources From Other Agencies/Organizations

As was the case with the academic/internship respondents, not many preceptor/practitioner respondents were aware of resources from other agencies/organizations for addressing Performance Indicator 4.01-n, (12%). Nonetheless, there were a few recommendations for these types of resources as follows:

- Skills Online – The Public Health Agency of Canada's modules http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/about_so-apropos_cd-eng.php
- Public Health Ontario resources included in The Health Communications Unit package http://www.thcu.ca/
- Public Health Primer – The Association of Faculties of Medicine of Canada http://phprimer.afmc.ca/
- Text Book: Contento, Isobel. Nutrition Education: Linking Research, Theory, And Practice; Boyle, MA & Holben, DH. (2010).
- Dairy Farmers of Ontario – Good Beginnings online education program www.goodbeginnings.ca is a free professional development opportunity for Ontario childcare professionals. Providing interesting, relevant and up-to-date information on nutrition for young children, there's something for everyone – from educators, cooks and program administrators to Early Childhood Education professors and students in Ontario college and university programs. Developed by Registered Dietitians and designed for different learning styles, the interactive content, hands-on activities, videos, links and resources make this course a big hit!

One respondent qualified the resource recommendations with the following comment:

"I am convinced that the students do not understand population health, community health/health promotion and nutrition and how it all links together. Not sure what training they get in these areas but it does not seem to be adequate - seems to be more focused on clinical than community, though the clinical is critical to community, w/out that platform to work from, dietitians will not be effective because they don't know their 'nutrition' basics."

Another respondent indicated that while some resources do exist from other agencies/organizations they are not nutrition specific, citing those from Public Health Ontario.

See Table 22 for a summary of these data.

Table 22 – Awareness of Resources From Other Agencies/Organizations for Addressing Performance Indicator 4.01-n

Response	Chart	Percentage	Count
Yes		12%	8
No		88%	61
	Total Responses		69

4.2.21 Respondents Who Are Able to Assess Performance Indicator 4.01-p - *Integrate assessment findings to identify priorities for population health approaches related to food and nutrition*

A majority of respondents who answered this question (67%) indicated that they are currently able to, or have been able to, assess Performance Indicator 4.01-p, compared with 80% of academic/internship educators. Seventeen percent (17%) of the individuals who responded to this question indicated that they are not able to assess this performance indicator. Eighteen percent (17%) indicated that this question did not apply to them, presumably as they had not been preceptors for students/interns. See summary data in Table 23.

Table 34 – Ability of Preceptors/Practitioners to Assess Performance Indicator 4.01-p- Integrate assessment findings to identify priorities for population health approaches related to food and nutrition

Response	Chart	Percentage	Count
Yes		67%	36
No		17%	9
Not Applicable		17%	9
	Total Responses		**54**

4.2.22 Types of Resources Used by Preceptors to Assess Performance Indicator 4.01-p *Integrate assessment findings to identify priorities for population health approaches related to food and nutrition*

Experiential learning activities, such as community-based placements, project work, field trips etc. are favoured by 79% of those respondents that currently assess, or have been able to assess, this performance indicator in the past. This is similar to the response from the academic/internship group. Sixty-seven percent (67%) also use assigned reading, while 49% use resources from other agencies/organizations. Over half (54%) of the respondents use other kinds of resources.

Just under half of respondents (44%, compared with 38% in the academic/internship group) use simulated learning activities. Examples provided included:

- Working through an example of an existing children's summer camp cooking program to discuss innovative approaches to education
- Review of DC Growth Chart training modules http://www.dietitians.ca/Knowledge-Center/Learning-On-Demand/Learning-On-Demand-Store/lodStoreProduct.aspx?guid=16b83d83-e067-435a-8dbe-4d07ec7fe5ba
- Jack Newman breastfeeding videos http://www.breastfeedinginc.ca/content.php?pagename=videos
- Let's Start a Conversation About Health - Users Guide and video https://www.google.ca/search?q=let's+start+a+conversation+about+health&oq=lets+start+a+con&aqs=chrome.2.69i57j0l3.6735j0&sourceid=chrome&ie=UTF-8

See Table 24 for a summary of these data.

Table 24 –Types of Resources Used to Assess Performance Indicator 4.0-p - Integrate assessment findings to identify priorities for population health approaches related to food and nutrition

Response	Chart	Percentage	Count
Simulated learning activities		44%	27
Experiential learning activities		79%	48
Assigned reading		67%	41
Resources/activities from other agencies/organizations.		49%	30
Other		54%	33
Not applicable		10%	6
	Total Responses		**61**

4.2.23 Willingness to share resources for performance indicator 4.01-p *Integrate assessment findings to identify priorities for population health approaches related to food and nutrition*

Most programs (71%) do not have resources that they have developed themselves for addressing this performance indicator. Of those that do, most were willing to share their materials with the project consultant. Only a handful of people - 3 respondents (7%) - indicated that they would not share their materials. These data are summarized in Table 25.

Table 25 – Willingness to Share Resource Materials 4.01-p

Response	Chart	Percentage	Count
Yes. Please include your name and email address to enable the Project Consultant to contact you.		21%	9
No		7%	3
Not Applicable		71%	30
	Total Responses		**42**

4.2.24 Kinds of Resources Recommended for Development by Preceptors/Practitioners 4.01-p
Integrate assessment findings to identify priorities for population health approaches related to food and nutrition

Respondents who currently are not able to assess this performance indicator were asked what kinds of materials they would like to see developed. Similar numbers (73% and 75%) favoured simulated learning activities and experiential learning activities respectively. There was stronger support from these respondents for these learning methods for assessing this PI, compared with the academic/internship respondents where 40% favoured simulated learning tools and 32% supported the development of more experiential activities. Case studies, video tutorials and suggestions of small community-based projects where deemed useful by the preceptor/practitioner group. Assigned readings were suggested by 63% of respondents with some individuals suggesting that it would be useful to have a list of readings. Fifty-six percent (56%) indicated that resources/activities from other agencies/organizations would also be suitable. See Table 26 for a summary of these data.

Table 26 – Kinds of Resources Recommended for Development to Assess Performance Indicator 4.01-p

Response	Chart	Percentage	Count
Simulated learning		73%	43
Experiential learning activities		75%	44
Assigned reading		63%	37
Resources/activities from other agencies/organizations		56%	33
Other		47%	28
Not applicable		5%	3
	Total Responses		**59**

4.2.25 Knowledge of Ongoing Professional Development/Continuing Education Programs that Address Performance Indicator 4.01-p *Integrate assessment findings to identify priorities for population health approaches related to food and nutrition*

As was the case with the academic/internship respondents, most preceptors/practitioners (90%) were unaware of other professional development or continuing education programs that address this performance indicator.

Table 27 – Knowledge of Ongoing Professional Development/Continuing Education Programs that Address Performance Indicator 4.10-p

Response	Chart	Percentage	Count
Yes		10%	5
No		90%	43
	Total Responses		48

Of those respondents that suggested other sources of professional development to address this performance indicator, the following were provided:

- Public Health Ontario – The Health Communication Unit http://www.thcu.ca/
- Public Health Agency of Canada Skills Online modules http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/about_so-apropos_cd-eng.php

4.2.26 Perceived Gaps in Ability of Preceptors/Practitioners to Assess for Other Performance Indicators Not Previously Identified

While performance indicators 4.01 (n) and (p) where identified in an earlier gap analysis of the ICDEP relative to population/public health conducted with academic/internship programs, this survey asked preceptor/public health respondents if they felt there were other gaps that had not been previously identified. Most (62%) indicated they were not aware of other gaps, while 38% felt there were other gaps. These percentages are the same as for the academic/internship respondents.

Table 28 – Perceived Gaps in Ability of Preceptors/Practitioners to Assess for Other Performance Indicators Not Previously Identified

Response	Chart	Percentage	Count
Yes, I believe there are other gaps.		38%	19
No, I'm not aware of other gaps.		62%	31
	Total Responses		50

The additional gaps and related comments identified included:

- "Lacking ability to work in teams. Entry level RDs seem to want to work in isolation and do not seek advice or input from very experienced dietitians and make all kinds of mistakes when they get into practice but seem to think they know it all and are not team players."
- 4.01 k – *Demonstrate knowledge of sources of and methods to obtain information related to food systems and food practices* [Also identified by academic/internship respondent]
- 4.01 l – *Obtain and interpret information related to food systems and food practices*. [Also identified by academic/internship respondent]
- 4.02 e – "Develop an action plan for population health – need explicit examples"
- "All of the work we do in public health is related to regional population based activities. Do the entry-level competencies adequately cover large projects using evidence-based program planning and evaluation processes? Also I think it is important for interns to learn about the political structure of Public Health Agencies, community agencies and various public health departments. I believe this type of background would be essential to a successful interview in our health department."
- 4.02 b – *Identify goals and objectives for population health related to food and nutrition*
- 4.02 d – *Identify appropriate strategies to meet goals and objectives for population health*
- 4.02 e – *Develop action plan for population health*
- 4.02 g – *Identify strategies and timelines to monitor and evaluate effectiveness of action plan*
- 4.03 b – *Contribute to the coordination and delivery of population health activities related to food and nutrition*
- 4.04 b – *Contribute to evaluating the effectiveness of population activities for a group, community or population*
- 4.02 c – *Propose modifications to population health activities to increase effectiveness*
- "Health inequities, social justice"
- 4.04 b – "Evaluation hasn't typically been a strength of most interns. Some additional activities in this area would be helpful (case study with a reading guide that provides guidance on designing an effective program evaluation)."
- "4.02 needs resources to assist with planning, especially tools such as logic model and work plan templates"
- "4.03 needs resources related to health promotion strategies, for one example the toolkits/roadmaps for policy work available from The Health Communications Unit (Ontario Public Health) and Ontario Chronic Disease Prevention Alliance"
- "4.04 would benefit from resources for evaluating health promotion initiatives, with one nutrition-related example being the new PHAC Resource "Evaluating Outcomes of Community Food Actions: A Guide - Protecting Canadians from Illness: http://www.cdpac.ca/admin/media.php?mid=1110 "
- Measurement and Analysis Companion: http://www.cdpac.ca/admin/media.php?mid=1111

4.2.27 Perceived Barriers to Accessing Online Tools

Because there is variability across the country in the various settings where online tools and resource material would be accessed, this survey determined whether preceptors/practitioners perceived technological barriers that may prevent students and practitioners from accessing online tools. While 42% of respondents didn't perceive there would be a problem, the combined response of those who answered "yes" and those that were uncertain (58%) suggests that there may be significant barriers experienced in some settings.

Potential barriers that were identified are listed below. It appears that those in community-based settings perceive there to be more potential barriers than were identified by academic/internship respondents.

- Firewalls
- Inconsistent access to computers in the workplace
- Slow access to internet in rural areas
- Internal challenges with video content
- Many limitations in IT systems such as pop-up blockers, outdated web browsers (IE6 is common; some people have IE7 or IE8)
- The health region does not always allow access to media viewing opportunities/sites, however most interns have their own computers and rely on creating hot spots to access what is necessary; depends on the health unity – they are not equal in IT capabilities. Response data are summarized in Table 29.

Table 29 – Perceived Technological Barriers to Accessing Online Learning Tools

Response	Chart	Percentage	Count
Yes. Please specify.		27%	14
No		42%	22
Uncertain		31%	16
	Total Responses		52

4.2.28 – Additional Comments

All other respondent comments have been grouped by common themes and summarized below.

- Lack of, and variability in, population/public health placements

"This is an integral part of our work and therefore our interns and students do have the opportunity to be exposed to this. It's very clear that many students do not have a good understanding of local public health unit's role or population health approaches initially (the same is often true for health professionals who've never worked in the field) — it would be ideal to work more of this into the undergraduate curriculum."

"I think the purpose of internship is the hands-on experiential learning opportunities. I think that if there are readings/videos etc. that should be done in undergrad studies."

"Our interns only have 4 weeks for their community placements which limits the kind of activities they can do. "

"The importance of spending time with Health Promoters and nurses as well as the dietitian, to help understand the work we do based on the social determinants of health and health equity."

"The types of activities for each intern will vary depending on the time of year and activities scheduled at the same time interns happen to be with the preceptor. We cannot always control or manage to schedule relevant activities for interns (e.g., in December or in June). However, February through May, there are usually very good learning experiences coinciding with community nutrition activities during those months."

"Actively involved in community nutrition program is the best way to learn."

"Really want interns to understand the Ottawa Charter, preventative aspects, and teamwork, these competencies seem to be greatly lacking and cannot be demonstrated in a short placement. There is a disconnect somewhere between learning and demonstration of skills. Need further work in these areas if RDs are going to be prepared to work in areas involving teams that work on community nutrition/development, program development in a community setting. Especially needed are the skills for: 1. Communications 2. Public policy 3. Research and Knowledge 4. Community development 5. Training and skill development 6. Working together   7. Reorienting services"

"The role of the PH RD in Chronic Disease and Injury Prevention has changed over the past two years i.e. we no longer provide one-of presentations or staff displays in the community unless it is part of a comprehensive health approach in settings such as schools. The Family Health RD still provides some presentations to small groups. "

"Due to the short amount of time the interns are with us (normally 4 weeks), the nature of our health promotion work, and the variety of new concepts to which they are introduced, it is difficult to judge whether an intern is making progress. Since it would take months to truly assess a community and identify the assets, as a preceptor I do my best to discuss how this would be carried out and what these tasks might look like in the long run. We work through theoretical situations to bring him/her to a basic understanding of these concepts. There is normally very little direct observation of the intern carrying out these tasks, so it is difficult to comment on their achievement of this competency."

"These competencies should not be separated. Assessing at the community/population level is a lot of back and forth between the situational assessment steps (note not needs assessment, bigger. There's a lot of can't see the forest for the trees for awhile and that's OK. Consequently placements are the best method for this experiential learning. "

- ### More clarity needed as to the kinds of experiences that are considered suitable to assess the Performance Indicators (PIs)

"I think a more broad definition of "groups, communities and populations" is required. These appear to refer only to external population groups, whereas at Ottawa Public Health, we work very closely with internal health professionals (public health nurses, project officers, etc. who work directly in the community."

"I feel the language of some of the competencies are not health promoting- dietitians are in the position to decide what their clients/community should do, rather than working together with the client/ community on ways to meet their health priorities. A gap would be language around how to work with communities instead of doing to."

"There is not always a lot of opportunity to do some project work from the stages of assessment to planning, implementation, delivery and evaluation. A project working on all these stages where a student could work on all these skills and look at all the variable factors involved."

"At this time, I have no opportunity to work with the internship coordinator in the province to review the population and public health competencies or meet with other RD's that provide support for this rotation within the province. There should be opportunity for those providing preceptorship to review all of these competencies and discuss how others are providing meaningful activities to address them. As a busy practitioner, I have no opportunity to actually review them, and then determine how a student could meet those during the 3 weeks they are with me. I try to meet them by providing hands-on activities, but if there are other ways, such as case studies, readings, etc., this would make it much easier to provide meaningful opportunities. Sometimes, depending on the time of the year, an RD may not be able to actually slot in an experiential learning experience. Also, being in the field for 27 years, I have no knowledge of what is actually being taught in the undergrad curriculum. For example, when I graduated, the Ottawa Charter had not even been discussed yet!"

- ### Desire for supportive materials to be developed

"I'm very pleased that ICDEP is acknowledging the unique skills needed for population health."

"In Eastern Health, the community/population health rotation is typically only four weeks in duration. It is very unlikely in this time frame for an intern to have the opportunity to participate in a health promotion initiative from the planning stage to the evaluation component. After reviewing the practice competencies and performance indicators, we have decided to develop case studies to ensure interns are able to demonstrate competence in these areas. It would be valuable if there were case studies developed nationally that could be shared."

"Probably need to break-down 4.01 into categories for practicality of having related resources. For example, a simplified version of a community food assessment might address indicators k,l,m,n; however, need a different tool/resource for, say, f & g. Not only are there several distinguishable categories contained within 4.01, it is too unwieldy to try to have one resource/tool to capture it all."

"Many of these performance indicators are quite abstract. I believe it would be helpful to preceptors if each indicator came with suggested activities or examples of what the indicator might translate into in practice. I understand that they are guiding principles, but for a busy preceptor it's sometimes difficult to tease out what they're really getting at when it comes to what the intern should actually be doing."

"Web-based learning resources would be helpful, accessible by most. "

"Thanks. Look forward to seeing this outcome of this work."

"Even without specific materials created, we have always been able to find activities and experiences that meet the learning needs of our students. One must be flexible and adaptable especially in rural settings."

"I think this is an important step in terms of competencies. I do hope work continues to support Public Health Departments to approve adequate preceptors and placements. I also hope PDEP/DC continues to advocate for integrated internships even thought they were turned down just recently."

"We need everything at Ottawa Public Health available in both French and English. Suggest that when resources are being developed for these competencies that they are piloted with public health dietitians to determine their feasibility and practicality."

"Modules that integrate some video, some reading and some question answering would provide a nice balance. I have heard that PHSA in BC has developed a very engaging online module in regards to first nations health. It may provide a model to follow. FYI - the two links in question 3.6 are to the French version of the guide."

"Development of a guidance document or implementation guide would be very helpful, maybe with a version for preceptors that focuses on the "how to's" of providing/monitoring learning experiences, and a version for learners that is more like a workbook & tracking record."

"It would be helpful for us to know what type of web accessibility we would need in order for the intern/student to complete the web activities."

"I think the new competencies and the way of assessing them will be better in the long run in measuring an intern's learning and ability. Whatever resources can come out of this project will be a help."

4.3 Environmental Scan of Existing Learning Tools

Based on the review of online materials by the National Advisory Committee that were identified by the Project Consultant, all 20 resources from the original scan were designated as useful materials to be recommended to educators and practitioners as is, or to be considered for adaptation with permission from the owners of the materials. Tools that were recommended through this review process will be included in a more robust resource inventory combined with those materials volunteered from educators to share with others. This inventory could potentially be made accessible online to educators and other interested parties.

4.4 Best Practices/Success Factors in On-line Learning Tools, Resources and Approaches

4.4.1 Advice from Key Informants

Seventeen (17) telephone interviews, averaging 45 – 60 minutes, were conducted between June and September 2013 with key informants from other population/public health disciplines and agencies. A synthesis of the contacts, professional competency supports and the process for their development, type of evaluation used and recommendations on best practices/success factors is summarized in Appendix VII.

Disciplines/Agencies Consulted

Academic
- Association of Faculties of Medicine of Canada [AFMC] – Barbie Shore, Project Manager
- College of Nursing, University of Saskatchewan – Marie Dietrich Leurer, Assistant Professor/Research Associate, Regina Qu'Appelle Health Region
- University of Kansas Work Group for Community Health & Development – Christina Holt, Associate Director Community Tool Box

Continuing Education
- Continuing Education & Outreach, School of Population/Public Health, University of British Columbia – Lydia Ma, Director

Professional Associations
- Alberta Physiotherapy Association – Iain Muir, Director Professional Practice
- Canadian Association of Continuing Education [CACHE] – Ella Croteau, President
- Canadian Physiotherapist Association – Chett Bradley, Manager Educational Programs
- Canadian Public Health Association – Greg Penney, Director National Programs
- Community Health Nurses of Canada [CHNC] – Ruth Schofield, Past President of CHNC; Elizabeth (Liz) Diem, Community Nursing Education Consultant; Yvette LaForet-Fliesser, Community & Public Health Consultant; Caroline Ball, Executive Director East York & East Toronto Family Resource Organization (formally of City of Hamilton Public Health Services)

Regulatory Bodies/Professional Colleges
- Alberta Physiotherapy College – Audrey Lowe, Competence & Professional Practice
- Canadian Institute of Public Health Inspectors [CIPHI] – Gary O'Toole, President
- College of Pharmacists of Ontario – Ella Croteau, Registrar

Other
- National Collaborating Centre on Methods & Tools – Pamela Forsyth, Managing Director
- Public Health Agency of Canada – Karen MacDougall, Program & Policy Analyst, PHSCB Initiative Content Lead; Elizabeth Wright, Epidemiologist
- Public Health Preceptor/Practitioner – Marie Traynor, RD

Professional Competency Supports

This synthesis reveals that many approaches are common across most professional organizations/agencies to support their members or constituents with attaining and maintaining professional competency. These supports include:

- Active and archived webinars and workshops
- Case studies
- Certificates of completion for online courses
- Competency support documents & toolkits
- Contests/competitions to promote student/member engagement in contributing to online learning tools
- Educational portals with topic focus
- Evaluation – online participant feedback surveys with results used for continuous quality improvement
- Field placement programs for advanced practice
- Interest groups/discussion forums for students & members
- Mapping of existing training offerings to professional competencies
- Online communities of practice

- Online primers (electronic textbooks)
- Reference libraries and manuals
- Self-study & facilitated modules on topics pertinent to the profession – developed by the specific professional group or by other agencies including the Public Health Agency of Canada, the National Collaborating Centres on Methods and Tools, and the Continuing Education Division of the School of Population/Public Health at the University of British Columbia
- Specialty certification for advanced practice

It is noteworthy that few of the key informant interviews identified academic/practicum programs or students as the main focus for supporting attainment of professional competencies. Most focus on practitioners themselves. An exception is the Association of Faculties of Medicine of Canada (AFMC) that places a major emphasis on enhancing the population/public health curriculum in medical education and has done extensive work to support teaching of population/public health. These supports include a detailed online Primer on Population Health designed specifically to address the Medical Council of Canada objectives (competencies), web-based discussion forum to support collaborative learning and teaching for educators, an environmental scan of best practices in public health undergraduate medical education and public health interest groups for students. Most recently the AFMC issued a challenge to medical and other health professionals students to develop and submit original learning tools that illustrate population health in action. They are offering a financial incentive for the most creative submissions. Similarly, the National Collaborating Centre for Methods and Tools also identified educators and students in training, as well as practitioners, as important targets for their online tools. Dietitians of Canada with its focus on supporting academic and internship programs, as well as practitioners is also unique in its approach.

Development Process

Many of the methods used to develop support materials were common across organizations/agencies. Generally a broad consultative process was applied that engaged constituents through surveys, workshops or in-person meetings held in conjunction with national conferences. In some cases key informants considered to be knowledgeable of current issues and concerns of constituents were consulted to provide their expert opinion.

Funding was frequently mentioned by key informants as a limiting factor in supporting them to do as much as they would like to support their members. Some agencies/organizations have used creative collaborations and partnerships with other health professionals to help augment resources to achieve common goals. Others have received strategic grants from government agencies or corporate sponsors.

Some organizations/agencies (AFMC for example) have established online communities that enable faculty and students to interact, share and create resources in a secure simple environment. This online community is actually open to all health professionals to contribute materials specific to their professional groups and/or to host closed online discussions.

Evaluation Methods

Limited methods are used to evaluate professional development materials, mainly online feedback surveys built in to web materials, or post workshop surveys administered in person. Web metrics are commonly used as an indicator of uptake of online training programs. Many of the professional development online modules/courses also include a self-assessment tool to enable learners to evaluate their learning and receive a certificate of completion. The National Collaborating Centre on Methods and Tools, the Public Health Agency of Canada Online Skills Program and the University of Kansas Community Tool Box thoroughly pilot test their learning materials with intended users through the development process to ensure their practicality and applicability to users, in addition to having integrated feedback mechanisms built into the tools. Smaller agencies and organizations with less financial resources are more limited in their ability to undertake this type of evaluation.

Best Practices/Success Factors

Key informants provided a wealth of recommendations for best practices and success factors in supporting competency development. It is clear from their feedback, that there is no one "best practice" approach that should be adopted. Rather many factors need to be taken into consideration for developing learning tools that will meet the needs of educators, students and practitioners relative to the identified competencies in population/public health nutrition. Guidelines and recommendations have been grouped according to common themes:

- **Sustainability** – consider sustainability of the program/product at the outset and plan for required resources to keep the content current and maintain the technology.
  - Engaging with volunteer interest networks can be a key factor in this sustainability but institutional support (staff and financial resources) is required for long-term continuity and sustainability.
  - Facilitated online programs seem to have a higher completion rate than those that are designed strictly as self-study. While facilitation is more resource-intensive, when it comes to sustaining interest in online learning it may be worth the investment in providing some access to a real-time expert as an element of the program.
- **Marketing and promotion** – an integrated communication strategy is needed to market and promote the product to all stakeholders, including students, educators, practitioners and employers.
  - It's not sufficient to simply post materials to a website and do a one-time push on their promotion. Marketing must be regular and ongoing.
  - Take advantage of existing networks and places that your audience already goes for guidance and tap into these ready-made familiar channels.
  - Newer professionals have a "me/we" focus rather than a focus on "us" or what is good for the profession. When marketing/promoting learning opportunities to students and new graduates it is important to appeal to the "me/we" level.
  - Employers are important stakeholders in the promotional strategy. Educating them about the competencies, and the supports available to their staff to enhance and maintain their knowledge and skills, helps to raise the profile of the competencies and lays the groundwork for workplaces to support dietitians to take advantage of the learning tools during working hours. In turn, this makes it more likely that the resources will be used.

- **Capacity building** – foster collaborative partnerships nationally, internationally and across disciplines with agencies/groups that have common objectives to yours.
  - Extend resources by augmenting or adapting those that already exist rather than starting from "a clean slate."
- **Accessibility and learner-focus** – not all potential learners have access to the most up-to-date browsers and many have restrictions at work on accessing third-party materials.
  - Professionals working in northern Canada were highlighted as having special limitations with variable Internet connections and speed. Producing learning materials that can be used off-line, such as CDs, should be considered.
  - While learners are becoming more competent with technology, the skill level is variable across the professions as well.
  - Online learning is a field unto itself. Seek out expertise and best practice guidance to ensure excellent design of the e-learning environment. Interactivity, engagement and ease of navigation are critical success factors. Minimize the number of clicks-through to access materials.
  - Ensure learning activities have a "sticky" design, i.e. they are based on real-life examples to bring the material alive for the learner and ensure its practicality. Engage practitioners in telling their stories and build these real-life experiences into case studies. Ensure you get permission from the practitioner to use his/her stories this way.
  - Consider how users will access your resources/tools with a mobile interface (i.e. smart phone, tablet etc) as this will impact on the overall design to the tool. You may need different formats and/or different points of entry to facilitate easy access by the user.
  - Give consideration to producing a French version of learning materials as a parallel process with the development of the English version, rather than translating the English version. While not always possible, this results in a better product overall.
- **Cost and time commitment** – educators and practitioners were like-minded in highlighting cost as a barrier to use of learning tools. Similarly, time commitment to complete online modules is an important consideration for busy students and practitioners.
- **Quality of evidence** – ensure content is supported by high-quality evidence.
  - The value of having professional development programs accredited was seen as important depending on the intended audiences and their form of continuing professional competency, that is whether a certain number of points or study hours must be accumulated.
- **Evaluation** – should be an essential element of all programs and learning tools. Integrate continuous quality improvement feedback mechanisms into the tools and online tools and dedicate resources to review and consider how to address feedback.
- **Opportunities for in-person networking** - online learning isn't for everyone and not all content lends itself to a web-based platform. It is important to continue to provide opportunities for in-person learning and networking.
  - Some suggest that establishing communities of practice for networking hasn't proven to be successful, especially for younger professionals. It is suggested that younger members have their own social networks and don't necessarily rely on their professional association to build or maintain these for them.

4.4.2 Best Practices/Success Factors Documented in the Literature

A recent review of the literature conducted by Ballew, Castro, Claus et al across five disciplines – Information Technology, Health, Education, Business and Communications – identified key success factors that would inform the development and delivery of web-based training for public health practitioners.[28] Findings from this review support many of the recommendations made by key informants.

- **A clear and consistent design**, layout and organizational flow of web-based training materials was considered a key factor influencing retention of users. Including variations in modes of learning to actively engage the learner and hold interest, such as video and audio clips and animation, along with the use of color and graphics were recommended.
    - Virtual learning tutorials or one-time face-to-face orientation sessions are also supportive of learner satisfaction.
    - Strong technical support is needed for timely updating content and troubleshooting. A best practice guideline for technical support to users is to provide support 24/7 through mechanisms such as tool-free hotlines, automated help desks and FAQ pages.
- **Successful web-based training designs support independent learning** by maximizing flexibility in the choice and order of exercises to complete. They also appeal to differences in learning styles through the kinds of interactivities provided, such as case studies, story telling, demonstrations, quizzes with immediate feedback, games that provide practice in applying theory.
- **Inclusion of concrete "real-world" examples** that aid in building skills rather than promoting memorization of concepts and facts, was also considered an important element of successful web-based training. Providing opportunities for exchange of ideas amongst learners and with a subject matter expert is encouraged through the use of chat rooms, instant messaging, bulletin boards, blogs, email, audio and video conferencing and coaching.
- **Implementing effective, sustained marketing strategies** is another success factor identified in the Ballew review that supports the recommendations from key informants. In addition to flyers, newsletters, emails and intranet postings within an organization, placing a link on websites that are visited often by intended users (i.e. go where your audience is) is an effective strategy, as is search engine optimization to increase the volume and quality of traffic to the website by making it more visible to users.
- **Incentives such as certificates of completion,** access to post-training materials, recognition in newsletters are other recognized means to recruit and retain users for web-based training.
- **With regard to evaluation,** the Ballew review suggests that there is little in the literature on best practices for evaluating web-based training and as a result these authors contend that little is known about what criteria best measure the key characteristics and effectiveness of web-based training.

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[28] Ballew P, Castro S, Claus J, Kitter N, Brennan L and Brownson RC. Developing web-based training for public health practitioners: what can we learn from a review of five disciplines? Health Education Research. 2013; 28 (2): 276-287. Abstract available from: http://www.ncbi.nlm.nih.gov/pubmed/22987862

More recent to the Ballew review, the Centers for Disease Control and Prevention (CDC) has developed CDC's E-Learning Essentials, a document identifying the components and best practices essential to quality e-learning29. There is concordance with many of the best practice elements identified in the Ballew review; these elements are summarized in the following figure.

CDC's Key Instructional Components and Best Practices

Component	Best Practices
ANALYSIS	E-learning products are based on results of analyses that identify learner audiences and inform their needs by focusing on • Knowledge or skills to be learned • Clear & measurable learning objectives • Strategies that support learning
INTERACTIVITY	E-learning products facilitate learning by applying interactive strategies that engage learners & stimulate recall of prior knowledge. Different levels of interactivity may be used to suit content & audience needs. All interactions work within the organization's web architecture & meet the organization's accessibility requirements.
INTERFACE & NAVIGATION	E-learning interface is learner-friendly with a main menu & other navigational elements that help learners know where they are within the course & move easily through it.
CONTENT	E-learning content is accurate & reading level is appropriate for the audience. Information is succinct, logical & clearly divided through the effective use of color, graphics, borders & white space. All screen elements adhere to organizational guidelines for digital media.
PRODUCT EVALUATION	E-learning products undergo formative & summative evaluations to ensure that learning strategies are effective & long-lasting.
LEARNING ASSESSMENT	E-learning products include an assessment that can be completed by all learners that determines the product's impact on intended learning outcomes.

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29 CDC's E-Learning Essentials. A Guide for Creating Quality Electronic Learning. Centers for Disease Control and Prevention. Scientific Education and Professional Development Program Office. January 2013. Available from: http://www.cdc.gov/learning/local/pdf/ElrngEsstls.pdf

5. Conclusions and Recommendations

The following conclusions and recommendations are drawn from the findings of the online survey, interviews with key informants and the environmental scan. These recommendations will guide the next steps in development of the e-learning materials to meet identified needs. Recommendations 1- 11 are specific to this present initiative and will be completed within the project time frame by March 2015; recommendations 12-15 are considered to be outside the scope of this current project.

1. **Facilitate the development of e-learning tools to assist in filling identified gaps for assessing the performance indicators (PIs) in the Integrated Competencies for Dietetic Education and Practice (ICDEP) for population/pubic health.** While many academic and internship programs are currently able to assess these PIs, there are sufficient numbers of programs that cannot, therefore warranting the development and/or adaptation of existing support tools. Community-based, experiential learning is considered by educators to be one of the best means to develop competency and assess the pertinent PIs, whereby learners can work along side of a practitioner to develop the required knowledge and skills. However, given that these community-based opportunities are not universally available across Canada, and possibly will become even less so over time, effective online tools can play a key role in supporting students to achieve entry-level competency.

2. **Ensure the content of e-learning tools, is evidence-based and that the learning tools use simulated, "real-life," interactive approaches to engage learners.**

3. **Explore the potential of collaborating with national and/or international partners to augment existing population/public health resource websites that host interactive e-learning tools addressing identified gaps in ICDEP PIs.** An advantage to exploring this approach is that it could extend the existing resources that are available in the current initiative and perhaps allow us to do more by addressing other identified gaps in PIs. Examples of these websites, where appropriate content and e-learning activities have been developed and thoroughly evaluated, include the University of Kansas Community Toolbox http://ctb.ku.edu/en/default.aspx, The Health Communications Unit (THCU) http://www.thcu.ca/ and the National Collaborating Centre on Methods and Tools (NCCMT) http://www.nccmt.ca/. In the case of the Community Toolbox, there has been interest expressed in a collaboration that could result in English/French materials (such as case studies) adapted to a Canadian context and with a nutrition focus. Likewise, with The Health Communications Unit and the NCCMT, a limitation identified by educators is that materials are not nutrition-specific and this could be explored with THCU and NCCMT.

4. Ensure that the design of new e-learning tools or revisions to existing ones is compatible with commonly used web browsers and Internet connections. Consider how tools could be augmented for an off-line version where accessibility concerns are an issue (such as remote and rural communities). Also consider what adaptations may be needed for mobile access through smart phones and tablets to maximize accessibility.

5. Build commitment and strengthen "buy-in" to use the e-learning tools by engaging educators and practitioners in telling their stories about their practices. These stories could then be developed into real-life case studies, videos and other interactive tools. Pilot test the tools with a broader group of students, educators and practitioners to validate their applicability to practice.

6. Establish an online community of practice for educators to share resources and learning tools that they have either developed or that they recommend from other agencies/organizations. A process should be developed that engages the educator community in keeping the site current. Learning activities and tools, assigned reading and links to online resources could be grouped according to the appropriate competencies/performance indicators.

7. Investigate the costs of hosting and maintaining this community of practice site on a newly developed "resource hub" of the DC Knowledge Centre for on-learning tools to support attainment of dietetic competencies. It is recommended that the site be open to all educators, students and practitioners, and not be restricted to DC members only.

8. Should the cost of developing the community of practice on the DC site be more than the financial resources available, an alternative approach to be considered is to collaborate with other existing platforms. One such model is on the AFMC website – The Canadian Healthcare Education Commons http://www.afmc.ca/projects-chec-e.php. A section of the AFMC platform could be built out specifically for dietetic educators and students. AFMC has expressed interest in supporting this addition to the site. An advantage of using this AFMC platform is that, as it already exists, it would be faster to begin posting and sharing resources and it may be more cost effective than building a new site. The downside to this approach is that resources may not be as visible and accessible to dietetic educators and students as they might be on a DC site that is already familiar to the intended users.

9. Promote the long-term sustainability of the e-learning tools with dedicated resources to keep the content current and to maintain the platform technology. Cost is considered a significant barrier to accessing these materials. While the current grant from PHAC covers the development costs of some learning materials for this project, how future developments and maintenance will be resourced, needs to be considered. Educators have expressed concern that there is now a fee to access many of the modules in the Online Skills program offered by PHAC, formerly available for free. However, in the interest of long-term sustainability for tools developed for this project, it is important to consider cost recovery options.

10. **Consider if/how facilitation could be incorporated into the e-learning tools, either through a synchronous or asynchronous process.** Facilitation has been shown to support sustained interest and completion of online learning programs. In the situation where learning tools are being designed for the academic/internship environment, a guide for instructors/leaders could be an element of the learning tools. Alternatively a regularly scheduled discussion forum could be considered, where students/interns and new practitioners could register ahead of time and have access to a subject expert to address questions. A "post-a-question" email box that was answered regularly by a subject expert could also be employed where all questions and answers were available as a reference to learners.

11. **Ensure that evaluation is an integral component of web-based learning tools.** An evaluation strategy should include feedback from the users on the appropriateness of the tools for addressing the intended performance indicators. It should also include learner assessment that providers the user with feedback on whether they have attained the required knowledge and skills. A certificate of completion is considered a desirable incentive for learners to complete learning modules.

12. **Ensure the communication plan for the learning materials doesn't end with the initial release and promotion.** It is important to provide regular, ongoing communication to educators and students, planned at relevant times for the academic and internship programs, to reach new students, interns and educators, as well as to remind the current audience and inform them of new developments.

13. **Develop an implementation guide for ICDEP, providing examples of appropriate learning activities for assessing each PI.** Many educators are uncertain as to whether the kinds of learning activities they are currently providing, or intend to provide, to address the PIs will be considered appropriate by an accreditation committee. This recommendation could be addressed through the online community of practice described in Recommendation 6, or it could be an actual guidance document, although the latter may be more difficult to keep current.

14. **Develop a plan and presentation materials for educating employers of public health/community dietitians about the ICDEPs in population/public health.** Many health professional groups have placed their focus on this aspect of implementation of their professional competencies. It has been identified as a cornerstone for raising the profile of population/public health competencies and also for supporting practitioners to take advantage of professional development as part of their workday.

15. **Work with educators to prioritize additional gaps identified in the ICDEP performance indicators and to identify existing resources and support tools that can be shared to address those gaps.** Many gaps were identified through the online survey of educators and practitioners and are detailed elsewhere in this report. Two gaps identified by both educators and practitioners include 4.01 k – *Demonstrate knowledge of resources and methods to obtain information related to food systems and food practices* and 4.01l – *Obtain and interpret information related to food systems and food practices.* These could be a starting point for future work on resource sharing.

Appendix I: Survey for Academic/Internship Programs

Online Environmental Scan/Needs Assessment Survey For Educators of Academic and/or Practicum [Internship] Programs

SECTION I

1.1	Name of Academic/Practicum Program	
1.2	Name, Position and Email Contact of Individual Completing the Survey (open text)	
1.3	Province/Territory (choose one)	
	BC	
	AB	
	SK	
	MB	
	ON	
	QC	
	NB	
	NS	
	PE	
	NL	
	YK	
	NWT	
	NU	
1.4	Program Type (choose one)	
	Integrated	
	Stand-Alone Academic	
	Stand-Alone Internship	
	Combined Masters – Practicum	

SECTION II

SECTION II of the survey pertains to the Practice Competency 4.01 *Assess food and nutrition-related issues of groups, communities and populations* and to the performance Indicator n - *Identify relevant group, community or population assets and resources*.

NOTE: this is an *entry-level* practice competency and performance indicator. Applying knowledge and skills to small population groups [such as school class rooms, prenatal classes, new parent groups, etc] are considered appropriate for assessing this performance indicator.

2.1 Will you assess this Performance Indicator within the 2013-14 Academic/Practicum Course Year?
☐ Yes
☐ No

2.2 If you selected **YES** to Q2.1, please indicate the types of resources/learning activities that you use, or will use in the 2013-14 Academic/Practicum Course Year to address this Performance Indicator. Please check all that apply and use the Comment Box to describe the resources/activities in more detail.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]
Comment Box – Free Text
☐ Experiential learning activities [such as community-based placements; field trips, etc.]
Comment Box – Free Text
☐ Assigned reading
Comment Box – Free Text
☐ Resources/activities available from other agencies/organizations. Please list and provide the URL link to those resources/activities in the comment box below.
Comment Box – Free Text
☐ Other [Please specify in the comment box below.]
Comment Box – Free Text

2.3 For those resources/learning activities that your program has developed, would you be willing to share these with the Project Consultant to assist in the development of learning resources and for use by other programs. Your program will be acknowledged for this contribution.

☐ Yes. Please provide your name and email address to enable the Project Consultant to contact you.
☐ No
☐ Not Applicable
Comment Box - Free Text

2.4 If you selected **NO** to Q2.1, please indicate which types of resources and/or learning materials that you would like to see developed and that your program would use to address this Performance Indicator.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]
Comment Box – Free Text
☐ Experiential learning activities [such as community-based placements, field trips, etc.].
Comment Box – Free Text
☐ Assigned reading
Comment Box – Free Text
☐ Resources/activities from other agencies/organizations. Please list and provide the url link in the comment box below to those existing resources/activities that you are aware of.
Comment Box – Free Text
☐ Other [Please specify in the comment box below.]
Comment Box – Free Text

2.5 Are you aware of any other ongoing professional development or continuing education programs that address this Performance Indicator?
☐ Yes
Please specify the course/program name, contact and/or URL
Comment Box - Free Text
☐ No

2.6 Use the comment box below for any other comments or information you'd like to provide.
Comment Box - Free Text

SECTION III

This section of the survey pertains to the Practice Competency *4.01 Assess food and nutrition-related issues of groups, communities and populations* and to the performance Indicator "P" - *Integrate assessment findings to identify priorities for population/public health approaches to food and nutrition.*

NOTE: this is an *entry-level* practice competency and performance indicator. Applying knowledge and skills to small population groups [such as school class rooms, prenatal classes, new parent groups, etc] are considered appropriate for assessing this performance indicator.

3.1 Will you assess this Performance Indicator within the 2013-14 Academic/Practicum Course Year?
☐ Yes
☐ No

3.2 If you selected **YES** to Q3.1, please indicate the resources/learning activities that you use, or will use in the 2013-14 Academic/Practicum Course Year to address this Performance Indicator. Please check all that apply and use the Comment Box to describe the resources/activities in more detail.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]
Comment Box – Free Text
☐ Experiential learning activities
Comment Box – Free Text

☐ Assigned reading
Comment Box – Free Text
☐ Resources/activities from other agencies/organizations. Please list and provide the URL link in the comment box below.
Comment Box – Free Text
☐ Other [Please specify in the comment box below.]
Comment Box – Free Text

3.3 For those resources/learning activities that your program has developed, would you be willing to share these with the Project Consultant to assist in the development of learning resources and for use by other programs. Your program will be acknowledged for this contribution.

☐ Yes. Please provide your name and email address to enable the Project Consultant to contact you.

☐ No

☐ Not Applicable

Comment Box - Free Text

3.4 If you selected **NO** to Q3.1, please indicate which types of resources and/or learning materials that you would like to see developed and that your program would use to address this Performance Indicator.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]

Comment Box – Free Text

☐ Experiential learning activities [such as community-based placements, field trips, etc.].

Comment Box – Free Text

☐ Assigned reading

Comment Box – Free Text

☐ Resources/activities from other agencies/organizations. Please list and provide the URL link in the comment box below.

Comment Box – Free Text

☐ Other [Please specify in the comment box below.]

Comment Box – Free Text

3.5 Are you aware of any other ongoing professional development or continuing education programs that address this Performance Indicator?

☐ Yes

Please specify the course/program name, contact and/or URL

Comment Box: Free Text

☐ No

3.6 Referring to the Population/Public Health Integrated Competencies for Dietetic Education & Practice at the following link, http://www.pdep.ca/files/Final_ICDEP_2013_English.pdf, please indicate if there are any other performance indicators that you believe need additional learning resources to achieve that PI *for entry-level practice*. Please indicate the relevant practice competency number [e.g. 4.01; 4.02; 4.03 or 4.04] and letter(s) of the performance indicator [e.g. (a),(b),(c), etc]. If there are no other practice competency or performance indicator gaps that you are aware of, select Not Applicable below.

Comment Box – Free Text

☐ Not Applicable

3.7 Resources and learning activities will be designed for web accessibility. Are there any technological barriers that might prevent you or your students from accessing or using the resources [e.g. older web browsers, fire walls that limit accessibility, etc.]?

☐ Yes
   Please Specify.
   Comment Box – Free Text
☐ No
☐ Don't Know

3.8 Are there any other comments you'd like to make?
   Comment Box - Free Text

Thank you for completing this survey. Your response is very important to support the development of learning materials that will enhance the skills of the dietetic profession in population/public health practice.

Survey for Preceptors/Practitioners

Environmental Scan/Needs Assessment for Practitioners/Preceptors Working in Population/Public Health Nutrition

Section I

1.1	Name of Agency/Organization Completing the Survey (open text)	
1.2	Name, Position and Email Contact of Individual Completing the Survey (open text)	
1.3	Province/Territory (choose one)	
	BC	
	AB	
	SK	
	MB	
	ON	
	QC	
	NB	
	NS	
	PE	
	NL	
	YK	
	NWT	
	NU	
1.4	Which setting best describes your work environment? (choose one)	
	Community Health Centre	
	Primary Health Care	
	Health Authority	
	Population Health Policy Level of Federal/Provincial/Territorial Government	
	Non-government Organization [Specify]	
	Industry [e.g. commodity boards; grocery retail etc.) Please specify	
	Other [Specify]	
1.5	Are you currently, or have you ever been a preceptor for practicum/internship? YES NO	
1.6	How long have you been in practice? Less than one year One to three years Three to five years More than five years	

SECTION II

This section of the survey pertains to the Practice Competency *4.01 Assess food and nutrition-related issues of groups, communities and populations* and to the performance Indicator "N" *Identify relevant group, community or population assets and resources.*

NOTE: this is an *entry-level* practice competency and performance indicator. Applying knowledge and skills to small population groups [such as school class rooms, prenatal classes, new parent groups, etc] are considered appropriate for assessing this performance indicator.

2.1 As a preceptor for internship/practicum experience, do you currently assess this Performance Indicator?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

2.2 If you selected **YES** to Q2.1, please indicate the resources/learning activities that you use to address this Performance Indicator. Please check all that apply and use the Comment Box to describe the resources/activities in more detail.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]
Comment Box – Free Text
☐ Experiential learning activities [such as community-based placements, field trips, etc.].
Comment Box – Free Text
☐ Assigned reading
Comment Box – Free Text
☐ Resources/activities from other agencies/organizations. Please list and provide the URL link in the comment box below.
Comment Box – Free Text
☐ Other [Please specify in the comment box below.]
Comment Box – Free Text

2.3 For those resources/learning activities that your agency/organization has developed, would you be willing to share these with the Project Consultant to assist in the development of learning resources and for use by other programs. Your program will be acknowledged for this contribution.

☐ Yes. Please provide your name and email address to enable the Project Consultant to contact you.

☐ No

☐ Not Applicable

Comment Box - Free Text

2.4 If you selected **NO or NOT APPLICABLE** to Q2.1, please indicate which types of resources and/or learning materials that you would like to see developed and that you and/or your agency/organization would use to address this Performance Indicator.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]

Comment Box – Free Text

☐ Experiential learning activities [such as community-based placements, field trips, etc.].

Comment Box – Free Text

☐ Assigned reading

Comment Box – Free Text

☐ Resources/activities from other agencies/organizations. Please list and provide the URL link in the comment box below.

Comment Box – Free Text

☐ Other [Please specify in the comment box below.]

Comment Box – Free Text

2.5 Are you aware of any other ongoing professional development or continuing education programs that address this Performance Indicator?

☐ Yes

Please specify the course/program name, contact and/or URL

Comment Box: Free Text

☐ No

2.6 Are there any other comments you'd like to make?

Comment Box - Free Text

SECTION III

This section of the survey pertains to the Practice Competency *4.01 Assess food and nutrition-related issues of groups, communities and populations* and to the performance Indicator "P" *Integrate assessment findings to identify priorities for population/public health approaches to food and nutrition.*

NOTE : this is an *entry-level* practice competency and performance indicator. Applying knowledge and skills to small population groups [such as school class rooms, prenatal classes, new parent groups, etc] are considered appropriate for assessing this performance indicator.

3.1 As a preceptor for internship/practicum experience, do you currently assess this Performance Indicator?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

3.2 If you selected YES to Q3.1 please indicate the resources/learning activities that you use to address this Performance Indicator. Please check all that apply and use the Comment Box to describe the resources/activities in more detail.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]
Comment Box – Free Text

☐ Experiential learning activities [such as community-based placements, field trips, etc.].
Comment Box – Free Text
☐ Assigned reading
Comment Box – Free Text
☐ Resources/activities from other agencies/organizations. Please provide the URL link in the comment box below.
Comment Box – Free Text
☐ Other [Please specify in the comment box below.]
Comment Box – Free Text

3.3 For those resources/learning activities that your agency/organization has developed, would you be willing to share these with the Project Consultant to assist in the development of learning resources and for use by other programs. Your program will be acknowledged for this contribution.

☐ Yes. Please provide your name and email contact to enable the Project Consultant to contact you.
☐ No
☐ Not Applicable
Comment Box - Free Text

3.4 If you selected **NO or NOT APPLICABLE** to Q3.1, please indicate which types of resources and/or learning materials that you would like to see developed and that you and/or your agency/organization would use to address this Performance Indicator.

☐ Simulated learning activities [such as video tutorials, case studies, vignettes, etc]
Comment Box – Free Text
☐ Experiential learning activities [such as community-based placements, field trips, etc.].
Comment Box – Free Text
☐ Assigned reading
Comment Box – Free Text
☐ Resources/activities from other agencies/organizations. Please list and provide the url link in the comment box below.
Comment Box – Free Text
☐ Other [Please specify in the comment box below.]
Comment Box – Free Text

3.5 Are you aware of any other ongoing professional development or continuing education programs that address this Performance Indicator?
☐ Yes Please specify the course/program name, contact and/or URL
Comment Box: Free Text
☐ No

3.6   Referring to the Population/Public Health Integrated Competencies for Dietetic Education & Practice at the following link, http://www.pdep.ca/files/Final_ICDEP_2013_English.pdf, and based on your experience as a preceptor of practicum students/interns, or as a new practitioner, please indicate if there are any other performance indicators [PI] that you believe need additional learning resources to achieve that PI *for entry-level practice*. Please indicate the relevant practice competency number [e.g. 4.01; 4.02; 4.03 or 4.04] and letter(s) of the performance indicator [e.g. (a),(b),(c), etc.]   If there is no other practice competency or performance indicator gap that you are aware of, select Not Applicable below.

> Comment Box – Free Text
> ☐ Not Applicable

3.7 Resources and learning activities will be designed for web accessibility. Are there any technological barriers that might prevent you or your students from accessing or using the resources [e.g. older web browsers, fire walls that limit accessibility, etc.]?

☐ Yes
   Please Specify.
   Comment Box – Free Text

☐ No
☐ Don't Know

3.8 Are there any other comments you'd like to make?
   Comment Box - Free Text

Thank you for completing this survey. Your response is very important to support the development of learning materials that will enhance the skills of the dietetic profession in population/public health practice.

Appendix II: Invitation and Reminder Messages Sent by Email to Potential Respondents

Dear Academic Program Director or Internship Director/Coordinator
[OR]
Dear Population/Public Health Educator/Preceptor

As you may be aware, Dietitians of Canada [DC] has received a grant from the Public Health Agency of Canada [PHAC] to operationalize new *entry-level* integrated competencies for dietetic education and practice [ICDEP] relevant to population and public health nutrition [see http://www.pdep.ca/files/Final_ICDEP_2013_English.pdf]. Previously, work was undertaken to determine if there were existing gaps in the ability of academic and internship/practicum programs to provide learning opportunities that would enable students to achieve competencies either currently or no later than the 2015-16 course year. Gaps relevant to population/public health nutrition practice were identified and posted on the PDEP website. See [http://www.pdep.ca/files/Report_on_gap_analysis_survey_and_ICDEP_Version_2_March_2013_ENG.pdf] and in French at http://www.pdep.ca/files/Final_ICDEP_April_2013_French.pdf

The following gaps (Practice Competency Statement 4.01) and Performance Indicators ("n" and "p") were identified:

> *4.01 Assess food and nutrition–related issues of groups, communities and populations*
> (n) Identify relevant group, community or population assets and resources
> (p) Integrate assessment findings to identify priorities for population/public health approaches to food and nutrition.

Dietitians of Canada invites Academic Program Directors and Internship Directors/Coordinators to complete a short on-line survey to determine the following:
[OR]
Dietitians of Canada invites practitioners that are newly working in population/public health or practitioners who act as educator/preceptors to dietetic students to complete a short on-line survey to determine the following:

- For those dietetic education programs that will be able to assess these entry-level performance indicators within the 2013-14 Academic/Practicum Course Year, what learning tools and resources are you currently using or will be using? Programs indicating they would be willing to share learning tools and resources or their concepts with other programs will be contacted by the Project Consultant.

- For those dietetic education programs/courses that will be able to assess these entry-level performance indicators by the 2015-16 Academic/Practicum Course Year, or those that do not foresee that they will be able to assess these performance indicators, what learning tools and resources would support you to conduct these assessments?

- For population/public health practitioners who are preceptors for practicum students/interns, or for new practitioners, what learning tools would support you or your students/interns' efforts to attain entry-level competency.

- Are there gaps in other entry-level Population/Public Health Nutrition Performance Indicators?

- What technological barriers may make it challenging to access learning materials via the web?

- Are you aware of ongoing professional development or continuing education programs that address identified gaps in entry-level performance indicators?

While the survey is being conducted in English, all learning materials created will be in French and English.

Survey results will be analyzed, synthesized and used in the development of new learning materials. To preserve anonymity names of respondents and programs will not be used in reports about the project. A summary report of the outcomes and recommendations will be prepared and made available to respondents early in 2014.

To access the online survey, please click on the following link. By clicking on this link and completing the survey we consider that you are providing informed consent to participate. Your response is required no later than **August 15, 2013**. If you know of other educators or population/public health practitioners that may not have received this invitation, please feel free to forward this message on to them.

‹ INSERT SURVEY LINK ›

Draft Follow-up Reminder Email – 1st Reminder Sent 3 weeks after the invitation

Dear Academic Program Director or Internship Director/Coordinator
[OR]
Dear Population/Public Health Educator/Preceptor
About 3 weeks ago you received an invitation from Dietitians of Canada to participate in an on-line survey designed to identify learning resource needs relevant to gaps in entry-level competencies for population/public health nutrition. The gaps identified were posted on the PDEP website [see http://www.pdep.ca/files/Final_ICDEP_2013_English.pdf]. If you have already completed this survey, we thank you for your input. If you have not yet completed the survey, we invite you to do so now. Your input is very important to provide a comprehensive picture of resource needs and to support DC in operationalizing the new integrated competencies.

Results of the survey will be analyzed, synthesized and used to make recommendations about the content and format of learning materials to be developed.   To preserve anonymity, names of respondents and programs will not be used in reports about the project.   A summary report of the outcome and recommendations will be prepared and made available to respondents early in 2014.

To access the online survey, please click on the link below. By clicking on this link and completing the survey we consider that you are providing informed consent to participate. Your response is required no later than **August 15, 2013**.

‹ INSERT SURVEY LINK ›

Draft Follow-up Reminder Email – 2nd Reminder Sent 1 week after the first reminder

Dear Academic Program Director or Internship Director/Coordinator
[OR]
Dear Population/Public Health Educator/Preceptor
About 4 weeks ago you received an invitation from Dietitians of Canada to participate in an on-line survey designed to identify learning resource needs relevant to gaps in entry-level competencies for population/public health nutrition. The gaps identified were posted on the PDEP website [see http://www.pdep.ca/files/Final_ICDEP_2013_English.pdf]. If you have already completed this survey, we thank you for your input. If you have not yet completed the survey, this is your last opportunity to contribute to developing a comprehensive picture of resource needs and to support DC in operationalizing the new integrated competencies.

Results of the survey will be analyzed, synthesized and used to make recommendations about the development of new learning materials.   To preserve anonymity, names of respondents and programs will not be used in reports about the project.   A summary report of the outcomes and recommendations will be prepared and made available to respondents early in 2014.

To access the online survey, please click on the link below. By clicking on this link and completing the survey we consider that you are providing informed consent to participate. Your response is required no later than **August 15, 2013.**

‹ INSERT SURVEY LINK ›

Appendix III: Key Informant Email Message and Telephone Interview Questions on Success Factors / Best Practices

Dear ‹personalize for each contact›

I'm contacting you on behalf of Dietitians of Canada, the professional association representing dietitians nation-wide. Dietitians of Canada has received a grant from the Public Health Agency of Canada to operationalize new entry-level integrated competencies for dietetic education and practice [ICDEP] relevant to population and public health nutrition. For a complete list of the integrated competencies see http://www.pdep.ca/files/Final_ICDEP_2013_English.pdf. These new integrated competencies will be used as the standard for program accreditation and for the registration exam that graduates must pass to be eligible to practice.

To ensure that dietetic students and dietitians planning to enter population/public health nutrition practice can meet the new integrated competencies, this initiative has been undertaken to identify gaps in knowledge, skills and abilities and to develop new resources to address those gaps. Therefore, the focus of this initiative is to develop suitable learning materials that can be accessed on line by academic and practicum programs as well as by dietitians working in other practice settings who want to meet the new entry-level competencies in population/public health nutrition.

I understand that you may be willing to share your knowledge and expertise regarding success factors and best practices in achieving professional competencies for practice.   I'm interested in conducting a short telephone interview with you to determine the following information:

1. What work have you or your agency/organization undertaken to support students/practitioners as they prepare to meet competencies for practice?
2. How did you or your agency/organization go about identifying the need for learning resources and/or approaches to meet required competencies?
3. What kinds of learning materials did you develop? What format or approaches did you choose? How did you develop the learning materials?
4. Why did you choose that particular format for the learning materials?
5. Have you evaluated or gathered feedback on the uptake/use of learning materials? If so, how? What were the results of this feedback? How will you use it to modify the learning materials?

6. What are the key success factors and/or best practices you have identified based on this experience?
7. What, if anything would you do differently if you were to undertake further resource development or learning approaches?
8. Is there anyone else you know that could contribute information about best practices/success factors for developing new learning materials to meet practice competencies in population/public health?

Please let me know if you would be willing for me to contact you about these questions. If you provide me with contact information for your administrative assistant, I will arrange for a time to call you at your convenience.

Thanks so much.

Regards,
Lynda Corby MSc, MEd, RD, FDC
Project Consultant
PH 250 386-0006
Email lynda.corby@shaw.ca

Appendix IV: Academic/Internship Programs Invited to Respond to the Survey

Program Type	Program Location
Stand-Alone Academic	- Brescia University - Ryerson University - University of Guelph - University of Manitoba
Integrated [Academic & Internship]	- Acadia University - Laval University - McGill University - Mount Saint Vincent University - Saint Frances Xavier University - University of Alberta - University of British Columbia - University of Moncton - University of Montreal - University of Ottawa - University of Prince Edward Island - University of Saskatchewan
Stand-Alone Internship	- Aramark Canada - Capital Health – Halifax - Eastern Health – St. Johns - Grand River Hospital - Hamilton Health Sciences - Hospital for Sick Children - London Health Sciences - Manitoba Partnership Program - Moncton Hospital - Mount Sinai - Northern Ontario Dietetic Internship Program - North York General - Saint Michael's Hospital - Sunnybrook Health Sciences - University Health Network

Program Type	Program Location
	▪ Internationally Educated Dietitians Pre-Registration Program [IDPP]
Combined Masters/Internship	▪ Brescia University College – Masters of Science: Food & Nutrition ▪ University of Guelph – Masters of Applied Nutrition ▪ University of Toronto – Masters of Public Health-Community Nutrition

Appendix V: Agency/Organizations Completing the Practitioner/Preceptor Survey

Alberta Health Services (4 responses)

Bracebridge Diabetes Centre

Brant County Health Unit

Brescia University College

Bruyere Continuing Care

Central Health

City of Hamilton Public Health Services (2)

City of Toronto – Toronto Public Health (6)

Chatham-Kent Public Health Unit (2)

Community Nutrition Public Health Programs PEI (2)

County of Lambton, Community Health Services Department

Department of Health & Social Services

Eastern Health, Health Promotion Division (3)

Eastern Health Authority Newfoundland/Labrador

Government of Nunavut

Government of Manitoba

Grey Bruce Health Unit

Haliburton Kawartha Pine Ridge (HKPR) District Health Unit

Hastings & Prince Edward Counties (HPEC) Health Unit

Horizon Health Network, Public Health, Fredericton Area & Upper River Valley Area

Huron County Health Unit

Independent Registered Dietitian working at a Primary Care Network in Alberta

Kingston Frontenac Lennox & Addington (KFLA) Public Health (2)

Middlesex-London Health Unit

Niagara Region Public Health

Northern Health Region – Northern Spirit Manor & Thompson General Hospital

Northern Inter-Tribal Health Authority

Ottawa Public Health (4)

Perth District Health Unit

Prairie Mountain Health

Peel Public Health (3)

Population Health North Shore Vancouver Coastal Health

Public Health Miramichi within Horizon Health Network New Brunswick

Public Health – Vitalité Health Network (2)

Regina Qu'Appelle Health Region (3)

Sudbury District Health Unit (2)

Santé publique d'Edmundston, NB

The Four Villages Community Health Centre

Vancouver Coastal Health (3)

VCH Richmond Health Service

Windsor-Essex County Health Unit

WorkSafe NB's Rehabilitation Centre

Appendix VI: Environmental Scan of Online Learning Opportunities Focusing on Population/Public Health Nutrition Practice Competency for Identified Gaps in ICDEP

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Community Tool Box	University of Kansas & Kansas Dept of Health http://ctb.ku.edu/en/online-courses.aspx 2011	8 Self-study non-facilitated modules with opportunity to "ask and expert" Post module assessment Certificate of completion The toolbox is broadly focused on population/public heath but readily applies to the specific discipline of dietetics. Module 2 and Module 4 apply specifically to PIs 4.01 (n) & (p) Uses US regional case studies that ideally could be adapted with Canadian materials. Project staff indicated strong interest in collaboration with our initiative including creating a French version.	**MODULE 2:** Define community health assessment; Define the geographic boundaries of the assessment; Compile and describe evidence about local needs **MODULE 4:** Use criteria & processes for priotizing issues to be addressed; Identify factors affecting community problems & goals
Critical Appraisal of Intervention Studies	National Collaborating Centre on Methods & Tools http://www.nccmt.ca/learningcentre/index.php#main.html January 2011	Self-directed learning module. Supports skill development in applying the criteria for critical appraisal of an intervention study. Uses an interactive worksheet to guide the critical review of an intervention study. Certificate of completion.	Learn how to critically appraise a primary prevention study; Practice critical appraisal skills using a realistic health scenario

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Health Promotion 101	Ontario Health Promotion Resource System (OHPRS) - The Health Communications Unit http://www.thcu.ca/hp101/eng/about_course.cfm Undated **Note:** Other provinces (e.g. British Columbia – Pubic Health 101 & Nova Scotia) have versions of this resource but not accessible as online interactive tools.	Self-study 9 module introductory course on health promotion; Includes static web pages on content, case studies, checklists, reading/resources, reflective exercises, glossary of terms	Explain the major definitions and concepts of health promotion; Relate & apply the major models & theories underpinning the filed of health promotion in Canada; Relate some of the key milestones that led to the development of the field of health promotion in Canada; Put into practice key strategies to take action on the health issues affecting individuals & communities; Provide concrete examples of how the features and values of health promotion, including the Ottawa Charter, manifest themselves in programs & services of various types, policy development & implementation of self-care, mutual support & other HP approaches; Identify & describe several implications for their current practice of concepts presented in the course; Identify future learning for health promotion practice

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Improving the Health of Young Canadians	Canadian Population Health Initiative (CPHI) https://learning.cihi.ca/users/index.aspx (Undated)	Self-study tutorial available in English & French This course presents analyses from the most recent cycle of the National Longitudinal Survey of Children and Youth (NLSCY) and the Canadian Community Health Survey (CCHS). The tutorial highlights research relevant to understanding adolescent health and development, exploring the association between positive assets in adolescents' social environments and their health behaviours and outcomes. Intended for those with an interest in promoting healthy transitions to adulthood in various contexts, including schools, community organizations and facilities, regional health authorities, and public health units. *Some difficulty accessing & loading this resource.*	Describe some of what is known about adolescent health and behaviour from the perspective of positive assets; Understand the results of analysis of latest available data from the National Longitudinal Survey of Children and Youth; Highlight the research upon which the initiatives to build positive assets and promote healthy transitions to adulthood are based.

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Introduction to Evidence-Informed Decision Making	National Collaborating Centre on Methods & Tools http://www.nccmt.ca/learningcentre/index.php#main.html May 2010	Self-directed learning module. Designed to support public health professionals to find and use high quality, relevant research to inform practice decisions. Includes a pre-test, three sections, and one final test. Certificate of completion.	Learn to construct a relevant answerable question; Learn where to look for high quality relevant research; Review a source of research and decide if the findings are relevant to a realistic scenario; Practice using a tool that can help to integrate research evidence with other important factors that contribute to decision-making; Learn about factors that need to be included in a plan for implementing and evaluating your decision
Introduction to Population Health	Canadian Population Health Initiative (CPHIP) https://learning.cihi.ca/users/index.aspx Undated	Self-study module available in English and French designed to provide basic instruction on population health issues for those looking for an introduction to the field. The course provides an overview of the elements of population health, including definitions, key concepts and goals. In particular, the presentation highlights the concept of the determinants of health, which are key elements of a population health perspective.	Recognize some developments in the history of population health in Canada; Explain the basic concepts of population health; Explain the key social determinants of health; Identify some key types of evidence that may support a population health approach

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Let's Start a Conversation On Health - Social Determinants of Health - Video & User's Guide	Sudbury Health http://www.sdhu.com/content/healthy_living/doc.asp?folder=3225&parent=3225&lang=0&doc=11749#video 2011	Video and User Guide. Developed as tools to further engage individuals & organizations from all sectors in achievement of healthy communities. Originally created as a resource to support public health staff, it is anticipated that other community partners including schools, social services, businesses, and community groups also find it informative & useful. Lacks learner assessment & interactivity but is a useful tool for introduction to the determinants of health.	Build understanding of the social determinants of health; Lead & participate in discussions with others
Life Course Nutrition: Maternal & Child Health Strategies in Public Health	TRAIN National - A collaboration of the US Public Health Foundation & CDC https://www.train.org/DesktopModules/eLearning/CourseDetails/CourseDetailsForm.aspx?courseId=1031313 December 30, 2011	Self-study This HTML-based online module has interactive exercises (Flash-based). While US focus and specific to Maternal & Child Health Strategies in Public Health, the principles of the course apply generally to situational analysis and related program planning	Describe the role of maternal and child health (MCH) nutrition in the lifelong health of the population; Access resources for assessment, assurance, and policy development for MCH nutrition; Identify ways to integrate MCH nutrition within state and local public health agencies; Apply the principles of the life course framework for population-based public health actions and initiatives.

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Online Health Program Planner 2.0 - Step 2: Conduct a situational assessment	The Health Communication Unit - Public Health Ontario http://www.thcu.ca/ohpp/view.cfm?stepID=2 2010	Self-study The Online Health Planner leads the learner through a 6-step process of program planning. Step 2 focuses on doing a situational analysis, beginning with the development of a data-gathering plan. Instructions and worksheets are provided on the types of data needed, as well as the methods and sources to access the data. This data-gathering plan expands on the draft work plan developed in Step 1 of the planning process. The data-gathering plan is guided by research questions. These research questions are tailored versions of three broad, generic questions that must be answered as a part of situational assessment: What is the situation? (trends, public perception, stakeholder concerns, etc.) What is making the situation better and what is making it worse? What possible actions can you take to deal with the situation? A teaching slide show is a supporting resource for this planning step. This resource is more suitable for a more	Understand & appreciate the purpose of situational assessments; Be familiar with the methods used to assess community health needs & assets; Appreciate the strengths & limitations of these methods; Be able to interpret & apply situational assessment results for program planning & priority setting purposes; Communicate the findings of a situational assessment to relevant stakeholders

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
		advanced learner (i.e. graduate level) rather than entry level. Need to complete previous modules and steps in the Program Planner in order to apply this section.	
Prevention & Population Health Teaching Modules	Association for Prevention Teaching & Research [APTR]; Developed by Brody School of Medicine, Department of Public Health at East Carolina University through the APTR Initiative in collaboration with Duke University School of Medicine School of Public Health, University at Albany, State University of New York. This project is funded through a cooperative agreement with the Centers for Disease Control and Prevention. http://www.aptrweb.org/?page=popheal thmodules Undated	This set of 7 teaching modules include ready to use material aimed at improving clinical and population-based prevention skills for all health professions students. All seven modules feature presentations produced by subject matter experts, supplemental materials to facilitate small group learning, and a bibliography of key resources. This curriculum is designed to be easily integrated into existing curricula. Faculty can choose the materials that best fit with their teaching style and needs, from recorded PowerPoint presentations that students can view online, to population health cases which can be used in small group settings.	**Module 1: Determinants of Health:** Discuss how to assess the health status of populations using available data (e.g. public health surveillance data, vital statistics, registries, surveys, electronic health records); Describe the distribution of morbidity; Discuss the role of socioeconomic environmental, cultural factors and other population-level determinants of health on the health status and health care of individuals and populations; Identify the leading causes of death **Module 6: Research to Practice:** Explain community needs, assets, resources, and the social determinants of health, in order to work effectively with communities to address health problems and improve health outcomes; Discuss how to translate and disseminate research findings into effective healthcare practices

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Primer on Population Health	Association of Faculties of Medicine of Canada (AFMC) http://phprimer.afmc.ca/inner/primer_contents Undated	A virtual textbook available in English and French for clinicians on public health oncepts. This Primer is tailored for medical students, students of other healthcare professions and all health professionals interested in improving their knowledge of population health concepts. Covering the population health objectives of the Medical Council of Canada, the Primer presents the population perspective of health that is relevant to clinical practice and illustrates how public health concepts can be used in clinical situations.	Medical Council of Canada Objectives: Concepts of Health & Its Determinants; Assessing & Measuring Health Status at the Population Health Level; Interventions at the Population Health Level; Outbreak Management; Environment; Health of Special Populations
Promoting Healthy Weights in Canada	CPHI https://learning.cihi.ca/users/index.aspx Undated	Self-study tutorial available in English and French. The tutorial focuses on the complex issue of promoting healthy weights and treating obesity involving a variety of factors including genetics and personal choices as well as our social, cultural, physical and economic environments. This course looks at the features of the environments in which we live, learn, work and play that make it easier - or harder - for us as Canadians to make choices that promote healthy weights.	Describe Canadian trends in overweight and obesity since the 1980s; Understand the links between home, school, work and community environments and the promotion of healthy weights; Describe variations in the prevalence of overweight and obesity by geographic location and mode of transport, and differences in levels of physical activity and fruit and vegetable consumption by income; Summarize what is known about effective programs for settings-based promotion of healthy weights.

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Public Health in Community Settings: An Introduction	Open University Learning. UK http://www.open.edu/openlearn/body-mind/health/public-health/public-health-community-settings-introduction/content-section Dec 2012	Self-learning guide This self-study unit is adapted from Promoting Public Health. This unit puts forward some ideas about how to build an initial picture of a community, how to research a community, get to know it, both formally and informally and work constructively in partnership with it. Includes practical exercises, questions and feedback. Uses UK examples.	Demonstrate knowledge and understanding of: Factors to consider when planning to research your chosen community; Approaches that will facilitate engagement at community level; Skills required to work constructively with communities.
Quantitative Research Design 101: Addressing Practice-based Issues in Public Health	National Collaborating Centre on Methods & Tools www.nccmt.ca/learningcentre July 2012	Self-directed learning module with interactivities designed support practice-based decision-making in public health. Certificate of completion.	Learn to distinguish between questions of effectiveness and causation; Learn the most common research designs to answer your questions

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Reducing Gaps in Health: A Focus on Socio-Economic Status in Urban Canada	Canadian Population Health Initiative (CPHI) https://learning.cihi.ca/users/index.aspx Undated	This resource is a recording of a discussion-based web conference that will provide learners with a broad overview of the links between area-level socio-economic status and health in Canadian census metropolitan areas (CMAs). Learners will be introduced to an index of multiple deprivations developed by the Institut national de santé publique du Québec (INSPQ) and will gain insight into the issues and opportunities for action stemming from the CPHI report Reducing Gaps in Health: A Focus on Socio-Economic Status in Urban Canada. *Some difficulty encountered in launching this module.*	Describe the relationship between area-level socio-economic inequalities and health in urban Canada; Understand the INSPQ's Deprivation Index and its relevance to health planning; Understand the nature of the socio-economic gradient in health.
Reducing Gaps in Health: Using Area-based Socio-economic Measures to Explore Population Health	Canadian Public Health Initiative (CPHI) https://learning.cihi.ca/users/index.aspx Undated 2010	Self-study tutorial available in English and French Explores how health and socio-economic data can be used together to better understand differences in health among areas with different population characteristics. With more knowledge of socio-economic status groups, their geographic distribution across Canadian municipalities and differences in health utilization according to socio-economic status, learners can then target their approaches to health planning, promotion and prevention and act to reduce disparities across their respective jurisdictions.	Define area-based socio-economic measure; Understand why area-based socio-economic measures are used to examine disparities in health; Identify opportunities for using area-based measures in monitoring disparities in health or health service use.

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Searching for Research Evidence in Public Health	National Collaborating Centre on Methods & Tools www.nccmt.ca/learningcentre July 2013	Self-directed learning module with interactivities designed to introduce the learner to time-saving techniques to find public health research evidence to inform decisions.	Practice developing a comprehensive, answerable question; Learn which sources of information are most suitable for answering a question; Practice efficient and effective search strategies for different information sources; Apply the 6S pyramid.
Setting Priorities - Strategic Techniques for Groups	The Health Communication Unit - Public Health Ontario http://www.thcu.ca/infoandresources/resource_display.cfm?search=%20search&res_sub_topicid=32 http://www.thcu.ca/videos/webcasts.htm 2009	Archived webinar - PowerPoint & Audio	To increase participant awareness, comfort & skill about using structured, strategic group processes for setting priorities
Skills for Health Promotion Tool Kit	The Health Communication Unit; http://www.thcu.ca/infoandresources/resource_display.cfm?res_topicID=4 http://www.thcu.ca/resource_db/pubs/164711338.pdf	A toolkit comprised of PowerPoint slides, activities, worksheets and tools for program planning based on a two-day workshop. The in-person workshop is available only to Ontario health professionals on request. Elements of the toolkit are suitable for developing self-study modules or classroom group activities.	To increase participant awareness, comfort & skill about using structured, strategic group processes for setting priorities

PROGRAM TITLE	AGENCY/URL/DATE	PROGRAM DESCRIPTION	OBJECTIVES
Skills Online - Skills Enhancement for Public Health	Public Health Agency of Canada http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/descriptions-eng.php 2012	Self-study and facilitated series of online modules available in English and French. **Modules 1: Introduction to Public Health** & **2: Introduction to Literature Searching** are self-study and offered free of charge. Facilitated modules are offered for a fee over an eight-week period during fall, winter and spring sessions. Interdisciplinary teams from across the country are connected through interactive discussion forums and guided by an expert, trained facilitator. The competency-based modules are specific to Canadian public health practice, and are designed using adult learning principles; Uses a variety of audio/visuals including videos, graphics, text; summary quizzes; module evaluation; completion certificate. Facilitated module topics: Basic Epidemiological Concepts; Measurement of Health Status; Epidemiological Methods; Outbreak Investigation and Management; Epidemiology of Chronic Disease; Applied Epidemiology - Injuries; Introduction to Surveillance; Communicating Data Effectively; Introduction to Biostatistics; Evidence-based Public Health Practice	**Module I: Introduction to Public Health** Describe the purpose and basic functions of public health and give examples of public health in action; Identify who is involved in public health—both within the formal public health system and in the community; Describe some of the important contributions public health has made and continues to make to improve the health of people and communities; Identify how public health operates at the national, provincial/territorial and regional/local levels and how it relates to medical services; Understand the meaning of some key terms used in public health; Access additional resources and information **Module 2: Introduction to Literature Searching** Have an understanding of "evidence-based public health"; Be familiar with different public health information sources and how to search them; Be able to develop an effective search question and basic search strategy; Be able to conduct a basic literature search using a bibliographic database; Have a basic understanding of quality assessment and management of research findings

Appendix VII: Synthesis of Interviews with Key Informants from Professional Associations and Agencies Regarding Best Practices Supports for Professional Competency Development

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
Association of Faculties of Medicine of Canada [AFMC] – represents Canada's 17 faculties of medicine and is the voice of academic medicine in Canada. Represents & supports the mandates of research, medication education, & clinical care with social accountability. http://www.afmc.ca/ **Contact:** Barbie Shore, Project Manager Bshore@afmc.ca [Sept 13. 2013]	**Medical Council of Canada's objectives (i.e. standards) in population/public health** – a review & revision of objectives to strengthen their content & ensure these competencies were included in the accreditation standards	AFMC led a national review in conjunction with US partners to put this foundational piece into place.	Survey of members of the AFMC Public Health Educators Network (PHEN) to establish a baseline for evaluating the impact of the AFMC Public Health Education project [i.e. whether changes have been made to curriculum as a result of the revised Medical Council of Canada (MCC) population health objectives (Feb 2010)] http://www.afmc.ca/pdf/Public%20Health%20Survey%20Results_Eng.pdf	1. Develop a strategy for ongoing promotion of resources for the long-term. Having a Network [such as Public Health Educators Network (PHEN)] that has this function as one of their responsibilities is a key success factor in sustainability. 2. Incorporate an evaluation/ feedback mechanism as an integral component of the initiative.
	AFMC Primer on Population Health www.afmc-phprimer.ca - Available in English & French, presents the population health perspective relevant to clinical practice. Illustrates how public health concepts can be used in clinical situations. Tailored for medical students, students in other health care professions & in all other healthcare professions interest in improving their knowledge of population health.	Initial funding from the PHAC designed to address the objectives of the Medical Council of Canada (MCC). Identified as a need by the Public Health Educators Network [PHEN]. Consulted with universities, public health physicians & learners to identify content. Written by two editors, then reviewed by learners, public health physicians and other subject matter experts; then translated in French.	A feedback tool is included on the Primer website to collect feedback on the content & suggestions for additions from users. Web metrics are tracked to determine usage of the Primer.	

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	Canadian Healthcare Education Commons [CHEC] https://chec-cesc.afmc.ca/ - an online community designed to support collaborative learning & teaching for the health professions.	PHEN established an online e-community where faculty & students can interact, share and create resources in a secure & simple online environment. The site is free to join & use. It feature resource collections of Virtual Patient cases & public health learning objects.	Participation in the community; resources posted	
	Environmental Scan of Best Practices in Public Health Undergraduate Medical Education http://www.afmc.ca/social-public-health-e.php	Funding from the PHAC - included literature review, key informant interviews with educators nationally and internationally as guidance for faculties. Key findings summarized in a series of reports on the AFMC website.	Completion of the environmental scan reports.	
	AFMC Public Health Learning Tools Challenge http://www.afmc.ca/pdf/Call_for_Proposals_Public_Health_Learning_Tools_Challenge_EN.PDF - for students & residence in all health professions in Canada to create new learning tools on public/population health topics - a competition designed to build excitement among students in influencing population health for the next generation of health professionals. The Challenge will reward excellent through financial awards up to $2500 with a total of 13 awards available.	Funding from PHAC over 2 years – under the Public Health Educators Network, formed a working group on learning tools	Evaluation will be based on the number of expressions of interest and new learning tools created that can be made available through the AFMC website.	

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	Public Health Interest Group (PHIG) http://www.afmc.ca/social-public-health-e.php	AFMC supports the development of PHIG in each of the medical schools across Canada. Students can apply to for seed funding to initiate the interest group. "How-to" document available to support the interest group development http://www.afmc.ca/pdf/Suggestions%20for%20creating%20a%20Public%20Health%20Interest%20Group%20-%20Eng..pdf	Survey of PHIG members as to whether the interest groups, are having an impact on increasing student interest and knowledge in public health. (Feb 2010). http://www.afmc.ca/pdf/Public%20Health%20Survey%20Results_Eng.pdf Key lessons learned from existing PHIGs to assist others in sustainability, recruitment & retention & activity planning. http://www.afmc.ca/pdf/Strengthen%20Public%20Health%20Interest%20Groups%20-%20Lessons%20Learned.pdf	
Canadian Association of Continuing Health Education (CACHE) - a forum for knowledge exchange and collaboration among healthcare stakeholders for professional and systems development to improve patient outcomes. http://www.cachecanada.org/en/ **Contact:** Ella Croteau, President CACHE & Registrar, College of Pharmacists of Ontario della.croteau@gmail.com [Aug 7, 2013]	**Alliance for Continuing Medical Education** – developed 48 individual competencies organized into eight general Competency Areas for CME Professionals: 1. Adult / Organizational Learning Principles 2. Educational Intervention 3. Systems Thinking 4. Partnering 5. Leadership 6. Administration Management 7. Self-Assessment & Lifelong Learning	The development of competencies and performance indicators used a wide consultative and validation process described at: http://www.acehp.org/iMIS15/aCME/PDFs/Competencies_Analysis_Report_REV_090909.pdf?&WebsiteKey=0844fe0e-0203-407c-98d2-9777dd5428a2&hkey=1fdf55f7-1d5c-4298-84af-b9b77c849025	N/A	1. Adapt existing high quality CE materials such as those developed by PHAC on immunization – add what is missing rather than starting with a "clean slate." 2. Collaborate nationally & interdisciplinary to develop tools that can be used by all. 3. Provide educational sessions to employers and health professionals themselves to facilitate understanding of what the competencies mean for practice & for employers.

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	A wide range of tools & resources in support of professional development in CME are hosted on the CACHE website. Accessible to CACHE members at http://www.accme.org/news-publications/publications/tools	Tools & resources are collection of materials from other member professional organizations rather than tools developed specifically by CACHE.	N/A	
	Open Access Library - Retrieve articles from open access publications related to continuing health education http://www.cachecanada.org/en/open-access-library	Position Papers from CME/CHE CACHE/ACEMC Documents Effectiveness of Continuing Health Education	N/A	
Canadian Institute of Public Health Inspectors (CIPHI) – represents & unites Environmental Public Health professionals Canada-wide. Advances the profession & field of Environmental Public Health through certification, advocacy, & professional competencies, thereby protecting the health of all Canadians http://www.ciphi.ca/home **Contact**: Gary O'Toole – President of CIPHI Gary.OToole@gov.ns.ca [July 10, 2013]	**Certification Board** ensures that Environmental Health Officer graduates attain a certain level of academic preparedness based on a set of 519 learning objectives, including a 12-week (minimum) practicum. No support is provided by CIPHI to students/academic instructors in support of competencies.	N/A	N/A	None identified
	Continuing Professional Competency Program http://www.ciphi.ca/files/documents/cpc/fullguide.pdf – Focus is on supporting certified practitioners to maintain professional competency. Members encouraged to access programs available through **British Columbia Institute of Technology (BCIT)** and **Skills Online program from PHAC**	NA	N/A	

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	Gastroenteritis at a Staff Luncheon in Hamilton, Ontario – a five-step self-paced online case study http://www.ciphi.ca/hamilton/Content/content/01_Intro/intro_07.html	Unknown	Self-scoring post test at the end of each section; no feedback mechanism on the case study itself.	
Canadian Physiotherapist Association - in partnership with provincial and territorial branches and practice divisions, CPA enables members to learn, share knowledge and enhance practice. CPA provides resources, education, ideas and advocacy to enable our professional community to better serve Canadians. CPA's purpose is to advance the profession of physiotherapy in order to improve the health of Canadians. http://www.physiotherapy.ca/Home **Contact:** Chett Bradley, Manager, Educational Programs CBradley@physiotherapy.ca [Sept 3, 2013]	**Webinars -** Aimed at clinicians who want to keep updated on the latest hot topics in clinical practice.	Topics identified for all PD programs through Division representatives who keep up to date on current & emerging issues affecting the professional & pertinent to maintaining professional competency. Certificate of participation (not competency) provided. Held every 2 weeks between Sept & June. Presented by an expert on the topic, each session includes a presentation, Q&A period, and resources to help practitioners stay on top of the latest issues in clinical practice. Both live & archived topics accessible through the CPA website.	Feedback evaluation provided at the end of each webinar.	1. Key measure of success is the financial bottom line – is the initiative cost-recovery or profit generating. 2. PD program must meet the needs of all areas of practice – key indicator in gauging success. 3. NB of marketing & promotion plan to ensure wide uptake. 4. Consider technology savvy of practitioners; many prefer in-person events because they are not familiar with technology, although this is gradually changing. 5. Need to be clear on who the target audience is- i.e. clinicians are looking for very clinical content – they want to be assured that the content is evidence-based but they don't necessarily want to through the evidence themselves; needs to be short & to the point.

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
Alberta Physiotherapy College & Association Audrey Lowe – Competence & Professional Practice alowe@physiotherapyalberta.ca [Aug 20, 2013] Iain Muir, Director Professional Practice imuir@physiotherapyalberta.ca [Aug 20, 2013]				1. Networking is still an important part of professional development so continue to offer opportunities for in-person meetings. 2. Establishing communities of practice hasn't proven to be effective, especially for younger members. They have their own social networks & don't rely on the association to build those for them. 3. We have a model that refers to We/Me/Us – professional associations & regulatory bodies tend to focus on the broader level of "us" – what is good for the profession as a whole. Whereas the individual members focus more on the "me" and possible the "we". When you are trying to market a product for them it is really important to target the "me"/"we" level. 4. Because the busy schedule of professionals need to make PD opportunities that are easy to access within their work time and reasonable commitment level.

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
				5. For online formats, if you have to click more than twice to find information, it's too complicated and turns people off.
	Online Practice Management Workshops - These interactive, online, workshops are designed to equip physiotherapy practice owners and managers with the necessary business skills to ensure their practices grow and rprosper.	Each 90-minute workshop will explore a core business concept or skill. Workshops are held online and will allow participants an opportunity to interact with the instructor and fellow participants and may include pre-reading or preparatory exercises to enhance the learning experience – allowing participants an opportunity to practice concepts before applying them to their facilities.	Feedback evaluation provided at the end of each webinar through an online survey	
	Translating Outcome Measures – weekly online workshops.	Each 90-minute workshop will take a focused look at a single outcome measure, exploring the state of evidence for its usage and its clinical application. Workshops are held online, allowing front-line clinicians to witness cases in action and to critically reflect on the application of the measure in their own practice. Sessions are optimized for therapists who have some knowledge or prior experience with the measure being discussed.	Feedback evaluation provided at the end of each webinar.	

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	PD Library - These archived webinars are exclusively available to CPA members at no charge due to sponsorship.		N/A	
	Online Courses - four-part online course, reviews the core principles and main technologies behind five EPAs in common usage today, and discuss the state of evidence and best practices when incorporating these modalities into your treatment plans.	Live webinar presentation Q&A with instructor Workshop reference list Clinical case discussions Course reading pack	Online feedback survey	
	Applying Evidence to Practice - a two-part self-study program of workshops designed for physiotherapists working in public and private clinical practice settings who want to apply evidence-informed healthcare principlses to their practice. care principles to their practice.	Developed in collaboration with Cochrane Canada; each part of the program includes three online, pre-recorded 90-minute sessions exploring the steps for finding and making informed effective use of the best evidence for clinical physiotherapy decisions.use of the best evidence for clinical physiotherapy decisions.		
	In-Person Courses – variable topics, location & timing	Two-day course presented by a topical expert;	Post course feedback survey	
	Specialty Certification - The CPA Clinical Specialty Program is a self-directed certification program to	The CPA Clinical Specialty Program is available to all registered physiotherapists, regardless of practice	N/A	

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	recognize physiotherapists who have demonstrated advanced clinical competence, leadership, continuing professional development and involvement in research. The program consists of a written portfolio submission and oral presentation that is assessed by a 3-person panel of peers.	setting or location. Candidates must meet 4 program requirements to receive the designation: • Advanced Clinical Competence • Professional Leadership • Professional Development Activities • Involvement in Research Candidates are assigned a 3-person assessor panel. 2 of the assessors are from the candidate's practice area and the 3rd assessor is from an outside practice area.		
Canadian Public Health Association - is the national, independent, not-for-profit, voluntary association representing public health in Canada. CPHA's members believe in universal and equitable access to the basic conditions that are necessary to achieve health for all Canadians. **Contact:** Greg Penney, Director National Programs gpenney@cpha.ca [Aug 20, 2013]	**Introduction to New HIV Prevention Technologies –** basic self-directed online training package focusing on the knowledge and skills defined in the professional competencies. http://www.cpha.ca/en/portals/hiv/training.aspx	Identified the need for training through an online survey & mapped the course to the professional competencies. Includes a pretest, post test & certificate of completion. Funded by the Public Health Agency of Canada (PHAC) and Canadian HIV Vaccine Initiative (CHVI) to undertake a project entitled, Preparing the Canadian Public Health Community for New HIV Prevention Technologies.	Online feedback survey built into the course	1. Need to provide more support for explaining what the core competencies are & why they are important. Engage employers in this process as well. 2. Link training materials to the pertinent competencies 3. Having time at work to take skill-building courses.

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	A Tool for Strengthening Chronic Disease prevention & Management – "How-To" Guide & Case Studies: presents eight Critical Success Factors for strengthening chronic disease prevention and management, with guiding questions for each. http://www.cpha.ca/en/portals/cd.aspx	In 2007/2008, CPHA worked with four health regions across the country to pilot a new chronic disease planning tool to help bring a comprehensive approach into regional dialogue and planning. Funded by the PHAC.	N/A	
	Mapping existing training offerings to the competencies – e.g. PHAC Skills Online Course has an Epidemiology Module addressing that competency so rather than creating our own courses, we link members to those that exist.		N/A	
	Educational Portals on Health Literacy, Infectious Diseases & Substance Abuse & Addictions – tools & resources along with links to other information sources on these topics			

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Community Health Nurses of Canada (CHNC) - an associate member of the Canadian Nurses Association (CNA), is a voluntary association of community health nurses consisting of community health nurses and provincial/territorial community health nursing interest groups.

CHNC provides a unified national voice to represent and promote community health nursing and the health of communities.

CHNC provides a forum for community health nurses across Canada to share issues of mutual concern and to communicate is a leader in the development of discipline-specific standards of practice, core competencies, and a community health nursing certification process.
Contacts: Ruth Schofield, Past President of CHNC; Nurse Educator – McMaster University & Western University
[Aug 8, 2013] | **Community Health Nursing Standards of Practice Toolkit**
http://www.chnc.ca/documents/Standards%20Toolkit/Published_Toolkit_Binder.pdf
- a component of knowledge translation strategies for dissemination & integration to support the uptake of professional competencies. Main focus is on practitioners in practice but there is also a section for educational institutions. | Literature review to support the development of Standards of Practice
http://www.chnc.ca/documents/ALitReviewUndertakentoInformRevisionstotheCdnCHNStdrsofPracticeMarch2011.pdf

Workshops conducted to in person & some web-based, video events. Through these events the organizers collected practice examples or stories on how they do their work in the community. The used these stories to show how their work related to the Standards of Practice and to bring the Standards "to life." | Evaluation report
http://www.chnc.ca/documents/ToolkitReport_Final_.pdf | 1. Organizational support including facilitators to assist with the integration of standards of practice & competencies within the workplace.
2. Integrate competencies into accreditation for public health units.
3. Encourage & support reflective practice by practitioners to identify learning needs.
4. It doesn't work to simply post materials to a website; need a more supportive strategy to encourage access & use.
5. Use learning activities that are "sticky" i.e. real-life examples to bring the material alive. When gathering stories from practitioners ensure that you have their permission to use the stories within the teaching/learning context.
6. Cost is a barrier for learners to access training materials.
7. Importance of interdisciplinary collaboration in tool development so that all can benefit from common needs.
8. Educators' Network would be valuable to share educational approaches & materials. |
| | **National learning needs assessment** with respect to Standards of Practice – identified different needs in public health compared with home health nurses. Evaluation & advocacy at the national level were two of the major gaps identified. These gaps have been communicated to faculty in educational institutions & shared with PHAC. | CHNC was a participant in a strategic planning meeting with PHAC and topics of advocacy, evaluation & community development were put forward. | | |

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Elizabeth (Liz) Diem, Community Nursing Education Consultant, Community Health Nurses Canada lizdiem@chnresources.org [July 2, 2013]	Existing tools & supports from other agencies (PHAC, NCCMT, NCCDH, THCU – OPH) as outline below recommended to full gaps. Formal supports provided.			9. Tools need to be customizable to the work setting. 10 Ensure learning tools can be applied in a practical way to the work context. 11 Need a bottom-up process for competency integration. 12 Supports needed at the organizational level for learners to put new knowledge and skills into practice. An environment that fosters interprofessional practice and collaboration across disciplines is needed. 13 Need an error-tolerant organization – it's OK to make mistakes when you are learning; that's the way you learn. This is difficult in a clinical situation. 14 If you do not have buy-in from the top, nothing you do will have an impact on competency development. 15 The sooner you engage the other disciplines the better in common thread opportunities to work on public health you build important connections. 16 Needs to be continuous improvement in competency development.
Marie Dietrich Leurer, Assistant Professor, College of Nursing, University of Saskatchewan; Research Associate, Regina Qu'Appelle Health Region marie.dietrichleurer@usask.ca [Aug 27, 2013]	**Blueprint for Action for Community Health Nursing in Canada -** a outlines a national framework and action plan for the current and future development of community health nursing in Canada including education & training needs for current and future practitioners http://www.chnc.ca/documents/2011 March30Blueprint_Final.pdf	Developed in collaboration by CHNC and its Board of Directors; the CHNC Political Action and Advocacy Standing Committee; National Partner Organizations; Project Management Team and funding from PHAC.	??	
Caroline Ball, Executive Director East York & East Toronto Family Resource Organization (EYET); originally with City of Hamilton Public Health Services carolineball@eyetfrp.ca [Aug 12, 2013]

Yvette LaForet-Fliesser, Community & Public Health Consultant yvettelaforetfliesser@gmail.com [June 25, 2013] | **Community Health Nurses website -** http://www.chnresources.org/node/10 0 for knowledge exchange & access to online resources. | Users can access learning activities and participate in a discussion forum for mutual support. | Materials developed by E. Diem from teaching community health nursing courses for 15 years to help introduce practitioners to community health practice. | |

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	Guidelines for Quality Community Health Nursing clinical placements that are now integrated into accreditation standards http://chnc.ca/documents/CPGuidelinesFinalMarch.pdf	Developed in collaboration with PHAC & Canadian Association of Schools of Nursing (CASN).	N/A	
	Entry-level competencies for public nursing – example of the type of work being done to support students.	Work in progress building on the competencies that are in place.	N/A	
	PHAC Online Skills Program has been recommended for addressing the identified gap of lack of faculty with experience at the community health level.	Developed by PHAC using subject-matter experts.	Online feedback within the modules Course registration	
	Health Promotion Series of ongoing workshops provided nationally to support certification of members	Developed in partnership with Community Health Nurses Initiative Group (CHNIG) and the Registered Nurses Association of Ontario (RNAO).	Post workshop evaluations Evaluation of impact of certification on practice http://www.chnc.ca/documents/CHNCCertificationReport_final_.pdf	
	Public Health Ontario- The Health Communication Unit resources; National Collaborating Centre on Methods & Tools and **National Collaborating Centre on Determinants of Health**	Developed by THCU, NCCMT & NCCDH	Online feedback surveys	

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	Integration & the Use of Core Competencies in Public Health in Canada. Results of a Pan-Canadian Scan. Jan 2010. http://www.hamilton.ca/NR/rdonlyres/ 8246C4AA-B82B-4DA3-939F- D47FC45B78F7/0/2009PanCanadianCC EScanfinalreport.pdf Learning needs identified included: - preferred learning styles - individual self-directed learning - problem-based learning in a group setting: people felt they learned better in this environment - not interested in topical workshops - credentialed courses preferred rather than one-of training events. From the results of the needs assessment a practical tool kit with a priority for managers to develop skills in performance management, an organizational priority.	National environmental scan conducted by City of Hamilton, Public Health Services was to develop a point-in-time snapshot of the Core Competencies efforts currently underway or emerging within local, regional, provincial and territorial jurisdictions across Canada. Administered to 151 public health organizations across Canada. The second component engaged key informants identified from the survey respondent sample in a telephone interview to further explore the results of the survey with a skilled interviewer. A total of 60 respondents, representing 58 public health organizations completed the survey and 9 key informants were engaged in telephone interviews. **Continuous improvement tool kit** developed as an electronic tool.	N/A Tool kit was pilot tested in 4 different sites with each site being able to customize the TK to meet their needs.	

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	Robinson Vollman, A. (2012). Canadian Community as Partners – interdisciplinary text with excellent section on community assessment, program planning & evaluation. **Stamler, LL & Yui, L – Community Health Nursing.**	Written by expert authors	N/A	
	Diem, E & Moyer, A – Community Health Nursing Projects – Making A Difference. – CHPT 3 focuses on community needs assessment.	A second edition e-book is being planned to make this text more accessible to students.	N/A	
University of Kansas Work Group for Community Health & Development Mission is research, teaching & public service in community health & development. Works collaboratively with groups at the local, national & international levels on research, capacity building and training to influence population health outcomes focusing on chronic disease, reducing health disparity, improving healthy nutrition etc. Contact: Christina Holt – Associate	**Community Tool Box -** a global self-paced online interactive, modular resource based at the University of Kansas for free information on essential skills for building healthy communities, offering more than 7000 pages of practical guidance in creating change and improvement. The CTB is part of the national TRAIN program affiliated with CDC. In addition to the online format the unit provides in-person workshops for community groups.	Developed by researchers & practitioners under the leadership of the University of Kansas - workgroup for Community Health and Development. Originally developed over 20 years ago, the CTB has continued to evolve as a dynamic resource freely accessible to practitioners. Designed around 16 core competencies including community assessment, strategic planning, capacity building and evaluation.	Ongoing metrics collected on the use of the online tools as well as periodic surveys & comments/feedback posted by users. In person workshops also evaluated. Canadian practitioners & students are the 8th highest user of the CTB resources.	1. Important to have consistency in the formatting of online materials. 2. In disseminating tools go where the people are i.e. partner with other agencies/organizations to have them post links to access the material – if these are places people already go for guidance use those channels. 3. Keep the website current and responsive to users & adapt content for mobile users to make it easy to use through those technologies.

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Director for Community Tool Box Services http://ctb.ku.edu/en/default.aspx **Contact:** Christina Holt chh@ku.edu [Sept 3, 2013]		Currently materials are available in English but they have a priority to make them available in other languages including French and would be interested in a collaboration with Canada for both translation as well as adapting case studies to a Canadian context.		4. Engage learners/users in identifying what issues they face in their work, and provide content that fills those gaps. 5. Provide multiple pathways to the materials. 6. Include as much interactivity as possible
Continuing Education & Outreach School of Population/Public Health University of British Columbia - delivers professional development opportunities for health professionals with a commitment to maintaining and enhancing professional competence. It provides a venue for communicating research findings and teaching best practices. It also creates an opportunity to network with researchers and other professionals. Our community of learners work in diverse organizations and have varied backgrounds and experience. Our courses are recognized	UBC Continuing Education Arm that operates alongside of the graduate program. Provides a very broad range of courses targeting health professionals in population/public health including physicians, occupational hygienists, safety professionals…etc. All courses are accredited for a certain number of professional development hours. Most courses offered face-to-face in a classroom setting.	Ongoing environmental scanning to identify upcoming PD needs for various health professionals. Identifies subject experts through contacts/networks to develop and instruct the course. Course development is overseen by the Program Director.	At the end of each course there is a feedback survey.	1. Ensure programs address a felt need of the audience. 2. Offer program under a known brand – I.e. UBC has an excellent reputation for well-designed courses. 3. Returning customers are a good indicator of success. If they like what you offer, they come back for more. 4. Ensure programs are high quality with solid, evidence-based content. 5. Draw on expertise of participants; UBC courses are not entry-level so learners can learn from each other's experience.

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
by professional organizations as providing educational value through the granting of certification maintenance points. http://spph.ubc.ca/continuing-education/ **Contact:** Lydia Ma – Director, Continuing Education & Outreach lydia.ma@ubc.ca [Aug 8, 2013]	**Air Quality Health Index** – online course promoted to a range of health professionals including physicians, nurses, respiratory technicians, etc.	Funded by Health Canada	Online feedback survey	
	UBC Grand Rounds Series in Population/Public Health – online series www.spph.ubc.ca	Presented by graduate students, researchers and community-based practitioners on a wide range of topics.	N/A	
National Collaborating Centre on Methods & Tools – is one of 6 National Collaborating Centres for Public Health in Canada. The NCCMT provides leadership & expertise in sharing what works in public health http://www.nccmt.ca/ **Contact:** Pamela Forsyth Managing Director forsyp@mcmaster.ca [Aug 27, 2013]	**NCCMT Learning Centre –** designed as a series of modules - Introduction to evidence-Informed Decision Making - Searching for Research Evidence in Public Health - Critical Appraisal of Intervention Studies - Quantitative Research Design - Critical Appraisal of Systematic Reviews - Online Tools: Search Pyramid	Online feedback surveys for each module & certificate of completion	All materials developed by the NCCMT are evaluated either through online surveys and/or in-person feedback from workshops. Statistically significant changes have been demonstrated in participant practice following them taking NCCMT training.	1. Interactivity & engagement of learners is a key success factor for both online and face-to-face learning. 2. Important to consider the platform for online learning. Not everyone has the latest version browsers. Build materials to accommodate this fact to ensure accessibility by intended users. Especially NB in northern communities where the internet ca be very slow. Make content available on CDs as well as online to accommodated this factor.

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	Workshops & Events - NCCMT works to build capacity in evidence-informed decision making in public health by offering workshops and other training events across Canada. Facilitators from NCCMT have presented our popular interactive workshops across Canada, with more workshops planned in the coming months. NCCMT offers half-day and full-day workshops on topics such as *Evidence-Informed Decision-Making in Public Health*, *Critical Appraisal of Research Evidence* and *Organizational Change for Use of Evidence in Decision-Making*. See more at: www.nccmt.ca/events/index-eng.html#sthash.S6eaqVMe.dpuf	Workshops are based on a standard offering and customized for the specific audience.	Feedback at each workshop	3. Foster a learning environment that is flexible and responsive to change. Consider where organizations are at in their readiness to adopt evidence-based decision-making applying the best sources of evidence. 4. Look at best practices in online learning tools to ensure such things as interactivity, not staying on any one activity too long, have adequate breaks, not didactic. 5. Consult expertise in web design in setting up the modules to ensure the navigation and process for working through the module is appropriate for online learning. Don't just create a website – make it a learning centre. 6. Cost to access the content is considered a barrier.
	Registry of Methods & Tools - The Registry is a searchable, online collection of methods (processes) and tools (instruments) for knowledge translation in public health. The Registry's goals are to help public health practitioners: communicate new knowledge to clients and colleagues; support innovation uptake in their organization; synthesize and appraise public health related research;	In addition to resources evaluated & posted by NCCMT, practitioners can propose resources for consideration which are then evaluated by NCCMT using a standard criteria.		

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
apply a new technique for working with community partners; and summarize relevant evidence for public health policy decisions. See more at: http://www.nccmt.ca/registry/index-eng.html				
Public Health Agency of Canada Online Skills Program – online, competency-based modules specific to Canadian public health practice, designed using adult learning principles. http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/about_so-apropos_cd-eng.php **Contacts:** Karen MacDougall, Program & Policy Analyst; PHSCB Initiative Content Lead Karen.MacDougall@phac-aspc.gc.ca [Aug 7, 2013] Elizabeth Wright, Epidemiologist Elizabeth.Wright@phac-aspc.gc.ca [Aug 26, 2013]	**PHAC Skills Online Modules –** Facilitated Modules: (registration fee) - Basic Epidemiological Concepts (E&F) - Measurement of Health Status (E&F) - Outbreak Investigation & Management (E&F) - Epidemiology of Chronic Disease (E&F) - Applied Epidemiology: Injuries (E) - Introduction to Surveillance (E) - Communicating Data Effectively - Introduction to Biostatistics - Evidence-based Public Health Practice Self-Directed Modules: (free) - Introduction to Public Health in Canada - Introduction to Literature Searching **Coming Soon:** Self-directed Modules: - Core Competencies in PH in Canada (will include tools to support use) - International Health Regulations	Developed to address an identified need through two environmental scans (2002 & 2005) to increase competency in the area of epidemiology. Pilot tested with public health professionals across the country. Practicum-based on adult learning theory. Now being approached by various agencies/government to develop further modules which address a broader range of topics. Modules are written by subject experts using a standardized template & curriculum design consultants (BCIT). All modules undergo thorough review throughout the development process. Takes approx three years to develop a module. Existing modules are reviewed & updated every 2-3 years.	Online post module survey 7-8 case studies on evaluation of the modules that include key informant interviews with managers & learners. Attrition studies Collection of data on use of content &/or planned use An award for the Online Skills program from Canadian Society of Training & Development.	1. Non-facilitated modules have tended to have a much lower completion rate than those that are facilitated. 2. Formation of local groups & local mentoring programs can reinforce learning by bringing the learning closer to home. 3. Online learning is a field of its own – content needs to be delivered in chunks of information, reinforce learning by interjecting discussion, activities, games, reflection exercises that link the theory to practice. This is really important. 4. Consider accrediting offerings.

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	Facilitated Modules: - Introduction to Evaluation (E&F) - Introduction to Health Literacy (E&F) - Evidence-Based Public Health (F) - Surveillance (F) - Applied Epi Injuries - Surveys (E)	Facilitators undergo training specifically for the Skills Online program. Looking at different funding models to make the registration fee more accessible to university students (group rates); likewise for work groups within public health units/community health centres.		5. Important to consider how the content will be adapted for French. Best to have the French and English developed using the same template outline but develop the program in French separately from the English. Better product than direct translation. 6. Taking an online course will not confer competency. One needs to apply the theory in practice over time to become competent.
	Canadian Field Epidemiology Program – application process required; combines practical, face-to-face and online instruction. Trains public health professionals in applied epidemiology—the specialized techniques and competencies required to respond to diverse public health issues in real-life settings. Also mobilizes field epidemiologists anywhere they are needed within Canada or around the world, supporting public health organizations as they respond to urgent public health events.	Field epidemiologists in the program spend two years as full-time employees of PHAC, although they work and learn at placement sites within a provincial, territorial, regional or local government department or public health agency. <u>Placement sites</u> provide the infrastructure, opportunities and mentoring needed to meet program requirements. Participants collaborate on field investigations away from their placement site; these investigations typically last for several weeks and often involve evening and weekend work.		

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
	Finally, the program creates and nourishes a <u>vibrant network of public health professionals</u> to promote the sharing of ideas, insights and information. http://www.phac-aspc.gc.ca/php-psp/cfep-pcet/index-eng.php	In addition to this on-the-job experience, field epidemiologists in the program attend conferences, workshops and classroom sessions. During the program, they must complete the following nine professional experience guidelines (PEGs): - Participate in a field investigation - Analyze and interpret a dataset - Design, implement, revise or evaluate a public health surveillance system - Write and prepare a scientific article for publication - Write a public health update for a scientific audience - Write and submit an abstract for a peer-reviewed scientific conference - Give an oral presentation for a scientific audience at a seminar, workshop or conference - Communicate complex scientific concepts to a lay audience - Provide service to placement site and/or the field of public health		

Organization/Agency/ Contact	Professional Competency Supports	Development Process	Evaluation	Best Practices/Success Factors Identified by Key Informants
Public Health Practitioner/Preceptor Leeds, Grenville & Lanark District health Unit (current position). **NOTE:** This interview was based on past position as internship coordinator/preceptor KFL&A Public Health Region, Kingston, Ontario **Contact:** Marie Traynor mariem.traynor@gmail.com [Aug 12, 2013]	**Internship Reference Manual & Tool Box –** community rotation section included pertinent literature, standards of practice, and learning materials on situational assessments, program planning, implementation, evaluation. Interns have opportunities to participate in many experiential learning situations i.e. to develop resource materials, to work with the media, write newsletters to targeted audiences, understanding population/public health, determinants of health.	Materials prepared by preceptors (PH Nutritionists) & were updated annually.	Direct feedback from interns on the content of the resource manual and learning activities.	1. Ensure there is a method to keep resources current 2. Emphasis should be placed on the importance of record keeping & documentation; just like with an electronic health record, it's essential to document the process and outcomes of community/population-based work. 3. Hands-on experience can't be replaced by simulations. Need to actually apply the theory to practice to learn how it is done. 4. Differentiate between community & public/population health 5. Look for more nontraditional settings for students/interns to get some of the necessary experiences to build competencies e.g. YMCA, Big Brothers/Big Sisters, Elizabeth Fry Society etc. These are all good places to learn program planning skills.