Community Health Nurses of Canada

Infirmières et infirmiers en santé communautaire du Canada

Public Health Nursing:
Primary Prevention of Chronic Diseases

Report February 29, 2012

Acknowledgments

The Community Health Nurses of Canada (CHNC), established in 1987, is a voluntary association of provincial / territorial community health nurses. CHNC provides a unified national voice to represent and promote community health nursing and the health of communities. CHNC is an associate member of the Canadian Nurses Association (CNA)

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Public Health Nursing: Primary Prevention of Chronic Diseases

Introduction

It is estimated that 40% of chronic illness can be prevented and that 25% of all direct medical costs are attributable to a small number of risk factors such as smoking, obesity, physical inactivity, and poor nutrition (Mirolla, 2004). Based on this information, it is not unreasonable to assume that Canada's high rates of chronic illness can be reduced through concerted health promotion initiatives that reduce risk behaviours and conditions (Mirolla, 2004).

At the request of the Public Health Agency of Canada (PHAC), the Community Health Nurses of Canada (CHNC) undertook a literature review and held a series of focused discussions with public health nurse leaders[1] from across Canada to identify best and promising comprehensive and integrated public health nursing practices directed at chronic disease prevention.

Definitions

For the purposes of this project, the focus was on primary prevention activities using the following descriptions of primary, secondary and tertiary prevention (Mirolla, 2004, p 28).

> **"Primary prevention** refers to actions that prevent disease from occurring and reduce its incidence. These actions occur before the onset of disease and include health promotion and protection. They include immunization, fluoridation of water, smoking cessation, regular physical activity, good nutrition, and a wide range of government regulations such as pollution controls, occupational safety requirements, and food safety inspections."
>
> **"Secondary prevention** involves early detection of disease that can minimize or interrupt its progression and thereby prevent irreversible damage. It includes Pap smears, blood pressure check-ups, mammograms, and other forms of screening. Primary and secondary prevention can be closely related: For example, secondary prevention of hypertension can be primary prevention of strokes."
>
> **"Tertiary prevention** refers to the control of a disease that has already developed, slowing its progress and reducing the resultant disability. Tertiary prevention may include both drug treatments and actions like physical activity and good nutrition that can help control heart disease and hypertension. While some aspects of tertiary prevention are an extension of curative treatment, others may be identical to primary preventive actions."

[1] The public health nursing leaders "focused discussions" included 14 public health nurses and one non-nurse expert in the area of chronic disease prevention.

Additionally, the following descriptions of comprehensive and integrated were used (Partnership for Prevention, 2005):

Comprehensive approaches:

- Address the leading causes of death and disability (cardiovascular diseases, diabetes, cancer, and chronic respiratory disease)
- Address the major risk factors (physical inactivity, obesity, poor nutrition, and substance use)
- Take into account health disparities in populations and their predisposing factors, such as socioeconomic status
- Reach the general population as well as targets high-risk and priority populations
- Use a settings approach to reach people where they can be found (schools, work sites, recreation areas, and faith and health care settings)

Comprehensiveness asks:

- Are you focusing on all the issues in your community to prevent chronic disease?
- Are you reaching all primarily affected populations in your area?
- Are you working on eliminating the primary risk factors in your area?

Integrated approaches:

- Are more about process then scope
- Provide opportunities for programs to work together, promote collective thinking and problem solving, and support working together in new ways so that the impact of all programs is improved

The Burden of Chronic Disease in Canada

Four types of chronic disease – cardiovascular disease, cancers, chronic obstructive pulmonary disease, and diabetes – account for nearly three- quarters of all deaths. Cardiovascular disease (heart disease, stroke, and atherosclerosis) accounted for 35% of all deaths and cancer accounted for 29% of all deaths. Based on estimated percentages, the medical care costs for people with chronic diseases account for 42% of total direct medical care expenditures, or $39 billion a year in Canada. (Mirolla, 2004, Health Canada, 2002).

Because cancer and heart disease kill so many at an early age, the indirect costs of chronic illness due to productivity losses are particularly high, accounting for over 65% of total indirect costs – $54.4 billion annually.

Epidemiological studies indicate that 25% of all direct medical costs – or nearly $9.7 billion are attributable to four modifiable health risk behaviours: lack of physical activity, poor nutrition, tobacco use, and excessive alcohol consumption (Goetzel, 2001). Action to prevent these major chronic diseases should focus on controlling the key risk factors in a well- integrated manner (WHO, 2002).

Literature Review

The literature review included a review of research and grey literature to identify comprehensive and integrated public health nursing best practices for primary prevention of chronic diseases that address the social determinants of health and risk factors such as tobacco, diet, exercise and substance use at multiple levels and with multiple stakeholders. In total 17 peer-reviewed articles met the screening criteria and nine unpublished reports met the criteria. A copy of the literature review can be found in Appendix A.

General Findings from the Literature Review

1. Public health nurses "*seek to promote health and prevent diseases and disability though population focused, inter-disciplinary program planning, intervention and evaluation"* (Price, 2008, p 22).

2. Public health nursing roles are based on the foundations of public health practice, which means public health nursing practice:
    - Focuses on entire populations and sub-populations
    - Is guided by assessment of population health status
    - Considers the broad determinants of health
    - Considers all levels of prevention, with a focus on primary prevention
    - Considers all levels of practice including; community focus, systems focus and individual/family focus (CPHA, 2010)

3. Chronic disease prevention interventions usually fall into one of 3 categories:
    - Activities that target a condition (diabetes, cardiovascular disease, cancer, respiratory diseases)
    - Activities that target a risk factor (diet, physical activity, tobacco use, alcohol/substance use)
    - General health promotion activities such as to promote healthy lifestyle and creating supportive environments.

4. Chronic diseases are multifaceted and as such require a multifaceted approach for prevention.

5. Public health nursing interventions aimed at chronic disease prevention:
    - Often fail to go "beyond traditional health education activities aimed at an individual target" (Richard et al., 2010)
    - Include screening, case finding, referral, active follow-up and early diagnosis
    - Integrate chronic disease prevention more commonly by risk factor (e.g., obesity, tobacco) than by disease entity

6. Health promotion and prevention activities that focus on an aggregate or population have several of the following common characteristics:
    - They have PHN leadership and coordination
    - They are based on partnerships with others [clients, other health professionals, other sectors, communities]
    - They are based on engagement that is culturally sensitive, relational, on clients' turf, and theory-based (e.g., TTM)
    - They move beyond health education (which is still important in terms of developing awareness and personal skills) to creating supportive environments and reorienting health service

7. Recognizing that overlaps exist between interventions, and public health nursing's contribution towards the primary prevention of chronic diseases can be themed as follows:
    - Innovative partnerships
    - Creative community based Interventions
    - Outreach/Linking
    - Policy development and implementation
    - Settings/Context in which services were offered (home, community, schools, workplaces, clinical settings)

8. Research indicates that the built environments profoundly impact health risks, behaviours and outcomes of a population. More specifically, recent evidence has found "connections between the built environment and physical activity, nutrition and obesity, air and noise pollution exposure, traffic crash risk, water quality, mental health and community social networks. In general, a planning and development scheme that concentrates growth and creates mixed-use, pedestrian friendly neighbourhoods has been found to be associated with improved health outcomes."(City of Calgary, 2008, p 1).

Though there appears to be very little documented in the literature, CHNC heard from its members that public health nurses are involved in practices that contribute to the prevention of chronic diseases. For this reason, focused discussions were organized to obtain feedback from public health nursing leaders.

Focused Discussions with Public Health Leaders Across Canada

The Community Health Nurses of Canada identified leaders in public health nursing from across Canada who were invited to participate in a series of focused discussions to identify best and promising Public Health Nursing practices that emphasize the primary prevention of chronic diseases with a focus on the prevention of cardiovascular disease, diabetes, cancer, and chronic respiratory disease (COPD).

To guide the focused discussions, a set of questions was developed through an iterative process with the CHNC chronic disease project (CDP) working group. These questions were provided to the participants ahead of time along with a request to complete and submit their responses prior to the scheduled dialogue. A copy of the dialogue questions can be found in Appendix B.

Although every effort was made to obtain representation from all provinces, some were not represented. See Figure 1 Provincial Representation.

Figure 1 – Provincial Representation

British Columbia	2
Alberta	0
Saskatchewan	1
Manitoba	1
Ontario	3
Quebec	0
New Brunswick	1
Nova Scotia	0
Prince Edward Island	3
Newfoundland/ Labrador	3
Northwest territories	1
Nunavut	0
Yukon	0

In total four focused discussions were held. A limitation of the focused discussions is that they were limited to a small number of public health nursing leaders.

General Findings from the focused discussions

There are extreme regional variations across the country with some public health nurses solely focusing their work at the individual, family level while others focus their efforts on community development and policy interventions.

In some jurisdictions, chronic disease prevention programs and their funding do not fall under public health but rather they fall under other program streams (i.e. Chronic Disease Prevention, Healthy Living etc.). For example: In Ontario these types of programs fall under public health while in Alberta they do not.

It is clear that public health nursing integrated and comprehensive interventions must move beyond focusing at the individual level to a broader population health approach for chronic disease prevention to achieve sustainable and long-term effects.

The lack of information related to public health nurses and chronic disease prevention in the literature may be due in part to the fact that:

- Public health nurses work in partnership with others and thus public health nursing activities are rarely cited specifically as public health nursing interventions
- Public health nurses are "busy doing the work" and aren't taking the time to report or publishing their findings
- Public health nurses don't use language that reflects the chronic disease prevention work they do

While some of the interventions did not meet the definitions of being "integrated and comprehensive" it is important to note that the collateral effects of some could be considered comprehensive and somewhat integrated despite the fact that they were not initially designed that way. For example tobacco reduction initiatives often include broad health promotion activities such as physical activity promotion and healthy eating.

Additionally, the collation of singular regional interventions targeting single risk factors or conditions, when considered as a whole, could loosely meet the inclusion definition of being comprehensive however they do not meet the definition of integrated.

Public health nurses are well prepared and have the expertise to play a key role in the prevention of chronic diseases because they:

- Possess the necessary knowledge and skills
- Are able to apply evidence to practice
- Focus on population health
- Have the trust of the community
- Integrate approaches

- Are effective in developing community relationships and partnerships
- Have access to high risk population
- Work across the life span
- Work in multiple settings

Public health nurses and public health organizations often face the following barriers:

- Lack of capacity and competing demands
- Limited resources – both human and financial
- Governments have not traditionally prioritized funding for disease prevention and health promotion activities
- Systemic limitations – e.g. Historical public health mandate and shrinking budgets to meet that mandate
- Poor role definition – Chronic disease prevention is not explicit in role expectations of public health nurses
- Limited education and continuing professional development – There is a need for ongoing educational opportunities to improve skills, particularly in policy development work
- Program evaluation is often limited to process evaluation and not outcome evaluation

Participants provided numerous examples of public health nursing interventions that support the prevention of chronic disease but did not meet the inclusion criteria. A summary of these examples can be found in Appendix C.

A summary of the responses that were received from the focused discussions can be found in Appendix D.

Best and Promising Practices

As an outcome of the literature review and focused discussions, the following integrated and comprehensive public health nursing chronic disease prevention interventions met the inclusion criteria:

Breastfeeding Promotion/ Baby Friendly Initiatives as described by *The Baby Friendly Initiative* (BFI)

BFI is a WHO/UNICEF international program overseen by the Breastfeeding Committee for Canada in collaboration with provincial and territorial breastfeeding committees. BFI has been implemented in numerous health units in Ontario and BFI designated "Baby Friendly" settings exist in Ontario, Quebec, Saskatchewan and British Columbia. BFI is comprehensive, integrated, multifaceted and evidence based. This initiative, championed by public health nurses, supports the development and implementation of policies and practices across settings (hospital, home, community) that create supportive environments designed to increase breastfeeding rates including initiation,

exclusivity to 6 months and sustained breastfeeding for 2 years or beyond. Breastfeeding leads to a significant reduction in obesity, overweight and type 2 diabetes and there is a link between breastfed babies and both lower systolic blood pressure and lower cholesterol later in life (WHO, 2007). Breastfeeding has also been associated with the amelioration of the negative effects of the social determinants of health. "Breastfeeding has been referred to as "a natural safety net" because of its mediating effect on the determinants of health" (OPHA, 2007, p 5). Public Health nurses are actively involved in encouraging breastfeeding and work closely with new moms during the postpartum period to promote initiation and continuation of breastfeeding.

Comprehensive School Health Initiatives

As described by the Healthy Learners in School Program (New Brunswick); the "Healthy Schools Strategy (Ontario)" and the Quality School Health Initiative (Prince Edward Island):

Public health nurses are assigned to work with the schools and school communities on primary prevention interventions using a comprehensive school health approach. Comprehensive School Health is an internationally recognized framework that supports improvements in educational and health outcomes in a planned, integrated and holistic way (Joint Consortium for School Health, 2007). It is a comprehensive health promotion approach that improves health (Stewart-Brown, 2006) and improves educational outcomes (Murray, Low, Hollis, Cross & Davis, 2007).

The following four distinct and inter-related pillars provide the foundation for comprehensive school health approach:

- Teaching and Learning – High quality instruction to help students develop the required skills to improve health and well being
- "Social and Physical Environments"– A supportive social and physical environment that supports the emotional well being and safety of the students (buildings, grounds, play space, equipment etc.)
- Partnerships and Services – Supportive relationships within the school, between schools, with families and others community organizations
- Healthy School Policies – Rules, procedures and policies that promote health and well being

Public health nurses work with multi-stakeholder "school health" teams to:

- Assess the health needs of an individual class, school or greater school community
- Develop strategies or "action plans" to address identified health issues
- Assist in carrying out planned activities with school partners using best practices and research
- Evaluate the success of planned activities

Key Components of a Chronic Disease Prevention Framework for Public Health Nurses

After reviewing the literature and consulting with public health nursing leaders, it was determined that a chronic disease prevention framework outlining the role of public health nurses currently does not exist, however a number of general chronic disease prevention frameworks do exist. The following is a list of the frameworks that were identified:

- Primary Prevention *of* Chronic Diseases in Canada: A Framework for Action. Chronic Disease Prevention Alliance of Canada, 2008
- A strategy to prevent chronic disease in Europe. A focus on public health action The CINDI vision. WHO, 2004
- A Framework for a Provincial Chronic Disease Prevention Initiative. An integrated approach. British Columbia, 2003
- Behaviour change at population, community and individual levels. National Institute for Health and Clinical Excellence, 2007
- The Simcoe County Healthy Living Strategy: An Integrated Approach, 2005

A brief summary of these frameworks can be found in Appendix E.

Based on the results of the literature review and the feedback that was received from the focused discussions, the following elements were identified as key components for an integrated and comprehensive chronic disease prevention framework for public health nursing:

Population Health Focus:

- Interventions focused on the determinants of health.
- Equity promotion

Healthy Public Policy:

- Encourage and support community-based advocacy for healthy public policy at all levels and in all sectors

Supportive Environments:

- Comprehensive school health
- Baby Friendly Initiative
- Outreach and linking interventions
- Create environments that support healthy lifestyle choices across life stages

Community Action:

- Community development and capacity building to strengthen community action
- Support more community driven programs
- Creative community based interventions (community level)

Development of Personal Skills:

- Mental health promotion
- Physical activity
- Healthy nutrition
- Breastfeeding support
- Personal empowerment
- Resiliency training

Re-orientation of Health Services/Resources:

- Focus on reallocating resources that are currently assigned for tertiary care to primary prevention.
- Re-examine the benefits of the Generalist PHN role – so interventions can have continuity over the life span and across settings
- Early detection and screening

Evidence Based Practice

- Evaluate current and new practices
- Address the issue of focusing only on short-term results
- Publish results
- Engage in research activities

Settings and Contexts

- Provide services and interventions across multiple settings and contexts

Partnerships and Collaboration

- Collaborative Practice and partnerships across disciplines and settings that support continuity and sustainability to positively effect change
- Innovative partnerships

Conclusion

After reviewing the literature and consulting with public health nursing leaders, it is evident that despite the fact that a chronic disease prevention framework for public health nurses does not currently exist, public health nurses do play an important role in the development, implementation and evaluation of comprehensive integrated interventions that prevent chronic diseases (including cardiovascular disease, diabetes, cancer and respiratory conditions and that address the social determinants of health that impact individuals, families, groups, communities, populations and systems.

In the course of their work, public health nurses implement population based programs and services that promote health however they do not publish and share their work enough nor do they appear to use language that reflects chronic disease prevention as part of their health promotion work.

Recommendations

1. It is recommended that CHNC partner with PHAC to develop a national framework that outlines the role of public health nurses in the prevention of chronic disease that purposefully links the work that PH nurses are already doing in the area of maternal child, early childhood and school health.

2. It is recommended that public health nurses:
    - Adjust their language to better reflect the chronic disease prevention work they are doing
    - Report and publish the results of their work
    - Advocate for; and continue to participate in, chronic disease prevention activities
    - Use the Canadian Community Health Nursing Standards of Practice (CHNC, 2011) and the Public Health Nursing Discipline Specific Competencies (CHNC, 2009) to advance their practice in the area of chronic disease prevention.

As public health nurses become more assertive in articulating their role in chronic disease prevention, it is anticipated that a clearer picture of public health nursing best practices aimed at the prevention of chronic diseases will emerge in the literature and practice.

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Appendix A - Literature Review

Public Health Nursing: Integrated Approaches to Chronic Disease Prevention

Introduction

In times when cost controls threaten to change the roles of public health nurses it is crucial to be able to articulate the unique contributions of public health nursing in relation to primary prevention of chronic diseases (Olson-Keller, Strohschein, & Schaffer, 2011).

This literature review was undertaken to identify comprehensive and integrated public health nursing best practices for primary prevention of chronic diseases that address the social determinants of health and risk factors such as tobacco, diet, exercise and substance use at multiple levels and with multiple stakeholders.

For the purpose of this review the following descriptions (Partnership for Prevention, 2005), were used to define the concepts of comprehensive and integrated as they relate to the prevention of chronic diseases:

Comprehensive approaches:

- Address the leading causes of death and disability (cardiovascular diseases, diabetes, cancer, and chronic respiratory disease);
- Address the major risk factors (physical inactivity, obesity, poor nutrition, and substance use);
- Take into account health disparities in populations and their predisposing factors, such as socioeconomic status;
- Reach the general population as well as targets high-risk and priority populations
- Use a settings approach to reach people where they can be found (schools, work sites, recreation areas, and religious and health care settings).

Comprehensiveness asks:

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- Are you reaching all primarily affected populations in your area?
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Integrated approaches:

- Are more about process then scope
- Provide opportunities for programs to work together, promote collective thinking and problem solving, and support working together in new ways so that the impact of all programs is improved.

Literature Review Process

This literature review included a review of research and grey literature (unpublished reports) on public health nursing interventions for comprehensive integrated individual, family, group, community, populations and systems levels of primary prevention of chronic diseases including cardiovascular disease, diabetes, cancer and chronic respiratory diseases (COPD) that address social determinants of health and risk factors using multiple stakeholders at multiple levels.

The CINAHL nursing databases, the 'Canadian Health Research Collection', 'health-evidence.ca', Health Source: Nursing Academic Edition' were searched using the search terms ("public health nursing" OR "community health nursing") AND ("chronic disease prevention" OR "premature chronic disease"). With the Canadian Health Research Collection the additional focused search terms were available for selection among a number of health-related terms and were added to the stated search terms: "nursing" OR "prevention and control" OR "public health" OR "chronic diseases" OR "chronic disease" OR "prevention".

In addition to the electronic database search a ten-year hand search was undertaken of the Journal of Community Health Nursing and the Public Health Nursing Journal. Finally, additional, non-peer reviewed documents and articles were provided by the CHNC Advisory Committee. The search was limited to citations printed in English. A screening tool was used to review the selected articles for inclusion or exclusion (see appendix 1). In total 17 peer-reviewed articles and 9 unpublished reports were identified. See reference list.

Inclusion criteria:
Articles were included if they were primarily concerned with aspects of public health/community health nursing related to integrated approaches for the prevention of chronic diseases with activities either directed at the primary prevention of cancer, cardiovascular disease, respiratory disease (COPD) and diabetes or the related risk factors of tobacco use, diet, exercise or substance use.

Exclusion criteria:
Articles were excluded if they did not include public/community health nursing and primary prevention. Articles were also excluded if they did not focus on diseases or related risk factors.

General Findings:

1. Public health nurses "*seek to promote health and prevent diseases and disability though population focused, inter-disciplinary program planning, intervention and evaluation"* (Price, 2008, p 22).

2. Public health nursing roles are based on the foundations of public health practice, which means public health nursing practice:
    - Focuses on entire populations and sub-populations
    - Is guided by assessment of population health status
    - Considers the broad determinants of health
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    - Activities that target a condition (diabetes, cardiovascular disease, cancer, respiratory diseases);
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    - General health promotion activities to promote healthy lifestyle.

4. Chronic diseases are multifaceted and as such require a multifaceted approach for prevention.

5. Public health nursing interventions aimed at chronic disease prevention:
    - Often fail to go "beyond traditional health education activities aimed at an individual target". (Richard et al., 2010)
    - Include screening, case finding, referral, active follow-up and early diagnosis.
    - Integrate chronic disease prevention more commonly by risk factor (e.g., obesity, tobacco) than by disease entity.

6. Health promotion and prevention activities that focus on an aggregate or population have several of the following common characteristics:
    - They have PHN leadership and coordination
    - They are based on partnerships with others [clients, other health professionals, other sectors, communities]
    - They are based on engagement that is culturally sensitive, relational, on clients' turf, and theory-based (e.g., TTM)
    - They move beyond health education (which is still important in terms of developing awareness and personal skills) to creating supportive environments and reorienting health service.

7. Recognizing that overlaps exist between interventions, public health nursing's contribution towards the primary prevention of chronic diseases can be themed as follows:
    - Innovative partnerships
    - Creative community based Interventions
    - Outreach/Linking
    - Policy development and implementation
    - Settings/Context in which services were offered (home, community, schools, workplaces, clinical settings)

Public Health Nursing Contribution

Innovative Partnerships

Innovative and multisystem community partnerships for the prevention of chronic diseases are described as an important aspect in the literature. Teamwork and partnerships with the community, health, medicine and business create an environment in which the prevention, early detection and treatment can successfully occur. (Constance et al., 2002; Kane, 2008; Lashley, 2007). Partnerships are predicated on a multidisciplinary collaborative practice model that can be replicated and are cost effective with the intervention being delivered where the client is at (school, community, seniors centers etc. (Nunez, Armbruster, Phillips, & Gale, 2003; Valde, 2011; Paniagua, Reilly, Evans, & Bond, 2011).

Public health/primary care partnerships have specifically been identified as an important intervention. Risk of chronic diseases and acquisition of chronic diseases is a continuum. Ever growing caseloads of primary care providers and current approaches to prevention of chronic disease in primary care can be fragmented, costly and inefficient (Vollman, 2004). While primary care providers have a genuine concern and play a very important role in chronic disease prevention, clients identify challenges to accessing primary care services (Paniagua et al., 2011). Collaborative relationships between primary care and public health with effective referral and follow-up methods support the delivery of community-based CDP strategies (Paniagua et al., 2011).

Creative Community Based Interventions

Public Health nurses have particular roles and skills in community based interventions for the prevention of chronic diseases. Clients are often seen in their own homes over a period of time providing an excellent opportunity to offer brief interventions and enhance motivation though repeated contacts (Laws et al., 2010; Provincial Council for Maternal and Child Health, 2010). Implementation of brief interventions is enhanced through the integration of standard screening tools into nursing assessment forms (Laws et al., 2010). Community nurses have a role in supporting the use of chronic disease

prevention tools with every client interaction (Chalmers et al., 2001; Groner, & French, 2005; Ontario Agency for Health Protection and Promotion, 2010). Public Health nurses practice in the community and have the advantage of being able to intervene in multiple settings/contexts in which services can be offered.

Outreach/Linking

The role of public health nurse delivered community based outreach services is a strong theme in the literature. A number of articles identify outreach/linking for screening, social marketing for early identification (case finding) and referral with intentional/planned follow-up as important PHN interventions (Lashley, 2007; Lucky et al., 2011; Kane, 2008; Paniagua et al., 2011; Price, 2008). Public health nurses use culturally competent relationship building for community engagement (Price, 2008) to support the development of human environments conducive to behaviour change (Kneipp et al., 2011; Marutani & Miyazaki, 2010). Public Health nurses work with their clients where they are. Public health nurses create environments that support clients to develop personal skills through advocacy and empowerment (enabling interventions) while simultaneously considering both risk and capacity (Sanders, Schneifderman, Loken, Lankenau, & Bloom, 2009; O'Reilly, Cara, McKean, Stellmach, 2010; Browne et al., 2010).

Policy Development and Implementation

Public health nurses have an important role in policy development and implementation (Price). The literature identifies the significant role that public health nurses play in guiding and supporting community action for the development and implementation of tobacco reduction policies (Thompson, Zinkan-McKee, Fox, 2008; McCammon-Tripp & Stitch, 2010).

Settings/Context

Nurses provided services and intervention across multiple settings and contexts. Excellent examples of effective PHN intervention directed at chronic disease prevention are occurring in homes (Browne, Doane, Reimer, Macledo, & McLellan, 2010; Groner & French, 2005; Kneipp et al, 2011; Laws et al., 2010), community settings (Constance et al., 2002; Lashley, 2007; Lucky, Turner, Hall, Lefaver, & deWerk, 2011; Kane, 2008; Paniagua et al., 2011), schools (Trim, 2011; Stitch & Thompson, 2009) and seniors settings (Nunez et al., 2003). Public Health nurses also have an important role in advocating for, referring to, role modeling and supporting workplace and community based activities designed to improve personal wellness.

Conclusion

Public health nurses are ideally situated to promote community well being and play an important role in the development, implementation and evaluation of comprehensive integrated interventions for primary prevention of chronic diseases (including cardiovascular disease, diabetes, cancer and respiratory conditions) that focus on the social determinants of health and risk factors (such as tobacco, diet, activity, and substance use.

At this point, the literature does not present a great deal of information about public health nursing comprehensive and integrated approaches to chronic disease management. This may be due in part because public health nurses are invisible in the literature and are often not acknowledged despite being an integral part of the team.

As public health nurses become more assertive in articulating their role in chronic disease prevention, it is anticipated that a clearer picture of public health nursing best practices aimed at the prevention of chronic diseases will emerge.

Literature Review - Appendix 1 – Screening Tool

Does this intervention include:

- ☐ Public/community health nursing?
- ☐ Other disciplines besides nursing?
- ☐ Other sectors besides health?
- ☐ Community-based processes?
- ☐ Other _____

Where does the intervention take place?

- ☐ Canada (Province_____)
- ☐ US
- ☐ UK Australia/New Zealand
- ☐ Other: _____

What determinants of health does this intervention address?
[http://www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php#key_determinants]

- ☐ Income and Social Status
- ☐ Social Support Networks
- ☐ Education and Literacy
- ☐ Employment/Working Conditions
- ☐ Social Environments
- ☐ Physical Environments
- ☐ Personal Health Practices/ Coping Skills
- ☐ Healthy Child Development
- ☐ Biology and Genetic Endowment
- ☐ Health Services
- ☐ Gender
- ☐ Culture

What action of the Ottawa Charter does this project address?
[http://www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf]

- ☐ Build healthy public policy
- ☐ Reorient health services
- ☐ Develop personal skills
- ☐ Strengthen community action
- ☐ Create supportive environments

What health conditions does this intervention address?

- ☐ Diabetes
- ☐ Cancer (Type_____)
- ☐ Respiratory disease
- ☐ Cardiovascular disease

What risk factors does this intervention address?

- ☐ Diet/healthy eating/healthy weight
- ☐ Exercise/healthy activity
- ☐ Tobacco
- ☐ Alcohol/substance use

Was this project evaluated?

- ☐ Yes
- ☐ No
- ☐ Unclear

Comments:

Appendix B – Dialogue Questions

Dialogue about PHN interventions that address the prevention of chronic diseases

Introduction:

Thank you for agreeing to provide your thoughts about comprehensive and integrated public health nursing interventions that address the prevention of chronic disease.

Definitions:

A comprehensive approach to chronic disease prevention:

- Addresses the leading causes of death and disability (cardiovascular diseases, diabetes, cancer, and chronic respiratory disease);
- Addresses the major risk factors (physical inactivity, obesity, poor nutrition, and substance use);
- Takes into account health disparities in populations and their predisposing factors, such as socioeconomic status;
- Reaches the general population as well as targets high-risk and priority populations
- Uses a settings approach to reach people where they can be found (schools, work sites, recreation areas, and religious and health care settings).

Comprehensiveness asks,

- Are you focusing on all the issues in your community to prevent chronic disease?
- Are you reaching all primarily affected populations in your area?
- Are you working on eliminating the primary risk factors in your area?

Integration (more about process then scope)

- Provides opportunities for programs to work together, promotes collective thinking and problem solving, and supports working together in new ways so that the impact of all programs is improved.

Partnership for Prevention (2005). *Comprehensive and Integrated Chronic Diseases Prevention: Action planning handbook for states and communities.*

Questions:

1. What comprehensive and integrated public health nursing practices are you aware of that focus on the prevention of chronic disease?

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province	Contact Person and Contact Information

2. In your opinion, what comprehensive and integrated public health nursing practices that focus on the prevention of chronic disease are not being offered by public health nurses but should be offered by public health nurses?

3. Why should public health nurses be involved in comprehensive and integrated public health nursing practices that focus on the prevention of chronic diseases?

4. What are the advantages of having public health nurses involved in comprehensive and integrated public health nursing practices that focus on the prevention of chronic diseases?

5. What are the barriers that public health nurses face related to becoming involved in comprehensive and integrated public health nursing practices that focus on the prevention of chronic diseases?

6. What strategies do you suggest be undertaken to overcome these barriers?

7. How would you define the ideal role of public health nurses in relation to the prevention of chronic diseases? (i.e.; Your vision of public health nursing best practice)

8. Please include anything else you would like to add here:

Appendix C - Examples of Chronic Disease Prevention Interventions

What follows is a list of example of chronic disease prevention interventions, identified through the dialogues that public health nurses (and/or collaborative teams) are involved in. It is not an exhaustive list, but presents examples form across the country.

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
Review/input to municipal official plans	PHNs review draft planning documents from municipalities re development with their jurisdiction and participate in various committees of council	Evidence base re built environment impacts on health; municipal plans revised to incorporate feedback	Ontario
Active Transportation	Work with municipalities to promote active transportation planning; workshops on policy development; participate in committees of council; feedback on Master Transportation plans	Evidence based – built environment	Ontario
How Many Drinks Campaign	Social media campaign promoting low risk drinking guidelines	Participants answered questions based on postings to the blog and following links provided to other information	Ontario
Advocacy to limit density of alcohol outlets and changes to the Liquor Licensing Act	Advocacy to government through Board of Health to influence policy decisions	Based on best practice evidence	Ontario
Municipal and golf course alcohol policies	Work with local municipal governments and golf courses to effect policy which defines “the rules” related to serving and consumption of alcohol in/on their premises	Based on best practice evidence	Ontario
Minimal Contact Intervention (MCI) an Intensive smoking cessation	Nurses provide MCI interventions with clients; follow-up with in-depth counseling when client is ready, offered in a location acceptable to the	Evidence based (RNAO BPG); evaluation is in the final planning	Ontario

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
counseling	client; work with prenatal and clients with young children	stages	
Smoke-free outdoor spaces	Work with municipalities to establish bylaws for smoke-free parks and recreational spaces	Evidence based – child/youth prevention, role modeling, social norms; emerging evidence re outdoor exposure to second hand smoke	Ontario
Ontario Nursing Best Practices Smoking Cessation National Initiative	The project was based on a multi-pronged approach to support nurses and organizations in the implementation of smoking cessation best practices through knowledge exchange, role modeling and mentoring as well as dissemination and use of the RNAO resources, including the RNAO Smoking Cessation Best Practice Guideline (SC BPG), TobaccoFreeRNAO.ca website, the Implementation Toolkit, Champions Network, and the RNAO e-Learning course.	Evaluated	Ontario
Healthy Schools	Comprehensive school health and Youth engagement approach used to involve youth in creating messaging, campaigns and tools that support youth prevention related to six common risk factors associated with chronic disease	Evidence based	Ontario
Sun safety/cancer prevention	Official plan review; promotion of use of sunscreen, hats in community channels; Mother's day campaign – promotion of screening for various cancers through hair salons	Best practice based; Mother's Day campaign evaluation	Ontario
Health Connection public health information service	PHNs respond to questions of callers or through email related to various risk factors	Evaluation identifies callers intentions to apply	Ontario

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
		information received through this contact	
Cancer Prevention and Screening: Toronto Public Health: Engaging Seldom or Never Screened Women in Cancer Screening	Toronto Public Health (TPH) works in collaboration with community partners to coordinate services and develop consistent messaging, as well as advocate for inclusion of cancer prevention and screening messages in the development of TPH programs, services, and products.		Ontario
Perinatal Tobacco Cessation And Protection Project *Working with midwives in Simcoe Muskoka*	Working with health professionals and community stakeholders are priority items on the CDP – Tobacco Program Operational Plan. Health professionals are in a position to identify and counsel people who smoke or are at risk because of exposure to secondhand smoke. The prenatal population is of particular concern because of the risks posed to mothers, fetuses and babies related to tobacco use. Midwives are health professionals who work directly with the prenatal population.	Report of findings	Ontario
Comprehensive Youth Pilot Project (Comprehensive School Health)	The aim of the CYPP was to engage pre-teen youth in action for health within their school community. In essence, the project mobilized grades six to eight youth, listened to their views on their school community's strengths and concerns, and involved them in planning action with adults (e.g., administration, teachers, parents, and relevant community partners) on a school health team/committee. The project focused on enhancing individual and school resiliency and was underpinned by the principles of the Comprehensive School Health (CSH) model.	Impact Evaluation March 2009	Ontario

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
Social Media Pilot Project	From draft report to raise awareness among non-problem drinkers about the health impacts of drinking beyond the low-risk drinking guidelines. Social media strategies were designed to build an audience, establish trust and be innovative	Draft project report	Ontario
Celebrating Women: A Cancer Screening Campaign	The intent of the campaign was to encourage women to consider their own health and well being as important as the well being of their families. The campaign targeted 1188 women, and was delivered through 20 beauty salons throughout Simcoe Muskoka.	Evaluation Report	Ontario
Health Promotion Activity	PHNs are involved in health promotion activity on a myriad of topics with clients, groups and populations including prenatal education, child health clinic and preschool health check anticipatory guidance, school health promotion, and community health promotion.	Decrease in childhood obesity rates.	Newfoundland
BURPS	This is a breastfeeding/parent support group for families with children 0-12 months of age. There is a health promotion topic discussed at each, support from a PHN, and parents can mingle with other families with children of a similar age to theirs.	Positive client satisfaction	Newfoundland
Smoking Cessation Programs	Group sessions aimed at providing those wishing to quit smoking with the tools and support to enable success.	PHN's report difficulty in getting a group to participate.	Newfoundland
Community Capacity Building	PHN's work with community groups to identify needs in their community, set priorities and develop action plans. Numerous projects and activities to promote health and provide people	Evaluation information indicates success of many of these projects however it may not indicate	Newfoundland

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
	with the tools to take better care of themselves and their families as a result of these initiatives.	decreases in chronic disease rates as these measurements are generally achieved over a longer term period.	
PARTY Program	This program is offered in schools by PHN's and focuses on the dangers of drinking and alcohol use.	Based on best practice evidence	Newfoundland
Implementation of School Food Guidelines	Efforts are geared toward limiting the foods that are served and/or sold in schools to a master list of foods categorized into serve most/serve moderate categories. Supported by school board policy and government involvement in overcoming the barriers to implementation.	There has been much success with this initiative	Newfoundland
Well Womens Clinics	In these early intervention clinics PHN's perform breast exams and cervical screening as per best practice guidelines.	Evidence based	Newfoundland
Quality School Health	The Quality School Health approach is used to involve students, parents and teachers in identifying school population needs, setting priorities and developing action plans	Evidence based	Newfoundland
Student Summits	High school student summits bring student together to receive health promotion messaging. They can then develop activities back in their schools to spread this messaging.	Best practice based; Mother's Day campaign evaluation	Newfoundland
Fruit and Veggie Campaign	Public Health offers small grants for schools to participate in fruit and veggie days to promote new foods to students	Successful uptake	Newfoundland
Lifestyle Clinics	These are drop-in clinics held on a regular basis where clients can drop in for health monitoring and support on an issue that they have goals set for.	Client satisfaction is positive.	Newfoundland

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
Promotion of Healthy Public Policy	PHN's share evidence based information to encourage healthy public policy in various areas related to healthy lifestyle. I.e. smoke free bars and eating establishments, car seat legislation, bicycle helmet use, etc.	No information provided	Newfoundland
Colorectal Cancer Screening	PHNs promote this cancer screening in communities that have the program PHNs do health promotion teaching to support the program	No information provided	Newfoundland
Diabetes Type 2- It Could be You Project	Partnership with the PHAC to increase awareness of the risk factors associated with diabetes and the effects of this chronic condition. Publication development Distribution of a storybook on diabetes for K-grade 3 students Drop the Pop campaign in community youth networks in the region.	Evaluation data available as per requirements of the PHAC funding agreement.	Newfoundland
School Health Liaison Consultants	These consultants support the Healthy Students Healthy Schools initiative with the regional school district.	Most schools have implemented school food guidelines and are developing other healthy students' policies.	Newfoundland
Healthy Baby Clubs	Prenatal Education and support for vulnerable women.	Improved breast feeding initiation rates Moved low birth weight rates to equal that of the general population.	Newfoundland
Healthy Beginnings, Child Health Clinics & Health Check Preschool Clinics	Health promotion messages related to healthy eating and promotion of physical activity are woven through these home visiting and clinic programs.	Limited formal evaluation.	Newfoundland
2010-11 Healthy Choices Initiative	Programming in the areas of: Healthy eating	No information provided	Northwest Territories

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
for Children and Youth	Tobacco Physical Activity Injury Prevention Sexual Health Addictions and mental Health		
Health Promotion Fund	Fund available to organizations that would like to improve and promote the health of infants, children, youth and or pregnant women and their families.	No information provided	Northwest Territories
Healthy Learners in School Program	In each school district - at least one nurse assigned to work with the schools and school communities in their area. Use the Comprehensive School Health Model Focus on primary prevention	No information provided	New Brunswick
New Brunswick Wellness Grants	Grants that are available to schools in the province. Many Public Health Nurses working at the School District Level coordinate these and sit on school committees Organize a team which includes students, teachers, and parents and uses a comprehensive model to identify needs based on school data Tobacco Free Living, Physical Activity, Healthy Eating Mental Fitness	Doing things in these for areas will help prevent Chronic Diseases	New Brunswick
Mango- Horizon Health Network exists (only in Miramichi New Brunswick)	Work with community partners to identify needs and develop, implement and evaluation initiatives/programs to improve the health of the residents of the communities Initiatives of these community groups are aimed at increasing physical activity and improving eating behaviours to in turn reduce rates of obesity and lead to prevention of	No information provided	New Brunswick

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
	various chronic diseases.		
New Brunswick Wellness Strategy	The Department of Wellness Culture & Sport, along with input from with various stakeholders developed a provincial wellness strategy for 2009-2013. Identifies 4 areas of wellness and supports the people of New Brunswick in initiatives and various programs, which will lead to better health of our population and the prevention of chronic diseases.	No information provided	New Brunswick Sport
Policy 711 Healthy Eating in New Brunswick Schools	Implemented by the Department of Education 2005. Public Health nurses as well as Public Health Dieticians were involved extensively with the development and implementation of this policy and continue to be. This policy supports ongoing work in schools to create more healthy foods being available to the students of New Brunswick.	No information provided	New Brunswick
School Pedometer program grants/programs	This grant is available to New Brunswick Schools through funding from the Department of Wellness Culture and Sport. Focuses on getting students and community members active. This grant program is often coordinated by the Public Health Nurse working in the school district	No information provided	New Brunswick
Join the Wellness Movement	This initiative kicked off in the fall and runs until February 29th It encourages individuals, schools and community groups to commit to doing something to improve their health in one of the 4 areas identified in the NB Wellness Strategy. Rallies were held in various communities around the province encouraging all community members	No information provided	New Brunswick

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
	to be involved.		
HEPAC The Health Eating Physical Activity Coalition was established in 2003 A network of member organizations from around the province that have a stake in health and wellness.	Through the support of local wellness networks, HEPAC will help To strengthen the ability of BBs to impact the wellness levels in their own communities.	No information provided	New Brunswick
The Baby Friendly Initiative	BFI is a WHO/UNICEF international program overseen by the Breastfeeding Committee for Canada in collaboration with provincial and territorial breastfeeding committees. In Ontario, the BFI has been implemented in numerous health units and is in the planning/development phase process in most other HUs. Comprehensive Multifaceted Evidence based An international set of policies and practices for hospital and community health services to increase breastfeeding rates including initiation, exclusivity to 6 months and sustained breastfeeding for 2 yrs. or beyond http://www.breastfeedingcanada.ca/TheBCC.aspx	It is well known that breastfeeding is associated with decreased rates of obesity, diabetes and cancer. It also has been associated with the amelioration of the negative effects of the social determinants of health.	Ontario
Prenatal education	Individual & group education with a focus on healthy eating & activity, smoking cessation, risk reduction with substance and alcohol exposure, breastfeeding promotion.	Monitor breastfeeding initiation, low birth weight rates, rates of premature birth	Prince Edward Island

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
	Collaboration with/referral to community dietitians, community mental health & addictions & other services as appropriate	Able to track referrals	
Maternal/Newborn home visiting program	Follow-up with all new mothers/babies with a focus on: infant nutrition/breastfeeding support, healthy eating & activity, smoking cessation/ exposure to second hand smoke, risk reduction with substance and alcohol exposure.	Breastfeeding duration rates Able to track referrals	Prince Edward Island
Infant and Preschool program	All children (2,4, 6, 12, & 18 mo. and 4 yrs.) Immunization Assessment of growth & development Nutritional/activity counseling Limiting/ avoiding exposure to second hand smoke & other substances. Collaboration with/ referral to community dietitians, community mental health & addictions & other services as appropriate looking to adopting the WHO growth charts	Breastfeeding duration rates Monitoring growth and dev. Able to track referral	Prince Edward Island
School Health program	Resource to schools at varying levels of involvement depending availability in area Healthy Eating & Active Living, Smoking and other substance use	No information provided	Prince Edward Island
Community health promotion	2 areas have a Health Promotion Nurse/ other areas respond to requests as able Healthy Eating & Active Living, Lifestyle Awareness program, Living a Healthy Life with a Chronic Disease program, Working closely with “GoPEI” active living program	Monitor attendance at programs.	Prince Edward Island
Health	We use The Health Communication	Measurable	Ontario

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
communication plans	Unit's 12 step process to develop and implement health communication plans on various topics: Physical activity, Fruit and vegetable consumption, Quitting smoking etc.)	indicators and targets have been set	
Health Education interventions -	Examples of this: Skill building workshops for physicians regarding the adoption of best practice guidelines for smoking cessation. This workshop aims to provide physicians with tools and resources that will assist them to help their patients quit smoking. Workshops for educators regarding creating a healthy school environment.	Measurable indicators and targets have been set	Ontario
Capacity Building	Work with school communities to identify health issues and build plans to address the health issues.	Measurable indicators and targets have been set	Ontario
Healthy Public Policy	PHN's work on: Smoke free bylaws, Smoke Free Ontario, Develop resources to assist municipalities to develop healthy public policies.	Measurable indicators and targets have been set	Ontario
4A's	PHNs ask every client: Ask about tobacco use Advise consideration of stopping smoking (if a smoker) Assist with moving closer to being ready to quit and/or developing a quit plan Arrange follow-up	When 4A's (or 5As) are used by physicians, increased likelihood (by 30%) that tobacco users will abstain long-term from tobacco use (Fiore et al 2008: http://www.surgeongeneral.gov/tobacco/treating_tobacco_use08.pd	Manitoba

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
		f Advice and support from nurses increased likelihood of successful cessation (Rice & Stead, 2009 : http://summaries.cochrane.org/CD001188/does-support-and-intervention-from-nurses-help-people-to-stop-smoking)	
Dad's group	Address the issue of caring and the lack of caring due to lack of role models. Needing to learn. Meal together Health Topics: Relationships Healthy eating Nutrition Other items	No information provided	Saskatchewan
Outreach with Addictions Services	Three week program, PHNs present on nutrition and addictions & healing	No information provided	Saskatchewan
Living in Balance	Life skills - Depression - Budgeting - Sexual health - Relationships - Physical activity component - Nutrition component and - Other topics	No evaluation Anecdotal feedback is positive	Saskatchewan
Recovery	With Regional Correctional 4 week cycle - Nutrition and recovery - Education about resources	No information provided	Saskatchewan

Name of the Intervention	Summary of the Intervention	Demonstration that the Intervention is Effective in the Prevention of Chronic Disease(s)	Province
Reclaiming our Lives	A program around parenting as well as the determinants of health With a nutrition competent and cooking class Eat together	No information provided	Saskatchewan
"Self Management Support" skills	Project in Kooteneys Focus with health care professionals has been on behavioural aspect of self management Try to have people involved in prevention and use strategies that influence empowerment and skill development and confidence. http://www.self-managementsupport.blogspot.com/	Implementation evaluation has been successful	British Columbia

Appendix D – Feedback from Focused Discussions

Dialogue about PHN interventions that address the prevention of chronic diseases

What follows is the feedback received from participants of the focused discussions, in response to the guiding questions. Additional feedback came from participants' colleagues. Where possible, duplicates have been removed.

In your opinion, what comprehensive and integrated public health nursing practices that focus on the prevention of chronic disease are not being offered by public health nurses but should be offered by public health nurses?

Interventions at the Population level

- Full spectrum of approaches individuals, family counseling, through to community work and policy.
- Provide broader population health approaches to chronic disease prevention
- Built environments – there is not much focus on built environments
- PHNs nurses are not involved to that extent at a broader level if they were thinking/involved more globally they could contribute right for the beginning
- This program requires implementation at an agency level however – not just by PHNs – with knowledgeable support from the managers right down to the clerks
- Targeted social marketing and public education to increase awareness and adherence health promotion and CDP interventions across the social environment, which encompasses public places, primary care office settings, buses, schools, hospitals and other health care settings etc.

Community Focus (Community Development)

- We have distinct geographic locations - set up committees and have community partners to reduce obesity, increase activity
- We should be more community driven and less program driven
- More of a presence in the Community in addition to the Maternal/Child health services
- Engaging a variety of community stakeholders to ensure consistent messaging is delivered
- Other programs we have MANGO (nutrition) they work in smaller sub committees in every –location
- Facilitate in the community

Collaborative Practice / Partnerships across settings

- Collaborating with individuals/community partners to conduct a holistic assessment of the individual/community (brief needs assessment done when clients access some programs, i.e. Prenatal education)

- Initiatives (e.g. the BFI) require a collaborative and integrated efforts between hospital and public health agencies within each community and the involvement of a range of professional groups such as RNs, MDs, NPs, dieticians as well as managers/administrators

Base Practice on Evidence

- Consistent implementation of the evidenced based policies and practices of the Baby Friendly Initiative which includes the 10 Steps to Successful Breastfeeding and the WHO Code of Marketing of Breast milk Substitutes
- Ongoing evaluation of practices and services with their impact in the community Awareness/education campaigns, outreach, alcohol/substance use, diet, activity/exercise

Increased focus on high risk

- Increased involvement with families at high risk for poor child health outcomes
- Increase support to agencies working with vulnerable families
- Capacity issues challenge the ability of PHNs to work in community settings, which provide regular support to vulnerable populations often at higher risk for chronic disease. For example a PHN may as part of her work assignment have a community centre, family resource centre or youth centre. These NGOs often look for PHN involvement that we are not able to support adequately due to the broader demands in the PHN workload

Generalist Role of PHN

- Create adequate resources to balance provision of broad population based health promotion approaches with individual services
- Reallocating/re-dividing the areas
- PH has been program specific – only in early childhood intervention are not working in the comprehensive community approach as MANGO is working very much on the integrated approach
- A more generalist across the age span, across settings
- Incorporate healthy eating and physical activity into all interventions (home visiting etc)

Early detection - screening

School Health - School program working well

Other

- Physical Activity Promotion - Exercise programming for youth and families
- Tobacco prevention
- Healthy eating
- Resilience training for resisting substance use

Why should public health nurses be/what are the advantages of having public health nurses involved in comprehensive and integrated public health nursing practices that focus on the prevention of chronic diseases?

Public Health Nurses…

..have knowledge and skills

- Ability to apply multiple strategies as per the Circle of Health
- Knowledge re: the determinants of health
- They have the knowledge required
- Advantage over health promoters is the ability to exercise the full range of interactions (e.g. counseling, education, activation, referral) with individuals as well as community
- Can make appropriate referrals when needed
- Public health nurses are able to apply knowledge about: the health of populations, inequities in health, determinants of health and illness, social justice, principles of primary health care, strategies for health promotion, disease and injury prevention, health protection and factors that influence the delivery and use of health services
- Skills and trust to increase the likelihood of behavior change

…are population health focused

- With increased capacity have the knowledge and skills to focus in a more comprehensive way on population health focused initiatives at both the neighbourhood and broader community level
- Have the range of knowledge and skills that allow for comprehensive approaches – can work with individuals on specific issues right through to political advocacy

…are trusted

- Nurses have direct contact with the public – are the most trusted professional in the eye of the public and have the broad based scientific and humanistic knowledge, expertise and critical thinking needed to develop and implement health policy and practice.
- Have the trust of the public re health information
- They are trusted to give reliable, accurate information

…can capitalize on integrated approaches

- They provide a wealth of individual services through which chronic disease prevention messages can be woven

…have community relationships / partnerships

- They know their communities and partners

- Public health nurses are respected members of their communities
- Many have excellent facilitation skills to assist with capacity building
- Public health nurses are in a position to recognize that a health concern or issue exists and assess the health status and functional competence of individuals, families, and communities
- They are very connected to community groups
- Have the ability to establish the trusting relationships that are necessary for success
- The public and other partners have a good relationship with PHN's and they are known to provide information that is based on best practice
- Can focus on issues that the community has identified as important to them
- PHNs linked and respected in the community
- They have the community connection
- Know who to call – there is white space between where people are at
- Get buy in quicker because
- PHNs have excellent relationships with their communities
- Have the longest continuous involvement
- These individuals already work in community-based settings and have excellent knowledge about the resources available to support healthy living

…provide access and advocacy

- Are trusted
- Have access to populations, and also to vulnerable populations where these interventions have more chance of making a larger public health impact
- Available to all communities (within resource constraints) – universal coverage
- Public health nurses are in a position to advocate for societal change and healthy public policy and services

…base practice on evidence

- Able to apply evidence and best practice information within daily practice
- This is a major part of population health, which is the heart of public health nursing practice
- Nurses have evidence on their side
- Know what is coming
- PH – keeping abreast of the new way of doing things and we are more able to keep up
- They are seen as a valuable and credible source of information
- Provide current, evidence-based teaching and interventions
- They have access to up to date literature and emerging and best practices

…work across the life span and across multiple settings

- They have the ability to intervene very early through access to prenatal, postnatal and early childhood populations
- Can target families and entire populations with emphasis on preventing chronic illness and promoting healthy lifestyle at an early age
- Have contact with individuals throughout the lifespan to reinforce teaching
- Have a holistic approach

…believe primary prevention is our role

- Is prevention and the optimization of population health and well being not the core of our role?
- Prevention of chronic illnesses provides savings to the health care system.
- Promoting Health
- Building individual and community capacity.
- Building relationships.
- Facilitating access and equity
- Demonstrating professional responsibility and accountability

There is a fiscal argument

- Prevention of chronic illnesses provides savings to the health care system.
- PHNS can support maximizing health and minimizing the expensive treatments that go with chronic illness
- In today's paper – there is news of the governments trying to recover billions in health care costs from tobacco companies
- We could make a similar argument for recovering billions of costs associated with not breastfeeding due to increased rates of both acute and chronic illnesses in infancy and childhood and even beyond the breastfeeding period
- They are a cost effective resource as they are already working in community

What are the barriers that public health nurses face related to becoming involved in comprehensive and integrated public health nursing practices that focus on the prevention of chronic diseases?

Imagine, Dora, a PHN who works in a community centre in a high density, low income housing area, in addition to providing the core Public Health immunization, clinic and home visiting programs, able to respond to her community centres requests for her increased involvement with their local food bank, family resource program and seniors outreach. Imagine the potential opportunities for creating environments and policy, which supports chronic disease prevention. Today Dora is not able to do that because she also has to provide services for a larger neighborhood with an increasing population.

Capacity

- Capacity
- Staffing inadequacies often mean having to make choices about what work the nurses will be involved in day-to-day – difficult to both individual and more broadly based community work

Competing Demands

- Competing demands for services
- Sacred cows – longstanding programs which have not been evaluated that have the potential to be modified to create capacity
- PHNs are challenged to provide broader population health approaches to chronic disease prevention due to inadequate capacity and the competing demands for individual client services, such as immunization and home visiting
- We don't have enough capacity to participate in many of the broader population health approaches and when we do the involvement is inconsistent across the regions/province

Resources

- Lack of resources
- Limited resources/tools to assist with public education
- Example of barrier: As a PHN went into a school district – need to find resources – but no money to purchase resources = lack of commitment for resources – was fortunate because superintendent understood the resource need
- Resources a real barrier – both financial and human
- Time
- Government hasn't put dollars into primary prevention
- We need to have resources available

Systemic limitations

- Some nurses experience constraints re involvement in political action – due to perceived conflict of interest (their own of their employer's view)
- Lack of partners in rural areas
- Working in silos
- The length of time between the intervention and the time it takes to measure effectiveness with chronic diseases
- It would be hard to single out the impact from PH nursing intervention from everything else that is going on in communities
- Often the program is a chronic disease prevention intervention its title smoking cessation or healthy eating – can be hard to tease it out
- The historical mandate for the PHN role and the shrinking budget that goes with the mandate
- At a policy level don't know the role that the PHN can fill
- The priority of governments has not been traditionally focused on prevention

- Prevention is not always a top priority for people
- It is difficult to measure prevention

Role Definition

- Narrow mindedness of our thinking
- Focus primarily on children and youth where chronic disease is often not identified as an issue by families and communities
- Chronic disease is often addressed by home care nurses rather than public health nurses
- Not the traditional role of public health nurses in the province
- There is interdisciplinary misunderstanding about the role of PHNs

Education and Continuing Professional Development

- Need ongoing educational opportunities to hone skills, particularly in policy work
- Lack of professional development opportunities and opportunity for skill/competency development
- Training

What strategies do you suggest be undertaken to overcome these barriers?

Don't think we need thousands of bodies

Government investment in prevention (resources)

- Government emphasis within the health care system needs to shift to prevention and health promotion to support adequate resource allocation – lots of talk but limited investment in this area
- More government awareness of the role of Public Health Nurses
- Government focus on health promotion, prevention, early detection and early intervention with adequate resources allocated for same
- More support given to primary prevention rather than tertiary
- Preventing chronic disease needs to become a priority for governments in order to ensure adequate resources are dedicated towards achieving this.
- Making government aware of primary prevention because harder to measure (difficult to evaluate and put a price tag on it)

Community development and mobilization

- Need to find creative ways to engage and mobilize community members so that the nurse supports political action but is not necessarily in the forefront
- Municipal focus on planning involving public health for input for built environments
- Educating communities about the importance an healthy lifestyle choices at a young age and the impacts this can have on health throughout the lifespan

- Educating – the earlier we start the better
- Have a greater presence in advocating for changes in policies, systems and resource allocation to increase opportunities for health for the community as well effective and efficient use of community health nurse resources
- Participate in outreach activities whenever possible

Education and Continuing Professional Development

- Engage public health nurses to explore how they can seek opportunities/work to expand their role in the Community
- Providing education sessions for PHN to teach them how to include chronic disease prevention in their practice.
- Lots of introductory courses/education on topics, need Level 2, and beyond, educational opportunities to pursue skill development, mentorship opportunities.
- Education to Public Health staff on what their role could be and what it would look like

Evidence Based Practice (research and evaluation)

- Increased focus on evaluation, use of evidence and best practice
- Evaluate existing Public Health Nursing programs. Some need little evaluation, for example in NL Child Health Clinics are used to provide immunization and we enjoy the highest immunization rates in the country. However, are the strategies we use or the messages we weave related to chronic disease prevention the most evidenced based?
- Review current work with an evidence lens to determine where to allocate time/resources for biggest public health impact

Market the Value of Public Health Nurses

- Increase capacity – we need to "sell" the value of public and community health nurses and demonstrate the impact they can have on population health if capacity is supported adequately
- More education and awareness and buy in
- Increase awareness of the potential role of the public health nurse
- Promote the PHN role
- Nurses need to publish or document their role
- Need to be outspoken about their roles as a role in chronic disease prevention

Partnerships

- Public-private partnerships to help overcome resource gaps
- Explore opportunities to focus on health promotion and illness prevention across the lifespan whenever possible

How would you define the ideal role of public health nurses in relation to the prevention of chronic diseases?
(i.e. Your vision of public health nursing best practice)

Clear Role

- Primary and central role
- Consistent messaging to the population delivered by all stakeholders.
- PHNs frontline role
- Engage in appropriate prevention/harm reduction activities
- Teaching and helping implement the strategies
- A way to address the social determinants of health
- Get back to basics
- Food security, community gardens
- Health promotion role that incorporated the determinants of health

Work to full scope of practice

- Able to work to full scope of practice to utilize comprehensive approaches to address the underlying issues for chronic diseases – upstream approaches, application of Ottawa Charter
- Working with individuals, families, communities and populations to plan, implement and evaluate healthy lifestyle education/interventions utilizing the Circle of Health approach in a population health framework

Use Evidence Based Approach

- Utilize evidence based approaches with room for innovation with evaluation
- Evaluate and adapt practice as needed

Use an Inter Disciplinary Community development / Engagement Approach

- Engaging multiple stakeholders both from within the health community but also from a variety of other organizations and most importantly, community members themselves (multi-disciplinary plus!)
- Educators regarding healthy choices for families and communities, which will have long-term impacts on population health.
- Intervene early and reinforce teaching at every opportunity
- Out there working in communities
- Collaboration with individuals, communities and groups (i.e. schools) to do a holistic assessment of their assets and needs considering the social, economic and environmental health determinants
- Involve individual/community to identify root causes of issues and support development of self-advocacy skills
- Work to facilitate changes with the individual/group in collaborative relationships with community partners/resources referring or coordinating access to other services

Supported and Resourced

- Well-resourced supported PHN given the flexibility to provide services based on the needs of the population.
- PHN caseloads manageable enough to allow capacity to balance community development and population health strategies focused on chronic disease prevention.
- Get the best resources to intervene.
- Standards and policies would be in place to guide PHN in their practice to ensure they are having the greatest impact possible.
- There would be adequate number of Public Health Nurses working with families (across the age continuum) and community partners to educate and engage them in embracing healthy lifestyle practices to prevent chronic diseases.

Appendix E – Chronic Disease Prevention Frameworks - Key Points

A strategy to prevent chronic disease in Europe - A focus on public health action. The CINDI vision (World Health Organization, 2004)

The overall goal of this chronic disease strategy is the promotion and protection of health as well as prevention of chronic diseases by guiding the development of public health action at local, national and Region-wide levels to be implemented in an integrated manner. The implementation of this strategy would lead to a reduction in the burden of diseases to society.

This strategy, which aims to reduce the burden of NCD, targets four major chronic diseases: cardiovascular disease, cancer, chronic obstructive pulmonary disease (COPD) and diabetes.

It focuses on four lifestyle-related factors: tobacco, diet, physical activity, and alcohol In turn, this should lead to the improvement of individual risk profile by affecting four biological risk factors - overweight, hypertension, and abnormalities in lipid and in carbohydrate metabolism.

To achieve this, four integrated approaches are to be applied: individual risk reduction (aimed at high-risk individuals), population risk reduction (aimed at social determinants), rational use of health services (by empowering primary health care), and referral system support.

Efforts are guided by four major strategies: policy development, capacity building, surveillance, and dissemination of information and experience.

All of the above improve functioning of the socio-economic environment by focusing on four major social determinants of non-communicable diseases (NCD): poverty, lack of educational opportunities, unemployment and social inequality.
(WHO, 2004 p.5-6).

A Framework for a Provincial Chronic Disease Prevention Initiative
British Columbia Population Health and Wellness (2003)

This Chronic Disease Prevention framework focuses mainly on primordial and primary prevention and proposes a province-wide approach to coordinate the efforts of governmental and non-governmental health organizations and other key players through an integrated set of policies, programs and activities focused on preventing the onset of certain chronic diseases by addressing common risk factors and conditions that contribute to these diseases.

Key elements include:

1. Use of integrated strategies that target the set of common risk factors for major chronic diseases
2. Use approaches that promote and support healthy living.
3. Address the relationship between lifestyle choices and social conditions (to address underlying social determinants of health).
4. Address prevention efforts within life settings such as work, school or community (integrated prevention action on multiple risk factors and across life cycles.
5. Inter-sectoral and inter-jurisdictional coordination

Key interventions include:

- Developing Healthy Public Policy
- Changing social norms
- Creating supportive environments
- Protecting people form hazards
- Empowerment, community development and social support

Primary Prevention *of* Chronic Diseases in Canada: A Framework for Action
(Chronic Disease Prevention Alliance of Canada, 2008)

This framework is a shared, evidence-based Canadian resource designed to inform priorities, investments, and actions in population-based chronic disease prevention.

The plan is goal driven, evidence based and includes the following four inter-dependent components:

- **Resources –** The development and implementation of comprehensive population based primary prevention strategies require coordinated and sustained investment.
- **Capacities – This** represent the necessary skills, knowledge, and processes to plan, deliver, and adapt direct actions for chronic disease prevention.
- **Actions** – These are specific to settings and populations and include education interventions, environmental interventions and policy interventions.
- **Impacts** - The desired impact is to affect chronic disease incidence and prevalence, including their distribution across population sub-groups.

Behaviour change at population, community and individual levels
(National Institute for Health and Clinical Excellence, 2007)

This document provides a set of generic principles that should be used as the basis for planning, delivering and evaluating initiatives that support attitude and behaviour change (p 19).

Some of the highlights include:

- Interventions should be based on sound knowledge of community needs and build upon existing skills and resources within the community.
- Equip practitioners with the competencies and skills to support behavior change using evidence-based tools
- Evaluate all behavior change interventions and programmes, either locally or as part of a larger project.

Principles:

1. Plan
   - Work in partnership with individuals, communities, organizations and population to plan interventions and programs
   - Prioritize interventions
   - Disinvest in intervention where evidence suggest they are ineffective
2. Asses the social context
   - Identify and attempt to remove social, financial and environmental barriers that prevent people from making positive changes
3. Educate and support
   - Provide training and support for those involved in supporting people's health behavior change
4. Focus on Individual-level interventions and programs
   - Select interventions that support and motivate people
5. Invest in community-level interventions and programs
   - Invest in interventions that identify and build on the strengths of individuals and communities
6. Deliver population-level interventions and programs
   - Deliver population-level policies, intervention and programs tailored to change specific, health-related behaviours.
7. Evaluate
   - Ensure funding applications and project plans for new intervention and programmes include specific provisions for evaluation and monitoring
8. Assess cost effectiveness
   - Collect data for cost effectiveness analysis, including quality of life measures

The Simcoe County Healthy Living Strategy: An Integrated Approach
(Simcoe County District Health Unit, 2005)

The Simcoe County Healthy Living Strategy describes the background and context of the comprehensive planning framework that was developed to reduce chronic diseases rates in Simcoe County.

This strategy is designed to increase the capacity of individuals, families and communities to make the healthiest choice possible and to decrease the barriers preventing them from attaining optimal health. It also recognizes that behavioural change, at a population health level, is a long-term process.

The strategic actions identified take into account a wide variety of factors that influence health and reflect the five elements of the Ottawa Charter for Health Promotion listed below:

- Build Healthy Public Policy
- Create Supportive Environments
- Strengthen Community Action
- Develop Personal Skills
- Reorient Health Services.

The underpinnings, as listed below, identify the fundamental principles and tools that are needed to effectively carry out the strategic actions of the healthy living strategy:

- Best-Practice / Evidence-Based Decision Making
- Multi-faceted Health Promotion Strategies
- Partnership and Collaboration
- Surveillance
- Evaluation
- Research

This strategy also focuses on healthy living environments and modifiable risk factors (or health practices) that can be altered to reduce a person's chances of developing one or more chronic diseases. The following modifiable risk factors are highlighted:

- Physical Inactivity
- Unhealthy Eating
- Unhealthy Weights
- Unprotected Exposure to ultraviolet light