

CHAPTER 4

Public Health Nursing

Caroline J. Porr and Aliyah Dosani

LEARNING OUTCOMES

After studying this chapter, you should be able to:

1. Define public health.
2. Describe the role of the public health nurse.
3. Describe the historical evolution of public health nursing in Canada.
4. Identify concepts, principles, and values fundamental to public health nursing practice.
5. List the discipline-specific competencies of public health nurses.
6. Appraise the roles of the public health nurse in relation to the core functions of public health.
7. Discuss public health nursing interventions as they relate to primary, secondary, and tertiary levels of prevention.



PHOTO 4.1 Well-Baby Clinic, Hamilton, Ontario [CA. 1930]

Source: Public Health Nursing Branch. Reference Code: RG 10-30-2, 1.14.5. Archives of Ontario, I0005274

INTRODUCTION

Public health is most commonly defined as the organized efforts of society to keep people healthy and prevent injury, illness, and premature death. It is a combination of programs, services, and policies that protect and promote the health of all Canadians (Last, 2001). In September 2004, the Public Health Agency of Canada was established with the mission to “promote and protect the health of Canadians through leadership, partnership, innovation, and action in public health” (Government of Canada, 2006; Public Health Agency of Canada, 2015). In 2006, the Public Health Agency of Canada Act confirmed the agency as a legal entity and appointed a chief public health officer (CPHO). This legislation requires that the CPHO report annually on the state of public health in Canada. Under the leadership of the

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CPHO, various public health professionals focus on the health of the entire population in Canada to do the following:

- promote health;
- prevent and control chronic diseases and injuries;
- prevent and control infectious diseases;
- prepare for and respond to public health emergencies;
- serve as a central point for sharing Canada's expertise with the rest of the world;
- apply international research and development to Canada's public health programs; and
- strengthen intergovernmental collaboration on public health and facilitate national approaches to public health policy and planning (Public Health Agency of Canada, 2015).

Canada has a remarkable record of public health achievements. The Canadian Public Health Association (Canadian Public Health Association, n.d.) lists the 12 great achievements of public health in Canada (see Figure 4.1). It is significant to note that the average lifespan of Canadians has increased by more than 30 years since the early 1900s, and 25 of those years are attributable to advances in public health and the work of public health professionals (CPHA, n.d.). One type of public health professional is the **public health nurse (PHN)**. As discussed in Chapter 3, the PHN is one type of community health nurse. The PHN applies public health science, the **principles of primary health care**, nursing science, and the social sciences to promote, protect, and preserve the health of populations (CPHA, 2010).

Having briefly introduced you to public health, we will now explore the roles and responsibilities of the PHN, beginning with the historical evolution of public health nursing in Canada. Concepts, principles, and values fundamental to public health nursing practice are interwoven throughout the

chapter. At the end of the chapter are real-life exemplars from jurisdictions across Canada to illustrate the nature, diversity, and significant contributions of public health nursing practice. These exemplars will be discussed in terms of primary, secondary, and tertiary prevention.

HISTORICAL EVOLUTION OF PUBLIC HEALTH NURSING

The earliest documented references to public health occurred before Canada became a nation. In 1831 the Colonial Office in England corresponded with the executive government in Quebec concerning the possible arrival of immigrants to Upper Canada with Asiatic sporadic cholera. In response, a sanitary commission and Canada's first board of health were immediately established and directives were issued for the "preservation of health" (Bryce, 1910, p. 288). During this period there was little understanding of the nature, origin, and transmission of disease. Infectious diseases, particularly the cholera epidemic, accounted for the deaths of countless indigenous peoples and early settlers. By the 1880s, with scientific discoveries in the growing field of bacteriology, it became evident that personal hygiene and community sanitation were key to preventing malignant, contagious, and infectious diseases. Influenced by England's sanitary movement, Canadian sanitary reformers worked diligently to clean up water supplies and manage sewage removal, and in so doing, championed public health development in Canada. Public health initiatives that followed included legislation with detailed regulations for personal and environmental cleanliness (Allemang, 1995).

First Provincial Public Health Act

After Canadian Confederation in 1867, health and social welfare matters were the delegated responsibility of the provinces. In 1882, Dr. Peter Henderson Bryce (Photo 4.3) was



FIGURE 4.1 The 12 Great Achievements of Public Health—Too bad we can't have shots for this, too

Source: Canadian Public Health Association. (n.d.). *This is public health: A Canadian history*. Ottawa, ON: Canadian Public Health Association. p.6.11. Retrieved from http://www.cpha.ca/uploads/history/book/history-book-chapter6_e.pdf



PHOTO 4.2 A Canadian scene in the 19th century

Source: Rutty, C. & Sullivan, S. (2010). *This is public health: A Canadian history*. Ottawa, ON: Canadian Public Health Association.

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PHOTO 4.3 Dr. Peter Henderson Bryce

Source: Canadian Public Health Association. (n.d.). Chapter 1: The sanitary idea. In 1867 – 1909. *This is public health: A Canadian history* (pp. 1.1-1.16). Retrieved from http://www.cpha.ca/uploads/history/book/History-book-chapter1_e.pdf

appointed the first secretary of the Provincial Board of Health of Ontario. He prepared the first Public Health Act, which was passed in Ontario in 1884. This Public Health Act became the model for legislation in other provinces across Canada. (Bryce, 1910).

Other provinces in Canada soon established health acts and local boards of health. Local boards of health hired medical officers of health to protect Canadian citizens by responding to communicable disease outbreaks. Public health inspections and regulatory frameworks (e.g., environmental policies addressing contaminated water and sewage disposal systems) were soon added to the mandate of local boards of health. Local public health units were to oversee proper pasteurization of milk, tuberculin testing of cows, tuberculosis isolation and quarantine practices, and the tracking of sexually transmitted infections. World War I made it necessary for preventive medicine to be integrated with clinical medicine to control the spread of disease. A national Department of Health was founded by the Government of Canada at this time to enact legislation concerning disease surveillance and control measures as well as to safeguard public administration of food and drugs (Her Majesty the Queen in Right of Canada, represented by the Minister of Health, 2008).

The First Public Health Nurses in Canada

Lillian Wald coined the term “public health nurse.” Wald was an American nurse and founder of the Henry Street Settlement in New York City. In 1893, Wald described nurses who worked with low income communities as PHNs, setting them apart from nurses who cared for sick individuals in hospitals or in high-income homes (McKay, 2009). In Canada, public health nursing grew out of the religious persuasion and social conscience of the social gospel movement and maternal feminism. PHNs focused primarily on improving physical environmental conditions to reduce maternal and child morbidity and mortality. In the late 19th century, one out of every five infants died and the rate of maternal deaths was high as well. In addition, at this time, women were not recognized as people under the British North American Act (Ontario Ministry of Government Services, n.d.). Maternal feminists “were seeking sweeping social reform, particularly to protect the interests of women, children and families” (Harrison, 2011, p. 23).

Charitable Organizations While little is known about Canada’s first PHNs, it is certain that they worked for charitable or religious organizations in several regions of the country. They were known as visiting nurses or district nurses. In 1885 there was a diet dispensary in Montreal that employed a district nurse. The district nurse would have carried out nutrition counselling and assisted with volunteer distribution of nutritious meals to disadvantaged pregnant women and their families. Located in Toronto in 1889, the Nursing-at-Home Mission hired district nurses to visit disadvantaged families who lived close to the Children’s Hospital. The Victorian Order of Nurses was founded in 1897 in Ottawa and served as a national district nursing association. It was not uncommon for PHNs to volunteer their expertise at Winnipeg’s Margaret Scott Nursing Mission (constructed in 1905) or at the Lethbridge Nursing Mission (built in 1909), for example. Volunteer PHNs were also members of the St. Elizabeth Visiting Nurses’ Association that was established in 1910 (McKay, 2009).

Civic Health Departments Increasingly, the delivery of public health programs to address complex issues of the more vulnerable populations (e.g., immigrants, urban poor, infants and children, and rural isolated families) was becoming too great a financial burden for charitable organizations. Many organizations sought government funding to maintain their programs. In 1910, Winnipeg’s civic health department, through yearly grants, financed the local district nursing association and the milk depot to support their public health programs for children. The district nurse or PHN would have made visits to families armed with milk supplies, health messages, and parenting instruction. The PHNs assisted mothers with childbirth, infant feeding, and childcare, including bathing children (Ontario Ministry of Government Services, n.d.). Universal public schooling in Canada began in the late 19th century. Local school boards began sponsoring school health programs and hired PHNs to conduct physical inspections of children and to provide health education in the classroom.

Children who were at risk were identified at schools and PHNs often used this information to engage in home visits with vulnerable families. PHNs were instrumental in reducing high mortality rates among school-aged children by combating tuberculosis and controlling other communicable diseases. Civic health departments across Canada eventually took over voluntary public health programs, and before World War I PHNs were hired to work in specific departments like Winnipeg's Child Hygiene Department. Nurse leader Eunice Henrietta Dyke spearheaded the opening of the Department of Public Health in the City of Toronto (McKay, 2009).

Comprehensive System of Child and Family Health and Welfare Services



PHOTO 4.4 Eunice Henrietta Dyke (Front Row, 6th from the left)

Eunice Henrietta Dyke was a Toronto-born Canadian who, in 1905, attended nursing school in the States (Johns Hopkins School for Nurses in Baltimore, Maryland). In 1911, Nurse Dyke began her employment with the Department of Public Health of the City of Toronto. She pioneered the idea of positioning child welfare services as the nucleus of the department's child health centres. The child's family became the focus of public health nursing services and PHNs were responsible for families on a district basis. Decentralization of public health nursing services was truly innovative and was soon recognized around the world. Nurse Dyke also championed the coordination of public health and community welfare and social services.

Source: Canadian Public Health Association. (n.d.). Profiles in public health. Retrieved from <http://resources.cpha.ca/CPHA/ThisIsPublicHealth/profiles/pages.php?l=E>

Families in rural regions of Canada received few services of PHNs because of a lack of municipal finances. Women's groups (e.g., Women's Institute or the United Farm Women) are cited as organizations that interceded and hired PHNs or physicians to hold child health clinics or to conduct school inspections. Public health programs and public health nursing services were solely the responsibility of the provinces. In 1916, Manitoba became the first province in Canada to establish a provincially

funded public health nursing service. In 1919, Alberta provided its citizens with district nursing services and British Columbia, in the same year, set up health centres for several communities that were staffed with PHNs (Allemang, 1995).

Travelling Public Health Nurse Served Manitoba for 41 Years



PHOTO 4.5 Lynn Blair

Lynn Blair grew up in Alexander, Manitoba. She received her nursing training from the Children's Hospital in Winnipeg, graduating in 1928. Nurse Blair obtained a diploma in public health nursing from the University of Minnesota 20 years later. Her nursing career included working at the San Haven State Sanatorium in North Dakota in 1928 and then at the new Department of Health and Welfare in Manitoba in 1929. As a PHN, she travelled extensively throughout Manitoba and assumed diverse responsibilities, including delivering veterinarian services, and she performed some services that were usually carried out by physicians at that time. She met health needs of handicapped children and, as nursing consultant in venereal disease, worked to prevent the spread of sexually transmitted infections. In 1940 Nurse Blair travelled 1000 miles a week seeking family placement for children evacuated from war-torn Britain. Nurse Blair was awarded Canadian Public Health Association's Honorary Life Membership in 1975.

Source: Canadian Public Health Association. (n.d.). Profiles in public health. Retrieved from <http://resources.cpha.ca/CPHA/ThisIsPublicHealth/profiles/pages.php?l=E>

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Vaccination Campaigns PHNs continued to battle diseases including cholera, smallpox, typhoid fever, and several other bacteria and viruses that have since been eradicated. By the mid-1920s, following the discovery of diphtheria, pertussis, tetanus, and polio toxoids, PHNs were responsible for delivering substantial childhood immunization and vaccination programs. Polio, poliomyelitis, or infantile paralysis all refer to a disease that was terrifying for parents and children alike prior to the vaccine. This is because within a few hours of becoming ill a child could die or be permanently paralyzed (Harrison, 2011). In addition to delivering immunizations, PHNs were also involved in well-baby clinics, delivering prenatal classes, and conducting postnatal home visits where they discussed issues in parenting and the importance of childhood nutrition (PHAC, n.d.).

Public health nursing practice required advanced education, and the early PHNs were respected as “elite members of the nursing profession” (McKay, 2009, p. 250). Their work was both exciting and exhausting. It was not uncommon for PHNs to walk several miles in snow storms or travel by dog sled or horseback to carry out their diverse roles and responsibilities. Gwen Thomas was a district nurse in Newfoundland after World War II. Her account is a captivating portrayal of a PHN:

When I went to La Scie, it was 1949, and there was a lot of tuberculosis in Newfoundland. In quite a few families, one person or another was in bed with TB and eventually died. . . . The only way to get into La Scie was either by plane or in the winter by dog team, in the spring and summer by boat, or else across the woods road. I remember one time going to Shoe Cove, which was about four and a half miles, and we had to walk because there were no roads. When I arrived the patient was in labour. She had twins, which I delivered. (Marsh, Walsh, & Beaton, 2008, p. 183)



PHOTO 4.6 A patient in an iron lung—The “iron lung” was an artificial respirator used with patients suffering from paralytic polio. Patients with paralytic polio experienced paralysis of the diaphragm and intracostal muscles, which are essential for respiration.

Source: Rutty, C. & Sullivan, S. (2010). *This is public health: A Canadian history*. Ottawa, ON: Canadian Public Health Association.

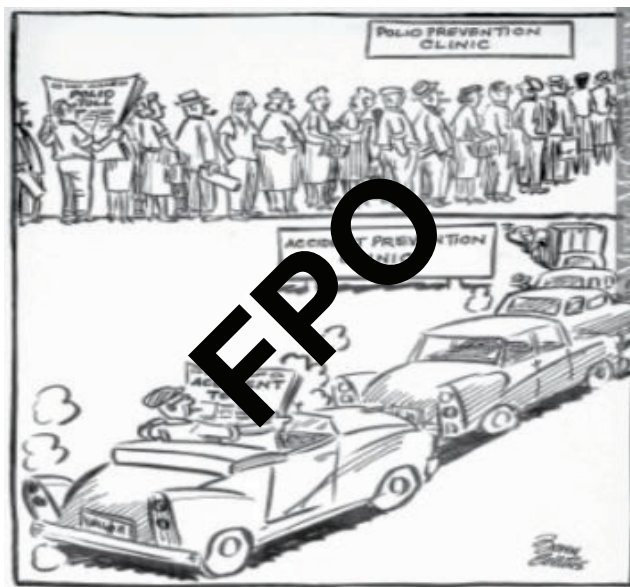


FIGURE 4.2 Polio Vaccination Campaign—Too bad we can’t have shots for this, too

Source: Canadian Public Health Association. (n.d.). *This is public health: A Canadian history*. Ottawa, ON: Canadian Public Health Association. p.6.11

Retrieved from http://www.cpha.ca/uploads/history/book/history-book-chapter6_e.pdf

Promoting Public Health Nursing and Primary Prevention



PHOTO 4.7 Eleanore Louise Miner

Eleanore Louise Miner of Regina, Saskatchewan, was a public health nursing leader. Her career spanned 35 years and within that time she advanced primary prevention efforts and expanded the staff of public health professionals by including dental hygienists, nutritionists, speech therapists, psychologists, and physiotherapists. She focused on meeting the public health needs of vulnerable groups. From 1959 to 1961 she was president of provincial and national nursing associations. Nurse Miner published a series of articles on public financing of PHNs in the *Canadian Journal of Public Health*, documenting the important contributions of PHNs.

Source: Canadian Public Health Association. (n.d.). Profiles in public health. Retrieved from <http://resources.cpha.ca/CPHA/ThisIsPublicHealth/profiles/pages.php?l=E>

PRIMARY HEALTH CARE AND PUBLIC HEALTH NURSING

The motivation behind the World Health Organization's (WHO) Health for All movement was the disturbing reality of health inequalities worldwide. In 1977, the World Assembly announced that the "main social target of governments and of the WHO should be attainment by all people of the world by the year 2000 a level of health that permits them to live socially and economically productive lives" (Little, 1992, p. 198). Assembly members, including Canada, endorsed the primary health care principles of public participation, intersectoral and interdisciplinary collaboration, health promotion, appropriate technology, and accessibility as key to achieving their goal. Then Health Minister Jake Epp's (1986) "Achieving Health for All" document and the release of the WHO, Health & Welfare Canada, and the Canadian Public Health Association (1986) document, "Ottawa Charter for Health Promotion" were the impetus to Canadian health reform and the foundation of the "new" public health movement.

PHNs were to reduce and challenge health inequalities by enabling citizens to take action to improve their health. PHNs were called on to make a concerted effort to enact the principles of primary health care, to think upstream (i.e., to think about the many risk factors contributing to sickness and disease in an effort to prevent illness or injury) by addressing barriers to health (Butterfield, 2002; Raphael, 2011). Mahler (1985), then director general of the WHO, was confident PHNs could make a difference: "If millions of nurses in a thousand different places articulate the same ideas and convictions about Primary Health Care, and come together as one force, then they could act as a powerhouse for change" (p. 10).

As Canadian provinces began preparing for major health-care reform, nursing associations actively endorsed primary health care principles by submitting recommendations to provincial advisory committees, task forces, and commissions. "Health for all Canadians: A Call for Health Care Reform" by the Canadian Nurses Association (CNA) (1988) led to position statements and projects pushing for nursing roles reflective of primary health care. Community nurses' resource

centres, for example, were created in Manitoba. Alberta took steps to implement plans for the "Increased Direct Access to Nursing Services" project and reallocated \$110 million from acute care to community health services. Between 1985 and 1995 the Canadian nursing profession lobbied for the shift from the medical model to a primary health care model.

Healthcare reform and healthcare restructuring in Canada since the mid-1990s have moved healthcare services from institutions to communities and have led to a greater emphasis on health promotion, disease prevention, and public participation (Reutter & Ford, 1998). Public participation is a primary health care principle that is integral to PHN's achieving sustained change. The PHN's role is not just to educate, consult, or "do for" by providing services, but to collaborate with individual citizens, families, and communities, as active partners, addressing problems to promote, maintain, and restore health (Underwood, 2010). The principle of public participation is based on the premise that citizens, collectively, have the knowledge and capacity to identify barriers to health and to determine options to overcome. PHNs assume a strengths-based orientation by seeking information about capabilities of individual citizens, families, and communities, and by assisting them to mobilize resources. Capitalizing on strengths fosters a sense of optimism and hope, and citizens are apt to take charge and forge a healthier future for themselves (Gottlieb, 2013).

PUBLIC HEALTH NURSING DISCIPLINE-SPECIFIC COMPETENCIES

PHNs practise in community health centres, homes, schools, workplaces, street clinics, youth centres, outpost settings, and as part of community groups. Disease prevention, particularly infectious diseases, including preventing the introduction and spread of pandemic infections such as SARS and influenza A virus subtype H1N1 remain the responsibilities of PHNs. Non-communicable chronic diseases (e.g., coronary heart disease and diabetes), injuries, and lifestyle risks to health due to tobacco, alcohol, and drug consumption require considerable time, effort, and expertise. PHNs continue to promote and to advocate for the health and quality of life of mothers and children; in particular, younger mothers and mothers of low socioeconomic status. The health of the environment is also a priority focus, especially with the threats brought on by global climate change, deterioration of ecosystem services, and land-use change. Such threats are interacting to create grave risks to community and population health, including exposure to infectious disease, water scarcity, food scarcity, natural disasters, and population displacement (Myers & Patz, 2009). In addition, food safety, sanitation, and occupational hazards also remain part of the PHN's responsibilities. Finally, PHNs focus on the prerequisites for health because they seek social justice for individual citizens, families, communities, and populations. PHNs are committed to working collaboratively to help balance the benefits of health throughout society (McKay, 2009).

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Today, PHNs are the largest group of public health employees. PHNs function under the laws and regulations of various government bodies who oversee public health. Historically, public health programs have been delivered according to provincial mandates, and variance among programs and across jurisdictions continues. Sometimes PHNs must challenge current laws, regulations, or policies within their jurisdiction to better support the health of individual citizens, families, communities, and population groups. For this reason, the PHN needs to be knowledgeable about how federal, provincial, and territorial governments operate. Additionally, the PHN must have a working knowledge of the local operations of municipalities, and Aboriginal organizations (CPHA, 2010). Politics and public health administration are just some of the necessary elements of the PHN's knowledge base.

The PHN is expected to possess a comprehensive knowledge base in order to intervene effectively to contribute to the health of the population as a whole. For example, while the hospital nurse will require human pathophysiology to promote patient healing, the PHN requires the science of epidemiology to assess the magnitude of population-level health threats of specific diseases in society. Being population oriented also means that the PHN is focused on the community origins of health problems, such as those related to nutrition, employment, or the environment. PHNs look for risk factors that could be altered to prevent or delay illness or premature death. Similar to the systematic health assessment of a patient by the acute care nurse, the community is assessed systematically by the PHN. Using a population-oriented approach also equips PHNs for effective intersectoral collaboration, which means partnering with representatives from several sectors of society in addition to health (e.g., education, government, industry, recreation, nongovernmental

agencies) to deal with, oftentimes, a vast array of factors (PHAC, n.d.).

The public health nursing discipline-specific competencies were established in 2009. This work was funded by the Public Health Agency of Canada and led by members of the Community Health Nurses of Canada. The discipline-specific competencies include the following:

1. Knowledge derived from public health and nursing science.
2. Skills related to assessment and analysis.
3. Conducting policy and program planning, implementation, and evaluation.
4. Achieving partnerships, collaboration, and advocacy.
5. Promoting diversity and inclusiveness.
6. Effective communication exchange.
7. Leadership capabilities.
8. Professional responsibility and accountability.

All of the eight discipline-specific competencies require that PHNs possess certain knowledge, skills, and attitudes as outlined in Table 4.1. The PHN may have to rely on several competencies on a day-to-day basis to promote, protect, and preserve the health of the population. The attitudes are critical to the role as are the broad knowledge base and diverse skills. A PHN would likely draw on all of the knowledge, skills, and attitudes presented in Table 4.1 while completing work that falls under one or more of the public health nursing discipline-specific competencies. Each PHN discerns which knowledge, skills, and attitudes are essential as he or she carries out responsibilities reflecting the competencies. Accordingly, a PHN may place more emphasis on certain knowledge, skills, and attitudes to inform his or her nursing practice.

Table 4.1 Public Health Nursing Discipline-Specific Competencies (Community Health Nurses of Canada, 2009) and Corresponding Knowledge, Skills, and Attitudes

Competencies	Knowledge	Skills	Attitudes
1. Public health and nursing science	<i>The public health nurse has knowledge of</i>	<i>The public health nurse is equipped with skills to</i>	<i>The public health nurse considers</i>
2. Assessment and analysis	<ul style="list-style-type: none"> behavioural and social sciences 	<ul style="list-style-type: none"> apply knowledge, critically appraise knowledge, and research new sources of knowledge 	<ul style="list-style-type: none"> health as multi-dimensional
3. Policy and program planning, implementation, and evaluation	<ul style="list-style-type: none"> biostatistics epidemiology 	<ul style="list-style-type: none"> collect, assess, analyze, and apply data, facts, concepts, and theories to determine individual, family, group, and community health concerns 	<ul style="list-style-type: none"> the influence of physical, sociocultural, political, and economic environments on health
4. Partnerships, collaboration, and advocacy	<ul style="list-style-type: none"> environmental public health demography 		<ul style="list-style-type: none"> support needs of individuals, families, groups, and communities to assist them to improve conditions conducive to health
5. Diversity and inclusiveness	<ul style="list-style-type: none"> workplace health 		
6. Communication	<ul style="list-style-type: none"> prevention of chronic diseases 		
7. Leadership	<ul style="list-style-type: none"> infectious diseases 	<ul style="list-style-type: none"> assess individual, family, group, and community levels of capacity to address health concerns 	<ul style="list-style-type: none"> opportunities to address health inequities and promote social justice
8. Professional responsibility and accountability	<ul style="list-style-type: none"> psychosocial problems and injuries 		

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Competencies	Knowledge	Skills	Attitudes
	<ul style="list-style-type: none"> nursing theory change theory economics politics public health administration community assessment management theory program planning and evaluation population health principles primary health care determinants of health community development theory social justice history of public health 	<ul style="list-style-type: none"> identify and recommend appropriate interventions, including health promotion, health protection, and disease and injury prevention lead policy and program planning, implementation, and evaluation collaborate effectively with diverse individuals, families, groups, and communities promote positive team functioning initiate interdisciplinary and intersectoral partnerships and networks work to achieve interagency and intergovernmental co-operation act as spokesperson as needed on public health issues respond to public health emergencies 	<ul style="list-style-type: none"> accommodating diverse sociocultural, economic, and educational backgrounds

PUBLIC HEALTH NURSING AND LEADERSHIP

As indicated in the previous section, leadership is one of the core competencies of public health nurses (Community Health Nurses of Canada, 2009). A leader in public health has the aptitude to influence, motivate, and enable others to achieve goals. Nurses work at the “intersection where societal attitudes, government policies, and people’s lives meet . . . [and this] creates a moral imperative to not only attend to the health needs of the public but also, like Nightingale, to work to change the societal conditions contributing to poor health” (Falk-Raphael, 2005, p. 219). Public health nurse leaders have “courage, vision, strategic agility, passion, and a moral core. They have substantial networks, keen understanding of issues and are solution focused while seeking root causes of problems” (Community Health Nurses of Canada, 2013, p. 23). It seems fitting, then, that public health nurses use their relationships with their diverse range of clients to work at various levels (individual, family, community, and system/sector) on the determinants of health to ultimately impact the health of society (Cohen & Reutter, 2007; Falk-Raphael and Betker, 2012). The following section provides an overview of how nurses function to create change in population health status through the six essential functions of public health systems in Canada.

PUBLIC HEALTH NURSING ROLES

PHNs combine the knowledge, skills, and attitudes of the above discipline-specific competencies to promote, protect, and preserve the health of all Canadians. PHNs perform the roles and responsibilities as outlined in the **six essential functions of public health** (CPHA, 2010):

1. Health protection
2. Health surveillance
3. Population health assessment
4. Disease and injury prevention
5. Health promotion
6. Emergency preparation and response

PHNs concentrate their efforts on the population and the several prerequisites or determinants of health. Through ongoing surveillance and by examining vital statistics and other population data, the PHN decides when and where to intervene. PHNs carry out the essential public health functions listed above by assuming various roles and employing an array of strategies as illustrated in Table 4.2.

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Table 4.2 Public Health Nursing Roles

Public Health Essential Functions	Description	Public Health Programming	Public Health Nursing Roles
Health protection	Health protection is a chief function of public health. Canada's water supply and food are protected from contamination. Regulatory frameworks protect the population from infectious diseases and from environmental threats.	<ul style="list-style-type: none"> • Water purification and monitoring • Air quality monitoring/enforcement (Environmental Protection Act) • Restaurant inspections • Childcare facility inspections • Smoking cessation through public health policies, tobacco taxes, anti-smoking advertising campaigns, and production labelling 	<p>Collaborator:</p> <ul style="list-style-type: none"> • Partners with health inspectors, government officials, and agency representatives to ensure all citizens have safe drinking water and food, and live, work, and play in safe environments • Establishes coalitions and networks as needed to enact or enforce public health legislation <p>Leader:</p> <ul style="list-style-type: none"> • Initiates action • Encourages citizens, the community, and those with power to initiate action <p>Policy Formulator:</p> <ul style="list-style-type: none"> • Identifies health protection issues in need of policy development • Participates in implementing and evaluating policy
Health surveillance	Public health professionals use health surveillance techniques to collect population data on an ongoing basis to detect early signs of illness and disease trends or outbreaks. Surveillance data provide the information needed to intervene in an effective manner to mitigate disease impact.	<ul style="list-style-type: none"> • Periodic health surveys • Cancer and other disease registries • Communicable disease reporting • Ongoing analysis of data to identify trends or emerging problems, (e.g., recognition of increasing syphilis cases) • Reporting health threats to practitioners, what they need to look for, and intervention required 	<p>Epidemiologist:</p> <ul style="list-style-type: none"> • Seeks health surveillance data • Coordinates systematic and routine collection and reporting of health data • Analyzes surveillance data for risk and forecasting of threatening events • Surveillance of broad determinants of health • Disseminates surveillance findings and health implications to citizens, communities, and decision makers
Population health assessment	Public health professionals are well-versed in what facilitates and what hinders the health of the Canadian population. Population health assessment is a tool to ensure public health programs, services, and policies are adequately meeting goals and objectives.	<ul style="list-style-type: none"> • Population or community health needs assessment • Health status report; system report card 	<p>Epidemiologist:</p> <ul style="list-style-type: none"> • Applies health surveillance data to public health nursing practice • Conducts population health assessments and community health assessments • Justifies new initiatives or revisions to current programs or services with needs assessment

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Public Health Essential Functions	Description	Public Health Programming	Public Health Nursing Roles
Disease and injury prevention	Public health professionals contribute to the longevity and quality of life of Canadians through disease and injury prevention.	<ul style="list-style-type: none"> • Immunizations • Investigation and outbreak control • Screening for nutritional (e.g., scurvy), occupational (e.g., cancer of scrotum) and environmental (e.g., lead poisoning) diseases • Encouraging healthy behaviours (e.g., smoking cessation during pregnancy, healthy eating, breastfeeding, physical activity, bicycle helmet use) 	<p>Outreach Worker:</p> <ul style="list-style-type: none"> • Actively seeks information about the health of populations, communities, or aggregates • Uses health assessment findings to target issues (actual or potential) and to plan steps to address issues • Willing to reach out to high-risk communities (e.g., harm reduction strategies) if information indicates public health nursing interventions are warranted
			<p>Service Provider:</p> <ul style="list-style-type: none"> • Manages and controls communicable diseases using prevention techniques, infection control, behaviour change counselling, outbreak management, and immunization • Conducts screening for disease • Informs individuals about screening procedures, rationale, and results • Monitors, documents, and evaluates screening activities • Uses effective strategies to reduce risk factors that may contribute to chronic disease, injury, and disability <p>Health Educator:</p> <ul style="list-style-type: none"> • Offers formal presentations, educational programs, and informal teaching sessions about healthy lifestyle behaviours • Applies teaching/learning principles to address health education needs and to ensure readiness of learner to change at-risk behaviours • Evaluates effectiveness of health education interventions • Uses marketing techniques to promote both community health programs and healthy living
Health promotion	Public health professionals improve the health of Canadians through healthy public policy, public participation, and community-based interventions.	<ul style="list-style-type: none"> • Intersectoral community partnerships (e.g., Heart & Stroke Foundation) to address factors affecting health • Advocacy for healthy public policies 	<p>Capacity Builder:</p> <ul style="list-style-type: none"> • Involves communities, aggregates, and individual citizens in planning and priority setting of health promotion programs and services • Shares information about community resources • Fosters skill development of community members to mobilize resources, establish social networks, and navigate political processes

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Public Health Essential Functions	Description	Public Health Programming	Public Health Nursing Roles
Emergency preparedness and disaster response	Public health professionals are aware of the immediate and secondary threats to population health incited by natural disasters. Emergency preparedness and disaster response safeguards water supplies or food sources from contamination.	<ul style="list-style-type: none">Catalyzing the creation of physical and social environments to support health (e.g., bike paths, promoting access to social networks for institutionalized seniors)	<p>Community Developer:</p> <ul style="list-style-type: none">Uses community development strategies to engage community members in identifying and addressing social, economic, cultural, and physical environment issuesUses a strengths-based approach that supports community empowerment and decision making <p>Facilitator:</p> <ul style="list-style-type: none">Fosters interagency links and working relationshipsUses mediation skills to facilitate interagency and intergovernmental Co-operation
		<ul style="list-style-type: none">Disaster planning to prepare communities to respond to floods, earthquakes, and firesLeading institutions in emergency preparedness to respond to explosives or biological threats	<p>Consultant:</p> <ul style="list-style-type: none">Uses knowledge and expertise in emergency preparedness and disaster response planning to inform individual citizens, non-profit agencies, organizations, institutions, the public, and all levels of government of measures required to reduce the impact of public health emergenciesActs as a resource person to communities, aggregates, and individual citizensPlans for, is part of, and evaluates the response to both natural disasters (e.g., floods, earthquakes, fires, or infectious disease outbreaks) and man-made disasters (e.g., those involving explosives, chemicals, radioactive substances, or biological threats) to minimize serious illness, death, and social disruptionUses effective risk-communication techniques to inform individual citizens and the public

Source. Based on Public Health Agency of Canada (n.d.) and the Canadian Public Health Association (2010). *Public Health ~ Community Health Nursing Practice in Canada: Roles and Activities* (4th ed.). Retrieved from <https://www.chnc.ca/documents/PublicHealthCommunityHealthNursinginCanadaRolesandActivities2010.pdf>

LEVELS OF PREVENTION

It is important to note that PHNs intervene at three levels of prevention: primary, secondary, and tertiary levels. In the PHN role in **primary prevention**, risks of illness, disease, and injury are eliminated. Sometimes the resistance to illness, disease, and injury may be enhanced (Vollman, Anderson, & McFarlane, 2012). Examples of the primary prevention work of PHNs may include the following:

- Breastfeeding campaigns during which PHNs publicly advocate breastfeeding for up to two years and beyond. Breast milk provides infants with “optimal nutritional, immunological, and emotional benefits for growth and development” (CPHA, n.d.). Nutrition gained from breast milk enhances childhood resistance to illness and disease.
- The Government of New Brunswick has adopted the “Baby-Friendly Initiative” as a strategy to support

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breastfeeding. Breastfeeding support services are offered by New Brunswick's Miramichi Region in the form of breastfeeding clinic drop-ins where breastfeeding mothers can meet with PHNs who are lactation consultants.

- PHNs working at public health district offices across Canada prevent children from acquiring communicable diseases by implementing effective vaccination programs.
- PHNs providing education sessions to a group of middle-aged men about how low-salt, low-fat, and low-sugar nutrient rich foods combined with smoking cessation and exercise will eliminate risk factors for atherosclerosis.
- PHNs working broadly with the determinants of health advocate for communities to have access to iodized salt,

perhaps in the form of enriched flour, to prevent iodine deficiency goiter.

- Home visiting by PHNs allow for risk assessment and observation related to home safety and environmental hazards. For example, PHNs often work with families to identify factors in the home that may put aging and elderly family members at risk for falls. As another example, PHNs may identify drawstrings on blinds as a choking hazard for small children. PHNs will problem solve with family members to mitigate such risks.

CANADIAN RESEARCH BOX 4.1

What are the legal and ethical considerations of extending tobacco legislation to include multi-unit dwellings in Alberta, and what does this mean for public health nursing practice?

Stooke, V. D. (2013). Sharing the air: The legal and ethical considerations of extending tobacco legislation to include multi-unit dwellings in Alberta. *Public Health Nursing*, 31(1), 6068. doi:10.1111/phn/12068.

Stooke explores the legal and ethical considerations of extending tobacco legislation to include multi-unit dwellings (MUDs) in Alberta, and the implications for public health nursing practice. The tobacco legislation in Canada currently protects individuals in public places but not in private dwellings. In Alberta, there are over one million individuals living in MUDs who are exposed to environmental tobacco smoke. Children are particularly vulnerable to the negative health effects of tobacco smoke. As well, many apartment fires in Alberta are related to smoking, which makes expanding tobacco legislation to include MUDs an important public health issue. There are many potential barriers to the adoption of this tobacco legislation, including legal, ethical, and civil rights concerns, and the bureaucracy of the political process. Stooke articulates the position that it is both legal and ethical to expand provincial tobacco legislation to include MUDs after considering individual civil rights. This approach is also aligned with the Canadian Nurses Association code of ethics for registered nurses (2008) that is used to guide nursing practice. PHNs must advocate for change in the current legislation by becoming politically active and building community capacity to promote social justice.

Discussion Questions

1. What level of prevention is tobacco legislation?
2. Does social justice include restricting citizens from smoking when living in MUDs?
3. When reading the primary values outlined in the CNA code of ethics one might suggest that stipulating individual lifestyle choices means that PHNs are violating the code. Explain why you agree or do not agree.

CANADIAN RESEARCH BOX 4.2

What is the relationship between a mother's intention to supplement with infant formula and breastfeeding duration?

Kim, E., Hoetmer, S. E., Li, Y., & Vandenberg, J. E. (2013). Relationship between intention to supplement with infant formula and breastfeeding duration. *Canadian Journal of Public Health*, 104(5), e388–e393.

Health Canada and the Canadian Paediatric Society recommend infants be exclusively breastfed for the first six months with continued breastfeeding for two years and beyond. In this study, Kim, Hoetmer, Li, and Vandenberg examined the relationship between a mother's intention to supplement with infant formula and the risk of discontinuing breastfeeding during the first 12 months of the postpartum period. The researchers surveyed 345 mothers at six weeks, six months and 12 months postpartum as part of York Region's Infant Feeding Survey. The relationship between a mother's prenatal intention to supplement with infant formula and breastfeeding duration was examined using Cox proportional hazards regression. Various factors were controlled for including mother's age, prenatal education, immigration status, parity, household income, mother's ethnicity, and education. Nearly one-third of mothers intended to supplement with infant formula. Of those mothers, 69% actually supplemented their breastfeeding with infant formula within 12 months postpartum. Intention to supplement was found to be associated with shorter breastfeeding duration (hazard ratio = 2.64, 95% CI 1.83–3.81). First-time mothers experienced shorter breastfeeding durations compared to experienced mothers (hazard ratio = 2.13, 95% CI 1.39–3.27). The authors concluded that a mother's prenatal intent to supplement may be associated with shorter breastfeeding duration.

Discussion Questions

1. What level of prevention are measures to promote breastfeeding?
2. What types of strategies could PHNs implement to ensure mothers breastfeed exclusively for the first six months postpartum?
3. Hospital policies exist that allow infant formula products to be made readily available to new mothers. What role(s) should the PHN assume in order to promote breastfeeding?

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In **secondary prevention**, the disease process is suspended before symptoms occur. Causal factors are not eliminated but permanent sequelae (a pathological condition) is prevented through early detection for treatment or by public health programs to control the disease (Vollman et al., 2012). Examples of secondary prevention work of PHNs may include the following:

- Screening for lead levels in blood samples of employees exposed to environmental contaminants in their workplace.
- Screening for cholesterol and blood pressure levels of employees in the workplace (Shah, 2003).
- Working in early detection programs, including mammography to detect breast cancer and papanicolaou smears to detect cervical cancer (McKeown & Messias, 2008).

In **tertiary prevention** the impairment or disability from the disease process is halted (Vollman et al., 2012). Examples of tertiary prevention work of PHNs may include the following:

- Implementing a control strategy with individuals diagnosed with active tuberculosis and who live in communities with a high incidence of tuberculosis.
- Providing treatment, education, self-management, and support to adults and children diagnosed with various infectious diseases, including human immunodeficiency virus (HIV) or hepatitis.

CASE STUDY

Molly Styles is a 20-year-old single mother. She has one child who is two months old. Her home is a dilapidated one-bedroom basement apartment in downtown Toronto. Ms. Styles relies on public assistance, but monthly cheques barely cover the costs of rent, food, and transportation. By the end of the month she has to take a trip to the local food bank. Ms. Styles quit high school when she found out she was pregnant. Her boyfriend, whom she was living with, left before the baby was born. She has been estranged from her parents for several years. Isolated and caring for her child, her life is bittersweet, because on the one hand becoming a mother has given her a reason for living, and on the other hand life is very different now with the demands of raising her child alone. During the baby's two-month immunization appointment, the PHN noticed that Ms. Styles seemed downcast. The PHN was also concerned about the baby's poor weight gain and wondered if Ms. Styles was still breastfeeding.

Discussion Questions

1. Do you think that you are witnessing health inequalities or social inequities or both in this case study?
2. Which public health essential functions and public health nursing roles are most relevant to this case study? Which of the discipline-specific competencies do you think you would need as a PHN to work with Ms. Styles and why?

CONCLUSION

PHNs have played and continue to play instrumental roles in the health and well-being of Canadians. Earliest documented accounts attest to the dedication, commitment, and visionary leadership of Canada's public health nursing pioneers. Today's PHNs face complex health-related issues locally, nationally, and globally. Safeguarding the health of the Canadian population entails assuming several roles and PHNs must be equipped with diverse competencies. The career of the PHN will continue to be both challenging and exciting as they work to fulfill the essential functions of health protection, health surveillance, population health assessment, disease and injury prevention, health promotion, and emergency preparation and response for the betterment of all Canadians.

KEY TERMS

disease and injury prevention p. xx
 emergency preparedness and disaster response p. xx
 health promotion p. xx
 health protection p. xx
 health surveillance p. xx
 population health assessment p. xx
 primary prevention p. xx
 principles of primary health care p. xx
 public health p. xx
 public health nurse p. xx
 public health nursing discipline-specific competencies p. xx
 secondary prevention p. xx
 six essential functions of public health p. xx
 tertiary prevention p. xx

STUDY QUESTIONS

1. What is the definition of public health?
2. When was the Public Health Agency of Canada established and why?
3. What is the role of the Public Health Agency of Canada?
4. What are the six functions of public health in Canada?
5. What are the public health nursing disciplinary-specific competencies?
6. Discuss what you think are two of the important contributions early public health nurses have made and why.

After working through these questions, go to the MyNursingLab at www.pearsoned.ca/mynursinglab to check your answers.

INDIVIDUAL CRITICAL-THINKING EXERCISES

1. Consider the definition of public health presented in this chapter. Is there another component you think is critical to include in this definition?
2. Although the Public Health Agency was established relatively recently, are there other organizations you know of (or may find) that have also contributed to public health around the turn of the previous century?

- How do you think PHNs may contribute to the work of the Public Health Agency of Canada?
- Discuss the importance of the six functions of public health.
- Why do you think it is important to have public health nursing disciplinary-specific competencies?

GROUP CRITICAL-THINKING EXERCISES

- Discuss what course concepts have you learned in class that relate to the public health nursing discipline-specific competencies (version 1.0).
- What public health activities are you able to identify in the communities in which you live?
- Discuss the differences in the definition of the role of community health nurses in general and public health nurses.

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ABOUT THE AUTHORS

Caroline J. Porr, BScN, RN, MN, PhD, is an assistant professor in the School of Nursing at Memorial University in Newfoundland and Labrador. During her PhD research at the University of Alberta, she formulated a theoretical model of relationship building to inform public health nurses of how to establish therapeutic rapport when working with vulnerable and potentially stigmatized clients. One of her research pursuits has been to disseminate and test the model for its utility for front-line public health nursing practice. Dr. Porr has since facilitated several relational skills training workshops focused on assisting public health nurses to develop therapeutic relationships with lower income lone-parent mothers.

Aliyah Dosani, RN, BN, MPH, PhD, is an associate professor in the School of Nursing and Midwifery, Faculty of Health and Community Studies, at Mount Royal University in Calgary, Alberta. She holds a PhD from the University of Calgary with a specialization in population/public health. Her nursing practice includes instructing students in the Bachelor of Nursing program, population/public health, community health nursing, and legal issues in nursing. Her work focuses on maternal, newborn, and child health. Her research interests include working with vulnerable populations through community-based programs and interventions. She also shares a passion for global health issues.