

Core Public Health Functions

Public health systems provide and support a wide range of program and policy interventions. Over the past decade, many countries have defined core (or essential) functions of their public health systems. Identifying the functions of the public health system is a recurring theme around the world,³⁹ suggesting a need for countries and international health organizations to improve their ability to explicitly identify what they do and how they do it. What follows is a description of core public functions developed to date in Canada and the United States. Core / essential public health functions described by other countries and agencies around the world are listed in Appendix C (PAHO), Appendix D (Australia), Appendix E (WHO) and Appendix F (England).

In Canada, no official list of essential or core public health functions exist, however there appears to be agreement with the following essential functions outlined in the report of the Advisory Committee on Population Health (ACPH):⁴⁰

- Population health assessment
- Health surveillance
- Health promotion
- Disease and injury prevention
- Health protection

Other recent reports such as Naylor and Kirby refer to this list when discussing the roles and functions of public health. Saskatchewan Public Health base their description of what population and public health services should be on similar broad themes. As well, the Quebec Public Health Act⁴¹ (the most recent public health legislation in the country), uses the same five headings to outline public health functions. A description for each of the five broad public health functions is provided in the ACPH Report⁴² as follows:

- **Population Health Assessment.** Population health refers to the health of a population as measured by health status indicators. Population health focuses on the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in their patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of those populations.
- **Health Surveillance.** Health surveillance is the tracking and forecasting of any health event or health determinant through the collection of data, and its integration, analysis and interpretation into surveillance products, and the dissemination of those surveillance products to those who need to know.
- **Health Promotion.** Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment.
- **Disease and Injury Prevention.** Prevention consists of an intervention that has been shown to reduce significantly the likelihood that a disease or a disorder will affect an individual or that interrupts or slows the progression of that disease.

³⁹ Moloughney, B. (2002).

⁴⁰ Advisory Committee on Population Health Highlights Report. (2001) 21-25.

⁴¹ Quebec Public Health Act (2001, c. 60, s. 8). Retrieved 20-02-04 at

http://publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/S_2_2/S2_2_A.html

⁴² Advisory Committee on Population Health Highlights Report. (2001) 21-25.

- **Health Protection.** Health protection refers to actions that protect Canadians against health and safety risks. Science (providing evidence), surveillance (monitoring and forecasting health trends), risk management (assessing and responding to health risks) and program development (taking action) form the basis of health protection activities.

CIHR - The Institute of Population and Public Health recently led a group of opinion leaders through a process to consider the future of public health and identified some examples for each of these functions delineated in this table⁴³:

TABLE #1: FREQUENTLY CITED CANADIAN CORE PUBLIC HEALTH FUNCTIONS

| | |
|-------------------------------|---|
| Population health assessment | <ul style="list-style-type: none"> ▪ Population/community health needs assessment ▪ Health status report, system report card. |
| Health surveillance | <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) ▪ Report to practitioners of increasing threat, what they need to look for, and intervention required. |
| Health promotion | <ul style="list-style-type: none"> ▪ Inter-sectoral community partnerships to solve health problems ▪ Advocacy for healthy public policies; (including an implicit or explicit responsibility for monitoring and advocating for policies around fundamental determinants of health including income, education, housing, access to affordable and personally acceptable food, safe communities, green-space, etc.) ▪ Improving personal skills; ▪ Creating physical and social environments to support health (e.g. bike paths, brokering access to social networks). |
| Disease and injury prevention | <ul style="list-style-type: none"> ▪ Immunizations ▪ Investigation and outbreak control ▪ Encouraging healthy behaviours (e.g. not smoking, healthy eating, physical activity, bicycle helmet use) ▪ Early detection of cancers (e.g. breast cancer screening). |
| Health protection | <ul style="list-style-type: none"> ▪ Restaurant inspections ▪ Child care facility inspections ▪ Water treatment monitoring ▪ Air quality monitoring/enforcement |

Various reports have suggested additions to the theme areas. For example the Naylor Report recommended an expanded definition for core public health to articulate public health's key role in disaster and emergency response.⁴⁴ This report also recommended that the current core functions be expanded to include greater investments in disease surveillance systems, health emergency preparedness and epidemic response capacity, a major and urgently-needed program of development of public health human resources, substantial augmentation of research spending and enhancement of federal laboratories.

⁴³ CIHR. (June 2003). 4.

⁴⁴ National Advisory Committee on SARS and Public Health. (October 2003). 2.

In Nova Scotia⁴⁵ *population health advocacy* is articulated as a separate and additional public health function. Although the ACPH⁴⁶ report includes advocacy activities under the broader function of health promotion, the Nova Scotia website explains that adding population health advocacy as a separate component is needed to strengthen the understanding of governments and populations about the broad determinants of health, and gain support for the involvement of government and non-governmental agencies in actions that improve the overall health of populations. Activities under population health advocacy include developing comprehensive inter-sectoral initiatives that significantly impact population health, supporting longitudinal research to build on a foundation of sound evidence about factors that impact health and using evidence to develop public policies that improve the health of populations. A more detailed description of the Nova Scotia Public Health Services Role Relative to each of the essential elements is available in Appendix B.

Saskatchewan⁴⁷ bases their description of public health population health services on the same broad themes but have expanded them to include:

- health promotion processes
- disease and injury prevention
- health status monitoring and disease surveillance
- investigation and control of diseases
- protection of the environment, workplaces, housing, food and water
- laboratory services to support disease control and environmental protection
- health education and information
- community mobilization for health-related issues
- targeted outreach and linkage to personal services
- public health services quality assurance and accountability
- education and development of public health professionals
- participation in policy development, planning and administration.

Of note in the Kirby report⁴⁸, the term “public health” is avoided. The report states that this term is often confused with publicly funded health care. Instead they use the terminology “health protection and promotion” and consider it to encompass the following activities: disease surveillance, disease and injury prevention, health protection, health emergency preparedness and response, health promotion and relevant research under takings.

The United States have perhaps undertaken the most formal process of identifying and adopting core functions for public health. In 1988 the Institutes of Medicine (IOM), published its landmark report *The Future of Public Health* which broadly defined the role of governmental public health agencies to include three core functions⁴⁹:

- Assessment – the regular, systematic collection, assembly, analysis and dissemination of information on the health of the community

⁴⁵ Nova Scotia Public Health Services. Who we are, What we do website.

⁴⁶ Advisory Committee on Population Health Highlights Report. (2001). 21-25.

⁴⁷ Saskatchewan Health. (October 2001). Public Health / Population Health Services in Saskatchewan. (Adapted from the *Journal of Public Health Policy*, Vol. 19, No. 4, 1998, pg. 394-95.) Retrieved 20-02-04 at http://www.health.gov.sk.ca/phb_public_health/health_promotion.pdf

⁴⁸ Standing Senate Committee on Social Affairs, Science and Technology. (November 2002). *Reforming Health Protection and Promotion in Canada: Time to Act*. The Senate of Canada. 5.

⁴⁹ Corso, L., Wiesner, P., Halverson, P., Brown, C. (Sept. 2000). 4.

- Policy development – the exercise of responsibility to serve the public interest in the development of comprehensive public health policies by promoting the use of scientific knowledge base in decision making
- Assurance – the guarantee to constituents that services necessary to achieve agreed upon goals are provided by encouraging actions of others, requiring action through regulation or providing service direction

Since the identification of the three core functions, many researchers and practitioners have used them as a basis for identifying or analysing public health activities. For example several states made attempts to restructure their public health system to a system primarily based on the core public health functions and researchers use them to analyse activities within program area or job categories. This led to the development of the following organizational practices⁵⁰ to describe public health performance and eventually to assess and evaluate public health performance:

- Assessment
 - Assess the health needs of the community
 - Investigate the occurrence of health effects and health hazards in the community
 - Analyze the determinants of identified health needs
- Policy development
 - Advocate for public health, build constituencies and identify resources in the community
 - Set priorities among health needs
 - Develop plans and places to address priority health needs
- Assurance
 - Manage resources and develop organizational structure
 - Implement programs
 - Evaluate programs and provide quality assurance
 - Inform and educate the public

This framework was found to be a feasible framework of assessing public health performance in many studies.⁵¹

In 1994 a working group comprised of leading public health agencies⁵² in cooperation with the US Centers for Disease Control and Prevention (CDC) undertook to identify what it takes to maintain a healthy community. They specifically wanted to describe public health activities more effectively to external audiences. A list of ten essential public health services was developed as follows:⁵³

1. Monitor health status to identify community health problems
2. Diagnose and investigate health problems and health hazards in the community
3. Inform, educate, and empower people about health issues
4. Mobilize community partnerships to identify and solve health problems

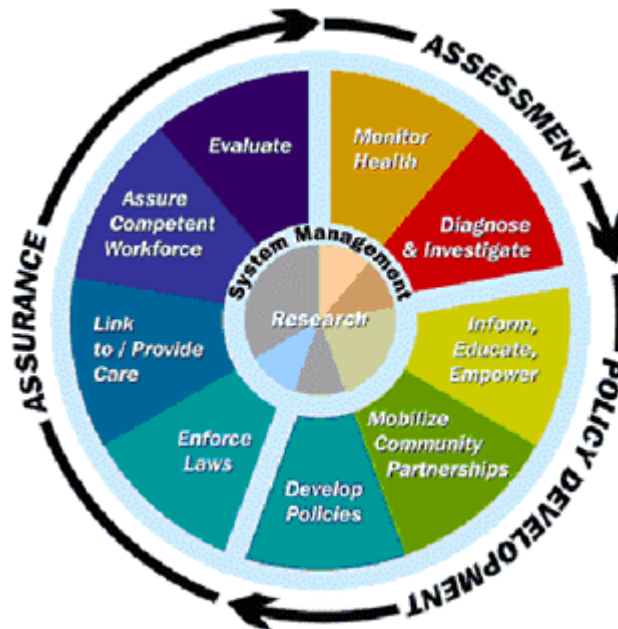
⁵⁰ Corso, L., Wiesner, P., Halverson, P., Brown, C. (Sept. 2000). 7.

⁵¹ Corso, L., Wiesner, P., Halverson, P., Brown, C. (Sept. 2000). 7.

⁵² Adopted: Fall 1994, Source: Public Health Functions Steering Committee, Members (July 1995): American Public Health Association, Association of Schools of Public Health, Association of State and Territorial Health Officials, Environmental Council of the States, National Association of County and City Health Officials, National Association of State Alcohol and Drug Abuse Directors, National Association of State Mental Health Program Directors, Public Health Foundation, U.S. Public Health Service --Agency for Health Care Policy and Research, Centers for Disease Control and Prevention, Food and Drug Administration, Health Resources and Services Administration, Indian Health Service, National Institutes of Health, Office of the Assistant Secretary for Health Substance Abuse and Mental Health Services Administration

⁵³ Nelson, J., Essien, J., Loudermilk, R. and Cohen, D. (2002). 25.

5. Develop policies and plans that support individual and community health efforts
6. Enforce laws and regulations that protect health and ensure safety
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable
8. Assure a competent public health and personal health care workforce
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services
10. Research for new insights and innovative solutions to health problems



Inherent in these functions was the recognition that each public health organization would not perform the same amount of each element or the same elements as others; rather they would be determined by a number of forces in the community.

The chart which follows compares the frequently cited Canadian core public health functions with the similar functions described in the United States, Pan American Health Organization, World Health Organization (WHO), WHO Western Pacific Region, Australia and England.

TABLE #2: SUMMARY OF PUBLIC HEALTH CORE FUNCTIONS COMPARED WITH FREQUENTLY CITED CANADIAN CORE FUNCTIONS

| Canada (frequently cited) | US | PAHO | WHO | WHO – Western Pacific Region | Australia | England |
|--|--|--|--|--|--|--|
| <ul style="list-style-type: none"> Population health assessment | <ul style="list-style-type: none"> Monitor health status to identify community health problems Evaluate effectiveness, accessibility, and quality of personal and population-based health services | <ul style="list-style-type: none"> EPHF 1 Monitoring, Evaluation, and Analysis of Health Status | | <ul style="list-style-type: none"> Health situation monitoring and analysis; | <ul style="list-style-type: none"> Assess, analyse and communicate population health needs and community expectations | |
| <ul style="list-style-type: none"> Health surveillance | | <ul style="list-style-type: none"> EPHF 2 Public Health Surveillance, Research, and Control of Risks and Threats to Public Health | <ul style="list-style-type: none"> Prevention, surveillance and control of communicable and non-communicable diseases; monitoring the health situation; | <ul style="list-style-type: none"> Epidemiological surveillance/ disease prevention and control; | | <ul style="list-style-type: none"> Health surveillance, monitoring and analysis. Investigation of disease outbreaks, epidemics and risks to health; |
| <ul style="list-style-type: none"> Health promotion | <ul style="list-style-type: none"> Inform, educate, and empower people about health issues Develop policies and plans that support individual and community | <ul style="list-style-type: none"> EPHF 3 Health Promotion EPHF 4 Social Participation in Health | <ul style="list-style-type: none"> Health promotion; | <ul style="list-style-type: none"> Development of policies and planning in public health; Health promotion, social participation | <ul style="list-style-type: none"> Strengthen communities and build social capital through consultation, participation and empowerment Promote, develop and support healthy public | <ul style="list-style-type: none"> Establishing, designing and managing health promotion and disease prevention programmes; |

| Canada (frequently cited) | US | PAHO | WHO | WHO – Western Pacific Region | Australia | England |
|--|---|--|--|--|---|--|
| | <ul style="list-style-type: none"> health efforts | | | and empowerment; | policy, including legislation, regulation and fiscal measures <ul style="list-style-type: none"> Promote, develop and support healthy growth and development throughout all life stages | |
| <ul style="list-style-type: none"> Disease and injury prevention | <ul style="list-style-type: none"> Link people to needed personal health services and assure the provision of health care when otherwise unavailable Diagnose and investigate health problems and health hazards in the community | <ul style="list-style-type: none"> EPHF 7 Evaluation and Promotion of Equitable Access to Necessary Health Services | <ul style="list-style-type: none"> Specific public health services Personal health care for vulnerable and high risk populations | | <ul style="list-style-type: none"> Promote and support healthy lifestyles and behaviours through action with individuals, families, communities and wider society Prevent and control communicable and non-communicable diseases and injuries through risk factor reduction, education, screening, immunisation and other interventions | |
| <ul style="list-style-type: none"> Health protection | <ul style="list-style-type: none"> Enforce laws and regulations that protect health and ensure safety | <ul style="list-style-type: none"> EPHF 6 Strengthening of Institutional Capacity for Regulation and Enforcement in Public Health | <ul style="list-style-type: none"> Occupational health; Protecting the environment; Public health legislation and regulation; | <ul style="list-style-type: none"> Regulation and enforcement to protect public health; | <ul style="list-style-type: none"> Promote, develop, support and initiate actions which ensure safe and healthy environments | <ul style="list-style-type: none"> Ensuring compliance with regulations and laws to protect and promote health; |
| <ul style="list-style-type: none"> *Population Health Advocacy (as included in Nova | <ul style="list-style-type: none"> Mobilize community partnerships to identify and solve | | | | <ul style="list-style-type: none"> Promote, develop and support actions to improve the health | <ul style="list-style-type: none"> Enabling and empowering communities |

Core Competencies in Public Health Literature Review

| Canada (frequently cited) | US | PAHO | WHO | WHO – Western Pacific Region | Australia | England |
|--|---|--|--|--|--|--|
| Scotia) | health problems | | | | status of Aboriginal and Torres Strait Islander people and other vulnerable groups | and citizens to promote health and reduce inequalities |
| <ul style="list-style-type: none"> *Emergency response and preparedness and epidemic response capacity (as recommended by Naylor) | | <ul style="list-style-type: none"> EPHF 11 Reduction of the Impact of Emergencies and Disasters on Health | | | | |
| <ul style="list-style-type: none"> *Development of public health human resources, (as recommended by Naylor) | <ul style="list-style-type: none"> Assure a competent public health and personal health care workforce | <ul style="list-style-type: none"> EPHF 8 Human Resources Development and Training in Public Health | <ul style="list-style-type: none"> Ensuring the quality of personal and population-based health services; | <ul style="list-style-type: none"> Human resources development and planning in public health; | | <ul style="list-style-type: none"> Developing and maintaining a well-educated and trained, multidisciplinary public health workforce; |
| <ul style="list-style-type: none"> *Substantial augmentation of research spending (as recommended by Naylor) | <ul style="list-style-type: none"> Research for new insights and innovative solutions to health problems | <ul style="list-style-type: none"> EPHF 10 Research in Public Health | | <ul style="list-style-type: none"> Research | | <ul style="list-style-type: none"> Research, development, evaluation and innovation |
| <ul style="list-style-type: none"> *Enhancement of federal laboratories (as recommended by Naylor) | | | | | | |
| Other: <ul style="list-style-type: none"> Quality assurance | | <ul style="list-style-type: none"> EPHF 9 Quality Assurance in | <ul style="list-style-type: none"> Public health management | <ul style="list-style-type: none"> Strategic management of | <ul style="list-style-type: none"> Plan, fund, manage and evaluate health | <ul style="list-style-type: none"> Creating and sustaining |

| Canada (frequently cited) | US | PAHO | WHO | WHO – Western Pacific Region | Australia | England |
|---|----|--|-----|--|--|---|
| <ul style="list-style-type: none"> Management and Planning | | Personal and Population-based Health Services <ul style="list-style-type: none"> EPHF 5 Development of Policies and Institutional Capacity for Planning and Management in Public Health | | health systems and services for population health gains; | gain and capacity building programmes designed to achieve measurable improvements in health status, and to strengthen skills, competencies, systems and infrastructure | cross-governmental and inter-sectoral partnerships to improve health and reduce inequalities; <ul style="list-style-type: none"> Ensuring the effective performance of NHS services to meet goals in improving health, preventing disease and reducing inequalities; Quality assuring the public health function. |

* represents core functions recommended by some groups in Canada

Based on the chart above, it is clear that the frequently cited core public health functions in Canada are considered also as key functions in most other countries who have begun identifying them. However several areas, some of which have been proposed in the Naylor report, are absent and worthy of consideration. These include:

- Emergency preparedness and epidemic response capacity
 - Ongoing development and sustainability of a strong, skilled public health workforce
 - Research and planning
 - Quality Assurance activities
-