Environmental Health Competencies

Prepared for the Environmental Health & Equity Collaborative's Workforce & Education Workgroup

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ENVIRONMENTAL
HEALTH & EQUITY
COLLABORATIVE

Contents

BACKGROUND & GOALS

About the Environmental Health & Equity Collaborative

The Environmental Health & Equity Collaborative is a group of environmental health professionals convened by APHA and funded by the Agency for Toxic Substances and Disease Registry and the Centers for Disease Control and Prevention's National Center for Environmental Health. It acts as a unified voice for environmental health. The coalition promotes environmental health through resource-sharing and coordinating efforts around four priority areas: climate change; environmental health workforce and education; environmental health awareness and communications; and systems and infrastructure.

The American Public Health Association champions the health of all people and all communities. It is the only organization that combines a nearly 150-year perspective, a broad-based member community, and the ability to influence policy to improve the public's health.

Current Project

During a June 2019 strategic planning session, the coalition prioritized the development of environmental health competencies, with a focus on individual professional competencies for people working in environmental health in some capacity. During that session, it planned to:

perform a literature review to learn about existing efforts conducted by the Council on Education for Public Health, the National Environmental Health, Science and Protection Accreditation Council, and others;

- develop a survey tool to collect information from early-career professionals and employers about the kinds of environmental health skills and knowledge they've gained and how (e.g., what was good, what could be better); and

- write a report and peer-reviewed publication, as well as share recommendations with environmental health programs.

This document represents the results of the literature review.

DEFINITION OF COMPETENCIES

For this work to be useful and relevant, the notion of competencies had to be defined as precisely as possible. The most basic definition of the word competency is "an important skill that is needed for a job."[1] This broad definition cannot be used for our purpose if it does not distinguish general and universal competencies from skills (including technical ones), knowledge and relevant practices in a professional context. Another important feature of the chosen definition should be its inclusiveness. Indeed, the various frameworks, or competency projects already undertaken, as well as any future ones, aim to apply to all environmental health practitioners, regardless of their education status or their level of authority.

The leading environmental health competencies project in the U.S. to date, established by NCEH and APHA, used Parry's definition. It states that a competency is "a cluster of related knowledge, skills and attitudes that affect a major part of one's job (a role or responsibility), that correlate with performance on the job, that can be measured against some accepted standards, and that can be improved via training and development."[2]

What may be lacking in this definition, especially in a context in which practitioners face increasingly complex and new challenges, is the idea of a competency not only as a cluster of resources, but also as an ability to combine and mobilize resources to overcome a complex issue. This meets Rey's definition of the competent individual, who is according to Pascal Ughetto,[3] "not only able to carry out standardized tasks on demand, but someone who knows how to muster them appropriately in new situations falling under his domain of ability and who, thus, is able to determine the notion of appropriate."

The notion of determining what is appropriate to mobilize is essential when discussing competencies, as many environmental health situations can draw from a wide range of categories of knowledge and abilities. This is the idea at the heart of the definition of competency provided by the National Public Health Institute of Québec in their Environmental Health Competency

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1. Definition of « Competency » from the Cambridge Advanced Learner's & Thesaurus Dictionary © Cambridge University Press

2. Parry, S. R. "The Quest for Competencies," Training, July 1996, p. 50

3. Pascal Ughetto. Référentiels de compétences : ce que l'instrument fait à la logique compétence. B. Prot. Les référentiels contre l'activité, Octarès, pp.35-49, 2014.

A competencies framework must note the distinguishing factor between general public health competencies and environmental health competencies, though they naturally overlap.

Framework for Public Health. It uses Tardif's[4] definition, which states that a competency is a "complex knowing to act which involves mobilizing and combining a variety of internal and external resources in a range of situations."[5] This acknowledges that competencies not only summon internal resources, but also external resources and how to combine them.

Now that we have discussed the general elements of the definition of a competency, we can try to find key characteristics of those competencies. For that purpose, we can once again rely on the National Public Health Institute of Québec, which cites Tardif[6], who highlighted five key characteristics of competencies. They must be **integrative,** meaning that they integrate miscellaneous and different resources; **combinatory,** meaning that they involve mobilizing various resources; and **developmental,** or evolving throughout one practitioner's lifetime. Competencies should also have a **contextual** character, meaning that they are mobilized in a specific context; and should eventually develop an **evolving** character, meaning they "are designed to permit the integration of new resources and new situations without being compromised."[7]

Another important point for the definition of competencies is the idea of **universality.** When establishing a general framework of competencies, it seems prudent to design competencies that can be applied to all environmental health practitioners. This is a particularly challenging task, considering the wide spectrum of professions encompassed by this domain and the variety of educations and levels of responsibility. Designing universal competencies does not mean negating the particularities of each occupation and the different resources that could be mobilized. Instead, it means creating a competencies framework that can be used at all levels and be relevant to anyone's task. This approach is complimentary to the establishment of field-specific competency frameworks, as has been extensively done in the public health domain.

Finally, a competencies framework must note the distinguishing factor between general public health competencies and environmental health competencies, though they naturally overlap.

METHODOLOGY AND INITIAL IMPRESSIONS

A scoping review was performed to identify existing work on environmental health competencies. We searched mainly using the following **key words** on multiple web platforms:

- competencies / competence
- skills
- proficiency

The keywords "environmental health" or "public health" were also added (the latter in order to identify competencies that could also be applied to the environmental health context).

Platforms used were Google, Google Scholar, PubMed and the online catalogues of the libraries of Johns Hopkins University and Sciences Po Paris. The search was performed both in English and French to explore a broader spectrum of sources and to more easily find sources, such as those at the National Public Health Institute of Québec. The search terms used in French were the equivalent of those used in the English search.

Results were first selected according to their titles — in which the main **exclusion criteria** was the specificity of the article (applicability to the environmental health domain) — and yielded the six documents specific to environmental health below.

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4. Tardif , J.. L'évaluation des compétences. Documenter le parcours de développement, Chenelière Éducation, Montreal, 2006
5. National Public Health Institute of Québec, Environmental Health Competency Framework for Public Health in Québec, 2012
6. Tardif, J. 2006. L'évaluation des compétences. Documenter le parcours de développement, Chenelière Éducation, Montreal
7. National Public Health Institute of Québec, Environmental Health Competency Framework for Public Health in Québec, 2012

The methodology for the search was simple on purpose, as it was meant to identify sources that are easily accessible and thus effectively useful to environmental health professionals.

The selected articles were read and analyzed to evaluate their usefulness to the task of establishing a new environmental health competency framework. Massaquoi et al. (2015), Lopez-Medina et al. (2019) and Gordon et al. (2002) were not included in the table since they did not provide actual environmental health competencies, but are contextual articles (emphasizing the context and importance of environmental health competencies in specific public health domains).

Specific sources on environmental health competencies:

- American Public Health Association. (2001). Environmental Health Competency Project: Recommendations for Core Competencies for Local Environmental Health Practitioners. National Center for Environmental Health, Centers for Disease Control and Prevention.

- Bellack, J. P., Musham, C., Hainer, A., Graber, D. R., & Holmes, D. (1996). Environmental health competencies: A survey of nurse practitioner programs. *AAOHN journal,* 44(7), 337-344.

- Gordon, L. (2002). Setting the context: environmental health practitioner competencies. J*ournal of Environmental Health,* 65(1), 25-27.

- Laliberté, C., & Brahimi, C. (2013). Environmental health competency framework for public health in Québec. Direction de la santé environnementale et de la toxicologie, Institut national de santé publique Québec.

- Lopez-Medina, I. M., Álvarez-Nieto, C., Grose, J., Elsbernd, A., Huss, N., Huynen, M., & Richardson, J. (2019). Competencies on environmental health and pedagogical approaches in the nursing curriculum: A systematic review of the literature. *Nurse education in practice,* 37, 1-8.

- Massaquoi, L. D., & Edwards, N. C. (2015). A scoping review of maternal and child health clinicians attitudes, beliefs, practice, training and perceived self-competence in environmental health. *International journal of environmental research and public health,* 12(12), 15769-15781.

We also searched for competencies in the objectives of environmental health academic programs. We chose one source from a master's degree program and another from a practitioner program that were the most relevant and up-to-date. The practitioner's program was found using the same methodology as for the environmental health articles. Meanwhile, the academic program was found on a list of public health referential sources at the end of Brahimi et al. (2011)[8].

Ultimately, we used objectives from the following environmental health academic programs:

- MPH Program Curriculum and Competencies, Environmental Health Sciences subsection, Harvard University T.H. Chan School of Public Health

- Chartered Environmental Health Practitioner Programme, Program Specification, Chartered Institute of Environmental Health (UK)

The oldest article found was a survey of nurse practitioners' programs, which dates back to 1996. We did not feel the need to exclude sources on the basis of publication date, since they offered competencies that could still be relevant today.

In addition to finding five sources that present competencies specific to the environmental health field, another potential source (Bourne, 2005) was not accessible to us, as it required access to the Canadian Institute of Public Health Inspectors database.

Thus, among the five specific sources retained, two of them are precise frameworks of environmental health competencies from CDC (2001) and the National Public Health Institute of Québec (2012). These are the sources we have relied on the most. A third source was a survey of environmental health competencies that focused specifically on nurse practitioners; but those competencies can be extrapolated to environmental health professionals. The last two sources listed above were objectives from environmental health academic programs.

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8 Brahimi, C., Farley, C., & Joubert, P. (2011). L'approche par compétences: un levier de changement des pratiques en santé publique au Québec. Québec: Institut national de santé publique du Québec.

Our first impression of a general convergence between competencies from the different sources has been validated by a closer analysis. Indeed, except for a few rather vague competencies from the academic and professional programs, we matched all competencies with the referential.

Ultimately, we used the following public health competency frameworks:

- Public Health Agency of Canada. (2007). Core competencies for public health in Canada. Release 1.0.

- Harvard T.H. Chan School of Public Health's MPH Foundational Competencies

- Council on Linkages Between Academia and Public Health Practice. (2014). Core competencies for public health professionals.

- Recension of public health competencies referencials, National Public Health Institute of Québec, 2011

At the level of the competencies themselves, we mostly found them understandable. The global competencies in Québec 2012 were very broad, categorizing their data into four areas. For more precision, we also included specific competencies and skills contained in their "family of situations" classification. Some competencies, such as "Apply environmental health principles in a work/field-based setting," were too vague to be useful. They mostly came from academic and professional programs; however, this was expected since those were not meant to be competencies frameworks specifically for environmental health workers.

The general impression was of substantial coherence between all the competencies and most of the core notions. The differences were mainly found in the organization and phrasing. Indeed, although the ideas behind the establishment of the competency frameworks were similar, there was great disparity in the organization of those ideas. This suggests that there is still no broad consensus on what a competency is and what it should contain.

Some competencies were presented as short but rather extensive key notions (CDC 2001), with explanatory examples and lists of soft skills and technical competencies in the appendix. Others were phrased in a lengthier way but were very few (Québec, 2012), resulting from a very broad grouping of multiple specific competencies and skills, with each attached to a lengthy list of "Internal Resources" on professional situations, declarative knowledge, know-how and procedural knowledge, soft skills and attitudes, as well as lists of "External Resources" such as networks, guidelines and policies, tools and references. We will not go into detail on the structure of competencies from the survey and the academic and professional programs since they were not intended as a framework of competencies and thus, have not been shaped with the same intention as CDC 2001 and Québec 2012 and are rather meant to enrich the content of those frameworks.

Generally, the impression was that Québec 2012 adopted a more restrictive and precise definition of competencies than CDC 2001, while being more precise in the inventory of corollary knowledge, skills and resources for each competency. However, we found that the structure for the competencies in CDC 2001 was more extensive (with more competencies per category, resulting from a less severe grouping and synthesis) and more intuitive.

RESULTS

Using the conclusions of our first impressions, we have chosen to use the three categories and 14 core competencies of CDC 2001 as referential for the organization of our data. The competencies from our four other sources were organized to match the relevant category of the referential. This has provided us with a table in which matching competencies are grouped, making comparisons easier.

Our first impression of a general convergence between competencies from the different sources has been validated by a closer analysis. Indeed, except for a few rather vague competencies from the academic and professional programs, we matched all competencies with the referential. The core competencies from Québec 2012 were harder to match since they are broad and could overlap, but the specific competencies from Québec 2012 could all be matched in a category of the

referential. This suggests that, generally, the CDC framework is still quite complete and on par with other sources. It also comforts us in our choice to use CDC categories as the referential, suggesting that the structure — which made it possible to regroup the other competences — is also valid. From that point, the analysis of the data was undertaken with an aim of comparing other competencies frameworks to CDC 2001 to discover what could be added or improved. Most of the competencies matched to CDC 2001 were more specific competencies encompassed in the broader scope of CDC 2001. Thus, it is not relevant to highlight all the differences. This section will rather provide an analytical summary of meaningful differences and ideas for improving CDC 2001.

First, although the structure allowed almost every competency from our sources to find a match, some of the core competencies from CDC 2001 were not matched by any other source. This could either suggest that other referentials were not successful in characterizing these aspects of environmental health work or that those core competencies are not relevant or redundant. There are two of them: "Reporting, Documentation and Record-Keeping" and "Computer/Information Technology." One reason for this might be that those competencies focus more on technical aspects than other, more translational competencies. This is particularly true for "Computer/Information Technology," which although being essential, does not possess an integrative and combinatory nature as strong as other competencies defined in CDC 2001. This category encompasses the use of software and web-based applications to research, keep records, analyze data, interpret data and report tasks. Although the category was created to bring particular attention to this skill, the use of computer and information technology could be integrated into the following categories: "Information Gathering," "Data Analysis and Interpretation," or "Reporting, Documentation, and Record-Keeping."

Another observation concerning the presentation of core competencies is the use of unclear names. An example is the competency "Marketing," which CDC defined as the transmission of environmental health information and importance to clients and the public. If the definition makes sense, the name itself is not clear, which might impair comprehension.

In addition, CDC's 2001 framework includes competencies that are defined as capacities to mobilize resources when required; however, there are no competencies on maintaining action over the long run. One of the specific competencies found in Québec 2012 is centered on monitoring the emergence of new health threats, especially following an emergency or disaster. One competency we suggest is the capacity to be proactive regarding the emergence of threats and the ability to monitor the evolution of a health situation — the need for both have been clearly highlighted in the ongoing COVID-19 pandemic. Similarly, we recommend that the "Collaboration" competency from CDC 2001 not only include the "capacity to form partnerships and alliances with other individuals and organizations to enhance performance on the job," but also the ability to maintain those relationships, as stated by the Chartered Environmental Health Practitioner Program.

Another point that emerged from the analysis of the results is cultural sensitivity as a competency. In CDC 2001, the authors extensively discussed the theme of cultural sensitivity as a competency. They concluded that it is something important, while not recognizing it as an explicit competency. As such, the authors included the notion of cultural sensitivity in the examples provided for the competencies of "Economic and Political Issues" and "Communicate," while not explicitly mentioning it in the definition of their competencies. In comparison, the public health competency framework from the Canadian Public Health Agency (2008)6 featured a "Diversity and Inclusiveness" category containing three competencies. Those competencies are: "Address population diversity when planning, implementing, adapting and evaluating public health programs and policies" and "Apply culturally relevant and appropriate approaches with people from diverse cultural, socioeconomic and educational backgrounds, and persons of all ages, genders, health status, sexual orientations and abilities." However, we feel the notions of cultural sensitivity and inclusivity deserve a more important place in the environmental health competency framework.

Foronda (2008) in "A Concept Analysis of Cultural Sensitivity"sets conditions under which cultural sensitivity can be used by public health workers. The authors define three antecedents that "stage the possibility of employing cultural sensitivity":

- diversity (there has to be diversity in the group)
- awareness (one should be aware of one's own culture)
- encounter (one should come into contact with someone of cultural difference).

We recommend that environmental health workforce training and credentialing be enhanced to focus on equity, environmental justice, and sustaining collaborative partnerships with intersectoral partners and community representatives.

The paper also stresses that for cultural sensitivity to be useful in helping public health workers improve communication, yield more effective interventions and generate a higher degree of satisfaction, the notion ought to be clearly defined. The authors provide a concept analysis of cultural diversity (figure in appendix) and give the following definition: "Cultural sensitivity is employing one's knowledge, consideration, understanding, respect, and tailoring after realizing awareness of self and others and encountering a diverse group or individual. Cultural sensitivity results in effective communications, effective interventions, and satisfaction."[8]

A final, more general observation comparing CDC 2001 to Québec 2012 is that there is still room for improvement within the CDC environmental health competency project. Although Québec 2012's more condensed competencies made it arguably less useful and legible, it attached to its competencies a large quantity of related information on the know-how, attitudes, skills and resources for each competency. Although this information does not represent the actual environmental health competencies, it may be useful for environmental health workers.

OPPORTUNITIES FOR ACTION

The findings from this review suggest a need to develop a comprehensive set of environmental health competencies that utilize a health equity lens in order to create and sustain equitable environmental health practices, policies, and decisions. Additionally, we recommend that environmental health workforce training and credentialing be enhanced to focus on equity, environmental justice, and sustaining collaborative partnerships with intersectoral partners and community representatives.

Overall, we encourage federal agencies responsible for environmental health regulation, research, education, and practice to revise the current environmental health competencies with the participation and agreement of relevant stakeholders, such as APHA, National Environmental Health Association, National Association of County and City Health Officials, Association of Schools and Programs in Public Health, Association of Industrial Hygienists, EH Accrediting Council, Council on Education in Public Health, etc.

Specifically, in the development of the competencies, we recommend that they each incorporate cultural awareness and sensitivity as a key aspect. We also suggest each competency provide links to resources and examples, as done in the Quebec 2012 competencies and which provides for ease of use.

Finally, we encourage universities and accrediting bodies (EHAC and CEPH) that offer environmental health programs to adopt the revised environmental health competencies.

	Environmental Health Competencies (specific resources)					
	Environmental Health Competencies Project, NCEH, CDC, APHA May 2001	**Environmental Health Competencies Framework for Public Health in Quebec, Quebec National Public Health Institute, July 2012**		**Environmental Health Competencies, A survey of nurse practitioner programs, Bellback et al., 1996**	**MPH Program Curriculum and Competencies, Environmental Health Sciences subsection, Harvard University T.H. Chan SPH**	**Chartered Environmental Health Practioner Programme, Program Specification, Chartered Institute of Environmental Health (UK) => Programme outcomes (general competencies)**
		Global competencies	**Specific competencies (after selection and grouping)**			
Assessment			Analyze a simple or complex situation in response to a request from the network or community, or an emerging issue that poses a potential risk for the population (physical health or concerns)	Understand the relationship between environmental hazard and human health	Describe the biological aspects of public health issues	Make well-formed judgments in complex and novel situations, objectively analyzing information, assessing risk, identifying and implementing appropriate solutions
	Information gathering		Receive information on disease or health risk	Access information resources related to environmental hazard and health		
			Investigate an outbreak + conduct studies	Conduct environmental and exposure histories		
			Estimate contamination from exposure, quantify the risk and evaluate the health consequences			
			Monitor the emergence of new health threats / monitor and interpret health indicators / carry out health monitoring / implement monitoring activities following an emergency or disaster			

	Data analysis and interpretation		Validate and/or establish reference values, standards and criteria for various chemical, physical, microbiological and radiological contaminants		Characterize the human health effects, both acute and chronic, of major environmental and occupational hazards such as air pollution, metals, organic pollutants, microbial contamination of drinking water, and physical hazards and their application to sustainability	Demonstrate research and evaluation skills, critically engaging and evaluating with environmental health research and evidence
					Analyze sources, pathways, and routes of exposure to these environmental and occupational hazards, and determine the populations with a high risk of exposure	
	Evaluation		Define indicators and use them in a monitoring plan or an information system			Critically evaluate and reflect upon interventions, outcomes, and conclusions associated with environmental health practice
			Evaluate the impacts of development projects by identifying the psychological and health issues when the projects are subjected or not to the impact procedure			
			Carry out feedback activities aimed at improving emergency response planning			
			Evaluate an awareness campaign or communication tools			

Management						
Management	Problem solving	Provide expertise for the management of health risks stemming from biological, chemical or physical threats, contaminants or hazards in the environment	Take appropriate action in response to an environmental problem or situation that presents a risk, taking into account the actual or perceived seriousness of the situation	Plan and implement care for clients with environmentally induced diseases	Apply environmental health principles in a work/field-based setting	Practice environmental health at the highest level, demonstrating and maintaining expert-level functional and technical competencies in a core area of practice
			Define and implement measures to protect population health	Serve as an advocate for reducing environmental hazards (linked with leadership)		
			Develop a prevention strategy			
	Economic and political issues				Demonstrate the ability to develop and apply a conceptual framework for understanding regulatory and policy processes relevant to environmental health, occupational health, and/or sustainability	Practice ethically, demonstrating an understating of professional ethics and taking into account the wider consequences of one's own actions
	Organizational knowledge and behavior					Demonstrate a critical understanding of how a range of organizations operate, their functions, cultures, key relationships and the context they are working within
	Project management	Respond to environmental emergencies or disasters with a view to protecting public health		Exert a direct influence on environmental public policy		Demonstrate effective leadership skills, taking responsibility for complex pieces of work, influencing and inspiring others, as well as project and people management
	Computer and information technology					
	Reporting, documentation and record keeping					

Communication	Collaboration	Support the environmental health network and its intersectoral partners during the decision-making process in a constantly evolving context	Collaborate in identifying, eliminating and reducing risks that can result in a biological, chemical or physical emergency or disaster that is likely to adversely affect population health			Work effectively in collaboration with others, demonstrating multidisciplinary awareness, engaging with multiple stakeholders and building and maintaining relationships
Communication	Educate	Make recommendations on all public health issues related to environmental impacts, including policies, large-scale environmental projects, acts, regulations, standards, programs and land-use plans	Conduct or help develop an information campaign for the general public or for community partners in order to eliminate or minimize exposure risks or promote the adoption of safe and healthy behaviors	Counsel clients about how they can reduce risks associated with environmental hazards		
				Provide information to community groups about local environmental risks		
	Communicate		Draft or assist in drafting a scientific opinion in accordance with section 54 of the Public Health Act, an environmental health bill or the amendment process for a set of regulations			Communicate effectively with a range of people and organizations using verbal, non-verbal and written communication skills, in order to influence, persuade, negotiate and disseminate information
			Influence decision-makers and partners involved in the development of public policy related to environmental health			
			Prepare a public health advisory or recommendation in connection with a risk assessment			

| | Conflict resolution | | | | | Demonstrate acute self-awareness, identifying strengths, weaknesses and how to interact effectively with others |
| | Marketing | | Raise the awareness of partners, decision-makers and the general public regarding environmental health risks and encourage the creation of healthy environments | Answer clients' questions about the harmful effects of pollution | | |

In grey	Does not fit perfectly in the category
Cultural sensitivity	Questions on whether it should be integrated as a new category of competencies about diversity awareness and sensitivity

APPENDIX B: PUBLIC HEALTH COMPETENCIES (NON-SPECIFIC RESOURCES)

Public Health Competencies (non-specific ressources)			
	Core Competencies For Public Health in Canada, Release 1.0, Public Health Agency of Canada, 2008		**Harvard T.H. Chan SPH, MPH Foundational Competencies**
Public health sciences	Demonstrate knowledge of the following concepts: the health status of populations, inequities in health, the determinants of health and illness, strategies for health promotion, disease and injury prevention and health protection, as well as the factors that influence the delivery and use of health services	**Domain 1 : Evidence-Based Approaches to Public Health**	Apply epidemiological methods to the breadth of settings and situations in public health practice
	Demonstrate knowledge about the history, structure and interaction of public health and health care services at local, provincial/territorial, national, and international levels		Select quantitative and qualitative data collection methods appropriate for a given public health context
	Apply the public health sciences to practice		Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
	Use evidence and research to inform health policies and programs		Interpret results of data analysis for public health research, policy or practice
	Demonstrate the ability to pursue lifelong learning opportunities in the field of public health	**Domain 2: Public Health & Health Care Systems**	Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
Assessment and analysis	Recognize that a health concern or issue exists		Discuss the means by which structural bias, social inequalities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels
	Identify relevant and appropriate sources of information, including community assets and resources	**Domain 3: Planning & Management To Promote Health**	Assess population needs, assets and capacities that affect communities' health
	Collect, store, retrieve and use accurate and appropriate information on public health issues		Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
	Analyze information to determine appropriate implications, uses, gaps and limitations		Design a population-based policy, program, project or intervention
	Determine the meaning of information, considering the current ethical, political, scientific, socio-cultural and economic contexts		Explain basic principles and tools of budget and resource management
	Recommend specific actions based on the analysis of information.		Select methods to evaluate public health programs
Policy and program planning, implementation and evaluation	Describe selected policy and program options to address a specific public health issue	**Domain 4: Policy In Public Health**	Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
	Describe selected policy and program options to address a specific public health issue		Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes

Category	Competency	Domain	Competency
	Develop a plan to implement a course of action taking into account relevant evidence, legislation, emergency planning procedures, regulations and policies		Advocate for political, social or economic policies and programs that will improve health in diverse populations
	Implement a policy or program and/or take appropriate action to address a specific public health issue		Evaluate policies for their impact on public health and health equity
	Demonstrate the ability to implement effective practice guidelines	Domain 5: Leadership	Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision-making
	Evaluate an action, policy or program		Apply negotiation and mediation skills to address organizational or community challenges
	Demonstrate an ability to set and follow priorities and to maximize outcomes based on available resources	Domain 6: Communication	Select communication strategies for different audiences and sectors
	Demonstrate the ability to fulfill functional roles in response to a public health emergency.		Communicate audience-appropriate public health content, both in writing and through oral presentation
Leadership	Describe the mission and priorities of the public health organization where one works and apply them in practice		Describe the importance of cultural competence in communicating public health content
	Contribute to developing key values and a shared vision in planning and implementing public health programs and policies in the community	Domain 7: Interprofessional Practice	Perform effectively on interprofessional teams*
	Utilize public health ethics to manage self, others, information and resources	Domain 8: Systems Thinking	Apply systems-thinking tools to a public health issue
	Contribute to team and organizational learning in order to advance public health goals		
	Contribute to maintaining organizational performance standards		
	Demonstrate an ability to build community capacity by sharing knowledge, tools, expertise and experience		
Partnership, collaboration and promotion	Identify and collaborate with partners in addressing public health issues		
	Use skills such as team building, negotiation, conflict management and group facilitation to build partnerships		
	Mediate between differing interests in the pursuit of health and well-being and facilitate the allocation of resources		
	Advocate for healthy public policies and services that promote and protect the health and well-being of individuals and communities		
Diversity and inclusiveness	Recognize how the determinants of health (biological, social, cultural, economic and physical) influence the health and well-being of specific population groups		

	Address population diversity when planning, implementing, adapting and evaluating public health programs and policies		
	Apply culturally relevant and appropriate approaches with people from diverse cultural, socioeconomic and educational backgrounds and persons of all ages, genders, health status, sexual orientations and abilities		
Communication	Communicate effectively with individuals, families, groups, communities and colleagues		
	Interpret information for professional, non-professional and community audiences		
	Mobilize individuals and communities by using appropriate media, community resources and social marketing techniques		
	Use current technology to communicate effectively		

Extra public health competency resources (too extensive to fit in the table) :

Inventory of public health competencies referentials, National Public Health Institute of Québec, 2011 [too extensive to fit in the spreadsheet]	Core Competencies for Public Health Professionals, The Council on Linkages Between Academia and Public Health Practice, 2010 [too extensive to fit in this spreadsheet]
See document = for competencies for each professional domain within public health	**Main categories highlighted:** 1. Analytic/Assessment Skills 2. Policy Development/Program Planning Skills 3. Communication Skills 4. Cultural Competency Skills 5. Community Dimensions of Practice Skills 6. Public Health Sciences Skills 7. Financial Planning and Management Skills 8. Leadership and Systems-Thinking Skills
Categories: lactation consultant, professionals in charge of hemovigilance clinics, professionals in charge of security of transfusions and technical medical experts in blood banks, experts on the retreatment of medical equipment, infection prevention and control, professionals in immunization, 1st line professionals, health promotion	

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Designed in 2021