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An Inter-sectoral Approach for Improving HEALTH LITERACY for Canadians

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A Discussion Paper

Acknowledgments

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The opinions expressed in this report do not necessarily reflect the official views of the Public Health Agency of Canada.

Executive Summary

I. What is the Purpose of This Document?

In 2008 an Expert Panel on Health Literacy led by the Canadian Public Health Association (CPHA) produced a report titled *A Vision for a Health Literate Canada.* This report called for a pan-Canadian strategy for health literacy and the development of policies, programs and research to improve low health literacy levels as one important step towards reducing health disparities in Canada. [1] Furthermore, it recommended the CPHA, the Public Health Agency of Canada (PHAC) and Health Canada (HC) collectively provide leadership in supporting its recommended actions and promising approaches.

The purpose of this document – *An Inter-sectoral Approach to Improve Health Literacy for Canadians* (hereafter referred to as *the Approach*) - is threefold:

i) To **identify priorities** and organize them into a comprehensive framework for improving health literacy in Canada

ii) To recommend a **set of actions** that could be taken at the national, provincial/territorial and local levels for the purpose of increasing health literacy among Canadians

iii) To **facilitate conversations** amongst practitioners, researchers and policy makers about health literacy and encourage cross-sectoral work around health literacy initiatives.

II. Why is Health Literacy Important?

Health literacy is critical to Canadians' capacity to manage their health. It refers not only to the abilities of individuals but also to health-related systems and providers of information within those systems.

Increasingly, health literacy is recognized as a determinant of health in Canada—one that is closely related to other social determinants of health such as literacy, education, income, and culture.

To be health literate is to be able to access and understand the information required to manage one's health on a day-to-day basis. Ideally, a health-literate individual is able to seek and assess the health information required to 1) understand and carry out instructions for self-care, including the administering of complex daily medical regimens, 2) plan and achieve the lifestyle adjustments required for improved health, 3) make informed positive health-related decisions, 4) know how and when to access health care when necessary, 5) share health promoting activities with others, and 6) address health issues in the community and society.

[1] Rootman, I., & Gordon-El-Bihbety, D. (2008). *A vision for a health literate Canada: report of the expert panel on health literacy*. CPHA. Retrieved from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf

Given that chronic ill-health is the leading cause of death in Canada, with more than 75% of all deaths attributable to one of five chronic diseases— cancer, heart disease, diabetes, kidney disease and respiratory disease—the positive health and lifestyle implications for improved health literacy are potentially far-reaching.

Currently, however, the status of health literacy in Canada falls short of the ideal. Based on research conducted by the Canadian Council on Learning, an estimated 60% of Canadian adults (ages 16 and older) and 88% of seniors (age 65 and older) do not have the skills required to obtain, understand and act on health information and services. Nor do they have the ability to make appropriate health decisions on their own.

Those who endure the greatest struggles with low health literacy skills are most often older adults, members of the Aboriginal population, recent immigrants, people with lower levels of education and/or low English or French proficiency, and those who are dependant on social assistance. The implications for these more vulnerable groups is that limited health literacy often correlates with a lack of ability to effectively self-manage health, access health services, understand available and relevant information, and make informed health-related decisions.

As well as having a negative impact on health and quality of life, low health literacy also exacts a significant financial toll. In 2009 low health literacy in Canada cost an estimated 3 to 5% of the total health care budget for that year. This amounted to approximately $8 billion a year in excess health care costs due to low health literacy.[2]

III. How is Health Literacy Defined?

Health literacy is an essential life capacity. The definition of health literacy adopted in this document is, "The degree to which people are able to access, understand, evaluate and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course."[3]

IV. Framework for Action

This framework for action will be guided by its vision, mission, goals and values, as well as by collaborative effort in five key settings.

A. Vision: A health literate Canada in which all people are able to access, understand, evaluate and use health information and services that can aid them and others in making informed decisions that will enhance their health and well-being.

[2] Eichler, K., Wieser, S., & Bruegger, U. (2009). The costs of limited health literacy: a systematic review. *International Journal of Public Health*. Retrieved from http://www.springerlink.com/content/n7327r1tl81665t3/fulltext.pdf

[3] Kwan, B., Frankish, J., & Rootman, I. (2006*). The development and validation of measures of "health literacy" in different populations*. Vancouver: University of British Columbia Institute of Health Promotion Research & University of Victoria Centre for Community Health Promotion Research.

B. Mission: To develop, implement and evaluate an approach that will support, coordinate and build health literacy capacity in Canada.

C. Goals: To improve the health literacy abilities of all Canadians by:

- developing a sound knowledge base that provides access to the existing and most recent information as well as evidence on effective ways to improve health literacy
- raising the awareness and increasing the capacity of all Canadians to improve health literacy levels
- building the infrastructure and identifying the partnerships necessary to develop a coordinated approach to advancing health literacy initiatives.

D. Values:

- Every person has an equal and inherent right to accurate, understandable, and culturally appropriate health information and services
- Life-long learning is a fundamental ingredient for health literacy
- Improving health literacy is a responsibility to be shared among multiple sectors
- Creating opportunities for innovation and making use of all available evidence-informed strategies are both critical to success
- The work will be approached with integrity and will uphold the honest, fair and respectful treatment of all people
- Financial and social accountability is paramount at all times.

E. Key Partners, Components and Actions

Only a joint effort by multiple partners at all levels of society will ensure the best prospect for an increase in capacity for health literacy among the people of Canada. The *Approach* identifies the following **five key partners**:

- **Governments** – Federal, Provincial, Territorial and Municipal governments
- **Health Sector** – Health care providers including medical personnel, health care institutions and clinics
- **Education Sector** – Public and private schools, post-secondary institutions, adult literacy programs, centres for continuing education and English as a second language (ESL) education

- **Workplaces and Businesses** – Small, medium and large businesses and places of employment

- **Community Organizations** – Libraries, community recreation centres, religious institutions, and the media. Immigrant settlement services, family resource centres, womens resource centres, unions and senior support programs are other important examples.

The Approach identifies **three fundamental components** deemed essential for the development of a comprehensive strategy for improving health literacy in the population. A list of objectives has been developed for each component, and these have been used to establish a compendium of relevant and effective possible actions for each of the settings.

- Component1. **Develop Knowledge:** Develop and facilitate an extensive knowledge base that provides access to research and practice-based evidence on effective ways to improve health literacy.

- Component 2. **Raise Awareness and Build Capacity:** Develop and provide learning opportunities that enhance the knowledge, understanding and abilities of the public and private sector workforce, professionals and community members in their efforts to support and promote integrated health literacy. Develop, implement and foster communication strategies that attract the attention of key stakeholders and convey the importance of health literacy.

- Component 3. **Build Infrastructure and Partnerships:** Allocate sufficient fiscal, human, organizational and physical resources to support and sustain a coordinated effort to build the partnerships and implement the activities outlined in the *Approach.*

V. What are the Next Steps?

The Approach identifies the importance of improving health literacy as a crucial component of the determinants of health. Its three fundamental components are intended to guide and encourage collective and cohesive actions at federal, provincial/territorial, and local levels that will result in the enhanced health literacy of all Canadians.

We invite groups to review the *Approach* and discuss the application of the ideas to their own contexts and health literacy work and provide feedback on how the framework could be improved to better support their health literacy work.

The Approach is an important step in the journey of creating a health literate Canada. Translating its proposed actions into meaningful change will require the sustained involvement and commitment of all those who work within the health sector as well as the ongoing engagement of those in education (youth and adult learning, educators and researchers in the health professions), community services, business and other sectors as well. The *Approach* is sufficiently flexible to accommodate, incorporate and adjust to the growth in health literacy knowledge as it is developed.

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An idea
that is
put into action
is more important
than an idea
that exists only
as an idea.

- *Buddha*

An Inter-sectoral Approach to Improving Health Literacy for Canadians

I. Introduction

Health literacy is a resource for daily living that occurs across the life-span in the course of being at home, at work, in school, in the marketplace, in the health system and in society as a whole.[4] A relatively new concept in the field of health research and practice in Canada, its comprehensive definition can be summed up as the "…degree to which individuals are able to access, understand, evaluate, and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course."[5] Health literacy is looked at in various ways. It can be seen as an emerging concept, a process, an outcome and increasingly, a Canadian public health goal.[6]

Given the information-rich society in which we live, it is not surprising that many Canadians do not have the skills to be health literate in all situations, impeded by an almost endless list of barriers, circumstances and information-processing demands. Eliminating these obstacles and improving the way health services and public health professionals, educators, the media and others communicate health information would offer the best opportunity to achieve a health literate society.[7]

In 2008 an Expert Panel on Health Literacy led by the Canadian Public Health Association (CPHA) produced a report titled *A Vision for a Health Literate Canada.*[8] This report called for a pan-Canadian strategy for health literacy and the development of policies, programs and research to combat low health literacy levels as one important step towards reducing health disparities in Canada.[9] Furthermore, it directed the CPHA, the Public Health Agency of Canada (PHAC) and Health Canada (HC) to collectively provide leadership in supporting its recommended actions and promising approaches.

Building on the work of that report, the purpose of this document—*An Inter-sectoral Approach to Improving Health Literacy for Canadians* (hereafter referred to as the *Approach)*—is threefold:

i) To **identify priorities** and organize them into a comprehensive framework for improving health literacy in Canada

[4]Adapted from Rootman, I., & Gordon-El-Bihbety, D. (2008). *A vision for a health literate Canada: report of the expert panel on health literacy*. CPHA. Retrieved from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf
[5] Ibid
[6] Ibid
[7] Nielsen-Bohlman, L., Panzer, A., & Kindig, D. (Eds.). (2004). *Health literacy: a prescription to end confusion.* Washington, DC: National Academic Press.
[8]Adapted from Rootman, I., & Gordon-El-Bihbety, D. (2008). *A vision for a health literate Canada: report of the expert panel on health literacy*. CPHA. Retrieved from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf
[9]Rootman, I., & Gordon-El-Bihbety, D. (2008). *A vision for a health literate Canada: report of the expert panel on health literacy*. CPHA. Retrieved from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf

ii) To **recommend a set of actions** to be taken at the national, provincial/territorial and local levels for the purpose of increasing health literacy among Canadians

iii) To **facilitate conversations** amongst practitioners, researchers and policy makers about health literacy and encourage cross-sectoral work around health literacy initiatives.

This document is intended for multiple audiences. For example: policy makers can take note and move legislation, resources and programs based on the identified priorities and recommended actions; practitioners can look at where their practices "fit" with the recommended changes and a) share their experiences to build a rich "inventory" of health literacy initiatives, b) seek collaborations with others who are engaging in similar activities to build cross-sectoral synergies, and c) support the collection of evaluation data to document promising practices.

In the following pages the *Approach* outlines a framework that singles out the overarching goals and highest priority strategies to be pursued in creating a health literate Canada. This framework has been built on evidence-informed (research and practice) health literacy interventions that are grounded in sound public health and policy-making principles. These include tangible actions for enhancing awareness, education, integration, evaluation and research of health literacy concepts, programs, services and policies.

The framework aims to engage all people and sectors in a connected, multi-level effort that will ultimately result in enhanced health literacy among Canadians. No single sector can work alone to achieve this result; only a collaborative effort by multiple partners (e.g. health, education, employment, social services) will ensure that health information and services will be provided in diverse ways that collectively meet the needs and capacities of all people in Canada.

This document begins with a brief overview of the importance of health literacy, including a discussion of the social and economic costs typically correlated with widespread low health literacy.

The next section clarifies the meaning of the term 'health literacy' and identifies the contexts in which health literacy skills are required as well as the key players who have a role in promoting health literacy in the community.

This is followed by a brief review of promising interventions and an examination of the areas requiring further research.

The last section of the document outlines the vision, goals, principles and recommended actions for achieving a more health literate Canada.

II. Why is health literacy important?

The literature sums up the importance of health literacy as follows:

1. **The large numbers of people affected:** Health literacy is everyone's concern. Every person encounters situations that call for health-related decisions and the application of health literacy skills. However, an estimated 60% of adult Canadians (ages 16 and older) lack the capacity to obtain, understand and act on health information and services, and also the ability to make appropriate health decisions on their own.[10]

2. **Poor health outcomes:** Evidence shows that literacy levels are linked to education, ethnicity and age,[11] and that limited literacy and/or numeracy skills act as an independent risk factor for poor health,[12] [13] [14] often because of medication errors[15] [16] and a decreased understanding of disease and treatments.[17] Limited literacy is linked to several adverse health-related variables, including lack of knowledge about health and health care, hospitalization, and some chronic diseases.[18] It also comes with other hardships. Qualitative research has shed light on the practical difficulties and personal shame that patients with limited literacy can experience in their interactions with the health care system, and also on the coping strategies they employ to circumvent these difficulties.[19] As well, there is a clear correlation between inadequate health

- ***Limited health literacy has negative implications for health outcomes, health care quality, and health care costs.***
- ***Low health literacy is a serious and costly problem that is likely to grow as the population ages and the incidence of chronic disease increases.***

[10] Health Literacy in Canada. (2007) Canadian Council on Learning. Accessed April 2012 at: http://www.ccl-cca.ca/ccl/reports/HealthLiteracy/HealthLiteracy2007.html

[11] Paasche-Orlow, M.K., Parker, R.M., Gazmararian, J.A., Nielson-Bohlman, L.T., Rudd, R.R. (2005). The prevalence of limited health literacy. *J Gen Intern Med*;20:175–84.

[12] Baker, D.W., Parker, R.M., Williams, M.V., & Clark, W.S. (1998). Health literacy and the risk of hospital admission. *J Gen Intern Med*,13,791–800.

[13] Wolf, M.S., Gazmararian, J.A., & Baker, D.W. (2005). Health literacy and functional health status among older adults. *Arch Intern Med*,165,1946–52.

[14] Sudore, R.L., Yaffe, K., Satterfield, S., Harris, T.B., Mehta, K.M., & Simonsick, E.M.(2006). Limited literacy and mortality in the elderly: the health, aging, and body composition study. *J Gen Intern Med*,21,806–12.

[15] Williams, M.V., Baker, D.W., Parker, R.M., & Nurss, J.R.(1998). Relationship of functional health literacy to patients' knowledge of their chronic disease: a study of patients with hypertension and diabetes. *Arch Intern Med*, 158,166–72.

[16] Wolf, M.S., Davis, T.C., Tilson, H.H., Bass, P.F., & Parker, R.M.(2006). Misunderstanding of prescription drug warning labels among patients with low literacy. *Am J Health-Syst Ph*,63,1048–55.

[17] Williams, M.V., Baker, D.W., Parker, R.M., & Nurss, J.R.(1998). Relationship of functional health literacy to patients' knowledge of their chronic disease: a study of patients with hypertension and diabetes. *Arch Intern Med*,158,166–72.

[18] Systematic review completed by DeWalt, D.A., Berkman, N.D., Sheridan, S., Lohr, K.N., & Pignone, M.P. (2004). Literacy and health outcomes. *J Gen Intern Med* ,19,1228–39.

[19] Wolf, M.S., Davis, T.C., Tilson, H.H., Bass, P.F., & Parker, R.M.(2006). Misunderstanding of prescription drug warning labels among patients with low literacy. *Am J Health-Syst Ph*,63,1048–55.

literacy—as measured by reading fluency—and increased mortality rates.[20] In fact, poor health literacy is a stronger indicator of mortality risk than overall years of schooling.

3. **Increasing rates of chronic disease:** Chronic diseases are the leading causes of death in Canada - more than 75% of all deaths are due to one of five chronic diseases: cancer, heart disease, diabetes, kidney disease and respiratory disease.[21] Although chronic diseases are most often experienced by, and associated with, older members of the population, 42% of all Canadians over the age of eleven report that they live with at least one of a number of diverse chronic diseases.[22] One of the ways to address the anticipated escalation in chronic disease rates and the subsequent demands this will place on the health care system is to engage patients in more effective self-management. [23] Self-management includes all of the "…tasks that an individual must undertake to live well with one or more chronic conditions. These tasks include gaining confidence to deal with medical management, role management and emotional management."[24]

- ***The people of Canada have diverse information needs, based on cultural differences, language, age, ability, and literacy skills. This diversity impacts on their ability to obtain, process, and understand health information and services.***
- ***There are numerous barriers to effective communication between professionals and the public.***

Health literacy plays a crucial role in chronic disease self-management. In order to manage chronic or long-term conditions on a day-to-day basis, individuals must be able to understand and assess or evaluate health information (which often includes a complex medical regimen), plan and make lifestyle adjustments, make informed decisions, and know how to access health care when necessary.[25] [26] A lack of skill in these areas prevents many patients from engaging in effective self-management. Caution, however, is required in holding individuals responsible for self care/management without considering their life context. For example, the populations most likely to experience difficulty with self-management are those with low literacy levels—typically older adults, Aboriginals, ethnic minorities, people with low levels of formal education and people with low

[20] Baker, D., Wolf, M., Feinglass, J., Thompson, J., Gazmararian, J., & Huang,J. (2007). Health literacy and mortality among elderly persons. *Arch Intern Med,* 167(14),1503-1509.
[21] Statistics Canada. *The Daily.* September 27, 2004. Catalogue 11-001-XIE.
[22] PHAC. (2008). *The Chief Public Health Officer's report on the state of public health in Canada, 2008*. Retrieved from http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2008/fr-rc/cphorsphc-respcacsp06e-eng.php
[23] Heneghan, C., Alonso-Coello, P., Garcia-Alamino J., et al. (2006). Self-monitoring of oral anticoagulation: a systematic review and meta-analysis. *Lancet*, 367, 404–11.
[24] McGowan, P. (2005). *Self-Management: a background paper*. Paper presented at New Perspectives: International Conference on Patient Self- Management, September 2005.
[25] Institute for Health Improvement, Message to health care providers on a program on self-management support.
[26] Johnston, L., Ammary, N., Epstein, L., Johnson, R. & Rhee, K. (2006). A transdiciplinary approach to improve health literacy and reduce disparities. *Health Promotion Practice*, 3.

income levels.[27] Low health literacy is a particular issue among the elderly, even among those who are more affluent and educated than the national norm. The evidence presented here supports the need for an inter-sectoral approach to cultivating the conditions for improved health literacy for all Canadians with attention to the most vulnerable and marginalized within our communities. The health care system/providers can support client understanding of health care information by engaging, in an authentic manner, in client-centred care practices.

4. **Health care costs:** A systematic examination of the cost of low health literacy in 2009 found that the additional expense of limited health literacy ranged from 3 to 5% of the total health care cost per year. [28] In Canada, this amounts to an extra $8 billion a year spent on health care as a result of low health literacy.

5. **Health information demands:** More than 800 peer-reviewed studies on the assessment of various health-related materials such as informed consent forms and medication package inserts have been conducted in the last three decades. These studies have found that a mismatch exists between the reading levels of the materials and the reading skills of the intended audience. [29] In fact, it was found that most of the assessed materials exceeded the reading skills of the average high school graduate. Often, the use of jargon and technical language made many health-related resources unnecessarily difficult to use.[30] As well, the ubiquitous nature of the Internet and the rise in social media use makes these avenues of information dissemination attractive in terms of widespread audience reach and dissemination efficiency. Yet there remains a considerable proportion of our population without access to information from these sources, which serves as a reminder for diversity and innovation in information dissemination.

6. **Equity:** Equity means fairness. Equity in health connotes that the needs of people guide the availability of opportunities for well-being.[31] In actuality, however, culture, social class, race and ethnicity, language proficiency, area of residence and health literacy level are common and widespread barriers to health equity.[32]

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[27] Nielson-Bohlman, L., Panzer, A., & Kindig, D. (Editors, Committee on Health Literacy, Institute of Medicine (IOM)). (2004). *Health literacy: a prescription to end confusion*. National Academy of Sciences. Washington, DC.

[28] Eichler, K., Wieser, S., & Bruegger, U. (2009). The costs of limited health literacy: a systematic review. *International Journal of Public Health*. Retrieved from http://www.springerlink.com/content/n7327r1tl81665t3/fulltext.pdf

[29] Rudd, R., Anderson, J., Nath, C. & Oppenheimer, S. (2007). Health literacy: An update of medical and public health literature, in *Review of Adult Learning and Literacy*, J. Comings, B. Garner & C. Smith (eds.), National Centre for the Study of Adult Learning and Literacy, Vol. 7, Chapter Six.

[30] Rudd, R.E., Colton, T., & Schacht, R. (2000). *An Overview of Medical and Public Health Literature Addressing Literacy Issues: An Annotated Bibliography. Report #14*. Cambridge, MA: National Center for the Study of Adult Learning and Literacy.

[31] WHO. (1996). *Equity in health and health care*. Geneva: WHO.

[32] Epstein, L. (nd). Office of Health Equity. Health Resources and Services Administration, http://www.hrsa.gov/grants/apply/TechnicalAssistance/effectivecommunication.pdf

Improving the health literacy of those with the worst health outcomes is an important tool in reducing health inequalities.

The National Arhives. (2009). http://www.dh.gov.uk/en/Publichealth/Healthimprovement/Healthliteracy/DH_095382

The research indicates that some segments of Canadian society exhibit disproportionately lower levels of health literacy. Older adults, the Aboriginal population, recent immigrants, those with lower levels of education and with low English or French proficiency, and persons receiving social assistance are over-represented among those with low health literacy skills.[33] For example, about 60% of immigrants fall below Level 3 in prose literacy—considered to be the minimum level for coping with the demands of everyday life and work in a knowledge-based economy—as compared to 37% for the Canadian-born population.[34] This proportion does not vary by length of stay in Canada. There are also regional differences in health literacy levels which may be related to fewer opportunities to acquire the skills and find the supports required to be health literate in certain parts of the country, particularly isolated and rural areas.

Table 1 below provides details of the typical proficiencies associated with each level of the Health Literacy Scale.

Table 1. Health Literacy (HL) Scales[35]

Level	HL scores	Description (in terms of ability)
1	0-225	Reading relatively short text
2	226-275	Sorting through distractions
3	276-325	Integrate information from dense text
4	326-375	Multiple steps to find solution to abstract problems
5	376-500	Search for information in dense text with distractions, making inferences etc.

Low levels of health literacy often mean that a person is unable to manage their own health effectively, access health services effectively, and understand the information available to them well enough to make informed health-related decisions. Improving the health literacy of those with the

[33] Rootman, I & Gordon-El-Bihbety, D. (2008). *A vision for a health literate Canada: report of the expert panel on health literacy*. CPHA. Retrieved from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf

[34] Canadian Public Health Association. (2006). *Increasing understanding of the impact of low health literacy on chronic disease prevention and control: final report*. Canadian Public Health Association, Ottawa.

[35] Adapted from: Statistics Canada. (2008). *About the survey.* Retrieved from http://www.statcan.gc.ca/pub/89-588-x/4152886-eng.htm

worst health outcomes is an important tool in reducing health inequalities.[36]

[36] The National Arhives. (2009). *Health literacy and health improvement*. Department of Health. Retrieved from http://www.dh.gov.uk/en/Publichealth/Healthimprovement/Healthliteracy/DH_095382

The Importance of Health Literacy Among Canada's Aboriginal Population

Many reports and studies have been issued highlighting the health status of Canada's Aboriginal and First Nations peoples and across most indicators, Canada's indigenous people have poorer health status and outcomes than other Canadians. As well as having lower literacy levels and educational achievement rates, these groups also suffer higher rates of homelessness in urban areas, unemployment and reliance on income assistance. Due to the impacts of colonization and Canada's Indian Residential School history, Aboriginal people often suffer higher rates of mental illness, depression, suicide and substance use. There are aspects of native languages and cultures that have been severely affected by external forces although many are undergoing revival.

Despite these factors however, Canada's indigenous people are increasing their potential and capacity in economic development, art and culture, decision-making and self-governance through Treaty processes, investment in commercial enterprise and political advocacy. Aboriginal people are heavily committed to improving health outcomes for themselves and must be provided opportunity to contribute actively and appropriately according to their political, service delivery and community structures, assets and resources across Canada.

These many strengths provide significant opportunities for partnerships with Aboriginal people that can help to increase health literacy levels and contribute to improving health outcomes for the indigenous people of Canada. The challenge will be to ensure this occurs in a way which reflects the significant diversity across the country within the Aboriginal population; greater health needs and the geographic, linguistic, cultural, infrastructural and political realities that exist within this important population for Canada.

III. How is health literacy defined?

The concept of health literacy first appeared in the literature more than 35 years ago. It wasn't until the mid- 1990's, however, that interest in this field began gaining ground.

This section explores the many-pronged characteristics and applications of health literacy. It is not identical to literacy although it does involve the bringing together of people from both the health and literacy fields.[37] Health literacy builds on the idea that *both health and literacy are critical resources for everyday living.* A person's level of literacy directly affects the ability not only to obtain information relevant to personal health, but also to comprehend its significance and assess its relevance to individual, family and community health. While many definitions for health literacy exist, the definition that has been adopted here is: "The degree to which people are able to access, understand, evaluate and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course".[38]

Proficiency in health literacy allows both the public and all stakeholders involved in the delivery of health services to better access, understand, evaluate, communicate, and use pertinent information.

Health literacy encompasses the use of a wide range of skills that can improve people's ability to act on information in order to live healthier lives.[39] These skills include reading, writing, listening, speaking, numeracy, and critical analysis, as well as other communication and interaction skills.[40] Increasing health literacy levels of the population is an effective health intervention.

How does health literacy differ from literacy? Literacy refers to basic skills needed to succeed in society, while health literacy requires some additional skills, including those necessary for finding, evaluating and integrating health information from a variety of contexts. It also requires some knowledge of health-related vocabulary as well as the culture of the health system.

Rootman, I. (2009). Presentation at the University of Victoria, BC.

Health literacy is not only the responsibility of individuals in the general population or of just one sector; rather, **it crosses multiple boundaries, professions and jurisdictions** as illustrated in Figure 1. While the figure depicts the connections as being rigidly linear and radiating outwards like spokes on a wheel, they more accurately crisscross and intersect "... like a tangled pile of spaghetti, weaving in and out of other paths that rarely ever leave the plate."[41] In so doing, they illustrate

[37] Gillis, G., & Quigley, A. (2004).Taking off the Blindfold: Seeing how literacy affects health. *Health literacy in rural Nova Scotia research project*. Retrieved from http://www.nald.ca/healthliteracystfx/pubs/takngoff/takngoff.pdf

[38] Kwan, B., Frankish, J., & Rootman, I. (2006*). The development and validation of measures of "health literacy" in different populations*. Vancouver: University of British Columbia Institute of Health Promotion Research & University of Victoria Centre for Community Health Promotion Research.

[39] Adapted from The Centre for Literacy. (2007). *The Calgary Charter on health literacy: rationale and core principles for the development of health literacy curricula.* Retrieved from http://www.douglas.bc.ca/__shared/assets/Calgary_Charter_Oct_0964267.pdf

[40] Ibid

[41] Christakis, N., & Fowler, J. (2009). *Connected*. New York: Little, Brown and Company.

the complex interconnectedness between and among the myriad stakeholders at every level of public service.

Figure 1. Major stakeholders involved in health literacy

Improved health literacy can contribute to more informed choices, reduced health risks, increased prevention and wellness, better navigation of the health system, improved patient safety, better patient care, fewer inequities in health, and improved quality of life. Health literacy applies to all individuals and all health systems (organizations). To illustrate:

- A **person** demonstrates health literacy by showing the ability to use the skills needed to find, understand, evaluate, communicate, and use information
- **Information providers** demonstrate understanding of health literacy by presenting information in ways that improve the target audience's ability to understand and act on the information
- **Systems** demonstrate understanding of health literacy by ensuring easy access to and delivery of health services and health information in a supportive environment.

Not surprisingly, the health literacy skills and abilities of those who deliver health services impact on the health literacy level of the system. [42] Health service personnel with high levels of awareness and capacity related to health literacy typically enhance a system's effectiveness. In contrast, a system that has low health literacy awareness and capacity is more likely to have a negative impact, often by causing confusion as a result of materials that have been poorly or inappropriately designed.[43] For example, hospital signage using technical medical terminology and overly-complex medical history forms require a high level of health literacy and thus would pose difficulty for many patients. Systems must strive to accommodate the abilities of their intended users, and when they do, they enhance the abilities of these people to access, understand, evaluate and communicate information about their health.[44]

Health literacy skills include:

- ***Basic health competencies*** and the application of health promoting, health protecting and disease preventing behaviours, as well as self-care
- ***Patient competencies*** to navigate the health system and act as an active partner to professionals
- ***Consumer competencies*** to make health-related decisions in the selection and use of applicable goods and services and to act on consumer rights if necessary
- ***Citizen competencies*** through informed voting behaviours, knowledge of health rights, advocacy for health issues and membership of patient and health organizations.

Kickbusch, I., Wait, S., Maag, D. Navigating health: the role of health literacy. (2005). Alliance for Health and the Future,International Longevity Centre. Retrieved from http://www.emhf.org/resource_images/NavigatingHealth_FINAL.pdf

While health literacy is given a specific definition in this document, it is, in fact, a far-reaching concept that is inherently fused to the myriad of skills required for successful living. It can be expressed differently in varying contexts, but is always based on the same underlying skills and abilities. Therefore health literacy can play a critical role in each of the following initiatives: efforts to reform health systems, improvements to understanding health issues, strategies to prevent poor health, strategies for better communication of complex issues and more culturally appropriate communication, efforts to induce behaviour change, strategies for health promotion and effective navigation of health systems.[45]

To be a health literate society, we need a health literate public, health literate health professionals and health literate politicians and policy-makers.

Kickbusch, Wait, & Maag. (2005). *Navigating health: the role of health literacy.* Retrieved from http://www.emhf.org/resource_images/NavigatingHealth_FINAL.pdf

Any discussion of the definition of health literacy quite naturally turns to the topic of plain language as a primary strategy, and indeed, many current health literacy interventions mostly consist of instruction in the use of plain language in health communication. However, while plain language is one way to

[42] The Centre for Literacy. (2007). The Calgary Charter on health literacy: rationale and core principles for the development of health literacy curricula. Retrieved from http://www.douglas.bc.ca/__shared/assets/Calgary_Charter_Oct_0964267.pdf

[43] Ibid.

[44] Gillis, D. (2011) Personal Communication. St Francis Xavier University

[45] The Centre for Literacy. (2007). The Calgary Charter on health literacy: rationale and core principles for the development of health literacy curricula. Retrieved from http://www.douglas.bc.ca/__shared/assets/Calgary_Charter_Oct_0964267.pdf

communicate effectively, it is, by definition, not synonymous with health communication and health literacy. In fact, health literacy encompasses much more than the sum total of plain language, reading, writing, numeracy, and effective communication between health professionals and the public. According to the Calgary Charter on Health Literacy:[46]

- Health literacy includes an awareness of and ability to navigate differences between the cultures of the health system and the public. It also includes an awareness of and ability to minimize the power imbalances between the health system and the public

- Health literate health professionals and systems are those that allow and encourage patients to feel welcomed and empowered to ask questions, that deliver information in ways that people can use, and that proactively take the steps to prevent ill health and provide treatment to all people in need

- Health literacy encompasses more than an individual's literacy skills. A health literate individual possesses some basic knowledge of science, culture and health, an understanding of the health system they are using, the awareness that they have the right to ask for what they need in order to stay healthy and the confidence to act on their rights.

An understanding is needed of other systems as well. Referred to as civic literacy skills, this involves advocating for policies and services for maintaining and promoting one's own health, the health of family members and the health of the community.

[46] ibid

IV. What findings are important for improving health literacy?

A substantial amount of research on health literacy has been produced in the past 25 years, most of it in the United States.[47] Included in this cadre of new information are six extensive systematic literature reviews done for the purpose of gleaning what, if any, intervention strategies might improve health literacy. (The methods, major findings and conclusions of these reviews are presented in Annex 1.)

The research on health literacy has not always produced definitive results but some studies do point to some fairly cogent findings that could help develop an effective framework for action. These include the following:

- The effects of limited health literacy are severe.[48] Aside from having a negative impact on the self-management of chronic conditions, research also points to a link between limited health literacy and increased preventable hospital visits, increased medication errors, and mortality.[49]

- People with limited health literacy often hide their struggles out of shame. Hence, limited health literacy is often invisible to those who provide health services.[50]

> ***One day an elderly patient arrived at Dr Paul Cappon's family practice with what appeared to be some cardiac complications. "I explained to her at great length what I considered the issue to be," he says. "I thought I was being understood." But when she came in for a follow-up a month later, he realized she hadn't understood a thing he'd said and hadn't taken any of the medications he had prescribed. "This is not an uncommon occurrence," he sighs.***
>
> Solomon, S. (2007). *Health literacy spells t-r-o-u-b-l-e*. Retrieved from http://www.nationalreviewofmedicine.com/issue/2007/04_15/4_patients_practice07_7.html

- While interventions and materials designed to counteract health literacy barriers may have greater bearing on those with limited health literacy, they nonetheless also seem to be preferred by and of benefit to people with higher levels of health literacy.[51]

- The action most commonly taken to augment literacy skills is the simplification of reading material through the use of clear language, pictures and symbols.

[47] Rootman, I., & Gordon-El-Bihbety, D. (2008). *A vision for a health literate Canada*. Canadian Public Health Association. Retrieved from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf

[48] Parker, R.M., Wolf, M.S., & Kirsch, I. (2008). Preparing for an epidemic of limited health literacy: Weathering the perfect storm. *Journal of General Internal Medicine*, 23(8), 1273-1276.

[49] U.S. Department of Health and Human Services. (2010) National Action Plan to Improve Health Literacy.

[50] Ibid.

[51] Sudore, R.L., Landeveld, C.S., Barnes, D.E., Lindquist, K., Williams, B.A., Brody, R., et al. (2007) An advance directive redesigned to meet the literacy level of most adults: A randomized trial. *Education and Counseling*, 69(1-3), 165-195.

Yet the gap between the readability of written health information and the literacy skills of people is well documented.[52]

- Multimedia interventions may improve the knowledge of people with both low and high literacy skills, but do not appear to change health-related behaviours.[53]

- Community development and participatory approaches—engaging the target population in the development and implementation of an initiative—seem to show promise.[54] [55] For example, applications of participatory education principles and theories of empowerment appear to help parents access, understand and use health information for the benefit of their own and their children's health.[56] In addition, initiatives that empower single parents by enhancing their parenting skills, and that team with public health practitioners' support, skills development and recreation interventions, have been shown to improve health literacy, health status and community participation, and to reduce reliance on social assistance.[57]

Learning it Together – a Western University School of Health Studies student developed initiative combines one to one (UWO student to elementary student) reading / play / healthy lifestyle approach to an after school program. The evidence based program translates health concepts and reading activities into play strategies to support children ages 6 – 8 (grade 1-3) in developing health literacy skills – targeting low socio-economic neighbourhoods

See: http://www.uwo.ca/fhs/LiT/

- The extent of reading in daily life (e.g., reading books, newspapers, magazines, letters, notes or e-mails) and level of education are both strongly correlated to health literacy, according to the Canadian Council on Learning.[58]

- In older adults, lifelong and life-wide learning appears to be a particularly important predictor of health literacy. Older adults who engage in self-study in the form of reading manuals, reference books and journals; who use the computer/Internet and the library, and who read books for leisure and write letters, notes and e-mails, demonstrated a particularly robust correlation to high health literacy levels.[59] On the other hand, a mother tongue that was

[52] Zorn, M., Allen, M., & Horowitz, A. (2004). Understanding health literacy and its barriers. Bethesda, MD: National Library of Medicine.

[53] Hauser, J. & Edwards, P. (2006). *Literacy, health literacy and health: A literature review* Ottawa: Expert Panel on Health Literacy, Canadian Public Health Association.

[54] Gillis, D.E. & Sears S.A. (2012). *Health literacy in rural communities: Challenges and champions.* Chapter in J.C. Kulig, & A. Williams (Eds.) Health in Rural Canada. (pp. 209-224) Vancouver: UBC Press.

[55] Gillis, D. (2007). A community-based approach to health literacy using participatory research [Special issue on Health Literacy.] *Adult Learning,* 15 (1/2), 14-17.

[56] Ouellet, F., Dufour, R., Durand, D., René, J.-F. & Garon, S. (2000). *L'empowerment dans Naître égaux – Grandir en santé*. Montreal, QC: Direction de la santé publique de Montréal-Centre.

[57] Browne, G., Byrne, C., Roberts, J., Gafni, A., & Whittaker, S. (2001). When the bough breaks: Provider-initiated comprehensive care is more effective and less expensive for sole support parents on social assistance. *Social Science and Medicine*, *53*(12), 1697–1710.

[58] Canadian Council on Learning. (2008). *Health literacy in Canada: a healthy understanding.* Ottawa: Author.

[59] Wister, A., Malloy-Weir, L., Rootman, I., & Desjardins, R. (2010). Lifelong educational practices and resources in enabling health literacy among older adults. *Journal of Aging and Health, 22*, 827-854.

different from the language of assessment had a strong negative impact on health literacy score.[60]

For our societies to become health literate, all members must increase their health literacy:

- ***Citizens*** *must be able to make decisions about their health for themselves rather than merely responding to decisions made for them by others*
- ***Patients*** *must be genuinely engaged and empowered to participate in care decisions*
- ***Professionals*** *must tailor their communication to meet their patients' needs and see it as their responsibility to foster patient health literacy*
- ***Politicians*** *must incorporate the notion and paradigm of health literacy into their design of policy, their research agendas and their objectives for population health.*

Adapted from: Kickbusch, Wait, & Maag. (2005). *Navigating health: the role of health literacy.* Retrieved from http://www.emhf.org/resource_images/NavigatingHealth_FINAL.pdf

[60] Canadian Council on Learning. (2008). *Health literacy in Canada: a healthy understanding.* Ottawa: Author.

V. Framework for Action

The framework for action is based on three fundamental components that collectively encompass a comprehensive strategy for increased health literacy in Canada. This section begins with an outline that includes a collection of activities and initiatives that, once implemented, will enhance the health literacy levels of Canadians. Part 1 of this section presents the *Approach's* vision, mission, goals and values. Part 2 provides an in-depth examination of the three proposed components and outlines the actions and initiatives required to implement them and evaluate their effectiveness in different settings.

Part 1 – The Vision, Mission, Goal and Values

a. The Vision

A vision statement provides a description of the ideal, conceptualized for some point in the future; it is the horizon towards which all efforts are directed. The vision for the *Approach* is to achieve a health literate Canada, namely that:

> *...all people in Canada are able to access, understand, evaluate and use health information and services that can guide them and others in making informed decisions to enhance their health and well-being.*

Every sector, community and individual has a role to play in ensuring all Canadians have access to the resources to be health literate and to meet the diverse health-related needs for individuals, families and communities.

- Health Literacy Think Tank. Vancouver, April, 2012.

b. The Mission

A mission statement describes in an overarching way how the vision is intended to be realized. The *Approach's* mission is:

> *...to develop, implement and evaluate an approach that will support, coordinate and build health literacy capacity of the general public, and people and systems that deliver health information and services in Canada.*

c. The Goal

A goal is an overall statement of aspiration. The goal of the *Approach* is:

> *...to improve health literacy abilities of all Canadians by:*
>
> - *Developing a sound knowledge base that provides access to the existing and most*

A goal is a timeless statement of aspiration.

U.S. Surgeon General .(1979). *The **Surgeon General's** report on health promotion and disease.* Office of the Surgeon General: United States Washington, D.C.

recent information as well as evidence on effective ways to improve health literacy.

- *Raising the awareness and increasing the capacity of all Canadians to improve health literacy levels*

- *Building the infrastructure and identifying the partnerships necessary to develop a coordinated approach to advancing health literacy initiatives.*

d. The Values

Values are the compass that can guide the way to the best approaches for developing new health literacy interventions and for adapting existing ones. Values form the foundation on which the *Approach* is developed and guide how it will be implemented and assessed.

> ***Vision is values projected into the future.***
>
> C. Bezold, Founder, Institute for Alternative Futures

The *Approach* is based on the following values:

- ***Every person has an equal and inherent right to accurate, understandable, and culturally appropriate health information and services*** *that can contribute to personal health and quality of life*

- ***Life-long learning is a fundamental ingredient for health literacy.*** *Lifelong learning is a continuous process that stimulates and empowers an individual to gain all the knowledge and skills required throughout life, and to apply these gains with confidence and creativity*[61]

- ***Improving health literacy is a responsibility to be shared among multiple sectors: Partnerships are essential for optimizing the strengths of public and civil society.*** *The task of improving health literacy cannot be the sole responsibility of the health sector. Alliances must be established with other ministries, NGOs (non-governmental organizations) and private business; this effort requires open dialogue and the active participation of everyone. Non-health sectors must become more aware of their own capacity to contribute to the health of populations. They must be actively encouraged to become involved in health literacy initiatives and supported in their ensuing efforts to do so*

- ***Creating opportunities for innovation and making use of all available evidence-informed strategies are both critical to the success of this initiative.*** *To inform the direction of all health literacy initiatives, it is essential to use, on an ongoing basis, the most accurate and up-to-date information available. However, research on how to augment*

[61] Barker, K. (1998). *Lifelong learning in Canada; Vision for the future.* Learning and Literacy Branch of HRDC. Retrieved from http://www.futured.com/pdf/IV%20LLL%20in%20Canada.pdf

health literacy is still evolving and there are few established "best" practices. Therefore, promising practices and ideas that emerge from community experience and/or cultural knowledge should be included in the mix of strategies to be used

- ***The work will be approached with integrity and uphold the honest, fair and respectful treatment of all people.*** *It will seek the engagement of meaningful partnerships within the community and recognize their contributions*

- ***Financial and social accountability is paramount at all times.*** *We will balance planning, action and evaluation, and encourage continuous learning. In the course of our work we will strive to be financially responsible, act cooperatively to meet our stated common goals and objectives, and be willing to adapt to changing conditions.*

Part II. Key Partners, Components and Actions

a. Key Sectors - Partners

Health literacy is everyone's business. At first glance a sector seemingly unrelated to health services might take the view that it has no connection to health and therefore no role to play in promoting health literacy. But a closer analysis would reveal that, without exception, every single enterprise in every category—from government to schools to private business—has a stake in health literacy. Everyone benefits when people are healthier, and people are more likely to be healthier when they are more health literate.

Health literacy is everyone's business.

Improving health literacy among Canadians is a complex and ambitious initiative that requires the sustained dedication, commitment and collaboration of many sectors outside of health services. Only a **joint effort by multiple partners** at all levels of society will ensure the best prospect for an increase in health literacy among the people of Canada.

The partners for this initiative can be organized into the following groups but are not limited to those named here and are not in order of importance. Among the groups interacting with each of the partners are certain sub-populations that are highly vulnerable to health inequity, due in part to inadequate health literacy levels. These include older adults, Aboriginal populations, new immigrants and families from lower socio-economic groups. These vulnerable groups could be reached through the services, programs and policies provided by some or all of these partners:

- **Governments** – Federal, Provincial, Territorial and Municipal governments

- **Health Services** –Health care providers including medical personnel, health care institutions and clinics

- **Education Sector** – Public and private schools, post-secondary institutions, centres for continuing education and ESL training

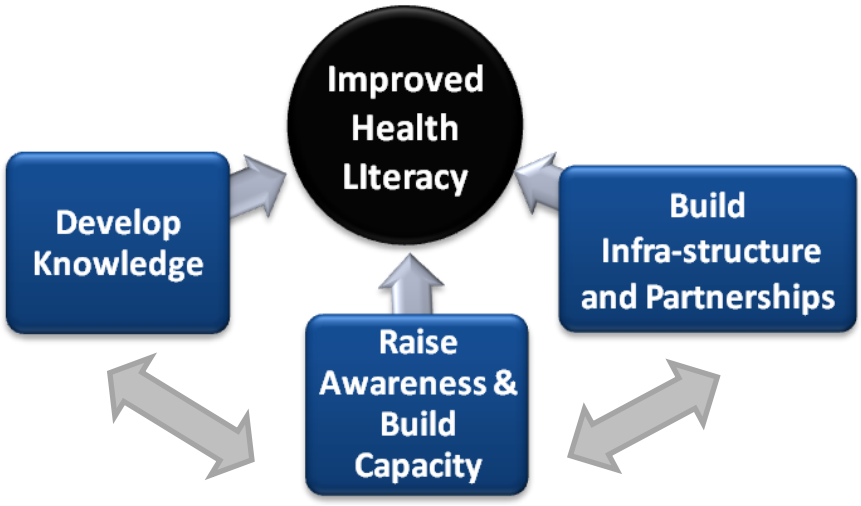
- **Workplaces and Businesses** – Small, medium and large businesses and places of employment

- **Community Organizations** – Libraries, community recreation, religious institutions and the media. Immigrant settlement services, family resource centres, womens resource centres, unions and senior support programs, are other important examples.

b. The Components

The *Approach's* comprehensive Framework for Action is built on three fundamental components that collectively form the guidepost for the entire range of actions to be undertaken by all partners committed to improving health literacy in Canada. The three components interact with each other to achieve the goal of improved health literacy. The components are shown in **Figure 2**, below:

Figure 2. The Three Fundamental Components of the Framework for Action



Develop Knowledge

Develop and facilitate a sound knowledge base that provides access to the existing and most recent information as well as evidence on effective ways to improve health literacy.

A critical first step of the *Approach* is the development of a comprehensive knowledge base for the purpose of guiding health literacy policies, programs and practices. The continuum of activities under this component includes gathering and translating (as required) all pertinent research and literature; documenting and evaluating community health literacy initiatives; analyzing and synthesizing the gathered information; and making the resulting body of knowledge available to all stakeholders in a form that will be of the most practical use to them.[62] [63] Knowledge development is essential for "evidence and practice-based decision making," for the development of promising practices in health literacy, and for the identification of core competencies for health literacy (e.g. computer literacy skills which allow for the critical analysis of information especially among older adults and Aboriginal populations). Evidence and practice-based decision-making uses the best available evidence on health literacy, on the determinants of health, and on the effectiveness of interventions to identify priorities and develop strategies to improve health literacy levels in the population.[64] As health literacy is a cross-sectoral initiative, it is also important to draw from literature and experiences from a variety of fields.

Integral to this process is the development of a research and evaluation agenda that allows for expanding what is currently known about health literacy. Three research areas require immediate attention: research on the determinants of health literacy (e.g. What determines low and high health literacy - among individuals a well as health professionals?); research on the distribution of health literacy in the Canadian population (e.g. In which jurisdictions are low and high health literacy more prevalent?); and evaluation of interventions that address low health literacy (e.g. How can low health literacy be improved?). How to measure health literacy is an important area of research today - and is necessary to support research and evaluation of interventions.

[62] Public Health Agency of Canada. (2003). *An integrated pan-Canadian healthy living strategy: A discussion document for the healthy living symposium*. Ottawa, Ontario, 1-52.

[63] Dalhousie University Unit For Population Health and Chronic Disease Prevention. (2003). *Nova Scotia chronic disease prevention strategy.* Government of Nova Scotia.

[64] Adapted from: Health Canada. (2003). *Taking action on healthy living: Background information on the integrated pan-Canadian healthy living strategy.* Health Canada,1-12

Raise Awareness and Build Capacity

Develop and provide learning opportunities that enhance the knowledge, understanding and abilities of all partners at all levels so they can better support health literacy. This includes the development and implementation of health communication strategies that capture the attention of targeted recipients and convey the importance of health literacy.

This component consists of two sub-components: building capacity and awareness internally (i.e. within the organization); and building capacity and awareness externally (e.g. among service recipients, patients, students etc.). The former component consists of supporting the building of a workforce within the public and private sectors that has the expertise to advance health literacy. The intent is threefold: to increase workforce awareness of the importance of health literacy; to enhance the workforce's ability to create resources for health literacy; and to equip the workforce with the skills required to convey information in a manner that is accessible, relevant and understandable to the intended audience. The workforce to be targeted includes government personnel, current providers, associated professionals, and individuals in training (at universities, community colleges, certificate programs, etc.).

Various types of health communication strategies can be used to convey health information and raise public awareness including (but not limited to) interpersonal communication, public education and awareness, media relations/advocacy, health journalism, stakeholder relations, risk communication, public information, and social marketing (e.g. point-of-purchase health information such as nutritional labeling in stores and restaurants/food services) .[65] The type of communications strategy used will depend on the purpose of the initiative and the intended audience.

One of the most promising prospects for raising the public's awareness of a host of health- related issues is the area of information technology and social media (aka information and communication technology (ICT)). ICT now makes it possible to distribute information in ways that are inexpensive; instantly, widely and easily accessible; and potentially creative and entertaining. ICT can efficiently reach large numbers of people and is therefore an important tool for enhancing both population-wide and targeted-group health literacy levels. To be effective, however, the information being distributed must be relevant, timely, user-friendly and of sound quality. The next steps for harnessing ICT's immense potential for influencing health literacy levels may be to find the mechanisms that can develop private-public partnerships, share best/promising practices and reduce the inequities caused by lack of accessibility.

[65] Dalhousie University Unit For Population Health and Chronic Disease Prevention.(2003). *Nova Scotia chronic disease prevention strategy*. Government of Nova Scotia.

Build Infrastructure and Partnerships

Allocate sufficient fiscal, human, organizational and physical resources to support and sustain a coordinated approach to building the partnerships and implementing the activities outlined in the *Approach.*

The *Approach* cannot be successfully implemented unless supporting infrastructures are in place. These infrastructures or "inputs" involve committing sufficient fiscal, human and organizational resources to support and sustain a coordinated and integrated approach to improving health literacy. Jurisdictions and sectors across Canada are becoming increasingly aware of the importance of health literacy as a determinant of population health and of the correlation between high health care costs and low health literacy. Infrastructure also involves the organizational ability to foster strong partnerships among these jurisdictions and sectors.

Throughout Canada many individuals, organizations, communities and municipalities are engaged in improving health literacy by forming partnerships or coalitions. One province, British Columbia, has established a Health Literacy Network. This 'network of networks' brings together representatives from different sectors: government, not-for-profit, and community organizations from the health and literacy sectors, who represent a variety of stakeholders including immigrants, seniors, low literacy adults, patients, and mental health clients. Other provinces are considering establishing similar networks. To a great extent, however, health literacy coalitions are still in their infancy and coordinated efforts across sectors are the exception rather than commonplace. At the local level there are deficits in addressing health literacy inter-sectorally. There is also insufficient support for and evaluation of existing health literacy initiatives. The issues of sustainability, inter-sectorality and effectiveness are complex and need to be addressed as appropriate and effective health literacy interventions are being explored.

c. Actions Partners can take within each of the three Components

The *Approach* includes a list of suggested actions to provide direction for achieving each of the three components identified in Figure 2, above. While these actions are outlined individually by sector, their inter-connectedness is both inherent and essential since each is part of an integrated approach to improving health literacy. Like pieces in a puzzle, they rely on each other for long-term success, and must therefore be promoted and advanced in a concurrent and consolidated manner.

i. What Governments Can Do.

- Federal, Provincial, Territorial and municipal governments

Governments at all levels play a key role in improving general language skills and literacy levels in the population. This includes raising the levels of knowledge and literacy to the point where individuals can 1) make informed personal and family health-related choices, and 2) take an active role in bringing about change in the environments for the benefit of their health.[66] By guiding, developing and/or enacting

[66] Nutbeam, D., Wise, M., Bauman, A., Harris, E. and Leeder, S. (1993) *Goals and targets for Australia's health in the year 2000 and beyond*. AGPS, Canberra.

policies, guidelines, regulations and laws that influence the availability of and accessibility to public health information and education programs and services, governments are major catalysts for spurring political and community 'traction' for health literacy. According to Kickbush et al., "Governments should provide supportive environments that foster the growth of health literacy …" by creating "…a voice for health literacy in the political process." For this to happen, however, the issue of health literacy must be raised within "… the political agenda and have designated advocates within the political process."[67]

Following are examples of actions that governments can engage in to improve health literacy.

Component	Actions

Develop Knowledge	• Identify existing, emerging and promising health literacy practices.
	  ◦ Identify the knowledge needs of major stakeholders, giving particular attention to the information they require to advance their work in health literacy.
	  ◦ Commission a set of reviews of existing, emerging and promising health literacy practices. Reviews should target main population groups (children/youth, older adults, Aboriginals, immigrant population) and focus on mental health, chronic disease areas (e.g. diabetes, cardio-vascular disease, cancer, respiratory diseases, obesity (children), inequities, and determinants of health literacy.
	• Develop, implement and/or refine ways to measure, monitor and/or evaluate the determinants of health literacy, the distribution of health literacy across Canada, and the impact of health literacy initiatives on population health and on reducing health disparities.
	  ◦ Develop a set of questions on health literacy that could be inserted in existing and ongoing national, provincial/territorial and local surveys (e.g. Canadian Community Health Survey (CCHS)).
	  ◦ Initiate discussions with national, provincial/territorial and local organizations (e.g. CIHR Institute of Population and Public Health as well as other Institutes) regarding ways to support the development of research on health literacy, including intervention research.

[67] Kickbusch, I., Wait, S., & Maag, D. Navigating Health: The role of health literacy. Retrieved from http://www.ilonakickbusch.com/health-literacy/NavigatingHealth.pdf

	• Use census and survey data to map limited health literacy "hot spots" and prioritize interventions and resources for communities and individuals with the most limited health literacy. • Conduct a review and analysis of existing laws, policies and regulations that make all types of health information (e.g. general health, safety, medication, health care coverage, financing and informed consent) difficult to use. • Review, analyze and recommend changes to existing laws, policies, and regulations that make it difficult to use the information produced. • Develop and implement ways for the smooth transfer of health literacy knowledge between research and practice communities. • Customize aggregate knowledge for different audiences (e.g. practitioners; policymakers, general public) and produce information materials in format and language appropriate to these audiences. • Develop partnerships and methods for joint-planning and information exchange on health literacy between research and practice communities. • Commission regional reviews on research and interventions related to health literacy followed by a national workshop involving researchers, practitioners and policymakers similar to the national health literacy workshop conducted in 2003. • Initiate discussions with the CIHR Institute of Population and Public Health as well as other Institutes and provincial/territorial bodies regarding ways to support the development of the research-practice community in relation to health literacy.
Raise Awareness and Build Capacity	• Facilitate public discussion on ways to increase awareness of the importance of health literacy within public health, other sectors, communities and the general public. • Conduct town hall meetings to gather information from the public and professionals on heath literacy concerns, abilities and issues in relation to improving the health of populations.

	• Begin health literacy awareness-raising strategies for different sectors. Identify and/or develop appropriate methods for information dissemination. Consider a wide variety of dissemination methods by collaborating with adult educators, journalists, and other non-traditional partners. Use plain language. • Educate policy makers, decision makers and other government personnel about the need to communicate health issues clearly and about the importance of health literacy and its contribution to improvements in health outcomes and decreased costs. Develop, implement and evaluate methods for building health literacy knowledge and skills within government at all levels. • Conduct an internal scan of government staff health literacy knowledge and skills. • Identify core competencies and gaps. Identify training needs and priorities. • Develop guidelines and standards for workforce staffing requirements for health literacy. • Develop training plans and establish benchmarks for training and evaluation protocols. • Identify internal policies/procedures that provide opportunities for training (e.g. new staff orientation, integration into staff skills development courses). • Promote health literacy expertise within government by including health literacy-related issues in regular communications (e.g. newsletters, websites) and presentations on health literacy at meetings and special events. • Develop government guidelines on clear communication. Use clear communication in all public correspondence and approve the use of clear communication by non-government organizations that have their pubic information reviewed by government agencies. • Develop, implement and evaluate methods for building health literacy knowledge, skills, and resources within public health, other sectors, communities and the general public. • Create inventory of external expertise in the field

	(e.g. Literacy/Adult Learning, Health Education, Health Promotion, Curriculum Development and Public Health). • Identify and support regional and local health literacy learning activities/workshops. • Explore using information technology to disseminate information (e.g. webinars, blogs, social media). Tie into national strategies e.g. National Childhood Obesity Strategy. Consider timely topics such as media advocacy, health literacy and the web. • Develop health literacy learning modules for public (use of stories, current and relevant events). • Integrate health literacy into program level Request For Proposals (RFPs) and other funding requests. • Develop and foster mechanisms to ensure that academic institutions and professional organizations are engaged in health literacy training. • Develop an inventory of tools/toolkits currently being used by communities to enhance health literacy. • Provide ongoing health literacy technical expertise and assistance to communities and across all sectors. • Support partners in providing evidence-informed health literacy initiatives.
Build Infrastructure and Partnerships	• Develop infrastructure within governments for adequately supporting health literacy initiatives. • Identify and hire sufficient human resources – consider an educator/trainer, evaluator, information technologist, planner, psychometrician, or social marketer. • Establish a dedicated Health Literacy Centre as a nexus to lead, coordinate awareness, knowledge development/translation, capacity activities etc. • Investigate the feasibility and identify potential sources of funding (e.g. health literacy tax on junk food, health literacy tax credit for books/educational materials, sponsorship (media)) and leveraging opportunities.

	• Build partnerships by establishing alliances and building relationships with key ministries, provincial/territorial jurisdictions and networks, and NGOs to ensure a coordinated, multi-sector approach. • Establish an inter/multi-sectoral health literacy council to coordinate/ communicate on health literacy issues. • Collaborate across government bureaucracies - such as public health, education, transportation, social services, and environment – to provide clear and consistent public information about health issues and recommendations. • Include health literacy in strategic plans, requests for proposals, grant and contribution awards, programs and educational initiatives. • Establish partnerships (e.g. with CIHR/CIHI) to identify/create and include health literacy measures in national, regional and local surveys.

ii. What the Health Sector Can Do.

- The Health sector includes medical personnel, health care institutions and clinics and health promotion/public health professionals.

As health care costs continue to rise, health systems are increasingly pressed to carve out the best possible balance between the quality of care on the one hand and optimal use of dwindling resources on the other. One promising solution lies in the use of health literacy as a tool for improving self-management in health. Health literacy in this context "…includes an awareness of and ability to navigate differences between the cultures of the health system and the public. It also includes an awareness of and ability to minimize the power imbalances between the health system and the public." [68]

Improving health literacy—and thereby achieving improved self-management of health—holds benefits for both the individual and the health system.[69] Health literate patients are better equipped to make sound, pro-active decisions concerning their own health. Health literate professionals can help their patients and clients acquire the knowledge needed to make good decisions. Altruistically this holistic strategy has

[68] Calgary Charter. (2008). *The Calgary charter: rationale and core principles for the development of the health literacy curricula.* Retrieved from http://www.centreforliteracy.qc.ca/Healthlitinst/Calgary_Charter.htm

[69] Levin-Zamirr, D., & Peterburg, Y. (2001). Health literacy in health systems: perspectives on patient self-management in Israel. *Health Promotion International, 16*(1) 87-94.

great merit but it also makes sound economic sense: Research has shown that giving patients appropriate and understandable self-care information can reduce the use of health services.[70]

Health care providers need to examine where their patients are getting information on disease and self-management, assess whether or not that information is reliable, and inform their patients of the best sources for information and its use. Patients need to have a level of health literacy that allows them to critically analyze information on their own, as appropriate, and make prudent decisions regarding their care. Provider training and the resulting patient/provider relationship are critical in improving health literacy.[71] As well, every attempt should be made to ensure that the health care setting is 'patient-friendly' and sensitive to the literacy capabilities of all patients.

Following are examples of actions that those who provide health services can engage in to improve health literacy.

Component	Actions

Develop Knowledge	• Establish a formal mechanism to acquire a greater understanding of patient, professional and system-related health literacy issues.
	  • Develop assessments and collect information on the health literacy levels of patients with consideration for ethical practice. Increase practitioners' awareness of the social stigma of low literacy.
	  • Develop and collect information on the health literacy knowledge and skills of service providers.
	  • Establish ways to review and address the literacy levels, quality of translation, and cultural appropriateness of written and visual information for patients.
	  • Create collections or repositories (e.g. insurance forms and instructions, informed consent and other legal documents, aftercare and medication instruction, and patient education materials) in several languages and review the materials with members of the target population.
	  • Develop ways to assess organizational results from health literacy improvement efforts.

[70] Morrison, E. M. and Lift, H. S. (1990). Health maintenance organization environments in the 1980s and beyond. *Health Care Financing Review,12*, 81–90.

[71] Levin-Zamirr, D., & Peterburg, Y. (2001). Health literacy in health systems: perspectives on patient self-management in Israel. *Health Promotion International, 16*(1) 87-94.

	• Include health literacy factors in the evaluation of public health interventions in areas such as chronic disease prevention and management. • Become familiar with information and literacy resources in your community and refer patients to them.

Raise Awareness and Build Capacity	• Develop campaigns that bring awareness to health literacy issues in health care organizations
	
	• Ensure that all health and safety information meets the needs and capacities of patients.
	
	  • Assess whether it is culturally and linguistically appropriate and motivating.
	
	  • Create documents that demonstrate best practices in clear communication and information.
	
	  • Assess whether all materials (e.g. applications, benefits information, rights and responsibilities, letter, and health and wellness information) incorporate health literacy principles.
	
	  • Leverage technology and electronic health tools to deliver health information at the time, in the place, and in multiple formats to meet patient needs.
	
	• Use appropriate methods during the patient visit.
	
	  • Use different types of communication methods including vetted pictures, models and score cards to support written and oral communication with patients and their caregivers.
	
	  • Use proven methods of checking patient understanding such as the teach-back method to ensure that patients understand the health information being conveyed and the risk and benefit trade-offs associated with treatments, procedures and medical devices.
	
	  • Use developmentally appropriate communication with children to build better understanding of their health and health care.
	
	• Enhance the pre and post-treatment care of patients.
	
	  • Provide patient support services such as pre-visit or hospitalization reminders and post-visit and discharge follow-up calls, to help patients prepare and know what

	to do when they return home. • Refer patients to public and medical libraries to get more information and assistance with accurate and actionable health information. • Refer patients to adult education and English (or French if appropriate) language programs. • Use technology, including social media, to expand patients' access to the health care team and health information. • Enhance the health literacy knowledge and skills of health care providers. • Establish minimum continuing education requirements in health literacy for all health professions. • Participate in ongoing training in health literacy, plain language, and culturally and linguistically appropriate services and encourage colleagues and staff to be trained. • Advocate for requirements in continuing education for health care providers who have been working in the field to attend health literacy, cultural competency and language training.
Build Infrastructure and Partnerships	• Enhance cross-disciplinary partnerships within and outside of the organization. • Build networks with community and faith-based organizations, social service agencies, and non-traditional partners—such as foster care services, poison control centers, and literacy service providers—to deliver health and safety information to different points in the community. • Invite adult education classes to visit your health centre and adult education students to speak at meetings and symposia. • Collaborate with community organizations and local libraries to support the health information needs of the community. • Establish programs for patient navigators, health coaches (electronic and/or people) and/or community health workers to assist patients in accessing recommended services and information. • Build partnerships across health professions as part of a

	multi-disciplinary team that works to improve the health literacy skills of the care team and patients. • Ensure pharmacists provide the necessary counseling to consumers in language they understand for dispensed medications. • Include members of patient communities, including new readers, in organizational assessments and health literacy improvement efforts. For example, involve members of the target population—including persons with limited health literacy—in planning, developing, implementing, disseminating and evaluating health and safety information. • Create patient-friendly environments that are conducive to communication. • Use architecture, images, and language that reflect the community and its culture. • Create a welcoming, easy-to-navigate, shame-free environment (e.g. well-designed signage and offering assistance with forms). • Enhance accreditation requirements. • Adopt standards for health care organizations that require care delivery systems to address health literacy. • Incorporate health literacy process and outcome performance measures into accreditation criteria. • Integrate health literacy audit tools, standards and scorecards into all quality process and performance activities and measures.

iii. What the Education Sector Can Do.

– Public and private schools, post-secondary institutions and centres for continuing education.

A partnership with the education sector is an investment in the future and vital to achieving health literacy in the population. Given that one of the main goals of the education system is to develop literacy, and that literacy is an essential part of health

literacy, it follows that schools can play a crucial role in developing health literacy skills.[72]

Educational programs can help consumers develop the functional abilities to gather relevant health information, interpret health information, engage in meaningful deliberations with their health care providers, and explain their symptoms and health experiences clearly. Moreover, educational programs must be tailored to the needs of consumers and patients as they learn how to negotiate and navigate the many complexities and bureaucracies of the modern health care system, learn essential skills for self-management of chronic conditions, and learn how to communicate about their health needs for acute, chronic, and preventive care.[73]

At one time health information was typically transferred to students in a top-down approach that resulted in few long-term behaviour changes. However, "…there is now sufficient *prima facie* evidence to suggest that it is possible to attain the changes needed in school structures and practices to achieve better education and health outcomes."[74] These changes include moving away from a teacher dominated culture of learning to a more collaborative one, a change that is already making some inroads into Canadian schools with respect to health literacy.

The *Centre for Addictions Research of British Columbia* at the University of Victoria is working with schools and other partners to develop learning resources, including a project called *iMinds* [75] that promote mental health literacy by engaging students in projects and thoughtful discussions on issues relevant to them. A Canadian study found that students wanted to explore more contemporary health–related issues such as depression, and desired a more hands-on approach in the classroom rather than the traditional 'teacher talk.' [76] Post-secondary institutions play a key role in pushing back the boundaries of knowledge through research and evaluation, especially as it relates to identifying best and promising evidence with respect to improving health literacy.

The education setting has a fundamental role to play in the development of a health literate population.[77] Classroom–based health education can be the impetus for improved health literacy among today's children and adolescents. [78]

Following are examples of actions that people in the education sector can implement to improve health literacy.

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[72] Manganello, J.A. (2007). Health literacy and adolescents: a framework and agenda for future research. *Health Education Research, volume,* issue, pages. Retrieved from http://her.oxfordjournals.org/content/23/5/840.full

[73] Parker, R., & Kreps, G. (2005) . Library Outreach. Journal of the Medical Library Assoc. 81-85. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1255757/

[74] St. Leger, L., (2001). Health literacy and public health: possibilities and challenges, Health Promotion International, Oxford University Press, http://heapro.oxfordjournals.org/content/16/2/197.full.pdf+html

[75] http://carbc.ca/portals/0/school/iMinds/iMindsPrimer.pdf

[76] Begoray, D., Wharf-Higgins, J., & MacDonald, M. (2009). High school health curriculum and health literacy: Canadian student voices, *Global Health Promotion,*16,35, p? Retrieved from http://ped.sagepub.com/content/16/4/35

[77] U.S. Department of Health and Human Services (2010). *National Action Plan to Improve Health Literacy*.. Office of Disease Prevention and Health Promotion, Washington, DC..

[78] Singleton, K. (2003). *Virginia Adult Education Health Literacy Toolkit*. Retrieved June 16, 2009, from http://www.aelweb.vcu.edu/publications/healthlit/sections/toolkit.pdf

Component	Actions

Develop Knowledge	• Identify and address gaps in the health literacy knowledge base, with a specific focus on the following:
	  ◦ the determinants of health literacy (e.g. What determines low and high health literacy?);
	  ◦ the distribution of health literacy in the Canadian population (e.g. In which jurisdictions are low and high health literacy more prevalent?);
	  ◦ the economic costs associated with limited health literacy;
	  ◦ evaluation of interventions that address low health literacy (e.g. How can low health literacy be improved, especially as it relates to technology-based interventions?);
	  ◦ barriers and strategies to improve access to health information and navigation of the health care system; and,
	  ◦ channels and formats to disseminate evidence-based research findings that effectively reach and influence health professionals and adult educators.
	• Develop more rigorous and comprehensive methods and instruments to measure and estimate the full range of individual and population health literacy knowledge and skills (e.g. listening and speaking, writing, numeracy, and cultural and knowledge). As well, develop measures and assess the full range of health literacy knowledge and skills of health professionals and organizations.
	• Develop, implement and evaluate health literacy interventions based on current theories and models - drawing from such related disciplines as communication, behavior change psychology, health education and medical sociology.
	• Include the use of participatory approaches and qualitative methods to help shape research questions and ensure greater relevance, credibility and comprehensiveness.
	• Ensure that persons with limited health are included in

	clinical trials and other health-related studies by removing barriers that prevent these persons from participating. • Conduct and disseminate the results of systematic reviews and evaluations on the effectiveness and implementation of health literacy interventions.

Raise Awareness and Build Capacity	• Enhance the knowledge and skill base on health literacy of early childhood educators.
	
	  • Increase the amount of health education in early childhood education training programs.
	
	  • Mandate coursework in health education for all students who are in postsecondary schools and preparing for a career in early childhood education.
	
	  • Provide professional development opportunities for all child care teachers on the link between early childhood literacy and health literacy.
	
	• Build the health literacy knowledge, skills and capacity of the workforce.
	
	  • Train more librarians and reference staff in health literacy skills and health information technologies.
	
	  • Include training on health reporting and health literacy in schools of journalism and public health.
	
	  • Include health literacy training opportunities in the curricula of all health professions.
	
	  • Require course work in health education for all future teachers currently enrolled in schools of education.
	
	  • Provide professional development for all teachers on health education teaching strategies, topics, skills and age-appropriate health education.
	
	• Build the health literacy knowledge of children, youth and young adults.
	
	  • Mandate standardized health education classes in all schools from kindergarten to grade 12. Ensure that health literacy topics are included in the health education curriculum.
	
	  • Incorporate health education into existing science, math,

	English and French, social studies and computer instruction from K-12 by embedding health-related information and skills into lesson plans (i.e. curriculum infusion). • Require annual coursework in health literacy and health education for all students in post-secondary institutions.

Build Infrastructure and Partnerships	• Commit sufficient fiscal, human and organizational resources to support and sustain a coordinated and integrated approach to providing comprehensive, age-appropriate health education in schools.
	  • Create standards and core competencies for health education teachers (include health literacy as a key component within these standards).
	  • Require certification for all teachers who teach health education.
	  • Offer certificate and diploma programs in health education at post-secondary institutions.
	
	• Include diverse populations, including new readers, in course presentations and training for health professionals.
	
	• Build partnerships and cross-disciplinary coalitions to promote and advocate for health literacy by connecting with:
	  • Local hospitals and clinics.
	  • Health care providers.
	  • Librarians.
	  • Adult education centers.
	
	• Enhance the dissemination of research findings on health literacy in studies conducted in post-secondary institutions. Support opportunities for more interdisciplinary research, given the multifaceted nature of health literacy.
	  • Actively engage practitioners, community members, consumers and policy makers in the research process.
	  • Emphasize dissemination as an essential step in the scientific process, and speed dissemination of results on health literacy research to practitioners, policy makers and researchers in other disciplines.
	  • Actively disseminate findings on health literacy to trade journals and consumer publications to accompany scientific articles.
	  • Explore new methods to share data and research

	findings on health literacy across disciplines. • Include health literacy interventions in a number of research areas such as chronic diseases, patient safety, immunizations and health equity.

iv. What Workplaces and Businesses Can Do

– small, medium and large businesses and places of employment.

A work-based health literacy campaign that would reach millions of people at their worksite, office or any other business setting could have profound far-reaching effects on population health literacy in Canada. Improving health literacy in the workplace, and particularly at a site where physical injury is an ongoing possibility, can bring about two important benefits: enhanced worker safety on the job, and improved skills for accessing and understanding the information required to manage personal and family health on a day-to-day basis.

A 2010 Report examining literacy's impact on workplace health and safety mentioned the following 10 Canadian companies for actions taken to improve literacy skills 'in the interests of health and safety': Abbot Point of Care, Ottawa; Atlantic Health Sciences Corporation, Saint John, N.B.; Bristol Aerospace, Winnipeg; City of Vancouver; De Beers Canada, Yellowknife; Keyera Energy, Calgary; Lilydale Inc., Edmonton; Loewen Windows, Steinbach, Manitoba; Omega 2000 Cribbing Inc., Calgary, and Robinson Paperboard Packaging, Mississauga.

Campbell, A. (2012) What You Don't Know Can Hurt You: Literacy's impact on Workplace Health and Safety. The Conference Board of Canada.

A recently released report by the Conference Board of Canada[79] concluded that organizations that invest in workplace literacy can minimize workers' compensation board premiums, claims, and fines. In addition, fewer health and safety incidents means reduced work stoppages and slowdowns, leading to higher productivity and organizational performance overall. A low level of literacy can jeopardize workers' safety if they cannot understand the health and safety regulations provided to them. Furthermore, low literacy skills can prevent workers from obtaining information about their rights to a safe workplace. Without an understanding of their rights or the ability to assert them, workers with low literacy skills will continue to be exposed to unsafe work environments.

Many organizations do invest heavily in workplace health and safety through capital expenditures in modern, safe equipment. In addition, employers report spending an average of 10 per cent of their training budgets on occupational health and safety training, according to previous Conference Board research.[80] On average, however, only 2 per cent of organizational training, learning, and development budgets is spent on literacy and basic skills upgrading.[81]

[79] Campbell, A., (2008). What you don't know can hurt you: literacy's impact on workplace health and safety. The Conference Board of Canada, Ottawa, ON.

[80] Hughes, D.P., & Grant, M.. (2007). *Learning and development outlook*. The Conference Board of Canada, Ottawa, ON.

[81] ibid

Following are examples of actions that could occur at workplaces to improve health literacy.

Component	Actions
Develop Knowledge	• Determine the health literacy needs and capacities of all employees within the workplace. • Evaluate the contribution of poor communication and information to patient safety incidents and poor health outcomes.

Raise Awareness and Build Capacity	• Provide workplace policies that increase and improve health information and services for employees and their families.
	  • Ensure that information and services are culturally and linguistically appropriate.
	  • Engage employees in planning and evaluating health information.
	  • Include employees in selecting health information products that have been developed using health literacy principles, and are culturally and linguistically appropriate.
	• Provide training, tools and resources that enable employees to improve their health information-seeking and decision-making skills.
	• Recommend that all products, including educational and communication materials, forms, and surveys be written in plain language and tested with the intended users.[82]
	• Encourage contractors, grantees, and partners to indicate and evaluate how their activities contribute to improved health literacy.
	• Incorporate health literacy into Funding Opportunity Announcements (FOAs) and other agreements, such as Request for Proposals (RFPs).

[82] http://www.cdc.gov/healthliteracy/training/page2043.html

Build Infrastructure and Partnerships	• Partner and consult with local librarians to help build an appropriate collection of health and insurance information products and to connect with community resources. • Negotiate with health insurers to provide easily accessible, employee-tested information and ensure the information is culturally and linguistically appropriate.

v. What Communities Can Do.

– Libraries, community recreation and community-sponsored continued learning, religious institutions and the media. Immigrant settlement services, family resource centres, women's resource centres and senior support programs are other important examples.

The community is the cornerstone of life for most Canadians. It provides a multitude of programs and services for residents of all ages and backgrounds and generally promotes social interaction as part of the experience. Many of these programs and the staff that run them can provide an excellent setting and opportunity for improving health literacy in the community. Three sectors that show especially great potential are English-as-a- Second-Language training (ESL) and French-as-a-Second-Language training (FSL), the public library system, and the media.

ESL and FSL students are typically newly arrived immigrants who are struggling to learn English or French. Studies show that immigrants usually have lower levels of literacy and health literacy as compared to the mainstream population,[83] a problem that is underestimated in Canada. [84] Knowing this, it becomes clear that ESL and FSL classes hold potential as a especially valuable settings for health literacy intervention.

The three domains of good health literacy practices in the ESL classroom include clear writing, oral communication between patients and health care professionals, and visual tools such as videos and illustrations.

Shohet, L & L. Renaud.(2006). Critical analysis on best practices in health LIteracy, *Canadian Journal of Public Health,* 97: S10-S13.

One resource is the downloadable health literacy kit developed by the BC-based TriCities Literacy Committee in 2011.
http://tricitiesliteracy.wikispaces.com/Resources,+Research+and+Reports

Another is an easy-to-read photonovella on nutrition, developed by a BC-based team that included ESL-speaking immigrant women.

Nimmon, L.E. (2007) Within the eyes of the people: Using a photonovel as a consciousness-raising health literacy tool with ESL-speaking immigrant women, *Canadian Journal of Public Health* 98(4), 337-340.

Libraries hold a wealth of information and provide a plethora of free services to consumers of all ages and backgrounds. Personnel routinely help patrons search for and obtain useful information on many topics, including those under the health umbrella. Still, the library's vast potential as a catalyst for improved health literacy remains underdeveloped. Specialized training and ongoing support in health literacy would give staff the added tools required to tailor health information to the specific needs of patrons and identify the barriers to meeting these needs.[85]

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[83] Rootman, I., & D. Gordon-El-Bihbety. (2008). *A vision for a health literate Canada: report of the expert panel on health literacy*. Canadian Public Health Association.

[84] Simich,L., (2009). Health Literacy and Immigrant Populations. Policy brief prepared at the request of the Public Health Agency of Canada, Ottawa Submitted March 30, 2009, http://canada.metropolis.net/pdfs/health_literacy_policy_brief_jun15_e.pdf

[85] Parker, R., & Kreps, G. (2005) . Library Outreach. Journal of the Medical Library Assoc. 81-85. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1255757/

Community initiatives related to health literacy can use a broad range of approaches to reach many groups, including older adults, people with disabilities, Aboriginal peoples, literacy learners, and people with mental illness. As an example, well-developed health literacy materials can be distributed from many community locations including shopping malls, recreation centres and places of worship.

An easy-to-read mental health literacy resource, Alone in Canada: 21 Ways to Make it Better has been produced specifically for new immigrants by the Centre for Addiction and Mental Health. It is available in 18 languages in print and on line at:

http://www.camh.net/About_Addiction_Mental_Health/Multilingual_Resources/index.html.

The media, including the Internet and other social media, is increasingly becoming the main source of health information for most people. As such, it holds great potential for developing and disseminating health-related information in a dynamic new learning environment that can be both interactive and visually enriched. Media-based learning can take place almost anywhere and can be used individually or in group settings such as the classroom or community recreation centre. Learning about health by surfing the net, visiting chat rooms, and talking in any number of languages to people thousands of miles away is already a reality for many people.[86]

Much research has shown that mass media can have both health-compromising and health promoting effects on health behavior.[87] The negative influences can include violence,[88] sexual risk behaviour ,[89] obesity,[90] body dissatisfaction and eating disorders,[91] cigarette smoking [92] and alcohol use .[93] The positive attributes of the media lie in the potential for providing: health information; leadership in health-promoting norms and lifestyles; and campaigns to help reduce risk behaviors.[94] Thus, while the media's negative influences are not to be discounted, its great potential for positive influence on the public[95] nonetheless warrants it a place on the list of community resources that can help promote health literacy.

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[86] Kickbush, I. (2001). Health Literacy: Addressing the Health and Education Divide. Health Promotion. International, Vol 16, 3. 289-297

[87] Levin-Zamir, D., Lemish, D., and Gofin, R. (2001), Media Health Literacy (MHL): development and measurement of the concept among adolescents, Health Education Research, 26(2), 323-335

[88] Murray JP. Media violence: the effects are both real and strong. Am Behav Sci 2008; 51: 1212.

[89] Strasburger VC. Adolescents, sex, and the media: ooooo, baby, baby-a Q & A. Adolesc Med Clin 2005; 16: 269–88, vii.

[90] Hobbs R, Broder S, Pope H et al. How adolescent girls interpret weight-loss advertising. Health Educ Res 2006; 21: 719–30.

[91] Van den Berg P, Neumark-Sztainer D, Hannan PJ et al. Is dieting advice from magazines helpful or harmful? Fiveyear associations with weight-control behaviors and psychological outcomes in adolescents. Pediatrics 2007; 19: 30e–7e.

[92] Wellman RJ, Sugarman DB, DiFranza JR et al. The extent to which tobacco marketing and tobacco use in films contribute to children's use of tobacco. Arch Pediatr Adolesc Med 2006; 160: 1285–96.

[93] Snyder LB, Milici FF, Slater M et al. Effects of alcohol advertising exposure on drinking among youth. Arch Pediatr Adolesc Med 2006; 160: 18–24.

[94] Gunther AC, Bolt D, Borzekowski DLG et al. Presumed influence on peer norms: how mass media indirectly affect adolescent smoking. J Commun 2006; 56: 52–68.

[95] Lemish D. Children and Television—A Global Perspective. London, UK: Blackwell Publishing, 2007.

Following are examples of activities that could occur in communities to improve health literacy.

Component	Activities
Develop Knowledge	• Participate in local activities that attempt to determine the health literacy levels of the general population and among special populations.

Raise Awareness and Build Capacity	• Ensure that mental health promotion and chronic disease prevention initiatives are appropriate for immigrant groups, and use participatory, community-based strategies.
	• Work with employers and particularly with educational institutions to enhance immigrants' health literacy about health promotion and preventive health.
	• Support efforts to increase the cultural competence of health and social service providers to promote health literacy skills and to deliver programs effectively to immigrants, including providing mandatory cultural interpreter services.
	• Use local, community and ethnic media to raise awareness of health information and services in the community and to overcome barriers to accessing appropriate health services.
	• Identify poor-quality health information and services in the community and provide feedback on how they might be improved using health literacy principles.
	• Create opportunities for health education and learning in communities through creative use of technology and social media.
	  • Use emerging technologies to reach all segments of society with accurate and actionable health information.
	  • Identify and recruit members of the target population in the identification of communication vehicles.

	• Infuse health literacy skills into curricula for adult literacy, ESL and FSL, and family literacy programs. • Consider providing health-related information in easy-to-read community newspapers such as: http://blogs.capilanou.ca/westcoastreader/ • Provide professional development in health education topics and skills for those teaching adult literacy, ESL and FSL, and family literacy programs.

Build Infrastructure and Partnerships	• Facilitate collaborative efforts among adult literacy, ESL and FSL communities, health services partners, and faith- and academic-based organizations.
	
	  • Include high school, college and professional school students in health literacy programs to bridge cultural and generational divides.
	
	  • Be a guest lecturer in an adult education class. Teach computer skills or be a curriculum advisor in an adult education program.
	
	  • Collaborate with medical librarians to create health information displays or centres in public libraries. Consider posting these displays in public places such as malls, recreation centres or seniors' facilities.
	
	• Work with entertainment producers and writers to increase the amount of accurate health information in all mass media programming.
	
	• Engage professional writing associations and social media users in raising awareness of and action on health literacy issues

VI. Conclusion and Next Steps

This document has substantiated the importance of the goal of a health literate Canada and established a process for achieving it. It presents a framework that suggests a cadre of individual and collective actions that can be taken by each of the identified sectors to positively influence health literacy and the determinants of health. It is a solid first step in the journey towards a more health literate Canada.

It would be easy to begin the process by focusing on the tangible task of information distribution, but health literacy interventions must reach beyond this narrow parameter to focus as well on the ways in which information is shaped, how and by whom it is accessed, how it is critically analyzed and how it can be more effectively used to bring about genuine change at the individual and community levels.

Transforming the actions outlined in this document into meaningful change will require sustained involvement and commitment of all those who work within the health sector as well as of those in other sectors, including education (youth and adult learning), community services and business. With this understanding, the following tenets should be incorporated into all efforts that support the *Approach's* vision:

- A participatory approach should be strived for, so as to meaningfully engage all disciplines and professions and population groups as equal partners in creating, planning, implementing and evaluating initiatives.

- The most up-to-date and practice-based evidence-informed health literacy programs, policies and services available must be sought out and adopted or adapted to local circumstances. All ensuing activities should be developed, implemented, and evaluated with the "end-user" in mind.

> ***Access to accurate and actionable health information and usable health services is a matter of fundamental fairness and empowerment.***
>
> U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2010). *National action plan to improve health literacy*. Washington, DC: Author.

- Ongoing evaluation must be incorporated into all activities and initiatives so as to determine whether things went as planned and if specific efforts achieved their desired results. Only a thorough and ongoing evaluation can push through the current confines of knowledge and lead to the discovery of increasingly more effective and efficient approaches for achieving the *Approach's* vision.

- Every approach selected for improving health literacy must be comprehensive. While the ultimate goal is enhanced health literacy knowledge and skills in the Canadian population, environments (e.g. policies, settings, systems) must also be made conducive to and supportive of individual decision-making.

- Whenever possible, those most affected by limited health literacy must be included in the development, implementation, and evaluation of all *Approach* initiatives.

The *Approach* is a work in progress. Application of the three **Components** by the five **Partners** identified in this document is being put forth as the foundation on which to build the collective and cohesive blueprint for the ultimate enhancement of health literacy in Canada. Health literacy is a relatively new concept and much information is certain to be added to the body of knowledge in the years to come. Growing research will further pinpoint the key determinants of health literacy and thus lead to better ways of measuring health literacy levels across populations, among at-risk groups, and across different health issues. Understanding of health literacy will surely increase in the future as methods to influence the factors and conditions that contribute to health literacy become more distinguishable. As for the *Approach,* it has sufficient structure and flexibility to accommodate, incorporate and adjust to this growth as it happens.

Although this document has drawn on work done in Canada and other countries it has been developed with Canada in mind. We hope that those who use it will continue to take the Canadian context into account in developing and implementing policies, practices and research that reflect our unique society and ways of working.

The next steps will be to share this document widely with individuals, communities and organizations interested in improving the health literacy of Canadians in order to enhance existing initiatives and develop new ones in all of the sectors mentioned and to encourage a sustained comprehensive, Canadian approach to addressing the issue. We hope that everyone who reads it will be inspired to make a contribution to these ends.

Annex I. Major Systematic Reviews of Health Literacy, Behaviours and Outcomes

Pignone, et. al. (2005)[96] **Method:** Systematic review of research published between 1980-2003 on the effect of interventions on the health outcomes of persons with low health literacy. Included controlled and uncontrolled trials that measured literacy and examined the effects of interventions for people with low literacy on health knowledge, health behaviours, use of health care resources, intermediate markers of disease status, and morbidity or mortality. **Findings:** Only 5 articles examined the interaction between literacy level and the effect of intervention. Mixed results. **Conclusions:** Drawing conclusions difficult because of limitations in study design, interventions tested and outcomes assessed. Further research required.	**Hauser and Edwards, (2006)**[97] **Method:** Reviewed research on health literacy interventions published prior to 2007 **Findings:** Few rigorous evaluations exist. While most widespread initiative used is simplifying reading material using clear language and pictures, there is no evidence that this improves health outcomes. Although multimedia presentations may improve knowledge in both the literate and the less literate, they do not appear to change health-related behaviours. **Conclusions:** Community development is a promising avenue that requires more exploration. Creation of innovative evaluation tools required.
King, (2007)[98] **Method:** Review of published and grey literature related to health literacy interventions in Canada and internationally. Also conducted key informant interviews. **Findings:** Majority of health literacy interventions involve accessing and understanding, with few focused on appraising or communicating health information. limited information found on the effectiveness of health literacy interventions. Some evidence to support the finding that a participatory educational and empowerment approach is effective. **Conclusions:** Barriers to evaluation of programs were time, money and lack of provider expertise. Further investigations suggested : • health literacy interventions focused on appraising health information • cultural issues • health care professional training • sources of health information • learner and patient perspectives	**Clement et, al. (2009)**[99] **Method:** Systematic review of randomized and quasi-randomized controlled trials that focused on complex interventions for people with limited literacy or numeracy. Searched eight databases from 1966 to 2007. Predominantly North American. **Findings:** Knowledge and self-efficacy were outcomes most likely to improve but not necessarily related to health outcomes. **Conclusions:** While the review focused on two specific aspects of health literacy (reading ability and numeracy) many interventions included wider empowerment and/or community participation aspects. The implementation of literacy/numeracy interventions might most usefully be embedded within this broader approach to health literacy**.**

[96] Pignon,M., DeWalt, D., Sheridan, S., Berkman, N., & Lohr, K. (2005). Interventions to improve health outcomes for patients with low literacy: a systematic review. *Journal of General Internal Medicine*, 20(2), 185-192.
[97] Hauser, J. & Edwards, P. (2006). *Literacy, health literacy and health: a literature review.* Ottawa: Expert Panel on Health Literacy, Canadian Public Health Association.
[98] King, J. (2007). *Environmental scan of interventions to improve health literacy*. National Collaborating Centre for Determinants of Health.
[99] Clement, S., et. al. (2009). Complex Interventions to improve the health of people with limited literacy: A systematic review. *Patient Education and Counceling,* 75, 340351.

Sheridan et. al. (2011)[100]	Sorensen et. al. (2012)[101]
Method: Conducted a systematic evidence review that evaluated the effectiveness of interventions designed to mitigate the effects of low health literacy through either single or multiple literacy-directed strategies **Findings:** Found several discrete design features that improved participant comprehension in one or a few studies (e.g., presenting essential information by itself or first, presenting information so that the higher number is better, presenting numerical information in tables rather than text, adding icon arrays to numerical information, adding video to verbal narrative). Furthermore, we found a few studies that provided consistent, direct evidence that intensive mixed-strategy interventions focusing on self-management reduced emergency department visits and hospitalizations, and that intensive mixed-strategy interventions focusing on self- and disease management reduced disease severity. **Conclusions:** To continue to advance the field of health literacy research should: • focus on confirming the effectiveness of discrete design features or mixed-strategy interventions that, to date, have shown success only in limited populations. • explore yet untested interventions. Such interventions might include interventions to increase motivation to process information (e.g., fotonovellas); interventions that work around the problem of low health literacy (e.g., patient navigators); and interventions that change physician behavior, practice structure, or existing health policy. • continue to explore the features that make health literacy interventions successful. Although a combination of intervention features has been shown to ensure the success of interventions, paring away ineffective features could save delivery time and be more cost-effective. • explore the best ways to disseminate and implement effective health literacy interventions. Such an effort might be aided by creating a central, accessible library of literacy-directed interventions.	**Method:** A systematic literature review was performed to identify definitions and conceptual frameworks of health literacy. A content analysis of the definitions and conceptual frameworks was carried out to identify the central dimensions of health literacy and develop an integrated model. **Findings:** The review resulted in 17 definitions of health literacy and 12 conceptual models. Based on the content analysis, an integrative conceptual model was developed containing 12 dimensions referring to the knowledge, motivation and competencies of accessing, understanding, appraising and applying health-related information within the healthcare, disease prevention and health promotion setting, respectively. **Conclusions:** A model is proposed integrating medical and public health views of health literacy. The model can serve as a basis for developing health literacy enhancing interventions and provide a conceptual basis for the development and validation of measurement tools, capturing the different dimensions of health literacy within the healthcare, disease prevention and health promotion settings.

[100] Sheridan, S., Halpern, D., Viera, A., et. al. (2011) Interventions for Individuals with Low Health Literacy: A Systematic Review, Journal of Health Communication, 16:30–54

[101] Sorensen, K., VAN DEN Broucke, S, Fullam, J., et. al. (2012). Health literacy and public health: A systematic review and integration of definitions and models. BMC Public Health. http://www.biomedcentral.com/1471-2458/12/80

Annex II.

Proposed *Inter-sectoral Approach to Improving Health Literacy for Canadians* Logic Model

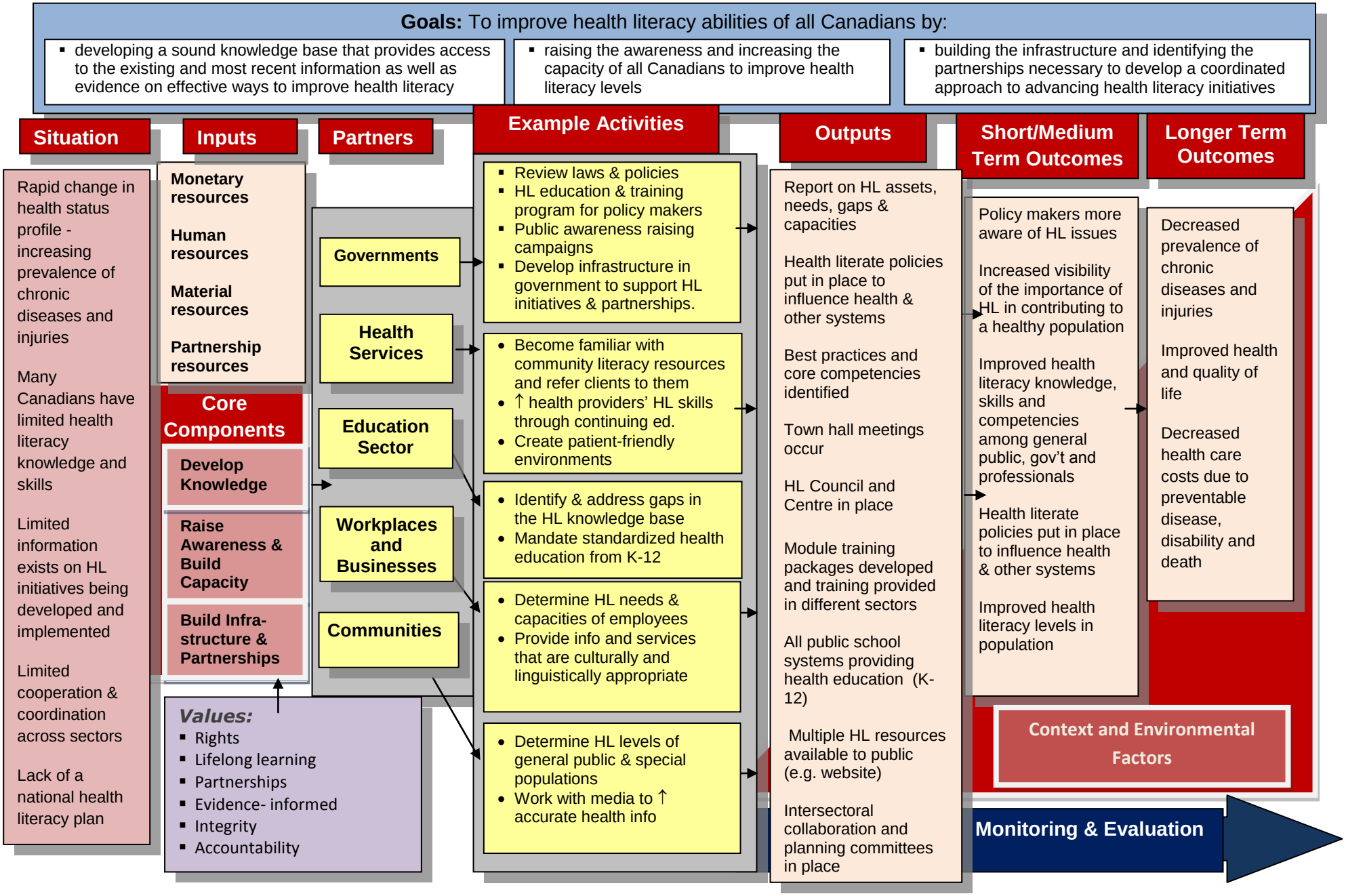
Logic modeling provides a high level, program description of a strategy's major concepts - in other words, it is a tool to help organize the relationship between major activities and anticipated outcomes. Similar to a flowchart, logic models illustrate a strategy's *theory of change*, showing how activities connect to the results or outcomes the program is trying to achieve.

Establishing desired long-term outcomes, such as improved academic achievement and improved social functioning, is tenuous, because while the activities outlined in the *Approach* may contribute to affecting chronic disease rates, other programs and environmental factors may also contribute (or hinder) the achievement of successful outcomes. The dark background triangle presented in Figure 3 depicts the increasing importance of context and environmental factors in influencing the projected outcomes of the *Approach.*

Figure 3. Proposed Inter-sectoral Approach to Improving Health Literacy for Canadians Logic Model

Vision: A Health Literate Canada in which all people in Canada can access, understand, evaluate and use health information and services that can guide them and others in making informed decisions to enhance their health and well-being.

Mission: to develop, implement and evaluate an approach that will support, coordinate and build health literacy capacity of the general public, and people and systems that deliver health information and services in Canada.



Annex III: Meeting Participants

(In alphabetical order)

- Dr. Thomas Abel, University of Bern [Switzerland
- Ms. Mara Andrews, First Nations Health Council (FNHC)
- Ms. Paola Ardiles, British Columbia Provincial Health Service Authority (PHSA)
- Mr. Michael Barnes, Public Health Association of British Columbia (PHABC)
- Dr. Cynthia Baur, Centres for Disease Control (US)
- Ms. Lynn Chiarelli, Consultant
- Ms. Mary Collins, British Columbia Healthy Living Alliance Secretariat
- Dr. Lorie Donelle, Western Ontario
- Mr. Ted Bruce, Public Health Association of British Columbia (PHABC)
- Ms. Eve Gaudet, British Columbia Ministry of Education
- Ms Linda Jacobsen, Vancouver, Strategic Initiatives and Innovation Directorate (SIID-Public Health Agency of Canada
- Dr. James Frankish, University of British Columbia (UBC)
- Dr. Doris Gillis, St. Francis Xavier University
- Ms. Diane Gray, University of British Columbia (UBC)
- Dr. Trevor Hancock, University of Victoria (Uvic)
- Ms. Julia Hayos, Consultant
- Mr. Tim Hutchinson, Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada (CCDPC-PHAC)
- Mr. Art Kube, Council of Senior Citizens Organizations of BC (COSCO)
- Ms. Brenda Le Clair, Decoda British Columbia
- Ms. Andrea Long, Strategic Initiatives and Innovation Directorate (SIID-PHAC)
- Ms. Leslie Malloy-Weir, McMaster University
- Ms. Kelly McQuillen, British Columbia Ministry of Health Services
- Dr. Dawne Milligan, University of British Columbia (UBC)
- Ms. Christine Nabukeera, Centre for Health Promotion, Public Health Agency of Canada (CHP-PHAC)
- Dr. Marina Niks, Consultant
- Mr. Greg Penney, Ottawa, Canadian Public Health Association (CPHA)
- Ms. Kayla Pompu, Public Health Association of British Columbia (PHABC)
- Ms. Johanna Trimble, Patient's Voices Network
- Ms. Pam Turner, Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada (CCDPC-PHAC)
- Dr. Linda Shohet, Centre for Health Literacy
- Ms. Christine Soon, University of British Columbia (UBC)
- Dr. Sandra Vamos, Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada (CCDPC-PHAC)
- Dr. Joan Wharf Higgins, University of Victoria (UVic)
- Dr. Andrew Wister, Simon Fraser University (SFU)
- Ms. Meredith Woermke, British Columbia Mental Health Services (BCMHS)
- Dr. Paul Yeung, Consultant