



Health & Learning Knowledge Centre
Centre du Savoir sur la Santé et l'Apprentissage

CANADIAN COUNCIL ON LEARNING
CONSEIL CANADIEN SUR L'APPRENTISSAGE

Literacy and Health: The Role of a Health Authority

Population Health Round, Vancouver Coastal Health
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Outline:
History
Definitions
Measurement
Reasons for Concern
Current Activities
Role of Health Authority



History of Literacy and Health in Canada:

- Growing interest in literacy in the late 1980's
- OPHA/Frontier College Literacy and Health project (1989-1993)
- CPHA Literacy and Health Program (1994-present)
- CPHA Clear Language Service (1997-present)
- Canadian Conferences on Literacy and Health (2000, 2004)
- Canadian Literacy and Health Research Project (2002-2006)
- CPHA Expert Panel on Health Literacy (2006-2007)



Definitions of Literacy:

- a complex set of abilities to understand and use the dominant symbol systems of a culture for personal and community development (Centre for Literacy of Quebec, 2000)
- using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential (Statistics Canada, 2005)
- the ability to understand and use reading, writing, speaking and other forms of communication as ways to participate in society and achieve one's goals and potential (CPHA Expert Panel on Health Literacy, 2008)



Definitions of Health Literacy:

- Cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways which promote and maintain good health (Nutbeam, 1998)
- Ability to read and comprehend prescription bottles, appointment slips, and other essential health-related materials” (A.M.A., 1999).



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Institute of Medicine Definition:

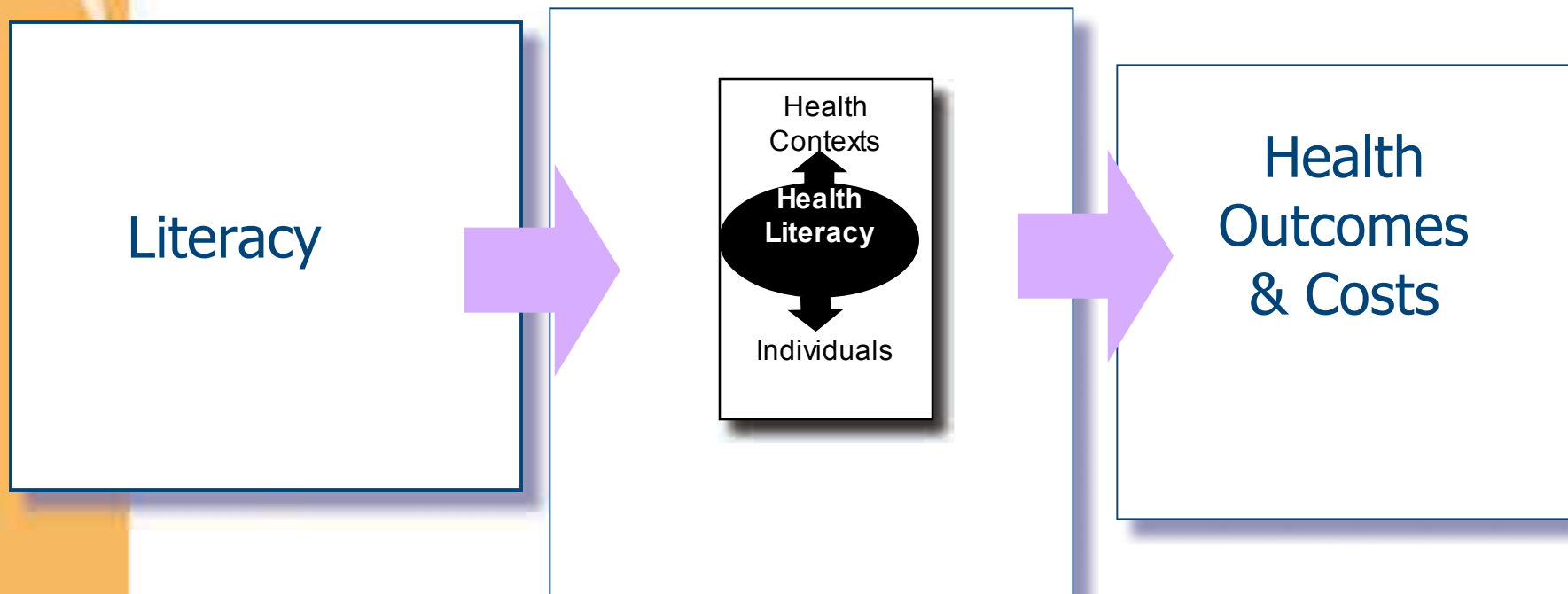
- The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (I.O.M., 2004)



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Health Literacy Framework (I.O.M., 2004)





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British Columbia Definition:

- *The degree to which people are able to access, understand, appraise and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course* (Kwan, Frankish and Rootman, 2006)



CPHA Expert Panel Definition:

- the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life-course
(Rootman and Gordon-El-Bihbety , 2008)



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European Definition:

- “the capacity to make sound health decisions in the context of everyday life – at home, in the community, at the workplace, in the health care system, the marketplace and the political arena” (Kickbusch, 2007)



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Health and Literacy or Health Literacy:

- Literacy and health refers to the recent understanding that literacy is a determinant of health, both for individuals and for populations. This is due, in part, to the impact of literacy skills on socio-economic status, employment, quality of life and use of health services.
- Health literacy, on the other hand, relates more directly to the ability to access, understand, evaluate and communicate health information, in order to make appropriate health-related decisions and manage interaction with the health system.

Commonly Used Tools to Measure Literacy:

- **WRAT:** Wide Range Achievement Test
(Wilkinson, 1993)
- **IALSS:** International Adult Literacy and Skills Survey (Statistics Canada, 2005)



Commonly Used Tools to Measure Health Literacy:

- **REALM:** Rapid Estimate of Adult Literacy in Medicine (Davis et al., 1993)
- **TOFHLA:** Test of Functional Health Literacy in Adults (Parker et al., 1995)
- **NVS:** Newest Vital Sign (Weiss, 2007)
- **HALS :** Health Activities Literacy Scale, National and International Surveys (Rudd, et al., 2004)



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HALS:

- Using 350 unique items in NALS/IALS/ALLS
- 191 items judged to measure health-related activities
- Health-related items assigned to five health literacy sub-domains

Health Activities	Number of Items (n=191)
Health Promotion	60
Health Protection	65
Disease Prevention	18
Health Care and Disease Management	16
Navigation	32

Limitations of HALS:

- Excludes oral skills
- No measures of component skills that underlie fluent and automatic reading
- No measure of the specialized vocabulary used in health settings
- No measure of scientific literacy
- No measure of problem solving skill
- Limited measures of attitudes, values and beliefs
- Less than optimal representation of HL sub-domains in pool of test items
- May underestimate ability of individual to deal with a specific HL demand with which they are familiar



Strengths of HALS:

- Goes beyond health care
- Provides a rigorous and calibrated means to measure some elements of the definition of HL (e.g. ability to understand and use health information)
- National and international data are available from large carefully-drawn samples
- Data are collected by national statistical agencies using standardized and supervised procedures
- Has the potential to study change over time, cross-national and regional and local differences



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Why is Literacy and Health and Health Literacy important?

- Large numbers of people appear to have low levels of literacy and health literacy
- Lower levels of literacy health literacy appears to be related to poorer health outcomes
- Increasing rates of chronic disease will increase need for literacy and health literacy skills
- Lower literacy health literacy appears to be related to higher health care costs
- Increasing complexity of the healthcare system and the deluge of health information now available put high demands on people for literacy and health literacy skills
- Low health literacy may reflect inequities in health



Many Canadians have low literacy Skills (Statistics Canada, 2005):

- Among Canadians aged 16-65, an estimated:
 - **42%** (about 9 million) fell below Level 3 on the *Prose* scale
 - **43%** fell below Level 3 on the *Document* scale, and
 - **50%** fell below Level 3 on the *Numeracy* scale
- If people over the age of 65 are included:
 - **48%** (about 12 million) were below Level 3 on the *Prose* and *Document* scales, and
 - **55%** were below Level 3 on the *Numeracy* scale

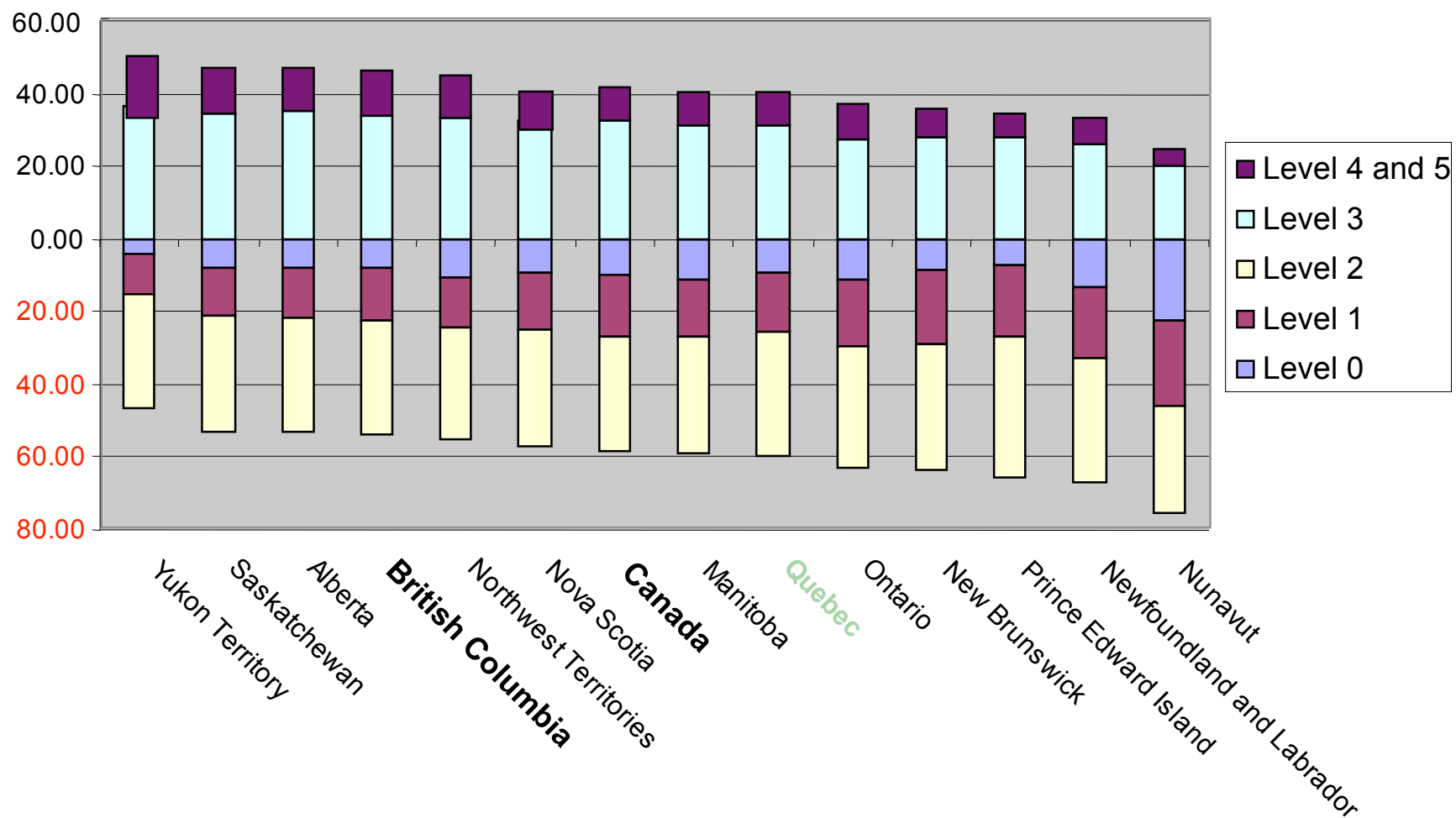
Level 3 is considered the minimum level of proficiency required to meet the demands of modern day life



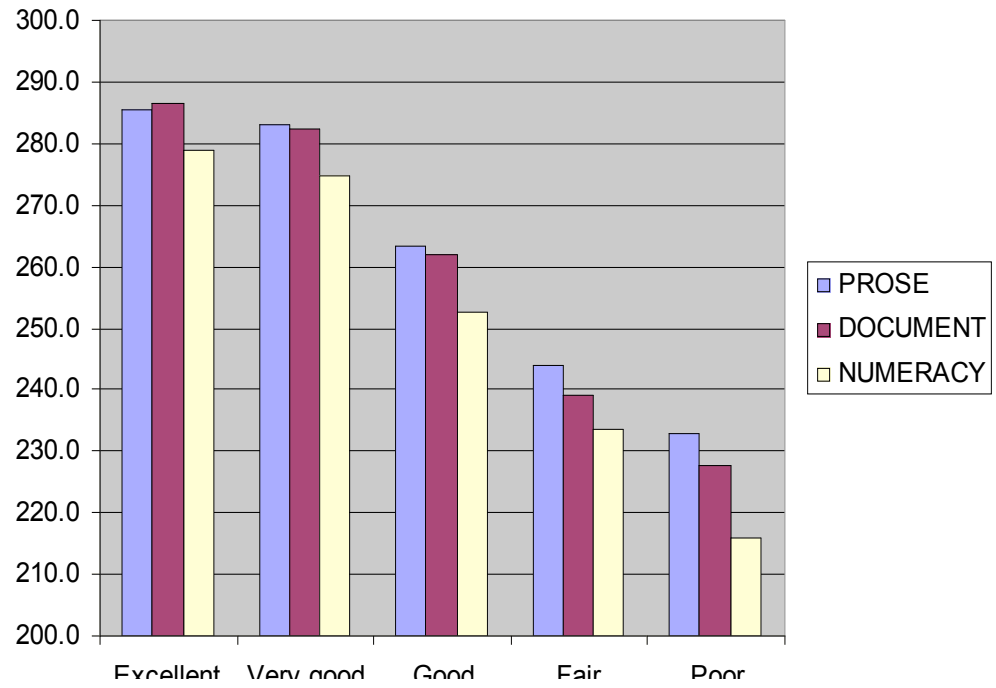
Many people in Canada have low levels of HL:

- Based on the 2003 IALSS, **11.7 million** working age residents of Canada (55%) are estimated to lack the minimum level of health literacy needed to effectively manage their health information needs (CCL, 2007).
- When seniors are added, an estimated **14.8 million** may be without adequate health literacy skills. An estimated 88% of respondents 65+ fell below Level 3 on the Health Literacy Scale in the 2003 IALSS survey (CCL, 2007).

Distributions of Health Literacy Skill Levels, Canada and Provinces/Territories



Proficiency Scores by General Health, Canada, All Ages, 2003



Health Literacy Scores by Self-perceived General Health Status, Canada, 2003



Health outcomes related to low reading proficiency include:

- Longer hospitalizations (Baker et al., 1997, 2002)
- Higher rates of cervical cancer (Lindau et al., 2002)
- Higher rates of diabetes (Murray et al., 2008)
- Higher mortality (Baker et al., 2007; Sudore, 2006)



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Health Literacy (Reading proficiency) and mortality:

- A recent U.S. study (Baker et al., 2007) examined the all-cause and cause-specific (cardiovascular, cancer, and other) mortality of 3260 Medicare enrollees over age 56 in 4 US metropolitan areas.
- Older adults with inadequate and marginal health literacy levels had a 50 per cent higher mortality rate over a five-year period than those with adequate skills.
- Low health literacy was the top predictor of mortality after smoking, and was a more powerful variable than both income and years of education.
- Another recent study found that limited literacy, as measured by the REALM, was independently associated with a nearly two-fold increase in mortality in the elderly (Sudore, et al., 2006).



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Low reading proficiency is associated with:

- **Inappropriate medication use and compliance with physician orders** (Williams, et al., 1995; Kalichman, et al., 1999)
- **Less use of preventive services and less care seeking** (Scott, et al., 2002)
- **Less expression of health concerns** (Rudd et al., 1999)
- **Difficulties using health care system** (Davis et al. 1996; Brez and Taylor, 1997)



Increasing chronic disease and health literacy:

- The number of people with diabetes in Canada is projected to increase from approximately 1.4 million patients in 2000 to 2.4 million in 2016 (Ohinmaa, et al., 2004).
- One of the ways to address chronic disease which is being increasingly used is patient self-management (McGowan, 2005)
- Low health literacy is a barrier to effective self-management. A review of randomized control trial studies found that 62% of patients with lower reading skill levels were unable or unwilling to engage in self-management (Johnston et al., 2006)
- Improving literacy and health literacy should lead to improved self-management of chronic diseases



Health Literacy (Reading Proficiency) and Cost:

- An analysis of expenditure data from a study of public hospital patients found that predicted in-patient spending for a patient with inadequate HL (Reading Proficiency) was \$993 higher than a patient with adequate reading skills. A difference of \$450 remained after controlling for health status (IOM, 2004).
- Another study which looked at Medicare users found that the Medicare costs of those with less than a 3rd-grade reading level were \$10,688/year, while the costs for those with greater than 4th-grade reading level were \$2,891 (Weiss and Palmer, 2004)



Estimated Economic Drain of Low Health Literacy on U.S. Economy:

- “initial approximation places an order of magnitude of the cost of low health literacy to the U.S. Economy in the range of **\$106 billion to \$238 billion** annually” (Vernon et al., 2007)
- “When one accounts for the future costs of low health literacy that result from current actions (or lack of action), the real present day cost of low health literacy is closer in range to **\$1.6 trillion to \$3.6 trillion**” (Vernon et al., 2007)



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Demands of health information materials:

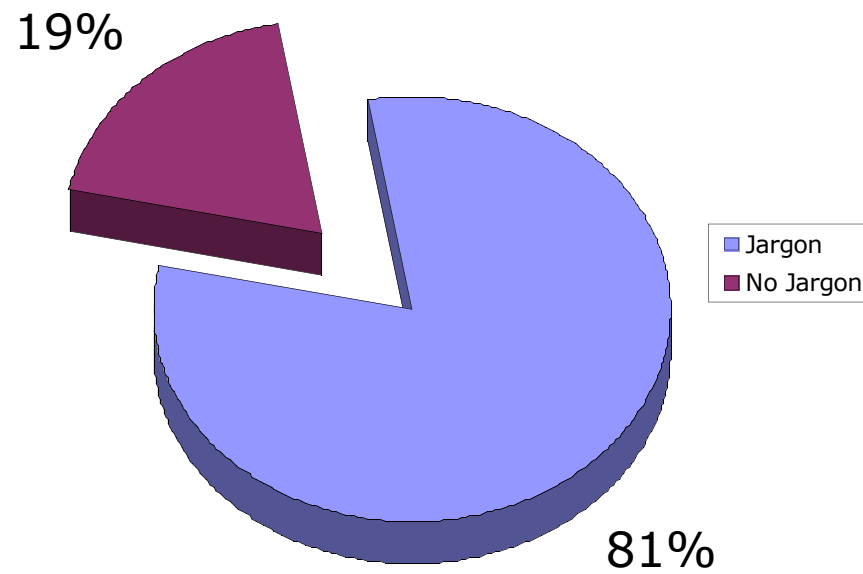
- Over 800 studies have found that health-related material for patient education far exceeds the reading levels of the average adult (Rudd, 2007)
- A recent study of health information websites in Canada, the U.K. and Australia found that the content of all sites was written at a higher level than recommended by literacy organizations. The lowest level was grade 11 (Petch, 2004)



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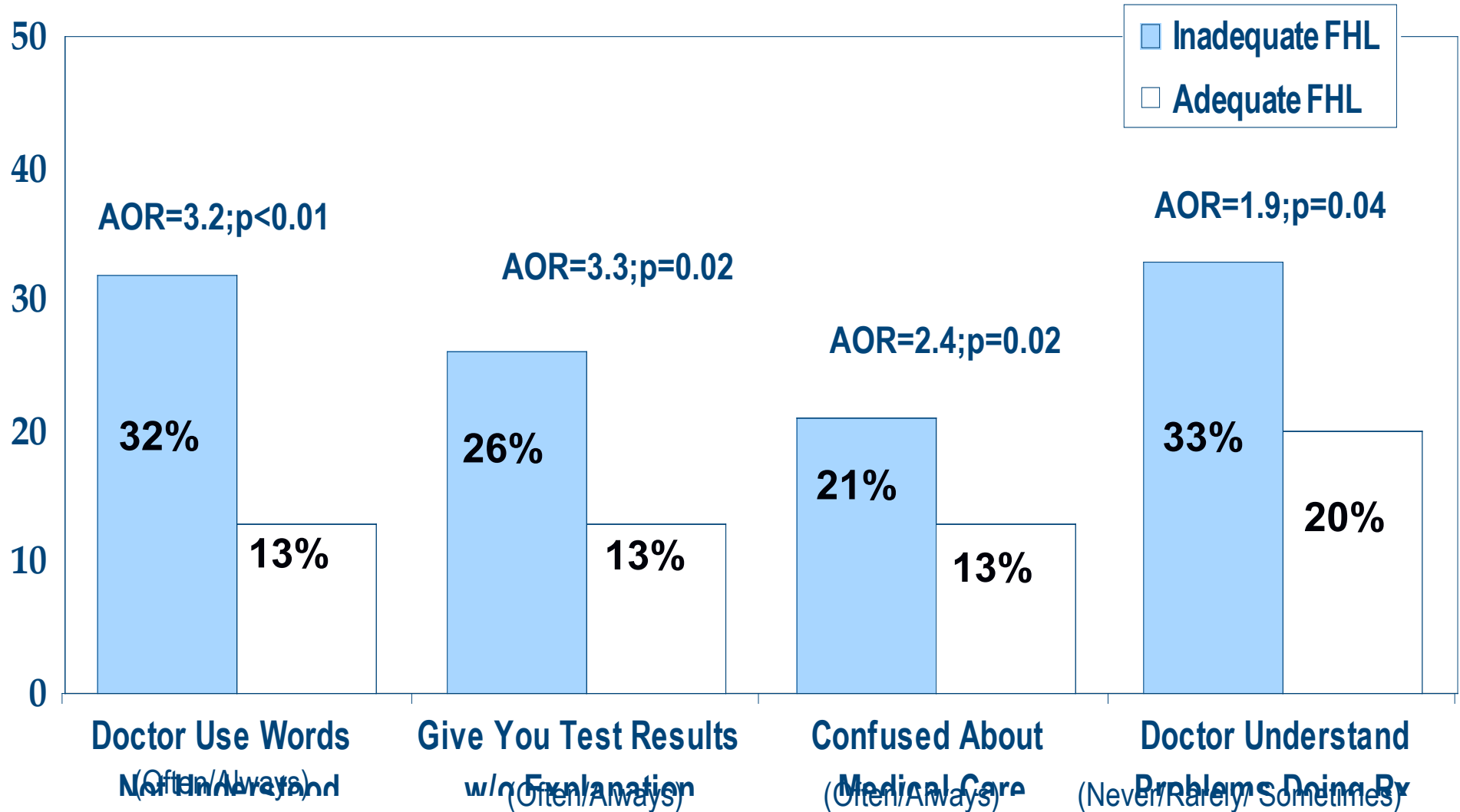
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Jargon use in physician visits



Castro. et al., 2007

Health Literacy and Oral Communication





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Low Literacy and Health Literacy may be a reflection of Inequities in health:

- Certain population groups appear to be more likely to experience lower levels of literacy and health literacy. They include:
 - Older adults
 - Immigrants
 - Adults with low levels of educational attainment
 - People whose mother tongue is neither English nor French
 - Recipients of social assistance
 - Residents of particular provinces or territories

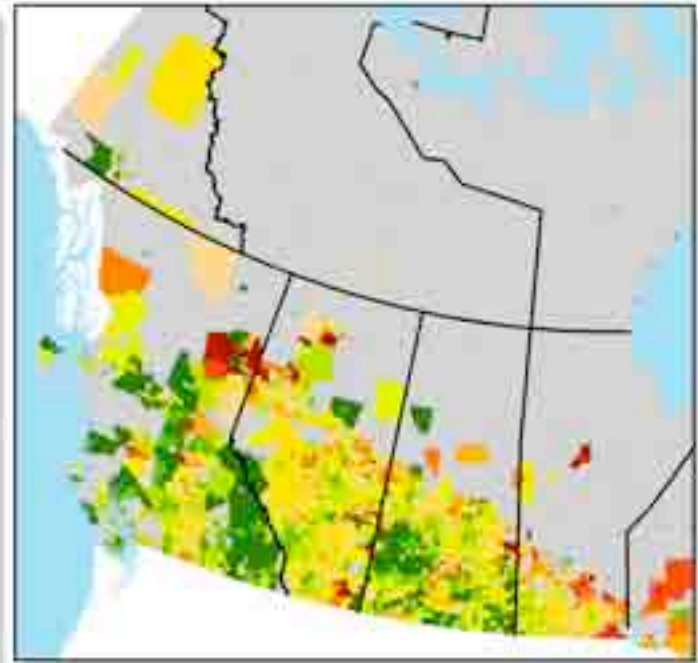
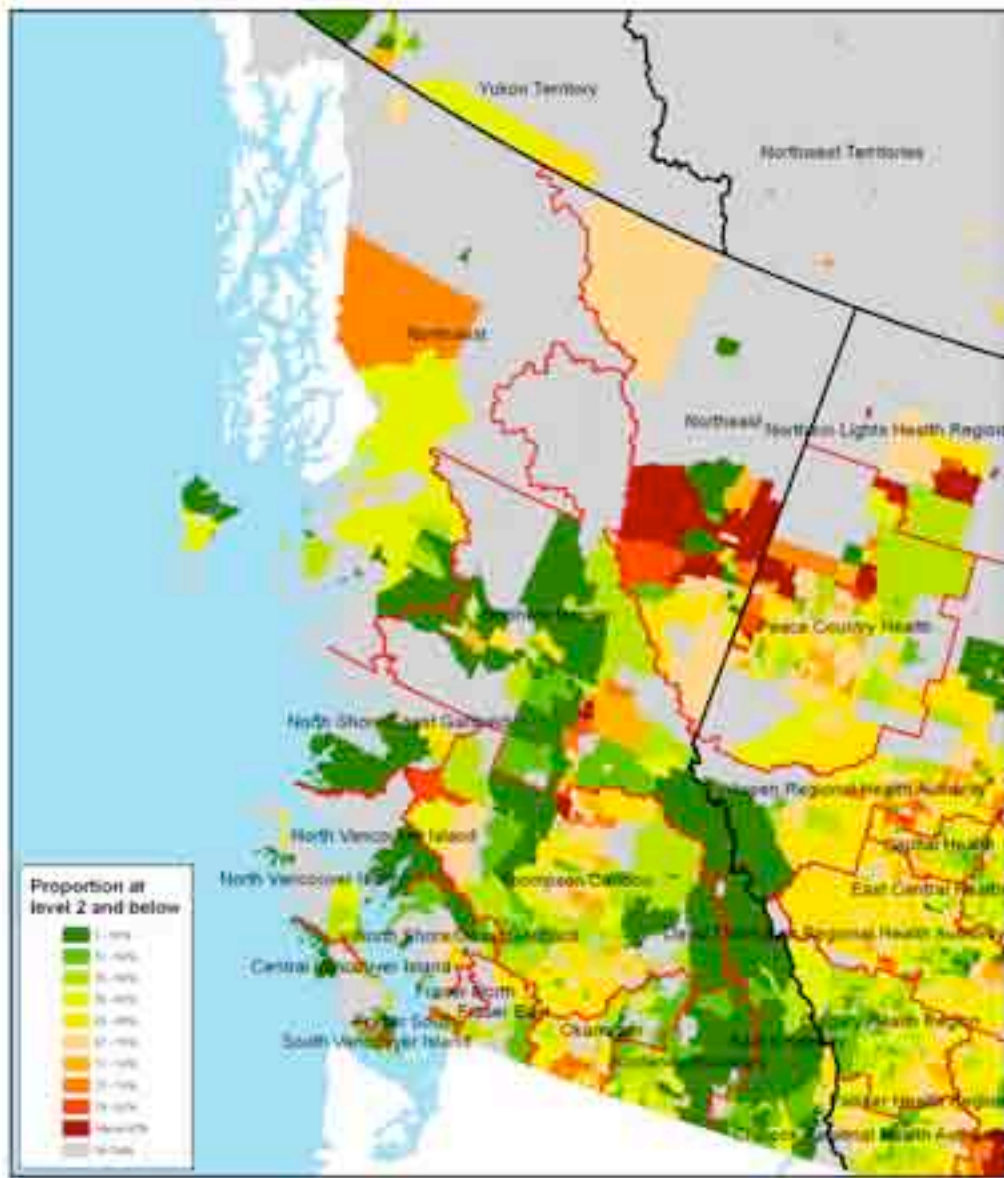


Current Canada-wide Initiatives:

- CPHA Literacy and Health Program and resources
- CAPC and CPNP
- Movement for Canadian Literacy (MCL)
- Fédération canadienne pour l'alphabétisation en français (FCAF)
- Canadian Alliance on Mental Illness and Mental Health
- Canadian Council on Learning
- National PHAC Collaborating Centre on Determinants of Health
- CPHA Panel on Health Literacy
- Health Literacy Maps

The Distribution of Health Literacy in British Columbia

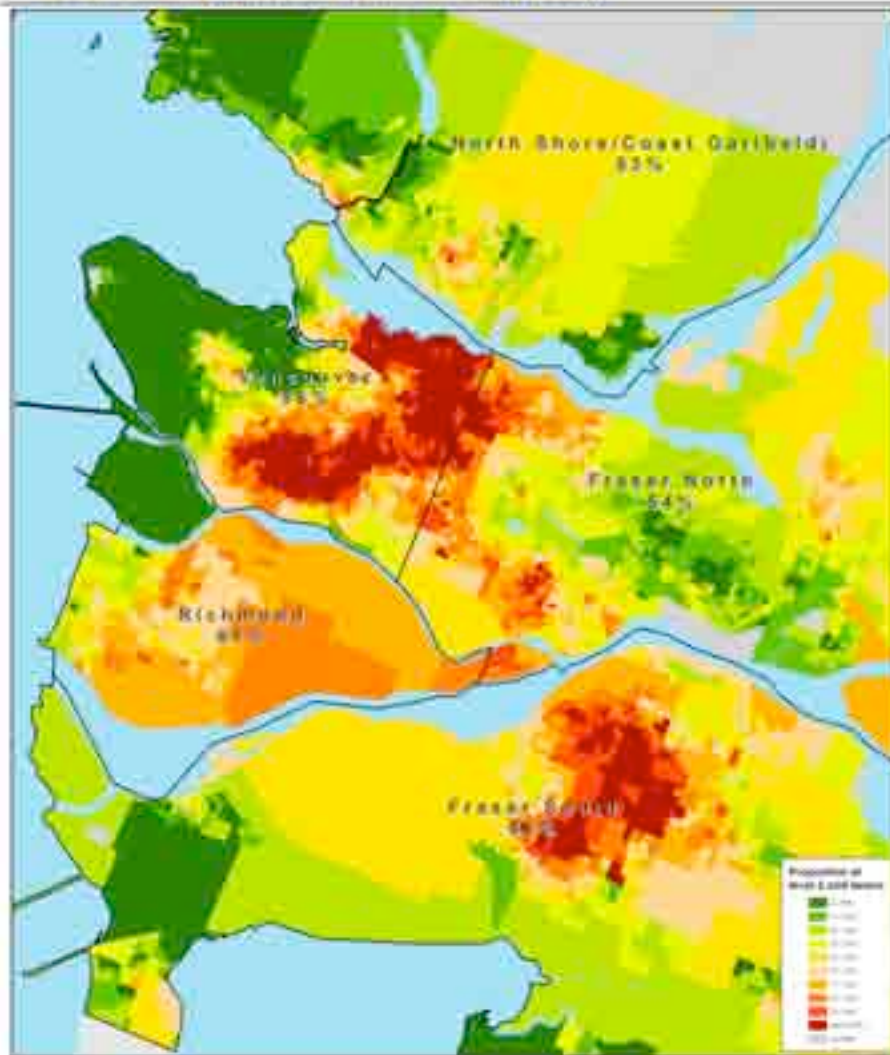
Proportion of adult health literacy at level 2 and below, ages 16 and older



Proportion of adult health literacy at level 2 and below	
British Columbia	54%
East Kootenay	40%
Kootenay/Boundary	48%
Champlain	50%
Thompson/Cariboo	58%
Fraser East	55%
Fraser North	54%
Fraser South	56%
Richmond	61%
Vancouver	59%
North Shore/Coast/Garibaldi	50%
South Vancouver Island	49%
Central Vancouver Island	50%
North Vancouver Island	53%
Northwest	61%
Northern Interior	49%

Vancouver

Health Literacy: Proportion at Level 2 and below





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Current Province-wide Initiatives:

- Health Literacy Network (B.C.)
- Healthy Aboriginal Network (B.C.)
- Health Literacy Research Team (B.C.)
- Healthy living performance standards for Schools (B.C.)
- The Literacy Audit Kit (Alberta)
- “It’s Safe to Ask” Project (Manitoba)
- Literacy and Health Project (Manitoba)
- To be Born Equal-To Grow to Health Program (Quebec)
- Literacy and Health Project (Quebec Centre for Literacy)
- Health Literacy in Rural Nova Scotia Research Project
- Promoting Literacy in Healthy Public Policy (PEI)
- Discussion paper for Inuit communities on literacy and health (Nunavut)
- Health Check (N.W.T.)



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Current Local Initiatives:

- Hispanic Health Literacy Video Project, Vancouver
- Farsi-speaking T.V. series on Health, Vancouver
- Outreach Librarian Position, Vancouver (VGH and UBC Hospital Foundation)
- Health and Literacy Committee, Prince Albert Saskatchewan
- Health benefits of literacy project, READ Saskatoon
- Alphabet Soup, Winnipeg
- Community Health Assessment, Brandon
- Diabetes Management project, Ottawa
- Literacy and Health project, North Bay
- Patient Education project, Hamilton
- Naître égaux – Grandir en santé, Quebec
- Montreal Hospital project
- “Do I Need to See the Doctor?”, Guysborough Antigonish Strait Health Authority, Nova Scotia



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What can we do Nationally:

Develop a comprehensive, coordinated, cooperative and integrated Pan-Canadian Strategy on Health Literacy be developed, funded and implemented to improve the level of health literacy in Canada, and the extent to which people receive the support they need to cope with the health literacy demands they encounter (Expert Panel on Health Literacy, 2008).



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Goals of strategy:

1. To improve literacy and health literacy
2. To reduce inequities in literacy and health literacy
3. To enhance the capacity of individuals and the systems that serve and support them to improve their health literacy levels and to receive services that are appropriate for their current levels of health literacy



Promising Approaches :

- Develop and undertake a **coordinated multi-media campaign** to increase awareness of the issue of health literacy in Canada among the public and specific audiences
- **Integrate health literacy** into curricula from primary and secondary education through to adult education and seek resources for doing so from governments, the private sector and foundations
- **Set population-specific targets for health literacy, monitor and report progress**
- Make health literacy a **mandatory component of service provider curricula, professional continuing education, and professional registration and certification**
- **Develop policies** on use of plain/clear language and visual symbols in health communications, **guidelines and prototypes** including accreditation standards for health communications and interactions, and **undertake assessments/audits** of accessibility of service provision systems and institutions as well as **health services accreditation**.



Promising Approaches (Cont.):

- **Develop pertinent funding streams** to address health literacy research and programming
- Develop mechanisms to **coordinate federal, provincial and territorial and Aboriginal governments policy and program delivery** to promote health literacy across the life span
- Develop mechanisms to **evaluate health literacy interventions, allocate adequate funding, and disseminate the findings**
- Establish a multi-stakeholder **Pan-Canadian Council on Health Literacy** at arms length from government to monitor and assess progress, facilitate partnerships between organizations and provide strategic direction
- Develop a **parallel process** to the one undertaken in producing the Expert Panel report by **Aboriginal organizations and people**



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What could and should be done by a Health Authority?

- Commit to addressing literacy, particularly as it relates to health
- Establish Literacy and Health Committee
- Conduct audit of facilities, services and programs in terms of literacy and health literacy demands on public
- Examine health literacy maps and consider implications for action
- Implement and evaluate health literacy interventions
- Provide training opportunities for staff related health literacy
- Form stronger links with the literacy community
- Support the development of research on literacy and health and health literacy



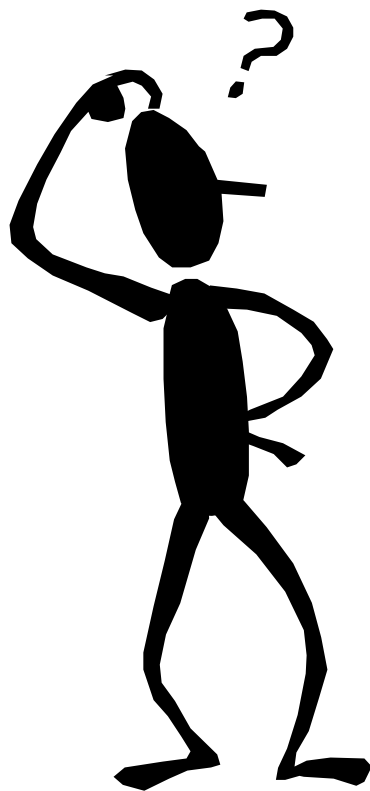
What can you do?

- Familiarize yourself with literature on health literacy and literacy and health including the CPHA Expert Panel report
- Advocate for and support the implementation of the recommendations of the Expert Panel report
- Support current initiatives on literacy and health and health literacy
- Educate yourself and others about the possible effects of literacy and health literacy on health
- Practice clear communication in all your work
- Advocate for attention to literacy and health literacy in your workplace
- Lobby your politicians to pay more attention to literacy and health literacy issues



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Some Resources:

Canadian Council on Learning website: ccl-cca.ca

National Literacy and Health Program:
www.cpha.ca



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