

# HEALTH AND LEARNING

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## Health Literacy and Public Health

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### Outline

- What is health literacy?
- How is it measured?
- Why is it an important issue for public health?
- What has its role been in public health?
- What else could and should public health do?
- What can you do?

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### **Definitions of Health Literacy:**

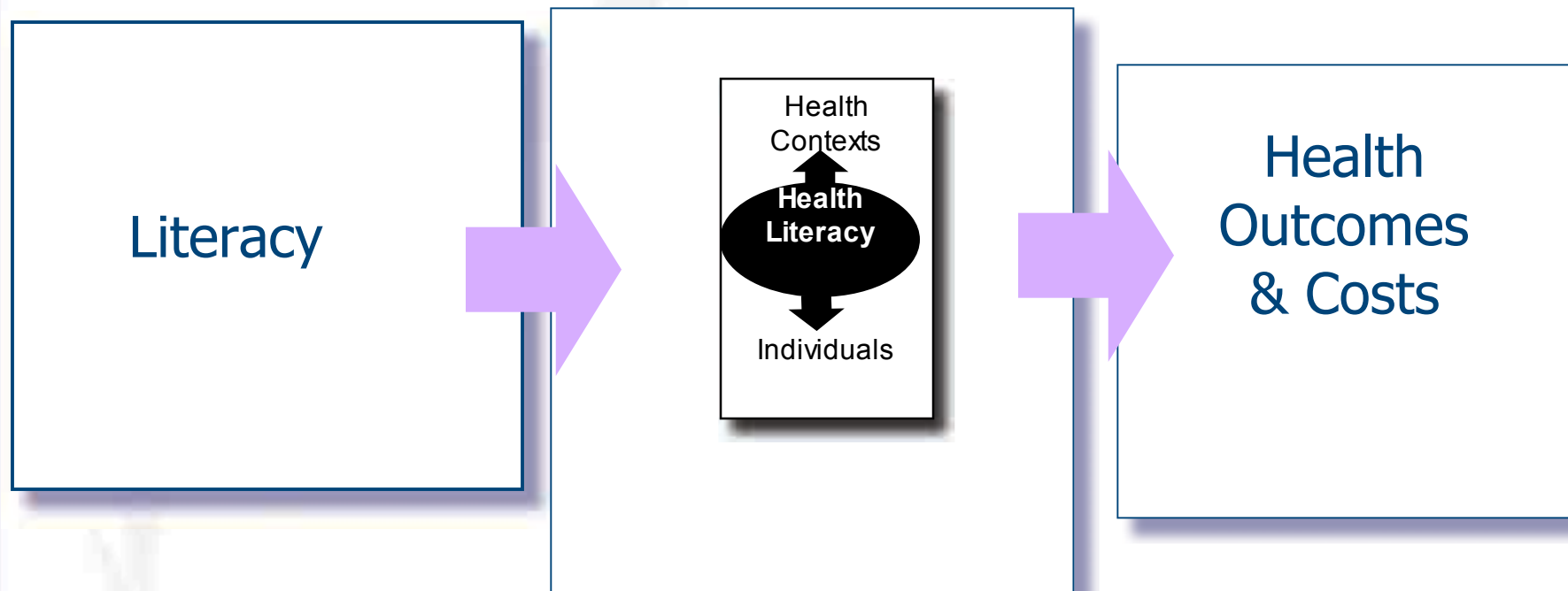
- Cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways which promote and maintain good health (Nutbeam, 1998)
- Ability to read and comprehend prescription bottles, appointment slips, and other essential health-related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

## **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)*



## **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)

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### **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

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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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### 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

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### **Strengths of HALS:**

- 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 and cross-national differences
- Goes beyond health care

## Why is HL important for Public Health?

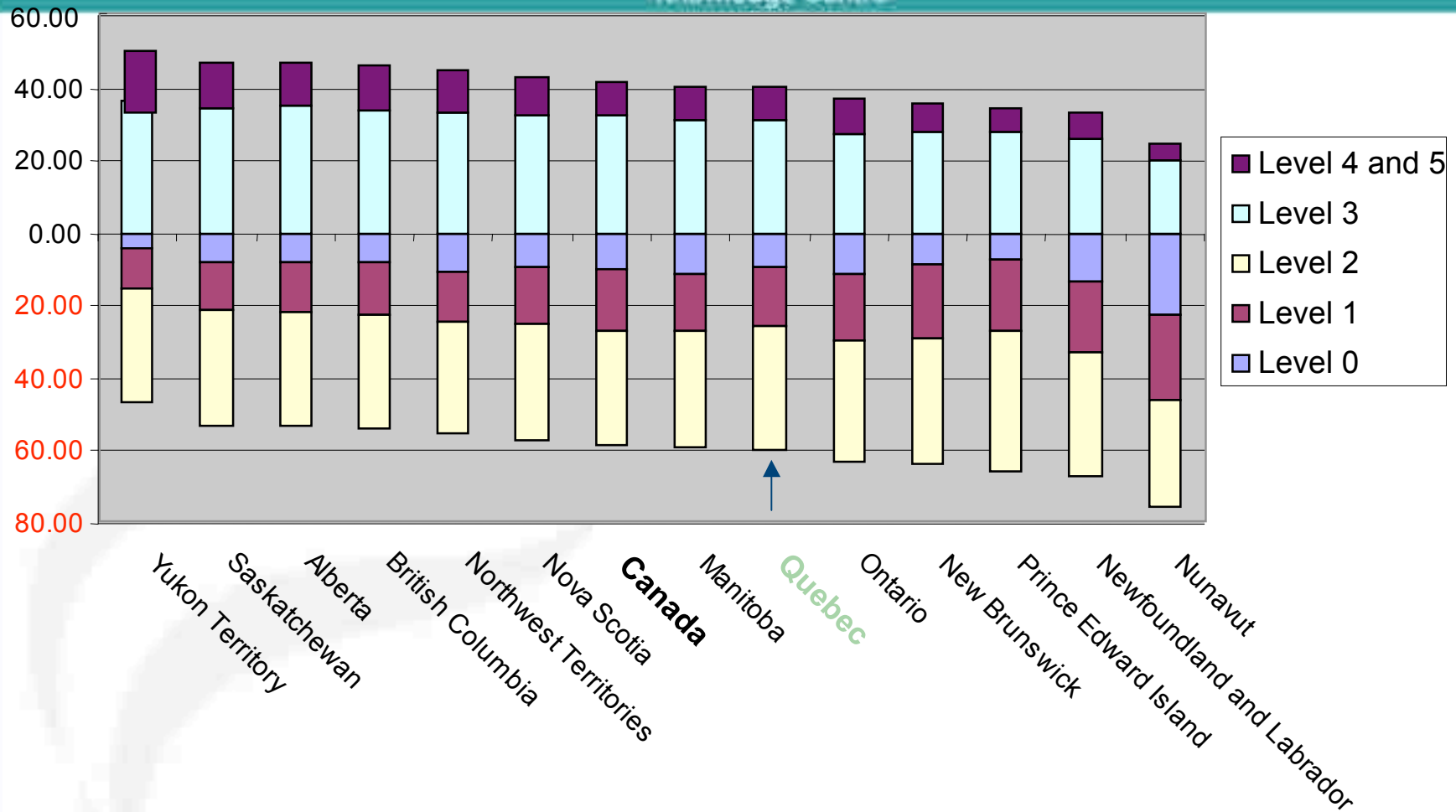
- Large numbers of people appear to have low levels of health literacy
- Lower health literacy appears to be related to poorer health outcomes
- Increasing rates of chronic disease will increase need for health literacy skills
- Lower health literacy appears to be related to higher health care costs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

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### 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).

**Level 3 is considered the minimum level of proficiency required to meet the demands of modern day life including those posed by health information**



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



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### **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)

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### **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 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

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### **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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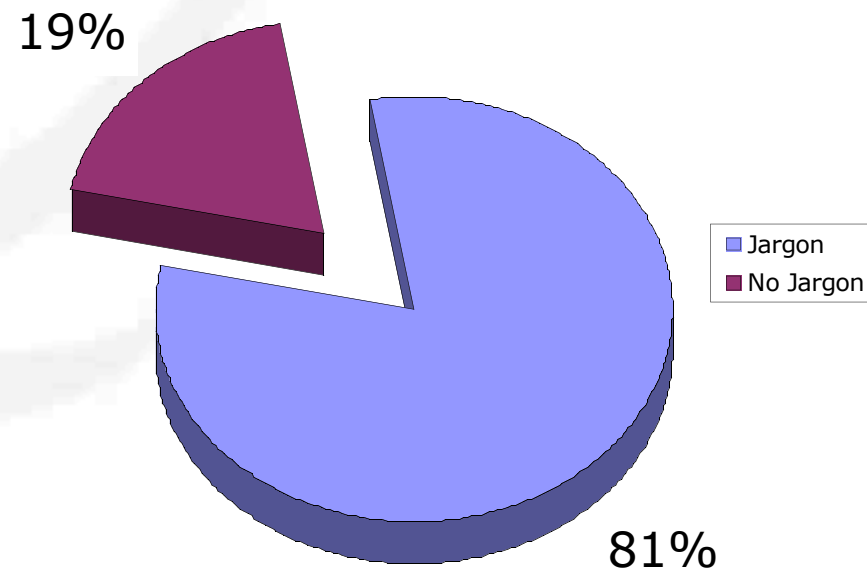
### **Demands of health information materials:**

- 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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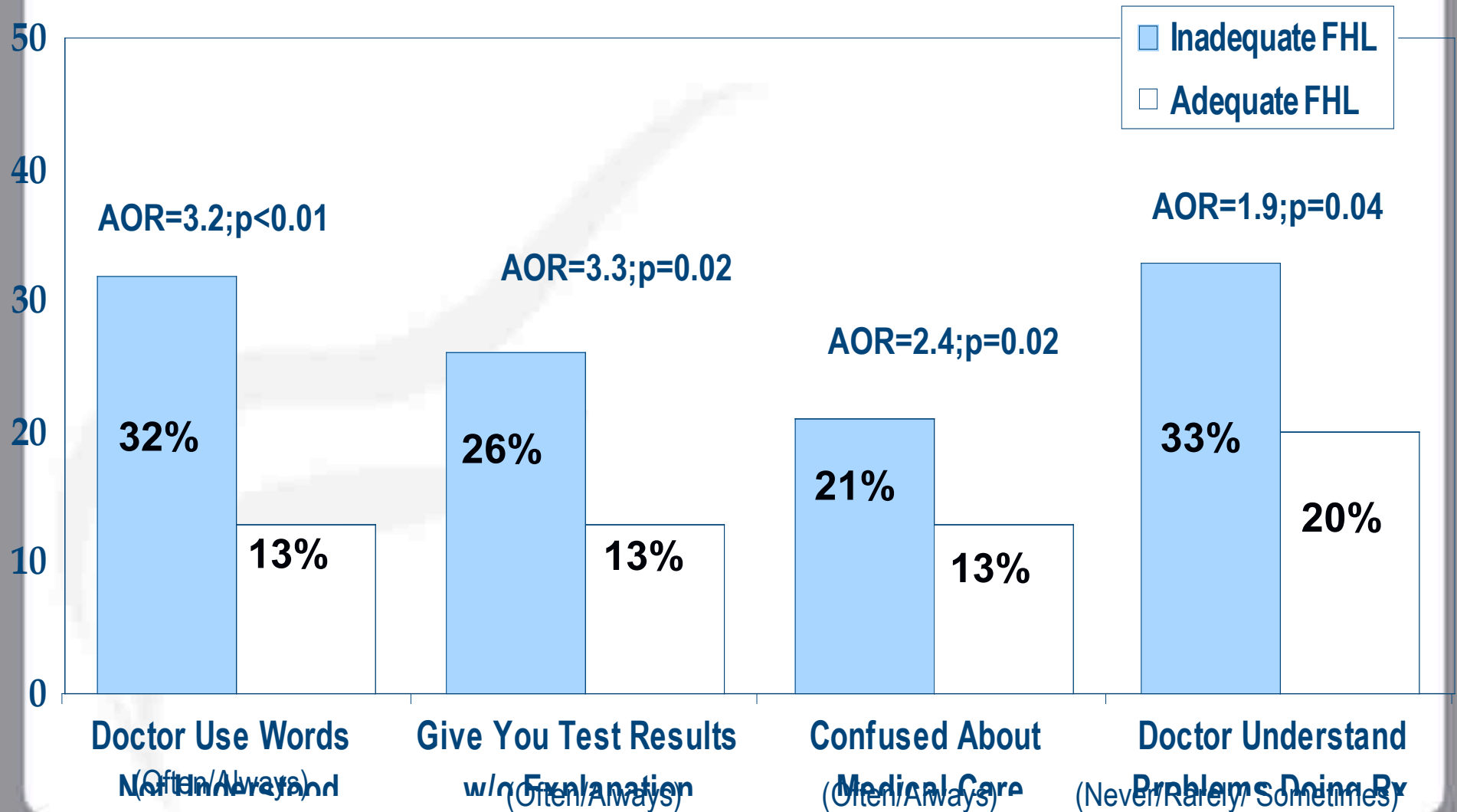
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### Jargon use in physician visits



Castro. et al., 2007

# Health Literacy and Oral Communication

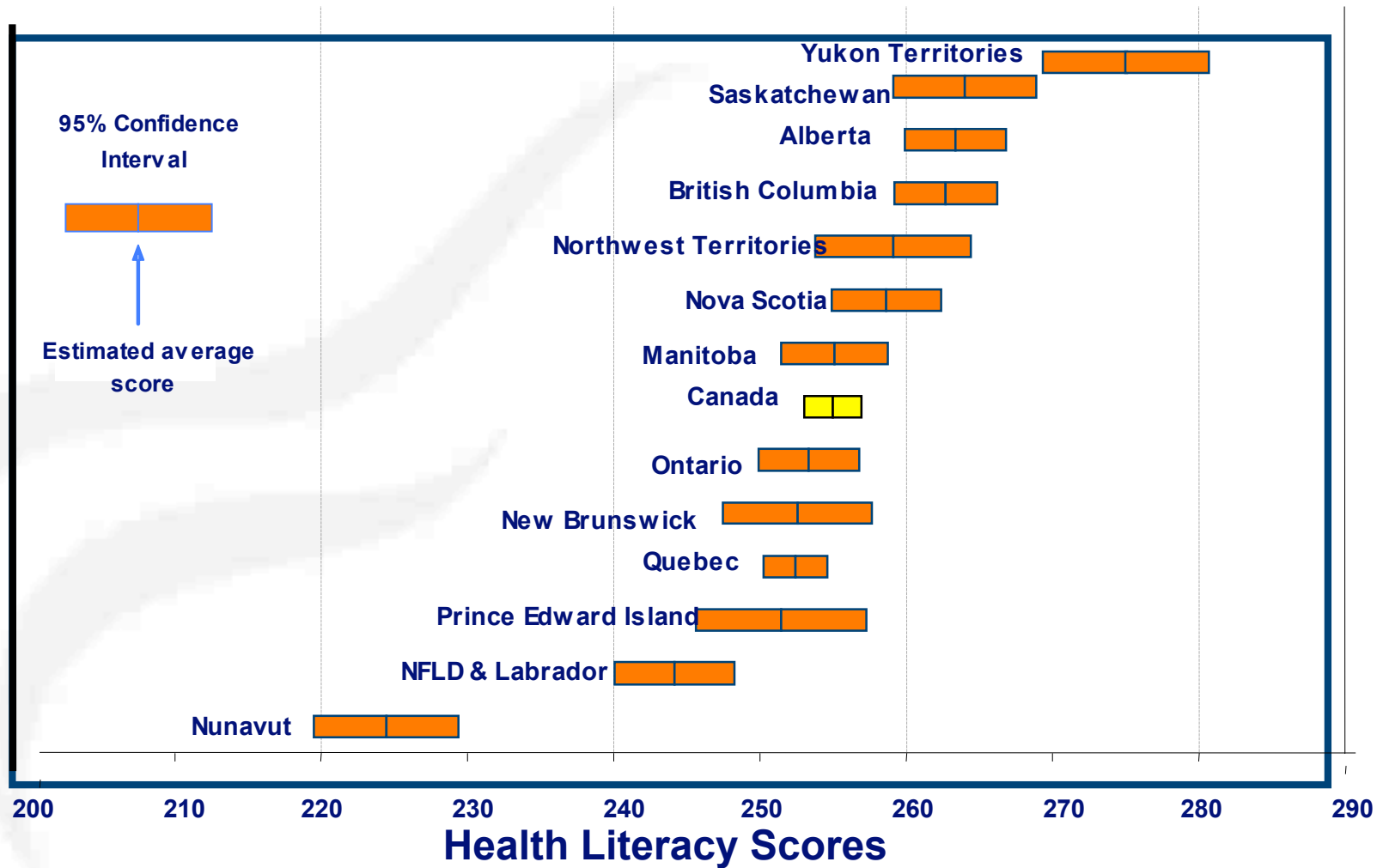


## **Low Health Literacy may be a reflection of Inequities in health:**

- Certain population groups appear to be more likely to experience lower levels of 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

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## **Role of Public Health in relation to Health Literacy 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)

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### **Current Canada-wide Initiatives:**

- CPHA Literacy and Health Program and resources
- 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 Knowledge Centre on Health and Learning
- CAPC and CPNP
- National PHAC Collaborating Centre on Determinants of Health

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### **Current Province-wide Initiatives:**

- Health Literacy Network (B.C.)
- Healthy Aboriginal Network (B.C.)
- Health Literacy Research Team (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:**

- 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

## **Recommendation of CPHA Expert Panel on Health Literacy:**

*That 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's Vision of a Health Literate Canada:**

*All people in Canada have the capacity, opportunities and support they need to obtain and use health information effectively, to act as informed partners in the care of themselves, their families and communities, and to manage interactions in a variety of settings that affect health and well-being.*

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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, including citizens, patients and their advocates, providers, researchers and communities to provide opportunities for Canadians to improve their health literacy levels.

## What could and should be done by public health?

- Commit to addressing literacy, particularly as it relates to health
- Form stronger links with the literacy community
- Support the development of research on literacy and health and health literacy
- Advocate for more attention to health literacy and literacy by politicians and others
- Audit operations in terms of literacy demands and address the issues that arise
- Implement and evaluate health literacy interventions

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### 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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### **Looking to the future:**

Fall 2007:

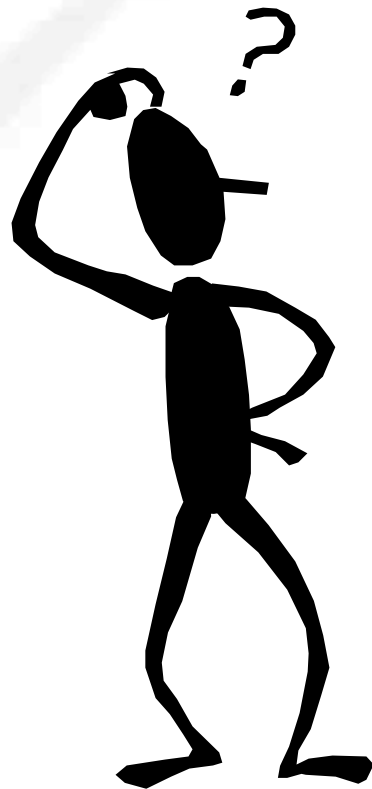
- Interactive web-based health literacy maps and data

Early 2008:

- Symposium on health literacy
- Release of Expert Panel report on health literacy
- Release of comprehensive report by Canadian Council on Learning providing further analysis from IALSS

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