How Does Literacy Affect the Health of Canadians?

A Profile paper

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Ce document est aussi offert en français sous le titre:
“Effets du niveau d’alphabétisme sur la santé des Canadiens et des Canadiennes — Étude de profil”

Cat. H39-444/1998E
ISBN: 0-662-27114-9

How Does Literacy Affect the Health of Canadians?

A Profile Paper

Presented to:
Policy Development and Coordination Division
Health Promotion and Programs Branch
Health Canada

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31 March 1998

Table of Contents

1. Introduction: Why Should the Health Field be Concerned about Literacy?

Literacy is a major variable influencing health in a variety of ways. This paper discusses the significant health impacts of literacy. It identifies why literacy is a health issue and thus is relevant to Health Canada and to its mandate: “helping the people of Canada maintain and improve their health”. The paper touches upon some of the mechanisms by which literacy affects health, and suggests some of the ways in which the health field can respond.

The primary purpose of this paper is to heighten awareness within Health Canada about the importance of literacy in relation to health. It is intended to serve as a resource paper, for use by Health Canada’s partners and collaborators. This paper may serve as a tool to stimulate collaborative action with respect to planning, policy and program development.

This paper starts with a brief consideration of the actual literacy skills of Canadians. It then reviews the evidence which indicates the strong impact of literacy on health, no matter how health is defined or measured. The paper considers the mechanisms by which literacy affects health, pointing out that this is through a combination of both direct and especially indirect means. The paper indicates that literacy is closely related with other determinants of health which have been identified.

Finally, the paper provides some ideas about what the health field can do to address the issues of the impact of literacy on health. It suggests some action steps, as well as areas in which further research could be useful.

2. The Literacy Situation in Canada

A. What is Literacy?

Literacy is more than the ability to decode words. Indeed, as the summary to the Second Report of the International Adult Literacy Survey (IALS): *Literacy Skills for the Knowledge Society*(1) indicates: "Literacy means more than knowing how to read, write or calculate. It involves understanding and being able to use the information required to function effectively."

This has some important implications:

- Literacy is a moving target. As the Second IALS Report indicates: "While most people can read, the real question is whether their reading and writing skills meet the challenge of living and working in today's . . . society." As the demands of society change, so do the necessary literacy skills required to function.

- Literacy involves comprehension and understanding — not only of the written word, but also of the spoken word. Literacy, for example, is a key factor in the ability to understand and to be able to act upon verbal directions from health professionals, e.g. doctors, pharmacists, physiotherapists and others.

- Literacy skills enhance flexibility. They enable people to deal with change and with unfamiliar contexts.

As we shall see later, these factors are all closely related to health.

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1 Published by the National Literacy Secretariat, Human Resources Development Canada and the Organisation for Economic Cooperation and Development, 1997.

B. The Current Status of Literacy in Canada

The most recent information about literacy in Canada comes from the IALS survey, carried out in Canada and in a number of other countries in 1994-95. Statistics Canada, in cooperation with the National Literacy Secretariat (NLS), Human Resources Development Canada, was responsible for coordination of the survey in Canada and preparation of reports describing the findings.

IALS determined literacy skills by using real examples drawn from everyday life of varying complexity, for example presenting a copy of an actual medicine label, a bus schedule, and various examples of instructions, forms and charts (e.g. a weather chart from a newspaper) one encounters in real life.

About 22 percent of adult Canadians fall into the lowest level of literacy(2). For example, they are unable to look at a medicine label and determine the correct amount of medicine to give to a child. Individuals at this level are limited in their ability to deal with much of the written material they would encounter in everyday life.

A further 26 percent are at Level 2. Individuals at this level can read. But they can only deal with material that is simple, clearly laid out, and in familiar contexts. They would have difficulty understanding information which is more complex or in a context different from what they are familiar with.

Thus nearly half of Canadians have difficulty with reading materials encountered in everyday life. They avoid reading except for materials which are relatively simple and familiar to them.

The IALS results indicate a close relationship between education and literacy. In general, the higher the level of educational attainment, the higher the literacy level. But as the IALS Canadian report(3) indicates: "The connection between educational attainment and literacy levels, while strong, is not exclusive. Many individuals — one third of the population in fact — do not fit the general pattern."

This means that for policy, planning and research purposes, level of education can be used as a proxy for literacy, as in some of the evidence referred to in the following sections of this paper. But with respect to individuals, their actual literacy may be greater — or less — than their level of education might suggest.

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2 Figures cited are for "prose literacy" — the ability to understand and to use information from texts. IALS also considered "document literacy" (use of information from documents such as job applications) and "quantitative literacy" (use of arithmetic, for example in completing an order form). Findings for the three types of literacy are very similar.

3 Reading the Future: A Portrait of Literacy in Canada. Statistics Canada and HRDC, NLS. 1996

IALS has also identified a number of subgroup differences. In particular, it indicates that the literacy levels of older adults are dramatically lower than for others. For prose literacy among adults over age 65, 53 percent are at Level 1, with an additional 27 percent at Level 2. Just 19 percent have the minimum skills considered necessary to fully function.

As the IALS Canadian report indicates: "The consequences of low literacy for Canadian seniors have been explored in a variety of studies. Seniors with low literacy skills are restricted in their activities and often depend on others to cope with the literacy activities of daily living." This means that many older adults are limited in their ability to understand information about health and to use health care services.(4)

Following are some major implications of the International Adult Literacy Survey (IALS) findings about literacy levels among Canadians:

- Literacy is not either-or, but represents a continuum of different skill levels. Very few people are completely unable to read or write anything. But a very high proportion — nearly half of adult Canadians — have literacy skills which are sufficiently limited to affect their ability to function in society. These people are especially vulnerable to changes in circumstances or contexts, such as changes in their job requirements or employment situation.

- Prior knowledge and the familiarity of the context has an important impact on the ability of people to understand written and oral information. This means, for example, that the ability to understand health communications can depend in part on one's previous acquaintance with the topic and the extent to which the information is related to what one already knows.

- The above findings are not well recognized or accepted by the public at large, by health professionals — and by individuals about their own literacy skills. Among Canadians with low literacy skills, only a small proportion acknowledge this limitation or go on to participate in literacy or adult upgrading courses.

4 NLS recently has commissioned a monograph from the University of Regina, which will use the IALS database for a more in-depth look at the impact of literacy levels on the socio-economic status and health of older adults.

3. Literacy and Health Status

The most extensive Canadian research study exploring the connection between literacy and health was carried out as part of a project cosponsored by the Ontario Public Health Association and Frontier College (the "OPHA research study").(5) This report contains numerous citations to the research literature and other sources, and also presents the findings of original research. It forms the basis for much of this present paper. As well, the more recent information reviewed and used for the completion of this paper is consistent with the picture presented in the 1989 OPHA research study.

The major finding of the OPHA research study was that low literacy levels have a major negative impact on health. In fact, literacy is one of the major influences of health status. However health is defined or measured, people with limited literacy skills are worse off than others with higher literacy skills. Literacy is a major factor underlying most other determinants of health.

Evidence for these conclusions comes from many different types and sources of information. There is extensive Canadian data, confirmed by reported findings from other jurisdictions.(6) Canada is fortunate to have carried out a number of extensive surveys examining the health of its population. For example, the National Population Health Survey was carried out by Statistics Canada in 1994-95 (findings presented in the *Report on the Health of Canadians*, 1996, and its companion *Technical Appendix*(7)). This survey — and its findings about the influence of literacy or education on health — is similar to earlier Health Promotion Surveys in 1985 and 1990.

There are also a number of other national and provincial databases. Data also comes from a variety of other sources reported in the literature. A very consistent pattern arises from all sources of information. These "hard" sources of data are confirmed by "soft" evidence, such as reports of health and literacy workers.

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5 Burt Perrin. Research Report: Literacy and Health Project Phase One. Toronto: Ontario Public Health Association (OPHA). 1990. Report available from the OPHA for $10.00 (468 Queen St. East, Suite 202, Toronto, Ontario M5A 1T7; (416) 367-3313; opha@web.net). A summary of the above report can be found in: Burt Perrin. Literacy and Health: Making the Connection." Health Promotion. Vol. 28, No. 1. Summer, 1989.

6 Canada has been recognized internationally for its extensive research and other activities in the health and literacy area. The Appendix to this report provides examples of some of the activities which have been undertaken in Canada.

7 Report on the Health of Canadians and Report of the Health of Canadians - Technical Appendix, prepared by the Federal, Provincial and Territorial Advisory Committee on Population Health for the Meeting of the Ministers of Health, September 1996. Health Canada 1996.

One of the most commonly used indicators of health is *self-rated health status*. As the technical appendix to the *Report on the Health of Canadians* indicates: "Self-rated health status is a good predictor of the presence of more 'objectively' measured health problems as well as health care utilization." The report indicates a close relationship between the amount of education and self-rated health: 19 percent of Canadians with less than high school education rated their health as "excellent", compared to 23 percent who have completed high school, 27 percent of college graduates and 39 percent of university graduates.

Another commonly used behavioural measure of health is long-term activity limitation at home, work or school. 23 percent of people who have not completed high school reported an activity limitation. This compares with 19 percent of high school and college graduates, and 15 percent of university graduates. Much the same pattern is found with respect to *short-term activity limitations*. University graduates report only about three quarters as many disability days as those who have not finished high school.

The above are merely examples. For example, the *Report on the Health of Canadians* indicates that education is negatively associated with poorer health, whether the measures used are subjective (such at self reported health), behavioural (e.g. activity limitation), or objective (e.g. high blood pressure and the presence of other risk factors, or the presence of disease). As discussed in the OPHA research study, these findings are strongly supported in the literature. Low literacy is also generally associated with greater use of health care services.

Indeed, as the OPHA research study indicates, many different sources of information have repeatedly documented the negative effect of low literacy on virtually *all* aspects of health, including overall levels of morbidity and mortality, accidents, and a wide range of diseases, e.g., diabetes, cardiovascular disease, and rheumatoid arthritis.

A 1997 report from Manitoba(8) summarizes findings about literacy and health in that province. Since the 1970s, the Manitoba Centre for Health Policy and Evaluation at the Faculty of Medicine of the University of Manitoba has been assessing health status and health care utilization in the province, through analyses using the provincial medicare databank, considered one of the most reliable in North America.

Recently, the Centre superimposed literacy levels from the 1991 Canada Census on the health regions of Manitoba. These analyses indicated that "the lowest education levels and the poorest health are co-existent in the same region" (Sarginson). They demonstrate that instances of disease and epidemics and violent death are more prevalent in areas with low levels of literacy. Hospital usage by children is also highest in communities with low levels of literacy.

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8 Rob Sarginson. Literacy and Health: A Manitoba Perspective. Literacy

Many other factors in addition to low literacy are also associated with poor health, such as age, income and environmental factors. A variety of epidemiological and multivariate studies have explored these inter-relationships in a variety of ways. For example, re-analyses of Statistics Canada surveys and the Quebec Health Survey have found that, even when adjusting for age, the effects of limited education on health status persist for virtually every measure of health examined.

The effects of literacy, income, poverty and health are related and interdependent in a number of ways. For example, children who go to school hungry may have difficulties in concentrating, which can impair their ability to develop literacy skills. But given that low income and poverty to a large extent result from low literacy, so do the health problems associated with it. As the OPHA research study indicates:

"A number of statistical analyses which have controlled separately for the effects of education and of income indicate that while both are associated with ill health, *lack of education is the predominant factor*." (emphasis in original)

For example, an unpublished re-analysis of data from the 1985 Health Promotion Survey found that while, initially, there appeared to be a strong relation between income and self-reported health, the income differences disappeared totally when this was controlled for education. In other words, the apparent effects of income on self-reported health in this survey were actually a result of education/literacy.

These findings should not be surprising. The impact of literacy and education on employability has been very well documented. For example, IALS has demonstrated the strong impact of literacy skills on employment — and on income. This effect is more pronounced in Canada than in a number of other countries involved in this study, such as Germany and the Netherlands. As the IALS Canadian report indicates, the increased importance of literacy in Canada is a reflection of the nature of the Canadian labour force, which places a greater premium on skill than is the case in some other countries.

4. How Does Literacy Affect Health?

Literacy affects health through a combination of both direct and especially indirect means. Let us first consider the direct effects.

A. Direct Effects of Literacy on Health

As indicated earlier, a large proportion of Canadian adults have difficulty understanding the directions on medication labels. Close to half have difficulty understanding complex materials. Thus it is hardly surprising that failure to understand information about medications, health practices, and safety risks can result in health problems.

There is limited documentation in the published research literature about the direct effects of literacy on health. But the survey and case studies carried out as part of the OPHA research study identified numerous examples of health problems, often severe enough to require hospitalization, directly arising from literacy difficulties. Since then, the National Literacy and Health Program of the Canadian Public Health Association (CPHA), the Ontario Literacy Coalition (OLC), the Manitoba research effort, and a variety of literacy and health groups across Canada have identified numerous other instances. Examples follow:

Incorrect use of medications. Nearly half the respondents to the survey of the OPHA research study provided illustrations of errors in the use of over-the-counter and prescription medications as a result of literacy difficulties. CPHA says that "there are hundreds of stories of people who failed to respond to prescription drug treatment because they took the incorrect dose at the wrong time of day." The OLC cites the following example of a woman with diabetes:

"...She needs to follow a restricted diet and take several medications prescribed by her family physician at regular intervals each day. But [she] is unable to read food labels or the instructions that come with her prescription medicines. [Her] literacy problems are a hazard to her health!"

Failure to comply with medical directions. The OPHA study identified a number of examples of persons who would not comply with medical direction, due to an inability to read written instructions or because verbal instructions were not presented in a way in which they could be understood. Literacy can impede the ability to understand the risks of medical procedures. A recent court ruling in British Columbia indicated that a written consent form, presented in technical language, did not meet the requirements for informed consent.(9)

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9 MD's failure to use plain language can lead to the courtroom, by Deborah Gordon, Canadian Medical Association Journal 15 Oct. 1996; 155(8) [Carpenter v. Finch. 1993].

Errors in administration of infant formula. The OPHA research study identified a number of instances reported by public health nurses where infant formula was misused, placing babies at risk. For example, a number of nurses reported that some mothers were not diluting concentrated formulas, and others were diluting ready-to-feed formulas.

Safety risks in the workplace, the community and at home. The Manitoba review of literacy and health indicated that: "Difficulty comprehending precautions on farm and recreational machinery such as all-terrain vehicles, watersleds, snowmobiles and farm equipment of all sorts, makes rural life more dangerous." A report of the Ontario Advisory Council on Occupational Health and Safety cited a number of cases where literacy difficulties resulted in accidents, including inability to understand safety instructions when handling chemicals and "a pictorial instruction material demonstrating 'how not to' carry out a task was interpreted as a 'how to' instruction and the result was an increase in accidents."

B. Indirect Effects

As significant and dramatic as these direct effects may be, a striking finding from the research is that the major impacts of literacy on health occur indirectly. The relationship between literacy and a range of factors which, in turn, are known to have major impacts on people's health, has been extensively documented.

The Federal/Provincial/Territorial Advisory Committee on Population Health, in its 1994 Health Canada report, Strategies for Population Health - Investing in the Health of Canadians, has identified five major determinants of health:

- Living and Working Conditions
- Personal Health Practices and Coping Skills
- Physical Environment
- Health Services
- Biology and Genetic Endowment

Of these, "Biology and Genetic Endowment" is the only one which is not affected, at least to some degree, by literacy. We provide examples below of the role of literacy in influencing and interacting with the remaining four determinants of health.

Living and Working Conditions

Literacy and poverty. There has been considerable research, in Canada and internationally, demonstrating the links between poverty and ill health. In turn, while education and literacy are not the only reasons for poverty, there is extensive documentation indicating that they are the major factors. For example, as discussed earlier, literacy is a critical determinant of employability. It is closely related to employment, and in turn to income.

The IALS Canadian report indicated that: "Social assistance recipients demonstrate markedly lower literacy skills than either Unemployment Insurance beneficiaries or the general

population." *The Report of the (Ontario) Social Assistance Review Committee* (1988) identified low literacy as the major problem preventing recipients from entering the labour force and stated: "The importance of literacy programs as a vehicle to help recipients become more self-reliant cannot be underestimated."

Just as lack of literacy skills is a major cause of poverty, literacy is a basic prerequisite for escaping from poverty. Shifts in the job market make it increasingly difficult for people with limited literacy skills to obtain any form of employment, let alone jobs which pay enough to permit a person to live about the poverty line. In addition, many training programs have educational prerequisites of grade 10, 11 or 12.

Dangerous environments. Workers with limited literacy skills have a higher than average rate of occupational injuries. This appears to be mainly because the types of jobs generally open to them — in the primary, resource and construction industries, for example, are more likely to be dangerous. In addition, because information about occupational health and safety frequently is not understandable to people with limited literacy skills, they are less likely to be aware of the existence of dangers in the workplace. And even if workers with limited literacy skills are aware of workplace risks and their rights, they are unlikely to be in a position to assert their rights, due to limited advocacy skills and the lack of "job purchasing power".

Home environments and neighbourhoods also tend to be more dangerous for people whose literacy skills are limited. They are more likely to live in low quality housing and in unsafe areas, with higher rates of pollution and environmental hazards, traffic, crime and other factors. They are less likely than others to be in a position to install various safety features (e.g. general repairs, installation of smoke detectors) in their homes. For these and other reasons, accidents are more common.

Personal Health Practices and Coping Skills

Stress, vulnerability, and control. People with limited literacy skills tend to be under a higher degree of stress than those with higher skill levels. They are more likely to have limited self confidence and to feel vulnerable. This feeling of vulnerability, given the limited range of choices open to them, is based in reality.

Coping with the literacy demands of society, for someone whose literacy skills are limited, is a stressor in its own right. And low literacy results in high stress through indirect means as well. The OPHA research study cites evidence documenting that unemployment, under-employment and poverty, coping with unsafe and insecure living and working conditions, and dealing with the uncertainly and lack of control over one's life are very stressful. People living in such conditions not only encounter more stressful events; they have fewer resources to be able to cope with stressful situations when these do occur.

Stress has been recognized as a major health problem in its own right. For example, stress is a major factor in depression, anxiety, and other mental health problems. It also leads directly to the subsequent occurrence of illness and diseases of all sorts.

As noted earlier, literacy skills increase adaptability and flexibility in being able to cope with change. And change is the watchword of the day — for example with fewer and fewer jobs for life and the demands of most existing jobs changing dramatically. Many people, for example at IALS Level 2, can read, but only simple materials in familiar contexts. As long as their environment remains stationary, they frequently can function very well. But they are at a severe disadvantage when their environment changes — which it is doing at an accelerating rate. As a result, they are likely to suffer from both material changes (e.g. losing a job) as well as increased stress. All these factors have been shown to have a major negative impact on health.

Healthy lifestyle practices. There is substantial evidence — from Canada's major surveys of health status as well as from numerous other sources — that literacy is closely related to healthy lifestyle practices. People with low literacy are more likely than others to take part in a wide range of unhealthy lifestyle practices, such as: smoking, poor nutrition, infrequent physical activity, lack of seatbelt use or wearing of bicycle helmets, less prevalence of breast feeding (where applicable), less likely to ever have had a blood pressure check, and (among women) less likely to practice breast self examination and to obtain pap smears.

The above findings have been found, consistently, in Canadian surveys of healthy lifestyles, as well as other sources of information in Canada and elsewhere. People with limited literacy are also less likely to be aware of the importance of healthy lifestyle practices.

Indeed, as *The Report on the Health of Canadians* indicates, about the only major risk factors where people with limited literacy are not worse off is with respect to drinking. People with higher levels of education drink more in total, and are more likely to drink to excess and to drive after drinking.

Don't Blame the Victim

One should be careful not to blame people with limited literacy for their lifestyle and health practices. Low literacy limits opportunities, resources, and the control which people have over their lives. As a result, people with low literacy have limited opportunity to make informed choices about their own lifestyle.

Physical Environment

The physical environment itself may be unrelated to literacy. But literacy skills give people the ability, to some extent, to choose the physical environment where they live and work, to make changes and to take steps to protect themselves from potential hazards. People with limited literacy have less control and less ability to escape from a dangerous or unhealthy situation. For example, they are more likely than others to be living in a poor neighbourhood and in poor quality housing. They also have less power and the ability than people with more advanced literacy abilities to be able to advocate effectively on behalf of a healthy environment — and a healthy community.

Health Services

Literacy directly influences the ability of people to be able to access and to make effective use of the health care system.

Health information. People with low literacy skills have limited access to health information, including both written and verbal information. Much available information about health — both from health organizations and practitioners as well as from other sources, such as the media — is in written form and hence difficult or impossible for many people to understand. The printed word is not a preferred or credible source of information for many people, who tend to obtain their information about health via word of mouth.

As indicated earlier, literacy involves understanding and comprehension. People with limited literacy skills also tend to have limited prior knowledge of health and health concepts and terminology. As a result, there is ample evidence that even verbal information, from health care practitioners or others, is frequently not understood.

As a result — due to difficulties in understanding written health information, lack of information available in appropriate and trusted media, and verbal information which is not presented understandably — it is hardly surprising that many people with low literacy have a limited understanding of health issues, and often considerable misinformation.

Inappropriate use of medical and health services. Many people with limited literacy skills do not know where to go for the health services they need. Lack of information, fear of embarrassment, low self confidence and limited resources often result in people with low literacy neglecting preventative care, failing to assert themselves, and waiting to seek medical help until a health problem has reached a crisis state.

Literacy is directly related to appropriate use of health services, including use and misuse of emergency care and compliance with medical directions. For these and other reasons (in particular, the higher rates of health problems as discussed earlier), people with limited literacy skills tend to cost the health care system more than do others. In other words, not only does low literacy adversely affect individuals — it is more costly to the health care system and to society.

5. What Can the Health Field Do to Address the Issue of the Impact of Literacy on Health?

A. Acknowledge the Critical Importance of Literacy to Health

As this paper has indicated, literacy is a major health issue. Literacy is an important factor in its own right, and closely related to practically all the major determinants of health which have been identified.

There is increasing recognition within the health sector of the importance of literacy. Over the past several years, a variety of different types of health organizations have formally recognized the connection of literacy to health, and have pointed this out to their members. The Ontario Public Health Association (OPHA), the Canadian Public Health Association (CPHA), the Centre for Literacy of Quebec and others have all undertaken activities to increase awareness and joint action. Thus some initial steps have been taken. But the links between literacy and health and the implications of this connection still are not well understood. Thus there is a need to increase awareness, across the health and social services sectors as well as among members of the general public and societal opinion leaders.

Recognition is needed at a broader societal level. But it is also important that service providers be sensitive to the importance of literacy and create a respectful environment when dealing with individuals, families, and groups. Few people will readily acknowledge that they have a problem in reading or in understanding what they are being told. To do so would require them to declare their own inadequacies or limitations.

When health practitioners are sensitive to the potential role of literacy in comprehension, they are more likely to check that what they are saying is indeed being understood and to use simpler or alternative explanations as necessary to ensure that their message actually is being received. As the OPHA research study indicates, a number of medical practitioners have indicated that they eventually came to realize that what they initially thought was lack of compliance by their patients was instead a lack of understanding.

B. Place More Emphasis on Enabling People to Improve their Literacy Skills

Given the impact of literacy on health, the health sector has a direct interest in seeing that both children and adults learn to read, and upgrade their skills. There are opportunities for partnerships: with the schools, to identify ways in which youth can be assisted in staying in school, and to learn as much as possible when they are in attendance; and with adult education and literacy organizations, which are assisting adults improve to their literacy skills.

Family or inter-generational literacy could be a priority area. Family literacy programs attempt to address many of the systemic difficulties keeping young people from developing their literacy

skills, and to break the cycle whereby children who come from literacy-poor environments have a challenging time in being able to develop their own skills. Because literacy interacts with so many other factors, family literacy programs need to take a holistic approach.

Health Canada's Aboriginal Head Start initiative is one such example. The aim of the initiative is to prepare young Aboriginal children for their school years, by meeting their emotional, social, health, nutritional and psychological needs. The program is comprehensive in nature, designed to meet the spiritual, emotional, intellectual and physical needs of the child. It recognizes parents and guardians as the primary teachers and caregivers of their children, while also acknowledging and supporting extended families in teaching and caring for children.

C. Develop Partnerships between Health and Literacy Organizations

As this paper has indicated, literacy is one of the most important factors influencing health status. It interacts with most other determinants of health. Most solutions, however, to the health problems resulting from low literacy require a multi-faceted approach or are not directly under the control of the health sector. This suggests the need for health practitioners to work together in partnership with others, particularly with literacy and educational organizations. A variety of forms of partnerships can take place at all levels. For example:

- At the *local* level, public health and community health centres in some situations have worked together with community literacy organizations or with schools, in jointly identifying and implementing approaches which build upon the strengths and needs of the people involved.

- At the *national or provincial level*, health and literacy organizations similarly can work cooperatively. For example, the OPHA/Frontier College *Literacy and Health Project*, which included the research study identifying the links between literacy and health and also acted to increase awareness and to stimulate various collaborative activities, itself represents an important partnership between the health and literacy sectors. CPHA's National Literacy and Health Program facilitates links between literacy groups and its 26 partner organizations, which include health professions such as optometry, palliative and home care, nursing, and associations of pharmacists, pharmaceutical manufacturers and others.

- Within the federal and provincial *governments*, as well as at the regional/municipal level, there are opportunities for inter-departmental and inter-governmental liaison and collaboration. For example, there are opportunities for Health Canada and the National Literacy Secretariat to work together in exploring and supporting ways of addressing issues related to literacy and health.

Plain Language: A Useful Step but Not "The Answer"

Presenting written health information in easy-to-read, rather than complex, technical language, is undoubtedly a useful step. Many people who have difficulty understanding complex language can understand materials which are presented simply and in familiar contexts.

But plain language is not the primary solution to addressing the health difficulties associated with literacy. As the CPHA has indicated, "written information should be secondary to verbal communication and should only supplement the exchange between physician and patient. Personal contact is the best way to ensure that patients have understood a message."

One of the major needs arising from the research — as well as from the experiences of community groups — is the need to make health information available other than via the written word. Some people may not view written information as credible and prefer to obtain their health information through other means. This includes many people who can read but who prefer not to.

Also, many adults, particularly with low literacy skills, feel powerless to make changes in their lives. Health information alone is not sufficient. It needs to be combined with a variety of enabling strategies in order to effect change.

D. Emphasize Alternative Forms of Health Communications

There is a major need for alternative ways of enabling people to obtain health information other than through written means.

More effective verbal communications. A common complaint of many people, including people with high literacy skills, is that health professionals do not talk to them in a way which they can understand.

Rather than putting responsibility for clear communications upon the individual, it would seem appropriate for health practitioners to take responsibility for checking to make sure that what they are saying is understood by their patients and clients. This will benefit all Canadians, including individuals with low literacy.

Community development approaches. Most people, especially people with low literacy, get most of their health information through word of mouth. Health "experts" are not always seen as credible.

Rather than view this as a barrier to effective health communications, why not approach it as an opportunity? This requires a somewhat different role for many health professionals. Rather than viewing their role as providing health information directly, they need to act as facilitators, and to work in partnership with others in the community.

This involves tapping into existing community networks, such as peer groups, respected neighbourhood contacts or "seers", and others who are in contact with and respected by people who have difficulty connecting with traditional health systems and resources. Social support networks are also critical to health.

Participatory health education. A variety of literacy and public health programs, on occasion, have enabled low-income, low-literacy individuals to actively explore health issues of concern to them. Health professionals may take part, not as experts but as part of a group which includes people with various life experiences and levels of education. Participatory approaches can enable individuals not only to learn the facts, but also to become more confident and to identify ways in which they can take more control over their lives. In many cases, they then go on to teach what they have learned to others, sometimes including to people with more formal education than themselves.

E. Make It Possible for People with Limited Literacy Skills to Have More Control Over Their Lives

Many people with limited literacy skills, as a result of difficulties in reading, poverty, and other factors, feel powerless to make changes in their lives. They feel helpless in the face of an unwelcoming health care system which they do not understand. As a result, they do not feel in a position to do anything which can affect their own health.

Health information alone will not be useful to people who do not feel they have the power to act. Other complementary strategies are needed, such as community development and participatory health education as mentioned above. The health care system also needs to acknowledge the lack of power which many people feel, and to explore ways in which it can assist people in taking more control over their lives and their health.

F. Approach Literacy from a Population Health Perspective

As this paper has indicated, literacy is a continuum. And nearly half of all Canadians do not have the literacy skills which are sufficient to deal with all the situations they are likely to encounter. Thus a population health perspective needs to give significant consideration to literacy issues.

Furthermore, addressing the needs of Canadians with low literacy also means addressing the needs of *all* Canadians. For example, it is difficult for most people, irrespective of their degree of education, to understand much of the available information about health. Information which is complicated or difficult to follow is less likely to be understand or acted upon, regardless of literacy level.

Similarly, two-way communications, where health professionals check to see whether or not people understand what they are saying, will benefit *everyone*, irrespective of literacy level. The same applies to providing greater opportunities for people to exert power and to make informed choices about issues affecting their own personal health, as well as the health of their communities. Action which addresses other determinants of health, such as structural impediments to healthy lifestyle environments and practices, will also be of benefit to everyone, irrespective of literacy levels.

G. Priorities for Research

While this paper was not intended to provide a comprehensive analysis of research needs and priorities, it does, however, provide an opportunity to identify literacy and health issues, and possible strategies for addressing them. Research topics could include attention to:

- The role of literacy and other factors in enabling people to feel more confident and "empowered" to take action regarding their own health.

- The effectiveness of alternative forms of health communications other than traditional written materials.

- Effective communication approaches for health care providers in order to result in greater understanding and awareness among their clients/patients, as well as support the capacity of individuals, families and groups to make informed decisions about factors related to their own health.

- Innovative strategies for providing people with information about health and for enhancing a feeling of power and control, e.g. community development, participatory education.

- Evaluation of promising approaches and practices addressing literacy and health issues, with subsequent dissemination and opportunities for adaptation.

- Costs of health care delivery related to the direct and indirect impacts of literacy.

- Strategies for health promotion, as well as for more effective methods of health care delivery, which result in improved health and higher quality of life for everyone, irrespective of literacy levels.

Future research needs to build upon what is currently known about the complex links between literacy and health. There are opportunities for better use of existing data sets, e.g. the National Population Health Survey and earlier Health Promotion Surveys, by carrying out secondary analyses which examine the relationships between education/literacy and other factors. There would also be value in research exploring the specific mechanisms which influence healthy behaviour and how this is influenced by literacy.

As this paper has noted, there is substantial Canadian evidence documenting the link between literacy and health. Nevertheless, there has been limited research activity by Canadian academics in literacy, whether health related or otherwise. Part of the reason for this is that adult literacy does not form an academic discipline of its own. This was one of the themes emerging from a Policy Conversation on Literacy Research in 1996 sponsored by the National Literacy Secretariat of Human Resources Development Canada (NLS).

It should be noted that the NLS has recently developed a new framework for literacy research, and is taking steps to promote greater research both by literacy practitioners and by academics. There may be opportunities for collaboration in this regard between NLS and Health Canada.

6. Conclusion

The literacy skills of some 22 percent of adult Canadians are so limited that they are unable to determine the correct dosage from reading a medicine label. A further 26 percent can read — provided that materials are simple and presented in familiar contexts. *Thus nearly half of Canadians have difficulty with reading materials encountered in everyday life. They avoid reading except for materials which are relatively simple and familiar to them.*

As this paper has indicated, there is extensive evidence, from Canadian sources as well as from elsewhere, which consistently documents that literacy is one of the major factors influencing health status. However health is defined or measured, people with limited literacy skills are worse off than are others. Low literacy also is generally associated with greater use of health care resources.

Literacy affects health directly, for example when a failure to read or to understand instructions results in medication errors or accidents. The major impacts of literacy on health, however, occur indirectly. Literacy affects and interacts with almost all other determinants of health. It is a major determinant of poverty.

What can the health field do to address the impact of literacy on health? This paper has suggested that the first step is to acknowledge literacy as an important health issue. Literacy is closely related to practically all the major determinants of health which have been identified. There has been increasing recognition within the health sector of the importance of literacy. Indeed, Canada has been recognized for its efforts in this area. Nevertheless, there is still a long way to go.

Other steps which this paper has suggested include: placing more emphasis on enabling people to improve their literacy skills, developing partnerships between the health and literacy sectors, using alternatives to the written word to provide health information, and using a variety of strategies to make it possible for people with limited literacy to have more control over their lives. This paper has also identified areas for future research.

Finally, it is important that a population health approach give significant consideration to literacy issues. Improved communications, where health communities check to see whether or not people understand what they are saying, will benefit *everyone*, irrespective of literacy level. Addressing the needs of Canadians with low literacy levels benefits *all* Canadians.

Appendix

Canadian Activities in the Health and Literacy Area

Canada has been recognized internationally for its research and other activities in the health and literacy area. Following are examples of some of the activities which have been undertaken in Canada:

- **Literacy and Health Project Phase One**: Research Report (1990), authored by Burt Perrin and sponsored by the Ontario Public Health Association and Frontier College. This study clearly identified the impact of literacy on health and presents evidence about the reasons for this link. The methods used in this study included: a review of data from a number of major national, provincial and other health status surveys, a comprehensive, multi-disciplinary review of published and unpublished literature, a brief survey to health and literacy organizations across Ontario, three case studies, and a number of key informant interviews. This study has been cited extensively in Canada and internationally.

- The above research study was the first component of an extensive Literacy and Health Project sponsored by the above two organizations. Other activities of the project included: spreading the word about the relationship between literacy and health and the need for action, fostering working partnerships between literacy and health groups, assisting with a number of specific projects and activities, and the creation of a clearinghouse of literacy and health information.

- Major health status surveys, including national surveys such as the National Population Health Survey (1994-95) and Health Promotion Surveys (1990 and 1985), as well as Ontario, Quebec and other surveys which have data permitting identification of links between education and a wide variety of health indicators.

- The National Literacy and Health Program of CPHA works in partnership with 26 national health associations to raise awareness among health professionals about the links between literacy and health. Its activities also include the development of various resources, such as information promoting the use of plain language, and practical resources for health providers, e.g. an easy-to-use seniors' guide providing practical strategies for working with seniors with low literacy. The Centre for Literacy of Quebec has undertaken a number of activities including: workshops, newsletter articles, and other means of identifying the health and literacy connection; collaborating with a seniors' agency and a hospital to identify how communications helps or hinders seniors in accessing hospital services; and a recent annotated bibliography on literacy and health.

- The Manitoba Centre for Health Policy and Evaluation at the Faculty of Medicine of the University of Manitoba has carried out extensive analyses of factors, including education, associated with health status and with the utilization of health and medical services. The Literacy Partners of Manitoba has very recently (1997) prepared a paper, drawing mainly

upon this research, reviewing literacy and health issues in that province.

- There have been a number of projects across Canada, involving literacy and/or health organizations, which have addressed the literacy and health connection. For example, some projects have involved participants in literacy programs producing their own materials about health issues of concern to them. Others have involved partnerships between literacy and health organizations. Many of these projects have been assisted by the National Literacy Secretariat.

- NALD (the National Adult Literacy Database) has some 300 references to literacy and health. Full texts of many of these are available online http://www.nald.ca