Health Literacy in Primary Health Care

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Health literacy is fundamental if people are to successfully manage their own health. This requires a range of skills and knowledge about health and health care, including finding, understanding, interpreting and communicating health information, seeking of appropriate care and making critical health decisions. A primary health system that is appropriate and universally accessible requires an active agenda based on research of approaches to address low health literacy, while health care providers should be alert to the widespread problems of health literacy which span all age levels. This article reviews the progress made in Australia on health literacy in primary health care since health literacy was included in Australia’s health goals and targets in the mid-1990s. A database search of published literature was conducted to identify existing examples of health literacy programs in Australia. Considerable work has been done on mental health literacy, and research into chronic disease self-management with CALD communities, which includes health literacy, is under way. However, the lack of breadth in research has led to a knowledge base that is patchy. The few Australian studies located on health literacy research together with the data about general literacy in Australia suggests the need for much more work to be done to increase our knowledge base about health literacy, in order to develop appropriate resources and tools to manage low health literacy in primary health settings.

Key words: Health literacy, Primary health care, Health outcomes, Health literacy research, Health education

Primary health care is a broad field that encompasses health promotion, illness prevention, care of the sick, advocacy and community development (Australian Primary Health Care Research Institute [APHCRI], 2006). The primary health sector comprises a range of services including general practice, community and women’s health services, and government and non-government health services. It is closely connected with a range of community-based social support and welfare sectors. These sectors are informed by the Declaration of Alma Ata on Primary Health Care (World Health Organization [WHO], 1978), which articulated the connection between education, health and social factors. The spirit of social justice that is the necessary foundation for primary health systems requires the advancement of knowledge about how to provide adequate health and social measures for all groups within wider populations to create accessible and appropriate health care, health education and health programs.

In the 1990s the relationship between education, population literacy levels and health status was recognised when health literacy was included in Australia’s health goals and targets (Nutbeam & Kickbusch, 2000). The recommended goals related to improvement in general language skills and literacy levels in the population, as well as improvements in knowledge about health literacy, so that all people are enabled to make informed choices about health and take active roles in bringing about change to environments that influence their health (Nutbeam, 1999). Health literacy is considered to include knowledge about health and health care; the ability to find, understand, interpret and communicate health information; and the ability to seek appropriate care and make critical health decisions, including skills to comprehend and act on social and economic determinants of health (Rootman & Ronson, 2002). Health literacy is understood as “enabling patients to understand and to act in their own interest...and the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (Fineberg, 2004, p. x). Another widely used definition of mental health literacy is “the knowledge and beliefs about mental disorders which aid their recognition, management or prevention” (Jorm, 1997, p. 1).

Health literacy is not simply a technical matter involving reading and numeracy skills. Rather,
Health literacy is both the process and outcome of people’s interactions with the culture and society in which they live. Cultural differences in approaching and understanding health care, listening, speaking and writing skills, the degree of familiarity with health-related language and concepts, information and types of materials, are important to achieving health literacy. Health literacy is a social determinant of health in that it is a causal pathway to sub-optimal or poor health, although the exact nature of the pathways is not well understood. Nonetheless, low health literacy is thought to be a better predictor of health status than education, SES, employment, race or gender (Weiss, 2005; Partnership for Clear Health Communication, 2006).

General literacy is only one type among a range of “literacies”, which also include computer literacy, cultural literacy, media literacy, scientific literacy and health literacy, of which a sub-set is mental health literacy. General literacy rates of Australians aged 15–65 years are at disquieting levels. Only 18% of Australians have high levels of literacy on ABS measures, and just 34% have functional literacy at the minimum level of competence needed to cope with everyday life and work. That means that about half the Australian population have the minimum level of competence needed to cope with everyday life and work and half are below the minimum level, with one in five Australians not having adequate literacy to participate effectively in everyday life. These low literacy rates are about the same as Canada but more than double that of Germany and Sweden (AusStats, 2001). Further, in 2001, there were over 3.5 million people living in Australia (28%) who were born in countries where the first language was not English, with 45% of those people having poor English language skills and 25% of those having low literacy in their first language (Walker, Weeks, McEvoy, & Demetriou, 2005). Literacy skills are predictive of health literacy but are not definitive of the effectiveness of health education or social marketing of health messages, which are dependent on how understandable people find them. Both low general literacy and low health literacy engender vulnerability and stress. Low literacy predicts the degree of engagement that people will have with primary and public health services and interventions, and their self-management of and knowledge about chronic conditions. The (American) Institute of Medicine (IOM) convened the Committee on Health Literacy to assess the problems of limited health literacy in the USA (Nielson-Bohlman, Panzer & Kindig, 2004), which found that more than 300 studies indicate the mismatch between health-related materials and the average reading ability of adults.

There is a growing body of health literacy research, primarily from Canada and the USA, which has demonstrated that limited health literacy is independently associated with higher utilisation of services, and poorer health status (Williams, Baker, Hoing, Lee, & Howlan, 1998; Schillinger et al., 2002; Schillinger & Davis, 2005). The cost of low health literacy in Australia has not been estimated but in the USA, low health literacy is estimated to cost the US health care system more than US$58 billion annually (Partnership for Clear Health Communication, 2006). Low health literacy predicts less healthy behaviours, higher rates of hospitalisation, difficulty in verbal communications with providers and poorer health status in general (Weiss, 2005). Without adequate literacy, a person may not understand written health information, or understand what a health professional tells them about their condition, or be able to follow written and verbal instructions to manage it, to read labels on food packaging and medicines, or understand health information presented in posters or brochures. Certainly, the literacy skills of the general public have not kept pace with the complexities of health information and there is a lack of research and good practice in communication strategies to bridge the divide (Schwartzberg, VanGeest, & Wang, 2005).

For example, health literacy is a key factor affecting communication across the continuum of diabetes care and therefore affecting prevention, treatment and self-management of diabetes and access to services and information. Diabetes health care, as it is currently developed and conveyed, requires a sound level of health literacy. For example, diabetes education materials and programs are frequently pitched at the higher levels for literacy. Numeracy skills are given insufficient consideration when patients are asked to modify their dietary habits by reading food labels, estimate fat and carbohydrate content of meals, and take medication doses. Patients are expected to read directions, record and interpret blood glucose values and understand complicated health information.
The Canadian response to the challenges of health literacy is encapsulated by the National Health Literacy Program, spearheaded through the Canadian Public Health Association since 1994, building on a series of earlier research programs that sought to understand the connections between literacy and health outcomes (Rootman & Ronson, 2002; Wilson, 2004). The American Medical Association has taken leadership in the USA, recognising the relationships between disparities in education and other socioeconomic measures and literacy, generating considerable activity to address health literacy (Schwarzbert, VanGeest, & Wang, 2005).

**Outcome levels**
Health literacy can be regarded as an individual outcome associated with primary health care and health promotion (Keleher & Round, 2005). Health literacy is also an outcome at the level of communities, and even more broadly at a population level, as research in mental health literacy suggests (Highet, Luscombe, Davenport, Burns, & Hickie, 2006; Jorm et al., 2006). Nutbeam (1999) has identified a matrix of levels of health literacy, and outcomes (or benefits), summarised in Table 1. This scheme argues that as the level of literacy increases from functional health literacy, interactive health literacy through to critical health literacy, so do autonomy and personal empowerment, in turn, bringing benefits for individuals, communities and populations.

Two primary groups engaged with health literacy are adult literacy practitioners, and health practitioners and researchers, each with differing perspectives. “Adult literacy practitioners who are concerned with health literacy have a primary goal of helping their students improve their literacy and take better control of their lives, including their health” (Shohet, 2002, p. 1). Health practitioners and researchers are focused on a range of issues from understanding the challenges of low literacy, patient-provider communications, and the relationships between health literacy and health outcomes. Primary health practitioners have a direct interest in low literacy learners, because poor literacy has been shown to be an impediment to health teaching and empowerment as well as to the uptake of self-management strategies. Certainly there are some primary health care practitioners who develop skills in achieving better compliance and improved patient health outcomes and are able to assess the degree of understanding held by people of particular conditions or health concepts. But these skills are unlikely to be based on a strong Australian research or program development basis because, compared to Canada and the USA, little Australian research and development into health literacy has been undertaken. Yet, country-specific research is important because health literacy is not necessarily related to educational attainment and varies by setting and context.

**Australian research into health literacy**
A scoping review was conducted to make a preliminary assessment of potentially relevant literature. The aim of the scoping review was to identify studies published about health literacy research in Australia. A search of a range of sources for Australian health literacy including Cochrane Library Reviews, PubMed, Medline and CINAHL.

<table>
<thead>
<tr>
<th>Health Literacy Level and Educational Goal</th>
<th>Content</th>
<th>Outcome: Individual Benefits</th>
<th>Outcome: Community and Social Benefits</th>
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<tbody>
<tr>
<td>Functional Health Literacy: basic reading and writing skills to understand and follow simple health messages</td>
<td>Transmission of factual information on health, communication with providers, appropriate use of health services</td>
<td>Improved knowledge of health risks and health services, compliance with prescribed actions</td>
<td>Increased participation in populations health programs (screening, immunisation)</td>
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<tr>
<td>Interactive Health Literacy: more advanced literacy, cognitive, and interpersonal skills to manage health in partnership with professionals</td>
<td>As above, including opportunities to develop skills in a supportive environment</td>
<td>Improved capacity to act independently, improving motivation and self-confidence to act on advice received</td>
<td>Improved capacity to influence social norms, and interact with social groups</td>
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<tr>
<td>Critical Health Literacy: ability to analyse information critically, increase awareness, and participate in action to address barriers</td>
<td>As above provision of information on social and economic determinants of health, and opportunities to achieve policy and/or organisational change</td>
<td>Improved individual resilience to social and economic adversity, personal empowerment</td>
<td>Improved capacity to act on social and economic determinants of health, improved community empowerment</td>
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</table>
provided a small number of research studies undertaken in Australia.

Two studies explored the relationships between knowledge and treatment-seeking behaviour (see, for example, Kubba 2000; Koo, Krass, & Aslani, 2006). However, most Australian studies are focused on mental health literacy (Jorm, 1997; Jorm 2000; Bartlett, Travers, Cartwright, & Smith, 2006; Cotton, Wright, Harris, Jorm, & McGorry, 2006; Highet et al., 2006); for example, to assess the effect of social marketing and individual training programs that have been found to demonstrate gains in awareness and knowledge of mental disorders, and helped de-stigmatise beliefs about efficacy of treatment and help-seeking (Thompson, Hunt, & Issakidis, 2004; Jorm et al., 2006). Studies have shown that information is more accessible to the health literate (Highet et al.) but evidence for improved population mental health is unavailable (Jorm et al.).

Research with people from Aboriginal and non English-speaking backgrounds expose inadequate literacy and illiteracy as ongoing obstacles to empowerment and participation in community life (Hecker, 1997; Schwab & Sutherland, 2004). Among Aboriginal people, poor retention in school, illiteracy and severely reduced life expectancy are well recognised crises for many Aboriginal communities, which are inter-related with health literacy. Community development initiatives to enhance literacy levels hold the promise of health improvements across the lifespan, and increases in life expectancy, which McMullen suggests has occurred in Native American communities (McMullen, 2006). A Community Literacy Empowerment Project in the Jawoyn region in the Northern Territory is working on community identified projects including child and adult literacy programs to be implemented in educational, social and employment sectors. Improvements in maternal and child health are foreseen as early outcomes (Schwab, 2004).

The South West Sydney Health Literacy Project has developed a number of local projects. One worked with women of non-English speaking backgrounds to develop health literacy models that can be transferred to other groups from disadvantaged populations. Another project consulted with Vietnamese and Italian communities to promote quality use of medicines (O’Callaghan, 2000). Koo et al. (2006), using a cross-sectional questionnaire to 479 patients, investigated factors influencing use of written medicine information. They found coping style, health literacy and occupation predicted interest in reading information, while type of condition, health locus of control and health literacy influenced seeking information. Health professionals are advised to take a proactive role to provide information to patients while being aware of differences in motivation and needs.

Primary health care services are a vehicle for implementing recent national and state health policy initiatives. Chronic disease self-management (CDSM) education and training is a key action area within the National Chronic Disease Strategy (National Health Priority Action Council, [NHPAC] 2005). Although reducing health inequalities and responsiveness to disadvantaged groups are among the principles to guide implementation of the NCDS (NHPAC), Australian evidence for effective and appropriate approaches to self-management in these groups is limited.

Current implementation of self-management programs is thought not to be reaching disadvantaged population groups (Foster et al., 2003; Walker et al., 2005) who bear the greater burden of chronic diseases. Participants in CDSM programs generally have higher education and socioeconomic status, are English-speaking (Lorig & Holman, 1993) and are better able to respond to written marketing information, which is the predominant means of recruitment to CDSM programs. Cultural differences in health beliefs are perceived by health professionals to be a barrier to adopting self-management for people from some non-English speaking backgrounds. Yet, poor literacy in a person’s primary language as well as English is a greater barrier to participation (Walker et al., 2005). An RCT of the Peer-Led Self-Management of Chronic Illness project has been conducted to measure the benefits of the Chronic Disease Self-Management Program (Swerissen et al., 2006). The population groups of interest to this study were people from Chinese, Italian, Vietnamese and Greek backgrounds who have a chronic illness.

Lessons from research

Larger health literacy programs from North America have provided many insights into the directions that health literacy research should be developing. The
IOM found that there are many opportunities for partnerships between adult literacy programs and health communities, and that health professionals require education to develop skills for improving health literacy (Nielson-Bohlman et al., 2004). In addition, recommendations from the IOM report include:

- Research that leads to “causal models explaining the relationships among health literacy, the education system, the health system and relevant social and cultural systems...and on the extent, associations and consequences of limited health literacy including studies on health service utilization and expenditures” (Nielson-Bohlman et al., 2004, p. 14).

- Research to develop and test approaches to improve health communication, innovative approaches to health education particularly using participatory action and empowerment research strategies to reach communities.

- The inclusion of health literacy into the curricula and competencies of health professional education programs.

- Demonstration projects to develop effective approaches to reducing the negative effects of low health literacy.

- Inclusion of health literacy assessments into quality and accreditation standards of health care organisations.

- The development of standards for addressing health literacy in research applications to achieve meaningful research outcomes.

A rare systematic review of interventions (Pignone, DeWalt, Sheridan, Berkman, & Lohr, 2005, pp. 192) concluded that to address low health literacy, more intervention studies are needed to “examine whether the association between low literacy and adverse health outcomes is mainly direct (meaning that outcomes could be improved by interventions designed to overcome limitations in reading and quantitative reasoning) or indirect (such that outcomes might be better addressed by focusing on other underlying causes of health disparities such as poverty, lack of access to care, or racism)”. Thus, health literacy interventions have the potential to address health outcomes. However, no clear pathway has yet been articulated between health literacy and an effect on inequalities. Of course, all health inequalities interventions operate within complex social systems. Understanding how to adapt health education and public health information for low literacy consumers requires teasing out the relevant context as well as understanding that process is important in achieving outcomes. Indeed, targeting health literacy interventions runs the risk of bestowing stigmatisation unless approaches to health education and information provision are seamlessly integrated into an adult learning framework that is respectful of the ways in which people manage complex health information in relation to their psychosocial and material environments (Asthana & Halliday, 2006). Nutbeam's hierarchy of outcomes (Table 1) suggests that interventions may assist some previously low literacy people to achieve functional literacy; others may achieve interactive literacy, while some may achieve critical literacy, and those who are engaged in effective programs are very likely to achieve a level of empowerment.

**Conclusions**

Primary health care is not explicitly discussed in Australian studies, even though primary health care is (or should be) a driver for increasing health literacy. As yet, Australia does not have a national approach to increasing health literacy and this is reflected in the low number of published Australian studies; nor has there been a consolidated research program in Australia to understand health literacy issues or the impact of low health literacy on the use of health services or the burden on people themselves. Certainly it has been recognised in other developed countries that “health care providers, including physicians, nurses, and other health care personnel, should be alert to the widespread problem of low literacy, and should consider how to convey important health care information in ways that do not require advanced reading skills. They should have access to tools that have been shown to be effective.” (Pignone et al., 2005, pp. 192).

This paper has only been able to indicate the scope of studies in health literacy by North American researchers (both Canada and the US) from whence a considerable body of work has been developed. Opportunities exist to review studies on particular topics to assess their relevance for Australian contexts, and to adapt tested tools and strategies.
For example, in the first phase of the Canadian National Health Literacy Program (Canadian Public Health Association, 2001) research was undertaken into older people's prescription medication use, access to health services and health information, the impact of poor health communication on informed consent, hard-to-use forms and their impact on the wellbeing of low-literacy health consumers, and health among low-literacy youth. More recently, there is a recognised need in Canada (Hammond, 2005) and the US (Nielson-Bohlman et al., 2004) to develop research capacity on health literacy; to develop cooperation and collaboration between researchers and literacy and health practitioners; to improve the dissemination and application of research findings; to train future researchers in literacy and health; and to stimulate policy-relevant research into literacy and health.

Experiences of researchers from other countries suggest the need for collaborative inter-relationships between health researchers and literacy researchers using cross-sectoral approaches to influence the socioeconomic determinants of health rather than only conducting research dominated by health system concerns. The evidence base about the social determinants of health indicates the need to develop knowledge about how they relate to health, particularly chronic disease self-management. Relevant social determinants are likely to include low income, gender, education, literacy, social isolation, social support, access to supportive environments such as exercise opportunities, affordable health services, adequate food and transport. The consequences of not being able to adequately comprehend health information can be grave. Given the rising prevalence of chronic disease and sexually transmitted diseases within the Australian population, it is essential that the health literacy needs of people are investigated and effective strategies developed.

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