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Health literacy

A new concept for general practice?

Background
Health literacy is the ability to understand and interpret the meaning of health information in written, spoken or digital form and how this motivates people to embrace or disregard actions relating to health.

Objective
This article aims to describe the concept of health literacy, its importance and its applications in the general practice setting.

Discussion
Australia trails behind other western countries in practical applications of health literacy. Health literacy underpins the efficiency of consultations, health promotion efforts, and self management programs. Recognition of the health literacy status of individuals allows use of appropriate communication tools. This can save time and effort and improve patient satisfaction and health outcomes.

Table 1. Common medical language related to screening that patients with limited health literacy may not understand[1]

• Blood in the stool	• Rectum
• Bowel	• Screening (versus diagnosis)
• Colon	• Tumour
• Lesion	• Prognosis
• Growth	• Biopsy
• Polyp	• Metastasis

Health literacy (HL) is more than just the ability to read, write, and understand numbers in the health setting. Health literacy is the cognitive ability to understand and interpret the meaning of health information in written, spoken or digital form. It impacts on whether people are able to embrace or disregard actions relating to health, and make sound health decisions in the context of every day life.

A person with adequate reading ability may often have poor HL and this can interfere with the understanding of, and participation in, health related activities such as cancer screening (*Table 1*).[3] According to the recent Australian Literacy and Life Skills survey, up to 9 million Australians have inadequate HL.[1]

In practical terms, HL involves knowing about bodily functions and signs of dysfunction; knowing how to find, interpret and understand information, and how and where to seek further information when required. It impacts on the ability of the individual to communicate with relevant health professionals, discern what constitutes good quality advice, and translate this help into action.[2]

Why is health literacy important?

People with adequate HL have better health status than those with limited HL skills.[3] People with limited HL have less knowledge about the importance of preventive health measures,[4] are less able to participate in chronic disease self management,[5] and often do not understand medication instructions and may take medications incorrectly.[6] Limited HL has been shown to be associated with poor health in a range of settings and conditions, and is particularly prevalent among the elderly, people of non-English speaking backgrounds, those with limited education, those from low socioeconomic groups, and those with chronic disease.[1,7,8]

Recognising low HL in general practice is important as there is evidence to suggest that tailoring communication to those with poor HL can improve outcomes in chronic diseases.[9,10]

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Promoting health competency

Health competency (HC) is the application of HL to meet the complex demands of modern health. It encompasses skills and attitudes that help individuals take responsibility and control over their health, seek out health information and navigate complex systems. Health literacy and HC are crucial in promoting 'wellness' and in optimally managing chronic disease.

One of the assumptions of the chronic disease self management model is that the reorganisation of health care will lead to more productive interactions between informed, involved patients and prepared, proactive health care teams; in turn leading to better outcomes. Yet policies promoting more choice for consumers may run the risk of creating a two tiered system in terms of access, where health literate individuals are able to exercise greater choice while vulnerable groups, such as the elderly, disabled, less educated, or socially excluded, 'fall through the net'.

The health care system has a responsibility to proactively enable more accessible interactions and environments that promote health and wellbeing.[2] Health literacy is primarily the responsibility of health systems, and those working in them, as they determine the parameters of the health interaction, including the physical setting, available time, communication style, content and mode(s) of information provided, attitudes to the provision of information and definitions of concepts such as 'sound health decision making' and 'compliance'.

International efforts on health literacy

Dedicated national programs now exist in many countries including Canada,[11] the United Kingdom,[12] Ireland[13] and the European Community.[14] Despite the large number of people with limited HL, Australia lags behind the USA and other western nations. There has been some important work done in Australia on mental health literacy. However, this has been related to specific conditions and has not addressed broader health issues.[15] Fledgling community organisations have formed to address this problem, but systematic effort aimed at assessing and improving HL has not been undertaken.

Health literacy in general practice

Self management practices and self management skills vary by patient and carer levels of HL. Attempts by clinicians and health systems to educate patients are often unsuccessful, which may be due to the failure of correctly tailoring communication to patients. It has been shown that much of the health education information available to patients – both oral and written – is too complex for the average person to understand,[16] particularly for elderly patients.[17]

Major investments in disease prevention and chronic disease self management depend on the level of HL of individuals, communities and health services. These investments are at risk without a clear understanding of HL and its effect on behaviour.

Identifying patients with limited health literacy

The first step in improving HL is to accurately measure HL in primary care. However, a major stumbling block is that clinicians are unable to correctly identify those with limited HL.[18] Health literacy cannot be predicted from education level alone, therefore some form of assessment will be required. In one Australian study of a relatively socially advantaged group, use of educational level alone as a measure of literacy would have misclassified more than 10% as health literate/illiterate.[19]

Screening tools for assessing HL include the Test of Functional Health Literacy in Adults (TOFHLA),[20] which is the instrument most often used in health care research but it is impractical for routine use in clinics. Rapid screening tools, such as the Rapid Estimate of Adult Literacy in Medicine (REALM)[21] and the Newest Vital Sign (NVS)[22] are more practical in the primary care setting. The NVS consists of a nutrition label that is accompanied by six questions that probe the participant's ability to read and apply information from the label. In comparison with the TOFHLA, the NVS has a very high sensitivity for detecting limited HL.[23] The NVS has the advantage of being very quick to administer (~3 minutes), and is acceptable to patients, with more than 98% of patients agreeing to undergo assessment during a routine primary care visit.[24] The NVS is available at www.clearhealthcommunication.org/physicians-providers/newest-vital-sign.html at no cost.

Measuring HL in every patient is impractical. It has been suggested however, that clinicians should perform HL assessments on a sample – perhaps 50 consecutive patients – to learn the prevalence of limited HL in their practice.[25] This could be performed as part of a continuing medical education activity and would arguably have as much value as a clinical audit. It could be easily be administered by other practice staff after minimal training.

It is likely that as individual clinicians become aware of the frequency with which they see patients with low HL, they will begin to adjust communication styles to meet the needs of patients and carers, producing better health outcomes and more satisfying encounters for both patients and doctors. Involving the entire clinical team is ideal, beginning at the front desk, with everyone involved

able to restate directions and explanations and provide patient follow up as appropriate.

Use of specific communication techniques can improve health outcomes among patients with low HL.[26] For example, using 'teach back' to verify understanding has been shown to improve diabetic control.[10] Express use of other techniques such as 'ask me 3', or motivational interviewing[27] and goal setting are reported to be effective at improving communication. Certain commonsense approaches can be also be effective, including: use of plain language free of medical jargon, sitting face-to-face with the patient, use of simple diagrams or pictograms to illustrate explanations, and use of educational materials geared to low health literacy individuals. Repeating directions and recommendations, just to be sure they are being heard, and frankly asking patients whether they understand their treatment plan, purpose of any medications, and the dosing of those drugs, are other approaches that can be used.

Conclusion

Health literacy has important applications in the general practice setting. It underpins the efficiency of consultations, health promotion efforts, and self management programs. Recognition of the HL status of individuals allows use of appropriate communication tools. Over time, realigning general practice to allow the time and structures to tailor communication appropriately will save time and effort, and improve patient satisfaction and health outcomes.

Conflict of interest: none declared.

References

1. Adult Literacy and Life Skills Survey, summary results, Australia 2006. Canberra: Australian Bureau of Statistics, 2007, Cat. no. 4228.0.
2. Kickbusch I. Thinker in residence interim report. March 2007. Adelaide: SA Government.
3. Baker DW, Wolf MS, Feinglass J, Thompson JA, Gazmararian JA, Huang J. Health literacy and mortality among elderly persons. Arch Intern Med 2007;167:1503–9.
4. Miller DP Jr, Brownlee CD, McCoy TP, Pigmore MP. The effect of health literacy on knowledge and receipt of colorectal cancer screening. A survey study. BMC Fam Pract 2007;8:16.
5. Morrow D, Clark D, Tu W, et al. Correlates of health literacy in patients with chronic heart failure. Gerontologist 2006;46:669–76.
6. Shrank WH, Avorn J. Educating patients about their medications: the potential and limitations of written drug information. Health Aff 2007;26:731–40.
7. DeWalt DA, Pignone MP. Reading is fundamental. The relationship between literacy and health. Arch Intern Med 2005;165:1943–4.
8. Berkman ND, DeWalt DA, Pignone MP, et al. Literacy and health outcomes. AHRQ Publication No. 04-E007-1. Rockville, MD: Agency for Healthcare Research and Quality, 2004.
9. Schillinger D, Machtinger E, Wang F, et al. Are pictures worth a thousand words? Communication regarding medications in a public hospital anticoagulation clinic. J Gen Intern Med 2003;18 S1:187.
10. Schillinger D, Piette J, Grumbach K, et al. Closing the loop: Physician communication with diabetic patients who have low literacy. Arch Intern Med 2003;163:83–90.
11. Rootman I, Ronson B. Literacy and health research in Canada: Where have we been and where should we go? Can J Pub Health 2005;96(Suppl 2):S62–77.
12. Department of Health. Skilled for health. Available at www.dh.gov.uk/AdvanceSearchResult/index.htm?searchterms=skilled+for+health [Accessed 3 November 2008].
13. National Adult Literacy Agency. The health pack: Resource pack for literacy tutors and healthcare staff. UK: NALA, 2004.
14. Coulter A, Magee H. The European patient of the future. Maidenhead: Open University Press, 2003.
15. Jorm AF, Korten AE, Jacomb PA, Christensen H, Rodgers B, Pollitt P. Mental health literacy: a survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. Med J Aust 1997;166:182.
16. DeWalt DA, Berkman ND, Sheridan S, Lohr KN, Pignone MP. Literacy and health outcomes: a systematic review of the literature. J Gen Intern Med 2004;19:1228–39.
17. Miller MJ, Degenholtz HB, Gazmararian JA, Lin CJ, Ricci EM, Sereika SM. Identifying elderly at greatest risk of inadequate health literacy: a predictive model for population-health decision makers. Res Social Adm Pharm 2007;3:70.
18. Kelly PA, Haidet P. Physician overestimation of patient literacy: a potential source of health care disparities. Patient Educ Couns 2007;66:119–22.
19. Buchbinder R, Hall S, Youd JM. Functional health literacy of patients with rheumatoid arthritis attending a community-based rheumatology practice. J Rheumatol 2006;33:879–86.
20. Parker R, Baker DW, Williams MV, Nurss JR. The test of functional health literacy in adults (TOFHLA): a new instrument for measuring patients' literacy skills. J Gen Intern Med 1995;10:537–45.
21. Richard S, Safeer RS, Keenan, J. Health literacy: The gap between physicians and patients. Am Fam Physician 2005;72:387–8.
22. Weiss BD, Mays MZ, Martz W, et al. Quick assessment of literacy in primary care: The newest vital sign. Ann Fam Med 2005;3:514–22.
23. Osborn CY, Weiss BD, Davis TC, et al. Measuring adult literacy in health care: Performance of the newest vital sign. Am J Health Behav 2007;31(Suppl 1):S36–46.
24. Ryan JG, Leguen F, Weiss BD, et al. Will patients agree to have their literacy skills assessed in clinical practice? Health Educ Res 2007; doi:10.1093/her/cym051.Sep 22 Epub ahead of print.
25. Weiss BD. Assessing health literacy in clinical practice. Medscape 2007. Available at www.medscape.com.
26. Weiss BD. Health literacy and patient safety: Help patients understand: A manual for clinicians. 2nd edn. Chicago, Ill: American Medical Association Foundation and American Medical Association, 2007.
27. Rollnick S, Miller WR. What is motivational interviewing? Behavioural and Cognitive Psychotherapy 1995;23:325–34.

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