

# Addressing health literacy: talking plainly to improve patient care

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One of my first introductions to health literacy occurred during my residency training in primary care (internal medicine and paediatrics). I saw a two-week-old baby in clinic who had significant conjunctivitis. Concerned about possible *Chlamydia trachomatis* affecting the eyes and possibly the lungs, I gave the mother a prescription for erythromycin, to give the baby four times daily by mouth for 14 days. However, when the family returned two days later the baby's eyes looked significantly worse. It was then I discovered that the mother was putting the medicine in the baby's eyes instead of his mouth! In retrospect, this probably made sense to the mother, since that is where she saw the infection. The mother did not understand the prescription or my instructions. This experience opened my eyes to the problem of low health literacy and the importance of clear communication.

When many of us hear the term 'literacy' we think this refers to whether or not a patient can read, but literacy actually includes a host of skills, such as reading, oral literacy (speaking and listening ability) and numeracy or maths skills. Literacy is a functional skill that includes the ability to read or be told something, to be able to understand it and then to be able to act on the information.<sup>1,2</sup> Health literacy has been defined as 'the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions'.<sup>1</sup>

Low literacy and numeracy skills are common. The International Assessment of Literacy Survey (IALS), conducted in 20 major countries worldwide, found that 25–80% of all adults have basic or below basic literacy levels.<sup>3</sup> In the UK, approximately 50% of those surveyed had below basic literacy skills, suggesting that they would have challenges coping with the demands of everyday life in a complex society.<sup>3</sup> Similarly, in the US, approximately 90 million adults have basic or below basic literacy skills and more than 110 million have limited numeracy skills.<sup>4</sup> The average American reads at approximately the eighth grade level (i.e. the reading age of a 13–14 year-old) and maths skills are typically worse than this.

Many patients and family members, even those with good literacy skills, have a difficult time navigating a complex healthcare system and understanding medical recommendations and health information. Patients struggle to understand insurance information, consent forms, prescription labels, how to measure and adjust medications, decisions involving risk or probability, and other tasks. Patients with lower literacy do not understand as much about their health conditions as those with higher literacy skills. They have worse self-management skills, worse clinical outcomes and even higher rates of mortality than those with higher literacy. Importantly, literacy predicts health status even after adjusting for factors such as education level, income, insurance status and other variables.<sup>5</sup>

An example of the importance of literacy and numeracy skills can be seen in patients with diabetes. Recent studies have demonstrated that patients with diabetes who have lower literacy or numeracy skills have worse diabetes knowledge, self-management behaviours, self-efficacy and glycaemic control.<sup>6</sup> In a recent study of 398 patients with diabetes, we found that patients with diabetes struggle to perform many of the daily self-management tasks that are expected of them. For example, 26% struggled with basic number hierarchy – unable to identify what numbers were within the normal glucose range of 60–120 mg/dl – a common task for interpreting a glucose meter. More than 45% of patients could not calculate the amount of carbohydrates in a bag of crisps, despite the use of a calculator. Many patients also struggled to understand medication and insulin dosing.

Encouragingly, several recent studies have demonstrated that addressing health literacy and improving communication skills of healthcare providers can improve patient outcomes. Using low-literacy/numeracy educational materials, providing simplified oral communication, focusing on key behavioural messages and clarifying and confirming messages can improve patient understanding and outcomes. Using the 'teach back' approach, where a healthcare provider asks patients to confirm

understanding of key messages, can be particularly helpful.<sup>7</sup> For example, in several recent randomised trials we demonstrated that providing literacy-sensitive diabetes education materials and enhancing health communication could potentially improve diabetes-related outcomes.<sup>8</sup>

We as physicians need to communicate clearly with all of our patients. We need to remember that even though many of us went into medicine because we liked or excelled at science and maths the majority of our patients do not share our aptitude. We should use educational materials written at the 4th–6th grade level (i.e. the reading age of 9–12 year-olds), use picture-based

materials and speak to patients in plain language without a lot of medical jargon. We should focus on key behaviours we want patients to perform, and make our information as practical and culturally relevant as possible. We also must confirm patients' understanding of information by asking them to 'teach back' what they have learned. Patients usually do not tell us if they are having trouble understanding something. The onus is on us to communicate clearly and confirm that what we meant to communicate has been understood correctly by the patient or the family.

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