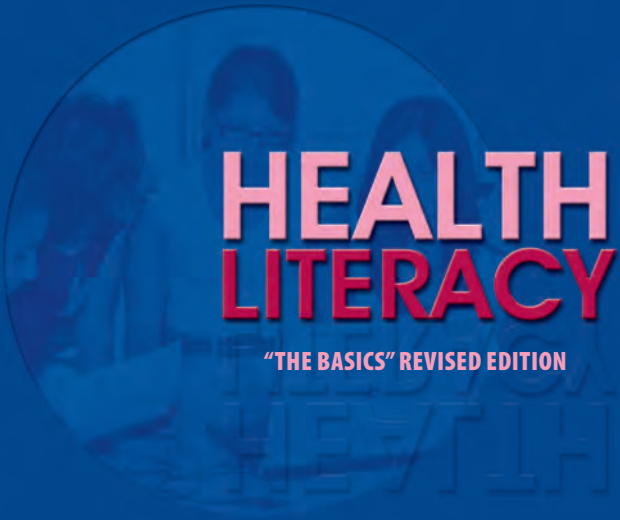
WHCA ACTION GUIDE

World Health Communication Associates



HEALTH LITERACY

"THE BASICS" REVISED EDITION

promoters - journalists HEALTH LITERACY ACTION GUIDE health professionals -

HEALTH
LITERACY

World Health Communication Associates

HEALTH LITERACY

"The Basics" Revised Edition

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Cataloguing Information:
ISBN 978-1-907620-00-3
Published by World Health Communication Associates Ltd.

This manual is a publication of the WHCA Action Guides Project.

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Telemedicine can link rural health centres to urban resource centres and improve care and information exchange.

FOREWORD

The World Health Communication Associates' (WHCA) Health Literacy Action Guide : "The Basics" Revised Edition is presented as a practical resource for use by local, national and international health, education and development advocates and agencies that are working on and/or planning to take action to enhance people's health literacy. This reprinting and updating is based on demand from individuals and organisers who found it "a clear, short, well-presented" review of concepts and intervention ideas. Since its last printing there has been a rapid growth of interest and action in health literacy. Part 1, "The Basics", was published on the occasion of the United Nations Economic and Social Council (ECOSOC) meeting in Geneva, Switzerland in July 2009, where Ministers of State and Finance convened to discuss actions to advance progress towards the Millennium Development Goals. The guide contributed to discussions on health literacy and the inclusion of a call in the conference declaration" to "enhance health literacy on all levels". Since then, health literacy has been included in multiple national action plans, including in China and the USA (e.g. health literacy is specifically mentioned in President Obama's national health plan), in EU and WHO actions to address health inequities, and in a multitude of specific interventions on all levels.

As with the previous edition of the WHCA Health Literacy Guide Part 1, "The Basics", actions described not only focus on individual behaviour change but also look at initiatives being taken to strengthen and adjust systems in order to address institutional and structural deterrents to health literacy, make information more accessible and understandable, and make 'navigation' through health, education systems and work, community and policy-making settings easier. In so doing, the guide builds on the interactive health literacy framework first presented by Ruth Parker at the US Institute of Medicine Roundtable on Health Literacy in 2009.

The authors are grateful to all those people, projects and agencies who have shared their work with us. Special thanks to Stacy Cooper Bailey and Michael S. Wolf for permission to use their materials in sections 2 and 4. Additionally, we wish to thank Tuuli Sauren for her creative design work, Steve Turner, Erik Luntang, Kara Jacobson and the International Council of Nurses for use of their pictures and posters. Finally, we wish to thank WHCA, IAPO, Johnson and Johnson and the Liverpool Healthy City Project for their support to this project.

The guide has been developed through a process which has involved all the authors and their extended networks and continues to be a work in progress. Updates will be posted on the WHCA website: www.whcaonline.org. In addition to sharing our approaches with you, we would like to invite readers to give feedback about whether the conceptual approaches described herein make sense in your contexts and to contribute case studies for inclusion in future editions of the guide. We are very pleased to see the high demand for a hard copy pocket guide, especially in this age of virtual publications. For Part 3, the development team is particularly interested in gathering evidence and case studies about the relationship of health literacy to noncommunicable diseases.

Please forward any comments to: franklin@whcaonline.org.

For the Guide Development Team

Franklin Apfel

© Photo by Steve Turner

Poor health literacy skills are very common. Based on studies in several countries one can assume that 20-50% of the people in this picture will have trouble obtaining, understanding and using health information.

SUMMARY

Health Literacy at a Glance

WHO IS THIS GUIDE FOR?

This guide is for health professionals, educators, policy makers and advocates who wish to improve individual and population health literacy. This *Health Literacy Action Guide* summarises current knowledge on why health literacy is important and how we can improve health literacy.

WHAT IS HEALTH LITERACY?

Health literacy refers to a person's capacity to obtain health information, process it and act upon it. Health literacy skills include basic reading, writing, numeracy and the ability to communicate and question. Health literacy also requires functional abilities to recognise risk, sort through conflicting information, make health-related decisions, navigate often complex health systems and 'speak up' for change when health system, community and governmental policies and structures do not adequately serve needs. People's health literacy shapes their health behaviours and choices—and ultimately their health and wellbeing.

WHY IS HEALTH LITERACY IMPORTANT?

There is strong scientific evidence that shows that poor health literacy leads to less healthy choices, riskier behaviours, poorer health, more hospitalisations and higher health care costs. Poor health literacy has been shown to be a major public health problem in all countries where the issue has been studied. Very large numbers of people in both developed and developing countries have poor health literacy skills. In the US, for example, about 90 million adults—half of the adult population—are thought to lack the literacy skills needed to effectively use the US health care system.

WHY THIS GUIDE?

Poor health literacy is not just an individual problem but a systemic societal problem. It is best addressed when information, education and all types of communication from health and other services are aligned with the skills and needs of their users. While poor health literacy skills are common and have been found to be a significant determinant of health, to date there has been little systematic corrective action in

most countries. Meeting in Geneva in July 2009, the United Nations Economic and Social Council (ECOSOC) acknowledged this deficiency and called for the development of health literacy action plans at all levels. This guide provides a framework for such action and identifies useful interventions that people and agencies can take to strengthen health literacy.

SIX KEY AREAS FOR INTERVENTIONS

This guide focuses on action in six key systems or settings: health and education systems, media marketplaces, home and community settings, workplaces and policy-making arenas at all levels. Actions and structures within these settings may either facilitate or be a barrier to the development and expression of health literacy skills.

ORGANISATION OF THE GUIDE (6x6)

The guide is organised into six sections, addressing six key questions:

Section 1: What is health literacy?

This section defines health literacy and describes the demands and complexities of different systems and settings, which shape people's ability to access, integrate and act on health information.

Section 2: Why is health literacy important?

This section looks at the size of the problem and briefly reviews evidence of its impact on health, wellbeing and health system costs.

Section 3: How is health literacy measured?

This section looks at measurement tools for assessing individual health literacy skills and competencies, as well as the health literacy 'friendliness' of the systems and settings where health information is obtained.

Section 4: What can individuals, agencies and systems do to strengthen health literacy?

This section looks at interventions in six key systems and settings: health systems, education, media health information marketplaces, home and community, workplace and policy-making arenas.

Section 5: How can we advocate for more attention, investment and action to strengthen health literacy? Messages to key stakeholders.

This section identifies messages to key stakeholders and describes specific health advocacy communication strategies.

Section 6: What should be the components of a national or local health literacy strengthening action plan? Building national and local health literacy action plans.

This section suggests steps that can be taken to develop systematic approaches to enhancing health literacy.

SECTION 1: WHAT IS HEALTH LITERACY?

This guide defines health literacy as *"The capacity to obtain, interpret and understand basic health information and services and the competence to use such information and services to enhance health."*
(Ratzan & Parker 2000; IOM 2004)

Health literacy 'capacity and competence' is not just determined by an individual's basic literacy skills. It is also defined by the interaction (or alignment) of these skills with the demands and complexities of the systems within which information is sought, interpreted and used *(see Figure 1)*. Health literacy 'capacity and competence' varies by context and setting. It is dependent on individual and system factors. These factors include both user and provider communication skills and knowledge of health topics, culture and the specific characteristics of the health care, public health and other relevant systems and settings where people obtain and use health information (Healthy People 2010). When these services or systems, for example, require knowledge or a language level that is too high for the user, health will suffer.

Figure 1. Health Literacy Framework (Parker R, in Hernandez 2009, p.91)

Over 300 studies in the US and UK, for example, demonstrate that printed materials, including consent forms, and web-based information sources are written in language above the average reading ability of most of their adult populations (IOM 2004).

Action to enhance health literacy, therefore, has to focus on both improving individual skills and making health service, education and information systems more health literacy friendly. Health literacy friendly

systems and settings are ones which actively measure, monitor, evaluate and adjust their communications to meet the needs (and skills) of their users.

SYSTEM DEMANDS AND COMPLEXITY

This guide identifies six key systems and settings—'domains of influence'—which help shape both the development of health literacy skills and their expression *(see Box 1)*.

© Photo by Kara Jacobson

Navigating increasingly complex health systems is a challenge for all users. Those with poor health literacy skills are particularly challenged. Health care and other agencies can help by ensuring their signposting , consent forms and other written materials are clear and understandable. If you were looking for the pharmacy, does this sign help or confuse?

BOX 1 : SIX DOMAINS OF INFLUENCE ON HEALTH LITERACY
(adapted from Kickbusch & Maag 2008)

Health systems — Health systems play a major role in developing individual and population health literacy skills. Health systems can be made more health literacy friendly in a variety of ways. Workers may be trained to recognise the specific needs of users and assist them in navigating systems. Information—such as forms, signs and letters—can be made more accessible and understandable. If done appropriately, this can help align system demands to user skill levels and improve user ability to access health systems, assess risks, select appropriate pathways of care and engage in self-care. Health systems can also advocate for and shape the 'health literacy friendliness' of other systems and settings. They can do this by raising awareness of the negative health consequences of weak health literacy skills and, importantly, identifying good practice and advocating for more effective policies and interventions.

Educational systems — Schools and other formal and informal educational establishments play a major role in developing literacy skills and fostering literacy in all countries. They help children and adults to learn about what influences their health, the impact of the choices they make and where to find reliable information to support decision-making. Learning may have benefits in terms of improving attitudes to and competencies for engaging in positive health behaviours and making best use of health services. Literacy improves employment prospects (with associated health gains), either by helping individuals to move out of unemployment or through aiding progression in the labour market. Adult participation in learning may also be beneficial for the next generation in terms of improving their chances of learning and health outcomes. The development of such literacy skills should be a priority and included in all school and adult education programmes, with particular emphasis on parental involvement in early years education.

Media marketplaces — For many people, media marketplaces are a main source of health information. These marketplaces shape people's health perceptions, behaviours and choices. Commercial and political interests often dominate, with interested parties using sophisticated communication techniques to sell their products and ideas. Public health advocates need to learn from commercial advertisers and marketers. They can use the same approaches to help people make healthier decisions when choosing goods and services. This could also serve to counteract the negative influences of industries—tobacco, alcohol and fast food

companies—which glamorise and promote unhealthy products and lifestyles.

Home and community settings — People are called upon to make daily health-related decisions in their homes and communities. Families, peer groups and communities can be primary sources of health information. They help to shape functional health literacy skills related to product and service choices. These sources can provide important information about health-promoting, health-protecting and disease-preventing behaviours, as well as 'alternative therapies', self- and family care, available support services and first aid.

Workplace settings — By providing clear and consistent health messages to employees, employers can help prevent accidents and lower the risk of industrial or occupational diseases. Health-promoting work environments go further with specific health and wellbeing policies and dedicated support for employees to address lifestyle choices, such as alcohol and drug use and stress factors, including job security, demand–control, effort–reward in the workplace and issues related to achieving an appropriate work–life balance.

Policy-making arenas — Policies at all levels—institutional, community, national and regional—shape the social and structural factors which determine health literacy and health. The engagement of citizens in policy-making processes is a fundamental democratic principle. A key trend in many health system reforms is the empowerment of patients, the development of patient-centred care, and efforts to address the social determinants of health which shape differential access to information and care across a social gradient.

BUILDING INDIVIDUAL SKILLS

Building health literacy skills and abilities is a lifelong process, and no-one is ever totally health literate (or illiterate[1]). People develop their health literacy over time and from a wide variety of sources. These may include their family and work settings;

[1] This guide intentionally avoids use of the term 'health illiteracy', as it is both inaccurate and an emotionally loaded term which all too often causes stigma and shame.

primary, secondary, higher and adult education; health providers; print and on-line health information; the media; and a wide variety of community-based resources, such as support groups to assist in quitting smoking.

Health literacy skills *(see Box 2)* include basic reading, writing, numeracy and the ability to communicate and question. Health literacy also requires functional abilities to recognise risk, sort through conflicting information, take health-related decisions, navigate often complex health systems and 'speak up' for change when health systems, community and governmental policies and structures do not serve needs.

BOX 2 : HEALTH LITERACY—FOUR INDIVIDUAL LEVEL SKILL SETS

Health literacy related skills can be categorised as: cognitive (knowledge), behavioural (functional), advocacy (proactive) and existential (spiritual).

Cognitive skills include general literacy, numeracy, information gathering skills and analysis. These skills are used for health-related actions like reading health warnings and food labels, filling in forms, deciphering prescription drug instructions, as well as the ability to understand written and oral information given by health care professionals.

Behavioural skills include more interactive literacy and social skills used to make health risk assessment and lifestyle choices; system 'navigation' (finding the way to services or negotiating complex systems); self-care; and interpersonal communication and negotiating (e.g., asking for and receiving information, filing complaints or understanding health care charges, costs and bills).

Advocacy skills include critical competencies to analyse health information, understand the political and economic dimensions of health, and take action to express opinions and make changes at institutional, community and political levels. This may include 'speaking up' for oneself and others, taking action to promote new or change existing policies, lobbying and organising campaigns.

Existential skills include the ability to make sense of a life with illness, live with uncertainty, and avoid descending into depression, self-pity, hopelessness or helplessness. It includes the ability to grieve and to prepare for and die in a peaceful way.

Health literacy is best viewed as a dynamic continuum of skills. People's needs change over time as they face different health challenges. Some of these changes are predictable based on life stages or whether preventive, disease care or rehabilitative information is being sought. The need for other skills arises when new behaviours are required: for example, to respond to the emergence of new health threats like pandemic influenza, climate change related heat waves and floods. But no one is ever totally health literate. Everyone at some point needs help in understanding or acting upon important health information. Even highly educated individuals may find systems too complicated to understand, especially when made more vulnerable by poor health.

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Times of illness often provide 'teachable' moments and opportunities to enhance health literacy skills and knowledge.

SECTION 2: WHY IS HEALTH LITERACY IMPORTANT?

1. POOR HEALTH LITERACY SKILLS ARE VERY COMMON

In the United Kingdom, United States, Australia and Canada surveys have shown poor health literacy skills in 20-50% of the population. A National Consumer Council survey in the United Kingdom (NCC 2004) found that one in five people had problems with the basic skills needed to understand simple information that could lead to better health. US studies estimate that 90 million adults—almost half of the adult population—may lack the literacy skills needed to effectively use the health system. The majority of these adults are native-born English speakers. Literacy levels were found to be lower among the elderly, those who have lower educational levels, those who are poor, minority populations and groups with limited English proficiency, such as recent immigrants (Kutner et al. 2006).

2. POOR LITERACY SKILLS AND LOWER EDUCATIONAL STATUS ARE ASSOCIATED WITH POORER HEALTH AND WEALTH

Literacy—along with primary and secondary school attendance—is positively correlated to personal income, economic growth, female empowerment, life expectancy and having fewer children (Wils 2002). There is also a positive relationship between education and income (Cassen 2002). A global study by Barro (1991) showed that each percentage increase in primary school enrolment resulted in a 0.025 percent higher annual GDP growth rate in the subsequent 25 years. Household surveys of developing countries consistently find that those households headed by illiterate or less educated individuals are more likely to be poor. Simple literacy may not be sufficient to completely erase the possibility that a household is poor, but it can reduce the probability and the depth of the poverty experienced (Wils 2002).

Health education affects health outcomes in many ways. Enhancing a mother's educational level reduces infant and child mortality in developing countries (Ratzan 2001). The number of years spent in formal education have been found to be inversely related to age-adjusted mortality in many countries, such as Norway, England and Hungary (Ratzan et al. 2000). A review of the health impacts of education found low educational level was associated with an increased risk of death from lung cancer, stroke, cardiovascular disease and infectious diseases, as well as a number of illnesses including back pain, depression, dementia, asthma and diabetes. Even in countries

where the average life expectancy for all has increased, the gap between those with the highest and lowest levels of education has remained (Higgins et al. 2008).

Clear links between education level and health behaviours have been shown. The likelihood of becoming a smoker is increased among less educated populations. Those educated to Level 2 or below are 75 per cent more likely to be a smoker at age 30 than a similar individual educated to degree level or higher (Wilberforce 2005). Higher educational levels are related to decreases in smoking prevalence and higher rates of smoking cessation in Europe (Cavelaars et al. 2000). And higher educational level has been related to more ideal body weight in Europe, Russia and China (Molarius et al. 2000).

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Health systems may be very advanced or very basic in their resources. Consider the impact of limited health literacy for those in rural areas.

3. POOR HEALTH LITERACY IS ASSOCIATED WITH MANY ADVERSE HEALTH OUTCOMES[2]

Health literacy has been directly linked with acquisition of health knowledge, health behaviours and compliance with medication and self-care regimens (Baker 1999; DeWalt et al. 2004; IOM 2004). Empirical data supports an association between limited health literacy and numerous adverse health outcomes *(see Box 3)*.

BOX 3 : HEALTH OUTCOMES OF WEAK HEALTH LITERACY

- Poorer health choices
- Riskier behaviours
- Less use of preventive services
- More delayed diagnoses
- Poorer understanding of medical conditions
- Less adherence to medical instructions
- Poorer self-management skills
- Increased risk of hospitalization
- Poorer physical and mental health
- Increased mortality risk
- Greater health care costs
- Higher health costs

Less health knowledge. People with limited health literacy have less health knowledge, access fewer preventive services and have poorer self-management skills (Williams et al. 1998a, 1998b). A person with low health literacy is likely, for example, to have poor knowledge about a wide variety of chronic health conditions, including asthma, hypertension, diabetes and congestive heart disease.

Worse self-management skills. People with low health literacy skills demonstrate poorer self-management skills. This has been studied in asthma, HIV infection and diabetic patients (Williams et al. 1998a,1998b; Wolf et al. 2005;

[2] This section is adapted from *Health Literacy: A Brief Introduction* by Stacy Cooper Bailey, MPH; Michael S. Wolf, PhD MPH; Kara L. Jacobson, MPH CHES; Ruth M. Parker, MD; Scott Ratzan, MD MPH (ICN 2009).

Kalichman et al. 1999; Wolf et al. 2007; Schillinger et al. 2002). These studies showed that patients with lower health literacy skills were less able to identify medications, demonstrate proper administration techniques and showed poorer adherence to medication. In the case of people with diabetes, patients were less likely to know the appropriate dosing instructions and dietary restrictions, less able to achieve tight blood sugar control and reported higher rates of retinopathy as the result of poor self-care. HIV-infected patients with limited literacy skills have been found to demonstrate less control of their infection and were less likely to have an undetectable viral load.

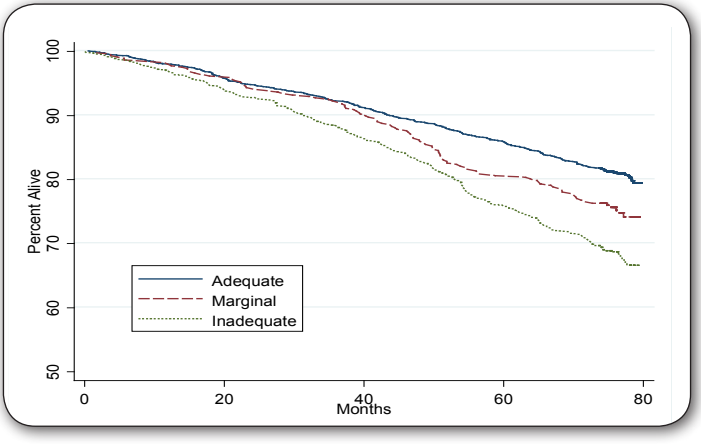
Higher hospitalisation rates. Patients with limited health literacy have higher hospitalisation rates and a greater number of emergency room visits (Mancuso & Rincon 2006; Baker et al. 2002).

Poorer health. People with low health literacy have been found to be twice as likely to self-report poor health, even after adjusting for age, gender, race and markers of economic deprivation (Baker et al. 1998). Health literacy has been found to be a significant, independent predictor of average blood sugar in people with diabetes (measured by serum haemoglobin A1c) (Schillinger et al. 2002). People with low health literacy had a higher prevalence of diabetes and congestive heart failure, reported worse physical and mental health and greater difficulties with daily activities and limitations due to physical health (Wolf et al. 2005).

Higher mortality. Sudore and colleagues (2006) reported that in elderly people, low health literacy was associated with greater all-cause mortality risk compared to those with adequate health literacy. Similarly, Baker et al. (2007) found low health literacy to be significantly and independently associated with higher mortality risk in elderly people *(see Graph 1)*.

4. HIGHER HEALTH CARE COSTS

Health literacy has a strong economic component. A low level of health literacy can lead to inappropriate use of the health care system, reduce effectiveness and efficiency of health care interventions or increase the likelihood of unhealthy lifestyles. One analysis in the US, by the National Academy on Aging Society, estimates that low health literacy costs the US health care system $30-$73 billion annually (1998 dollars). Sixty-three percent of the additional costs attributed to low health literacy may be borne by public programmes (Friedland 1998).



Graph 1: Literacy and Mortality Risk (Baker et al. 2007)

SECTION 3: HOW IS HEALTH LITERACY MEASURED?

Most health literacy measures in current use tend to assess reading skills (word recognition or reading comprehension) and numeracy rather than measure the full range of skills needed for health literacy. Although this is an area of active research, current assessment tools are still weak. There is a need to develop tools that can measure the ability to use health information to attain and maintain good health, including oral understanding, health knowledge and navigation skills (i.e., whether individuals are competent to access services, handle transitions, and find relevant information). Secondly, measures are needed to be able to assess the health literacy friendliness of systems and settings as both a guide to quality improvement and as a way to hold agencies responsible for making health information understandable and actionable (Clancy in Hernandez 2009, p.9).

The 2009 Institute of Medicine Roundtable on Health Literacy Measurement looked at measures of population health literacy, through geo-mapping and other techniques, to determine areas where interventions may be appropriately targeted (Hernandez 2009). The Roundtable pointed to a variety of tools in the pipeline which may help enhance capacities in this area in the near future *(see Box 4)*. The report can be downloaded from http://www.nap.edu/catalog.php?record_id=12690.

BOX 4 : MEASUREMENT TOOLS IN DEVELOPMENT—PATIENT ASSESSMENT

The Consumer Assessment of Healthcare Providers and Systems (CAHPS) is a set of standardized, evidence-based surveys (in the US) for assessing patient experiences with their health care encounters. The CAHPS project not only develops survey instruments, but also provides reports that consumers can use to make decisions about their choices in health care. The project has also started to develop provider reports that can be used by providers to identify areas for quality improvement.

A tool is being developed that will be used to measure patients' perspectives on how well health care professionals communicate health information. The goal is to gather data to help health providers improve communication skills and patients' health literacy. It will include measures on:

- Oral communication regarding health problems and concerns, medications, tests, health promotion and forms;

- Written communication regarding medications and tests;
- Techniques utilized by health providers to ensure patient comprehension of health information (commonly referred to as "teach back methods"); and
- Patient-provider relationship.

For more information see https://www.cahps.ahrq.gov/default.asp

3.1 CURRENT MEASUREMENT TOOLS—INDIVIDUAL SKILLS AND ABILITIES

REALM

The Rapid Estimate of Adult Literacy in Medicine (REALM) is a word recognition test. Patients are asked to read a list of 66 increasingly difficult medical terms. The number of correctly pronounced words is subsequently related to approximate grade levels of reading (0-18: third grade and below; 19-44: fourth to sixth grade; 45-60: seventh and eighth grade; 61-66: ninth grade and above). REALM is simple, brief (administered in two to three minutes) and useful for profiling patients' reading skills.

TOFHLA and S-TOFHLA

Comprehension tests—such as the Test of Functional Health Literacy in Adults (TOFHLA) and the Short Test of Functional Health Literacy in Adults (S-TOFHLA)—were designed to provide a broader assessment of functional health literacy. They take into account reading comprehension and quantitative literacy (numeracy).

TOFHLA uses three passages of prose to assess reading comprehension. These are: (1) instructions for the preparation for an upper gastrointestinal tract x-ray, (2) the patient rights and responsibilities section of a selected application form, and (3) a standard hospital consent form. Each of these passages has about every fifth word eliminated and the respondent is asked to choose the most appropriate word to complete the sentence.

S-TOFHLA uses only the first two passages. For both the TOFHLA and the S-TOFHLA, hospital forms and prescription bottles are also used to assess a patient's numeracy skills, such as instructions for taking medication, appointment schedules, blood pressure and glucose monitoring, and obtaining financial assistance for both of these tests.

The number and type of quantitative tasks vary according to the version of the TOFHLA used. TOFHLA and S-TOFHLA have been shown to be reliable and valid measures of functional health literacy. Although TOFHLA and S-TOFHLA are the primary instruments by which reading comprehension and numeracy skills are measured, the time—22 minutes for the TOFHLA and 12 minutes for the S-TOFHLA—and complexity have limited their use to research within health care environments.

NVS

The Newest Vital Sign (NVS) test is a health literacy screening tool administered in three minutes. It requires users to read a standard nutrition label from a carton of ice cream and answer a series of six questions. The concept implies that health literacy is a vital sign, just as heart rate and blood pressure are. As with the TOFHLA, there are English and Spanish versions of the NVS. Currently, there is limited experience with the NVS in the published literature.

One-Item Screening Measures

While researchers may choose to use one of the above tools, it may be necessary for practitioners in a busy health care environment to simplify the measurement of health literacy. Because of the shame associated with limited health literacy, efforts have been made to identify simple screening questions that avoid the perception of literacy testing.

One study evaluated a series of questions as potential predictors of health literacy as measured by the S-TOFHLA. Three questions emerged from the analysis as best single-item screening measures:

- How often do you have problems learning about your medical condition because of difficulty understanding written information?
- How confident are you filling out medical forms by yourself?
- How often do you have someone help you read hospital materials?

In a follow-up study of the three questions, "How confident are you filling out medical forms by yourself?" was identified as the best predictor of limited health literacy skills when validated against REALM. Using a one-item screening question during individual encounters is simple, less intrusive, and may be a practical alternative to more complex measures.

3.2 MEASURING THE DEMAND AND COMPLEXITY SIDE—HEALTH LITERACY INTERVENTIONS

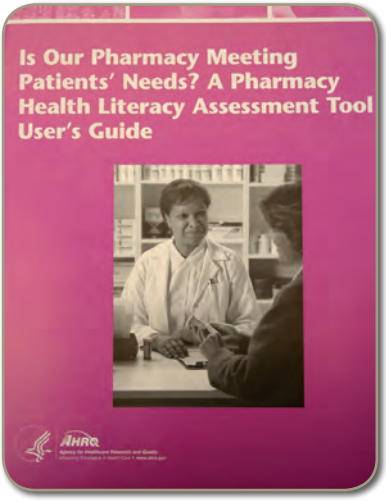
Some researchers have begun developing tools to evaluate the health literacy friendliness of systems. One such tool is shown in Table 1 (Matthews & Sewell 2002). The evaluation tool is a 5-minute, 15-question, web-based survey. It collects information on whether health literacy is considered in programme development and service activities; the degree to which organisations follow health literacy principles in their programmes; whether organisations pilot test materials for comprehension or cultural competence; evaluation of materials; which activities people associate with health literacy; and lessons learned.

System assessments

In addition to activity/intervention analysis, researchers have used assessment tools to evaluate how well a health service meets the needs of patients with limited health literacy skills. One study applied an assessment tool to a pharmacy setting. It evaluated patient understanding of medications and adherence to prescribed regimens (Jacobson 2008). Additionally, the assessment tools:

- Raise pharmacy staff awareness of health literacy issues.
- Detect barriers that may prevent people with limited literacy skills from accessing, comprehending and using health information and services provided by the organisation.
- Identify opportunities for improvement.

Conducting an organisational assessment may also provide a baseline assessment prior to implementing an intervention. Jacobson identified nine key elements of an organisational health literacy intervention: management, measurement, workforce, care process, physical environment, technology, paperwork and



This assessment tool can be accessed at: http://www.ahrq.gov/qual/pharmlit/.

written communications, culture, and alignment. Evaluating these elements provides a comprehensive audit to assess congruence between patient, provider and organisational perspectives of health literacy. A follow-up assessment allows evaluation of the intervention's impact on an organisation's accessibility to those with limited health literacy.

TABLE 1A. FREQUENCY OF UNDERTAKING HEALTH LITERACY-RELATED ACTIVITIES

	Regularly	Sometimes	Do not do	Don't know	No response
Simplify language and check readability					
Reformat materials to make them more user-friendly					
Confirm patient/client understanding					
Train agency, staff, or health-care providers about health literacy					
Use audiovisual aids					
Provide materials in multiple languages					
Use pictographs, cartoons, etc. to instruct and inform					
Test for reading levels in clients					
Use interactive computer or kiosk					

3.3 SCORECARDS

The WHCA Action Guide Group has proposed the development of health literacy scorecards for individual and system monitoring of risk or disease management progress. A noncommunicable disease (NCD) scorecard, for example, could serve as a visible tool for awareness-raising and provide a proxy measure for and a way of promoting NCD health literacy (*see Box 5*). As such, ideally it should include clinical and behavioural measures, such as Body Mass Index (BMI), blood sugar, blood pressure and cholesterol levels, immunization status and behavioural factors such as smoking and exercise (*see Figure 2*), all of which are associated with chronic disease prevention and control.

BOX 5: BENEFITS OF THE HEALTH SCORECARD

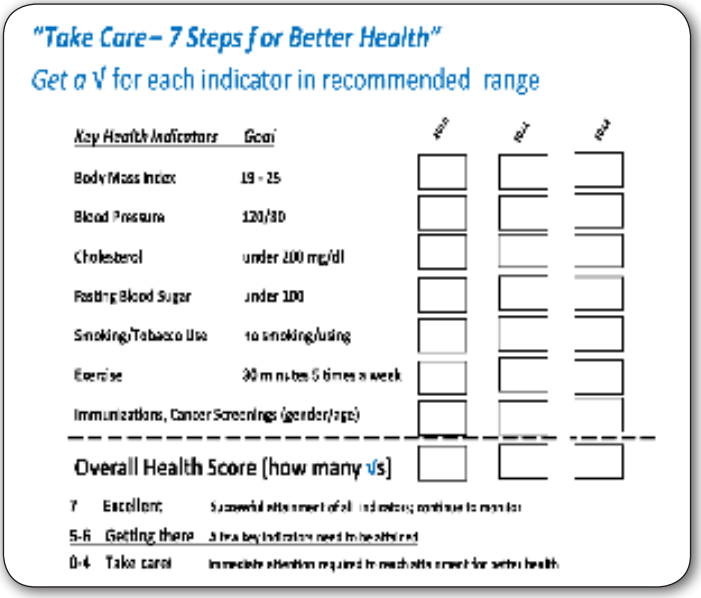
(adapted from Myron-Shatz 2010)

Individual benefits

1. A single number provides an easy means for people to keep track of their health (message: 'Know your numbers').
2. Establishing simple goal ranges (e.g. red, yellow, green) allows people to see how they rate compared to laboratory and community standards.
3. Including a range of medical/health indicators and behaviours helps people create a mental model of how lifestyle choices and NCDs are connected.
4. Having a scorecard that reflects 'risk' and 'preventability' can motivate action.

System benefits

5. Sequential ratings can serve as an incentive for improvement.
6. A health scorecard, especially when it results in one number, allows anyone who is interested in monitoring and promoting health, and healthy behaviour—whether insurers, governments, agencies, pharmaceutical companies or global health organization officials—to keep track of health indicators at every level.
7. This will allow for detecting areas of either excellence or need.
8. An agreed-upon and broadly disseminated health scorecard will allow different institutions or geographical areas to know their health ranking, both relative and absolute. This provides a benchmark and an incentive for improvement.
9. An agreed-upon and broadly disseminated health scorecard can translate to a unified national concept of health that can be accepted and hopefully pursued.



"Take Care – 7 Steps for Better Health"

Get a √ for each indicator in recommended range

Key Health Indicators	Goal	[illegible]	[illegible]	[illegible]
Body Mass Index	19 - 25			
Blood Pressure	120/80			
Cholesterol	under 200 mg/dl			
Fasting Blood Sugar	under 100			
Smoking/Tobacco Use	no smoking/using			
Exercise	30 minutes 5 times a week			
Immunizations, Cancer Screenings (gender/age)				
Overall Health Score (how many √s)				

7	Excellent	Successful attainment of all indicators; continue to monitor
5-6	Getting there	3 to 4 key indicators need to be attained
0-4	Take care!	Immediate attention required to reach attainment for better health

Figure 2. An example of NCD scorecard (Myron-Shatz 2010)[3]

Alternatively, the scorecard might measure knowledge of key facts needed to live a healthy life. Individuals could rate themselves against a standard and agencies would be measured on how many of their users successfully achieved the score parameters.

[3] These 'numbers' are presented as an example. Other key indicators such as tests of lung function might usefully be added.

3.4 A PUBLIC HEALTH LITERACY KNOWLEDGE MEASUREMENT TOOL (PLEASANT AND KURUVILLA,2008).

A public health literacy knowledge measurement tool, based on "The Facts for Life" (UNICEF et al., 2002) was tested in China, Mexico, Ghana and India (see Table 1a). The tool developed a series of true and false questions based on the thirteen 'essential Facts for Life messages' covered in the UNICEF et al (2002) publication. The topics include: timing of births; safe motherhood; child development and early learning; breastfeeding, nutrition and growth; immunization; diarrhea; coughs, colds and more serious illnesses; hygiene; malaria; HIV/AIDS; injury prevention; and disasters and emergencies.

TABLE 1B PUBLIC HEALTH LITERACY KNOWLEDGE SCALE- ANSWER TRUE OR FALSE

For a healthy pregnancy and birth, all pregnant women should visit a health worker before the baby is born	**(T)**
Births that are not assisted by a skilled birth attendant are as safe as births that are assisted by a skilled birth attendant	**(F)**
It is normal if children below the age of 1 year weigh the same over a 2-month period	**(F)**
Children who are vaccinated are protected from dangerous diseases	**(T)**
Overall, vaccination has more risks than benefits	**(F)**
Children learn a lot by playing	
Most injuries and accidents cannot be prevented	**(F)**
If a child is breathing rapidly or has difficulty breathing, the child should be taken immediately to a health-care provider	**(T)**
Many diseases can be prevented by washing hands before touching food	**(T)**
Using condoms when having sex can prevent the spread of AIDS	**(T)**
Using mosquito nets helps prevent malaria	**(T)**
Exercise helps prevent heart disease	**(T)**

Coughs and colds only get better with medicine	**(F)**
It is the father's gene that decides whether the baby is a boy or a girl	**(T)**
Antibiotics kill viruses as well as bacteria	**(F)**
Cigarette smoking causes lung cancer	**(F)**
All bacteria are harmful to humans	**(F)**

Pleasant and Kuruvilla suggest (2008) that this scale can meet the needs of researchers concerned with the relationships between knowledge and health and inform advocacy efforts to improve the flow of health information to promote healthy behaviors, prevent and treat individual diseases, conditions or health issues. Moreover, the scale could be used as a core measure for national survey efforts investigating the relationship between knowledge and health similar to the U.S. National Science Board's and Eurobarometer efforts to assess changes and effects of science literacy in society.

3.5 A MEASURE OF HEALTH DEVELOPMENT

Ratzan (2001) and others have proposed that population health literacy should be considered a measure of health development. A population health literacy index which measures a person's skills and the health literacy friendliness of key systems and settings could provide a useful and unique picture of population health competence. Such an index could provide a new type of health index for societies that complements measures such as the disability adjusted life years (DALYs) and morbidity and mortality data (Ratzan 2001; Kickbusch 2002). The IOM Roundtable 2009 heard several presentations of approaches to population health literacy measurement, including geo-mapping using census data and literacy measures (Lurie in Hernandez 2009, p.66) and another imputing health literacy based on patient sociodemographic indicators such as age, education, etc. (Hanchate in Hernandez 2009, p.61). This is an area for future research.

Social Capital

Links have also been made between health literacy and the concept of social capital. Social capital refers to the features of social organisation—such as networks, norms and social trust—that enable participants to act together more effectively in pursuing shared objectives (Putnam 2000; Coleman 1988). A health literacy index may also serve as a measure of social capital as regards health.

WATCH THIS SPACE

The European Health Literacy Survey (HLS•EU) is a project which will measure health literacy in various European regions and cultures and create awareness of its societal and political impact in Europe. First results are expected spring 2011 (http://inthealth.eu/research/health-literacy-hls-eu/measuring-health-literacy-in-europe/).

The HLS•EU is the first international survey of health literacy, yielding datasets for European and national valorization as well as in-depth international analyses.

SECTION 4: WHAT CAN INDIVIDUALS, AGENCIES AND SYSTEMS DO TO STRENGTHEN HEALTH LITERACY?

Health literacy is a society-wide responsibility—it is everybody's business. Useful interventions can be taken in the six domains of activity identified earlier. While health literacy is indeed the product of many societal actors, health care and public health workers have a special responsibility in this area both to enhance their own communication capacities and those of the systems in which they work, as well as facilitating the change and development needed in other sectors and settings.

A NOTE OF CAUTION

While much can be learned from the activities of others, this guide is not promoting the wholesale adoption of any intervention. It is important that any definition of health literacy recognises the potential effect of cultural differences on the communication and understanding of health information (Nutbeam 2000). Native language, socioeconomic status, gender, race and ethnicity, along with mass culture—news publishing, advertising, marketing, and the plethora of health information sources available through electronic channels—all influence health literacy.

4.1 HEALTH SYSTEMS

Complexity of health systems

Advances in medical science, changes in the delivery of care and the adoption of a business approach to health reform in many countries[4] have resulted in less accessible and more complex health systems. These changes all make high health literacy demands on their users. Navigating such health care systems, with their numerous layers of bureaucracy, procedures and processes, can be a challenging task. People often have to choose a provider, make a decision about treatment depending upon the severity of illness, and assess the ease and quality of various treatment options.

[4] The adoption of a business approach to health reform, guided by efficiency outcome measures, has often led to a re-orientation of priorities. Economic values inherent in an industrial and/or for-profit approach have in many places replaced fundamental commitment to access and care for many vulnerable persons, e.g. the poor, elderly and unemployed. Time management of health professional visits, for example, reduces the amount of contact time and opportunities for information exchange between providers (especially doctors) and patients.

They also have to move from community settings to hospitals, and from public to private providers (IOM 2004). An adult's ability or inability to make these decisions and navigate these systems is a reflection of systemic complexity as well as individual skill levels. Patients, clients and their family members are often unfamiliar with these systems. Their health literacy can be thought of as the currency needed to negotiate the system (Selden et al. 2000); or a compass for what may be a difficult and unpredictable journey (Kickbusch & Maag 2008).

Health Literacy enhancement interventions

Health system interventions to improve individual and population health literacy can be divided into four categories:

1. **Provision of simplified/more attractive written materials**
2. **Technology-based communication techniques**
3. **Navigating health systems**
4. **Training of educators and providers**

4.1.1 Provision of simplified/more attractive written materials[5]

Health information materials and official documents—including informed consent forms, social services forms and public health and medical instructions—often use jargon and technical language that make them difficult to use (Rudd et al. 2000, cited in IOM 2004). Moreover, studies suggest that health information is often more difficult to comprehend than other types of information (Root & Stableford 1999).

Most of the approaches in this category involve producing patient information materials that are written with simplified language, have improved format (for example, more white space and friendlier layout), or use pictograms or other graphics. Table 2 describes some key techniques (Doak, Doak & Root 1996).

[5] This section is adapted from *Health Literacy: A Brief Introduction* by Stacy Cooper Bailey, MPH; Michael S. Wolf, PhD MPH; Kara L. Jacobson, MPH CHES; Ruth M. Parker, MD; Scott Ratzan, MD MPH (ICN 2009).

TABLE 2. TECHNIQUES TO SIMPLIFY PRINT MATERIALS

Technique	Explanation
Write in short sentences	Short sentences tend to be easier to read and understand for patients. Sentence length should be less than 15 words, and ideally less than 10 words. Sentences should be written in a conversational style.
Print in large, Sans-Serif font	Text should be written in Sans-Serif font (e.g. Arial) with a minimum font size of 12 pt. Use of all capital letters should be avoided; only the first letter of words in text should be capitalized.
Include sufficient white space	Large margins and adequate spacing between sentences and paragraphs will provide sufficient white space and prevent a document from appearing to be solid text. In general, text should be left-justified for easy reading.
Select simple words	Words that are commonly used in conversation are the best to include in health messages. Shorter words tend to be easier to understand and more familiar to patients.
Provide information in bulleted lists	Bullets help to separate information from the rest of the text. Information provided in lists is often easier and faster for patients to read and comprehend.
Highlight or underline key information	Bolding and highlighting phrases or words can draw attention to essential information for patients. It should be used sparingly to differentiate key sentences or phrases from the rest of the text.
Design passages to be action and goal oriented	Written passages should be action and goal-oriented, and should provide readers with a clear explanation of the purpose of the written material. Passages should clearly define what actions should be taken by the reader and why these actions are necessary.
Group and limit instructional content	Consider grouping information under common headings to promote understanding. Place key information at the beginning of a paragraph and be sure to limit the amount of instructional content that is given to what is essential for the patient to know and understand.

Use active voice	Information written using active voice is easier to understand and more likely to motivate the patient to action.
Avoid unnecessary jargon	Unnecessary jargon can be distracting to patients and often provides little information. Medical terminology should be used as infrequently as possible and, if used, should always be clearly defined and explained to the patient.

Studies have shown that the majority of patients prefer to have print materials provided in clear and concise formats like those described above. All print materials should be simplified regardless of literacy level of target group.

Utilising visual aids. It is helpful to use visual aids in print material and during clinical encounters to help patients remember and process health information. One study demonstrated that people who listened to medical instructions accompanied by a pictograph remembered 85% of what they heard in contrast to 14% for patients who did not receive a visual aid (Houts et al. 2001). Visual materials are useful to teach patients about health conditions that cannot be seen easily—for example, cholesterol in the blood vessels—and to demonstrate how to follow steps to complete a task. Visual materials should be tailored to reflect the culture, age and background of the patient population and should be simple, recognisable and clear. Photographs and visual materials depicting how to correctly engage in health activities are useful methods of transferring health information to patients.

4.1.2 Technology-based communication techniques

The internet, mobile phones and other telecommunication advances allow for instant local-global linkages and cost-effective information transfer and intelligence gathering. These technologies facilitate health literacy by providing people with a choice of information that can be accessed in their own time and allowing them to put their own information on the web. However, the current digital divide is more dramatic than any other inequity in health or income. Access to internet and mobile phone technologies reflects social and economic differences between and within countries. High income countries—which have 16% of the global population and 7% of the global burden of disease—have 94% of internet hosts. Low-income countries, with 84% of the population and 93% of the burden of disease, have only 6% of internet hosts (Dzenowagis 2004).

Interventions

A wide variety of initiatives have tried to enhance access to technologies and address the digital divide. These initiatives include the introduction of low-cost hardware; the creation of 'staging posts' where local intermediaries interpret information for others; language-specific mirror sites (where web pages are regularly translated into local languages); and training programmes for users. Such technologies not only address information access issues for users but can be useful to institutions and governments as an interactive way of gathering feedback on the friendliness of services and information access.

One widely-used type of technology-based communication technique is telephone-delivered interventions (TDIs), in which counselling and health reminders are delivered using the telephone or through text messaging. TDIs can vary by the type of service provider and the extent to which the call is scripted. They may also vary depending on characteristics and responses of the individual, and the extent to which subsequent calls take into account information from other encounters with the individual (IOM 2002).

A systematic review of technology-based communication techniques shows that such decision aids improve knowledge, reduce decisional conflict and stimulate patients to be more active in decision-making without increasing anxiety (O'Connor et al. 1999).

New communication technologies offer educational opportunities that help people to be more involved in their health decisions and treatment. These technologies include web-based learning, audio-visual aids (for example, videos, DVDs, spoken word), interactive games and 'mobile health' (m-health). Mobile devices such as mobile telephones, as well as wireless and satellite communications, are giving remote communities an opportunity to be connected and have access to information. Two out of every three people on the planet now have access to mobile 'phones. Sixty-four percent of all mobile 'phone users live in the developing world. By 2012, half of all residents in remote areas of the world will have mobile phones, compared with 305 million PCs or 11 million hospital beds. (Bloom & Woods 2010). The potential for m-health communications is enormous. M-health is a rapidly evolving communication area and early results support its development as a most powerful interactive channel for health-related communications. Current uses for m-health communication include citizen science (providing researchers with data on risk promotion and behaviours), education and awareness, disease and

epidemic outbreak tracking (providing decision-makers with timely, location-related information), patient diagnostic and treatment support, health care provider training and communications support, and remote patient data collection (Ratzan & Gilhooly 2010).

On the provider side, computerised profiles of individual patients or target populations can be used to tailor existing materials to fit specific situations. This can be done using computer-based algorithms that take various patient characteristics into account. These characteristics might include language, age, gender, ethnicity, reading ability, health literacy level, and the needs and goals of the patient at that time (Revere & Dunbar 2001).

4.1.3 Navigating health systems

Many health systems, particularly at institutional and community level, have tried to make their services more easily navigable by using case managers and navigators to help patients. Navigators can be community health workers, lay or professional, paid or volunteers, but their role is to help patients through the health or social care system. They can be trained to provide health education, interpret health information and assist in obtaining access to services.

Navigators have been shown to help alleviate financial, communication and medical system barriers. They help patients to overcome fear and emotional barriers by providing support. The navigator can act as the patient's advocate in the interval between screening and further diagnosis or treatment, assisting with practical issues such as paperwork for financial support, childcare or transportation problems. They may also translate medical jargon into understandable language, provide education about the disease and its treatment, help the patient to communicate with their doctor and be available to listen to fears and concerns. Such services have been found to improve health outcomes, increase adherence to medical treatment, reduce missed appointments and lower health system costs (Freeman et al. 1995).

4.1.4 Training of educators and providers

Providers should be trained to communicate more effectively to help them care for patients with limited health literacy. Training should focus on improving clinician communication skills and understanding of cultural sensitivities (Frankel & Stein 2001). Furthermore, the need for improved clinician skills in fostering mutual learning, partnership-building, collaborative goal-setting and behaviour change for

chronic disease patients has been identified (Youmans & Schillinger 2003). Training works best when it is informed by users with limited health literacy, who are often under-represented in clinical research (IOM 2004).

BOX 6 : CASE VIGNETTE
CHRONIC DISEASE MANAGEMENT PROGRAMME (IOM 2004)

Researchers and practitioners at the University of North Carolina in USA have developed several chronic disease management programmes that are designed to identify and overcome literacy-related barriers to care. The programmes, which include interventions for diabetes, heart failure, chronic pain and anticoagulation, are led by clinical pharmacist practitioners and trained health educators, who use evidence-based algorithms, a computerised patient registry and literacy-independent teaching techniques to facilitate effective self-care and assure receipt of effective services and medications. The teaching techniques are used in a one-on-one interaction with the patient during clinic visits and feature:

- A teach-back method in which the patient teaches the content back to the educator
- Practical skills rather than complex physiology
- Written educational materials designed for low-literacy users that the educator reviews with the patient
- Follow-up telephone calls and quick visits by the educator when the patient returns to the clinic, that serve to reinforce the education
- A collaborative learning environment based on sensitivity to the role of literacy in communication with patients

In each area, the programme organisers have systematically measured literacy as well as relevant health outcomes. For diabetes and anticoagulation, completed studies have found that these programmes can offset the adverse effects of low literacy.

A typical training programme might introduce providers to the concept of limited health literacy in patient populations, pointing out the implications for the delivery of health care services. It might provide techniques to improve communication with patients who have limited health literacy skills. Programmes

may also include direct instruction and role-play exercises, in which the provider practises counselling the patient (in this case the trainer) with an observer providing feedback (Jacobson 2008).

Improving Verbal Communication. It may not always be possible to identify patients with limited health literacy. Health professionals should use plain language with all patients and avoid the use of medical jargon (Paasche-Orlow et al. 2006). When this is not possible, terms and concepts should be clarified when they arise. Techniques for effective verbal communication are shown in Table 3 below (Paasche-Orlow et al. 2006).

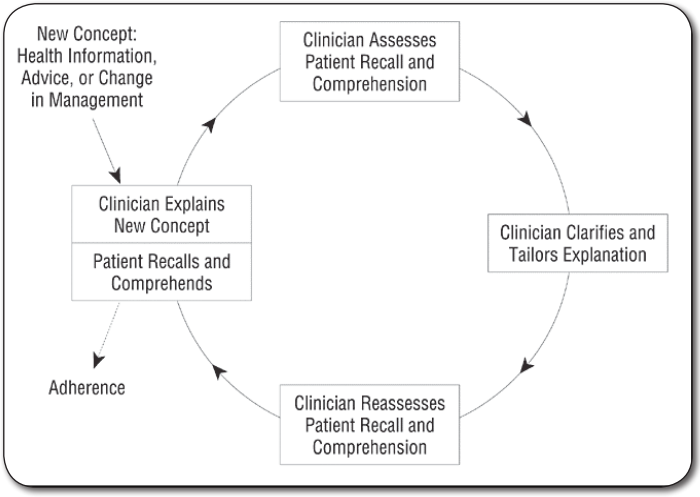
© Photo by Kara Jacobson

A dietician is shown using visual aids. Visual aids can increase verbal communication effectiveness.

TABLE 3. EFFECTIVE VERBAL COMMUNICATION TECHNIQUES

Communication Technique	Explanation
Talk slowly	Slow down the pace of speech when talking with a patient.
Encourage questions	An effective way to solicit questions would be to ask "What questions do you have?" This is an open-ended question and allows the patient more room for possible interactive communication with their provider. Questions such as "Do you understand?", "Do you have questions?", and "Do you think you can (check your blood sugars now)?" are vague and give the patient the opportunity to avoid the question with a simple "no" answer.
Explain things in clear, plain language	Plain, non-medical language should be used. New terms should be defined. Words or expressions that are familiar to patients should be used, such as "pain-killer" instead of "analgesic". Jargon, statistics, and technical phrases should be avoided.
Avoid complex numerical concepts and statistics	Many people do not understand percentages. Patients do not understand all the numbers given to them before they make any treatment decision. Instead of saying, "There is a 20% chance that you will experience X outcome," you can tell the patient "20 out of 100 people will experience X outcome."
Use analogies and metaphors	Analogies should be selected to relate complex concepts to things the patient already knows (e.g., "Arthritis is like a creaky hinge on a door.").
Limit information provided	Limit information to 1-3 key messages per visit. Reviewing and repeating each point helps reinforce the messages. In addition, it is important that other staff should reinforce the key messages.
Verify patient understanding	A "teach-back" or "show me" method should be used to allow the patient to demonstrate understanding and for the health professional to verify patient understanding.
Avoid vague terms	Say "Take 1 hour before you eat breakfast" instead of "Take on an empty stomach."

Health providers should also verify that information provided verbally has been effectively understood by the patient by integrating the 'teach-back' technique into clinical encounters with patients. After describing a diagnosis and/or recommending a course of treatment, the health professional should ask the patient to reiterate what has been discussed by reviewing the core elements of the encounter so far. The health professional should be specific about what the patient should teach back and be sure to limit instruction to one or two main points. If a patient provides incorrect information, the health professional should review the health information again and give the patient another opportunity to demonstrate understanding. Using this method, the health professional can gain assurance that the patient has adequately understood the health information presented. Graph 2 shows how the teach-back technique should be conducted (Bailey et al. 2009).



Graph 2: The teach-back method

4.2 EDUCATIONAL SYSTEMS

Schools and other formal and informal educational establishments play a major role in developing literacy skills and fostering literacy in all countries. Literacy skills may improve health in many direct and indirect ways. They help children and adults to learn about what influences their health, the impact of the choices they make and where to find reliable information. Learning may have benefits in terms of improving attitudes to and competencies for engaging in positive health behaviours and making best use of health services. Literacy improves employment prospects (with associated health gains), either by helping individuals to move out of unemployment or through aiding progression in the labour market. Adult participation in learning may also be beneficial for the next generation in terms of improving their chances of learning and health outcomes. The development of such literacy skills should be a priority and included in all school and adult education programmes, with particular emphasis on parental involvement in early years education.

The opportunity to provide health education also exists within institutional and community-based health services. There is sound justification for embedding health literacy instruction into these settings for children and adults. Educational research has documented the impact of context and content on learning, retention and transfer. This research has shown that learners retain and apply information best in contexts similar to those in which they learned it (Bereiter 1997; Mayer & Wittrock 1996; Perkins 1992).

BOX 7 : CRITERIA FOR HEALTH EDUCATION CURRICULA

(Lohrmann & Wooley 1998)

1. Be research-based and theory-driven.
2. Include information that is accurate and developmentally appropriate.
3. Actively engage students using interactive activities.
4. All students to model and practise relevant social skills.
5. Discuss how social or media influences affect behaviour.
6. Support health-enhancing behaviour.
7. Provide adequate time for students to gain knowledge and skills.
8. Train teachers to effectively convey the material.

For example, children and young people can learn about health and hygiene, nutrition and physical activity while learning about sexual and reproductive health. Information about birth control can be given at the same time as information about the prevention of HIV/AIDS and other sexually transmitted diseases—so-called 'dual protection'. Learning opportunities also exist during immunisation experiences, such that families and recipients understand the disease and the public health benefits of immunisation.

Education and literacy has a positive impact on population health—particularly on women's health and the health of their children (Sen 1999; Nussbaum 2000). It is estimated that two-thirds of the world's 960 million illiterate adults are women. There is a strong positive reciprocal relationship between female education and women's empowerment. Education empowers women by giving them knowledge and a new perspective on their role. It also improves their earning potential. Income for women rises by 10–20% for each additional year of schooling. Educated women are more likely to postpone marriage and childbirth, give better health care to their families, send their children to school and contribute to overall economic growth (Kickbusch 2002; Wils 2002).

© Photo by Kara Jacobson

The development of literacy skills should be a priority and included in all school and adult education programmes, with particular emphasis on parental involvement in early years education.

The educational intervention should be pitched at a level commensurate with age, mental capacity, gender and environment. Programmes for adolescents, for example, might focus on reproductive health (e.g. use of condoms) along with cancer prevention and detection—breast self examinations, testicular examinations and annual cervical smears. In young adults, the issues of communicable and non-communicable disease and the need for parental and childhood vaccination could be reinforced. Young mothers are receptive to learning about recognising and treating childhood illnesses. And interventions for people in their mature years—especially those with chronic illnesses—might focus on self care.

Obstacles to health education initiatives

The World Health Organization (1996) has described several barriers that may impede the implementation of school health programmes. Firstly, policy makers and political leaders—as well as the public at large—often do not fully understand the true impact of modern school health programmes on health. Secondly, some may not support the programmes because the content is considered too controversial, for example those that discuss HIV infection, other prevalent STDs and unintended pregnancy. Thirdly, modern school health programmes require effective collaboration—especially between separate education and health agencies (IOM 2004). Any planned educational intervention will need to address these potential obstacles.

Understanding barriers and facilitators to adult learning

According to Hillage et al. (2009), policy actions and interventions to address social inequities in education (and education-related differentials in health literacy) must be based on a clear understanding of why people do not engage with learning activities, as well as knowing the system and structural barriers and policy enablers. Three reasons why people do not take part in learning have been identified:

- Dispositional: lack of motivation related to perceptions that the learning is not relevant to them, lack of interest or confidence, and previous negative experiences at school.
- Situational: Cost, lack of time and/or transport or childcare and language (especially for non-native speakers) are common situational obstacles.
- Systemic: Poor awareness of options, lack of the necessary information or availability of the right type of course or learning environment may further block participation.

Initiatives which have been shown to stimulate demand for post-16 learning (Hillage & Aston 2001) generate demand through targeted publicity, advice and guidance, flexible offerings and funding options in community settings, workplaces and to specific populations (especially to young people, women, people with skill deficits and underserved communities).

© Photo by Steve Turner

Schools and other formal and informal educational establishments play a major role in developing literacy skills and fostering literacy in all countries. Learning to read and understand labels, for example, is a basic health literacy competence.

4.3 MEDIA MARKETPLACES

For many people media marketplaces—including print, radio, television, internet, mobile phones and public advertising spaces—are a main source of health information. These marketplaces shape people's health perceptions, behaviours and choices even though they often contain information of variable quality that can be more confusing than helpful. Separating fact from fiction requires some well-developed health literacy skills. National health information services, like the NHS Direct in the UK (http://www.nhsdirect.nhs.uk/), can help people decipher the variety of health information. Some quality standards and certifications, such as the Health On the Net (HON) standards (http://www.hon.ch/HONcode/Conduct.html), have been developed for quality control of health web pages but have not yet been applied globally and have not been shown to make websites easier to understand.

Commercial and political interests often dominate the media marketplaces. Industries such as tobacco, alcohol and fast food companies use sophisticated communication techniques which glamorise and promote unhealthy products and lifestyles. Recognising and countering these negative health messages require literacy skills to distinguish credible, reliable and independent information from sales-driven product marketing and advertising.

Interventions

Increasingly, public health advocates and educators are using a wide range of technologies, media and social marketing approaches to get independent evidence-based information to stand out and shape people's perceptions, choices and behaviours.

People need credible, reliable, accessible and understandable information so that they can avoid risky behaviours. This might be about lifestyle choices, mental wellbeing, the control of infectious diseases and environmental threats to health. Such information can help raise people's understanding of risks, enable them to make healthy choices and counteract the negative influences of some industries. Interventions can also be used to shape the development of policies and structures that can protect health—for example smoking bans in public places.

This domain of health literacy activity has been a very active intervention area in all countries. Public information approaches which support health literacy are thought to provide a necessary basis for:

- informed decision-making

- understanding of bias and levels of evidence
- statistics and probabilities, and
- critical thinking skills

Ratzan (2001) points out that in designing effective and understandable health communications it is important that the context and content reflect the realities of people's everyday lives and communication practices.

It is also essential to include the viewpoints and experiences of the target population in the design, implementation and evaluation of all interventions (IOM 2004).

Furthermore, health information that is developed from an interdisciplinary approach, which includes a variety of different health, education, social and cultural perspectives, is more likely to be effective, adopted and successfully diffused within individual communities (Allen 2001; Manderson 1999; Watters 2003).

Social Marketing

Social marketing uses marketing principles alongside socio-psychological theories to develop behaviour change programmes. It takes the planning variables from marketing (product, price, promotion and place—*see Box 8 below)* and reinterprets them for health issues. It seeks to address and adjust where needed the psychological, social and economic contexts that surround behaviour choices (NSMC 2007a; Hastings 2007[6]). Social marketing approaches focus on the needs of well-defined consumer groups—a shortcoming of 'traditional' public health communication. A key principle is that if you try to reach everybody, you reach nobody.

[6] Gerard Hastings' book provides a series of instructive case studies, to which the reader is referred.

BOX 8 : THE 'FOUR PS' OF SOCIAL MARKETING

Product refers to something the consumer must accept: an item, a behaviour, or an idea. In some cases, the product is an item like a condom, and in other cases it is a behaviour such as not drinking and driving. Price refers to psychological, social, economic, or convenience cost associated with message compliance. For example, the act of not drinking in a group can have psychological costs of anxiety and social costs of loss of status. Promotion pertains to how the behaviour is packaged to compensate for costs—what are the benefits of adopting this behaviour and what is the best way to communicate the message promoting it. This could include better health, increased status, higher self esteem or freedom from inconvenience. Finally, place refers to the availability of the product or behaviour. If the intervention is promoting condom use, it is essential that condoms be widely available. Equally important to physical availability, however, is social availability. Condoms are more likely to be used when such use is supported and reinforced by peer groups and the community at large.

(Wallack et al. 1993, p22)

Edutainment

Educational entertainment approaches—so-called 'edutainment'—have been shown to have a positive impact upon learning and action by target audiences. For example, studies indicate that discussions of immunisation on soap operas in some countries have actually increased the number of mothers seeking vaccinations for their children (Glik et al. 1998).

4.4 HOME AND COMMUNITY SETTINGS

People are called upon to make daily health-related decisions in their homes and communities. Families, friends, peers and community resources are key sources of health information. These sources model behaviours and shape the early and continuing development of functional health literacy skills related to product and service choices. They also provide basic information about health-promoting, health-protecting and disease-preventing behaviours, as well as self- and family care, 'alternative therapies', available support services and first aid.

4.4.1 Challenges

Chronic diseases

According to WHO (cited in Pruitt & Epping-Jordan 2005), chronic diseases—for example diabetes, emphysema, heart disease and cancer—currently account for more than half of the global disease burden in both developed and developing countries. People with chronic diseases have more health literacy demands, such as the need for self management (*see below*), the need to coordinate care with multiple providers and the ability to manage multiple, lifelong prescription medications. These people, however, often have poorer health literacy skills.

Patients with chronic diseases and limited health literacy have been shown to have poor knowledge of their condition and of its management. They also experience difficulties with oral communication. A study of patients with diabetes found that poor health literacy was associated with worse blood sugar control and higher rates of complications such as retinopathy, blindness, heart disease and strokes (Schillinger et al. 2004; Williams et al. 1998a, 1998b).

WHO and several international health professional associations have called for major changes in health workforce training to develop the provider skills required to meet the health literacy and other needs created by the prevalence of chronic illness. Skills called for include the ability of providers to support self-managed care, build more partnership-based provider–patient relationships and communicate more effectively (Pruitt & Epping-Jordan 2005).

Self management

In the past, patient health management was primarily the physician's responsibility. However, in many health systems people are increasingly encouraged to take more responsibility for their own health. To make appropriate self-management decisions,

people must locate health information, evaluate the information for credibility and quality and analyse risks and benefits. Furthermore, people must be able ask pertinent questions and express health concerns clearly by describing symptoms in ways the providers can understand (IOM 2004).

Moreover, people are increasingly challenged to make sound health decisions in many contexts of daily life. For example, they have to read and understand product labels and warnings; make lifestyle choices about food, activity, cigarettes and drugs; and evaluate the safety of chemicals in products they buy. Such decision making requires an understanding of the benefits of being healthy and information about personal health issues. All of these everyday demands require people to be able to assess their current health and consider and deal with the many socioeconomic factors and cultural values that influence it. For all this they need to have health literacy competencies that allow them to take responsibility for their own and their family's—and, where necessary, their community's—health (Kickbusch & Maag 2008).

Finally, many people use alternative therapies. This includes traditional healing approaches, nutritional supplements, acupuncture, homeopathy and a wide variety of other therapeutic and healing techniques. The estimated global market for such interventions equals or exceeds allopathic health care markets in many countries. The need to make choices between alternative approaches and standard medical care creates further challenges.

Community participation

Community participation aims to identify, shape and advance shared interests in priority issues for community health. This might be investment in education for self-care, increased penetration of vaccinations, elimination of vectors and control of sexually transmitted diseases. Investment in such participatory health literacy skill development can help individuals use systems more effectively and also serve as catalysts for change, when needed, within systems (IOM 2004).

4.5 WORKPLACE SETTINGS

The workplace directly influences the physical, mental, economic and social wellbeing of workers and, in turn, the health of their families, communities and society. It offers an infrastructure to improve health literacy through educational and health promotional interventions.

By providing clear and consistent health messages to employees, employers can help prevent accidents and lower the risk of industrial or occupational diseases. Health-promoting work environments go further, with specific health and wellbeing policies and dedicated support for employees to address lifestyle choices, such as alcohol and drug use, and stress factors, including job security, demand–control, effort–reward in the workplace and issues related to achieving an appropriate work–life balance.

Workplace health promotion

WHO (2008) has defined workplace health promotion as the combined efforts of employers, employees and society to improve the health and wellbeing of people at work. It places particular emphasis on improving the work organisation by increasing workers' participation in shaping the working environment and encouraging professional development.

Workplace health promotion focuses on a number of factors, such as the promotion of healthy lifestyles and non-occupational factors in the general environment. Non-occupational factors include family welfare, home and commuting conditions, and community factors (and risks) which affect workers' health.

While some health promotion activities in the workplace tend to focus on a single illness or risk factor (for example, HIV/AIDS or heart disease) or on changing personal behaviours (for example, smoking and diet), there is growing appreciation that there are multiple determinants of workers' health. In addition to person-focused interventions, workforce health promotion initiatives have moved toward a more comprehensive approach, which goes beyond safety issues and acknowledges the combined influence of personal, environmental, organisational, community and societal factors on employee wellbeing.

WHO has introduced the concept of the health promoting workplace (HPW) as an integrated way of paying proper attention to workers' health and safety. HPW programmes aim to:

- Help workers make healthier decisions and choices for themselves and their families;
- Reduce workplace-related health risks;
- Enhance awareness and action regarding protecting health from work-related environmental factors (e.g. pollution control);
- Influence occupational health and safety programmes so they help reduce worker and community risks;
- Use the workplace setting for medical diagnosis, health screening and assessment of functional capacities; and
- Link with other community-based activities related to major diseases (e.g., HIV/AIDS, heart disease) as part of larger disease prevention and control strategies. (WHO 2008)

4.6 POLICY-MAKING ARENAS

Policies at all levels—institutional, community, national and regional—shape the factors which determine health literacy and health. The engagement of citizens in policy-making processes is a fundamental democratic principle. Furthermore, a key trend in many health system reforms is empowerment of patients and the development of more patient-centred care. To function effectively in politics and policy-making, people need the ability to advocate for policy change; be active citizens (for example, have a vote); be knowledgeable about health rights and responsibilities; and be able to participate in health organisations.

Challenges

Financial crisis

The world is confronting a severe financial crisis at a time when it is also facing major energy and environmental problems and wide social inequalities. While the crisis has global roots, its impact is already being felt unequally between regions and countries (WHO 2009). Many experts point to long-lasting consequences for health all over the world. The crisis may lead to an opportunity to trigger significant changes in social norms, lifestyles and health-related behaviours or it could lead to a widening of social inequalities and further health literacy disparities.

Social determinants and health inequities

The Commission on the Social Determinants of Health (CSDH 2008) makes a strong case for the root causes of health and health literacy inequities as being based on structural societal factors, such as income differentials, lack of social protection or universal health care access. They call for society-wide action to address these factors and to reduce differential exposures to risks, differential vulnerabilities to both acute and chronic disease, and differential outcomes of care that poorer people in every country experience on a socially determined gradient. This social health gradient means that each successive social class is worse off with regards to their health than the class just above them.

Numerous studies (*see section 2 above*) demonstrate that poor health literacy skills are associated with a wide variety of negative health outcomes. Furthermore, studies point to clear social class differences in health literacy skills (Kickbusch et al. 2008). The CSDH does not deal directly with the issue of health literacy in their report. The relationship of health literacy to socially determined inequities is an important area for further study. This guide sees health literacy as a differential capacity that

results from the same structural factors which the CSDH identifies as underpinning all other health inequities.

Enhancing health literacy and improving the health literacy friendliness of key sectors and settings may help address some of the differential health outcomes of poorer people. Importantly, in the process of addressing health literacy needs of individuals in key societal 'domains of influence', greater awareness of the underlying causes of health inequities will emerge and with it broader support and advocacy action for the societal changes being called for by the CSDH.

Advocacy

This guide sees advocacy as an important part of the health literacy skills continuum. Advocacy, as discussed here, applies mainly to policy changes in systems. These 'systems' include any institution, community, citizen group, association or agency, governmental or non-governmental, public or private, national or international, that can influence individual and community health.

BOX 9 : A DEFINITION OF ADVOCACY

(Apfel 2008)

Blending science, ethics and politics, advocacy is self-initiated, evidence-based, strategic action that people can take to help transform systems and improve the environments and policies which shape their own and others' behaviours and choices, and ultimately their health.

A note of caution

The recommendations in this section of the guide focus on advocacy approaches in democratic countries. Advocacy assumes that people have rights and that these rights are enforceable: for example, the right to voice opinions openly as well as the right to adequate health care, pollution-free environments, employment and housing. Advocacy often focuses on ensuring that these rights are exercised, respected and addressed. Advocacy approaches are potentially effective only in political environments where:

- policy-makers can be influenced by public opinion; and/or
- governments can and do take action to protect the rights of their citizens; and/or

- there is an open and free media through which people can express themselves/ find a voice (Sen 1990).

Where these public freedoms do not exist, the most effective way of changing policy may not be through direct advocacy. It may require action from outside the country, from international agencies, and from actual and potential economic partners, as for example during apartheid in South Africa (Sida 2005). Anyone advocating for change in undemocratic environments may be putting themselves at risk and are advised to take a strategic, long-term perspective and, where possible, strengthen links with appropriate international advocacy groups.

SECTION 5: MESSAGES TO KEY STAKEHOLDERS

General Public

1. Strengthen your own health literacy—engage with formal and informal education systems.
2. Ask and act—seek out information from health providers, systems and other reliable sources. Where access is denied, advocate for change.
3. Support others—join forces with others in patient associations or community groups seeking enhanced alignment between skills and demands.

Policy Makers

1. Recognise the importance of strengthening health literacy and that improvements in health equity, affordability and quality require health literacy.
2. Put health literacy on the agenda. Develop policies that support health literacy development.
3. Fund necessary research.

Health Professionals and Advocates

1. Approach health literacy with 'universal precaution': i.e., assume everyone has weak health literacy skills and pay careful attention to all communications. Weak health literacy is common and often undisclosed.
2. Create health literacy friendly health care settings. Adapt materials, forms and signs accordingly. Make navigation easier.
3. Enhance your communications skills. Provide information in accessible, understandable and culturally sensitive ways. Professional schools and professional continuing education programmes in health and related fields, including medicine, dentistry, pharmacy, social work, anthropology, nursing, and public health, should incorporate communications into their curricula and areas of competence.
4. Advocate for system change where needed. Use your professional associations and cultural authority to catalyse policy and structural changes needed to strengthen people's skills and systems' healthy literacy friendliness.

Researchers

1. Develop and test assessment tools which can measure skills and abilities and demands and complexities. Current assessment tools and research findings cannot differentiate among (1) reading ability, (2) lack of background knowledge in health-related domains, such as biology, (3) lack of familiarity with language and types of materials, and (4) cultural differences in approaches to health and health care. No current measures of health literacy include oral communication, writing, advocacy and citizenship skills and none measure the health literacy demands on individuals within different contexts.
2. Develop causality models that can explain the relationships between skills and demands at different life stages and in different settings.
3. Evaluate interventions. There is a need for more intervention-based evaluations with guidance on efficacy and efficiency.

Educators

1. Use all formal and informal settings to teach health literacy. Educators should take advantage of all opportunities to transfer relevant health-related information.
2. Use new approaches and technologies. There is a need to develop more non-reading solutions, recognising that addressing health literacy goes beyond better-written communications.
3. Pay attention to different needs throughout the lifespan.

SECTION 6: BUILDING NATIONAL AND LOCAL HEALTH LITERACY ACTION PLANS

1. **Recognise the problem and its significance. Include health literacy on your action agenda.**
   - Assess health literacy among your target populations.
   - Measure the alignment of skills/abilities with task demands/complexity. Both must be measured. The goal is for both to be 'health literate'.
   - Identify and monitor indicators that will reflect progress toward aligning skills with demands.
   - Measure skills and abilities on multiple levels. What gets measured gets done.

2. **Support improvements in education and information access.**
   - Make health literacy skills an essential element on school agendas.
   - Help children and adults opt for healthy choices in everyday life.
   - Help people access and evaluate reliable sources for health information.

3. **Build health literacy friendly systems that better align demands with skills.**
   - Identify the specific health demands/tasks for targeted health actions.
   - Understand and simplify navigational demands.
   - Sensitize and train providers.
   - Identify and communicate essential information and desired behaviours in an accessible, understandable and culturally sensitive way.

4. **Set, measure and evaluate goals for improved alignment of skills/ ability with task demands/complexity.**

Tasks: How complex are they?

Information: Is it understandable?

Navigation demands: Can they be simplified?

5. **Engage with members of your target population at all stages of planning, implementation and evaluation.** The real experts in health literacy are those with trouble understanding what they must do to take care of their health.

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WHCA gratefully acknowledges support from WHO Healthy Cities Programme Liverpool, the International Alliance of Patients' Organizations and Johnson & Johnson in the production of this publication.

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