World Health Organization
REGIONAL OFFICE FOR **Europe**
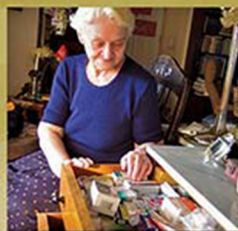
Health Literacy

Healthy Cities 21st Century

Health literacy
The solid facts

Editors: Ilona Kickbusch, Jürgen M. Pelikan, Franklin Apfel & Agis D. Tsouros

ABSTRACT

This publication makes the case for policy action to strengthen health literacy. Evidence, including the results of the European Health Literacy Survey, is presented that supports a wider and relational whole-of-society approach to health literacy that considers both an individual's level of health literacy and the complexities of the contexts within which people act. The data from the European Health Literacy Survey show that nearly half the Europeans surveyed have inadequate or problematic health literacy. Weak health literacy skills are associated with riskier behaviour, poorer health, less self-management and more hospitalization and costs. Strengthening health literacy has been shown to build individual and community resilience, help address health inequities and improve health and well-being. Practical and effective ways public health and other sectoral authorities and advocates can take action to strengthen health literacy in a variety of settings are identified. Specific evidence is presented for educational settings, workplaces, marketplaces, health systems, new and traditional media and political arenas.

Contents

Foreword

The WHO Solid Facts series was launched 15 years ago as an accessible source of intelligence on important and promising public health topics deemed worthy of more policy attention and action. It has two purposes. First, it aims to distil the best available evidence on these topics based on often-complex scientific studies and reviews. Second, it identifies policy implications and action points that could convert these ideas into realities. Importantly, in addressing these goals, the Solid Facts series has also appraised the strength of available evidence and identified where research and more solid facts are needed. Distilling evidence is especially challenging for cutting-edge public health concepts and the need to attract the attention of decision-makers. The strength and the extent of the available evidence may vary depending on the subject area, setting, health system or methods applied.

Several factors make health literacy a compelling and timely topic in the Solid Facts series. Literacy and health literacy are fundamental components of pursuing health and well-being in modern society. As societies grow more complex and people are increasingly bombarded with health information and misinformation and confront complex health care systems, becoming a health-literate person has become a growing challenge. Importantly, we now understand that poor health literacy adversely affects people's health. Literacy has been shown to be one of the strongest predictors of health status along with age, income, employment status, education level and race or ethnic group. Nevertheless, although understanding of literacy and health literacy as critically important determinants of health continues to grow, they remain neglected areas of public health action and research. This publication aims to help to change this situation.

To this end, this publication provides a concise overview of evidence on health literacy. Most evidence, until recently, has come from the United States of America and mainly focuses on people's functional health literacy (people's ability to read and understand basic health-related information) and the management of chronic diseases. The European Health Literacy Survey, summarized here, has generated a rich new source of high-quality data on the comprehensive health literacy of general populations that enables comparisons both within and between countries and has made major inequities visible. Importantly, the European Health Literacy Survey tools can serve as a basis for strengthening capacity to measure how the many promising interventions described here may affect population health.

This publication emphasizes information about practical and effective ways public health and other sectoral authorities and advocates are taking action to strengthen people's health literacy. It especially focuses on the health literacy–friendliness of the various

settings in which people live, play and work. In doing so, it remains well grounded in the values and principles put forward by the Ottawa Charter for Health Promotion. We hope the book will be used as a tool for spreading awareness, stimulating debate and research and, above all, for informing policy development and action.

Health literacy is a key dimension of Health 2020, the European health policy framework adopted by Member States in 2012. Health literacy is both a means and an outcome of actions aimed at promoting the empowerment and participation of people in their communities and of people in their health care. Taking action to enhance health literacy provides a unique platform for the health sector and its own organizations and professionals to demonstrate their leadership capacity. As described here, addressing health literacy requires a whole-of-society approach – many sectors, settings and actors need to work together to improve the health literacy of individuals and communities and to make environments easier to navigate in support of health and well-being.

This book is the result of a systematic and comprehensive effort to review scientific and experiential evidence and to identify implications for policy and interventions, drawing on the expertise, suggestions and inputs of individuals from many academic centres and disciplines as well as frontline practitioners in various sectors and settings. Although much remains to be learned, especially about the effectiveness and efficiency of interventions in various settings, such as mass media and social media, growing European and global studies, surveys and experience provide a rich and promising evidence base on which to draw.

Finally, a special word of thanks is given to the editorial team for the effective way they drove and coordinated the whole preparation process and for their excellent editorial work.

Zsuzsanna Jakab
WHO Regional Director for Europe

Note of caution

Although much can be learned from the activities of others, this guide is not promoting the wholesale adoption of any policy or programme intervention. Policies are subject to political systems and actors and require understanding the context in which they are to effect change. Any planned programme intervention should also recognize the potential effect of cultural differences on the communication and understanding of health information. 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 the choice of health literacy interventions.

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Introduction

Knowledge societies in the 21st century confront a health decision-making paradox. People are increasingly challenged to make healthy lifestyle choices and manage their personal and family journeys through complex environments and health care systems but are not being prepared or supported well in addressing these tasks. "Modern" societies actively market unhealthy lifestyles, health care systems are increasingly difficult to navigate (even for the best educated people), and education systems too often fail to provide people with adequate skills to access, understand, assess and use information to improve their health.

This paradox has resulted in a *health* literacy crisis in Europe and beyond. The recent European Health Literacy Survey found that nearly half of all adults in the eight European countries tested have inadequate or problematic health literacy skills that adversely affect their health literacy.

Weak health literacy competencies have been shown to result in less healthy choices, riskier behaviour, poorer health, less self-management and more hospitalization. They significantly drain human and financial resources in the health system. Policy action to address the health literacy crisis has been slow to emerge at all levels. This publication aims to help to change this situation. The range of evidence presented supports a wider and relational concept of health literacy that considers both an individual's level of health literacy and the complexities of the contexts within which people act (Fig. 1). Both need to be measured and monitored.

Fig. 1. Interactive health literacy framework

Skills and abilities → **Health literacy** ← Demands and complexity

Source: Parker R. Measuring health literacy: what? So what? Now what? In Hernandez L, ed. *Measures of health literacy: workshop summary, Roundtable on Health Literacy.* Washington, DC, National Academies Press, 2009:91–98.

Part A focuses on why policy action to address health literacy is needed. A case is made for viewing inadequate or problematic health literacy as a key determinant of health, a high-prevalence problem, a drain on human and financial resources and an obstacle to development.

Part B focuses on how action in a range of settings and sectors can enhance health literacy. Evidence is presented on how these actions can combine to empower and enable people to make sound health decisions in the context of everyday life – at home, in the community, at the workplace, in the health care system, in the educational system, in the marketplace and in the traditional and social media.

Part C focuses on building policy to support the strengthening of health literacy at the global, regional, national and local levels.

Each chapter focuses on an issue, presents evidence for why this issue is important and identifies a range of evidence-informed interventions that have been shown to work (Box 1). A list of useful sources is provided for each topic.

Key sources

Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012. Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

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Box 1. Note of clarification

The field of health literacy is a work in progress. Because health literacy is complex, it is not very amenable to randomized controlled trials. Evidence was included if the editors and reviewers felt that the intervention is reasonably certain to strengthen health literacy. These promising interventions – to use a term introduced by the Institute of Medicine of the United States National Academies – are described with the hope that they will attract the interest and support of policy-makers, be rigorously tested and, if found to be cost-effective, brought to scale. This book is intended for multiple audiences. Policy-makers and those who advise them can take note and develop legislation, assign resources and create programmes based on the priorities identified and actions recommended. Public health practitioners and those from other sectors can look at where their practices fit and do not fit with the action identified and (1) share their experiences to build a richer inventory of health literacy initiatives; (2) seek collaboration with others who are engaging in similar activities to build intersectoral synergy; and (3) support the collection of evaluation data to examine and document promising practices.

A

Making the case for investing in strengthening health literacy

Health literacy has gained considerable attention across the globe in recent years. Research from around the world is quickly deepening understanding of the vast potential that optimizing health literacy can have in improving health and well-being and reducing health inequities. Nevertheless, most of this research is still based on small populations with a focus on the functional health literacy of patients. That is why the results of the European Health Literacy Survey have represented such a breakthrough and encouraged this publication. Part A introduces the concept of health literacy and reviews three key evidence-informed arguments that can be made in advocating for policy action and investing in strengthening population health literacy and the health literacy–friendliness of the systems within which people seek and use information.

The first section introduces the European Health Literacy Survey. The second topic argues for the importance of health literacy as a determinant of health – one that is closely related to other social determinants of health such as general literacy, education, income and culture. The relationships between noncommunicable diseases and health literacy are discussed as an example. Third, key results of the European Health Literacy Survey are presented that show a very high prevalence of inadequate and problematic health literacy across Europe. How health literacy relates to migrants and minority populations is presented as an example. Finally, the ways health literacy can enhance the resilience of both individuals and communities are reviewed. An example from the Netherlands is presented.

Key source

D'Eath M, Barry MM, Sixsmith J. *A rapid evidence review of interventions for improving health literacy*. Stockholm, European Centre for Disease Prevention and Control, 2012.

1

European Health Literacy Survey

People cannot achieve their fullest health potential unless they are able to take control of those things which determine their health.

Ottawa Charter for Health Promotion[1]

Health literacy is linked to literacy and entails people's knowledge, motivation and competences to access, understand, appraise and apply health information in order to make judgements and take decisions in everyday life concerning health care, disease prevention and health promotion to maintain or improve quality of life during the life course.

Health literacy defined

Health literacy has been defined in many different ways since it was first introduced as a term and concept. This book uses a broad and inclusive definition developed in 2012 by the European Health Literacy Consortium:

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[1] The First International Conference on Health Promotion, meeting in Ottawa in 1986, responding to growing expectations for a new public health movement around the world defined and outlined principles and action areas for health promotion. The Ottawa Charter for Health Promotion defined health promotion as "the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being."

Conceptual model of the European Health Literacy Survey

Many conceptual approaches to health literacy have been developed during the past decade. This publication follows the conceptual model developed by the European Health Literacy Consortium for the European Health Literacy Survey (Fig. 2), which identifies 12 subdimensions of health literacy related to competencies of accessing, understanding, appraising and applying health-related information within health care, disease prevention and health promotion settings (Table 1).

This model and definition, which integrates medical and public health views of health literacy, was developed through a systematic literature review and content analysis of 17 peer-reviewed definitions and 12 conceptual frameworks found in extensive literature reviews. The model can serve as a basis for

Fig. 2. Conceptual model of health literacy of the European Health Literacy Survey
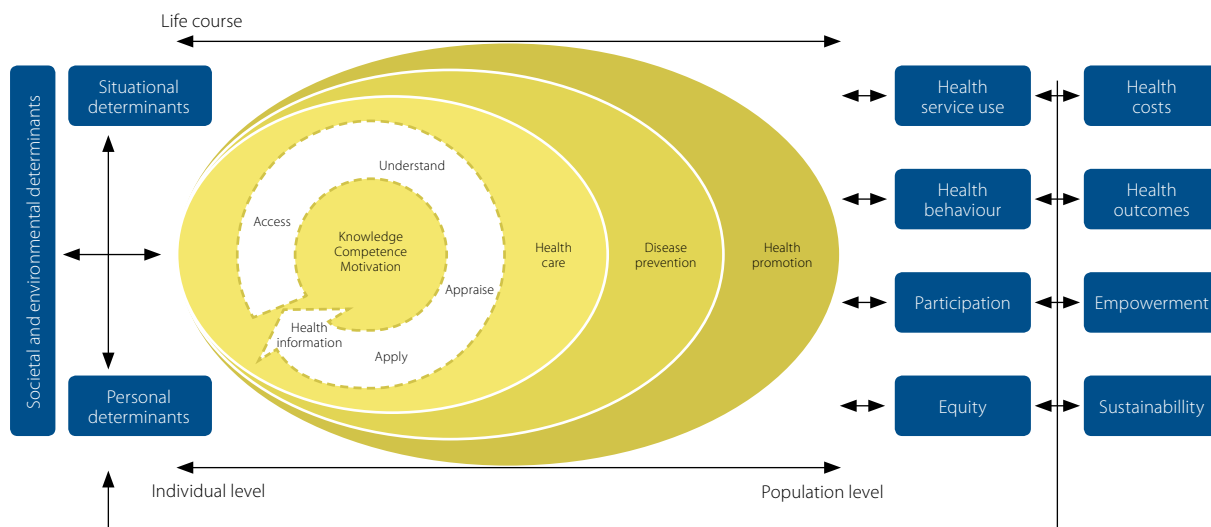
Source: adapted from: Sørensen K et al. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health,* 2012, 12:80.

developing interventions for enhancing health literacy and has provided a conceptual basis for developing and validating measurement tools, capturing the dimensions of health literacy within health care, disease prevention and health promotion settings. A comprehensive instrument to measure health literacy, the European Health Measurement Instrument, was constructed with 47 questions measuring the perceived difficulty of health-relevant tasks such as:

- understanding what your doctor says to you;
- assessing whether the information about illness in the mass media is reliable;
- finding information on how to manage mental health problems such as stress or depression;

- understanding information on food packaging; or
- participating in activities that improve health and well-being in your community.

This questionnaire has been tested on populations with sample sizes of 1000 in eight European countries: Austria, Bulgaria, Germany (North Rhine–Westphalia), Greece, Ireland, the Netherlands, Poland and Spain.

How was health literacy measured?

A comprehensive general index of health literacy was constructed using the scores on the 47

Table 1. The European Health Literacy Survey: the 12 subdimensions as defined by the conceptual model

Health literacy	Access or obtain information relevant to health	Understand information relevant to health	Appraise, judge or evaluate information relevant to health	Apply or use information relevant to health
Health care	**1)** Ability to access information on medical or clinical issues	**2)** Ability to understand medical information and derive meaning	**3)** Ability to interpret and evaluate medical information	**4)** Ability to make informed decisions on medical issues
Disease prevention	**5)** Ability to access information on risk factors	**6)** Ability to understand information on risk factors and derive meaning	**7)** Ability to interpret and evaluate information on risk factors	**8)** Ability to judge the relevance of the information on risk factors
Health promotion	**9)** Ability to update oneself on health issues	**10)** Ability to understand health-related information and derive meaning	**11)** Ability to interpret and evaluate information on health-related issues	**12)** Ability to form a reflected opinion on health issues

Source: adapted from: Sørensen K et al. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health,* 2012, 12:80.

questions and transformed into a scale from 0 to 50, where 0 represents the lowest and 50 the highest health literacy score. Based on this, thresholds and ranges for four levels of health literacy were defined: inadequate, problematic, sufficient and excellent health literacy. To identify vulnerable groups, limited health literacy was defined as inadequate or problematic health literacy. These data allow for comparisons both within and between these countries and have made major inequities visible. See Chapter 3 for more details.

Key sources

Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012. Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

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Sørensen K et al. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health,* 2012, 12:80.

2

Health literacy – a key determinant of health

… literacy is a stronger predictor of an individual's health status than income, employment status, education level and racial or ethnic group.

Weiss Health literacy and patient safety: help patients understand. Manual for clinicians

What is known

1. **High literacy rates in population groups benefits societies**. Literate individuals participate more actively in economic prosperity, have higher earnings and employment, are more educated and informed and contribute more to community activities and enjoy better health and well-being.

2. **Limited health literacy (as measured by reading skills) significantly affects health**. Limited health literacy is associated with less participation in health-promoting and disease detection activities, riskier health choices (such as higher smoking rates), more work accidents, diminished management of chronic diseases (such as diabetes, HIV infection and asthma), poor adherence to medication, increased hospitalization and rehospitalization, increased morbidity and premature death. The European Health Literacy Survey used a more comprehensive measure of health literacy to demonstrate a strong and continuous correlation between health literacy and self-assessed health (Fig. 3). Further, other models including other relevant social determinants of health and health literacy as independent variables have shown that health literacy influences self-assessed health. Thus, health literacy can be assumed to have a specific direct and independent effect on self-assessed health.

3. **Limited health literacy follows a social gradient and can further reinforce existing inequalities**. People with limited health literacy most often have lower levels of education, are older adults, are migrants and depend on various forms of public transfer payments. How limited general literacy affects people's health cannot always be clearly separated from how limited health literacy affects people's health. This is an ongoing debate. The European Health Literacy Survey confirms a social gradient for education, by showing that health literacy is significantly higher among people with more education in all participating countries, but this differs somewhat between countries (Fig. 4).

4. **Building personal health literacy skills and abilities is a lifelong process**. No one is ever fully health literate. Everyone at some point needs help in understanding or acting on important health information or navigating a complex system. Even highly educated individuals may find health systems too complicated to understand, especially when a health condition makes them more vulnerable.

5. **Capacity and competence related to health literacy vary according to context, culture and setting**. They depend on individual and system factors. These factors include communication skills, 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. When these services or systems, for example, require knowledge or a language level that is too high for the user, health suffers.

6. **Limited health literacy is associated with high health system costs**. Limited health literacy cost more than US$ 8 billion, an estimated 3–5% of the total health care budget in Canada in 2009. In 1998, the United States National Academy on an Aging Society estimated that the additional health care costs caused by limited health literacy were about US$ 73 billion.

Fig. 3. Self-assessed health status according to scores on the General Health Literacy Index for the 7780 respondents in the European Health Literacy Survey
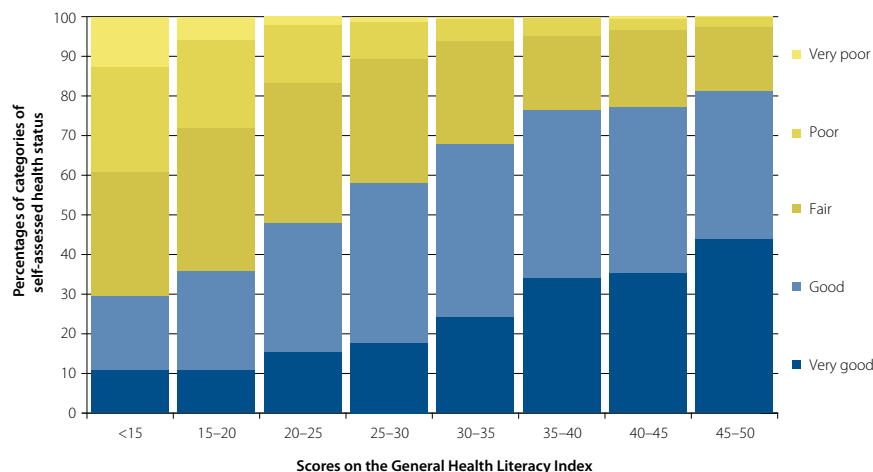
Source: adapted from: *Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012*. Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

There are no comparative data for European health systems yet, but weak health literacy is also expected to drain the resources of health systems in European welfare states that provide nearly universal access.

What is known – promising action areas

1. **Approach health literacy as a whole-of-government and whole-of society issue**. Health literacy is not only the responsibility of individuals or of policy-makers or professionals in the health sector ; rather, it crosses multiple boundaries, professions and sectors (Fig. 5). Multiple stakeholders need to be involved. Initiatives to build health literacy must be grounded in the settings of everyday life (see Part B).

2. **Involve multiple health literacy stakeholders**. Although Fig. 5 depicts the connections between stakeholders as being rigidly linear and radiating outwards like spokes on a wheel, they

Fig. 4. Mean scores on general health literacy by level of education in accordance with the International Standard Classification of Education (levels with _n_ > 10) for each country and the 7770 respondents
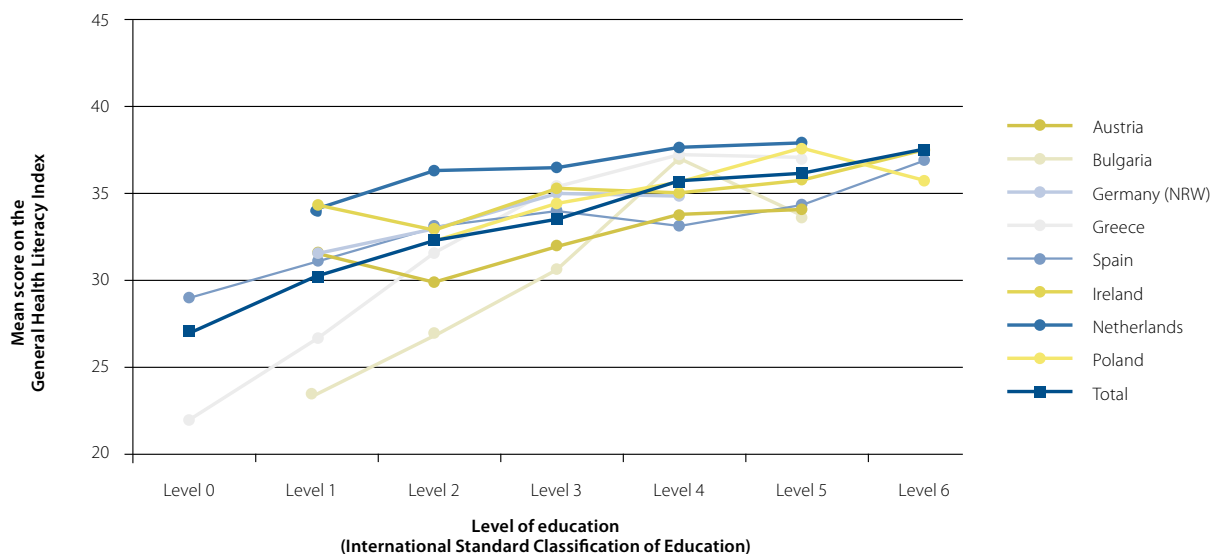
Source: adapted from: _Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012._ Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

more accurately crisscross and intersect "... like a tangled pile of spaghetti, weaving in and out of other paths that rarely ever leave the plate" (Christakis & Fowler, 2009). In so doing, they illustrate the complex interconnectedness between and among the myriad stakeholders at every level of public service.

3. **Develop plain-language initiatives**. Plain language means communication that the listener or reader can understand the first time they hear or read it. Providing meaningful and reliable information is required to build health literacy. Health information materials should be sensitive to differences and diversity in cultures, sex, age and individuals in their content and format (Box 2).

Fig. 5. Major stakeholders involved in health literacy
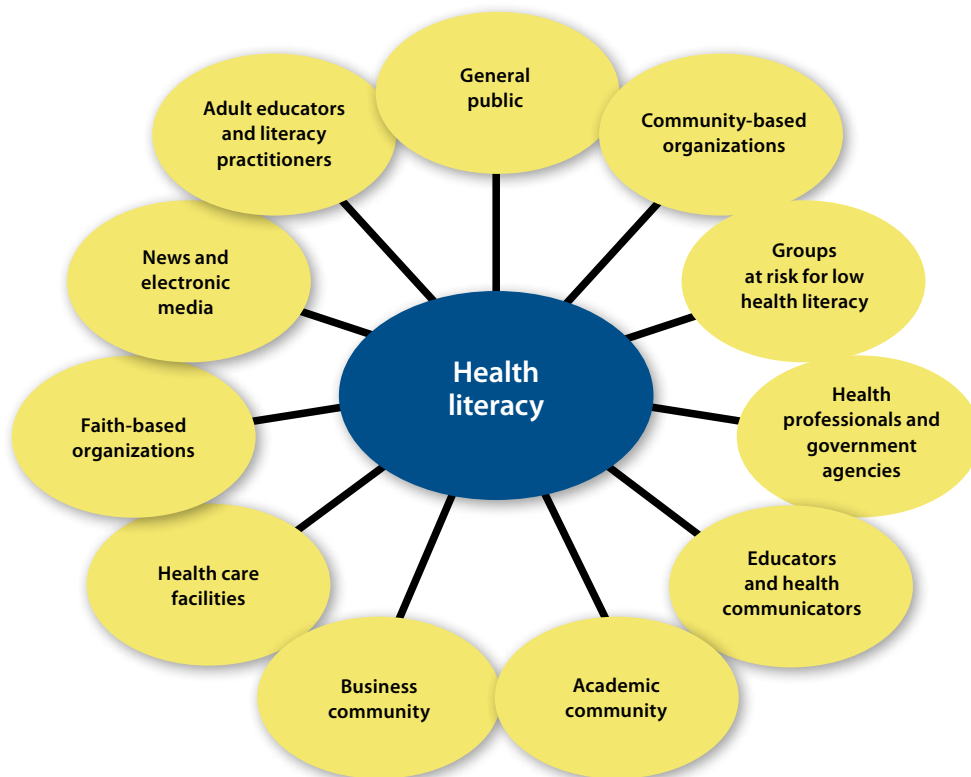
Source: adapted from: Mitic W, Rootman I. *An intersectoral approach for improving health literacy for Canada; a discussion paper*. Vancouver, Public Health Association of British Columbia, 2012.

Box 2. Plain-language initiatives

The European Commission launched a Clear Writing campaign in 2010 to make all types of documents, in all languages, shorter and simpler. In the United Kingdom, the plain-English movement has existed since the late 1970s. Many government offices, such as the Office of Fair Trading, have encouraged the spread of plain language by requiring it in certain consumer contracts. The other main actors in plain English include local authorities, health services and large financial corporations. In Finland, the new government, installed in 2011, is promoting plain language in legislation, administration and communication with citizens. Other countries such as Sweden, the United States of America, Germany and Australia also have plain-language initiatives and/or legislation.

4. **Invest in measurement and research**. Surveys of health literacy and the health literacy–friendliness of systems should be conducted. Research to support effective intervention needs funding. A first important step in this direction at the European level has been the European Health Literacy Survey, which should be extended to more countries of the European Union and of the WHO European Region and repeated at regular intervals.

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Example: noncommunicable diseases

What is known

1. **Increasing rates of noncommunicable diseases**. Noncommunicable diseases are the leading causes of death across the WHO European Region. More than 75% of all deaths are caused by one of four chronic diseases: cancer, heart disease, diabetes and respiratory disease (Fig. 6). Noncommunicable diseases frequently result in chronic conditions, and health literacy plays a crucial role in enabling people to manage chronic diseases themselves. A growing number of people have one or two chronic conditions as they get older, with 52% of such people younger than 65 years. People with poor health literacy have more difficulty in managing chronic or long-term conditions on a day-to-day basis. This includes planning and adjusting lifestyle, making informed decisions and knowing when and how to access health care services.

2. **Health literacy is an important factor in preventing noncommunicable diseases**. Noncommunicable diseases, such as cancer, heart disease and diabetes, are associated with multiple modifiable risk factors, mainly behavioural determinants: lack of physical activity, poor dietary habits, smoking and alcohol use. Health

Fig. 6. Estimated annual number of new cancer (in millions) cases by World Bank income groups, 2008 and predicted for 2030
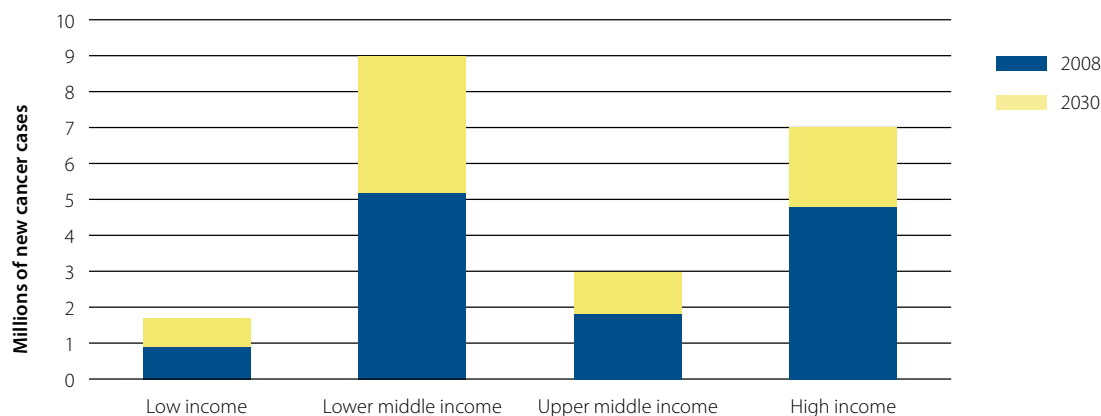
Source: *Global status report on noncommunicable diseases 2010*. Geneva, World Health Organization, 2011 (http://www.who.int/nmh/publications/ncd_report_full_en.pdf, accessed 15 May 2013).

literacy is associated with these types of health behaviour. Limited health literacy is often linked with other determinants of noncommunicable diseases. For example, lower health literacy is more prevalent in older population groups, low-income population groups and among cultures in transition, which are also more prone to developing noncommunicable diseases. The European Health Literacy Survey included indicators for four types of health-related behaviour or risks: smoking, alcohol, body mass index and physical exercise. Each showed quite different associations, varying by indicator and country. Of these, the amount of physical exercise was most consistently and strongly associated with health literacy (Fig. 7): the higher the health literacy, the higher the frequency of physical exercise. This applies to differing degrees to all participating countries, except for Spain.

What is known to work – promising areas of action

A wealth of experience has contributed to understanding how to improve and contribute to tackling noncommunicable diseases through health literacy. Effective interventions focus on three main

Fig. 7. Frequency of physical exercise according to scores on the General Health Literacy Index for the 7767 respondents in the European Health Literacy Survey
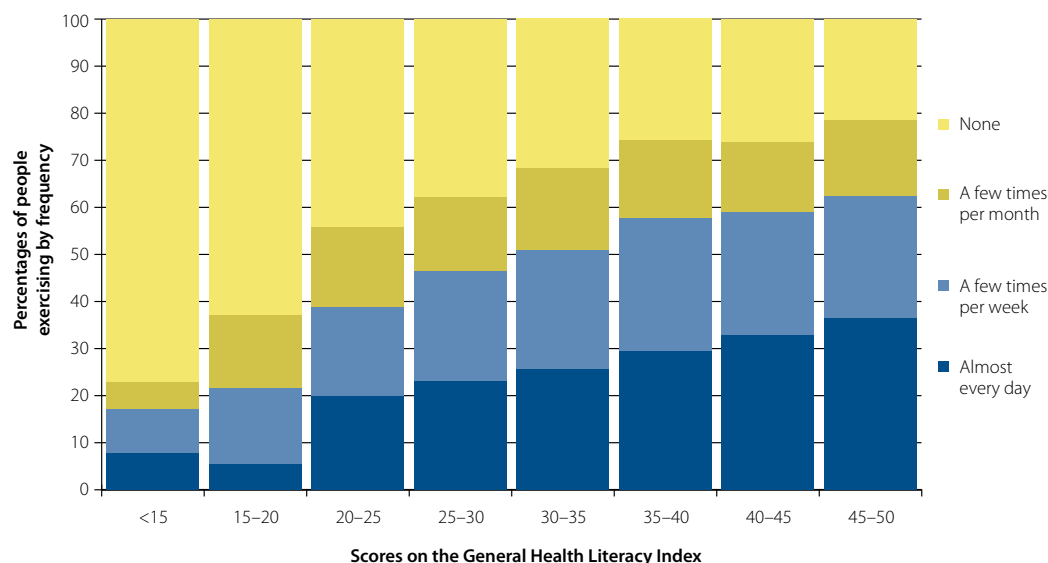
Source: adapted from: *Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012.* Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

areas: supporting people with lower health literacy, improving health literacy capacity and improving the organizational, government, policy and system practice. Much research in this field is not yet categorized as health literacy research but is considered under other headings such as health education, health promotion, behaviour research and the like.

1. **Develop and support the prevention of noncommunicable diseases through a wide range of health literacy interventions**. Evidence shows that, to be effective, noncommunicable disease interventions related to health literacy need to be of high intensity, based on theory, pilot tested before full implementation, emphasize building skills and have a health professional deliver the intervention. Interventions that influence outcomes indirectly work by intermediately increasing knowledge or self-efficacy or by changing behaviour. Coalitions such as the Partnership to Fight Chronic Disease in the United States of America and the Chronic Disease Alliance in Europe work intersectorally and inter-organizationally at the regional, national and local levels to influence policy development. Such coalitions can help raise awareness and advocate for stronger policies to address chronic disease and disability. They also contribute to empowerment by involving patients, providers, community organizations, business, labour and health policy expert groups.

2. **Build interventions on good empirical data**. Comprehensive measurement of health literacy provides guidance on what interventions might need to be put in place to respond to individuals and communities with limited health literacy.

The European Health Literacy Questionnaire, for example, can be used to assess the health literacy of specific groups. Austria has used this for adolescents and in various regions. Germany is including the subscale focusing on health promotion in a national health impact assessment, and the Questionnaire will be applied in the Diabetes Literacy project supported by the European Union to measure health literacy among people with diabetes.

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3

Limited health literacy: an underestimated problem and equity challenge

Nearly half of all Europeans have inadequate and problematic health literacy skills.

What is known

1. **Low literacy levels are common**. Many children, adolescents and adults have limited literacy skills, even in economically advanced countries with strong education systems.

2. **Limited health literacy is very common**. Like general literacy, health literacy can be measured at the individual, organizational, community and population levels. The European Health Literacy Survey revealed that 12% of all respondents have inadequate general health literacy and 35% have problematic health literacy. Limited health literacy in Europe is thus not just a problem of a minority of the population.

3. **Countries vary greatly**. Inadequate health literacy comprised between 2% and 27% of the population in the eight countries. Limited (inadequate plus problematic) health literacy varied between 29% for the Netherlands and 62% for Bulgaria (Fig. 8).

4. **Certain groups are more vulnerable**. Specific vulnerable groups have much higher proportions of limited health literacy than the general population in Europe, including lower social status (low self-assessed social status, low level of education, low income and problems in paying bills), with worse health status (measured by self-perceived health, long-term illness and limitations in activities because of health problems) or relative old age. Again, the diversity in Europe is very pronounced (Table 2).

Excellence in measurement starts with clarity about what needs to be measured and the purpose. There are more than 20 tools for measuring health literacy. The existing measures of health literacy are still too oriented towards individuals and must be expanded to include the collective level (including communities) and assessing the literacy-friendliness of materials, organizations and environments (Table 3).

What is known to work – promising areas for action

1. **Strengthening health literacy helps to address health inequalities**. The people who struggle most with limited health literacy are most often older people, members of

Fig. 8. Percentage distributions of general health literacy for each country and the 7795 respondents
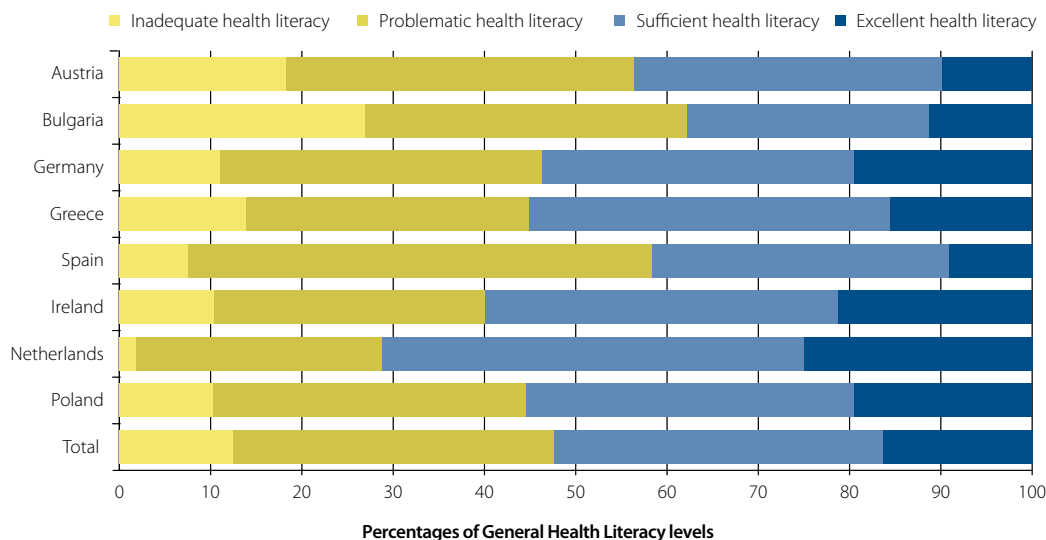
■ Inadequate health literacy ■ Problematic health literacy ■ Sufficient health literacy ■ Excellent health literacy

Percentages of General Health Literacy levels

Source: adapted from: *Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012*. Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

ethnic minorities, recent immigrants, people with lower levels of education and/or low proficiency in the national language and those who depend on public transfer payments. The implications for these more vulnerable groups are that limited health literacy often correlates with a lack of ability to effectively self-manage health, access health services, understand available and relevant information and make informed health-related decisions. Targeted initiatives can strengthen health literacy among vulnerable groups and can help to address gaps in health inequality. Measures to strengthen health literacy among children are key.

2. **Invest in measurement: what gets measured gets done**. Measuring and monitoring health literacy through population surveys can help to develop and evaluate policy and ensure that services are accessible to and respond to individuals with limited health literacy. Investment in health literacy aiming at long-term improvement should be based on solid empirical data covering all age groups. Evaluating the success of interventions requires monitoring not only health literacy but also the conditions in which health literacy is acquired and used throughout the life course and how they change.

Table 2. Percentage of people with limited (inadequate or problematic) health literacy in specific very vulnerable groups for countries and the total sample

Indicator	Category	Austria	Bulgaria	Germany	Greece	Spain	Ireland	Netherlands	Poland	Total
Social status	Very low	78	80	59	80	84	64	50	60	74
Self-perceived health	Poor or very poor	86	83	56	83	78	56	41	72	73
Education (International Standard Classification of Education level)	Level 0 or 1	63	76	58	77	74	51	41	100	68
Able to pay for medication	Very difficult	78	81	40	66	55	60	57	62	67
Able to afford doctor	Fairly difficult or very difficult	76	80	56	61	68	56	42	74	66
Limited activities because of health problems	Severely limited	82	81	55	80	77	56	35	66	66
Monthly household income	Less than €800	38	84	56	70	70	58	38	62	66
Able to pay for medication	Fairly difficult	67	72	66	60	72	51	35	67	64
Difficulty in paying bills	Most of the time	67	75	47	61	62	61	33	42	63
Long-term illness	Yes, more than one	78	83	58	74	69	45	33	54	61
Age	76 years or older	73	75	54	72	71	46	29	65	61
Social status	Low	59	62	64	57	59	53	48	64	60

Source: adapted from: *Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012.* Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

3. **Ensure ongoing measurement**. Repeated measurements can help in demonstrating whether interventions are effective or not. Europe now has a unique instrument at its disposal, and the European Health Literacy Survey study should be applied to more countries and be conducted regularly.

4. **Support research to expand and improve current measures in many settings**. Given the relative lack of real-world implementation research involving representative populations, public health agencies should develop mutually beneficial partnerships with health literacy researchers to help develop, identify, implement and evaluate health literacy interventions.

Table 3. Ways of measuring health literacy

Type of measure	Purpose and limitations
Clinical screening tests: reading comprehension, word recognition and numeracy	Identifying difficulties when attempting to understand and use health information, including medical labels and instructions. They may result in a sense of shame and stigma among people with limited literacy. They are applied at the individual level in face-to-face interviews and incompletely cover health literacy concepts.
Proxy measures of health literacy using population literacy surveys	Provides an estimate of the proportion of the population who may have inadequate skills to meet the complex demands of everyday life. Incomplete coverage of health literacy concepts. Provide little guidance for developing or applying interventions.
Direct survey measures a person's ability to understand, access, appraise and use health information and health services	This is a rapidly advancing field. New scales applied to groups or populations can provide information to enable practitioners, organizations and planners to provide better services for people with limited health literacy and inform policy responses.

Example: migrants and minorities

One of every 33 people today is a migrant, but the percentage of migrants varies between countries. The WHO European Region has an estimated 75 million migrants, 8% of the population.

What is known

1. **Migrants generally score lower on literacy and health literacy measures**. Educational resources and information programmes only partly reach migrants, often because of economic and social barriers. Lack of affordable second-language courses for adults, for example, creates a barrier for migrants who want to improve their literacy.

2. **Migrants have poorer access to and use less information and health promotion, disease prevention and care services**. Numerous studies show that interventions aimed at increasing access to cancer screening, mental health services, diabetes education, smoking cessation, HIV programmes and child immunization are less successful for migrant populations. This also applies to ethnic minority populations such as the Roma.

3. The European Health Literacy Survey following Eurobarometer methods included only EU citizens in its samples, but their migration background was surveyed (respondents with migration background being defined as having one or both parents born in another country than the one in which the respondent was interviewed). Only in Germany (North Rhine–Westphalia), where migration background with nearly 20% was highest, did respondents with migration background score significantly lower on general health literacy.

What is known to work – promising areas for action

1. **Develop specific health literacy strategies for migrants**. Specific migrant-friendly strategies can make systems more responsive to migrant needs. Migrant users and communities can be engaged in planning, implementing and evaluating these strategies through patients, cultural mediators in health settings and patients' organizations.

2. **Environmental interventions**. Effective interventions include the use of patient navigators, translated signage or pictograms and providing health care interpreters. Providing signage in minority languages not only helps ethnic minority patients find their way around hospitals but also creates a sense of belonging and inclusiveness. Although plain language is important in conveying messages, other means of communication such as images, photographs, graphic illustrations, audio and videos should be considered in producing materials.

3. **Health provider training** can improve communication by taking into account simplified messaging and cultural sensitivity. Migrant-friendly health providers should elicit information about health literacy and language proficiency that may affect people's ability to undertake health care. People should receive appropriate treatment and care sensitive to their ethnicity, sex, abilities, age, religion and sexual orientation. Diagnosis with relevant information and explanations should be communicated to people in their preferred language. Cultural mediators who explain and make understood various perspectives on health and disease are critical for many issues such as diagnostic treatment, surgery or treatment procedures. Professional interpreters should be used in obtaining informed consent from migrant patients.

4. **Networking and intersectoral interventions**. Health care organizations can catalyse migrant-friendly action with other sectoral and stakeholder organizations such as pharmacies, social work departments, schools, criminal and justice departments, voluntary organizations and companies (Box 3).

Box 3. Case studies

The Bradford Teaching Hospitals Foundation Trust in the United Kingdom has a formal Communication with Patients Steering Group that has developed guidelines for patient information.

A nongovernmental organization alliance trained health mediators to work in Roma communities to improve the health of Roma children.

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4

Health literacy builds resilience among individuals and communities

Health is created in the context of everyday life, and health literacy originates in and helps shape the sociocultural context in which people live. Empowerment, equity, co-production and cultural capital have been shown to be positively associated with people's health.

Thomas Abel *Theoretical reflections on health literacy as personal resources and community assets* (unpublished)

What is known

1. **Health literacy is an asset for individuals and communities**. Investment in strengthening health literacy is likely to yield a substantial return in health and well-being at both the individual and community levels. People acquire and use personal health literacy based on the social environments in which they live, and social action can improve these environments. Combined with appropriate social resources, health literacy can become an asset that will support people in becoming more resilient (have

a sense of adaptation, recovery and bouncing back despite adversity or change) and active for health: for example, by adopting healthier lifestyles or demanding their rights as patients as well as taking action to improve health in the community and contribute to sustainable development.

2. **Health literacy is an important form of social capital**. Communities benefit from the health literacy of their members, and community members benefit from community support and resources – such as self-help groups and neighbourhood support – in enhancing their health literacy. Such characteristics make health literacy a part of people's cultural capital. Cultural capital is linked to health outcomes and people's opportunities to be active for their health. Possessing and applying cultural capital – in the form of knowledge, values, norms and skills – increases peoples' potential to pursue healthy lifestyles and is positively associated with peoples' health.

3. **Health literacy means empowerment**. Health literacy is rooted in the health promotion movement, with the aim to empower people as citizens, members of the workforce, consumers and patients so that they can better make decisions

about their health and improve their skills in managing themselves. Empowerment is both a process through which people gain more control over their lives, their health and its determinants and an outcome that reflects the ability of people – individuals or communities – to influence the world. Through empowerment, health literacy programmes contribute to democratizing the health care system and to achieving a stronger commitment to health and well-being in communities and in society at large (Box 4).

Box 4. Capacity of a health-literate person

Ideally, a health-literate individual is able to seek and assess the health information required:

- to understand and carry out instructions for self-care, including administering complex daily medical regimens;
- to plan and achieve the lifestyle adjustments required for improving their health;
- to make informed positive health-related decisions;
- to know how and when to access health care when necessary; and
- to share health-promoting activities with others and address health issues in the community and society.

What is known to work – promising areas for action

1. **Build policies that recognize literacy and health literacy as a right**. Literacy and health literacy are part of the fundamental competencies needed to function in modern society. Just as there is a universal right of access to health care, the universal right of access to health literacy should be recognized, and programmes to build health literacy should be introduced accordingly as an essential dimension of strengthening health systems (Box 5).

Box 5. National Literacy Programme

In the Netherlands, 1.5 million people (10% of the adult population) are functionally illiterate. In 2004, the foundation Reading & Writing was initiated, spearheading the National Literacy Programme, a truly intersectoral programme with the involvement of all ministries, employers' organizations, labour unions, the business community and nongovernmental organizations. The Programme approaches literacy from a human rights perspective. In the training programmes, improving skills is combined with learning more about important issues for life, such as health, childcare and nutrition.

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2. **Health literacy benefits from diversity**. Health literacy initiatives work best when they customize approaches based on understanding the diversity of how individuals and communities approach health. The roles of family, social context, culture and education need to be factored into the development of all health literacy messages and proposals.

Example: Netherlands Alliance for Health Literacy

In the Netherlands, combining efforts for empowerment of individuals or communities with improvement of health sector communication yields the best results in improving health literacy.

Tackling health literacy in the Netherlands is based on a strong lobby for patients' rights, which resulted in clear legislation as well as longstanding programmes for improved communication in the health care sector. The National Literacy Programme, which focuses on general literacy, facilitates intersectoral collaboration in adult education and empowerment of people with limited literacy.

The National Alliance for Health Literacy was created in 2010 and has now more than 60 member organizations: patients, providers, health institutions, health insurance providers, academe, industry, business community, etc. (Fig. 9). The aim of the Alliance is to advocate for incorporating health literacy

Fig. 9. National Alliance for Health Literacy
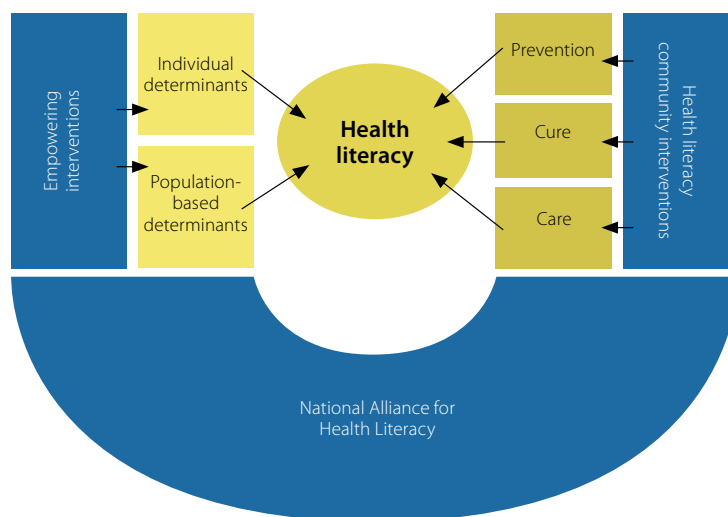
Source: National Alliance for Health Literacy.

into the daily operations of health institutions, to share knowledge and experience and to plan joint action. The Alliance has a web site with information and organizes regular meetings and workshops. The Alliance supports organizations for empowering individuals and communities.

Health literacy approach in the Netherlands

Patient groups are well organized in the Netherlands, and their umbrella organizations provide a strong political lobby. At the institutional level – such as hospitals – patient councils negotiate with management for patient-friendly measures. Patients' rights are laid down in legislation on informed consent, which obliges health care providers to provide proper understandable information and to get the patient's approval before treatment. In 2011, the National Health Council produced advice for the Minister of Health on tackling limited literacy in the health sector. This will further strengthen the position of vulnerable patients and their legal rights with regard to informed consent.

The Netherlands has a decades-long tradition of special health communication for migrants and minority groups, often in foreign languages, using information materials and involving mediators, interpreters and trainers. Based on research into inequities in health, the health communication programmes were broadened to people with limited literacy to ensure that these groups could access health services adequately.

Health care institutions, hospitals, home care organizations and health insurance providers are revising their health information on web sites, in brochures, in folders and on signs in buildings. They get support from specialized communication experts, who work closely with people with limited literacy. Smart solutions, such as prepackaged medication, remote sensors, tablet PCs, phone text messages with appointment reminders and interactive web sites, are applied to simplify complicated health interventions or guide people through administrative procedures. Sensitizing and building the capacity of health workers is an important part of the work, and their professional organizations support this.

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B

Taking action to create and strengthen health literacy–friendly settings

The relationship between people as citizens, consumers or as patients with the institutions that affect their health is significantly influenced by two interacting factors: their levels of health literacy and the willingness of such institutions to recognize diversity and share or give power for more equal, inclusive and accountable relationships. A high level of health literacy allows for an expansion of decisions and actions through control over resources and decisions that affect one's life.

Rudd & Anderson *The health literacy environment of hospitals and health centers. Partners for action: making your healthcare facility literacy-friendly*

Health literacy is a relational concept. Importantly, health literacy means not just developing individual skills but also the interaction between people and their environments and enhancing power and voice individually and with others. Health literacy

programmes, for example, contribute to co-producing health by improving communication and by addressing the power balance between service users and providers or laypeople and specialists.

Health literacy is very context specific. This has major implications for health literacy research. It has different meanings in various sociocultural contexts relevant to health. During the past 20 years, many approaches and tools have been developed to strengthen health literacy in various settings and for different population groups. Action must take place in many sectors: health professionals urge the education sector to improve the literacy skills of populations, but the health sector itself must take action to remove literacy-related barriers to information, services and care.

Research focusing on the links between the literacy skills of patients and health outcomes has established that many health outcomes are associated with patients' limited literacy skills. However, one cannot make a judgement about literacy without examining both sides of the equation – such as the reader and the book, the listener and the speaker, the skills of the person using the tool and the quality of the tool itself. How well do health professionals communicate with patients? How health literacy–friendly are health care organizations, workplaces

and supermarkets? The interaction of settings, people and professionals is crucial in developing policies and programmes that address health literacy and in evaluating them. In daily life, the interface between the organization and settings and people is critical. In the health care sector, the interface with professionals plays a very important role (Fig. 10).

Fig. 10. Health literacy interface

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Settings

People

Professionals

Health literacy interface

5

Attributes of health-literate settings

Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love.

Ottawa Charter for Health Promotion

What are health-literate settings?

The settings-based approach to health promotion involves a holistic and multidisciplinary method that integrates action across risk factors. It recognizes the importance of context and has been applied in cities, schools, hospitals, workplaces, universities, prisons and other organizational settings. Healthy settings make a clear commitment to health and well-being and set out transparent strategies to reach that goal. The key principles of healthy settings include community participation, partnership, empowerment and equity. Health literacy is a key concept in health promotion and is a key dimension of healthy settings. Health-literate settings infuse awareness of and action to strengthen health literacy throughout the policies, procedures and practices of the settings. They embrace strengthening health literacy as part of their core business.

This part of the publication presents the promising evidence on addressing these dynamics in different settings: the educational setting, the school, the workplace, the market environment, the health care setting, mass media and communication and social media. In improving health literacy, research attention and resources must be focused on identifying and removing the barriers that constrain effective action. What works and does not work in the many social and physical environments that can contribute to improving health literacy needs to be examined carefully.

6

Health literacy is a key attribute of a healthy city

What is a healthy city?

The WHO European healthy cities movement has been a key factor in spreading the health promotion message in Europe and beyond to decision-makers, politicians, citizens and professionals in many sectors. A healthy city is conscious of health and striving to improve it. It continually creates and improves its physical and social environments and expands the community resources that enable people to mutually support each other in performing all the functions of life and developing to their maximum potential. Successfully implementing this approach requires innovative action – through leadership for health, explicit political commitment, intersectoral partnerships and participation, it creates health literacy throughout the city. This way of working and thinking includes involving local people in decision-making, requires political commitment and organizational and community development and recognizes the process to be as important as the outcomes. Health literacy plays an important role in achieving the goals of the healthy cities movement (Box 6).

Box 6. How health literacy contributes to a healthy city

A health-literate city:

- recognizes at the highest political level the importance of becoming and remaining health literate and gives this priority through policies and interventions;
- strives systematically to improve the health literacy of its people, its communities, various social groups and its institutions and services;
- has leaders who understand the high relevance of health for the well-being of the city overall and the need to continually invest in and enhance the social assets of the city, including health literacy, community resilience, community empowerment and participation and social networking;
- is committed to intersectoral work across government because decision-makers in many sectors understand the high relevance of health and seek health co-benefits and synergy in their policies in cooperation with the health sector;
- provides individuals and communities with skills and knowledge because healthy people and communities are one of the key assets of cities;
- aids citizens in navigating through the health, education and social service systems, making the healthy choice the easier choice in settings under city jurisdiction;

Box 6. contd

- uses a range of media to deliver consistent and understandable messages and applies plain-language principles;
- regularly reviews programmes, encourages innovation and adapts services to the health literacy requirements of the most vulnerable people;
- works with the private sector and the many voluntary organizations in the city as well as adult learning institutions to improve the overall level of health literacy in the city;
- regularly measures the levels of health literacy in the city; and
- is committed to accountability and transparency.

7

Attributes of health literacy–friendly organizations

Health citizenship requires a combination of personal and social responsibility from individuals, but even more so it requires the institutions of society to promote choice, empowerment, self-management, responsiveness and participation in health and well-being.

Cayton & Blomfield *Health citizenship – leaving behind the policies of sickness*

The Institute of Medicine of the United States National Academy of Sciences compiled a set of 10 attributes of health-literate health care organizations based on the outcomes of more than two decades of health literacy research (Table 4 and Fig. 11). These attributes can mostly be extended to organizations in general. These strategies are not meant to be prescriptive. There are many paths to becoming a health-literate organization. Individual health care organizations (and other public health and sectoral agencies) will probably choose different strategies. Each should test how well its strategies work with the populations it serves and share the results of its efforts with others. Similarly, different agencies will choose which attributes to address first and how thoroughly to address those attributes before broadening their efforts to encompass additional attributes. The attributes described can be applied to all systems that work to strengthen health literacy.

Table 4. Attributes of a health-literate health care organization

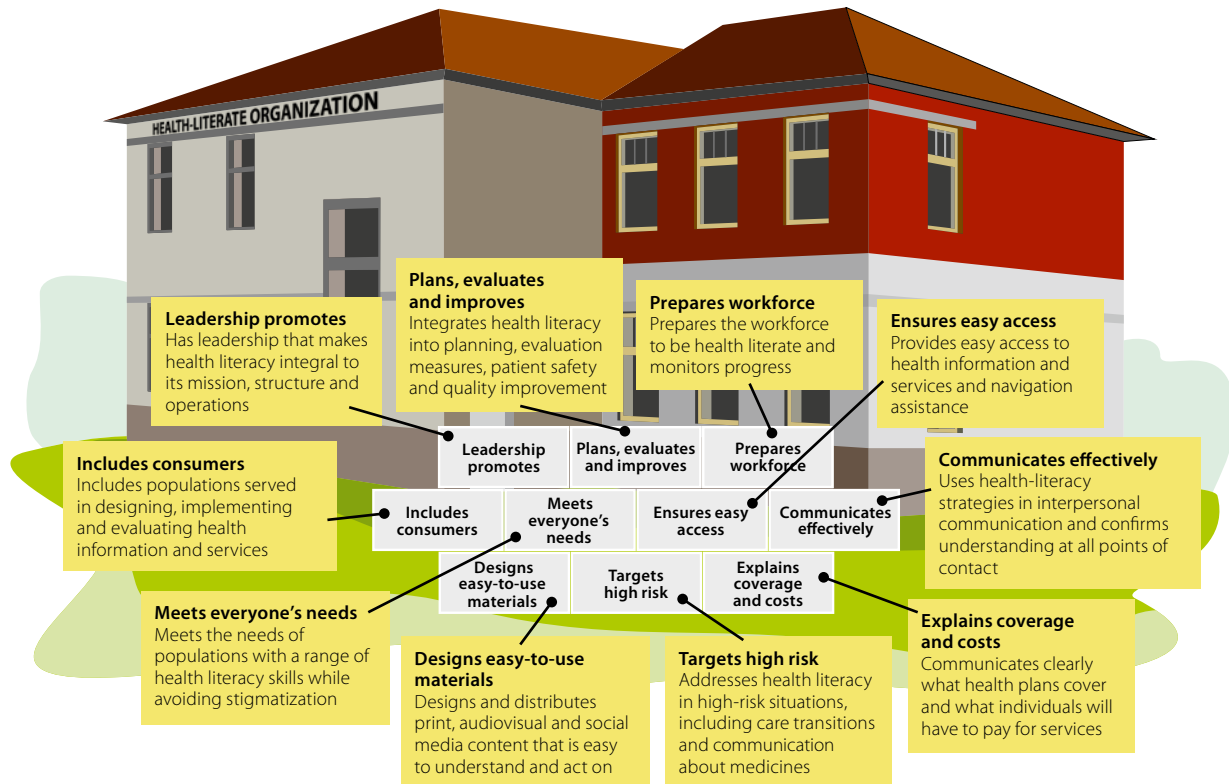| A health-literate health care organization:	Examples
Has leadership that makes health literacy integral to its mission, structure and operations	• Develops and implements policies and standards • Sets goals for improving health literacy improvement, establishes accountability and provides incentives • Allocates fiscal and human resources • Redesigns systems and physical space
Integrates health literacy into planning, evaluation measures, patient safety and quality improvement	• Conducts health literacy organizational assessments • Assesses the impact of policies and programmes on individuals with limited health literacy • Factors health literacy into all patient safety plans

Table 4. contd

A health-literate health care organization:	Examples
Prepares the workforce to be health literate and monitors progress	• Hires diverse staff with expertise in health literacy • Sets goals for training staff at all levels
Includes populations served in designing, implementing and evaluating health information and services	• Includes individuals who are adult learners or have limited health literacy • Obtains feedback on health information and services from individuals who use them
Meets the needs of populations with a range of health literacy skills while avoiding stigmatization	• Adopts universal precautions for health literacy, such as offering everyone help with health literacy tasks • Allocates resources proportionate to the concentration of individuals with limited health literacy
Uses health literacy strategies in interpersonal communication and confirms understanding at all points of contact	• Confirms understanding (such as using the teach-back[a], show-me or chunk-and-check[b] methods) • Secures language assistance for speakers of languages other than the dominant language • Limits to two to three messages at a time • Uses easily understood symbols in way-finding signage
Provides easy access to health information and services and navigation assistance	• Makes electronic patient portals user-centred and provides training on how to use them • Facilitates scheduling appointments with other services
Designs and distributes print, audiovisual and social media content that is easy to understand and act on	• Involves diverse audiences, including those with limited health literacy, in development and rigorous user testing • Uses a quality translation process to produce materials in languages other than the dominant language
Addresses health literacy in high-risk situations, including care transitions and communication about medicines	• Gives priority to high-risk situations (such as informed consent for surgery and other invasive procedures) • Emphasizes high-risk topics (such as conditions that require extensive self-management)
Communicates clearly what health plans cover and what individuals will have to pay for services	• Provides easy-to-understand descriptions of health insurance policies • Communicates the out-of-pocket costs for health care services before they are delivered

[a] The teach-back technique is used in 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 be assured that the patient has adequately understood the health information presented.

[b] After health professionals communicate one important message – a chunk of instructions – they check how much the patient understood.

Source: adapted from: Brach C et al. *Attributes of a health literate organization*. Washington, DC, Institute of Medicine, 2012 (http://www.iom.edu/~/media/Files/Perspectives-Files/2012/Discussion-Papers/BPH_HLit_Attributes.pdf, accessed 15 May 2013).

Fig. 11. Elaborations on the foundations of a health-literate organization

HEALTH-LITERATE ORGANIZATION

Leadership promotes
Has leadership that makes health literacy integral to its mission, structure and operations

Plans, evaluates and improves
Integrates health literacy into planning, evaluation measures, patient safety and quality improvement

Prepares workforce
Prepares the workforce to be health literate and monitors progress

Ensures easy access
Provides easy access to health information and services and navigation assistance

Includes consumers
Includes populations served in designing, implementing and evaluating health information and services

Communicates effectively
Uses health-literacy strategies in interpersonal communication and confirms understanding at all points of contact

Meets everyone's needs
Meets the needs of populations with a range of health literacy skills while avoiding stigmatization

Designs easy-to-use materials
Designs and distributes print, audiovisual and social media content that is easy to understand and act on

Targets high risk
Addresses health literacy in high-risk situations, including care transitions and communication about medicines

Explains coverage and costs
Communicates clearly what health plans cover and what individuals will have to pay for services

Source: adapted from: Brach C et al. *Attributes of a health literate organization*. Washington, DC, Institute of Medicine, 2012 (http://www.iom.edu/~/media/Files/Perspectives-Files/2012/Discussion-Papers/BPH_HLit_Attributes.pdf, accessed 15 May 2013).

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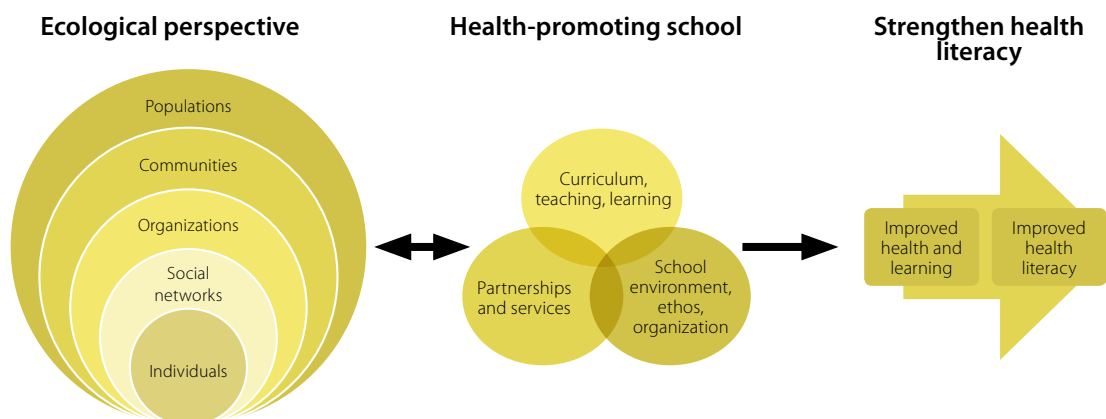
8

Educational settings

Health is vital to education. Education is vital to health. Healthier students, families and communities have higher levels of academic achievement and are more productive in later years. Educational interventions play a central role in promoting and strengthening health literacy.

Nutbeam *Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century*

What is known

1. **Literacy influences people's ability to access information**. Research studies in education and adult literacy indicate that literacy influences the ability to access information and navigate in literate environments, affects cognitive and linguistic abilities and affects self-efficacy. An individual's level of literacy directly affects their ability to access health information, learn about disease prevention and health promotion, follow health care regimens and communicate about health messages with other people (Fig. 12).

Fig. 12. Model of compatible levels of influence and the education system to strengthen health literacy

Ecological perspective

Populations
Communities
Organizations
Social networks
Individuals

Health-promoting school

Curriculum, teaching, learning
Partnerships and services
School environment, ethos, organization

Strengthen health literacy

Improved health and learning
Improved health literacy

2. **Lifelong learning strongly predicts health literacy**. Recent studies of the determinants of health literacy among older adults found that participation in lifelong learning, both formal and informal, is one of the strongest predictors of health literacy among this population group. Interventions encouraging people to be lifelong learners (either participating in structured learning or through daily activities such as daily reading or learning computer skills) are therefore considered to be likely to facilitate the development and maintenance of health literacy skills.

3. **Wide-ranging and mutually reinforcing learning opportunities are critical**. Increasing numbers of studies explain that people learn health literacy in the social and cultural contexts in which they live. As such, health literacy requires a broad variety of learning opportunities. Some of these opportunities are inside major societal institutions such as the school system or the health care system. However, similar to most basic life skills, people learn in all their settings and activities, and improving health literacy is therefore not confined to such institutions. Other contexts such as family, friends, peer groups and mass media are important. This means that wide-ranging learning opportunities in health literacy should be offered in various personal and social learning contexts. Since social learning and engagement require positive feedback, any attempts to promote health literacy should provide such positive feedback, which fosters gratifying experiences of being able to achieve change in health status and its determinants.

What is known to work – promising areas for action

1. **Build the foundations for health literacy in early child development**. The opportunities that very young children have to learn are critical for the following years. These include interacting with parents and other family members, early childhood education programmes, play, child-to-child programmes and many learning opportunities within childcare settings. Learning for well-being especially focuses on such learning opportunities.

2. **Develop and support health-promoting schools approaches**. Health-promoting schools as a settings approach aims to combine changing individual behaviour with changing organizations and policy. An ecological perspective recognizes that developing essential knowledge and life skills (including those required for health literacy) is part of the larger social system or ecology. It consists of three interacting components, including a broad health education curriculum supported by the supportive school environment and the ethos of the school and its partnerships and services. The health-promoting schools approach is compatible with the ecological model, which emphasizes action and interaction between individuals, levels and systems: intrapersonal factors; interpersonal factors; institutional factors; community factors; and public policy factors (Box 7).

3. **Addressing the barriers to adult learning**. Policy actions and interventions to address social inequities in education and education-related

Box 7. Case study: health-promoting schools

Bertelsmann Stiftung's programmes, Anschub.de (Alliance for Healthy Schools and Education in Germany) and Kitas bewegen ("good and healthy kindergartens") are implemented in several regional education ministries in Germany through mixed public-private partnerships. They link health and education, carrying out health interventions to achieve long-lasting improvement in the quality of education and learning within an overall context of children's development. Indicators of success include various aspects of the learning and teaching process; leadership and management; and the school climate and culture.

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. The reasons why people do not take part in learning have been identified: lack of motivation related to perceptions that the learning is not relevant to them, lack of interest or self-confidence and previous negative experiences. Cost, lack of time and/or transport or childcare and language (especially for non-native speakers) are common obstacles. Poor awareness of options and lack of the necessary information or availability and affordability of the right type of course or learning environment may further block participation. Learning programmes for adults with limited skills can also positively influence their children's learning.

4. **Combined and tailored approaches work best**. Combined approaches to strengthening health literacy such as using multimedia are more effective than single approaches. Approaches that are tailored to the specific audience are more effective than those that are not. Tailored approaches imply understanding the perceptions, attitudes, behaviour, learning and media channel preferences (such as print, television and social and other web media) of various population groups. Groups could be segmented based on demographic or attitudinal factors.

5. **Participatory approaches are promising**. Applying participatory education principles (which promote reflection, discussion and sharing between and among the learners) appears to help parents in accessing, understanding and using health information to benefit their own health and that of their children.

6. **Exploring new learning approaches for health and well-being**. Learning for well-being offers an integrative framework, giving a purpose to learning, creating a space that gathers different actors to collaborate beyond their silos and supporting multiple types of literacy.

Learning for well-being (Box 8):

- underlines the uniqueness and diversity of all children and the need to develop systems that take account of this fact;
- considers children as competent partners, nurturing personal responsibility more than compliance;
- understands learning not only as a cognitive, but as an integral process with many dimensions;
- moves from standardized education to child-centred education; and

Box 8. Case study: learning for well-being

Elham Palestine is a programme (in the West Bank and the Gaza Strip), supported by the Universal Education Foundation, for improving the physical, mental and social well-being of children and youth and enhancing their learning environments. It identifies, supports and disseminates innovative practices and is supported by a multistakeholder partnership of government ministries, the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNWRA), business, foundations, nongovernmental organizations and many local structures, nurturing entrepreneurship in the educational community, based on a belief in the capacity of local communities to stimulate systemic change.

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• moves from sectoral to systemic solutions in policy and society.

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9

Marketplace and community settings

The protection of the market is frequently more important than the protection of health. A political debate about health literacy is a debate about power and transparency: it is about a citizen's right to know about the origin and composition of food, about hospital infection rates, about which outlets sell alcohol to minors and about levels of pollution in a way that it can be understood broadly and easily.

Kickbusch *Health literacy, social determinants and public policy*

What is known

1. **Communities are key settings for health literacy**. People make daily health-related decisions in their homes and communities. Families, peer groups and communities are usually 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 behaviour that promotes and protects health and prevents disease as well as alternative therapies, self- and family care, available support services and first aid. By supporting and promoting interactive and individual health literacy capacity, communities can activate the cultural capital of their members and contribute to broader community development and strengthening social capital.

2. **Daily choices for consumers are made difficult**. In everyday life, making healthy choices can be difficult because the information about which types of behaviour or which products are healthy can be contradictory or not fully understood. For example, people often misjudge the number of calories they are consuming or the amount of exercise they take. People shopping do not always easily understand the composition of products such as processed food or judge the accuracy of health claims – since not many of these provide easily understandable information or labelling. Most are not organized to make the healthier choice the easier choice. Nevertheless, even with access to information, people often make choices by emotional or situational impulses – which is the basis of many marketing strategies (Fig. 13).

Fig. 13. Making healthy choices

So much information!   So many choices to be made!   What does it all mean?
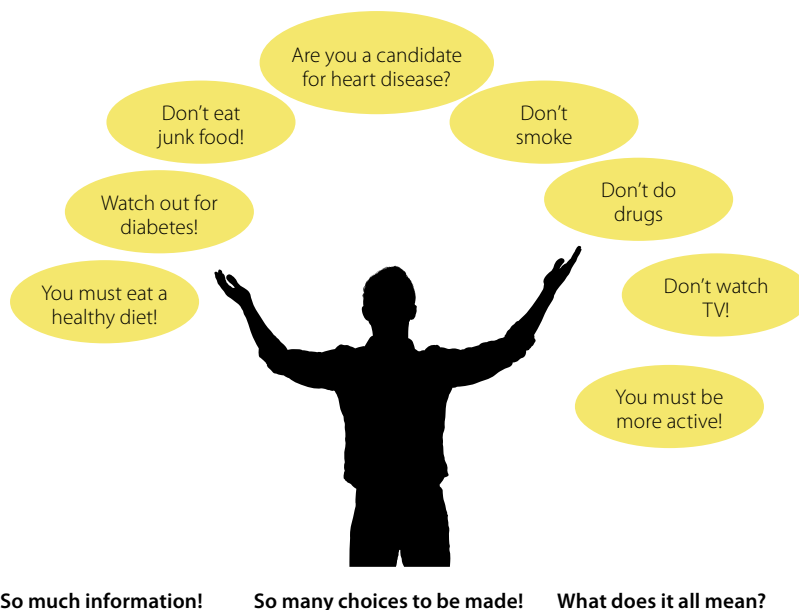
Source: adapted from: WestOne Services (2013).

What is known to work – promising areas of action

1. **Build supportive environments for consumers**. Although people do need to understand, for example, which kinds of foods are good for their health, it is increasingly recognized that health literacy support measures are needed in the consumer environment, especially in relation to food and beverages. Examples include:

   - clear labelling: for example, indicating the number of calories in a meal or a beverage;
   - a traffic light system: for example, indicating healthier and less healthier choices;

   - consumer design strategies: for example, placing the healthy food in attractive and easily accessible settings; and
   - consumer right-to-know and product liability laws.

2. **Provide reliable health information resources**. Most important is ensuring access to reliable, relevant and understandable information that is enforced by law (such as product information regarding processed food) or made available by a government institution (such as kiesBeter.nl or NHS Choices) or by independent actors such as foundations (such as Weisse Liste). Patients and consumers have a right to be

empowered and supported, not only by good and independent information but also by means of counselling and advocacy.

3. **Successful interventions start where people are and use multiple approaches**. Action is taken in the settings where people live, work and play. Interventions acknowledge a wide variety of learning styles and use multiple approaches (Box 9). Regulating the promotion of tobacco, alcohol and high-density and high-sugar foods to children, for example, has been shown to effectively reduce consumption when combined with awareness-raising and information campaigns based on understanding of the perceptions, knowledge and attitudes of the populations whose behaviour needs to be changed.

Box 9. Case study: workers in hairdressing salons

In the United Kingdom, the workers in hairdressing salons have been targeted for general hand hygiene purposes, influenza prevention messages and reducing the occupational hazard of skin problems as a result of chemicals or inadequate drying. Keeping written information to a minimum, "bad hand day" packs contain a simple leaflet, poster, stickers and fridge magnets delivered through the mail following a media campaign, personal delivery by local authorities, posters in trade outlets and trade journals and education sessions in training colleges and prove to be extremely effective. In eastern England, a Heads Up! campaign has made use of the salon setting and the interaction with clients to raise the issue of mental health as part of the Time to Change national campaign on tackling mental health stigma. The workers were able to direct clients to materials and service information made available in the salon relevant to topics that arose in conversation.

4. **Make the healthier choice the easier choice: use nudging to catalyse change in behaviour**. The term nudge describes any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. Engaging in nudge approaches requires health professionals to shift from their role as an expert telling people what to do to become knowledge brokers and choice architects (Box 10).

Box 10. Examples of nudging activities

Smoking nudges could include making nonsmoking more visible though mass-media campaigns with the message that the majority do not smoke and most smokers want to stop and by reducing cues for smoking by keeping cigarettes, lighters and ashtrays out of sight.

Alcohol nudges could include serving drinks in smaller glasses and making lower alcohol consumption more visible by mass-media campaigns with the message that the majority do not drink to excess.

Diet nudges might include designating sections of supermarket trolleys for fruit and vegetables and making salad rather than chips the default side-order.

Physical activity nudges might include making stairs, not lifts, more prominent and attractive in public buildings and making cycling more visible as a means of transport, such as through city bicycle hire schemes.

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10

Workplace settings

About 350 million working days are lost in the European Union each year, with stress and depression recognized as a major cause of sickness. The European working-age population is expected to shrink between 2020 and 2060 by 13.6%, and the number of workers older than 65 will increase.

Healthy workplace, healthy society: blueprint for business action on health literacy

What is known

1. **Behaviour change for health in the workplace can be effective**. Workplace health and well-being programmes have proven particularly effective in encouraging sustained healthy behavioural change and health education. These programmes work best not as add-on offerings but when integrated into core organizational strategies (Box 11). Interventions in the workplace are highly effective especially for men, who are more difficult group to reach with health messages than women. Workplace interventions have been shown to help prevent accidents, lower the risk of industrial or occupational diseases, improve lifestyle choices and reduce the risk of noncommunicable diseases. They have also been shown to counter stress factors (including job (in)security, demands and control and effort and reward in the workplace[2]) and issues related to achieving an appropriate work–life balance.

2. **There is a strong business case for investing in strengthening health literacy**. Strengthening health literacy as part of comprehensive health and well-being programmes improves attendance, performance, engagement and retention as well as health care costs. Where the employer is responsible for health care costs, the return on investment has been estimated as being 4:1.

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[2] The demand–control model and the effort–reward imbalance model are two work stress models that help to identify particular job characteristics important for employee well-being. The demand–control model predicts that the most adverse health effects of mental strain occur when job demands are high and the ability to make decisions is low. The effort–reward imbalance model assumes that emotional distress and adverse health effects occur when there is a perceived imbalance between efforts and occupational rewards.

Box 11. Case study: workplace wellness programmes

Johnson & Johnson has developed and implemented a comprehensive, holistic, onsite wellness programme for their employees since 1979. This programme affects more than 115 500 employees worldwide and includes the following features:

- financial incentives for employees to complete a health risk assessment and counselling process;
- onsite health education and health coaching, with employees able to access health services including stress management and wellness coaching and instant biometric health screenings such as height, weight, body mass index, blood glucose testing and cholesterol testing;
- access to fitness facilities and exercise rooms;
- vending machines that offer healthy snack and beverage choices;
- smoke-free campuses; and
- personalized health referrals for employees who need ongoing assistance for illness and managing risks.

Evaluations of the programme conducted between 1995–1999 and again from 2007–2009 have shown high staff participation in the programme, lower overall corporate health care spending and lower employee absenteeism. The programme has also significantly reduced risk factors for employee health, including sedentary behaviour (from 39% to 20%), smoking (from 12% to 4%), high blood pressure (from 14% to 6%) and high cholesterol (from 19% to 5%).

3. **Changing working environments put more responsibility on employees**. Some businesses in the service sector have become virtual, with nomadic employees travelling or working at different sites. This change means that employers have less control over health and well-being programmes, and new ways of strengthening employees' health literacy are emerging.

What is known to work – policy and other interventions

1. **A strategic approach to workplace health literacy programmes can be developed (Fig. 14)**.

   Action shown to be effective includes:

   - leadership by top management on healthy workplace initiatives;
   - engaging people at all levels from the boardroom to the shop floor;
   - engaging employees' and stakeholders' development and ongoing implementation through good branding and continual communication;
   - creating the right environment within the organization, aligning with other priorities and integrating initiatives with established workplace wellness and other employee assistance programmes (Box 11);
   - addressing relevant issues;
   - including interventions that address a range of learning styles;
   - maintaining momentum and freshness long term;
   - involving families;
   - keeping the message and the programme simple and aligned to business needs;
   - reflecting the diversity of the workforce and being culturally sensitive; and
   - evaluating the impact with robust measures before and after the interventions.

2. **Ensuring environmental support for healthier choices**. Effective initiatives include healthy on-site dining, catering and vending; open stairwells, walking paths and signposts

Fig. 14. Blueprint for Business Action on Health Literacy

STEP 1
Establish a
business case

STEP 2
Management buy-in

Decision-making
techniques

STEP 3
Assess and
measure

Evaluation tools

Measurement and
assessment tools

Health
literacy

STEP 6
Evaluate

STEP 4
Match and
set priorities

Policy, practice,
interventions and
solutions

STEP 5
Stop. Start.
Continue.

Project team and
stakeholder forum(s)

Source: *Healthy workplace, healthy society: blueprint for business action on health literacy*. Brussels, Joint Venture of Business Action on Health Literacy, CSR Europe, 2013 (http://www.csreurope.org/pages/en/hl_blueprint.html, accessed 15 May 2013).

marking distances and/or encouraging physical activity; break rooms with stretching aids; and free filtered water. Moreover, efforts to reach family members through employee education and targeted communication, healthy dinners-to-go offered in the employees' café, family and/or community access to company fitness facilities; and corporate support of physical education in schools, playgrounds and parks have been shown to have positive effects.

3. **Provide incentives for changing behaviour**.
Workplaces can provide incentives to employees to adopt healthy lifestyles. Subsidizing employees who choose not to commute to work by car, for example, increases the proportion of employees that walk or cycle to work. Other incentives include lowering health premiums for employees at higher risk of developing a chronic illness who complete health risk appraisals and recommended health-coaching activities. Peer support programmes have also been shown to improve health outcomes and lower costs (Box 12).

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Box 12. Case studies: workplace peer support and health promotion programmes

Volkswagen, a car manufacturer headquartered in Germany, actively involved employees by creating health circles in many company sectors. These problem-solving groups were tasked with identifying health-related problems and possible measures for improvement. This initiative, supported by training, halved absenteeism from 24 days per employee in 1986 to 12 days in 1996 and saved personnel costs of roughly US$ 50 million per year as a result of improved health.

Another study among firefighters in the United States of America found that peer support was effective in improving diet, physical activity and general well-being. A study in the transport sector in the United States of America found that peer support programmes reduced substantially related injuries, with a benefit–cost ratio of 26:1.

The NHS (National Health Service) National Institute for Health and Clinical Excellence in England has produced a series of guidelines addressing the evidence based for workplace health promotion programmes including smoking cessation, physical activity and mental well-being.

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11

Health care settings

Health information is often inaccessible because the literacy demands of health systems and the literacy skills of average adults are mismatched.

Rima E. Rudd *Health service interventions – navigating health systems and partnering with health professionals* (unpublished)

What is known

1. **Navigating increasingly complex health care systems is a major challenge for patients and their families**. Health institutions are complex structures and busy working environments with multiple entrances, busy hallways and layered signs and postings and are filled with the sounds of the foreign languages of medicine, nursing and varied allied health professions. Such institutions require sophisticated navigation skills. Initial studies have found multiple but similar barriers across countries and locations. They include problematic web sites, phone interactions and street signs; poorly marked entrances, passageways and destination points; complex maps that do not match signs or place colours; jargon-filled forms for health and family background information for legal documents such as informed consent and for

critical directions such as those for test preparations or for discharge home care. This can be a great challenge for adults and even more difficult for children and adolescents.

2. **Patients face multiple literacy requirements and increasingly difficult decisions**. This may include: evaluating information for credibility and quality, analysing relative risks and benefits, calculating dosages, interpreting test results or locating health information. To accomplish these tasks, individuals may need to be: visually literate (able to understand graphs or other visual information), computer literate (able to operate a computer), information literate (able to obtain and apply relevant information), media literate (able to distinguish reliable information from promotions) and numerically or computationally literate (able to calculate or reason numerically).

3. **Health information materials are often poorly written and literacy demands are excessive**. A strong body of evidence indicates that the literacy demands of health materials (in print and online) are clearly mismatched with the literacy skills of average adults with secondary school education. More than 1500 peer-reviewed studies indicate that health materials, across a wide array of content areas and formats (such as patient brochures, discharge instructions or medicine directions, forms, lists and

charts) have been poorly designed, poorly written and geared to a very sophisticated audience.

4. **Health providers' written and spoken communication has insufficient clarity and quality**. The skills of health professionals in communicating with patients have been associated with health outcomes. Studies show that patients require definition of terms, concrete examples, illustrations, narratives and reminder cues. They require help with solving problems and need to be actively encouraged to ask questions. Good experience has been gained with best practice guidelines.

5. **New "business" models can create new obstacles**. The adoption of a business approach to health reform, guided by efficiency outcome measures, has often led to reorienting priorities. The 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 people, such as low-income, older and unemployed people. 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.

6. **Health literacy affects the use of health services**. The European Health Literacy Survey shows that health literacy in European countries is slightly but significantly correlated with the use of health care services, such as the frequency of using hospital services (Fig. 15).

Fig. 15. Frequency of hospital service use in the last 12 months according to scores on the General Health Literacy Index for the 7764 respondents in the European Health Literacy Survey
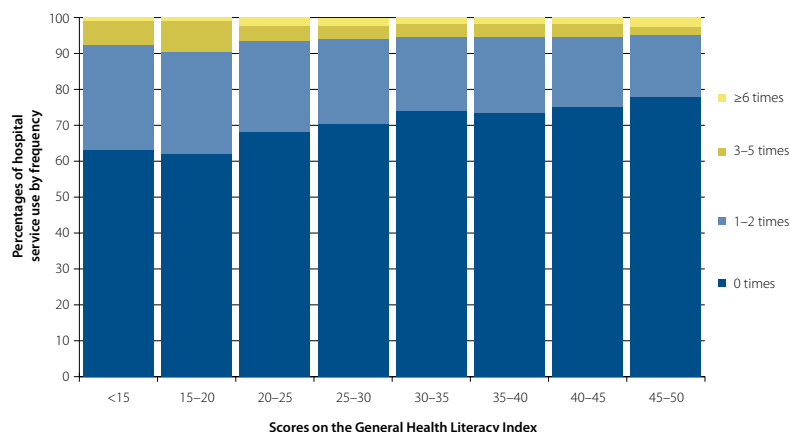
Source: adapted from: *Comparative report on health literacy in eight EU member states. The European Health Literacy Project 2009–2012*. Maastricht, HLS-EU Consortium, 2012 (http://www.health-literacy.eu, accessed 15 May 2013).

What is known to work – promising areas for action

1. **Reframe health literacy as a challenge to systems, organizations and institutions**. Several key reports on health literacy have uniformly recommended that health systems actively strive to understand the needs of their population and design care delivery models in a manner that accommodates everyone. Overall, limited health literacy should be framed not as a problem of patients and citizens, rather as a challenge to health care providers and health systems to reach out and more effectively communicate with patients, citizens and families.

A wide variety of effective evidence-informed interventions have been reported (Table 5).

2. **Establish a policy to promote health literacy in all communication materials**. Health systems should consider establishing policies that promote health literacy in written, multimedia and Internet-based communication directed to the public as a first response to health literacy. This includes enforcing plain-language approaches to health. Evidence-informed standards are available for ensuring plain-language communication and user-testing of materials and tools in health (Table 6). The way health information is offered in print, online and in

Table 5. Improving the health literacy environment in health care facilities: a toolbox

Focus	Challenges	Suggested action
Web	• Generally designed for attractiveness rather than use	• Improve navigation and the return to the home page • Enable users to make enquiries • Provide answers to common enquiries
Phone	• Recorded information is often spoken very rapidly • The operator cannot answer many questions • Wait times are long and disconnections are common	• Develop recordings with care and pilot them • Provide orientation and training • Provide scripts for frequently asked questions
Entry	• Signage is not clear • Different entrances are not marked by purpose	• Clarify street and entry signs
Way-finding	• The information desk is often welcoming, but the directions are not always clear • Many workers do not know the facility layout • Maps are very complex • Signs do not apply consistent or common words	• Provide orientation and training in using plain language • Provide orientation booklets for patients • For new construction: do not leave signs to the discretion of the designers • Consider all staff as ambassadors and provide orientation to the facility
Talk	• Medical jargon abounds	• Orientation for all staff • Plain-language training

Table 6. Plain-language approaches in health care settings

Focus	Challenges	Suggested action
Vocabulary and sentence length	• Overuse of jargon • Use of medical and other scientific terms that are not defined • Use of long and complex sentences	• Use plain language • Use clear and simple (but not simplistic) written and spoken language • Use child-friendly language
Organization and structure	• Materials are not written with the audience in mind or with attention to the reading process • People are often overwhelmed with information presented in complex formats	• Design for reading ease • Check for clarity • Use organizational and navigational cues • Organize information by reader preference and priority • Pilot written materials • Use teach-back for spoken information
Design and development processes	• Materials are often designed from the professional perspective • The production of material lacks professional rigour • Medical encounters are structured for the patient with scarce room for question asking	• Regulate the development and review of critical texts • Require piloting with members of the intended audience, including children and adolescents • Encourage and support people in asking questions and setting agendas
Rigour	• Few if any requirements are in place for designing, piloting and producing materials • Few protocols are in place for assessing the communication skills of health professionals	• Develop and apply regulations for designing, piloting and producing critical health texts • Teach and apply teach-back methods • Institute communication requirements for licensing exams

discussions should change. Recommendations related to print and online materials include calls for institutional review boards with minimum requirements for rigorous pilot testing with members of the intended audiences, evidence of revisions related to ease of use and clarity and reports of assessment processes and findings.

3. **Make health literacy sensitivity a quality criterion for health care management**. Health literacy has to be included as a relevant criterion in assessing the quality of professionals and institutions. Taking "universal precautions"

for health literacy means applying best practices for spoken communication to all health care professionals who interact with patients. Measures related to literacy and/or health literacy must be integral to any internal programme evaluation to obtain feedback as to whether ongoing initiatives are reducing or exacerbating health literacy disparities, and users have to be included in the processes of planning, governance and quality assurance and improvement. This also includes creating shame-free environments in which patients and visitors feel comfortable in asking for help, people feel welcomed, where

help is offered to everyone, clear signs and postings ease the burden of finding one's way, materials are provided and are well designed for use and talk is friendly and jargon-free.

4. **Invest in professional education**. Health care providers should be trained to communicate more effectively to help them care for people with limited health literacy. Training should focus on improving clinicians' communication skills and understanding of cultural sensitivity, gender differences and various age groups. Further, clinician skills need to be improved for fostering mutual learning, partnership-building, collaborative goal-setting and behaviour change for people with chronic diseases. Training works best when it is informed by users with limited health literacy, who are often underrepresented in clinical research**.** New types of professionals are needed who can guide individuals towards their health goals. New professionals are needed in the community and in all clinical settings to act as advocates, counsellors and guides.

5. **Use the International Network of Health Promoting Hospitals and Health Services as well as European patient organizations to foster health literacy**. The health-literate health care organization is an important model for hospitals and health services. Health literacy is a core concept for implementing health promotion. The setting-oriented approach is a relevant area in the strategies and policies of the Network. Networks such as this are therefore an important resource for promoting health-literate hospitals.

Example: adherence to medication

Directions for use and warnings on prescription drug labelling are often unclear, clinician communication during health care encounters is often incomplete, pharmacies may fail to counsel people or provide required documentation to ensure that a medication is used safely, and discharge instructions from hospitals may be too difficult to comprehend and follow.

Michael S. Wolf *Promoting health literacy among health systems* (unpublished)

What is known

1. **Medication errors are common, dangerous and preventable**. Problematic prescribing and drug labelling, coupled with known missed opportunities by doctors and pharmacists to verbally counsel people on new prescriptions, have been identified as root causes of medication errors, adverse events and poorer clinical outcomes. This problem persists despite the increasing availability of electronic record systems and technologies in medicine and pharmacy practices.

What is known to work – promising areas for action

1. The Universal Medication Schedule has been widely promoted and tested as a way to standardize the way doctors write medication instructions so that they are explicit and patient-centred: "take two pills in the morning and take two pills in the evening" versus "take two tablets by mouth twice daily" (Fig. 16). By leveraging an electronic health record system, these instructions can be made uniform across all medicines, and complementary, one-page medication information sheets can be generated automatically at checkout to promote safe and appropriate use. Studies have already shown that the Universal Medication Schedule can significantly improve patients' ability to correctly demonstrate how to use prescribed medicine and to find the most efficient way to take a multi-drug regimen and support proper, sustained adherence. By working at the point of pharmacy, these same Universal Medication Schedule instructions can be imparted through a pharmacy records system, so there is concordance between the communication from the prescriber and the pharmacy. In the end, the drug label instruction, which may reflect the most tangible source of information repeatedly viewed by patients, will have these more explicit and easy-to-understand directions.

Fig. 16. Example of the Universal Medication Schedule

Take	1 tablet in the morning (or bedtime)
Take	1 tablet in the morning 1 tablet in the evening
Take	1 tablet in the morning 1 tablet at noon 1 tablet in the evening
Take	1 tablet in the morning 1 tablet at noon 1 tablet in the evening 1 tablet at bedtime
Take	1 or 2 tablets Wait at least 4 hours before taking again Stop at 6 tablets in 1 day

Morning: 06:00–08:00

Noon: 11:00–13:00

Evening: 16:00–18:00

Bedtime: 21:00–23:00

Source: adapted from: Wolf M. *A universal medication schedule to promote patient understanding and use*. Rockville, MD, Agency for Healthcare Research and Quality, 2009 (www.ahrq.gov/legacy/about/annualconf09/wolf/wolf.ppt, accessed 15 May 2013).

Example: programmes for self-managing chronic disease

What is known

1. **The health outcomes for people with diabetes who have limited literacy can be improved significantly**. Personalized education, in which people with diabetes have direct contact with a provider, has more effect on diabetes knowledge and self-efficacy than multimedia interventions with no personalized contact. Comprehensive programmes for managing diabetes have the greatest effect on the clinical outcomes of people with limited literacy. Self-management behaviour improves with interventions focused on goal-setting and action plans.

2. Randomized clinical trials indicate that health outcomes such as systolic blood pressure and glycated haemoglobin (HbA$_{1c}$) can be improved among people with diabetes with high and limited literacy through comprehensive programmes for managing diabetes but not through automated telephone support, multimedia interventions or group visits.

What is known to work

1. **Develop and support programmes for self-managing chronic disease**. Supporting health literacy and empowering people with chronic disease and their families to successfully self-manage disease means providing not only relevant health information but also opportunities and an environment to develop skills, confidence and knowledge. This includes reducing the complexity of health-related information. The effectiveness of all options is enhanced by creating environments that encourage service providers to combine traditional care with peer-led self-management support that incorporates new roles for service users. Behaviour improves with interventions focused around goal-setting and action plans (Box 13).

Box 13. Chronic disease self-management programmes

An example of supporting the health literacy of people living with chronic conditions is the programmes for self-managing chronic disease now being implemented in several European countries such as Denmark, England, the Netherlands and Switzerland (originally developed at Stanford University). One well-established programme is the Expert Patient Programme in the United Kingdom based on self-care groups led by patient peers, adapted to community needs and based on patients understanding and being involved in their care.

Box 13. contd

Such programmes tend to be group-based self-manage-ment courses 6–8 weeks long with structured weekly sessions of about 2.5 hours and predominantly offered in community settings. Two trained peer leaders, at least one of which has a chronic condition, facilitate the inter-active sessions. People living with various chronic con-ditions and/or family members can attend the courses. Both training of leaders and facilitating the weekly ses-sions are based on a structured manual.

Reviews and a meta-analysis on the outcomes of these programmes conclude that moderate to strong evi-dence indicates that the programmes improve self-rated health, health distress, pain, fatigue, the management of cognitive symptoms, physical activity and self-efficacy. Implementing them on a large scale could contribute to improving public health.

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12

Media and communication

Mass-media communication can support health literacy in many ways. For most Europeans, the primary and most trusted information sources are their health care professionals, but most seek out supplementary information from a variety of mass-media sources.

Franklin Apfel *Mass mediated health communications and health literacy* (unpublished)

What is known

1. **Information alone is not enough**. Message communication approaches focused on crafting information and sending messages are not enough to positively influence people's choices. Research results and experience from across the wider social and behavioural sciences, including social marketing, social psychology, behavioural economics and neurosciences, increasingly provide practical and often cost-effective, solutions to helping people to "make judgments and take decisions in everyday life concerning health care, disease prevention and health promotion to maintain or improve quality of life during the life course" (Sørensen K et al. Health literacy and public health: a systematic review

and integration of definitions and models. *BMC Public Health*, 2012, 12:80) (Box 14).

> **Box 14. Case study: social marketing to enhance health literacy related to avian flu**
>
> During the 2005–2006 avian influenza outbreak in Turkey, UNICEF coordinated a multisectoral, multiagency task force that used social marketing techniques to deliver target-specific communications to hard-to-reach high-risk population groups. Focus groups and interviews were conducted with mothers living in the rural eastern part of Turkey to better understand their perceptions and risk behaviour (such as bringing chickens into the house to keep them warm), identify messages and incentives that could reduce risk and mass media and community channels (such as language-specific radio and television broadcasts) that could deliver reliable, understandable information appropriate to the literacy level of the population. The intelligence gathered also informed advocacy strategies for policies for compensating farmers for poultry losses.

2. **Communication is an integral part of comprehensive public health initiatives**. Communication has been credited with reducing some forms of risky behaviour (such as unprotected sexual intercourse); promoting uptake of disease prevention measures and treatment (such as the use of seat-belts and medication labelling); and enhancing adherence to medication and treatment regimens. Positive effects have been attributed to programmes that tailor health information to the needs of target

audiences, model health-promoting norms and lifestyles, conduct campaigns for reducing risk behaviour and actively advocate for policies that make healthier choices easier, such as advertising bans on tobacco and alcohol and banning smoking in public places (Box 15).

Box 15. Enhancing the health literacy of policy-makers in Ukraine

Social marketing can also be used to enhance the health literacy of professionals, organizations and policy-makers. Ukraine's tobacco control campaign, for example, used social marketing approaches to advocate for pictorial package labels in 2010. The campaign focused on educating parliamentarians as its primary target group about what the new proposed tobacco law related to labelling and taxation would mean for health and the economy. Tactics focused on "making ourselves indispensable". Organizers actively supported the drafting of the legislation in a working group of the Parliamentary Committee on Health Issues and relentlessly countered the arguments of the tobacco industry with the help of members of parliament.

3. **Health-compromising mass-media communication**. From the earliest age, people receive messages from multiple sources, some of which are highly problematic and directly undermine positive health behaviour. The aggressive global commercial marketing of tobacco, alcohol and unhealthy food and beverages, for example, continues to lead people towards unhealthy lifestyles and contributes significantly to the rapidly increasing burden of noncommunicable diseases.

What is known to work – promising policy and other interventions

1. **Levelling the communication playing field**. Enforced restrictions on hazard-related marketing, such as bans on tobacco and alcohol advertising (to reduce consumption and save lives) allow more space for health-promoting messages to be heard and seen. Free (or reduced-cost) public access to social advertising time and space as part of licensing regulations gives public health messages access to important (and otherwise prohibitively expensive) mass-media outlets, such as television, radio and cinemas. Freedom of information acts and regulations protecting open media underlie the potential effectiveness of any advocacy action and require rigorous support and continual monitoring for compliance. Social media (such as Facebook, Twitter and YouTube) have enabled new and unprecedented opportunities for public health communication (Chapter 13).

2. **Enhance public health communication capacity**. Strategic approaches to using mass media to enhance individual and population health literacy include strengthening the capacity to deliver audience-centred information, actively countering misinformation, influencing behaviour and advocating for health literacy–friendly environments and policies. Health communicators and educators can learn from the communication approaches successfully used by commercial advertisers and marketers. These include targeting and market segmentation techniques to deliver tested and tailored health messages and information.

Educational entertainment (edutainment) approaches positively influence health literacy learning and action. Studies indicate that edutainment, especially when it is combined with other methods and approaches such as movement-building strategies and interpersonal communication, has been highly effective in several contexts. In some countries, for example, discussing immunization on soap operas has increased the number of mothers seeking vaccination for their children.

3. **Actively counter misinformation and ensuring quality**. Establishing quality assurance systems to prevent misinformation and miscommunication can help to facilitate the delivery of reliable and coherent health information. Accreditation schemes for health literacy–friendly information materials can be established at institutional levels. Media health literacy skills are needed to distinguish credible, reliable and independent information from sales-driven product marketing and advertising. Media literacy works towards deconstructing media communication, taking it apart to show how it is made (Box 16).

Box 16. Independent sources of health information

Independent municipal, national and international health information sources, such as WHO, the European Commission or NHS Direct in the United Kingdom, can help people in distinguishing fact from fiction. Health web sites in general, however, lack quality control. Some quality standards and certifications, such as the Health on the Net standards, have been developed for quality control of health web sites but have not yet been applied globally and have not been shown to make web sites easier to understand.

4. **Enhance equity in electronic health (eHealth) literacy**. Health gains among highly eHealth-literate people have created new inequalities in digital health information. Groups at higher risk need to be educated and assisted and technology designed with accessibility by all in mind (Box 17).

Box 17. What is eHealth literacy?

Specifically, eHealth literacy is defined as the ability to seek, find, understand and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem. Unlike other distinct forms of literacy, eHealth literacy combines facets of literacy skills and applies them to eHealth promotion and care. At its heart are six core skills (or types of literacy): traditional literacy, health literacy, information literacy, scientific literacy, media literacy and computer literacy.

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13

Social media and mobile health

Health organizations should go where people already are online (on social media), rather than just build their own isolated web islands of "read-only" information portals and expect people to come and visit.

Maged N. Kamel Boulos *Using social media for improving health literacy* (unpublished)

What is known

1. **Social media can potentially improve users' capacity to obtain, process and understand health information and services needed to make appropriate health decisions**. Viral social marketing (reaching out to many more people, more quickly and with minimal costs, compared with other forms of marketing and advertising) is among the strongest aspects of social media and can play an important role in health education, promotion and outreach programmes. For example, viral marketing and other social media techniques have been successfully used to promote condom use in Turkey.

2. **Online social networks and participatory communication methods can also provide**

excellent **opportunities for peer-to-peer support**. Patients and members of the general public supporting each other can contribute to reducing the burden on conventional health care systems (Box 18). PatientsLikeMe, a social networking site for patients with various medical conditions, is now a classic example of online patient-to-patient support, and those using it often report several perceived benefits and improved disease self-management and outcomes.

3. **The mobile social web is now enabling people to easily share, rate, recommend and find software apps (applications) covering almost any topic, including health**. The advent of smartphones, small-form-factor tablets and the latest generations of operating systems and web browsers that support the concept of apps and associated app stores or markets has made downloading and installing software easy and popular. For example, more than 1 million people downloaded a mobile app for trusted and reliable health advice offered by the NHS in England in its first six months after launch in May 2011.

4. **Smartphones and their apps are rapidly and radically transforming health care, especially the care of people with long-term conditions**. This enables health care to

Box 18. Teen2Xtreme

T2X (Teen2Xtreme) is an online site that harnesses the power of social media to improve adolescents' health literacy. Run jointly by the UCLA School of Public Health and Health Net, Inc. in the United States of America, T2X offers a Facebook-linked, teen-only community of users, with teen- and professionally produced content, competitions, games, quizzes, polls, blogs, video clips (YouTube) and other interactive and participatory communication methods. T2X covers lifestyle issues for teens, such as nutrition, fitness, stress management, substance abuse and sexual behaviour. A screenshot of the T2X welcome page shows how various social media elements have been successfully integrated into the portal. The portal goes where teens already are on the social web and uses the same social media interfaces with which they are familiar, all while providing a unique, distinctive wrapper, with carefully selected teen quotes, colours and style that would appeal to a teenage audience, motivate them and foster their engagement with one another and with the service content.

Source: T2X Club, an online video series in which teens explore friendships, relationships, health topics, and school: (http://www.t2x.me/club.aspx; also available on YouTube: http://www.youtube.com/user/t2xTheClub.)

become more mobile at the point of need and more participatory by engaging all involved stakeholders, including patients, non-clinical caregivers, the general public, clinicians and others. Many of the available and planned specialized mobile apps have significant potential

in reducing health care costs and improving clinical outcomes (Box 19). Given the growing popularity and broad range of health-related mobile apps available today, the United States Food and Drug Administration is now proposing guidelines that outline the types of mobile apps the agency plans to oversee: the medical apps that could present a risk to patients if the apps do not work as intended.

Box 19. Plain-language medical dictionary

The Plain Language Medical Dictionary, created by the University of Michigan's Taubman Health Science Library, is available both on the web and as an iPhone app. This dictionary converts medical language into everyday English and could prove handy to individuals struggling to understand the exact and correct meaning of the medical terms that they encounter online.

The few terms shown in this screenshot of the app, such as abdomen, ability, absorption and accelerate, remind clinicians, scholars and policy-makers with a professional background how such terms that might be considered simple and self-explanatory can confuse many other people, even highly literate people. This is why such online dictionary apps and tools are important. For example, the word unsweetened could confuse people with diabetes with limited reading skills, who may only recognize the sweetened part of unsweetened and not the prefix, thus leading to inappropriate behaviour.

5. **Social media pose higher risks than other conventional media** (such as television and print material) because of the much wider (and faster) outreach of the social web and its message and its partly uncontrollable and non-moderated nature in which virtually anyone can publish whatever they want. The risks include spreading misinformation and disinformation, which can propagate very rapidly through viral messages, videos and electronic word of mouth and even through the social media accounts of reputable organizations that get hacked. The viral nature of the social web means that information and misinformation can travel and get boosted very fast (the water ripple effect), especially during times of mass stress and panic. Further, on the social web, the source (an important clue in assessing information credibility) is often omitted or lost (such as in Twitter retweets limited to 140 characters), and the information is sometimes paraphrased in a way that distorts the original message or takes it out of its intended context.

What is known to work – promising areas for action

1. **Create trustworthy social media channels**. Consumers can be educated and guided on how to critically appraise online health information and where to find good information online using the same social media tools and streams, while plenty of good material can be promoted by creating trustworthy social media channels for this purpose and socially marketing these channels. Examples include the official channels

for the NHS Choices in England and United States Centers for Disease Control and Prevention and anti-tobacco campaigns on Facebook.

2. **Monitor and moderate**. Users should be allowed to post and comment, since this is the essence of social media. Nevertheless, social media masters should regularly monitor and moderate their content for any forms of spam, abuse or violations of copyright or patient privacy. Account administrators should also protect their presences with strong passwords to prevent spammers from hacking their accounts. Organizations should develop and enforce clear policies and guidelines on what their staff members can post on various social media and should also allocate sufficient personnel time and resources to monitor their social media presences. This task can be very demanding but can be partly helped by identifying, training and appointing online community leaders from among patients (expert e-patients) and the general public to assist in moderating and facilitating social media postings.

3. **Tailor channels to audiences**. Social media content and choice of media (such as using a blog post, a YouTube video, using both media or a dedicated mobile app) need to be tailored to suit the profiles and preferences of target audiences and their levels of reading with understanding. Involving representatives from the target audiences in planning, implementing, disseminating and evaluating online health information and services is very important. A strategy based on shared-audience information sets (based on evidence-informed material originally

compiled for clinicians) can be adopted to maximize the efficiency of content authoring and delivery in relation to varying degrees of patient literacy, from the expert patient to the layperson with very limited literacy. Even the most readable (social media) posts will remain difficult to fully and properly understand for much of the population. For this reason, in addition to written text, online health information providers should also consider alternative and complementary social media modalities such as interactive games and live seminars in virtual worlds and plain-English videos (or in other languages as appropriate), so that no one is left behind.

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Resources available from United States agencies

The United States Centers for Disease Control and Prevention uses social media extensively in its public health campaigns and outreach activities. It offers

an online health literacy course, health literacy training materials and a social media toolkit and provides a monthly health communication publication on health literacy, social media and social marketing.

In addition, the United States Office of Disease Prevention and Health Promotion has created an online guide to writing and designing easy-to-use health web sites. It also hosts an open-source, online portal that contains key tools, research reports, and other resources for individuals interested in health literacy, health communication and eHealth. These tools could be useful to both public health practitioners and other individuals interested in developing social media content.

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C

Developing policies for health literacy at the local, national and European Region levels

This publication has presented strong evidence for why policy action to address health literacy is needed and has highlighted a wide range of promising interventions that are being and can be carried out by many stakeholders to strengthen health literacy. This part summarizes key action areas that can contribute to developing policies for health literacy on all levels. These action areas include: championing and leading for health literacy across society, aligning with the values and principles of the public good, advocating to put health literacy on the public policy agenda, strengthening the evidence base of health literacy through support for research and monitoring, building adequate capacity for action and finding effective ways to work together for health literacy at the European Region level.

Health literacy needs champions and leadership across society

1. **Politicians, professionals, civil society and the private sector can all contribute to addressing health literacy challenges**. As discussed above, many actors, agencies and settings are actively promoting, developing and implementing health literacy initiatives. Some countries have health literacy networks, coalitions and alliances. Some of these have been

strategically established alongside organizations that support patient empowerment and health promotion. Professional organizations and civil society organizations throughout Europe that promote patient participation, public health and consumer rights can be important advocates for health literacy. The International Union for Health Promotion and Education has established a Global Working Group on Health Literacy. Alliances such as the NCD Alliance[3] can help take the health literacy agenda forward in relation to the global challenge of noncommunicable diseases. The private sector can make significant contributions. Corporate social responsibility can include providing reliable information to patients and consumers, as should all health reporting, marketing and advertising. In particular, the mass media and the information and communication industry can work with patients and consumers to contribute to better information, experience exchange and transparency

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[3] The NCD Alliance was founded by four international federations of nongovernmental organizations representing the four main noncommunicable diseases – cardiovascular disease, diabetes, cancer and chronic respiratory disease. Together with other major international nongovernmental organization partners, the NCD Alliance unites a network of over 2000 civil society organizations in more than 170 countries. The mission of the NCD Alliance is to combat the NCD epidemic by putting health at the centre of all policies

and accountability for health. Networks such as healthy cities, health-promoting schools, health-promoting universities, healthy workplaces and health-promoting hospitals can significantly strengthen the health literacy agenda.

2. **The health sector can lead by example**. It can create enabling health care settings that empower individuals and promote and support health literacy. It is a core part of the professional duty for health professionals to improve their communication skills and to develop the health literacy skills of their patients. Training all health professionals is essential – new types of professionals are needed in the community and in all clinical settings who can act as advocates, change agents, counsellors and guides. National health services and health insurers in insurance-based health systems can create incentives for action in the health sector to support health literacy, and patient and consumer organizations can advocate for greater patient involvement and health literacy–friendly health care settings. Including representatives of patients in planning, governance and improving the quality of all health care organizations can be an effective means of making these organizations more health literate–friendly, as experience from the Netherlands shows.

3. **International and regional agencies can provide moral and political platforms for action**. For example, Health 2020, the European policy for health and well-being, acknowledges health literacy as a determinant of health and well-being, offering a unique and timely opportunity for accelerating action. The Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases, European Union white papers and declarations of the United Nations Economic and Social Council call for investment in health literacy research and action, providing critically important political mandates.

Aligning with the values and principles of the public good

1. **Health-related rights and access to information are needed**. Health literacy is a key dimension of health citizenship. It is a fundamental skill all people need to promote health, prevent disease and live with chronic disease in modern society. Health literacy is a public health imperative. Health literacy is a strong predictor of health status that is linked with age, income, employment status, education level and race or ethnic group. Everyone, including children and adolescents, has a right to health information and health systems that they can understand and navigate. They also have a right to information as consumers in relation to products that can adversely affect their health.

2. **Reducing health inequities**. Health literacy follows a social gradient in all countries across the European Region and beyond. Half of all Europeans have inadequate or problematic skills. The implications for these groups is that their limited health literacy often correlates with a lack of ability to effectively self-manage health, access health services, understand

available and relevant information and make informed health-related decisions. Targeted initiatives can strengthen health literacy among vulnerable groups and can help address health inequities.

3. **Reducing societal costs**. Limited health literacy incurs significant costs to society, health systems and individuals and their families. Building health literacy is a long-term strategy that requires long-term investment. National, regional or local governments can provide supportive environments that foster the commitment to health literacy. They can make a high level of health literacy an explicit goal of health policy as well as of education policy. Health literacy is a key outcome measure for early child development, school curricula and lifelong learning for health and well-being that need to be promoted across the life course.

4. **Building capacity to sustain change**. Strengthening health literacy not only improves health but also builds resilience to help individuals and communities navigate their way to health-sustaining resources and actions.

Advocating – putting health literacy on the public policy agenda

1. **Develop national and local strategies that strengthen health literacy.** Some countries have already moved in this direction and have included health literacy as a separate strategy or as a part of other national strategies for health or education. For instance, in Wales, health literacy

is an important part of the strategy to overcome inequalities in health; in Austria, health literacy has been included as one of 10 national health goals. Examples from Ireland and the Netherlands also provide excellent examples.

2. **Make standards for health-literate organizations part of quality management and corporate social responsibility**. Institutions such as workplaces, schools, hospitals and retail outlets can develop and adopt health literacy standards at the appropriate policy levels. This approach includes plain-language initiatives as a means of providing meaningful, reliable, simple and practical information for citizens, patients and consumers. Standards for health literacy must also become an integral part of what is expected of the producers of health-related goods and services.

3. **Adopt a multidimensional approach to building health literacy**. To reach target populations, initiatives to build health literacy are best grounded in settings of everyday life. Policies and approaches must be sensitive to differences in cultures, gender, age and individuals in their content and format. Most countries have agencies to address problems related to limited general literacy, and health literacy should become an important part of their tasks.

Strengthen the evidence base for health literacy

1. **Invest in research**. Developing institutional policy requires investing in interdisciplinary

research that demonstrates the benefits of tackling health literacy for the organizations concerned. This may include reduced costs (fewer no-shows and better adherence), improving the quality of care and improving patient satisfaction. Win-win is the best starting-point for success. Health insurance providers can incorporate attention for vulnerable groups in their contract conditions with health care providers when it reduces costs. Surveys of health literacy and the health literacy–friendliness of systems should be conducted at regular intervals to allow comparisons over time. Research should not only focus on adults but also include children and adolescents.

This publication has presented a wide variety of promising initiatives. Priorities need to be set and investment made in key developmental areas, such as analysing the effects of mass media and social media and better understanding how environmental interventions affect individual health literacy.

2. **Better measurement and comparative data at all levels of governance is needed**. Existing measures of health literacy are still too oriented towards the individual and must be expanded to include the collective level (including communities) and to assess the literacy friendliness of materials, organizations and environments. Better research will provide better directives for organizations to improve education and self-care interventions for individuals, patient care, quality of the services provided, the service responses to community needs and the nature, content and delivery of health promotion messages.

Working together at the European level

1. **European organizations should work together to expand the European Health Literacy Survey**. This can serve as a barometer to measure the effectiveness of whole-of-government and whole-of-society approaches to health and well-being – also within the organizations. It is recommended that health literacy be included in the European Union's framework for key competencies for lifelong learning. The European Health Literacy Survey should be sustained, have dedicated funding, be applied to more countries and be conducted at regular intervals through the continued support of the European Union, the WHO and countries. The instrument can also be used to assess and benchmark the health literacy of specific groups and of the effectiveness of policies, programmes and projects related to health and well-being across government sectors and societies.

2. **Support European centres of excellence**. Such centers could help drive the momentum for health literacy further and support both a research and an action agenda. They can help expand networks on health literacy in the WHO European Region. Health literacy is an excellent health action area on which the EU and the WHO Regional Office for Europe can join forces together with other European and global actors – especially in relation to the role of innovation in health, given the increasing relevance of health information technologies and social media in promoting health literacy.

3. **Support learning exchange**. European organizations should engage with developing health literacy networks. Health Literacy Europe is a rapidly growing network for professionals working in research, policy and practice. It was established as part of the European Health Literacy Project and launched in 2010 at the European Health Forum Gastein. Countries are already taking national, regional and local initiatives. Supporting this exchange of learning can help everyone progress faster (Boxes 20 and 21).

Box 20. Ireland: a multistakeholder approach

In Ireland, the multistakeholder collaboration between the National Adult Literacy Agency (NALA), the Department of Health, the Health Service Executive, academe and the pharmaceutical company MSD has offered an effective approach to making operational health literacy initiatives and influencing policy surrounding health literacy.

Health literacy has been on the periphery of the public policy agenda in Ireland since 2002. The initial stimulus emerged from the International Adult Literacy Survey, which revealed that 55% of Ireland's population surveyed in 1995 had very limited literacy skills. This was a shocking finding, and the NALA, a not-for-profit organization founded in 1980, responded to these findings in several ways, including exploring the relationship between literacy and health literacy. NALA carried out a qualitative research project using focus groups with a sample of its literacy learners alongside a sample of health care professionals. Their findings and recommendations for health literacy policy and strategies were published in 2002.

Over the years, NALA has worked closely with the Department of Health, Health Promotion Unit and Health Service Executive, which have supported NALA's health literacy initiatives. A recent important development in moving the health literacy agenda forward has been Ireland's participation in the European Health Literacy Survey. The Survey found that 39% of the people surveyed in Ireland have inadequate or problematic health literacy.

In 2007, a second stimulus emerged in the form of MSD, a multinational pharmaceutical company based in Ireland, for which health literacy became a key element of their corporate social responsibility agenda. Collaboration between NALA and MSD was forged.

In 2007, the MSD-NALA health literacy collaboration launched the Crystal Clear MSD Health Literacy Awards. This initiative is designed to recognize those driving change in health literacy across education and training, health writing and patient communication, to encourage best practice and to reward innovation in the field. The submissions for the Crystal Clear MSD Health Literacy Awards have increased steadily since 2007, and the quality of innovations and submissions has improved. The Awards are formally launched with a public relations campaign twice each year with coverage in the national media, including radio and television.

NALA has produced a wide range of supportive materials to promote health literacy. Plain-English teaching materials, training of communication staff in health care settings, health literacy research and developing health literacy awareness tools such as a health literacy audit tool and DVD all form a part of the ongoing daily work of NALA. Other materials include an NALA policy brief on health literacy in Ireland in 2009, literacy audit for health care settings in 2009, a toolkit for literacy-friendly health care settings and NALA Audit Project 2010, a report on the health literacy audits of four varying health care settings (a primary care centre, a community care setting, a hospital diabetes clinic and an information centre in a children's hospital).

NALA is currently seeking to ensure that their health literacy audit tool will become integrated into the standards for health care as prescribed and assessed by the Health Information and Quality Authority. NALA is also seeking to integrate health literacy into all national health campaigns and screening projects and the training at undergraduate level for a range of health care practitioners. Within the Health Literacy National Advisory Panel (an element of the European Health Literacy Project), NALA has been selected as the chair of the advisory panel for the future in seeking to further influence national health policy on health literacy.

Box 21. Swiss Health Literacy Alliance

The Swiss Health Literacy Alliance connects stakeholders from the health care and educational systems with researchers, politicians, representatives of the health care industry and the mass media with the common goal of promoting health literacy in Switzerland. The Alliance aims to drive the sociopolitical agenda, develops and implements strategies and concepts for promoting health literacy and supports the realization of specific projects in Switzerland together with partners from inside and outside the Alliance.

The members of the Swiss Health Literacy Alliance are: Health Promotion Switzerland, the Swiss Society for Public Health, Careum, the Swiss Medical Association (FMH) and MSD – Merck Sharp & Dohme AG.

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