

PUBLIC HEALTH IN THE 21<sup>ST</sup> CENTURY

**HEALTH LITERACY IN CONTEXT**  
**INTERNATIONAL PERSPECTIVES**

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Nova Science Publishers, Inc.  
*New York*

*Chapter 2*

## HEALTH LITERACY AND DEFINITION OF TERMS

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### ABSTRACT

In recent years, health literacy has emerged as a substantive and rich field of inquiry. However, there has not always been full agreement on what exactly is meant by the term *health literacy* itself. With health literacy increasingly considered a social determinant of health, focused attention to its definition is warranted. A definition not only sets parameters but also indirectly shapes questions for inquiry; it offers guidelines for measurement and, in the case of health literacy, indicates a locus of control and responsibility that may influence research, practice, and policy decisions. Early definitions of health literacy focused on the skills and abilities of individuals to gain access to, understand, and use information. However, attention has been increasingly focused on the assumptions and skills of those professionals who develop and provide health messages, directions, and information and on those institutions providing services and care. This growing attention to the physical and social contexts of health activities calls for renewed attention to the definition of health literacy with its focus on individuals. We argue that a more comprehensive definition of health literacy must include both the

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abilities of individuals and the characteristics of professionals and institutions that support or that may inhibit individual or community action. Any such definition will unquestionably need to be accompanied by measurement tools that fully operationalize its key concepts—thereby including not only measurements of the abilities of the lay public but also of the texts, of the skills of health professionals, and of the expectations and assumptions of health care environments.

## INTRODUCTION

Links between education and health outcomes have been well established. Only recently, however, has literacy—the foundation stone of education—been examined as a pathway to health. This interest in the links between literacy and health has garnered a good deal of attention from researchers, practitioners, and policy makers over the past decade and has established health literacy as a substantive field of inquiry. Contributions to the field include over 1,500 peer-reviewed articles in health journals, several texts, multiple editorials, white papers, and policy reports (Berkman, Sheridan, Donohue, Halpern, and Crotty, 2011; Rudd, Anderson, Oppenheimer, and Nath, 2007).

At the same time, defining *health literacy* has been somewhat problematic, causing many contributors to the field to pose and then revisit those definitions. Without a commonly agreed-upon definition, there is little or no control over words. Indeed, a term may be so broadly defined or so narrowly applied that misconceptions and misunderstandings result. In addition, it may be so variously defined that each usage requires a precise delineation so that communication can proceed.

‘When I use a word,’ Humpty Dumpty said, in a rather scornful tone, ‘it means just what I choose it to mean – neither more nor less.’ (Carroll, 1871)

It is difficult, in scholarly discourse or public engagement, to have the kind of personal control that Humpty Dumpty sought over the use of words. Consequently, definitions help maintain clarity. A definition not only sets parameters but also indirectly shapes questions for inquiry; it offers guidelines for measurement and, in the case of health literacy, indicates a locus of control and responsibility that may influence practice and policy decisions. In this chapter, we focus on the definitions and uses of the term *health literacy* with

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attention to shifts in usage over time as well as to the tools developed to measure health literacy.

### IMPORTANCE OF TERMS

With health literacy increasingly considered a social determinant of health, focused attention to the construct is warranted. Scholars and practitioners newly engaged in shaping a health literacy agenda within their area of work and will want to closely examine the concepts and underlying assumptions that have shaped and are shaping health literacy work elsewhere. Of on-going interest is attention to the title itself and to the meaning and implications of terms used.

Research protocols demand that key terms be carefully defined and operationalized. Indeed, construct validity is determined by the extent to which the constructs are successfully measured. Consequently, attention to definitions of terms must include a discussion of measures. In addition, definitions hold importance beyond individual studies because they may influence a field by establishing parameters on the focus and scope of inquiry. Thus, this chapter offers an overview of definitions and measures with an understanding that definitions have consequences for the rigor of individual studies as well as for a field as a whole.

In general, definitions are biased and, when closely examined, yield insight into a particular perspective. Bias is understood to be a predisposed tendency toward a certain point of view, which is most often based on a particular system of beliefs including orientation, personal knowledge, and experience. The term *bias* is not used to imply incorrect or nonsensical definitions. We do note, however, that underlying beliefs and perspectives need to be recognized and their consequences need to be addressed (McCray, 2006). Thus, we intend that the discussion provided in this chapter sets the foundation for an examination of key questions related to health literacy research: What constitutes health literacy? How will it be measured? Who and what will be measured?

## BACKGROUND

Studies focused on the relationship between health and literacy began, of course, with literacy. Definitions and measures of *literacy* vary widely—including, for example, the ability to sign one's name, the ability to read proffered text aloud, the proof of having attended school, the acquisition of a high school diploma. Generally, literacy is understood to have two distinctive elements: those that are task-based and those that are skills-based. Task-based literacy focuses on the extent to which a person can perform key literacy tasks, such as read a basic text and write a simple statement. Skills-based literacy focuses on the knowledge and skills an adult must possess in order to perform these tasks. These skills range from basic, word-level skills (e.g., recognizing words) to higher-level skills (e.g., drawing appropriate inferences from continuous text). Importantly, it follows that literacy can be measured in absolute terms by distinguishing between those who can read and write basic text and those who cannot and in relative terms as well by assessing the skill differences between those who are able to perform relatively challenging literacy tasks and those who are not.

In the late 1980s, a group of education scholars developed a uniform measure of literacy that could be used by industrialized nations for national and for comparative international analyses. They did so by assembling and analyzing commonly available materials (e.g., newspaper and magazine articles, bank deposit slips, bus schedules, merchandise labels) from various aspects of everyday life (e.g., finance, civics, work, health, recreation) and then evaluating them in terms of complexity. Materials were divided into prose (continuous text such as an editorial or health pamphlet) and documents (e.g., lists, charts, graphs) and ranged from simple to complex. Tasks were developed to resemble those most likely undertaken for everyday activities and were ranked by level of difficulty. For example, a survey participant might be asked to determine the winning team, using a sports article on a recent game (i.e., locate one piece of information in an article without distractions). A participant, given a common over-the-counter medicine box, would be asked to use the information to decide how much medicine to give a child of a specified age and weight (i.e., use a complex chart to find multiple pieces of information). Another may be asked to identify the writer's perspective in a newspaper editorial (i.e., interpret text to identify implicit opinions). Thus, the survey examined functional literacy based on materials and specific tasks related to them (Kirsch, 2001). These assessments were based on an agreed-

upon measure of literacy as a functional skill—the ability to use commonly available materials to accomplish mundane tasks.

Findings from the 1992 United States (US) National Adult Literacy Survey (NALS) and from the International Adult Literacy Surveys (IALS) conducted in 1994 in Canada and 20 other industrialized nations indicated that large proportions of adults had difficulty using print materials to accomplish everyday tasks with accuracy and consistency. Analyses of these surveys and of those that followed in 2003 provided evidence that the literacy skills of a majority of adults in most countries were not adequate to meet the expectations and demands of their societies (Kirsch, Jungeblut, Jenkins, and Kolstad, 1993; Kutner, Greenberg, and Baer, 2005; Murray, Kirsch, and Jenkins, 1997). Furthermore, differences in literacy proficiency based on educational attainment, poverty, and access to resources and on majority versus minority status indicated powerful effects of social factors (Rudd, 2007; Rudd, Kirsch, and Yamamoto, 2004). Analysts determined that literacy attainment is influenced by a variety of social factors and, in turn, that literacy skills further determine opportunities, employment, and social engagement (Sum, Kirsch, and Taggart, 2002). These insights set a foundation for examinations of literacy as a contributor to health outcomes and as a mediating factor in health disparities.

### **Literacy and Health**

Before the NALS and IALS surveys were undertaken, Grosse and Auffrey (1989) had traced the development of research on literacy as a major determinant of health status to studies in developing nations. Their public health review article helped establish the now-acknowledged links between maternal literacy and the health of children. Soon thereafter, published findings of international assessments of adult literacy skills drew the attention of health researchers and practitioners working in industrialized nations. The primary questions for these research initiatives focused on the health implications of the documented literacy skills of adults.

After publication of the educational survey findings in the early 1990s, literacy and its implications for health outcomes and disparities became the focus of a growing number of health studies in several English-speaking countries. Interest in health and literacy emerged as a policy issue in Canada and in Australia in the early 1990s (Nutbeam and Wise, 1993; Rootman and Gordon-El-Bihbety, 2008). Research studies were launched in the US soon

thereafter. Publications in peer-reviewed journals grew from about 50 during the years 1960–1989 to over 300 by 1999, with over 1,500 publications in the first decade of the 21<sup>st</sup> century (Rudd et al., 2007; Rudd and Keller, 2009; Rudd, Moeykens, and Colton, 2000).

### **Health Literacy Research Strands and Tools**

Two major strands of research have shaped the field of health literacy. The first focus of study was on the materials and messages developed for consumer use. This area expanded over time to include analyses of materials and messages in print and online, the match between text characteristics and the skills of intended readers, and analyses of spoken messages. Over 1,000 studies now indicate that demands are indeed quite high—above the average skills of a majority of adults—rendering a good deal of health information, if not useless, of limited use (Rudd et al., 2007).

Most of the tools used for studies of health materials and messages focused on only two characteristics of text: word and sentence length. However, this initial and somewhat superficial measure offered insight into challenges people face as they try to decode health information and supported arguments for examining and refining commonly used materials. Several workbooks and texts, such as Doak, Doak, and Root's classic text *Teaching Patients with Low Literacy Skills* (1996), helped people move beyond attention to word and sentence length to examine writing style as well as organizational and design elements that ease or hinder the reading process. Subsequent developments included attention to document format (Mosenthal and Kirsch, 1998), web posting (Choi and Bakken, 2010; Friedman and Hoffman-Goetz, 2006), and numeracy demands in health care settings (Apter et al., 2008).

The second strand of research focused on the links between literacy skills of individuals and a variety of health-related outcomes. In the mid 1990s, health researchers in the US were inspired by findings from the 1992 NALS to develop measurement tools that could be administered in health settings and used in research inquiries to examine health-related differences between patients with strong literacy skills and patients with weak literacy skills. The resulting tools were approximations of reading skills based on health-related words or statements from commonly used materials. They were modified over time as developers responded to preference for instruments that could be administered quickly within medical settings (Davis et al., 1993; Parker, Baker, Williams, and Nurss, 1995; Weiss et al., 2005). A continued interest in

the development and refinement of measurement tools for health-related fieldwork enabling researchers to assess literacy skills of patients is evident in the development of discipline-specific tools, such as a tool for use in dental research (Lee, Rozier, Lee, Bender, and Ruiz, 2007).

The studies in this strand of research moved from measures of individuals' skills in health contexts to analyses of links between these measured skills and a variety of outcomes including knowledge, behaviours, morbidity, and mortality. Early studies of the links between patients' skills and health outcomes focused on patients in emergency departments and those managing a chronic disease. Over time, health practitioners and clinicians from a broader array of interests (e.g., dentistry, mental health, surgery) have launched studies of patient skills and health outcomes.

By the end of the 1990s, findings from numerous studies indicated an association between reading skills and a variety of health outcomes ranging from knowledge to behaviours. The US federal Agency for Healthcare Research and Quality (AHRQ) commissioned a systematic research review with articulated inclusion criteria. The analytic review weighed the evidence accumulated by 2003 and concluded that the links between literacy skills and health outcomes were well established (DeWalt, Berkman, Sheridan, Lohr, and Pignone, 2004). AHRQ commissioned a second review that found strong links between measured skills and health outcomes (Berkman et al., 2011). The current literature contains dozens of studies concluding that knowledge and understanding of a disease or treatment plan, engagement in preventive behaviours, management of chronic diseases as well as a variety of morbidity and mortality measures vary by literacy skill levels, which were most often estimated through approximations of reading skill.

At the same time, critiques of existing measurement tools highlighted the narrow focus of health literacy studies on the reading skills of patients without attention to other skills, such as speaking, listening, and mathematics (Nielsen-Bohlman, Panzer, and Kindig, 2004). Several recent studies have focused on the importance of dialogue in health, addressing oral and aural literacy (Koch-Weser, Rudd, and DeJong, 2010; Roter, Erby, Larson, and Ellington, 2007, 2009). Two studies examining the relationship between oral literacy and health outcomes measured skills with the Woodcock Johnson Achievements Tests, reported as grade equivalents to explore associations between aural literacy skills and chronic disease management (Rosenfeld, Rudd, Emmons, Acevedo-Garcia, and Buka, 2011) and between reading, numeracy, and aural skills and coronary heart disease risk (Martin et al., 2011). This strand of research, sparked by publication of findings from the adult literacy surveys, has indeed



explored the health implications of limited literacy skills. The prevailing definitions of health literacy helped shape this agenda.

### **Expanding Research and Merging Strands**

Much of the literature in this growing area of research has focused on the serious problems that people with low literacy face when interacting with health care systems. This is often viewed, quite appropriately, as a health disparity issue, particularly since those with low literacy have been shown to suffer worse outcomes than those with higher levels of literacy. However, while individuals with low literacy will certainly find it extraordinarily difficult to navigate today's complicated health care system, the US National Academies of Science's Institute of Medicine (IOM) reminds us that even those with strong literacy skills have trouble obtaining, understanding, and using health information (Nielsen-Bohlman et al., 2004). This may mean that we need to look at a very large continuum of needs for those who are at the lowest end of the literacy spectrum to those who are at the highest end, but it may also be the case that an entirely different model is required to understand and address the health literacy needs of otherwise literate individuals.

Furthermore, a substantial portion of the literature on health literacy addresses the problem of the basic literacy level of the patient, the readability of the health-related materials that the patient is expected to read, and the frequent mismatch between the two. However, navigating today's health care system carries with it a high literacy burden. Patients need to interact in a variety of health care settings (e.g., doctors' offices, clinics, hospitals), and they need to interact with a broad range of health-related information (e.g., therapeutic instructions, patient education materials, prescriptions, bills, insurance forms). In addition, they are being asked to take increasingly greater responsibility for their own health care and disease management. Health literacy research has expanded at the same time that health systems have grown increasingly complex (McCray, 2005; Rudd, Renzulli, Perreira, and Daltroy, 2004).

Most of the early definitions of terms and many of the new and expanded definitions continue to draw attention to the skills and capacities of individuals and of communities. However, they do not fully address the capacity of health systems or health professionals to inhibit or enhance such capabilities. While research indicates that the skills of individuals are linked to untoward health outcomes, illness and premature death may well be the result not of the limited

literacy skills, capabilities, and desires of the public but instead of a mismatch between the demands of health information and care systems and the literacy skills of population groups (US National Institutes of Health, 2006).

## DEFINITIONS OF HEALTH LITERACY

Various definitions of health literacy are found in the literature. This brief history highlights some key documents to discuss both the scope of the definition and the implication for measurement and research.

### Capabilities of Individuals

In the US, the National Literacy Act of 1991 was enacted to ensure that all adults in the US acquire basic skills necessary to function effectively and achieve the greatest possible opportunity in their work and in their lives. Literacy was defined as skills needed by adults to function in society, to achieve their goals, and to develop their knowledge and potential (Irwin, 1991). This functional definition of literacy shaped the subsequent assessments of adult literacy skills in industrialized nations and influenced the definitions of health literacy.

Early definitions of health literacy focused on the skills and abilities of individuals to gain access to, understand, and use information. The 1993 Australian policy report defined health literacy in terms of accessing, understanding, and using information to promote and maintain good health (Nutbeam and Wise, 1993). Subsequently, a more expansive definition of health literacy was included in the World Health Organization's (WHO) *Health Promotion Glossary* (1998) written by Nutbeam: "Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health." (p. 10).

The glossary section further explains that health literacy means more than reading alone: "Health literacy implies the achievement of a level of knowledge, personal skills and confidence to take action to improve personal and community health by changing personal lifestyles and living conditions." (WHO, 1998, p. 10). Mention of health literacy was included in several other WHO glossary items; it was posited as critical to empowerment and as an important component of participation. In the discussion of participation, health

literacy is equated with or linked to health learning: "Health literacy/health learning fosters participation." (WHO, p. 2). Health literacy is also proposed as a measure or outcome, for example, considered useful as a health indicator. Furthermore, the definitions include implicit actions: gain access, understand, use, and participate. However, the term was not operationalized and specific measures were not offered.

The well-articulated connection between health literacy and activation reflected in parts of the WHO health promotion glossary was not overtly incorporated in the burgeoning research in the US. The definition of health literacy used in the US policy document, *Healthy People 2010* (US Department of Health and Human Services [HHS], 2000) focused on individuals' capacities and drew from the previously noted definition of literacy in the 1991 Health Literacy Act. It focuses on individuals' capacity to obtain, process, and understand basic health information and services. This emphasis fits well with the strand of research focused on the capacity/skills of individuals within health care settings but does not quite incorporate attention to the larger arena of health-related action, to the shape and content of the health information, or to the barriers or facilitating factors of available health and health care services.

### **Health Contexts**

In 2003, the HHS action plan for health communication (2003) used the narrowly focused definition generally adopted in its health goals and objectives for the nation but simultaneously highlighted the importance of attending to the assumptions, demands, and skills of those crafting health messages. Similarly, in 2004 the IOM Committee on Health Literacy adopted the same narrow definition with an added caveat that called attention to the importance of both the skill and demand side. The IOM report (Nielsen-Bohlman et al., 2004) called for policy makers to consider the interaction between the skills of individuals and the demands of social systems and to make needed correctives. Baker (2006) proposed a conceptual model that included the complexity and difficulty of print as well as spoken messages and its contribution to the abilities of individuals to understand and communicate. Other researchers have focused attention on the important exchanges taking place in health care settings and explored listening and speaking skills and their influence on chronic disease management as well as for advocacy

(Martin et al., 2011; Rosenfeld et al., 2011; Roter, Erby, Larson, Ellington, 2009).

The 2010 *National Action Plan to Improve Health Literacy* (HHS, 2010) included a broader focus on the demand side by calling for greater skill development to support independence in health decision making and empowerment among individuals and communities and for transformations in health systems to redress the mismatch between current demands and current skills. A responsibility for removing literacy-related barriers has a well-established theoretical foundation in Lewin's force field analysis. According to Lewin (1943), change can best take place when counter-forces are diminished; consequently, before one promotes or encourages action on the part of individuals and communities, one must mitigate or remove existing barriers.

As health literacy researchers became more attentive to the barriers involved in the use of words, jargon phrases, numbers, and numeric concepts, some focused their attention on the skills of health professionals. Several North American medical schools include training related to health literacy (Harper, Cook, and Makloul, 2007). Roter, Erby, Larson, and Ellington (2007, 2009) have encouraged such work by adding health literacy issues to their ongoing studies of patient/provider communication. They noted that providers must pay attention to multiple components of communication and interaction (e.g., openings for interruptions, easy flow of exchange, question-asking) in order to shape an encounter that does not presuppose advanced literacy skills. Others have provided initial tools for assessing the literacy environment of health care settings (Groene and Rudd, 2011; Rudd and Anderson, 2006). However, there is still no uniform health literacy tool to assess the skills of providers or institutions. The ability to conduct rigorous research into efficacious change will rely, in part, on the development of sophisticated measures to clearly document and identify existing barriers and to compare and contrast the newly changed environment and so determine change—benefits, deficits, and/or unanticipated outcomes.

At the same time, most individuals may only occasionally be patients. People take action to maintain their health and that of loved ones, fellow workers, members of their community, and their environment. Definitions of health literacy, to be relevant to social and civic engagement, must include attention to action outside of the medical care encounter and broaden the notion of health action to include activities people engage in their homes, communities, and worksites and in the social and political environments of countries and regions (Rudd, 2007). This broader notion (well articulated in the WHO *Health Promotion Glossary*) might include acknowledgement of and

attention to the active engagement of lay and professional people as well as institutional action to remove barriers to health-promoting actions. Such an expansion calls for the development of measurement tools so that rigorous program evaluation studies can determine efficacious change.

### **Expanding Definitions**

The discussions of health literacy and proposed definitions of terms in Europe and in Australia, as noted earlier, did not remain static. Instead, health literacy was proposed to be more than the application of literacy skills for finding information and completing health tasks. A typology of health literacy concepts proposed in 2000 transformed existing concepts (Nutbeam, 2000). A newly shaped definition called attention to the application of basic skills but then highlighted the importance of agency and the need to consider the patient/individual as an active participant in the creation of health. The typology included functional, interactive, and critical health literacy. Those working with health literacy at the most basic level—health literacy as functional—tend to focus on access to information and the application of reading skills to enhance understanding and control over events. However, the concept of health literacy as interactive or critical broadens the scope and purview to include active engagement and participation in decision making on individual, community, and policy levels.

This definition, based on an underlying notion of empowerment, has shaped a European concept of health literacy with an emphasis on the individual (i.e., patient or community member) poised to take action. The concept of critical health literacy—the capacity for effective social, political, and individual action—is reflected in the call for recognition of health literacy as an asset and a goal (Nutbeam, 2008). This is reflected in calls in the US for a notion of broader concepts (IOM, 2004; Rudd, 2010). For example, Zarcadoolas, Pleasant, and Greer (2005) proposed a concept of a civic literacy that encompasses the idea of citizens becoming aware of issues, participating in critical dialogue, and becoming involved in decision-making processes for health. Health literacy is defined as “the wide range of skills, and competencies that people develop to seek out, comprehend, evaluate and use health information and concepts to make informed choices, reduce health risks and increase quality of life” (Zarcadoolas, Pleasant and Greer, 2005, p. 196).

Others have proposed variations on definitions that highlight a public health purview. For example, two definitions of public health literacy have

been offered. Gazmararian, Curran, Parker, Bernhardt, and DeBuono (2005) suggested that public health literacy enables people to understand the problems of health for themselves, their families, and their communities. Furthermore, they proposed that “a skilled and professional workforce in healthcare and public health will communicate with the public in ways that they understand.” (p. 321). Similarly addressing a public health issue, Freedman et al. (2009) suggested that public health literacy engage a broad swath of stakeholders in public health efforts to address social and environmental determinants of health. They proposed that public health literacy is “the degree to which individuals and groups can obtain, process, understand, evaluate, and act upon information needed to make public health decisions that benefit the community” (Freedman et al., 2009, p. 448). Here, different levels of health literacy are distinguished by the higher levels of knowledge and skills that progressively support greater autonomy and personal empowerment in health-related decision making as well as engagement with a wider range of health knowledge. The concept extends from personal health management to the social determinants of health.

Still missing from many of the definitions is one that reflects the active involvement and skills of those in public health and in health care—the administrators, the staff, the writers, the legislators, and the various professionals—who give shape to health information as well as to the physical and social contexts of health activities. A broad concept of health literacy as the capacity for effective social, political, and individual action demands attention to social and political factors that inhibit or support such action.

## IMPLICATIONS AND CONCLUSIONS

Literacy assessments in multiple industrialized countries have firmly established weaknesses in the literacy skills of the public. The reason we care so much about literacy is that even the most basic functional literacy skills enable people to better develop their knowledge and improve the potential to achieve personal goals. Thus, they are able to participate more fully in society, both economically and socially. Responding to low levels of literacy in a population involves improving access to effective school education and providing adult literacy programs for those in need. Achieving high levels of literacy in a population is not only a vital development goal; it also produces substantial public health benefits. The documented links between literacy skills and health outcomes call for action.

At the same time, over 1,000 studies indicating a mismatch between health information materials and the documented skills of the general public have firmly established weaknesses in health systems (Nielsen-Bohlman et al., 2004; Rudd and Keller, 2009). If poor communication is at least partially responsible for untoward health and fatalities, swift action is needed to transform the skills of health professionals and the demands of health systems (Rudd, 2010).

Obviously, both groups of action are called for. Currently, we have the measures to track changes in literacy skills and the tools to assess health messages but are missing key measures to study more than basic functional health literacy or to monitor and evaluate efficacious change in health professionals and in health systems. It is far too easy for researchers to apply tools at hand and, perhaps, forget that core components remain undocumented and unmeasured. A definition that will benefit both research and practice should be coupled with measurement tools that can fully operationalize the key concepts.

Unfortunately, many health literacy inquiries—although emphasizing the importance of access to information—tend to focus on and measure the reading skills of individuals and pay scant attention to the characteristics of texts or speech that make information easy to access or too complex for either word recognition or comprehension. Similarly, as the expanding concept of health literacy more regularly includes social, political, and individual action, attention must be given to both the abilities of individuals or communities and the characteristics of institutions and professionals that support or that may inhibit individual or community action. Explorations of how to encourage, support, and establish conducive environments for critical health literacy have not yet been launched, measured, and studied. Certainly, such efforts will include attention to the abilities of health professionals and the capability of health systems to support and actively encourage the capacity for effective social, political, and individual action. Here too, measures of skills of professionals and of environmental characteristics have yet to be fully explored and tested. Until such measures are developed, links between system-level demands and health outcomes cannot be studied.

Furthermore, attention must be given to the logic and underlying assumptions inherent in the new and developing definitions of health literacy. Health literacy studies in the US and several other countries offer a strong research base establishing links between limited literacy skills of individuals and untoward health outcomes. At the same time, we know that literacy does not exist in a vacuum and that measures of skills will show variations based on

context and text as well as on unspoken assumptions and demands. Logic cannot support a causal relationship between literacy and health outcomes absent attention to the demand side. Thus, knowledge gaps include the lack of explanatory models that link literacy and social environmental conditions to health outcomes for population groups. Zarcadoolas (2011) proposed that, in taking on a very narrow definition of health literacy, we built a field without a theory.

Health literacy is currently garnering attention in health research, policy, and practice across industrialized nations. A substantial body of research indicates that health materials and other related demands exceed the literacy skills of large numbers of adults in all industrialized nations. Furthermore, a rigorous body of work over the past decade has established a clear link between the reading skills of patients and significant health outcomes. Yet, these two research strands have only recently been connected in a way that supports research into the interplay between skills of individuals and processes within health systems. In part, a narrow definition of health literacy encouraged a myopic focus on literacy deficits of people and ignored the barriers erected by the culture, language, and assumptions of those in the health fields. Only recently have these two research strands been connected in ways that support a critical assessment of the full health literacy environment. Scholars and practitioners will want to closely examine the concepts and underlying assumptions that have shaped health literacy discussion, research, and policy thereby opening the field and the terms in use to more critical scrutiny.

A growing awareness of the importance of definitions and their concurrent measures is encouraging a re-examination of assumptions in the field. Consequently, the highlighted caveats to the prevailing definition of health literacy provided in the early reports from the HHS, *Communicating Health* (2003), and from the IOM, *Health Literacy: A Prescription to End Confusion* (2004), are being revisited in the US; and increased attention is being paid to the more sophisticated notions of health literacy proposed in discussions in Europe. The early focus on the skills of individuals alone is being corrected with increased attention being paid to the health context: the facilitating factors and barriers that support or inhibit access to information and active engagement of people. At the same time, until new and more appropriate measures are developed to measure contextual characteristics and assess engagement, research will be hampered and examinations of possible efficacious action will be stymied.



### Questions for Reflection

- 1) The notion that definitions are inherently biased is introduced at the start of the article. How might the perspectives of varying professionals (e.g., educators, doctors, public health practitioners) influence the definition of health literacy? Which definitions reflect the perspective of which disciplines?
- 2) Texts in research methods highlight the importance of defining and operationalizing a key concept. How would you define health literacy for each of the two strands of research? How do you judge the adequacy of the measures used?
- 3) How would you expand the definition of critical health literacy to include attention to the health context/environment?

### ACKNOWLEDGMENT

We offer thanks to Lindsay Schubiner SM, graduate research assistant, Harvard School of Public Health.

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