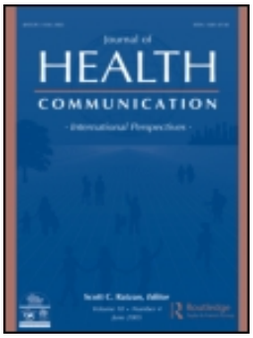

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Cynthia Baur

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Commentary

New Directions in Research on Public Health and Health Literacy

CYNTHIA BAUR

Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, Atlanta, Georgia, USA

Numerous calls for a public health approach to health literacy and visions of a health literate society have appeared in recent years. Yet, many gaps in what we know about and do to improve health literacy remain. Major developments at the national level in the last decade help define the role of health literacy in creating better public health and have set the stage for new investigations in public health and health literacy. Four frameworks are examined for their usefulness in posing new questions about public health and health literacy: Healthy People, the Ten Essential Public Health Functions, health promotion, and health disparities. Each of the frameworks generates questions and uses methods that can produce new findings about health literacy. Using the frameworks will open new investigations into population health and health literacy improvement at multiple levels.

Public health, at its core, is about making the most important improvements in the health of the greatest number of people (Association of Schools of Public Health, 2010). Health literacy is a vital factor in achieving the greatest good for the greatest number because it provides the principles and tools to reach as many people as possible with usable health information and services (Lurie & Parker, 2007). A health literate approach to public health ensures both health and social benefits, including increased equality of access to information. Numerous calls for a public health approach to health literacy and visions of a health literate society have been issued (Freedman et al., 2009; Gazmararian, Curran, Parker, Bernhardt, & DeBuono, 2005; Institute of Medicine, 2004; Lurie & Parker, 2007; Nutbeam, 2008; U.S. Department of Health and Human Services, 2003; Zarcadoolas, Pleasant, & Greer, 2006). There is a difference, though, between "public health literacy," in which individuals think about and act on health concerns in a community context (Freedman et al., 2009;

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Address correspondence to Cynthia Baur, PhD, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 1600 Clifton Rd., MS-E69, Atlanta, GA 30333, USA. E-mail: Cynthia.baur@cdc.hhs.gov

Gazmararian, Curran, Parker, Bernhardt, & DeBuono, 2005), and health literacy as a set of considerations in the practice of public health. This article focuses on the latter and some gaps in what is known about the underlying causes of and remedies for limited health literacy.

Four major developments at the national level help define the role of health literacy in creating better public health. One is the inclusion of health literacy in Healthy People, the Nation's public health agenda. *Healthy People 2010* includes an objective on improving the health literacy of the population, and *Healthy People 2020* will continue this objective (see www.healthypeople.gov). The second is the research program announcement from the National Institutes of Health (NIH), the Agency for Healthcare Research and Quality (AHRQ), and the Centers for Disease Control and Prevention (CDC) that funds new and continuing research on a range of health literacy issues ("Understanding and Promoting Health Literacy," 2010). Integrating health literacy research into the biomedical and health services research agendas connects the public health and medical worlds in ways they previously were not. The third major development is the Institute of Medicine report on health literacy that finds "health literacy is a shared function of social and individual factors" (Institute of Medicine, 2004). The report reframes the health literacy concept from clinical interactions between individuals to a complex interplay of factors at multiple levels of interaction. The fourth development is the Surgeon General's Workshop on Improving Health Literacy that spawned a national action plan on health literacy (Office of the Surgeon General, 2006). Participants in the Surgeon General's Workshop reviewed the scientific basis of health literacy as a major public health problem. This review led to a series of town halls to identify promising health literacy practices in the field. The workshop, town halls and additional literature reviews and expert consultations led to the National Action Plan, which unites the fields of healthcare services, public health, education and communication in a comprehensive and strategic approach to health literacy improvement. The U.S. Department of Health and Human Services released the plan to the public in late May 2010 (U.S. Department of Health and Human Services, 2010).

Several frameworks exist to construct a public health approach to limited health literacy. In addition to Healthy People, frameworks for consideration include the Ten Essential Public Health Functions; critical health promotion approaches; and models of health disparities. An interest in social determinants and their impact on public health links these four frameworks and suggests the possibility of exploring health literacy as a social determinant. This paper will examine each of the frameworks in turn as pathways to generating new knowledge and interventions to increase health literacy and promote public health. The paper concludes with some next steps for research in public health and health literacy.

Healthy People and Health Literacy

Healthy People provides the structure to connect otherwise disparate diseases and health concerns at the population level. *Healthy People 2020* is based on a social determinants of health model and has four overarching goals: 1) Eliminate preventable disease, disability, injury, and premature death, 2) Achieve health equity, eliminate disparities, and improve the health of all groups, 3) Create social and

physical environments that promote good health for all, and 4) Promote healthy development and healthy behaviors across every stage of life (see www.healthypeople.gov). Linking health literacy to the full array of public health issues and determinants is essential to mainstreaming both health literacy concerns as well as solutions.

The *Healthy People 2010* objective for health literacy focuses on the distribution of health literacy skills in the adult population and prompted the first ever national data collection on the topic. Population level data from the U.S. Department of Education National Assessment of Adult Literacy (NAAL) documents what many health professionals know through their own experience. The public's skills are not well matched with the health information they encounter in everyday life (Kutner, Greenberg, Jin, & Paulsen, 2006). Nine of ten English-speaking adults have less than proficient health literacy skills when using routine health information (Kutner, Greenberg, Jin, & Paulsen, 2006). The NAAL results show high proportions of below basic and basic health literacy skills among the elderly, people with limited educations and incomes, and racial and ethnic minorities. These groups already are targeted by many public health interventions because of poor health outcomes, health disparities or limited access to other resources, such as healthy foods or preventive screenings.

The data available on people's health literacy skills should be used not only to provide clearer, more useful information and recommendations, but also clearer, more usable public health interventions, i.e., products and services (Grier & Bryant, 2005; Kotler & Lee, 2008; Viswanath & Bond, 2007; Walsh, Rudd, Moeykens, & Moloney, 1993). If the disease-specific interventions are not delivering the expected outcomes, the NAAL data suggest health literacy issues merit closer investigation in the context of the interventions' results. This type of research would be a major contribution to the many topic areas in *Healthy People 2020* that do not typically consider communication and health literacy factors in intervention design, implementation and evaluation.

Healthy People is a data-driven process, and the absence of regularly collected data on significant health literacy factors at the population and system-levels threatens the inclusion of health literacy in future iterations of Healthy People. The only source for population-level data on health literacy skills is the NAAL, which is administered about once a decade by the U.S. Department of Education.[1] Once a decade is not frequent enough to provide trend data or to meet the three times a decade reporting the Healthy People process requires. Population level data are essential to an understanding of the nature and scope of limited health literacy as a factor affecting the public's health (Parker, Wolf, & Kirsch, 2008). Without these data, it is difficult to identify which groups struggle the most with routine health information and where to target resources that can contribute to eliminating preventable disease, disability, injury, and premature death.

The population level data should be complemented with data on health system performance using standardized metrics (Paasche-Orlow, Schillnger, Greene, & Wagner, 2006). Data on clinical and public health systems before and after changes to address health literacy factors is essential to understand the impact of the changes. For example, if health insurance companies change their practices to ensure that all consumer health communication—including applications, benefits materials, rights

[1]The Research Triangle Institute is currently funded by a grant from the NIH National Cancer Institute to develop and test a health literacy instrument to assess people's skills.

and responsibilities, letters, and health and wellness information—incorporates health literacy principles, then it is important to know what impact their changes have on the public's health.

The Role of Health Literacy in the Ten Essential Public Health Functions

The Ten Essential Services are the framework for national, state and local public health in communities ("10 Essential Public Health Services," n.d.). The purpose is to guide and inform what public health does and the responsibilities public health professionals have.

The services are categorized in three clusters: Assessment, Policy Development and Assurance. Population data are important to several of the functions, especially monitoring, diagnosing, investigating, and evaluating. The data activities occur, in part, through surveillance—the ongoing, systematic collection, analysis and application of data to public health practice (CDC Guidelines Working Group, 2001). Surveillance allows public health workers and communities to identify the determinants of health as well as their effects. Surveillance makes visible the most important health problems in a community and the progress, if any, to address the problems. Surveillance methods hold promise for health literacy research (Hanchate, Ash, Gazmararian, Wolf, & Paasche-Orlow, 2008; Lurie & Parker, 2007; Parker, Wolf, & Kirsch, 2008). If health literacy is a neighborhood or community issue as Lurie & Parker (2007) propose, then it must be studied at the neighborhood and community levels. A surveillance approach combined with qualitative methods that provide data on people's experience, knowledge and health concerns in their daily lives could provide a holistic picture of a community's health literacy challenges and opportunities for change.

The essential services perspective also includes the need for partnerships, community education and empowerment. A focus on these three factors could stimulate new research as well as practice. The Essential Functions framework proposes that people must be informed, educated and empowered to reduce their risks and promote their health. Too often, though, the available health information and education in a community do not fit people's needs, wants or health literacy skills (Institute of Medicine, 2004; Rudd, Anderson, Oppenheimer, & Nath, 2007). Also, the information and education are targeted at people as individuals, disconnected from their critical social networks and influences. Consequently, individuals and communities are not empowered; they are disenfranchised when they do not have information that allows them to assess and decide on their own and their communities' best interests (Freedman et al., 2009; Gazmararian, Curran, Parker, Bernhardt, & DeBuono, 2005; Nutbeam, 2008). Partnerships with trusted sources in the community can provide the access and insight health professionals need to conduct meaningful research and develop and disseminate appropriate and usable health information and services. As noted in the section on Healthy People, interventions—at the individual or community levels—may be less effective if they are not designed with health literacy as part of the core principles.

An often-overlooked element of public health practice that could generate new research in health literacy is policy design and implementation. Policy change is a tool not only of the essential services framework but also of Healthy People and disparities reduction. Governmental and organizational policies may create barriers for people to access and use health information and services. Researchers can analyze

and propose changes to existing laws, policies, and regulations that make all types of health information, such general health and safety, medication, health care coverage and financing, and informed consent, difficult to use.

Health Literacy and Health Promotion

Exercising control over health and its determinants is core to health promotion, but has not been frequently researched as part of health literacy studies (Kickbusch, 2002; Nutbeam, 1999, 2008; Rudd & Kirsch, 2003; Zarcadoolas, Pleasant, & Greer, 2006). The World Health Organization (WHO) definition of health promotion—skills to enable participation and control over everyday events[2]—shares with health literacy a common focus on skills. Nutbeam (2008), a leading advocate of the critical health promotion approach, characterizes health literacy as an individual and community asset to be built and strengthened through health communication and education. Functional abilities, cognitive and analytical skills come together to generate autonomy and health literacy as an outcome. Whereas the Healthy People definition of health literacy emphasizes informed decision-making (U.S. Department of Health and Human Services, 2003), the health promotion approach highlights situational control. Notably, being in the position to make decisions is an element of control over a situation, even when the decision is contrary to public health recommendations.

Using the health promotion approach, questions that explore dimensions of control, contextual skills, and social conditions are central. What type of control do people need to more fully participate in healthcare? How might people operationalize control over health in everyday life? What would fully informed, self-directed health look like? A taxonomy of skills to exercise control along with an explanation of how these skills are developed, maintained and refined over the life course would be useful for any future research in health literacy. Investigations of the types of social and physical environments that promote health literacy would also be appropriate as well as studies of how improved health literacy could inform healthy social and physical environments. If people are to realize their potential, then understanding and addressing the constellation of factors that shape their decisions about health and promote or inhibit control will be highly informative.

The Health Literacy–Health Disparities Relationship

The intent of focusing on health disparities is to identify and address inequities in healthcare and outcomes based on race and ethnicity (Agency for Healthcare Research and Quality, 2009; Institute of Medicine, 2003). Recent work looks to explain health disparities in the broad context of social determinants (Koh, et al., 2010). The literature on disparities in information access is increasing and relevant for health literacy research (Ackerson & Viswanath, 2009; Viswanath 2006; Viswanath & Bond, 2007). Limited health literacy has been connected to health

[2]The WHO (2005) defines health promotion as the process of enabling people to increase control over their health and its determinants, and thereby improve their health. The primary means of health promotion occur through developing healthy public policy that addresses the prerequisities of health such as income, housing, food security, employment, and quality working conditions.

disparities, but it is still early in the elaboration of their relationship and interaction (Bennett, Chen, Soroui, & White, 2009; Institute of Medicine, 2009; Sentell & Halpin, 2006). For example, poor communication between patients and healthcare providers is a factor studied by health literacy and disparities researchers; when providers and patients do not communicate well—whether the cause is health literacy issues or racial and ethnic differences, poor outcomes are the result (Institute of Medicine, 2004, 2009). Similar to health literacy, disparities may result in part from inter-personal interactions and micro-level decisions. Their effects however, appear at the population level, where patterns indicate broad cultural and social forces at work. Therefore, multi-level investigation of the ways limited health literacy intersects with disparities is necessary to understand and change the ways that health systems interact with individuals (Institute of Medicine, 2004; Paasche-Orlow, Schillnger, Greene, & Wagner, 2006).

Disparities due to disabilities are another dimension of population-level effects of limited health literacy. Persons with disabilities have poorer communication with healthcare providers, receive less information about their health and prevention and have worse health status than persons without disabilities (Office of the Surgeon General, 2005). Learning and communication disorders and intellectual and developmental disabilities in adults present special challenges to improve health literacy; these adults are virtually invisible in public health data (CDC National Center on Birth Defects and Developmental Disabilities Health Surveillance Work Group, 2009). Existing assessment tools, language skills and information formats may be inadequate, making it difficult to learn the cause of the miscommunication and provide assistance. For example, the National Center on Birth Defects and Developmental Disabilities guides parents to help them assess their children for developmental delays (see www.cdc.gov/ncbddd). Formative research suggests mothers who have intellectual disabilities need even more help than the average mother to use health information, such as guidelines and recommendations, effectively (Blackford, Richardson, & Grieve, 2000). The findings from disparities research indicate that even more targeted ways to improve communication than previously used must be considered. The alternative is to leave people disconnected from information that will allow them to make informed decisions and help them exercise autonomy and control. The result will likely be increased disparities.

Next Steps for Public Health and Health Literacy Research

Using any one of the frameworks will yield fresh ways of thinking about health literacy and new findings to inform more effective public health interventions. The four approaches briefly reviewed highlight the importance of social determinants of health, population-level data and the need to think about population-level effects of limited health literacy. Research on population groups, disease prevention, health promotion, health protection, disparities, policy change and a host of other public health-related areas could provide insights into more successful and long-term ways to lower long-standing barriers to health improvement.

Although some new interventions and policies are needed, this paper is equally a call to analyze existing disease, health condition, and population-specific interventions for the ways health literacy issues surface before, during and after the intervention and jeopardize successful outcomes. Conversely, disease, health condition, and population-specific interventions that demonstrate an effective application of

health literacy principles can be analyzed for the ways health literacy enhanced the intervention's impact. If health literacy is a social determinant, then it is a deep and persistent factor in social relations. The health literacy issues for a specific population group and situation must be excavated, made visible and explicitly addressed in holistic interventions and policies that consider root causes.

Adapting surveillance methods for defining, collecting and reporting health literacy data on populations, geographic locations and public health systems would move the measurement of health literacy toward the mainstream of public health practice. The distribution of health literacy skills in the population and by geographic and social locations is highly relevant to the distribution of resources to address the leading causes of preventable disease, disability, injury and premature death. The capacity of clinical and public health systems to deliver health literate information and services to all population groups can only be guessed at without a dedicated commitment to identifying and measuring health systems' projected and actual performance.

The public health frameworks discussed here provide blueprints for developing new research questions, methods and tools that firmly anchor health literacy in core public health work. Ensuring all population groups have the skills and resources needed to make informed decisions and exercise autonomy and control is an ideal that requires a path to realization. Using public health approaches to carefully and fully articulate health literacy improvement is a large step toward realizing the ideal sooner rather than later.

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