Health Literacy and Children: Introduction

In the setting of increased interest in health literacy, the American Academy of Pediatrics (AAP) convened a national conference on health literacy and pediatrics in Washington, DC, on November 8, 2008: "A Health-Literate America: Where Do Children Fit In?" The purpose of the conference was to examine health literacy related issues, problems, and opportunities with reference to children and children's health. Most health literacy research and interventions have focused on adult patients and diagnoses, and this gathering—which brought together pediatricians, health literacy researchers, educators, health systems researchers and policy makers, and adult learners—was designed to address complex questions related to where children fit in a national health literacy agenda.

Themes of the conference that run through this collection of commissioned articles, which were presented at the conference and are published in this supplement to *Pediatrics*, identify some of the ways in which children are distinct from adults regarding issues of health literacy while reminding us of how they are also part of the larger health literacy picture. The challenge of including children in a "health-literate America" is necessarily part of the overall challenge of addressing health literacy. The goals for children and their adult caregivers are the same as for adults: to use the health literacy perspective and its insights and evidence base to enhance the health care system, increase access and inclusion, reduce disparities, and improve health outcomes.

This supplement to *Pediatrics* includes a systematic review by DeWalt and Hink[1] of the literature on health literacy and child health outcomes, including analysis of methodology, discussion of the parent-child dyad, and opportunities for studying new interventions as they are developed. Wolf et al,[2] in their article, observe the relationship between health literacy and health learning, offer a broadened definition of health literacy, and emphasize the need to look closely at behaviors, not just knowledge, as outcome measures. Borzekowski[3] takes a theoretical approach to integrating the health literacy of children into a developmental and educational context and speaks of working outside traditional doctor-patient encounters. Yin et al[4] provide an analysis of the 2003 National Assessment of Adult Literacy data on the health literacy of parents in the United States and the potential role of health literacy in mediating health disparities. Turner et al[5] present data from a recent AAP periodic survey of pediatricians that focused on health literacy and communication skills. Sanders et al[6] address the relationship of pediatric health literacy to child health promotion and prevention and suggest targets for interventions. Finally, Rothman et al,[7] in their article, examine the relationship between health literacy and quality of care, with particular reference to children with chronic illnesses and to patient safety, highlighting differential pediatric epidemiology, demographic patterns, and health disparities.

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ABBREVIATION

AAP—American Academy of Pediatrics

The views and recommendations presented in the articles in this supplement are those of the authors and participants and not intended to represent those of the organizations with which they are affiliated or the funders of the conference or research.

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DEFINITION AND MEASUREMENT

Health literacy, as distinguished from general literacy, is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."[8] Although this definition is still evolving, how to best measure health literacy is an ongoing area of research, not unique to children, and distinguishing health literacy from general literacy is clearly key to larger discussions of measurement. Wolf et al[2] suggest deconstructing health literacy and analyzing it as a cognitive skill set that includes processing speed, working memory, long-term memory, reasoning, and attention, as well as literacy and numeracy. Borzekowski[3] brings the perspectives of Freire, Piaget, and Vygotsky to bear on the concepts of scaffolding knowledge and empowerment as children grow. The nature of health literacy can be considered more broadly, reaching beyond the specifically medical context to include health information that children find in school or the media, and it is suggested in several articles that this broader sense of health information and learning should inform interventions and strategies for addressing pediatric health literacy.

What is most complex and distinct about pediatric health literacy is that it must be considered in terms of parents' or caregivers' health literacy as well as the children's own health literacy (which is evolving as children grow, learn, and develop). These multiple aspects of health literacy must be part of the equation when we measure and study health literacy and when we plan interventions. The health literacy of children represents a continuum over time, because all children begin life lacking literacy, with their parents' or caregivers' health literacy acting as their complete surrogate interface with the health system. As children mature, their understanding and participation assume increasing importance in their health and health care, modulated in large part through increases in their literacy and health literacy. Challenges that are inherent to establishing age-related norms or developing age-related frameworks for understanding (and improving) children's conceptualization of their own bodies, health, and health care are discussed by a number of the authors, including Borzekowski[3] and Wolf et al,[2] and are further articulated by Sanders et al[6] in their discussion of child health promotion.

OUTCOMES AND INTERVENTIONS

The relative lack of research in outcomes and interventions regarding children is commented on by many of the authors, including DeWalt and Hink,[1] Wolf et al,[2] and Yin et al.[4] There has been limited focus on interventions to improve health outcomes in children and even less to address the complex nature of child health literacy. Wolf et al[2] argue that there are too few interventions with demonstrated efficacy and too many interpretations of health literacy. They underscore the important role that children's evolving knowledge of their bodies and health can play in self-efficacy and eventual transfer of health management from parent/caretaker to child, and also emphasize the need to measure outcomes as distinct from knowledge transfer.

The analysis of parent health literacy in the United States by Yin et al[4] focuses on National Assessment of Adult Literacy measures of parents' assessments of print materials and ability to perform pediatric health-related tasks. Although parents were less likely to have low health literacy than nonparents, immigrant and minority parents were at greater risk, and difficulties with documents such as insurance forms and medication labels were common. This article highlights the theme of medication safety as especially important in pediatrics because of the need to determine correct medication doses for children on the basis of weight, an issue that was reiterated in discussions of research and patient safety by others.

Turner et al[5] point out that pediatricians are aware of health-literacy–related problems and the need for good communication with families but struggle with time demands to implement those skills. Despite awareness of communication-related errors in patient care, pediatricians report underusing enhanced techniques known to improve communication. Nevertheless, they are open to receiving training in communication skills and would be willing to use easy-to-read materials with their patients if those materials were available from the AAP or other organizations.

Sanders et al[6] offer a framework for types of interventions, including training providers, reducing complexity of written information, using nonwritten materials, and modeling behaviors. They also address the need for involving schools and community-level educational formats. Rothman et al[7] also consider different areas for intervention (system, community, provider, and family) and return to the paramount concern of patient safety.

Because of the role that health literacy may play as a mediator of health disparities, some authors feel that interventions and practice changes should be designed to target risk groups rather than aimed broadly to improve the health literacy of all. This poses a particular challenge in pediatrics, because all children, not just those at higher risk, follow a trajectory that begins with no health literacy and progresses to adult (ideally proficient) health literacy. The best way to im-

prove health literacy in children may be to focus on education in literacy, health, and self-efficacy.

Health literacy related interventions that successfully target high-risk groups have the potential to reduce health disparities and improve access. Those that take into account developmental and learning trajectories of children have the potential to improve delivery of pediatric care and foster self-efficacy and age-appropriate understanding of health and illness. Interventions that incorporate perspectives and needs of patients and families at risk have the potential to help pediatricians learn to communicate and listen more effectively, change pediatric practice so that more voices are included, and benefit the entire community of patients and providers.

How are children different with respect to health literacy? Some answers appear in the repeated themes of the conference articles that follow this introduction: definition and measurement, developmental change, health literacy as a dyadic function, unique health disparities and health outcomes, and levels of or targets for intervention.

REFERENCES

1. DeWalt DA, Hink A. Health literacy and child health outcomes: a systematic review of the literature. *Pediatrics*. 2009;124(5 suppl):S265–S274
2. Wolf MS, Wilson EAH, Rapp DN, et al. Literacy and learning in health care. *Pediatrics*. 2009; 124(5 suppl):S275–S281
3. Borzekowski DLG. Considering children and health literacy: a theoretical approach. *Pediatrics*. 2009;124(5 suppl):S282–S288
4. Yin HS, Johnson M, Mendelsohn AL, Abrams MA, Sanders LM, Dreyer BP. The health literacy of parents in the United States: a nationally representative study. *Pediatrics*. 2009; 124(5 suppl):S289–S298
5. Turner T, Cull WL, Bayldon B, et al. Pediatricians and health literacy: descriptive results from a national survey. *Pediatrics*. 2009; 124(5 suppl):S299–S305
6. Sanders LM, Shaw JS, Guez G, Bauer C, Rudd R. Health literacy and child health promotion: implications for research, clinical care, and public policy. *Pediatrics*. 2009;124(5 suppl): S306–S314
7. Rothman RL, Yin HS, Mulvaney S, Co JPT, Homer C, Lannon C. Health literacy and quality: focus on chronic illness care and patient safety. *Pediatrics*. 2009;124(5 suppl):S315–S326
8. Institute of Medicine. *Health Literacy: A Prescription to End Confusion*. Washington, DC: National Academies Press; 2004

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