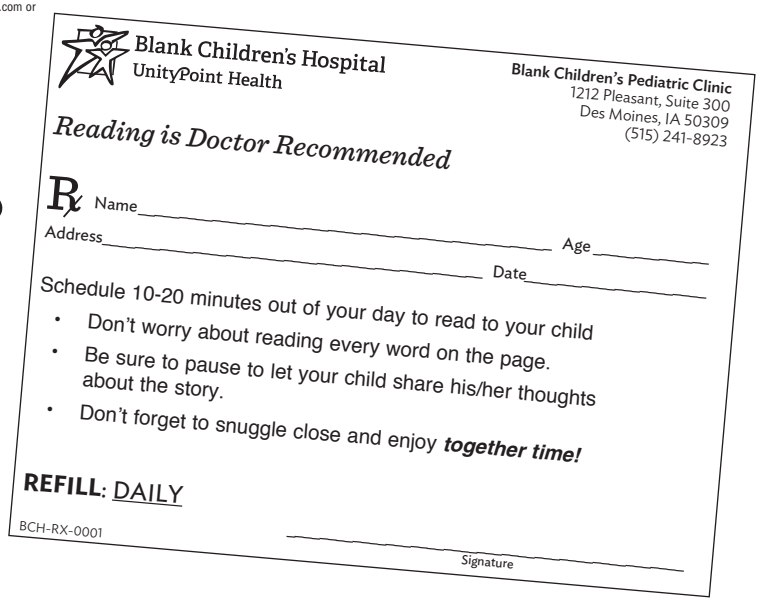
One Fish, Two Fish, Why Am I Blue, Fish?

A Pediatrician's Perspective on Early Literacy Promotion and Health Literacy

by Amy Shriver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Reading is Doctor Recommended

℞ Name _____ Age _____

Address _____ Date _____

Schedule 10-20 minutes out of your day to read to your child

- Don't worry about reading every word on the page.
- Be sure to pause to let your child share his/her thoughts about the story.
- Don't forget to snuggle close and enjoy ***together time!***

REFILL: DAILY

BCH-RX-0001

Signature

Discussing the importance of reading in my high-risk urban pediatric clinic is not only the best part of my work day, it is a critical component of well-child care according to a *2014 Policy Statement from the American Academy of Pediatrics*.[1] Few clinic interventions have the distinctive combination of changing life trajectories *and* making families — and providers — smile. Occasionally, though, I become disheartened by language and health inequities, especially in patients of lower income. Children who come from economically-challenged families hear far fewer words than children in more affluent families. By the time they are four years old, poorer children have heard 30 million fewer words than their more affluent counterparts. Discussing shared reading, talking, and singing are important ways that I can help close the 'word gap' in these families. Handing out books to families helps to overcome barriers of access to and interest in books. Sometimes discussion of shared reading reveals a truth that families often hide: adult illiteracy. Although rarely discussed, adult literacy issues can have a significant impact on the health and well-being of children and families.

Amy Shriver, MD, is a general pediatrician at the Blank Children's Pediatric Clinic in Des Moines, Iowa. She graduated with honors from medical school at the University of Iowa Carver College of Medicine in 2004. She completed her pediatric residency training and Chief Residency at the University of Colorado. Dr. Shriver was the Pediatric Residency Advocacy Director for the University of Colorado before moving to Des Moines in 2010. She is currently the Medical Director for Reach Out and Read Iowa and leads Iowa's pediatric residents in advocacy education. She is an adjunct professor for the Department of Pediatrics at the University of Iowa College of Medicine, as well as Des Moines University of Osteopathic Medicine. She is an active member of the Iowa Chapter of the AAP: she is on the legislative committee and is the advocacy liaison as well as the Reach Out and Read Chapter Champion. Dr. Shriver is a passionate child advocate and has testified at the State Capitol on Early Brain and Child Development and Adverse Childhood Experiences and helped expand funding for 1st Five. She is currently working on improving funding for preschools in Iowa and is working to improve school readiness for Hispanic children in Iowa.

According to the Department of Education's National Assessment of Adult Literacy (NAAL),[2] 32 million adults in the United States lack basic literacy skills. Struggles with literacy affect a person's life course from an early age. Children who are not proficient on third grade reading tests are statistically more likely to be convicted of a violent crime, become pregnant as a teen, or drop out of school. The economic future is tough for most young adults without a high school degree. Imagine not being able to complete the driver's education test or read a street map! Low literacy levels can affect almost every aspect of a person's life.

Literacy skills allow us to understand and communicate with others in the community. When we apply these skills to a health context it is called **health literacy**. Healthy People 2020 defines health literacy as "the ability of patients and parents to obtain, process, and understand basic health information and services needed to make appropriate decisions." In other words, health literacy means being able to understand and manage your own as well as your child's basic health needs. Adults need to be able to complete medical forms, read prescriptions, and understand the basics of immunization benefits and risks. Although general literacy is important for health literacy, even those who can read and write well can struggle with understanding and interpreting health information — and that can be disastrous for their health.

Nearly half of all American adults — 90 million people — have difficulty understanding and acting upon health information.[4] The NAAL categorizes health literacy ability into four levels:[5] below basic, basic, intermediate, and proficient. Surprisingly, only 12% of Americans are at a proficient level of health literacy, whereas 14% are below basic levels. For those individuals ranked 'below basic,' nearly 50% of adults had less than/some high school education. Individuals at the 'basic' level of health literacy (22% of the population) have a more even distribution of education attainment, from

'some high school' (27%) through 'some college' (20%) education. Slightly more than half of Americans (53%) fell into the 'intermediate' level, with health literacy increasing as education level increased.

Health literacy requires more than reading and writing — it demands comprehension of the 'what, why, and how' of medical issues, and often requires synthesizing and applying information in complex ways. For example, when my patients complain of fevers, I give parents a chart that explains acetaminophen and ibuprofen dosing quantity and frequency based on age. While the chart may seem straightforward to me, some patients cannot interpret it correctly and struggle to determine safe dosages for their child. In this case, low health literacy could lead to a dangerous medication overdose.

Dosing Chart for TYLENOL™
(To be given every 4 hours as needed)

Age	Weight	Infant Drops (80mg/0.8ml)	Children's Liquid Suspension (160mg/5ml)	Chewable Tabs (80mg)
0-3 months	6-11 lbs	0.4ml	¼ tsp	-
4-9 months	12-15 lbs	0.8ml	½ tsp	one tab
9-12 months	16-21 lbs	1.2ml	¾ tsp	1.5 tabs
12-23 months	22-32 lbs	1.6ml	one tsp	2 tabs
2-3 years	33-40 lbs	-	1 ½ tsp	3 tabs
4-5 years	41-54 lbs	-	2 tsp	4 tabs
6-8 years	55-64 lbs	-	2 ½ tsp	5 tabs
9-10 years	65-88 lbs	-	3 tsp	6 tabs

Dosing Chart for ADVIL™ and MOTRIN™
(To be given every 6 hours as needed)
do not give to children under 6 months of age

Age	Weight	Infant Drops (50mg/1.25ml)	Children's Liquid Suspension (100mg/5ml)	Chew Tabs (50mg)	Jr. Chewable Tabs (100mg)
6-9 months	12-15 lbs	1.25ml	½ tsp	one tab	-
9-12 months	16-21 lbs	1.875ml	¾ tsp	-	-
12-23 months	22-32 lbs	2.5ml	one tsp	2 tabs	one tab
2-3 years	33-40 lbs	-	1 ½ tsp	3 tabs	1 ½ tabs
4-5 years	41-54 lbs	-	2 tsp	4 tabs	2 tabs
6-8 years	55-64 lbs	-	2 ½ tsp	5 tabs	2 ½ tabs
9-10 years	65-88 lbs	-	3 tsp	6 tabs	3 tabs

Measuring medicine properly can be a challenge for individuals with low literacy and numeracy skills.

Language and cultural barriers also can interfere with health literacy. Low health literacy, cultural barriers, and limited English proficiency have been coined the 'triple threat' to effective health communication.[6] A person's language and culture provide the framework for interpreting medical information. Limited English proficiency causes roadblocks for the communication of important information to patients and families. Even with the use of live interpreters or telephone language lines, time limitations and lack of written materials negatively impact providers' ability to provide a comprehensive treatment plan across language barriers. My patient population includes many refugees from Burma. When they consult me in clinic about a health concern, I often worry that my guidance and education may be lost in translation. I once had a Somali family refuse albuterol because they believed using it would cause asthma in their child. As medical providers, we strive to achieve a basic working knowledge and understanding of cultural differences in the context of health care. This helps us improve health communication for patients with limited English proficiency. Addressing language and cultural barriers to health care may help reduce racial and ethnic health disparities.

Health literacy is one of the main determinants of adult well-being. Patients with lower health literacy are more likely to skip important preventive measures such as mammograms, Pap smears, and flu shots.[7] Low health literacy results in excessive use of the emergency department for non-emergent care, excess hospitalizations, longer lengths of stay, decreased medication adherence, and poor overall health outcomes. Both children and adults in families with low literacy are more likely to undertreat chronic illnesses such as asthma, hypertension, and diabetes. For some of my patients with moderate to severe asthma, their controller medication looks just like their rescue inhaler. They struggle to understand that one needs to be used daily and the other one should be used with acute illness.

Unfortunately, stigma and shame often hang over the heads of those who struggle with low literacy and health literacy. They may report feeling embarrassed, less of a person, stupid, angry, or fearful.[8]

Here are some startling statistics about feelings of indignity and shame with illiteracy:

Of those who struggle with illiteracy:

- 91% have never told their work supervisor.
- 68% have never told their spouse.
- 53% have never told their children.
- 19% have simply never told anyone.

Some people attempt to disguise their reading issues by watching others and copying them, pretending they can read, and never asking for help.[8] Many will seek medical help only when their illness is advanced. Some will sneak out of the waiting room due to fear, or make excuses, or become angry and demanding. Others may become quiet to avoid detection. Although critical to health outcomes, discussing literacy in the medical setting feels so awkward to both provider and patient that it becomes a challenge we avoid.

It's not always possible to determine if the families of my patients have trouble with literacy. However, some red flags emerge over time.[9] Some that I see at my own clinic are:

- screening forms incomplete or ignored.
- frequently missed appointments.
- skipped tests or referrals.
- non-adherence for medication.
- misuse of medications.

- difficulty naming or recalling medications.
- difficulty explaining medical concerns.
- no questions at all.

What can we do to improve health literacy? One important tool is the **"Ask Me 3"** program through the National Patient Safety Foundation (NPSF).[10] Reminders around the office encourage patients to ask questions to help clarify what they do and don't understand about their medical treatment plan. The questions are:

1. **What is my main problem?**
2. **What do I need to do?**
3. **Why is it important for me to do this?**

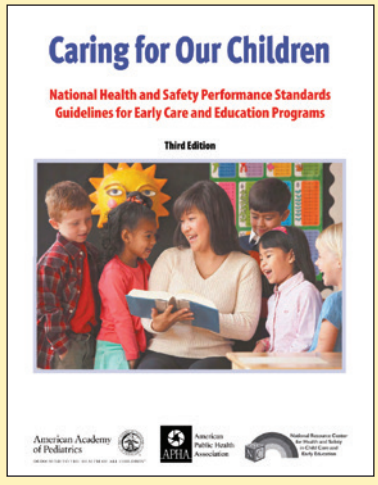
Using "Ask Me 3" helps parents become more active members of the health care team for their child, and helps health care providers more accurately assess health literacy levels of their patients and families. It provides a critical means to improve communications between patients, families, and health care professionals.

Another technique is to **"chunk and check"** or to organize information into 2-3 short concepts and then stop to check for understanding. Additionally, I frequently apply the technique of **teach-back** in my clinic. I explain the treatment plan to the patient, and then ask them in their own words what they understand the plan to be, to make sure I have explained it clearly. This demonstrates the patient's comprehension level and may help me clarify important gaps in communication.

Professionals like me need to be careful with our words. We speak our own language of 'educational and medical lingo' — full of jargon that is unhelpful for

Health Literacy: Connections to *Caring for Our Children*, 3rd Edition

When working with children and families in your program, you may wonder "What do the experts recommend?" *Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition* (*CFOC3*) "represents the best evidence, expertise, and experience in the country on quality health and safety practices and policies… in early care and education settings" (*CFOC3*, 2011, p. xvii). The following is a list of standards from CFOC3 to support you in promoting health literacy in your program.



1.3.2. Caregiver's/Teacher's and Other Staff Qualifications

Qualified staff working in quality programs plan both early literacy and health literacy activities for children and their families.

2.1. Program of Developmental Activities

Young children participate in curriculum that promotes language and literacy development, as well as daily habits to promote lifelong health.

2.4. Health Education for Children, Staff, and Parents/Guardians

It is important to provide staff, children, and their families with strategies and information to promote children's health and safety.

9.2.3. Health Policies

Quality programs maintain policies that promote each child's safety and health, to serve as an example for families.

9.4.2. Child Records

Program practices regarding child records offer opportunities to promote health literacy.

American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. (2011). *Caring for our children: National health and safety performance standards; Guidelines for early care and education programs* (3rd ed.). Elk Grove Village, IL: American Academy of Pediatrics; Washington, DC: American Public Health Association. Also available: http://cfoc.nrckids.org/

parent understanding. It can contribute to confusion and medical errors. Verbal communication should avoid overly technical words and replace those with plain language.[11] Handouts and forms should ideally be written at a 5th or 6th grade reading level. As often as possible, written materials should include illustrations that help explain concepts. Written materials should focus only on key points and should emphasize what patients need to do. Large captions, short sentences, and small paragraphs and titles help make reading easier.

In order to make a real difference, professionals need a new perspective and attitude about health literacy. We should create a shame-free environment; maintain an attitude of helpfulness, caring, and respect; and provide easy-to-follow instructions for all health-related information. Any assistance with health literacy issues should be provided in a respectful way without embarrassing the parent. All staff should be educated to recognize literacy 'red flags' and address them with the appropriate tools and techniques. If I notice a parent has not filled out their child's screening form, I should worry less about bringing up a taboo subject and worry more about whether the family needs help understanding me. I should provide assistance promptly, professionally, and discretely, with respect to the family's culture.

Recognizing the implications of both general literacy and health literacy to life course trajectories, we can better understand the significant impact that early literacy promotion programs such as Reach Out and Read can have on future generations. Reach Out and Read seeks to "give young children a foundation for success by incorporating books into pediatric care and encouraging families to read aloud together."[12] In literacy-rich clinic settings, pediatric providers give age-appropriate books to children at their well child visits from 6 months to 5 years of age. We discuss the importance of shared reading and offer advice and encouragement about books and reading. Sixteen peer-reviewed studies show increases in reading practices, increased numbers of books in the home, and increases in receptive and expressive language skills in preschoolers. The 2007 Joint Commission Report discusses Reach Out and Read as "a precedent for addressing literacy in health care" and "a vehicle for opening discussions with parents about literacy."[5] Early literacy promotion is a tool of primary prevention for low-literacy and low-health literacy among children, as well as secondary prevention for their parents.[8]

Endnotes

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12 Reach Out and Read: www.reachoutandread.org/about-us/

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