

Improving Care for Patients with Diabetes and Poor Health Literacy/Numeracy

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Learning Objectives:

1. Define literacy, health literacy, and numeracy
2. Discuss relevance of health literacy to patient care
3. Describe how to identify low-literacy patients
4. Strategies to improve communication
5. Diabetes Specific Tools
6. Briefly discuss current Health Literacy resources and activities

1. Definitions:

- Literacy – “An individual’s ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one’s goals, and develop one’s knowledge and potential.” – National Literacy Act, 1991
 - According to National Adult Literacy Survey (NALS, 1992) and National Assessment of Adult Literacy (NAAL, 2003), over 90 million adult Americans lack adequate functional literacy skills
- Health Literacy – “The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.” – Healthy People 2010
 - Context specific; people with adequate general literacy can still have low health literacy
 - Prevalence of low or marginal health literacy approximately 45% across medical studies
- Numeracy – “The ability to understand and use numbers and math skills in daily life.”

2. Relevance of health literacy to patient care:

- Patients with low or marginal health literacy struggle to understand medical terminology, self-care instructions, informed consent documents, etc.
- Literacy is a strong independent predictor of knowledge, skills, and some outcomes, after controlling for socioeconomic status, age, cognitive function, etc.
- Outcomes associated with literacy: general health status, hospitalization, emergency department use, prostate cancer stage, depression, diabetes control, HIV control, mammography, Pap smear, pneumococcal immunization, influenza immunization, STD screening, substance use, birth control knowledge, cervical cancer screening, breastfeeding, asthma knowledge, hypertension knowledge, medication adherence, smoking, cost.
- Patient literacy and numeracy skills are highly correlated with their ability to read and interpret food labels and calculate carbohydrate consumption. Common errors in interpreting food labels include: misapplication of serving size, confusion over extraneous information, calculation errors.

3. Assessing literacy skills:

- Clinical red flags: Seek help only when illness is advanced, Have difficulty explaining medical concerns, May pretend they can read, Excuses: “I forgot my glasses.”, Lots of papers folded up in purse/pocket, Lack of follow-through with tests/appts., Seldom or never have any questions, Can’t describe how to take meds
- Asking about literacy:
 - Can incorporate into social history
 - Lead in with “What kind of work do/did you do? Where did you go to school? How far did you go in school? How happy are you with the way you read?”
- Testing literacy skills
 - Medication review – ask patient to name and explain purpose of 1-2 meds
 - Reading task – ask patient to look at something and tell you what it says
 - Writing task – ask patient to write something relevant to medical condition
 - Formal assessment (research only) – Test of Functional Health Literacy in Adults (TOFHLA), Rapid Estimate of Adult Literacy in Medicine (REALM)
 - Screening Tools – Shortened REALM, Newest Vital Sign (NVS)

4. Strategies recommended to improve communication:

- Explain things clearly in plain language
 - Avoid medical jargon and vague terms
- Focus on key messages and repeat
 - Stick to 1-3 key points each visit, focus on patient concerns, repeat key information
- Use a “teach back” or “show me” technique to check understanding
 - Ask patient to repeat back important information or demonstrate new skills
 - One of top 11 patient safety practices by AHRQ
 - Associated with better glycemic control (Schillinger, Arch Intern Med 2003)
- Use patient-friendly educational materials to enhance interaction
 - Simple wording, short sentences, 4th-6th grade reading level, picture-based
 - Assess readability of materials using Flesch-Kincaid, SMOG, or other methods. Simple tools include: Microsoft Word Grammer Check, or <http://www.readability.info/>)

5. Diabetes Specific Resources to Address Health Literacy and Numeracy

- Scales (See <http://www.mc.vanderbilt.edu/diabetes/drtc/preventionandcontrol/>)
 - Spoken Knowledge in Low Literacy in Diabetes (SKILL-D)
10 item measure of diabetes knowledge
 - Diabetes Numeracy Test (DNT)
43 item measure of diabetes related numeracy skills
 - Diabetes Numeracy Test 15 (DNT-15)
15 item measure of diabetes related numeracy skills
 - Diabetes Adolescent and Parental Numeracy Tests
39 item versions for parents of young children and adolescents with diabetes
 - Diabetes Numeracy Test Latino (DNT-Latino)
Spanish version of the Diabetes Numeracy Test (in process)
- Educational Materials
 - Diabetes Everyday Guide (ACP). See <http://foundation.acponline.org/hl/diabguide.htm>
 - NIDDK Materials. See <http://www.niddk.nih.gov/health/eztoread.htm#dia>
 - Diabetes Literacy and Numeracy Education Toolkit (DLNET):
See <http://www.mc.vanderbilt.edu/diabetes/drtc/preventionandcontrol/>

WEBSITE RESOURCES

ORGANIZATIONS THAT SUPPORT HEALTH LITERACY AND ADULT LITERACY

These organizations provide excellent overviews of their goals and objectives for health literacy. These sites can be used as a starting point for those interested in learning about initiatives in health literacy.

American College of Physicians Foundation	http://foundation.acponline.org/healthcom.htm
American Medical Association Foundation`	http://www.ama-assn.org/ama/pub/category/8115.html
California Health Literacy Initiative	http://www.caliteracy.org/cahealthliteracyinitiative.html
	http://www.cahealthliteracy.org/
Cancer, Culture, and Literacy Institute	http://www.moffitt.usf.edu/education/ccl_institute/
Center for Health Care Strategies	http://www.chcs.org/ (then search health literacy)
Center for Plain Language	http://www.centerforplainlanguage.org
Centre for Literacy of Quebec	http://www.nald.ca/litcent.htm
Health literacy Project	http://www.centreforliteracy.qc.ca/
Clear Language Group	http://www.clearlanguagegroup.com/
Georgia State University	http://education.gsu.edu/csal/site/activities1.htm
Harvard Health Literacy Studies	http://www.hsph.harvard.edu/healthliteracy/
Health Literacy Institute	http://www.healthliteracyinstitute.net/
Health Literacy Month	http://www.healthliteracymonth.com/
Institute for Healthcare Advancement	http://www.iha4health.org/
National Center for Education Statistics (NAAL)	http://nces.ed.gov/naal/
National Institute for Literacy	http://www.nifl.gov
National Literacy and Health Program (Canada)	http://www.nlhp.cpha.ca/
Partnership for Clear Health Communication	http://www.askme3.org/
Pfizer Clear Health Communication Initiative	http://www.pfizerhealthliteracy.com/
Plain Language Action & Information Network	http://www.plainlanguage.gov
Plain Language Association International	http://www.plainlanguagenetwork.org
Robert Wood Johnson Foundation	http://www.rwjf.org
University of Virginia	http://www.healthsystem.virginia.edu/internet/som-hlc/
World Education	http://www.worlded.org/us/health/docs/culture/index.html

ORGANIZATIONS THAT FOCUS ON IMPROVING PHYSICIAN/PATIENT COMMUNICATION SKILLS

These websites and/or organizations primarily provide insights and resources to improve communication skills in the medical setting. There is overlap with the above website resources.

American Academy on Physician and Patient	http://www.physicianpatient.org/
Bayer Institute for Health Care Communication	http://www.bayerinstitute.com/
Institute of Medicine (focus on communication)	http://www.iom.edu/focuson.asp?id=6095
National Cancer Institute (focus on health communication)	http://cancer.gov/pinkbook

WEBSITE RESOURCES FOR TEACHERS AND BIBLIOGRAPHY SOURCES

These websites contain educational resources, or have specific literature, that pertains to health literacy.

American College of Physicians Foundation and Institute of Medicine, 2004 National Health Communication Conference, Moving Forward to Improve Health Literacy. Executive Summary available at:

http://foundation.acponline.org/healthcom/hcc3_exsum.pdf. To request a printed version of the Executive Summary, contact Jonathan Uhl at juhl@mail.acponline.org, or call (215) 351-2819.

Agency for Healthcare Research and Quality (AHRQ)	http://www.ahrq.gov/clinic/epcsums/litsum.htm
Centers for Disease Control and Prevention	http://www.cdc.gov/communication/resources/simpput.pdf
Literacy Information and Communication System	http://www.nifl.gov/lincs/
LINCS Health & Literacy Special Collection	http://www.worlded.org/us/health/lincs/
LINCS Hot Sites	http://www.nifl.gov/lincs/hotsites/hotsites.html
Health and Literacy Compendium	http://www.worlded.org/us/health/docs/comp/index.html
Health literacy: a prescription to end confusion (Institute of Medicine)	
	http://www.nap.edu/catalog/10883.html or http://www.iom.edu/report.asp?id=19723
National Cancer Institute, <i>Clear and Simple</i>	http://www.cancer.gov/cancerinformation/clearandsimple .
National Library of Medicine Current Bibliographies	http://www.nlm.nih.gov/pubs/cbm/hliteracy.html
University of Minnesota Biomedical Library	http://www.lib.umn.edu/libdata/page.phtml?page_id=839

WEBSITES THAT PROVIDE LOW LITERACY MATERIALS FOR PATIENTS

These websites provide low literacy educational material, and/or audiovisual material to help patients. This is a quick solution to help provide health information for the low literate patient. Note that there are commercial websites and companies that provide low literacy material as well that I have not included here.

American Academy of Family Physicians	http://familydoctor.org/
FDA Easy-To-Read publications	http://www.fda.gov/opacom/lowlit/7lowlit.html http://www.fda.gov/oc/seniors/ http://www.fda.gov/opacom/lowlit/englow.html
Kidshealth (can help adults as well)	http://www.kidshealth.org/
LSU Health Sciences Center Patient Education Library	http://lib-sh.lsuhscc.edu/fammed/pted/pted.html
National Center for Farmworker Health, Inc.	http://www.ncfh.org/00_ns_rc_pateduc.php
National Library of Medicine Medline Plus	http://www.nlm.nih.gov/medlineplus/healthtopics.html
NIDDK (branch of Nat'l Inst. Health)	http://www.niddk.nih.gov/health/eztoread.htm#dia
Oregon Health Sciences Library	http://www.ohsu.edu/library/patiented/links.shtml
Plane Tree Health Library	http://www.planetreesanjose.org/
UCSF Homeless Clinic	http://itsa.ucsf.edu/~hclinic/handouts.dir/lowlit.dir/lowlit.html
USDA Nutrition information (low literacy)	http://www.nal.usda.gov/fnic/pubs/bibs/gen/lowlit.html