

e-Health Literacy

What It Means and Why It Matters

Minnesota e-Health Summit:
Strategies for Success in Challenging Economic Times
June 25, 2009

**Lane Stiles, Director of Fairview Press
Fairview Health Services**
LStiles1@Fairview.org

Definition of general 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 of 1991*

e-Health Literacy: What It Means and Why It Matters

2

What is health literacy?

“the degree to which individuals have the capacity to obtain, process, and understand basic health information and services need to make appropriate health decisions”

—*Healthy People 2010, IOM*

e-Health Literacy: What It Means and Why It Matters

3

What is health literacy?

“the ability to read, understand, and act on health care information”

—*American Medical Association and the Partnership for Clear Health Communication*

e-Health Literacy: What It Means and Why It Matters

4

Health literacy involves . . .

- numeracy as well as reading, writing, and oral communication skills
- knowledge of health topics and health care delivery; navigational and access skills

e-Health Literacy: What It Means and Why It Matters

5

What is e-Health literacy?

“the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem”

—Norman & Skinner (2006)

Journal of Medicine Internet Research 8(2) e9

e-Health Literacy: What It Means and Why It Matters

6

In addition to linguistic literacy, numeracy, and knowledge of health topics and care delivery, e-health literacy involves . . .

- computer literacy
- media literacy
- information literacy
- science literacy

e-Health Literacy: What It Means and Why It Matters

7

Most definitions of health literacy and e-health literacy emphasize the patient’s ability to access health care, navigate health systems, and understand health information.

But . . .

e-Health Literacy: What It Means and Why It Matters

8

Health literacy is a function of the interface between provider and patient.

How well do we communicate with patients?

- Average adult reading level = 8th grade, but most materials written at a 10th grade reading level or much higher.
- According to 2003 National Assessment of Adult Literacy, only 12% of adults are proficient at understanding and using the health information we provide them.

e-Health Literacy: What It Means and Why It Matters 9

A better definition of health literacy:

The interface between

- a patient’s ability to get, understand, and use health information

AND

- a provider’s capacity to communicate clearly, educate about health, and empower patients.

Minnesota Health Literacy Partnership, 2009

e-Health Literacy: What It Means and Why It Matters 10

How serious a problem is health literacy?

- 42% Did not understand the instruction to “take on an empty stomach”
- 26% Unable to understand information on an appointment slip
- 43% Did not understand the rights and responsibilities section of a Medicaid application
- 60% Did not understand a standard informed consent

Williams MV, Parker RM, Baker DW, et al. Inadequate Functional Health Literacy Among Patients at Two Public Hospitals. JAMA 1995 Dec 6; 274(21):1,677–82

e-Health Literacy: What It Means and Why It Matters 11

How serious a problem is health literacy?

More than 90 million adults in the U.S. have difficulty reading:

- 40 to 44 million cannot perform the basic reading tasks required to function in society
- Another 50 million struggle with the most basic reading tasks, such as deciphering a bus schedule, reading a map, filling out a form.

Kirsch et al., “A First Look at the Results of the National Adult Literacy Survey,” National Center for Education Statistics, 1993

e-Health Literacy: What It Means and Why It Matters 12

Anyone can have a problem with health literacy

- Stress, injury, medication, acuity issues, the newness or complexity of information, how and when information is transmitted, and other factors can affect anyone's health literacy at any time.
- Research shows that everyone benefits from clear health communication.

e-Health Literacy: What It Means and Why It Matters

13

Health literacy is “fundamental to quality care”

—IOM, *Health Literacy: A Prescription to End Confusion*, 2004

- **A more significant predictor of health status than income, employment, education, race, or ethnicity**
- IOM, Joint Commission, AHRQ, AMA, IHI, AHIP, HHS, NCQA, CAHPS, and many other organizations have made health literacy central to their quality care agendas.

e-Health Literacy: What It Means and Why It Matters

14

What does (e-)health literacy have to do with EHRs?

- Many types of printed documents are routinely produced for patients and their families through EHRs: discharge instructions/after-visit summaries, medication reconciliation, embedded patient education/teaching sheets, medical test results, etc.
- Increasing use of patient portals (e.g., MyChart), secure patient-provider messaging, e-scheduling, electronically prescribed patient ed, and PHRs means that patients are receiving more and more communications electronically as well.

e-Health Literacy: What It Means and Why It Matters

15

How patient-centered is your EHR?

If we don't put patients at the center of planning and implementation, we will never realize the full benefits of EHRs for improving health outcomes and reducing costs.

e-Health Literacy: What It Means and Why It Matters

16

Medication section of AVR

“Stop Taking” caused much confusion.

Medications and Orders

Stop Taking These Medicines

montelukast (SINGULAIR) 10 mg oral tablet	take 1 Tab by mouth before bedtime.
loratadine-pseudoephedrine (CLARITIN-D 12HR) 5-120 mg oral tablet 12 HR	take 1 Tab by mouth. Once a day.
albuterol ipratropium (DUONEB) 2.5/0.5 mg/ml. Inhalation solution vial	by Nebulization route one time. AS instructed. One time in clinic now
albuterol ipratropium (DUONEB) 2.5/0.5 mg/ml. Inhalation solution vial	3 MLs by Nebulization route q4h. 1 neb in clinic
fluticasone (FLOVENT) 110 mcg/puff inhalation aerosol	1 Puff by Inhalation route bid.
mometasone (NASONEX) 50 mcg/act nasal suspension	2 Sprays by Nasal route hs.
albuterol (PROVENTIL;VENTOLIN) 90 mcg/puff inhalation aerosol soln	2 Puffs by Inhalation route qid.

Your Current Medicines Are

fluticasone (inha) (FLOVENT) 110 mcg/act inhalation aerosol inhaler	2 Puffs by Inhalation route twice daily.
montelukast (SINGULAIR) 10 mg oral tablet	take 1 Tab by mouth daily.
NASONEX NASAL	1 Spray by Nasal route daily. 1 SPRAY IN EACH NOSTRIL DAILY.
albuterol (PROVENTIL;VENTOLIN) 90 mcg/puff inhalation aerosol soln	2 Puffs by Inhalation route. PRN
CLARITIN-D 12 HOUR ORAL	take 1 Tab by mouth daily.

Accuracy of the medication list is based, all or in part, upon information provided by the patient.

Medication section of AVR

Still confusing. One med list proved best.

Medicines Ordered Today

	Refills	Start
hydrochlorothiazide 25 mg oral tablet	5/5	4/15/2008
Sig - Route: take 1 Tab by mouth daily. - Oral		
albuterol (PROVENTIL;VENTOLIN) 90 mcg/puff inhalation aerosol soln	0/0	4/15/2008
Sig - Route: 1-2 Puffs by Inhalation route four times daily. - Inhalation		
loratadine (CLARITIN) 10 mg oral tablet	5/5	4/15/2008
Sig - Route: take 1 Tab by mouth daily. - Oral		

Your Current Medicines Are

hydrochlorothiazide 25 mg oral tablet	take 1 Tab by mouth daily.
albuterol (PROVENTIL;VENTOLIN) 90 mcg/puff inhalation aerosol soln	1-2 Puffs by Inhalation route four times daily.
loratadine (CLARITIN) 10 mg oral tablet	take 1 Tab by mouth daily.
amoxicillin-potassium clavulanate 875-125 mg per tab (AUGMENTIN) 875-125 mg oral tablet	take 1 Tab by mouth twice daily.

Diagnosis codes, abbreviations, and unfamiliar terms

Diagnoses

Routine Medical Exam [V70.0B] - Primary
HTN (Hypertension) [401.9AE]
Fatigue [780.79B]
Osteoporosis [733.00C]
Anxiety [300.00E]
SCREENING MAMMOGRAM [V76.12B]

Confusing abbreviations

The car has a therapist?

Provider:	Department:
Car-Therapist	Cardiac Rehab
Car-Therapist	Cardiac Rehab
Car-Therapist	Cardiac Rehab
Ultrasound Equipment	Ultrasound Hcmmc
Eye-Complete	Eye CI Hcmmc
Eileen A O'Shaughnessy, MD	Nephrology CI Hfa
Eugene L Dela Cruz, DPM	Podiatry CI Hcmmc
Drm-Derm Footcare	Dermatology CI Hcmmc

Orders

Who is this information for?

Future Orders	Please
ULT KIDNEYS COMPLETE	5/14/07
Standing Orders	Interval
CARDIAC REHAB PLAN OF CARE	X3/week

Comments: Cardiac Rehab Plan Of Care: Increase Exercise Tolerance: Endurance and Strength
Tobacco Cessation: Ongoing Education and Counseling Nutrition Consult: Low Fat/Low Cholesterol, Low Sodium and Lipids Cardiac Rehab Education: Diagnosis, Home Exercise, Home Management, Medication, Risk Factor and Stress Management Length of program is based on achievement of outcomes up to 36 sessions or 3 months, maybe determined by insurance guidelines.

Orders

Jargon, abbreviations, all caps

We Performed the Following

**MAM MAMMOGRAM SCRIN BIL DIGITAL
COLONOSCOPY
PANEL BASIC METABOLIC (BMP)
TSH
CBC WITH PLATELET**

What did the doctor order?

“Try both aleve 2pills bid with flexeril at hs,
if not better see me next week”

What can we do to make our
communications with patients
through EHRs more effective
and patient-centered?

Use universal design principles for accessibility and usability

www.universalusability.com

- Design simply; less is more; just because you can add extra functionality doesn't mean you should; focus on relevance, consistency, ease of use
- Benefits all users of HIT, staff as well as patients; "universal precaution"

e-Health Literacy: What It Means and Why It Matters

25

Involve health communications and patient education specialists in planning and implementation

e-Health Literacy: What It Means and Why It Matters

26

Involve patients in planning and implementation

- Have lay audiences review patient interfaces and content
- Instead of the usual patient advisory groups (who may be more health care savvy), partner with community and adult literacy groups for testing

e-Health Literacy: What It Means and Why It Matters

27

Raise the awareness of, and educate clinical and IT staff about, the importance of health literacy and best practices for patient-centered communication.

e-Health Literacy: What It Means and Why It Matters

28

Make sure that all communications with patients meet best practices for health literacy and patient-centered communication.

e-Health Literacy: What It Means and Why It Matters

29

Guidelines for all communications

- Limit the number of messages (preferably 2-3 main messages); “need to know,” not “nice to know” information
- Use plain language (familiar, “living room” language; see www.plainlanguage.gov); avoid jargon and technical language
- Use short sentences and active voice; avoid long sentences and passive voice

e-Health Literacy: What It Means and Why It Matters

30

Guidelines for all communications

- Reading level should be 5th–6th grade, no higher than 8th grade
- “Chunk” information into meaningful sections with clear headings; use bulleted lists rather than large blocks of text; Q&A is a good format (directly address the reader)
- Information should be relevant to patient’s needs, and timely; do not make assumptions about patient’s knowledge

e-Health Literacy: What It Means and Why It Matters

31

Guidelines for all communications

- Focus on the actions or behaviors you want the patient to take, not medical facts
- Use Ask Me 3 (from the Partnership for Clear Health Communication) to help focus and structure information
 - What is my main problem?
 - What do I need to do?
 - Why is it important for me to do this?

e-Health Literacy: What It Means and Why It Matters

32

Guidelines for all communications

- Supplement with illustrations
 - Place images in context and label clearly
 - Focus on key messages and tie to text; avoid extraneous detail or decoration; simple line drawings are often best
 - Consider the cultural implications and relevance of images
 - Use tables, charts, and other abstract graphics sparingly

e-Health Literacy: What It Means and Why It Matters

33

Guidelines for all communications

- Use numerals rather than spelling out numbers
- Avoid percentages (“one out of ten” rather than “10%”)
- Do not require patient to make calculations or draw abstract inferences

e-Health Literacy: What It Means and Why It Matters

34

Guidelines for printed materials

- Use at least a 12-point font
- Avoid using all capital letters, italics, and fancy script
- Use a serif font such as Times, Garamond, or Palatino (not a sans serif font)
- Keep line length between 40 and 50 characters

e-Health Literacy: What It Means and Why It Matters

35

Guidelines for printed materials

- Leave right margins jagged (i.e., do not justify)
- Do not break words across lines
- Leave plenty of white space between lines and sections and in margins
- Use consistent designs, font sizes, and styles; avoid clutter

e-Health Literacy: What It Means and Why It Matters

36

Guidelines for printed materials

- Paper should provide a good contrast for type
- Do not run words over images or over shaded or patterned backgrounds

e-Health Literacy: What It Means and Why It Matters

37

Additional guidelines for electronic text

- Use a sans serif font for text that is to be read on a computer screen (use a serif font for printed text)
- Minimize the amount of text per screen
- Minimize the need for scrolling
- Enhance text with video or audio as appropriate and feasible

e-Health Literacy: What It Means and Why It Matters

38

General resources

“Quick Guide to Health Literacy.” U.S. Dept. of Health and Human Services. Available at www.health.gov/communication/literacy/quickguide/.

“Health Literacy and Patient Safety: Helping Patients Understand: Manual for Clinicians, 2nd ed.” Barry D. Weiss, MD. AMA Foundation. Available at <http://www.ama-assn.org/ama1/pun/upload/mm/367/healthlitclinicians.pdf>

“Health Literacy: A Prescription to End Confusion.” Institute of Medicine. Available at www.iom.edu/?id=19750.

e-Health Literacy: What It Means and Why It Matters

39

Resources for print materials

“How to Create and Assess Print Materials.” Rima Rudd. Harvard School of Public Health. Available at www.hsph.harvard.edu/healthliteracy/materials.html.

“Clear and Simple: Developing Effective Print Materials for Low-Literate Readers.” National Cancer Institute. Available at www.cancer.gov/cancerinformation/clearandsimple.

e-Health Literacy: What It Means and Why It Matters

40

Resources for electronic materials

"Accessible Health Information Technology (IT) for Populations with Limited Literacy: A Guide for Developers and Purchasers of Health IT." Agency for Healthcare Research and Quality. Available at http://healthit.ahrq.gov/portal/server.pt/gateway/PTARGS_0_1248_803031_0_0_18/LiteracyGuide.pdf

"Connecting with Care: Checklist for Evaluating Health Plan Websites for User-Friendliness" and "Guidelines for Health Plan User-Friendly Web Development and Design." America's Health Insurance Plans. Available at www.ahip.org/content/default.aspx?bc=39%7C341%7C22050.

"Creating Consumer Education and Engagement Tools: A Guide to Literacy and Language Considerations." Health Information Security and Privacy Collaboration. Available at http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_10779_872297_0_0_18/CEE_Tool_Doc_Literacy_Guide.pdf

e-Health Literacy: What It Means and Why It Matters

41

Resources for staff (computer) literacy

"Health Information Management and Informatics Core Competencies for Individuals Working with Electronic Health Records." American Medical Informatics Association. Available at http://www.amia.org/files/shared/Workforce_2008.pdf.

e-Health Literacy: What It Means and Why It Matters

42

Local resources

- Minnesota Health Literacy Partnership
<http://healthlit.themlc.org>
- Minnesota Alliance for Patient Safety (MAPS)
www.mnpatientsafety.org
- The Exchange
www.health-exchange.net

e-Health Literacy: What It Means and Why It Matters

43