

Health Literacy

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Introduction.

- A patient arrived at his doctor's office complaining of burning while urinating. The doctor handed him a cup and told him to "urinate in the cup." The patient just looked at him and said, "huh?"



“Void in the cup,” said the doctor.

“Huh?” asked the patient.

“Make water in the cup,” said the doctor.

“Huh?” asked the patient.

“PEE IN THE CUP,” blurted the doctor.

“Why didn’t you say that in the first place?” asked the patient.

- Mayer and Villaire, 2007



Literacy: Definitions

- “An individual’s ability to read, write, and speak in English... compute and solve problems at levels ...necessary to function on the job and in society, to achieve ...goals, and develop ...knowledge and potential.”

(National Literacy Act, 1991)



Literacy in the U.S.

- NALS (1992) surveyed 26,000 participants
- NAAL (2003) surveyed 19,000 adults (>16), including 1,000 prison inmates
- PIAAC (2011-2012) surveyed 5,000 adults 16-65
 - U.S. scored below the international average in literacy
 - Third to last in numeracy skills (lowest were Italy and Spain)
 - Second to lowest in technology problem-solving (equal to Ireland, above Poland)



Assessment Surveys

- Assessed participants' abilities along 3 scales:
 - prose literacy
 - document literacy
 - quantitative or mathematical skills
 - ability to access, interpret, and communicate information
- Presented participants with everyday tasks and assessed how adults performed in their everyday activities



NAAL Scale

- Level 1 - Proficient: participant possesses skills necessary to perform complex and challenging literacy activities
- Level 2 – Intermediate: able to perform moderately challenging activities
- Level 3 – Basic: able to perform simple, everyday tasks
- Level 4 – Below Basic: able to perform only the most simple and concrete literacy skills



Skills of Adults at Level 4

Can Usually Perform

- Sign name
- Identify a country in a short article
- Locate one piece of information in a sports article
- Locate driver's license expiration date
- Total a bank deposit entry

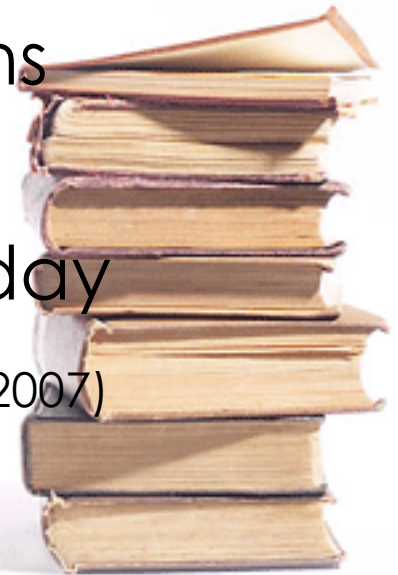
Cannot Usually Perform

- **Locate eligibility on table of employee benefits**
- **Locate intersection on a street map**
- **Locate two pieces of information in a sports article**
- **Complete a social security card application**
- **Calculate total costs of purchase from an order form**



Literacy Levels of Adult Americans

- Functional literacy – literacy level needed to perform specific tasks (Institute of Medicine, 2004)
- Approximately 87 million Americans (~37% of US population) are functionally illiterate. This means they cannot perform tasks necessary to function in everyday life (Vernon, Trujillo, Rosenbaum, & DeBuono, 2007)



Demography of Illiteracy

- 5% have learning disabilities
- 15% are born outside of the US
- Most of the illiterate are white, native-born Americans, especially elderly
- 17-21 million adults read at or below 4th grade level



Reasons for Low Literacy

- Not using learned reading skills
- Growing up with parents who don't read
- Lack of frame of reference
- Learning disabilities
- English not first language



Associated Challenges

- Crime
 - 7/10 (70%) prisoners performed in the lowest two literacy Levels
 - 85% of juvenile offenders
- Poverty
 - 43% at Level 4 were living in poverty, compared to 4% at level 1
 - Those with GED or Diploma earn significantly more than those without
 - Those with higher literacy levels more likely to be employed full time



Health Literacy

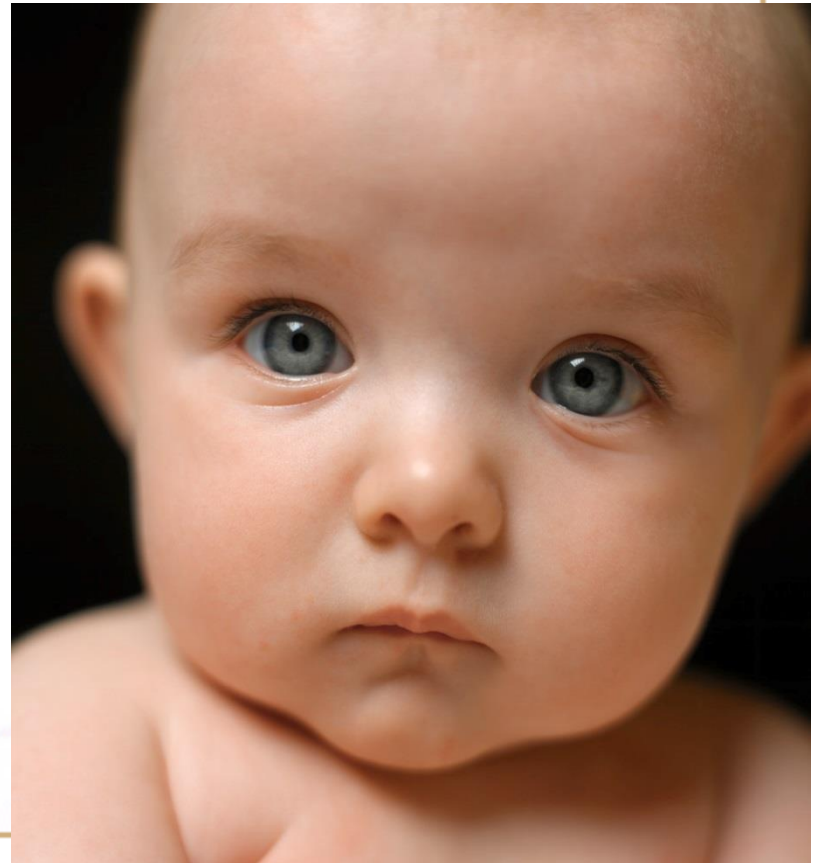


- Ability to ... "obtain, process and understand basic health information needed to make appropriate health decisions. Includes ability to read and understand prescriptions, written physician instructions, and appointment slips" (Archambault, 2003, p. 35)
- Only about 12% of adults have skill needed to navigate the health care system.



Literacy & Health - Direct Effects

- Not following medical instructions
- Incorrect use of medication
- Errors in administering infant formula
- Safety risks



Literacy & Health - Indirect Effects

- Limits options and ability to make lifestyle choices
- Stress and low self- esteem
- Dangerous work environments
- Lack of or inappropriate use of health services



Health Literacy - Implications

- Health care costs >4x higher for low literacy pts.
- “Literacy skills are a stronger predictor of an individual’s health status than age, income, employment status, education level, or racial/ethnic group”

(Weiss, 2007, as cited in National Patient Safety Foundation, 2011, p.1).



Impact on Health Care System

- Medication errors
- Misdiagnosis
- Surgical errors
- Treatment non-compliance
- Fragmented access to care
- Poor response to public health emergencies
- Unnecessary emergency room visits
- Longer hospital stays
- Hospital readmissions



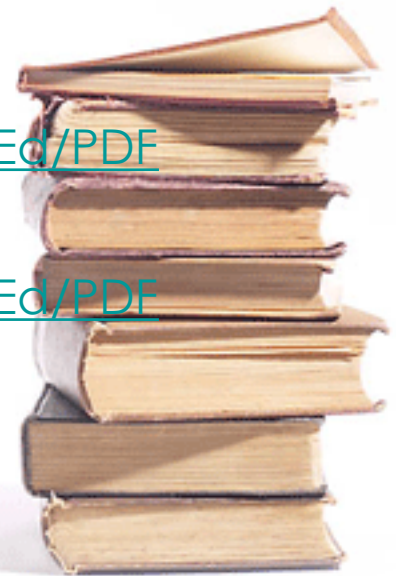
How can we tell?

- Look for clues indicating low literacy
 - Missing appointments
 - Incomplete forms
 - Making excuses
 - Non-compliance
- Assess reading level
 - REALM
 - Newest Vital Sign



Tools for Assessing Reading Ability

- Rapid Estimate of Adult Literacy in Medicine (REALM)
- Assesses literacy level (reading ability) of the person
- Quickly assesses word recognition skills and provides an approximate grade level of reading ability
- Instructions available from:
http://www.ihs.gov/NonMedicalPrograms/HealthEd/PDF/PtEd_REALM_Instr.PDF
- Tool available from
http://www.ihs.gov/NonMedicalPrograms/HealthEd/PDF/PtEd_REALM_Examiner_WordList.PDF
- Newest Vital Sign
- Instructions and Tool available from:
<http://www.pfizerhealthliteracy.com/physicians-providers/NewestVitalSign.aspx>



How can we help?

- Educate others
- Employ communication methods that enhance understanding
- Create environment without shame
- Improve readability of all written materials



Reading Levels for Health Information

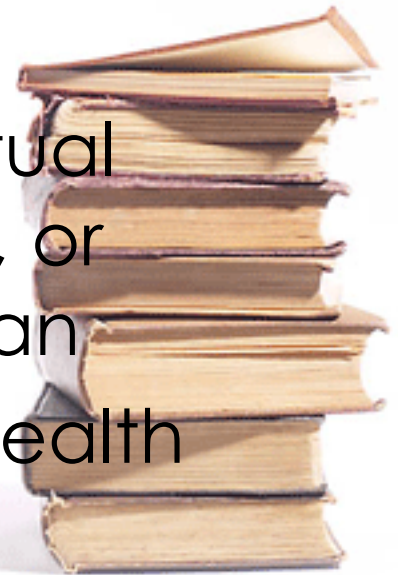
- General Population – No higher than 8th grade

*****For those in certain populations or circumstances known to be associated with illiteracy, materials should be written at a 4th to 6th grade reading level*****



Formulas for Assessing the Readability Level of Health Information

- There are nearly 40 different formulas available.
- Measure *structural difficulty* of written text: sentence and word length, vocabulary
- These do not measure conceptual difficulty, organization, content, or reader characteristics, which can also affect comprehension of health information

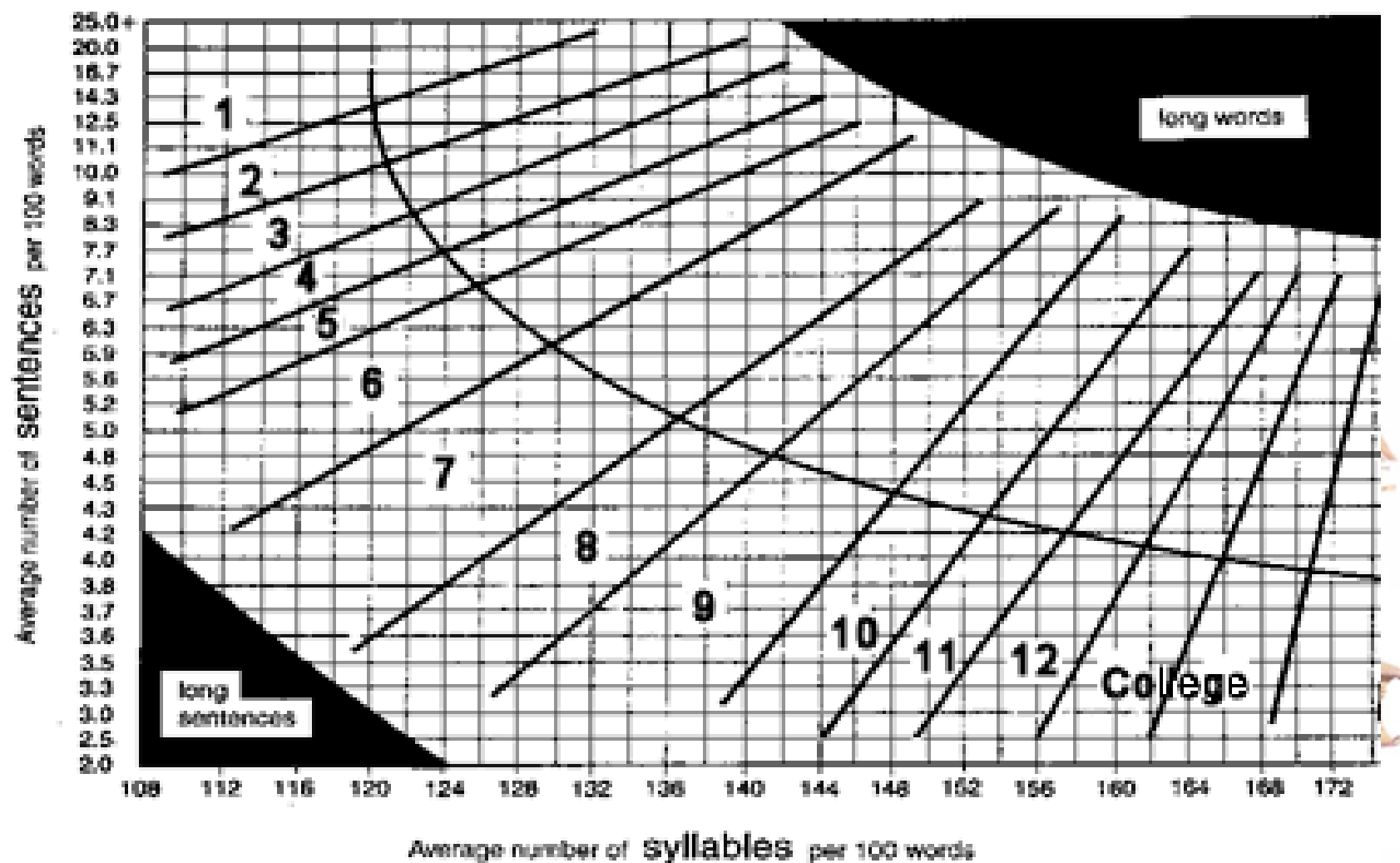


Most popular and frequently used formulas are:

- SMOG – Simple, fast and accurate; versions for short and long documents
- Fry Readability Formula – Used for documents of 300 words or more
- Computer software packages, including Flesch Kincaid (MS Word)



Fry Graph for estimating Reading Ages (grade level)



Other Important Factors to Consider When Developing Readable Materials

- Use “you” language
- Font no less than 12 point. Do not use all-caps.
- Clear and concise.
- Vivid writing.
- Action language.
- Rag right/ Left justification



Other Important Factors (continued)

- Use white space
- Combine mediums, but not too busy
- Pictures should relate to the content.
- Approach materials as an intervention or treatment
- **Color is good, but don't go overboard!**



Working with Low Literacy Clients

- Verbal education may be required
- Emphasize benefits to the learner
- Personalize information
- Use plain language, concrete terms
- Do not oversimplify – low literacy patients are not “dumb”
- Emphasize key points
- Organize material logically
- Take it slow
- Divide instruction into small steps – “chunking”



Working with Low Literacy Clients

(continued)

- Involve all senses possible.
- Make materials inviting, but not too busy.
- Use graphics, videos, hands-on
- Give and ask for frequent feedback –
“Teach Back” – to help you,
not as a test
- “Ask Me 3”:
 - What is the problem?
 - What should be done?
 - Why is it important? (NPSF as cited in Pontius, 2013)



Improving Communication

Problem

1. Benign
2. Condition
3. Lesion
4. Oral
5. Procedure
6. Avoid
7. Option
8. Adverse
9. Adjust

Better

1. Not harmful
2. Problem, how you feel
3. Sore
4. Mouth
5. Operation, how we fix the problem
6. Stay away from
7. Choice
8. Bad
9. Change



(NPSF as cited in Pointius, 2013)

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