It's Not You, It's Me
What Every Hospitalist Needs to Know about Health Literacy and Putting It into Practice

21 July 2017
Disclosures

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How familiar are you with the topic of Health Literacy?

- very familiar
- somewhat familiar
- a little familiar
- at all familiar

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How familiar are you with TOOLS for assessing Health Literacy?

- very familiar
- somewhat familiar
- a little familiar
- at all familiar

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Workshop Objectives

- **Understand** the principles of health literacy and its implications for pediatric health.
- **Recognize** how to use assessment tools to develop a health literacy-informed strategy for inpatient clinical care.

Session Timeline

- **9:45-9:50** Introduction/Pre-Workshop Needs Assessment
- **9:50-10:00** Topic 1: Introduction to HL and Tools
- **10:00-10:10** Pair-Share Activity: Administering HL Tools
- **10:10-10:15** Report-out
- **10:15-10:25** Topic 2: Written Assessment
- **10:25-10:35** Small Group Activity: Using Assessment Tools
- **10:35-10:40** Report-out
- **10:45-10:55** Action Plan Development
- **10:55-11:00** Wrap-up

“I have some specific, unknown objectives for you to achieve.”
Introduction to Health Literacy and Tools
Literacy Overview

**core skills of literacy**
- reading
- writing
- numeracy
- speaking
- listening

**context/barriers**
- time and place
- circumstances
- background
- culture

Health Literacy Definition

- degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions

- **NOT** plain-language

- **NOT** cultural competency
Common PHM-Specific Situations

- inhaler versus nebulizer
- rescue versus controller
- acetaminophen dose

- acute/chronic/minor
- long-term prognosis
- adolescent self-care
- patient safety

Adult Health Literacy Statistics

35% of adults with **BASIC** or **BELOW BASIC** health literacy cannot read instructions on prescription label and determine what time to take the medication
Two Aspects of Problem

Skills
• improve literacy skills
• improve communication skills of professionals

Demand
• change norms
• lower demands
• remove barriers

HL Universal Precautions
• assume ALL PATIENTS may have difficulty comprehending health information and accessing services
• simplify communication with ALL PATIENTS
• confirm comprehension for ALL PATIENTS
• make environment/health care system easier to navigate
• support patients' efforts to improve their health
Tools: SAHL

• Short Assessment of Health Literacy–English/Spanish
• 18 items; 2.5 minutes

“I’m going to show you cards with 3 words on them. First, I’d like you to **read the top word out loud**. Next, I’ll read the two words underneath and I’d like you to tell me which of the two words is **more similar to** or has a closer association with the top word. If you don’t know, please say ‘I don’t know’. Don’t guess.”

• correct answer = correct pronunciation **AND** accurate association
Tools: SAHL-E

<table>
<thead>
<tr>
<th>Stem</th>
<th>Key or Distracter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. kidney</td>
<td><strong>urine</strong></td>
</tr>
<tr>
<td>2. occupation</td>
<td><strong>work</strong></td>
</tr>
<tr>
<td>3. medication</td>
<td><strong>instrument</strong></td>
</tr>
<tr>
<td>5. miscarriage</td>
<td><strong>loss</strong></td>
</tr>
<tr>
<td>6. infection</td>
<td><strong>plant</strong></td>
</tr>
<tr>
<td>7. alcoholism</td>
<td><strong>addiction</strong></td>
</tr>
<tr>
<td>8. pregnancy</td>
<td><strong>birth</strong></td>
</tr>
<tr>
<td>9. seizure</td>
<td><strong>dizzy</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Key or Distracter</td>
<td>Key or Distracter</td>
</tr>
<tr>
<td><strong>fever</strong></td>
<td><strong>education</strong></td>
</tr>
<tr>
<td><strong>treatment</strong></td>
<td><strong>marriage</strong></td>
</tr>
<tr>
<td><strong>virus</strong></td>
<td><strong>recreation</strong></td>
</tr>
<tr>
<td><strong>childhood</strong></td>
<td><strong>calm</strong></td>
</tr>
</tbody>
</table>

Tools: PHLAT

- Parental Health Literacy Activities Test
- 20 questions; 20-25 minutes
- four clinical domains:
  - nutrition
  - psychosocial/development
  - injury/safety
  - medical/screening/immunization
- assesses literacy **and numeracy**
- also available as PHLAT-10
Tools: PHLAT

- You are told by your baby’s pediatrician to call him if the baby has a temperature of 100.4°F or greater. The thermometer looks like the following:

  Should you call the doctor?

- Your baby has an ear infection and the doctor puts him on amoxicillin 3 times a day (see bottle). Using the syringe, please demonstrate how you would administer one dose of this medication.

Tools: Asthma Numeracy Questionnaire (ANQ)

- disease specific
- numeracy
- 4 items

1. Your doctor asks you to take 30 mg of prednisone every day for a week. The pharmacist gives you a bottle of 5 mg tablets. How many pills should you take each day?

3. You have a peak flow meter. Your Danger or Red Zone is 50% of your best reading. Your best reading is 400 L/min. What is your Danger Zone?
Tools: DNT-14

• Diabetes Numeracy Test

• four domains:
  ○ nutrition
  ○ exercise
  ○ blood glucose monitoring
  ○ medication

If you ate the entire bag of chips, how many total grams of carbohydrate would you eat?

Nutrition Facts
Serving Size 1 oz. (28g/About 10 chips)
Servings Per Container 3.5

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>% Daily Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories 140</td>
<td>Calories from Fat 60</td>
</tr>
<tr>
<td>Total Fat 6g</td>
<td>10%</td>
</tr>
<tr>
<td>Saturated Fat 0.5g</td>
<td>4%</td>
</tr>
<tr>
<td>Cholesterol 0mg</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium 150 mg</td>
<td>7%</td>
</tr>
<tr>
<td>Total Carbohydrate 18g</td>
<td>6%</td>
</tr>
</tbody>
</table>

Your insulin dose is increased to 54 units and you begin using a larger syringe that holds 100 units. On the syringe below, circle the line/marking that shows you have drawn 54 units.
Other HL Tools

• REALM: Rapid Estimate of Adult Literacy in Medicine
  ○ 66 items
  ○ does not measure comprehension or numeracy

• REALM-R
  ○ 8 items
  ○ can add disease-specific items

• TOFHLA: Test of Functional Health Literacy in Adults
  ○ two parts
  ○ 20-25 minutes
  ○ tests literacy and numeracy

Tool #1: BRIEF (BHLS)

• Brief Health Literacy Screen

• 3 items; 2 minutes
Tool #2: Newest Vital Sign (NVS)

- available in English and Spanish
- 6 items; 3 minutes

Pair-Share Activity #1

Administering Health Literacy Tools
Introduction to Written Material Assessment

Literacy Statistics

average US adult reads at 8th or 9th grade level

20% read at 5th grade level or below
Keys to Comprehension

- **INFER** meaning
- **ASSEMBLE** words
- **RETRIEVE** information from processed sentences
- **USE** knowledge to form mental representation

Readability Formulas

- focus on length of words and sentences
- indicate grade level at which patient would have to read

- Flesch Reading Ease
- Fry Graph
- Gunning Fog
- SMOG
- Readability Consensus
Fry Graph

1. select 3 samples of 100 words
2. count number of sentences
3. count number of syllables
4. plot average sentence length by average number of syllables
Readability Consensus

www.readabilityformulas.com

Suitability Assessment of Materials (SAM)

rates materials in six areas
- content
- literacy demand
- graphics
- layout and type
- learning stimulation and motivation
- cultural appropriateness

Readability Consensus
Based on 8 readability formulas, we have scored your text:
Grade Level: 9
Reading Level: fairly difficult to read.
Reader's Age: 13-15 yrs. old (Eighth and Ninth graders)

Introducing Baby to Pets

USUITEABLE

SUITEABLE

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SAM: Content Purpose

• “It is important that readers readily understand the purpose of the materials.”

**Superior:** Purpose is explicitly stated

**Adequate:** Purpose is implied

**Not Suitable:** No purpose is stated

SAM: Learning Stimulation and Motivation

• “Desired behavior patterns are modeled or shown in specific terms.”

**Superior:** Instruction models specific behavior and skills

**Adequate:** Information is mix of technical and common

**Not Suitable:** Information is presented in non-specific terms
Patient Education Materials Assessment Tool (PEMAT) evaluate and compare:

**understandability**
can process and explain key messages

**actionability**
can identify what they can do

PEMAT
- content
- word choice and style
- use of numbers
- organization
- layout and design
- use of visual aids

**PEMAT-P**: printable
- 17 items understandability
- 7 items actionability

**PEMAT-A/V**: audiovisual
- 13 items understandability
- 4 items actionability
Small Group Activity

Using PEMAT-P

Asthma Handouts: Readability

• AAP Asthma Plain Language (2008):

  Readability Consensus
  Based on 8 readability formulas, we have scored your text:
  Grade Level: 4
  Reading Level: easy to read.
  Reader’s Age: 8-9 yrs. old (Fourth and Fifth graders)

• Nelson’s Patient Instructions – Asthma (2007):

  Readability Consensus
  Based on 8 readability formulas, we have scored your text:
  Grade Level: 9
  Reading Level: fairly difficult to read.
  Reader’s Age: 13-15 yrs. old (Eighth and Ninth graders)
PEMAT: Asthma Handouts

- AAP Asthma Plain Language
  - Understandability: 94%
  - Actionability: 100%

- Nelson’s Patient Instructions – Asthma
  - Understandability: 62%
  - Actionability: 80%

Small Group Activity

Using PEMAT-A/V
Case Presentation

The Problem with Isabella
Asthma Health Literacy Plan

• Isabella is a 6 year old girl with moderate persistent asthma
  ○ 6 hospitalizations
  ○ 10 steroid courses
  ○ near-daily albuterol use
  ○ PRN inhaled corticosteroid (ICS) use
  ○ concomitant seasonal allergies

• You decide to start her on a regimen with ...
  ○ daily ICS
  ○ leukotriene receptor antagonist
  ○ nasal corticosteroid spray
Create a Health Literate Asthma Action Plan

- adopt universal precautions in **WRITTEN** communication
  - readability
  - suitability

- tailor approach in **VERBAL** communication
  - plain language
  - teach back
**Action Plan Items – Big Picture**

**IDENTIFY** and **ELIMINATE** environmental barriers

- How “literacy friendly” are we?
- Are navigation tools/aids readily available?
- Is technology put to good use?
- Do words serve as barriers to access, navigation, care, consent, dignity?
- Is there organizational commitment?

**Action Plan Items – Patients**

- create shame-free environment
  - encourage questions
  - validate concerns
  - define terminology
- make learning patient-centered
- emphasize behaviors over knowledge
- focus on survival skills and need-to-know/do
- repeat/reinforce
- apply teach-back method
Action Steps – Written Materials

- consider use
- consider needs
- focus on action
- write in everyday language
- design for reading/listening ease
- pilot test with intended audience

Written Material Reminders

- don't assume patients read materials you give
- circle/highlight most important points as you talk
- personalize material
- use teach-back
- emphasize importance by referring to material
Final Thoughts

Closing Thoughts

• literacy and verbal skills of individuals important

• demands
  ○ health materials
  ○ communication skills of team
  ○ complicated nature of healthcare systems

• social factors and contexts shape skills and abilities
Next Steps

Agency for Healthcare Research and Quality (AHRQ) Health Literacy Universal Precautions Toolkit, 2nd ed.

1. Start the path to improvement
2. Improve spoken communication
3. Improve written communication
4. Improve self-management and empowerment
5. Improve support systems

Selected Health Literacy Resources

• Agency for Healthcare Research and Quality (AHRQ)
• Patient Education Materials Assessment Tool (PEMAT)
• Readability Consensus Tool
• American Academy of Pediatrics Culturally Effective Care Toolkit: Literacy and Health Literacy
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Health Literacy Heroes
Together, We Make a Difference