Patient Education and Health Literacy

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Goals

- Understand the importance of recognizing health literacy in all patient care centers
- Value your role as a pharmacist in patient education
- Be familiar with techniques you can apply as a healthcare provider to improve health literacy

Objectives

- Discuss the occurrence of low health literacy in the United States
- Identify high risk groups
- Evaluate consequences of low health literacy
- Indicate the deficiencies of current medication practice
- Illustrate use of health literacy assessments
- Apply strategies for improved medication communication
Introduction

- Define: 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."

- Define: Literacy
  - Ability to read and write

Institute of Medicine. 2004

Literacy in the United States

- 90 million adults have fair to poor literacy
- Average reading level: 8th grade
- 21-23% of American adults are functionally illiterate
- Higher rates in the elderly (~80%)

Aldridge MD. Nephrol Nurs J 2004;31:373-7

Prevalence of Low Health Literacy

- 36% of Americans

Interpreting a prescription label is an intermediate task!

High Risk Groups

- ≥ 65 years old
- Minorities
- Spoke another language prior to education
- Less than a high school diploma
- Live at or below poverty line
- Rate their overall health as poor
- Have Medicaid, Medicare, or no insurance

- 68% of people do NOT tell their spouse
- People with adequate education levels may have difficulty


High Risk Groups (cont.)

- Latino population
  - Expected to increase to over 30% by 2060
  - > ½ of Latinos have limited English proficiency (LEP)

- Children
  - Increase risk of:
    - emergency department visits
    - hospitalizations
    - missed school days
    - greater use of rescue medications


Consequences of Low Health Literacy

- ↓ understanding of instructions on Rx bottle
  - 2 times more likely
- ↑ misinterpretation of drug warning labels
  - 3-4 times more likely
- ↓ understanding of mechanism and side effects
  - 30-50% incorrect
- ↓ adherence
  - 2 times more likely

Davis TC. Ann Intern Med. 2006;145:887–894
Consequences of Low Health Literacy (cont.)

- Awareness of weight-based dosing among caregivers
  - 88.6% unaware
- Medication knowledge including name, dose, indication, and side effects
  - 80% had a medication knowledge score < median
- Ability to name their medication
  - 60% of patients with limited health literacy

Health Literacy Outcomes

- Low health literacy has led to:
  1. Less understanding
  2. Worse outcomes
  3. Increased cost

"A priority area for national action."
- Institute of Medicine

Deficiencies of current medication practice

- Patient with limited health literacy
- Communication
- Inadequate self-management
- Lack of social support
- Medication reads as high literacy needs
- Remains too stressful to know
- Inappropriate medication management

Patient Information Leaflets

- Medication guides written at the 11th and 12th grade level
  - Average adult reads at the 8th grade level

- Medication information handouts
  - Received information not valued
  - Provided handout did NOT increase knowledge
  - Wanted tailored information on benefit and harm
  - Wanted information prior to drug choice


Medication Labels

- Poor medication labeling
  - Possible cause of 1/3 medication errors

- Label includes
  - Pharmacy or logo (84%)
  - Medication name (8.9 font size)
  - Medication instructions (9.3 font size)
  - Color and boldface highlights information important to the pharmacist not patient
  - Warning labels highly variable


Medication Label Standards

- Organize label in patient centered manner
- Emphasize instructions
- Simplify language
- Give explicit instructions
- Include purpose of use
- Limit auxiliary information
- Address limited English proficiency
- Improve readability

Examples of Evidence-based Medication Label

- Jonathan Cash Doe
  - Hydralazine 25 mg
  - Take 2 pills in the morning, 2 pills at noon, 2 pills in the evening, and 2 pills at bedtime.

Examples of Evidence-based Medication Label

- Juan A. García Nevare
  - Hydralazine 25 mg
  - Tome 2 pastillas en la mañana, 2 pastillas al mediodía, y 2 pastillas en la tarde.

Counseling by Physicians and Pharmacists

- Communication failure
  - 10% of adverse drug events
  - 96% of patients do not ask questions
- Verbal counseling
  - 24% of the time from prescribers
  - 14% of the time from pharmacists
Medication Names

- The guidelines used to name new medications focus on healthcare practitioners use NOT the patients.

- For example:
  - patients can provide names for 55.8% of medications
  - patients with limited health literacy can recall 31.7% medications

Federal Policy Initiatives

- Healthy People 2020
- Patient Protection and Affordable Care Act of 2010
- Plain Writing Act of 2010
- Department of Health and Human Services (HHS)
- Agency for Healthcare Research and Quality (AHRQ)
- National Institutes of Health (NIH)
- Centers for Disease Control and Prevention (CDC)

Goals of the National Action Plan

1. Develop and disseminate accurate, accessible, and actionable health information
2. Promote improvements in the health care system
3. Incorporate developmentally appropriate health and science information in child care and education through the university level
Goals of the National Action Plan (cont.)

4. Support and expand local efforts
5. Build partnerships, develop guidance, and change policies
6. Increase basic research to improve health literacy
7. Increase the dissemination of health literacy practice

Health Literacy Assessments

Informal Literacy Assessments

1. Reads slowly
2. Has difficulty telling a coherent story
3. Fills out forms incorrectly or incompletely
4. Uses excuses such as, "I forgot my glasses," "I'll read this later," or "I don't have time to read this now. Can I take it home?"
5. Brings along a friend or family member for assistance
Informal Literacy Assessments

6. Fails to show up for appointments or is late for refills
7. Does not ask questions for clarification
8. Has difficulty following instructions
9. Nods in agreement or expresses understanding but does not truly understand information

Informal Literacy Assessments

- Medication Review
  - Forgets to refill or pick up prescriptions
  - Cannot verbalize a short list of medications
    - “I take them just like it says on the bottle”
    - “This is everything that I am taking”
    - Have to look at the pill color and shape

Formal Literacy Assessments

- Rapid Estimate of Adult Literacy in Medicine (REALM)
  - Word-recognition test based on pronunciation of medical terms

- Test of Functional Health Literacy in Adults (TOFHLA)
  - Measures prose literacy and numeracy section
Three-question Subjective Assessment

1. How confident they are filling out forms
2. How often they need help reading hospital materials
3. How often they have trouble learning about medical conditions due to reading difficulties

- 4 point Likert scale: (4) all of the time (3) most of the time (2) some of the time (1) a little of the time or (0) none of the time
- 0-4: adequate health literacy
- 5-6: marginal
- 7-12: inadequate


Strategies for Improved Communication

- Increase health literacy awareness
  - 7% of community pharmacists identify health literacy
- Complete medication history
  - Important in ALL clinical settings
- Conduct a health literacy assessment


Strategies for Improved Communication

- Improve medication counseling skills
  - Take the time to counsel
  - Create a relaxed and nonthreatening environment
  - Use plain language
  - Show the patient each medication while counseling
  - Focus on one to three key points and repeat them frequently

Strategies for Improved Communication

- Improve medication counseling skills
  - Have patients repeat instructions
  - Encourage patients to ask questions
  - Use pictures or illustrated medication schedules
  - Review complete regimen and consolidate all medicines into their daily schedule


Designing and Writing Patient Information Materials

Design Strategies

- Organization
- Style
- Font
- Type Size
- Emphasizing text
- Interactive elements
- Illustrations

Design Strategies -
Organization
- Materials should be organized by:
  - Categories with category names
  - Most important topic first
  - In the order patients will experience it
  - General information first, then progress to specific information

Design Strategies -
Style
- Do not overcrowd the pages!
  - Makes it more difficult to read
- Black letters on light colored paper
- Justify text to the left, leave the right side ragged
- Use bullets
  - Assists in helping the reader follow the information

Design Strategies -
Text Styles
- Appropriate fonts to use:
  - Arial
  - Geneva
  - Helvetica
  - Tahoma
  - Verdana
- Type Size
  - 12-14 for easier reading
  - Titles and headings in larger print size
- Emphasizing text
  - Underline or Bold
  - Avoid use ALL CAPS or italics
Design Strategies—Interactive Elements

- Use charts to relay numbers:
  - Lab values
  - Blood pressure monitoring
  - Medication doses

- “Fill in the blank”
  - Patient to fill in as the information is being discussed

Design Strategies—Illustrations

- Facilitates information recall
- Reinforces written information
- Pictures should be:
  - Simple
  - Uncluttered
  - Legible labels
Writing Strategies

- Focus on words, sentence structures and style of writing
  - Content
  - Writing clearly
- Note: written material can be viewed as permanent record
  - Information should be accurate and complete

Writing Strategies - Content

- "Need to know" vs. "Nice to know"
  - Need to know:
    - Symptoms of the disease
    - Medications used to treat the disease
  - Nice to know:
    - Pathophysiology of the disease
    - Mechanism of action of the medication

Writing Strategies - Tips to Writing Clearly

- Use personal pronouns
  - Write the way that you would speak
  - Address the reader as "you"
    - Avoid first person ("I") and third-person ("the patient")
  - Use consistent language
    - i.e.: Do not use "medications" then "pills" then "medicines" - pick one and stick with it!
Writing Strategies—Tips to Writing Clearly

- Max of 10-15 words/ sentence
- Divide long sentences with commas or semicolons
- Avoid technical words, statistics or abbreviations
- Use action verbs (e.g.: consult, measure, maintain)
- Give examples (e.g.: foods that contain potassium, such as bananas or oranges)

Writing Strategies—Tips to Writing Clearly

- Use active voice (avoid passive voice)
- Example:
  1. “This medication should be kept out of reach of children” - **Passive**
     **Instead use:** “Keep this medication out of reach of children”
  2. “Muscle pain, upset stomach, and weakness may be caused by Lipitor” - **Passive**
     **Instead use:** “Lipitor may cause muscle pain, upset stomach and weakness”

Writing Strategies—Tips to Writing Clearly

- Use numerals (1,2) instead of spelling them out (one, two)
- Define medical terms in a glossary
- Add pronunciation key
- Replace words with ≥ 3 syllables with shorter words
Simplifying Complex Words

<table>
<thead>
<tr>
<th>Administer</th>
<th>Give</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia</td>
<td>Low blood count</td>
</tr>
<tr>
<td>Diabetes</td>
<td>High blood sugar</td>
</tr>
<tr>
<td>Discontinue</td>
<td>Stop</td>
</tr>
<tr>
<td>Edema</td>
<td>Swelling</td>
</tr>
<tr>
<td>Hypertension</td>
<td>High blood pressure</td>
</tr>
<tr>
<td>Injection</td>
<td>Shot</td>
</tr>
<tr>
<td>Intravenous</td>
<td>In a vein</td>
</tr>
<tr>
<td>Notify</td>
<td>Call</td>
</tr>
<tr>
<td>Physician</td>
<td>Doctor</td>
</tr>
<tr>
<td>Subcutaneous</td>
<td>Under your skin</td>
</tr>
</tbody>
</table>

Flesch-Kincaid Readability Formula

- Readability based on US grad school levels
- Takes into account:
  - Average syllables per word
  - Average number of words per sentence
- Underestimates by 0.9-3.2 grades
- Available as a Microsoft Word tool

Tools>Spelling>Options
Select “Show readability statistics”

Flesch-Kincaid Readability Statistics

After “spelling and grammar” check is completed, readability stats will appear

Flesch-Kincaid Readability Formula- Example

“The patient should be taking phosphorus-binding medications with every meal or snack, as these drugs prevent absorption of phosphorus from the gastrointestinal tract into the bloodstream. The excess phosphate eventually leaches calcium from the bones, resulting in weakening of the bone structure.”

Flesch-Kincaid Grade Level= 14
Flesch-Kincaid Readability Formula - Example

> “You should take some medicines every time you eat a meal or snack. We call these medicines **phosphate binders**. The medicines keep the phosphate in your intestine. This helps calcium stay in your bones and keeps your bones strong and healthy.”

> **Flesch-Kincaid Grade Level= 5**

Conclusion

- Health literacy is overlooked
- Research is increasing to find the best interventions
- Federal and national organizations consider this a priority
- Health literacy is important for appropriate medication use

True or False

- More than 1 of 3 adults has difficulty understanding health information.
  - True
- Patient information leaflets are written at an acceptable reading level for all patients.
  - False
- Health literacy assessments are time consuming and difficult to complete.
  - False
References


Questions?