Health Literacy

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Objectives

1. Audience will be able to define health literacy and recognize its impact on patient outcomes.
2. Audience will be able to identify the differences in print literacy and health literacy while also recognizing their association.
3. Audience will develop a more thorough understanding of the health literacy landscape in the US.
4. Audience will feel more comfortable utilizing outcome measures to develop a deeper understanding of their patients health literacy.
5. Audience will identify simple strategies that can be utilized to decrease the barrier of low health literacy.

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”To bridge the gap between the medical information provided and its implementation, we need health professionals who are able to speak the language and understand the culture of their patients.”[1]

— Dr. Regina M. Benjamin

18th Surgeon General of the US

01 What is Health Literacy?

Definition

"the degree to which individuals have the ability **to find, understand, and use** information and services to **inform health-related decisions and actions** for themselves and others"[2]

Impacting factors of health literacy

Age[3]

- 71% of older adults (> 60) had difficulty understanding print materials
- 68% has difficulty interpreting numbers

Health Insurance[4]

- Health insurance literacy
- Impacts utilization of health care (primary AND preventative services)

Race/Ethnicity[5]

- 58% of African Americans had basic or below basic health literacy levels (vs 28% non Hispanic Whites)

Socioeconomic Status[6]

- Inadequate health literacy is strongly associated with low SES
- Migration background, education, income, transfer of public benefits

Consequences of Low Health Literacy

- Reluctant to ask questions or point out that they may not understand what the health professional is communicating[7]
- Higher mortality rate[1]
- Increase in hospitalizations[1]
- Poorer ability to take medications appropriately and interpret health messages[1]

How may low health literacy present?
- Make excuses to conceal their low literacy:
  - Forgot reading glasses
  - Relying on a trusted caregiver
  - Stating that they will read something later

Understanding Health Literacy as Health Care Professionals (HCP) in Inpatient Rehab[9]

Patient Views

Strengths:
- Feeling understood by HCP
- Ability to actively engage with HCP (mean = 3.84)

Weaknesses:
- Appraisal of health care information
- Navigating the health care system

KEY NOTE:
HCP's continuously overestimate patient health literacy

Health Care Professional Views

Physiotherapists presented higher mean scores than patients on:
- Ability to actively engage with health care providers (mean = 4.30)
- Understanding health information well enough to know what to do (mean 3.83 vs 4.05)
- Lowest agreement between HCP's and patient reported high literacy level was "ability to actively engage with health care providers"

02 Health Literacy vs Reading Level

Health Literacy[10]

- Ability to write
- **Fill out forms**
- Listen
- **Ask questions**
- Follow directions
- Do basic math
- **Keep track of information over time**
- Engage in maintain health
- **Managing condition**
- Participate in shared decision making

Reading Level

Print literacy

- A person is able to read and understand the printed material given
- **54% of adults have a literacy level below 6th grade**

Based on 8 readability formulas the overall consensus is…

Twelfth Grade (17-18 years old)

Based on 8 readability formulas the overall consensus is…

Twelfth Grade (17-18 years old)

Example 3

Based on 8 readability formulas the overall consensus is…

College Level (21-22 years old)

Based on 8 readability formulas the overall consensus is…

College Graduate (23+ years old)

Based on 8 readability formulas the overall consensus is…

Twelfth Grade (17-18 years old)

Based on 8 readability formulas the overall consensus is…

Twelfth Grade (17-18 years old)

03 Health Literacy in the US

50%

Percentage of US population that is functionally or marginally illiterate[11]

25%

Percentage of women who thought they knew what a mammogram was, and did not[11]

>90% vs < 5%

Clinicians with high health literacy vs US population with high health literacy[11]

1/10

English speaking adults in US that have “proficient” health literacy skills[12]

60%

Of people with Medicaid coverage are at “below basic” or “basic” health literacy skills[12]

$349 Billion

Cost of limited health literacy through all impacts (medical errors, increased disability)[12]

04 How Do We Measure Health Literacy?

Rapid Estimate of Adult Literacy in Medicine – Short Form (REALM – SF)[13]

Explanation:
"Sometimes in this office, we may use medical words that patients aren't familiar with. We would like you to take a look at this list of words to help us get an idea of what medical words you are familiar with. It will help us know what kinds of patient education to give you. Start with the first word [point to 1st word with pencil], please say all of the words you know. If you come to a word you do not know, you can sound it out or just skip it and go on."

Scoring:
- If pt takes more than 5 seconds on a word, encourage the pt to move along
    - "Let's try the next word"
- Count as an error any word that isn't attempted or mispronounced

REALM – SF Interpretation[13]

REALM – SF Word List

- Behavior
- Exercise
- Menopause
- Rectal
- Antibiotics
- Anemia
- Jaundice

Interpretation

- 0 = < Third grade *(will not be able to read most low literacy materials, require repeated oral instructions, need illustrations, audio, video tapes)*
- *1-3 = 4th to 6th grade (needs low literacy materials, not able to read prescriptions labels)*
- *4-6 = 7th to 8th grade (will struggle with most pt education materials, won't be offended by low literacy materials)*
- *7 = High school (will be able to read most pt education materials)*

Short Assessment of Health Literacy - Spanish and English (SAHL – E/S)[13]

Explanation:
"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."

Administration:
- You can repeat the instructions so the examinee feels comfortable with the test
- Assessor can read the words at the bottom of the card
    - One will be a distractor and one will be similar to the top word, the pt should say the one that is similar

Stem	Key or Distracter		Don't know
1. kidney	__urine	__fever	__don't know
2. occupation	__work	__education	__don't know
3. medication	__instrument	__treatment	__don't know
4. nutrition	__healthy	__soda	__don't know
5. miscarriage	__loss	__marriage	__don't know
6.infection	__plant	__virus	__don't know
7. alcoholism	__addiction	__recreation	__don't know
8. pregnancy	__birth	__childhood	__don't know
9. seizure	__dizzy	__calm	__don't know
10. dose	__sleep	__amount	__don't know
11. hormones	__growth	__harmony	__don't know
12. abnormal	__different	__similar	__don't know
13. directed	__instruction	__decision	__don't know
14. nerves	__bored	__anxiety	__don't know
15. constipation	__blocked	__loose	__don't know
16. diagnosis	__evaluation	__recovery	__don't know
17. hemorrhoids	__veins	__heart	__don't know
18. syphilis	__contraception	__condom	__don't know

SAHL – E/S Interpretation

- Better for factors outside of print literacy (REALM)
- Comparable tests in English/Spanish with good reliability and validity in both languages
- A score of 0 to 14 suggests low health literacy

Important Considerations

1 Combine formal and informal measures

Continue to evaluate a patients health literacy throughout their stay!! This can be a fluid assessment that is continually adapted to fit pt needs.

2 Conduct assessments in private

Patients may feel embarrassed or ashamed. Approach assessments with respect and sensitivity to ensure a safe, comfortable environment.

3 Distinguish limited HL skills from cognition decline

Although measures are not standardized on pts with cog decline, they may still be useful in understanding a pts current cog status in regards to medical

05 Key Recommendations

Key Recommendations

Preferred Language[14]

- Use words pt uses to describe illness/health
- Ask pt to repeat back what is understood when using a translator
- **Possible barriers:**
  - All words aren't easily translated
  - Some words don't exist in other languages/cultures
  - weak literacy in native language

Plain Language[15]

- **Discussion should have 3-5 key points**
- "Chunk and check" method
- **Every Day Words for Public Health Communication**
  - a tool that lists commonly used words in public health literature and their alternatives
- **Plain language is NOT:**
  - Unprofessional writing
  - "Dumbing down" or talking down to pt

Appropriate Language[16]

- **National CLAS Standards:** Action steps that can advance health equity , improve quality and help eliminate health care disparities

  Ex: Collect and maintain accurate and reliable demographic data to monitor and evaluate the impact of CLAS on health equity and outcomes and to inform service delivery.

So what can we do moving forward?

Recognize limitations in education material

Current education materials are insufficient for the average American. Take extra time to ensure patients do not have questions or need further explanation.

Outcome measures!!

Gaining objective data on your patients health literacy can be extremely useful in the way you gauge how to educate and instruct. Don't forget, adjustments can be fluid!

Key recommendations

These strategies are simple, yet effective and are an excellent place to start in attempting to decrease the the barrier low health literacy can create.

Post – Presentation Links

Quiz Time!!

https://forms.gle/CgcJE2JpXwpNcovc8

Presentation Evaluation

https://forms.gle/fD2a9K4EHRWgrFtb6

Thanks!

Do you have any questions?

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References

1. Benjamin, R. M. (2010). *Improving health by improving health literacy*. Public health reports (Washington, D.C. : 1974). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2966655/
2. Centers for Disease Control and Prevention. (2023, July 11). *What is health literacy?* https://www.cdc.gov/healthliteracy/learn/index.html#:~:text=Personal%20health%20literacy%20is%20the,actions%20for%20themselves%20and%20others.
3. Centers for Disease Control and Prevention. (2020, July 16). *Older adults*. https://www.cdc.gov/healthliteracy/developmaterials/audiences/olderadults/index.html
4. Yagi, B. F., Luster, J. E., Scherer, A. M., Farron, M. R., Smith, J. E., & Tipirneni, R. (2022, February). *Association of Health Insurance Literacy with Health Care Utilization: A systematic review*. Journal of general internal medicine. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8141365/
5. Rikard, R. V., Thompson, M. S., McKinney, J., & Beauchamp, A. (2016, September 13). *Examining health literacy disparities in the United States: A third look at the National Assessment of Adult Literacy (NAAL) - BMC public health*. BioMed Central. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-016-3621-9
6. Svendsen, M. T., Bak, C. K., Sørensen, K., Pelikan, J., Riddersholm, S. J., Skals, R. K., Mortensen, R. N., Maindal, H. T., Bøggild, H., Nielsen, G., & Torp-Pedersen, C. (2020, April 28). *Associations of health literacy with socioeconomic position, health risk behavior, and health status: A large national population-based survey among Danish adults - BMC public health*. BioMed Central. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08498-8

References (continued)

7. Katz, M. G., Jacobson, T. A., Veledar, E., & Kripalani, S. (2007, June). *Patient literacy and question-asking behavior during the medical encounter: A mixed-methods analysis*. Journal of general internal medicine. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2583801/#:~:text=Low%2Dliteracy%20patients%20ask%20fewer%20questions%20about%20key%20medical%20issues,to%20lower%20disease%2Drelated%20knowledge

8. Office of Disease Prevention and Health Promotion. (2022, October 3). *Mental Health Services*. Community Services Institute. https://communityserv.com/news/news-full-article/health-literacy-month-october-2022

9. Voigt-Barbarowicz, M., Dietz, G., Renken, N., Schmöger, R., & Brütt, A. L. (2022, March 16). *Patients' health literacy in rehabilitation: Comparison between the estimation of patients and health care professionals*. MDPI. https://www.mdpi.com/1660-4601/19/6/3522

10. Bakerjian, D. (2023, August 30). *Personal Health Literacy*. Patient Safety Network. https://psnet.ahrq.gov/primer/personal-health-literacy#:~:text=However%2C%20health%20literacy%20involves%20more,participate%20in%20shared%20decision%2Dmaking.

References (continued)

11. Weiss, B. D. (2006, June). *Health literacy: A Manual for Clinicians*. Investing in the Health of America. http://lib.ncfh.org/pdfs/6617.pdf

12. Center for Health Care Strategies. (2024, March 21). *What is health literacy?* https://www.chcs.org/resource/what-is-health-literacy/

13. Agency for Healthcare Research and Quality. (2022, December). *Personal Health Literacy Measurement Tools*. AHRQ. https://www.ahrq.gov/health-literacy/research/tools/index.html#rapid

14. Centers for Disease Control and Prevention. (2022, December 27). *Culture & Health Literacy*. https://www.cdc.gov/healthliteracy/culture.html#anchor_1630327611725

15. Centers for Disease Control and Prevention. (2023b, September 20). *Plain Language Materials & Resources*. https://www.cdc.gov/healthliteracy/developmaterials/plainlanguage.html

16. U.S. Department of Health & Human Services. (2012). *Clas standards*. Think Cultural Health. https://thinkculturalhealth.hhs.gov/clas/standards