



Health Literacy and Patient Adherence

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<http://go.osu.edu/OSUHealthLiteracy>
<http://healthliteracy.osu.edu>

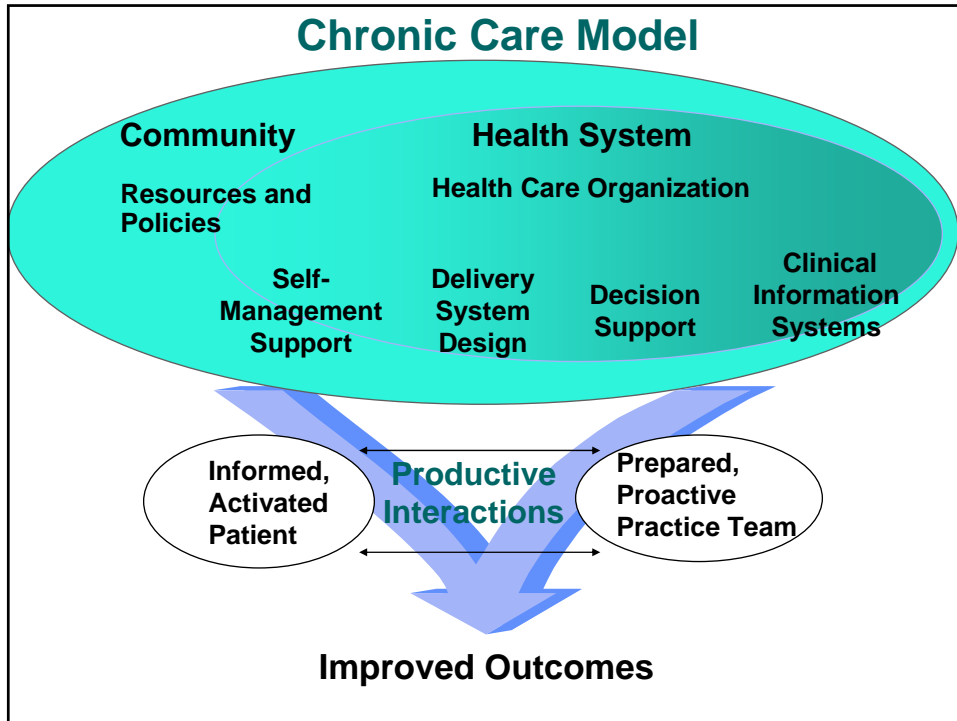
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What is Adherence?

“The extent to which the patient continues an **agreed-upon** mode of treatment (under limited supervision) when faced with **conflicting demands**”

American Heritage Medical Dictionary 2007



What characterizes “informed, activated patients”?

Informed, Activated Patients

They have the motivation, information, skills, and **confidence** necessary to effectively make decisions about their health and manage it

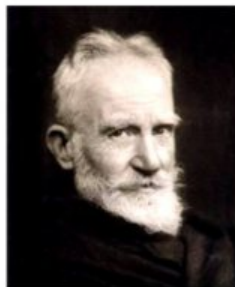
What characterizes a “prepared” practice team?

Prepared Practice Team

At the time of the interaction, they have the patient information, decision support, and resources necessary to deliver high quality care
(Knowledge and skills in health literacy and patient adherence strategies)

The problem with communication is the illusion that it has occurred.

– George Bernard Shaw





What is Health Literacy?

Health Literacy: (Healthy People 2020)

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

➡ **The ability to read, understand and ACT on health information to make informed health care decisions.**



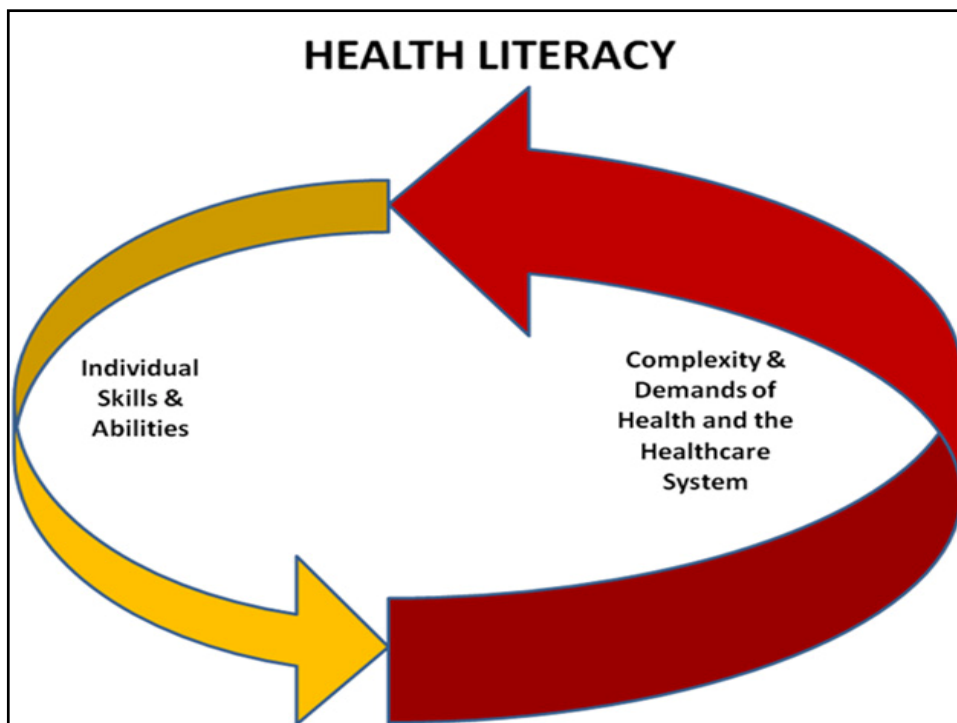
Literacy skills depend on:

- Background / familiarity
- Motivation
- Context of the message:
Relating new information to the person's perspective of what they know of the health context. Even well educated adults struggle with health concepts and terms.

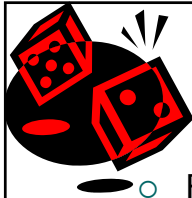
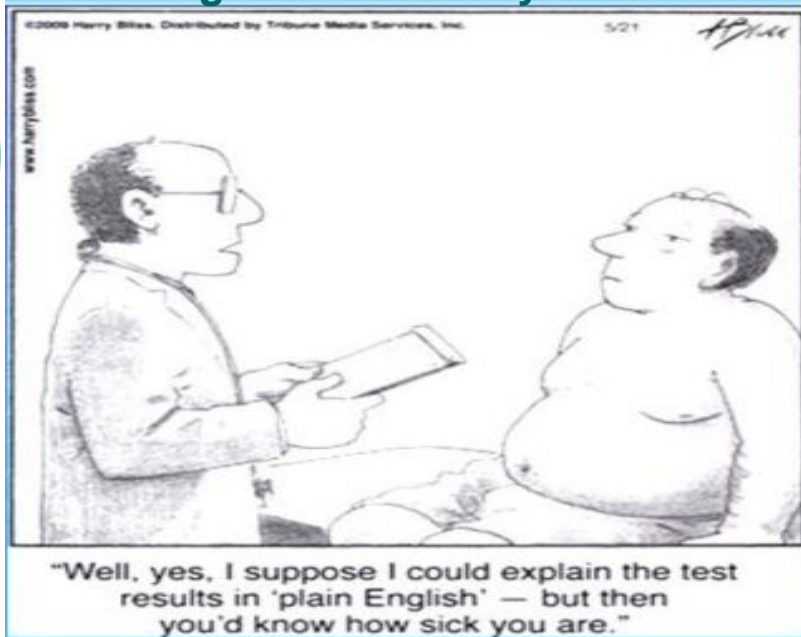


Factors that contribute to health literacy:

- General literacy
- Experience with health system
- Complexity of information
- Cultural and language factors
- How information is communicated
- Aging

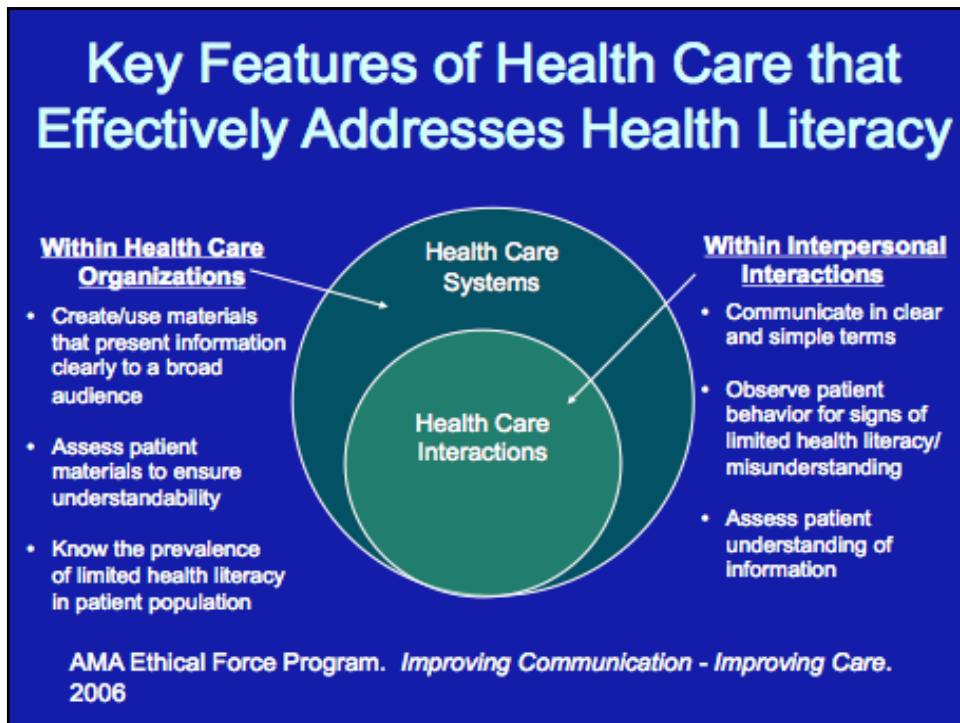
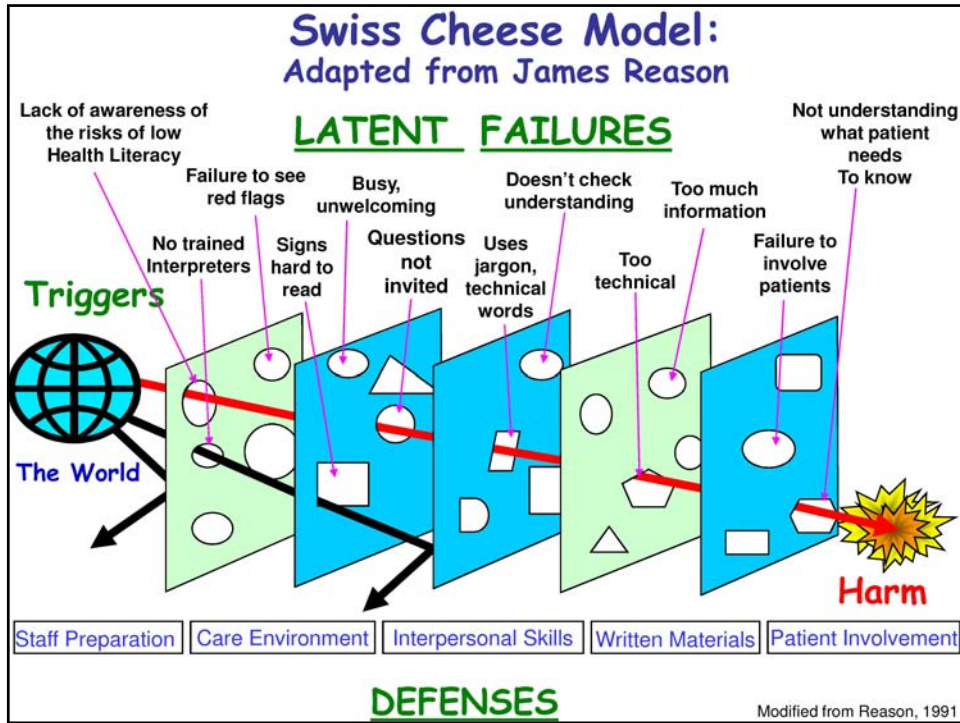


Reducing Health Literacy Demands



Why are patients at risk?

- Reliance on the written word for patient instruction
- Verbal instructions
 - Often complex
 - Delivered rapidly
 - Easy to forget in stressful situation
- Increasingly complex health system
 - More medications
 - More tests and procedures
 - Growing self-care requirements
 - Participatory/informed decision making



National Assessment of Adult Literacy (NAAL)

- National sample survey, 2003, N~20,000
- Prose, document, and quantitative literacy



Prose



Document

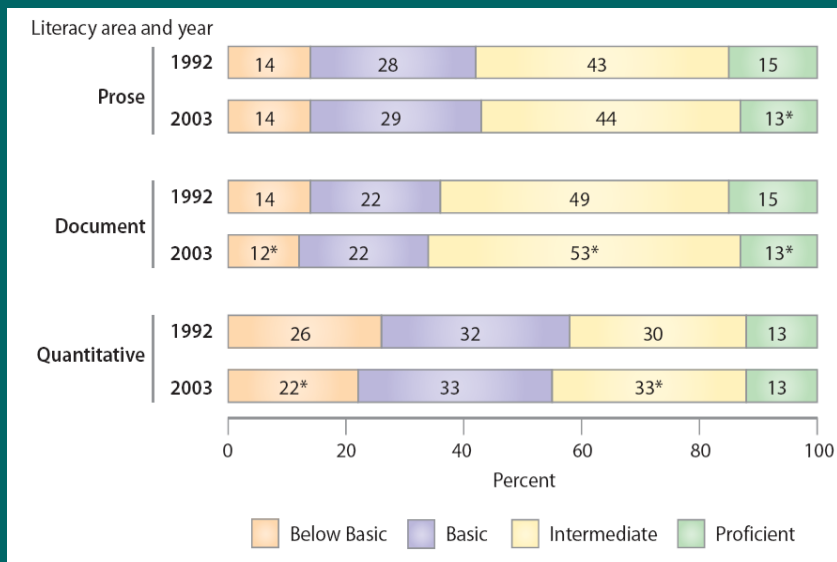


Quantitative

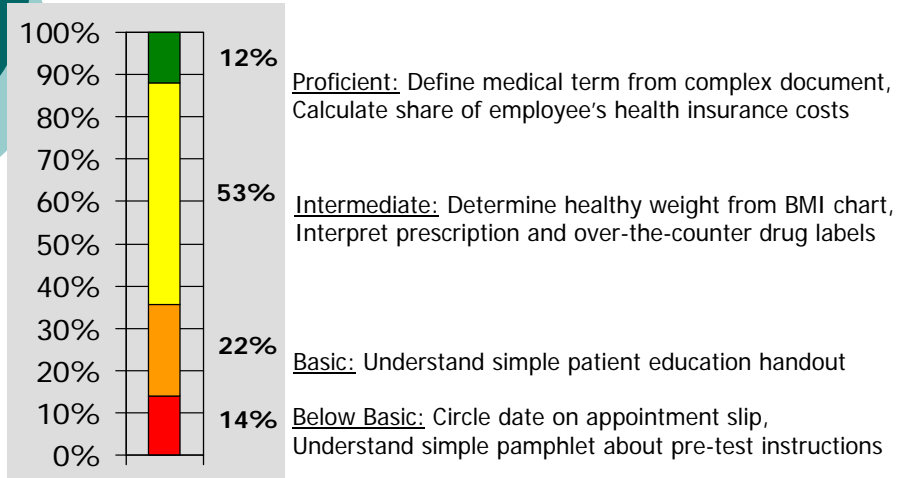
- Provided first national assessment of health literacy
- Levels: below basic, basic, intermediate, or proficient

From <http://nces.ed.gov/naal/>

Not Much Improvement in 10 Years



Health Literacy in America: Results from the NAAL



Kutner et al 2006



High Risk Groups

- Elderly
- Minorities
- Immigrants
- Poor
- Homeless
- Prisoners
- Persons with limited education

Kirsch et al 1993

Health Literacy of High Risk Populations

Group	Low Literacy (%)
All	36
Elderly (≥ 65)	59
Racial/Ethnic group: White	28
Black	58
Hispanic	66
Education level: 0-8 yrs	76
Still in HS 9-12 yrs	37
HS/GED grad	44
Below poverty threshold / 175% above PT	62 / 24
One or more disabilities	49

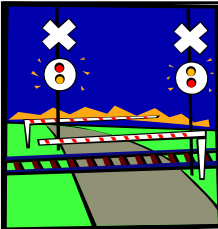
Weiss 2005.



VIDEO

Through the Patients' Eyes

- Health Literacy & Patient Safety: Help Your Patients Understand (AMA Foundation)
http://www.youtube.com/watch?v=cGtTZ_vxjya
- In Plain Language (Harvard Health Literacy Studies)
<http://www.hsph.harvard.edu/healthliteracy/overview.html#Two>



What are the Barriers?

- ➔ Barriers to Access
- ➔ Barriers to Diagnosis
- ➔ Barriers to Treatment

Health Care Experiences

- Low-literacy patients commonly hide their difficulty
- Many feel ashamed
- Avoidant behaviors

Parikh et al 1995. Weiss 2003.



Clues: Low Literacy

- Lack of interest
- No reading materials
- Make excuses not to read
- Lack reading speed
- Inability to answer questions
- Limited vocabulary
- Fake understanding
- Superior ability to memorize



How to ask about literacy

- **Introduce with social history:**
 - “What kind of work do you do?”
 - “How far did you go in school?” (asking about educational attainment alone may be insufficient)
- **Raise open discussion of literacy with:**
 - “How happy are you with the way you read?”
 - “What’s the best way for you to learn new things?”
- **Screening question:**
“How often do you have someone help you read materials given to you by your doctor, pharmacist or the hospital”

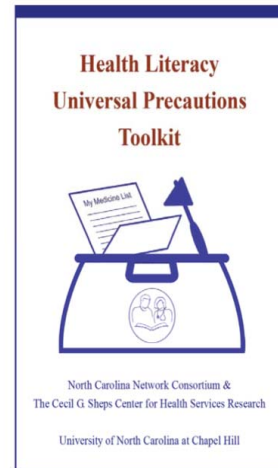


Health Literacy Universal Precautions

- Structure delivery of care as if every patient may have limited health literacy
- You can’t tell by looking
- Everyone may have difficulty understanding some things, some of the time
- Confirm understanding with everyone

AHRQ Toolkit (April, 2010)

- Focused on 4 drivers of health care
 - Effective oral communication
 - Effective written communication
 - Self-management and empowerment
 - Supportive systems
- 20 tools with overview, purpose, actions, & tracking progress



What do we know about low health literacy from research?

- **Low health literacy leads to:**
 - Lower health knowledge and less healthy behaviors.
 - Poorer health outcomes
 - Greater health costs
- **Specific communication techniques may enhance health literacy.**



Research also shows that:

- Literacy is the single best predictor of health status
- It is a **STRONGER** predictor than age, income, employment status, education level, or racial and ethnic group

Health Outcomes Associated with Literacy

Health Outcomes/ Health Services

General health status
Hospitalization
Prostate cancer stage
Depression
Asthma
Diabetes control
HIV control
Mammography
Pap smear
Pneumonia vaccine
Flu vaccine
STD screening
Cost
Mortality

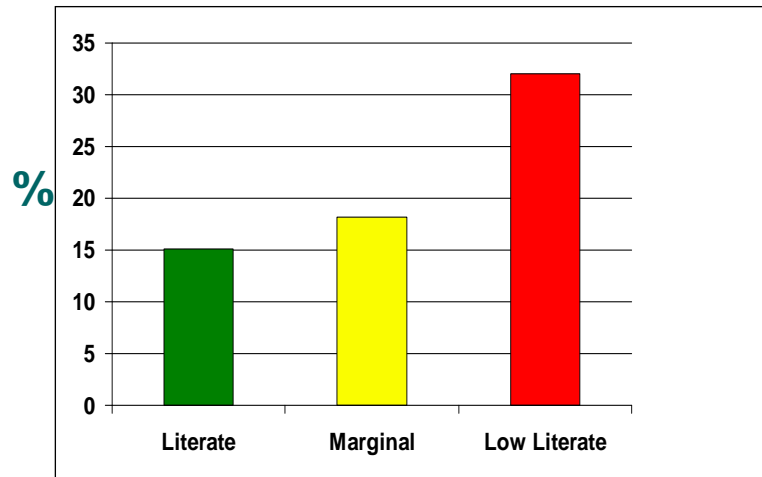
Behaviors Only

Substance abuse
Breastfeeding
Behavioral problems
Adherence to medication
Smoking

Knowledge Only

Birth control knowledge
Cervical cancer screening
Emergency department instructions
Asthma knowledge
Hypertension knowledge
Prescription labels

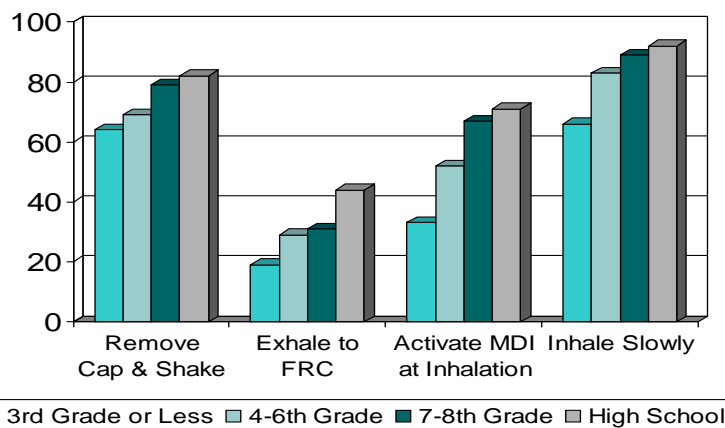
Patients with Low Literacy More Likely to be Hospitalized



Baker, Parker, Williams, et al. *JGIM* 1999

Health Literacy and MDI Use

Ability to perform MDI technique



Williams et al 1998.



Low Health Literacy and Medication Use

- ↓ Ability to identify their own medications
12-18 x greater odds
- ↓ Understanding of how to take medications
Take med every 6 hrs (52% correct)
Take med on empty stomach (46% correct)
- ↓ Understanding of drug mechanisms and side effects
Warfarin works by thinning blood
70% correct
Bleeding/bruising most common SE
49% correct
- ↑ Misinterpretation of common warning labels
3-4 x more likely to misinterpret

Kripalani et al 2006. Gazmararian et al 1999. Fang et al 2006. Davis et al 2006.

Health Literacy and Medication Use

- ↓ Understanding of numerical information
If your blood test result for warfarin is just right when it is between 2.0 and 3.0, which of the following results would be just right? 29% correct
- ↓ Medication adherence – On average, patients with chronic illness take only 50% of prescribed doses
- ↑ Adverse drug events (?)
- ↑ Health care costs

Fang et al 2006. Gazmararian et al 2006. Howard et al 2005.

Intervention to Improve Medication Adherence

Kripilani et al., 2007

209 Received personalized, illustrated pill card

REALM

- 41.6% Inadequate
- 36.9% Marginal

Those with inadequate or marginal literacy reported greatest use and helpfulness in medication adherence compared to those with adequate literacy ($p < 0.05$)

Date: 03-15-06		Name: Jane Doe		GMI# 01234567		
Names of Pills	What It's For	Morning/ Breakfast	Afternoon/ Lunch	Evening/ Dinner	Night/ Bedtime	
Lisinopril 20 mg 1 pill once a day	Blood Pressure 					
Simvastatin (Zocor) 40 mg 1 pill at bedtime	Cholesterol 					
Metformin 500 mg 2 pills twice a day	Diabetes/ Sugar 					
Gabapentin (Neurontin) 300 mg 1 pill every 8 hours	Nerve Pain 					
Aspirin EC 81 mg 1 pill once a day	Heart 					

Results of the gap: Risks to providers and systems

- Missed appointments
- Cancelled procedures
- Callbacks & time to repeat instructions
- Malpractice claims
- Unhappy patients
- Medical mistakes
- Loss of accreditation

THERE ARE 126 SCHOOLS IN THE
COUNTRY THAT TEACH YOU HOW TO BE A PHYSICIAN
BUT NOT ONE FOR HOW TO BE A PATIENT.



TAKE CHARGE OF YOUR CARE.

Do your homework. Gather up health information so you can be your own boss.

Bring someone with you for support when visiting your physician and to help you remember what was said.

Have key information with you, including your medical and medication history.

Take a notebook, ask questions and double-check your notes for accuracy.

At UnitedHealth Foundation, we believe that the more you know, the healthier you will be. Which is why we partnered with the NATIONAL PATIENT SAFETY EDUCATION TO bring you these important health tips. We encourage you to get more involved in your care. We have self-education tools for chronic health care that give information you can count on to make a positive, evidence-based choice. To find out more on this and other important topics, visit UHF.org

UnitedHealth Foundation



Costs of Low Health Literacy

Costs

- \$106-238 billion annually to US economy (7-17% of all personal expenditure)
- Future costs of LHL- range of \$1.6-3.6 trillion
- Savings by improving HL would insure all those un-insured.

Veron, JA et.al. Low Health Literacy: Implications for National Policy, Oct. 2007

Reasons

- Longer hospital stays
- 6% more hospitalizations
- 1.5 times more likely to visit a doctor
- More medication and treatment errors
- Three times as many prescriptions
- Lack needed skills to negotiate healthcare system

Center on an Aging Society Medical Panel Survey 1998)

Addressing patient communication needs across the continuum of care

Use 2 Evidence-Based Strategies:

- Plain language for all verbal and written communication
- 'Teach-back' to assure understanding of the communication/patient teaching
AND
- Engage individuals as care partners when possible



Patient Safety | Health Literacy

Safe Communication Universal Precautions

Medical information can be hard for anyone to understand. To communicate in the home of today's care relationships, health literacy barriers to effective communication include:

- Difficulty counting, processing and understanding health information
- Health care system complexity
- Process pressure
- Culture and language gaps
- Lack of a patient training or effective communication strategy

Approximately one of 10 adults are ill-equipped to manage consequences due to low health literacy. Those at risk also lack their patients' understanding and information skills to:

- Understand health care instructions, prescriptions and appointment slips
- Follow health concerns
- Increase medication use
- Reduce errors



What is Plain Language ?

- Speaking or writing in every day language (“living room language”)
- Limiting and organizing the information (oral, print, electronic, graphics, etc.) so the receiver gets the message quickly and clearly, and it makes sense to them.



The Keys to Plain Language

- Plan with the patient what they can and want to do and focus on actions or behaviors. Be realistic!
- Be brief and to the point. Give the most important information first and last.
- Limit the information to MOST important 2-3 “need to know” points.
- Use carefully phrased words as there is a tendency to take words literally.



The Keys to Plain Language

- Slow down and frame the message.
- Give context before new information.
- Break down complex instructions.
- Use common words (no jargon) consistently and define terms. Do not use:
 - Concept words
 - Category words
 - Value judgment words
- Give specific, concrete, and real world examples; use analogies for key concepts.

Example of Everyday Language

- **Original: (College)**

“With the onset of nausea, diarrhea or other gastrointestinal disturbances, consult your physician immediately.”

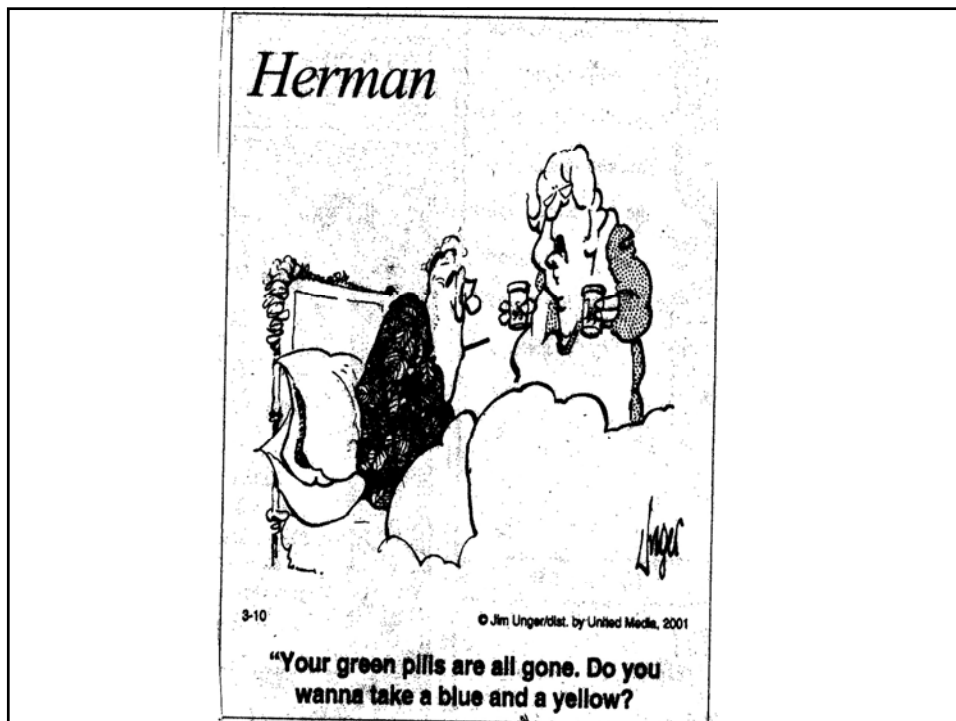
- **Rewrite: (4th grade)**

If you start feeling sick to your stomach, have loose bowel movements or other problems, call your doctor right away.

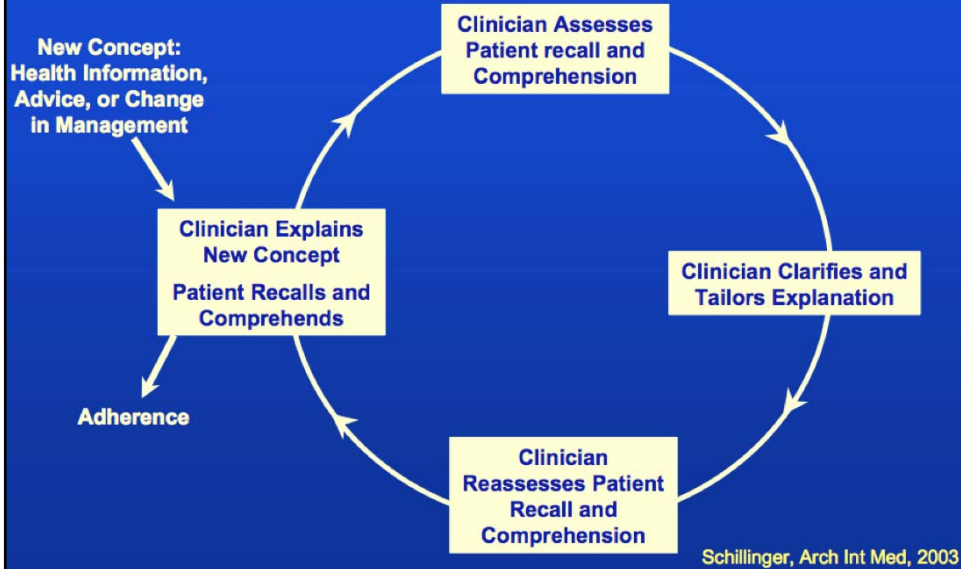


The Keys to Plain Language

- Use repetition / rephrasing / interactivity
- Use simple visual images
- Check understanding with “teach-back” or “show-back” method



Teachback technique



Teach Back Scripts

- I want to make sure I explained everything clearly. If you're explaining to your husband how to read a food label, what would you say?
- Let's review the main side effects of this new medicine. What are the 2 things that I asked you to watch out for?
- Please show me how you would _____, so I can be sure my instructions were clear.
- When you get home, if your husband asks you what the doctor said – what will you tell him?

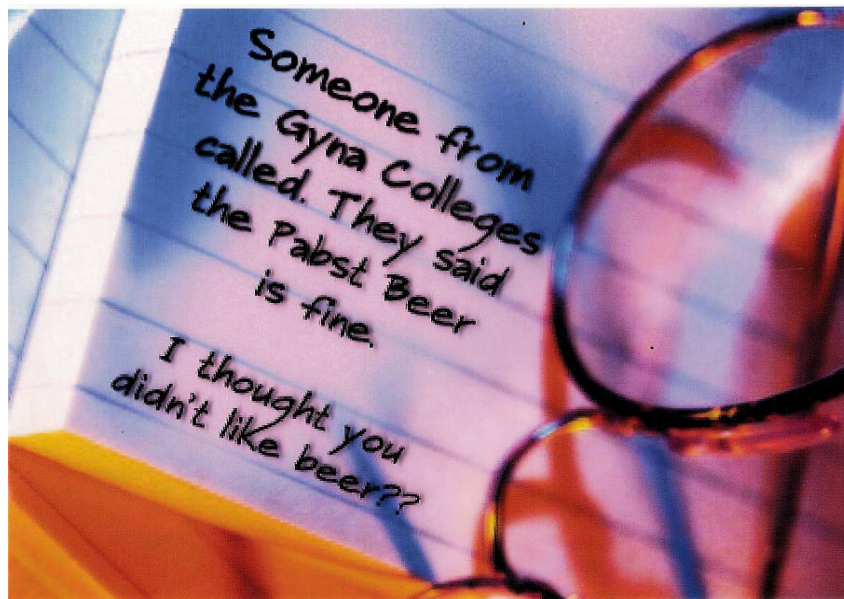


Effectively Solicit Questions

- Don't say:
 - Do you have any questions?
 - Any questions?

- Instead say:

What questions do you have?





Wrap Up

- Adopt Health Literacy Universal Precautions
- Implement Strategies to Improve Communication, e.g.,
 - Plain Language
 - Focus on Key Messages
 - Teach Back
- What questions do you have?



References

- AHRQ – Evidence Report/Technology Assessment # 43, (2001) pub – 01-E058. *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*.
- Dale, E. *Audiovisual Methods in Teaching*. (1969) 3rd Edition. Holt, Rhinehart, & Winston: New York.
- Davis TC, Williams MV, Marin E, Parker RM, Glass J. (2002). Health literacy and cancer communication. *CA Cancer J Clin*. 52:134-149.
- Lorig, K. & Associates. *Patient Education: A Practical Approach*. (2001) 3rd Edition, Thousand Oaks, CA: Sage Publications, Inc.
- Schillinger, D., Bindman, A., Wang, F., Stewart, A., & Piette, J. (2004) Functional health literacy and the quality of physician-patient communication among diabetes patients. *Patient Education and Counseling*. 52: 315-323.
- Streisand, R., Mackey, E., Elliot, B., et al. (2008), Parental anxiety and depression associated with caring for a child newly diagnosed with type 1 diabetes: Opportunities for education and counseling. *Patient Education and Counseling*, 73:333-338.



References

- Weiss B.D. (2007). *Health literacy: A manual for clinicians*. (2nd edition) Chicago: American Medical Association Foundation.
- Weiss BD, Reed RL, Kligman EW. (1995) Literacy skills and communication methods of low-income older persons. *Patient Education and Counseling*. 25:109-119.
- Wicklund, K., & Ramos, K. (2009)., Plain language: Effective communication in the health care setting. *Journal of Hospital Librarianship*, 9:177-85.
- Williams MV, Davis T, Parker RM, Weiss BD. (2002). The role of health literacy in patient-physician communication. *Family Medicine*. 34:383-389.
- Zimmerman, G., Olsen, C., & Bosworth, M., (2000) A "stages of change" approach to helping patients change behavior. *American Family Physician*. 61:1409-16.