

Health Literacy: A Cancer Communication Research Agenda

**Satellite Conference and Live Webcast
Tuesday, June 1, 2010
12:00 – 2:00 pm Central Time**

Produced by the Alabama Department of Public Health
Video Communications and Distance Learning Division

Faculty

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Disclosures

- **Research funding**
 - National Institutes of Health (NCI, NHLBI, NIA)
 - Agency for Healthcare Research and Quality (AHRQ)
 - Missouri Foundation For Health
 - California Endowment
 - Foundation for Informed Medical Decision Making
 - Industry (McNeil, Abbott, Pfizer)

Acknowledgements

- **Northwestern**
 - David Baker, MD, MPH
 - Stacy Cooper Bailey, MPH
 - Laura Curtis, MS
 - Joe Feinglass, PhD
 - Darren Kaiser
 - Anjali Pandit, MPH

Acknowledgements

- **Emory**
 - Ruth Parker, MD
 - Kara Jacobson, MPH
- **LSUHSC**
 - Terry Davis, PhD



Acknowledgements

- **Harvard**
 - Will Shrank, MD, MSHS
- **UConn/St. Francis**
 - Greg Makoul, PhD
- **Community partners**
 - JoAnn Pearson Knox
 - Pear Moraras
 - Mickey Eder, PhD



- Linking medicine to
 - Cognitive Psychology
 - Communication Science
 - Human Factors/Engineering
 - Learning Sciences/ Education
 - Marketing/Management
 - Neuropsychology
 - Public Health



Understanding and Promoting Health Literacy

- Help patients and families
 - Understand their health & healthcare
 - Translate knowledge to recommended actions
 - Apply problem-solving skills to new situations

Understanding and Promoting Health Literacy

- Foster ongoing health learning opportunities
- Instill health-promoting attitudes

Overview

- Health literacy defined
- A cognitive factors perspective
- Owning the problem
 - It's us, not you
- Practical solutions
- Looking forward

Literacy and Health Literacy

- Functional literacy
 - The ability to read, write and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential

– National Adult Literacy Act of 1991

Literacy and Health Literacy

- Health literacy
 - The capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions

– Institute of Medicine, 2004

Literacy and Health Literacy

- Functional literacy
 - The ability to read, write and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential

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Health Literacy > Reading

Health Literacy: What We Know

- Use of preventive services
- Delayed diagnoses (prostate cancer)
- Understanding of medical condition
- Adherence to medical instructions
- Self-management skills
- Risk of hospitalization
- Physical and mental health
- Mortality risk

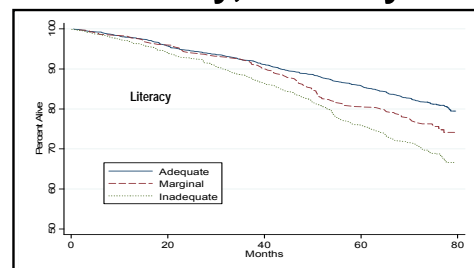
Cognitive Function: What We Know

- Use of preventive services
- Understanding of medical condition
- Adherence to medical instructions
- Self-management skills
- Physical and mental health
- Mortality risk

What We Know: Similarities

- Use of preventive services
- Understanding of medical condition
- Adherence to medical instructions
- Self-management skills
- Physical and mental health
- Mortality risk

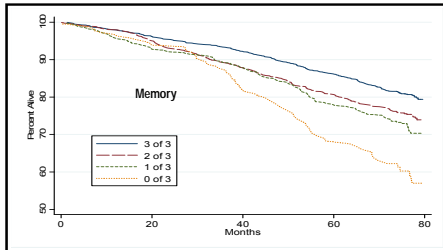
Cognitive Abilities, Literacy, Mortality



- Cognitive abilities explains 50% of health literacy effect on mortality

Baker DW, Wolf MS, Feinglass J, Thompson JA, J Gen Intern Med. 2008.

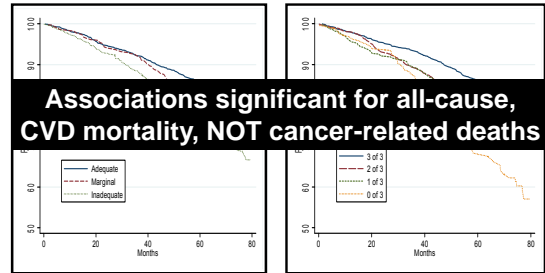
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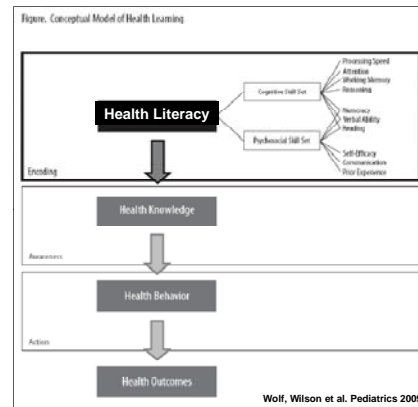
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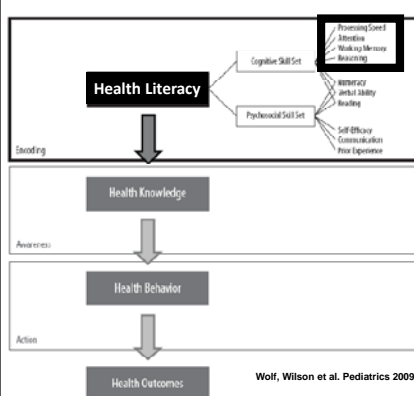
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Conceptual Framework: Health Learning Capacity



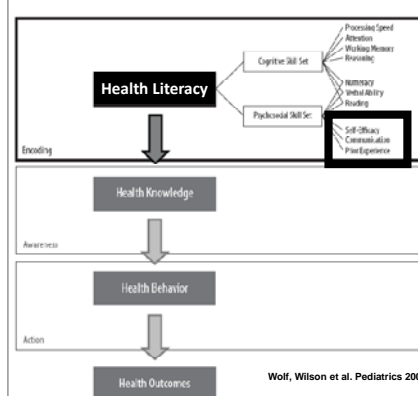
Wolf, Wilson et al. Pediatrics 2009

Figure. Conceptual Model of Health Learning

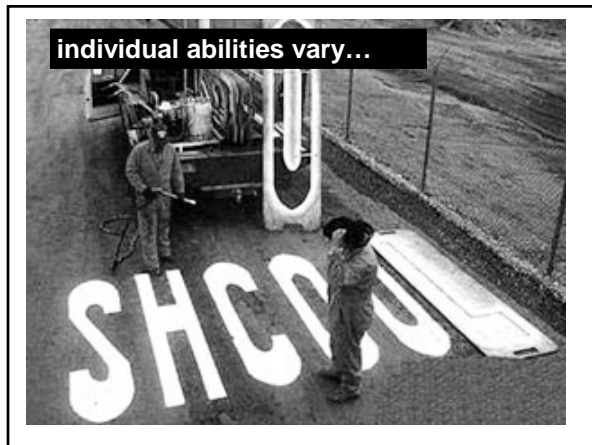
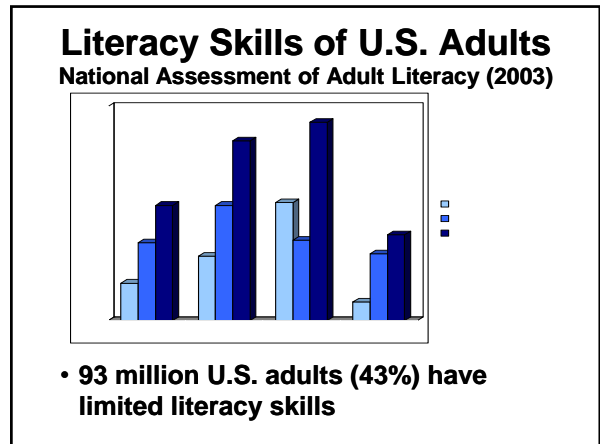
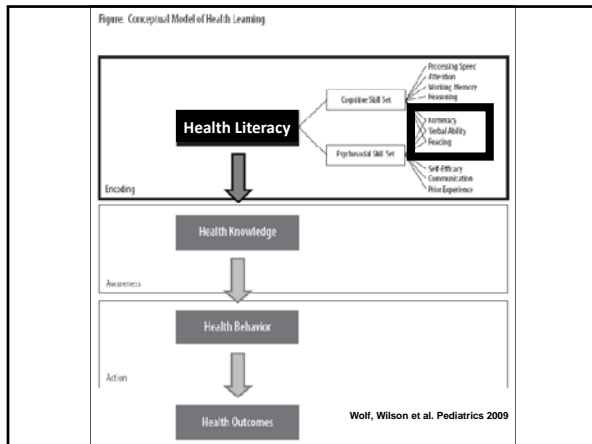


Wolf, Wilson et al. Pediatrics 2009

Figure. Conceptual Model of Health Learning



Wolf, Wilson et al. Pediatrics 2009



September 22, 2009 THE NEW ENGLAND JOURNAL OF MEDICINE

CORRESPONDENCE

Risk of Confusion in Dosing Tamiflu Oral Suspension in Children

TO THE EDITOR: The medical community should be made aware of the serious potential for dosing errors in children prescribed Tamiflu (oseltamivir) oral suspension, as illustrated in the case described below.

After the diagnosis of novel H1N1 influenza, a 6-year old received a prescription for Tamiflu (oseltamivir) oral suspension (12 mg per milliliter) at a dose of 3/4 teaspoon PO BID. However, the parents, one a primary care physician and the other one of the authors, had great difficulty determining the correct dose to administer to their child. The medication bottle was accompanied by a prepackaged syringe with markings of 30, 45, and 60 mg (fig. 1). The label attached by the pharmacy specified the dose in volume units ("3/4 teaspoonful") but the syringe provided only markings in mass units (milligrams). Despite

Figure 1. Tamiflu Package, Label, and Syringe Included in Box.

September 22, 2009 THE NEW ENGLAND JOURNAL OF MEDICINE

3/4 teaspoon dose:

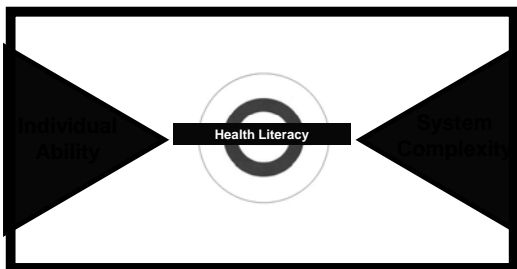
5 ml (volume of teaspoon) x .75 x 12 mg per ml Tamiflu suspension = 45 mg on syringe

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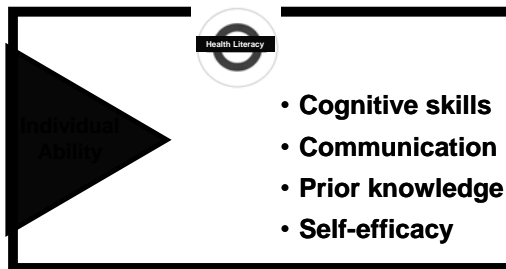
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Figure 1. Tamiflu Package, Label, and Syringe Included in Box.

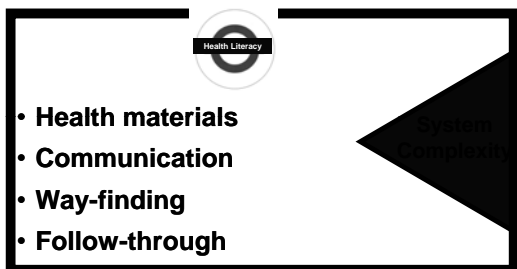
The Problem of Low Health Literacy



The Problem of Low Health Literacy



The Problem of Low Health Literacy



The Goal



- Find ways to match healthcare to average user ability

Health Literacy Targets

- Individual skills – improve learning & retention
- Health materials – examine modality, improve design
- Clinician skills – consider communication strategies
- Health system design – human factors

Health Literacy Targets

- Individual skills – improve learning & retention
 - Health materials – examine modality, improve design
 - Clinician skills – consider communication strategies
 - Health system design – human factors
- Comprehensive Strategies Needed!**

Pathways in Prostate Ca.

- 2 studies (Bennett et al. J Clin Oncol, 1998; Wolf et al. Urology, 2006) highlight delays in screening/dx
- Problems also suggested in decision making process (McCaffrey et al., Med Decision Making 2009)

In Treatment: The Case of Cancer Meds

- Increasing number of solid pill-form cancer meds
 - 1 in 4 cancer drugs under development are oral meds
- Chemotherapies available at community pharmacy

In Treatment: The Case of Cancer Meds

- Quality control shifted from physician to patient
 - February 4, 2007 (The Boston Globe)
 - “I take the pills until I develop a funny rash on my hands, then I back off a bit.”

– Pancreatic cancer patient taking Xeloda

A New Issue in Cancer: Rx Adherence

Disease	# of Studies
HIV	892
Hypertension	463
Diabetes	433
Asthma	370
ANY CANCER	130

An Abundance of Low-Hanging Fruit



Patient-Centered Design

<p>Do not drink alcoholic beverages while taking this medicine</p> <p>Carry or wear medical identification stating you are taking this medicine</p> <p>You should avoid prolonged or excessive exposure to direct and/or artificial sunlight while taking this medicine</p>	<p>Michael Wolf 04/29/71 Gleevec 100 mg Take for CML</p> <p>Take: 2 pills in the morning 2 pills in the evening</p> <table border="1"> <tr> <td>Morning 7-9 AM</td> <td>Noon 11-1 PM</td> <td>Evening 4-6 PM</td> <td>Bedtime 9-11 PM</td> </tr> <tr> <td style="text-align: center;">2</td> <td></td> <td style="text-align: center;">2</td> <td></td> </tr> </table>	Morning 7-9 AM	Noon 11-1 PM	Evening 4-6 PM	Bedtime 9-11 PM	2		2		<p>Rx #: 1234567 9/8/2009 You have 11 refills 180 pills Discard after 9/8/2010</p> <p>Provider: RUTH PARKER, MD Emory Medical Center (404) 123-4567</p> <p>Pharmacy: NOVA Scripts/Central 11445 Sunset Blvd. Reston, VA (713) 123-4567 NDC # 1234567</p>
Morning 7-9 AM	Noon 11-1 PM	Evening 4-6 PM	Bedtime 9-11 PM							
2		2								



Pediatric Dosage Chart Drops, Syrup, & Chewables

Approximate Dose	Syrup	Chewables	mg	Chewable 160 mg
1/2 cup	10 mL	1/2 tablet	160 mg	160 mg
1 cup	20 mL	1 tablet	320 mg	320 mg
1 1/2 cups	30 mL	1 1/2 tablets	480 mg	480 mg
2 cups	40 mL	2 tablets	640 mg	640 mg
2 1/2 cups	50 mL	2 1/2 tablets	800 mg	800 mg

Drug Facts

Warnings:

- Do not take if you are allergic to any of the ingredients.
- Do not take if you are taking other medicines that contain the same active ingredient.
- Do not take if you are taking other medicines that contain the same active ingredient.

Directions:

Take 1 tablet(s) (3 mg) by mouth twice daily. Take 2 tablets in the morning and 1 tablet at noon.

Other Information:

Keep this medicine out of the reach of children. Use only as directed. Do not use if the seal is broken or if the medicine is expired.

Keep this medicine out of the reach of children. Use only as directed. Do not use if the seal is broken or if the medicine is expired.

R_x Info at Prescribing

TRUSOPT (Timolol)

Warnings:

- Do not use if you are allergic to any of the ingredients.
- Do not use if you are taking other medicines that contain the same active ingredient.

Directions:

Use as directed. Do not use if the seal is broken or if the medicine is expired.

Other Information:

Keep this medicine out of the reach of children. Use only as directed. Do not use if the seal is broken or if the medicine is expired.

Patient Tools

my meds

What to do before you see your doctor:

- Know what you are taking.
- Keep a list of all medicines, including OTC medicines.

Medicines include all of the following:

- Prescription
- Over-the-counter
- Herbal
- Supplement

What to do when you see your doctor:

- Review your medicines with your doctor.
- Ask your doctor if you have any drug interactions.
- Ask your doctor how to take your medicines.

What to do after you see your doctor:

- Keep your medicines in their original containers.
- Do not share your medicines with anyone else.
- Dispose of your medicines properly.

Action-Oriented Self Care

- ACP Guide: A low literacy, print self-care tool
- Brief, plain language messages
- Supportive pictures, graphics
- Patient narratives
- Chunked information
- Non-linear approach

Action-Oriented Self Care

This Guide Will Help You:

1. Get started
2. Eat right
3. Be active
4. Check your blood sugar
5. Take your pills
6. Learn about insulin

You Can Do It!

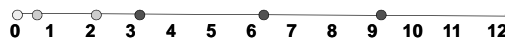
Choose one of these over time or write down 1 or 2 things you will do for the next few weeks. Remember, slow changes in your way of life make a big difference in your blood sugar.

- I will switch from juice or soda to diet soda.
- I will walk every day.
- I will take my medicine every day.
- I will pay a healthy lunch every day instead of eating out.
- I will have a healthy snack to eat when I feel hungry, like a banana, apple, or yogurt.
- I will take my pills every day.
- I will learn about insulin.

Education is Not A One-Time Endeavor!

- Follow-up necessary to move patients forward
- Front load activities
- ACP Guide – min. 6 follow-up calls or in-person encounters

Education is Not A One-Time Endeavor!



- Baseline clinic visit
- Telephone call follow-up
- Clinic visit OR telephone call follow-up

Carve-In vs. Carve-Out

Standards Needed

- Health materials
- Communication training
 - “Universal precautions”
- Coordination of care processes
- Measurement/evaluation indicators
- Set policy, health provider incentives

Standards Needed

- Medicare Part D: Medication Therapy management
- KP Plan: Stanford Patient Self-Management

Provider Communication Skills

- Three common strategies
 - ‘Teach Back’
 - Current recommended standard
 - Teach-to-Goal
 - Learning Mastery
 - Guided Imagery
 - Implementation Intention

Moving Forward

- What are we asking of individuals and families?
- How are we supporting them?
 - Clear, concise & consistent health information
 - Consider the ‘patient’ perspective
 - What is the ‘need-to-know’?
 - Limit, layer, prioritize
 - Follow-up!

Moving Forward

- **Involve everyone**
 - **Education, medicine, pharmacy, public health, social services**
 - **Set local and federal policies to enforce**
 - **Develop new measures to evaluate progress**

Contact Information

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