

Health Literacy: Definitions, Evidence and Interventions

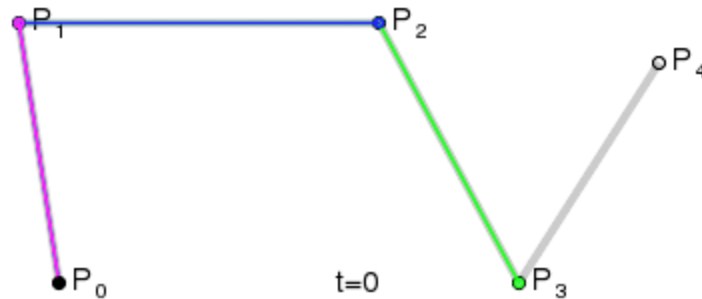
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with thanks to the faculty and teams of the
Health Literacy in Communities Prototype
Collaborative

What are we trying to accomplish?

- Understand what health literacy means
- Know why health literacy is important
- Learn some techniques to improve health literacy
- Make a plan to test some health literacy improvements in our location



- A **Bézier curve** is a parametric curve important in computer graphics and related fields. Widely publicized in 1962 by the French engineer Pierre Bézier, who used them to design automobile bodies, the curves were first developed in 1959 by Paul de Casteljaou using de Casteljaou's algorithm.
- In the diagram above, a quartic Bézier curve is constructed using *control points* **P0** through **P4**. The green line segments join points moving at a constant rate from one control point to the next; the *parameter* **t** shows the progress over time. Meanwhile, the blue line segments join points moving in a similar manner along the green segments, and the magenta line segment points along the blue segments. Finally, the black point moves at a constant rate along the magenta line segment, tracing out the final curve in red. The curve is a fourth-degree function of its parameter. **t**.

I had a pain in my stomach. The doctor did some tests.

He said I had a blgrkrdmr.

I didn't understand the word he used.

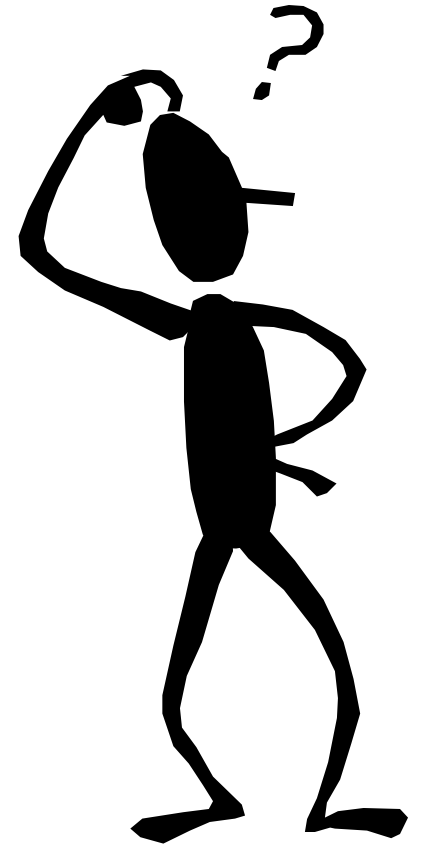
I asked him, "What is a blgrkrdmr?"

He said it was a grtiytuhr of the ptorjfm btbba.

I still didn't understand.

He asked me, "Do you understand?"

I just said yes.



Letter from a specialist

I am writing to you at this time to advise you that I have received a referral for your child to have a hearing test. The referral was dated Oct 21, 2010, upon receipt and is being held on the waiting list accordingly.

Doctor Smith has referred your son Bobby to me for a hearing test. I have put him on the waiting list.

Consent Form

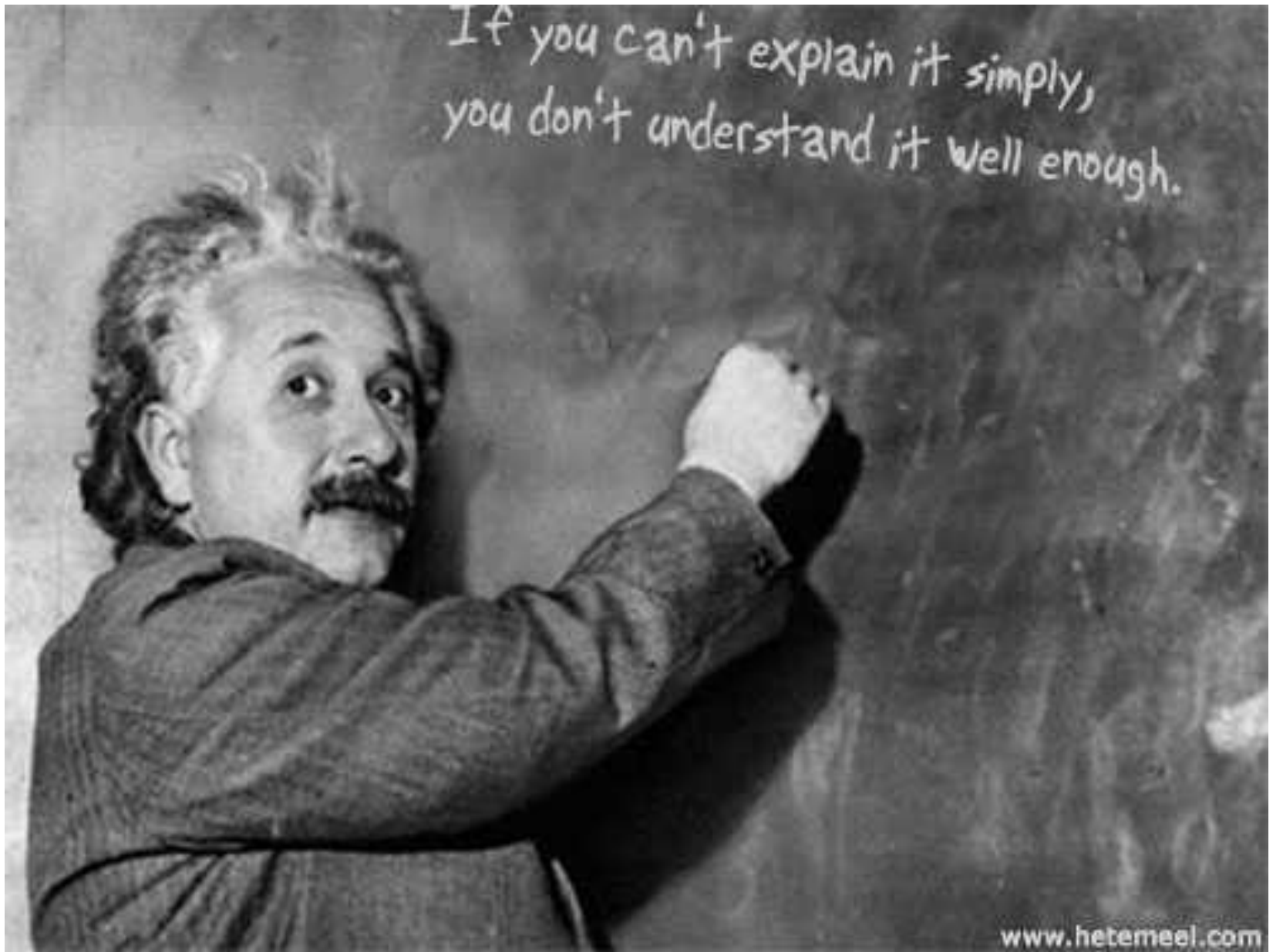
This is to certify that the surgical procedure known as _____ (name of operation), the reason why it is considered necessary, its advantages and possible complications, as well as possible alternative methods of treatment have been explained to me by _____ (name of Physician or Surgeon), and in light of the information the anaesthetic deemed advisable, the operation stated above and also to perform such additional procedures as may be held to be therapeutically necessary on the basis of findings in the course of the operation. Any tissues surgically removed may be disposed of by the surgeon or the hospital in accordance with their accustomed practice.

Source: Literacy Partners of Manitoba

I give permission for the surgeon,
Dr. _____, to operate on me.

During the operation, he/she

- May perform any other surgery that may be necessary
- May use any anaesthetic that may be necessary
- May dispose of any tissue that is cut out



www.hetemeel.com/einsteininform.php

Health Literacy is...

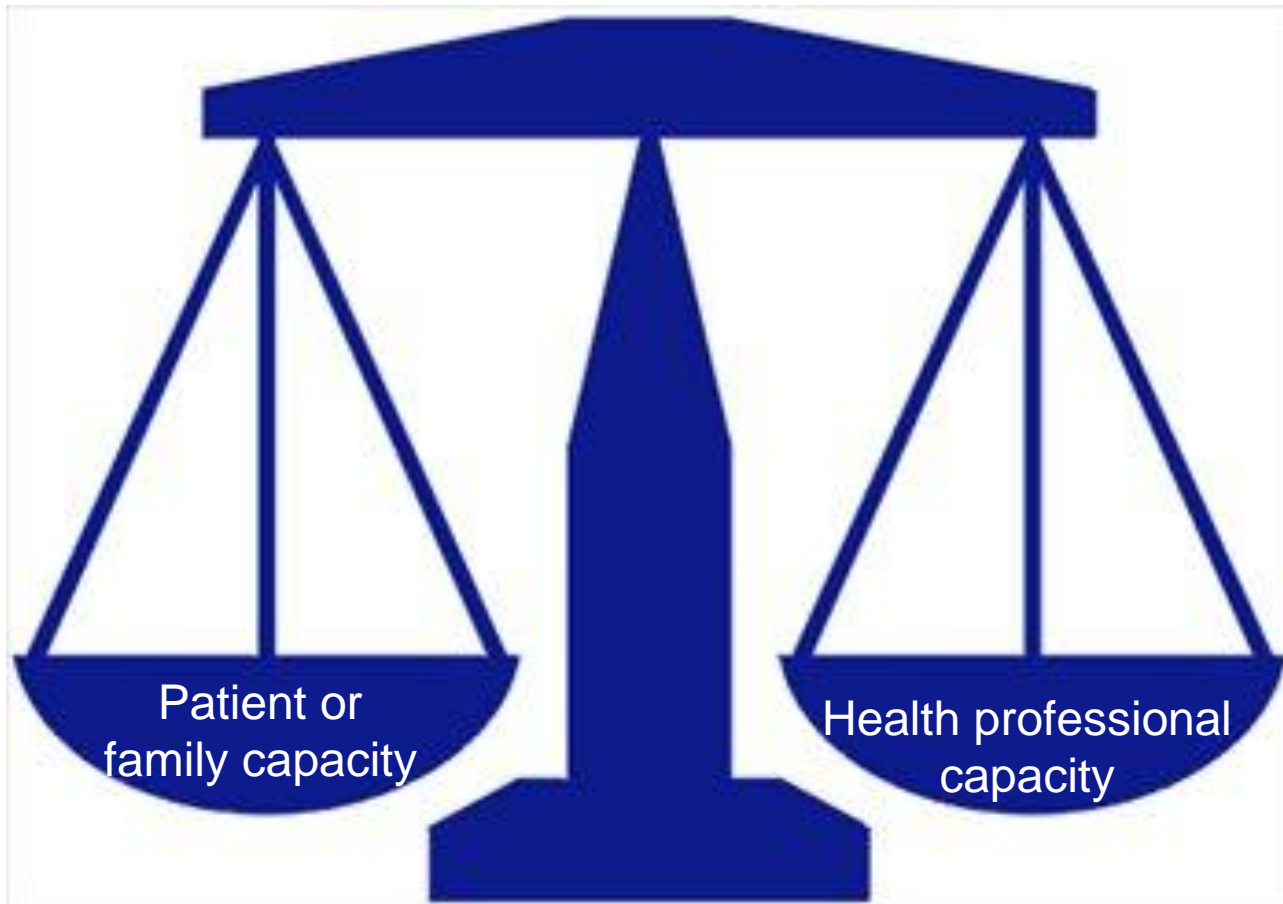
“the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” Healthy People 2010

But there is another important component:

“The ability of professionals and institutions to communicate effectively so that community members can make informed decisions and take appropriate actions to protect and promote their health.”

adapted from Rootman and Gordon-El-Bihbety, 2008 and Health and Literacy Partnerships, Focus on Basics, World Education, Vol. 9, Issue B, September, 2008.

Health Literacy



Developed in conjunction with Impact BC for the Supporting Innovation and Improvement Webinar Series, 2010

Health literacy is a state of being...

Health literacy emerges when the expectations, preferences and skills of individuals seeking health information and services meet the expectations, preferences and skills of those providing information and services.

Dimensions of Health Literacy

- Functional skills (the 3 R's)
- Interactive/social skills
- Reflective/critical skills
 - Nutbeam, 2008

Why is health literacy important?

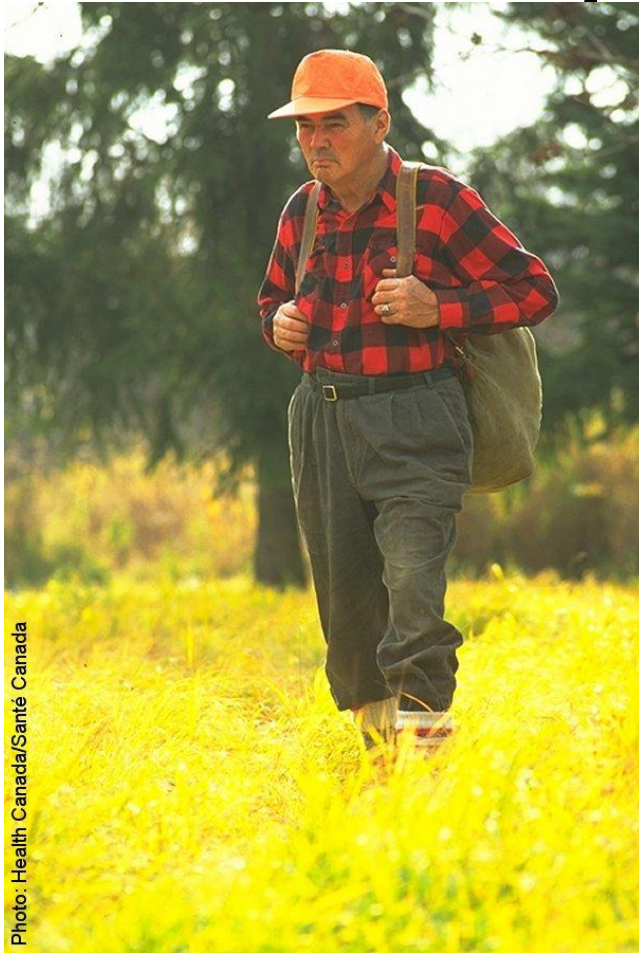


Photo: Health Canada/Santé Canada

1. Large numbers
2. It effects health
3. More chronic disease
4. Cost
5. Complex health information
6. Fairness

Courtesy of Dr Irv Rootman

1. Numbers

Many people in US have low health literacy:

- 47% cannot read newspaper or forms
- 93 million adults have basic or below basic literacy skills
- Increases with age (nearly 60% of those over age 80 have marginal or inadequate literacy)



2003 National Assessment of Adult Literacy, Baker,
2000

2. Effect on Health

Low health literacy may lead to:

- Longer hospitalizations (Baker et al., 1997, 2002)
- Chronic disease (CCL, 2008)
- Earlier death (Baker et al., 2007; Sudore, 2006)

Health outcomes associated with literacy

- General health status
- Hospitalization
- Prostate cancer stage
- Depression
- Asthma
- Diabetes control
- HIV control
- Mammography
- Pap smear
- Immunizations
- STD screening
- Cost
- Mortality
- Substance abuse
- Breastfeeding
- Behavioral problems
- Adherence to medications
- Smoking
- Birth control knowledge
- Cervical cancer screening
- Understanding emergency department instructions
- Asthma knowledge
- Hypertension knowledge
- Prescription label understanding

DeWalt et al, JGIM, 2004

Hospitalizations and Low Literacy

- People with low literacy have 30-70% increased risk of hospitalization
- Even after adjustment for age, gender, socioeconomic status, health status and whether or not they had a regular source of care

Baker et al AJPH 2002; Baker et al JGIM, 1998

3. Chronic disease

- Increase in diabetes patients from 1.4 million in 2000 to 2.4 million in 2016 (Ohinmaa, et al., 2004).
- Low health literacy is a barrier to effective self-management (Johnston et al., 2006)



Courtesy of Dr Irv Rootman

4. Cost

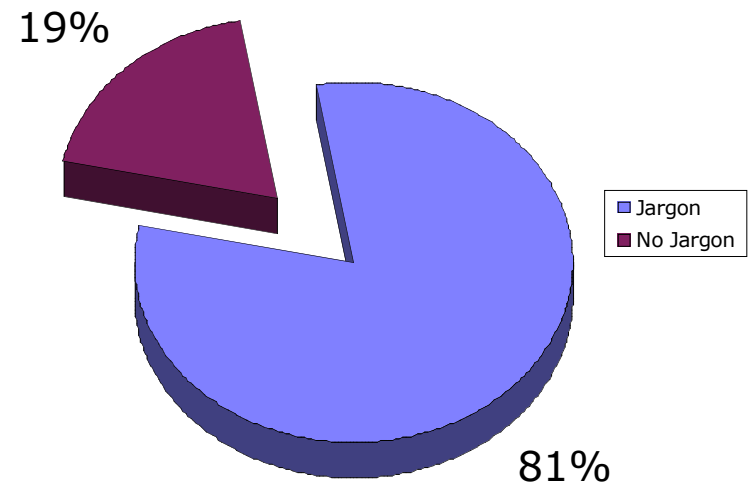
- Additional costs of limited health literacy ranged from 3 to 5% of the total health cost per year (Eichler et al., 2009)



Courtesy of Dr Irv Rootman

5. Complex health information

- Many studies have found that there is a mismatch between reading levels of health education materials and the reading skills of the audience. (Rudd, 2007)
- The same is true for health information websites. (Petch 2004)
- Jargon is also often used in health care. (Castro, 2007)



Courtesy of Dr Irv Rootman

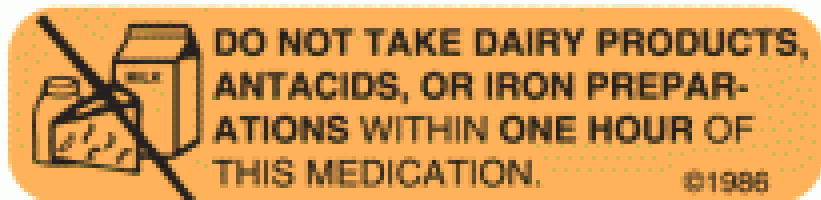
Understanding Instructions



84%



59%



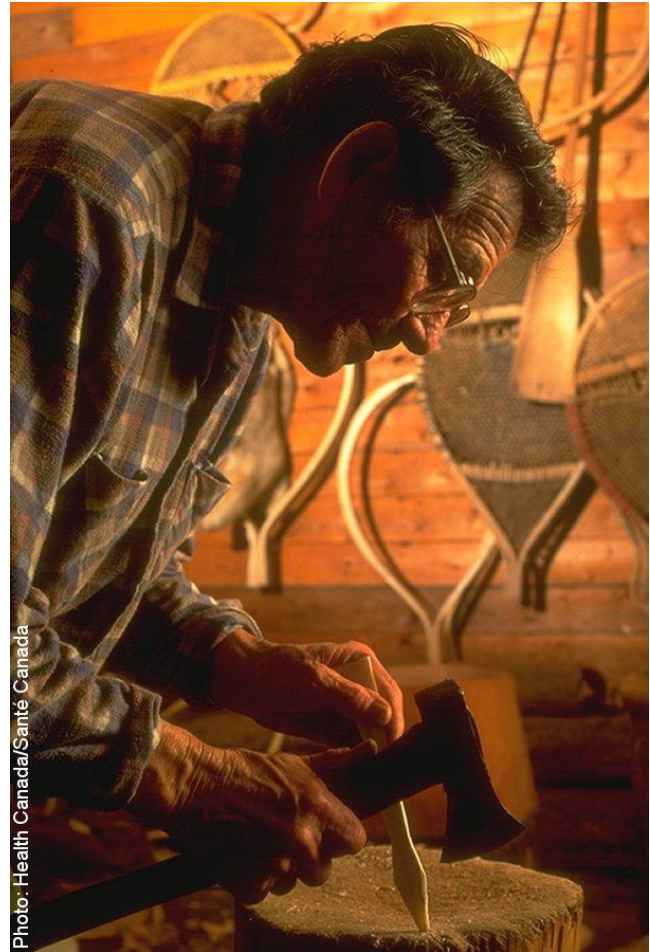
8%

6. Fairness

Certain groups experience lower levels of health literacy. They include:

- Older adults
- Immigrants
- People with less education
- Minority groups
- People with disabilities

(Prescription to End Confusion)



In summary

- Health literacy is the match between the expectations , preferences and skills of individuals seeking health information and services and the expectations, preferences and skills of those providing information and services.
- If we don't address health literacy, people have more health problems and health care costs more.

Courtesy of Dr Irv Rootman

Health Literacy AMA video

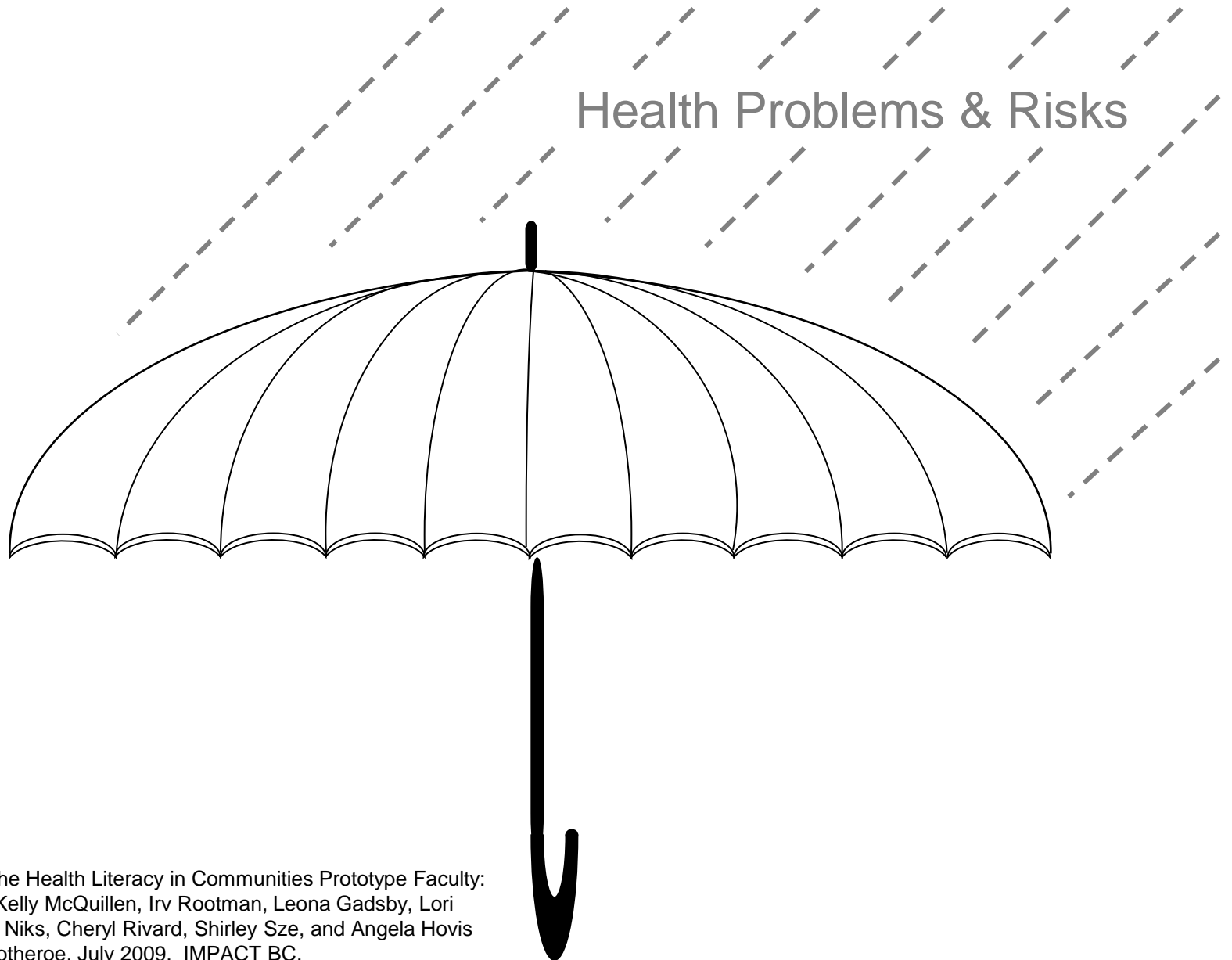
The Health Literacy Umbrella

Health Problems & Risks



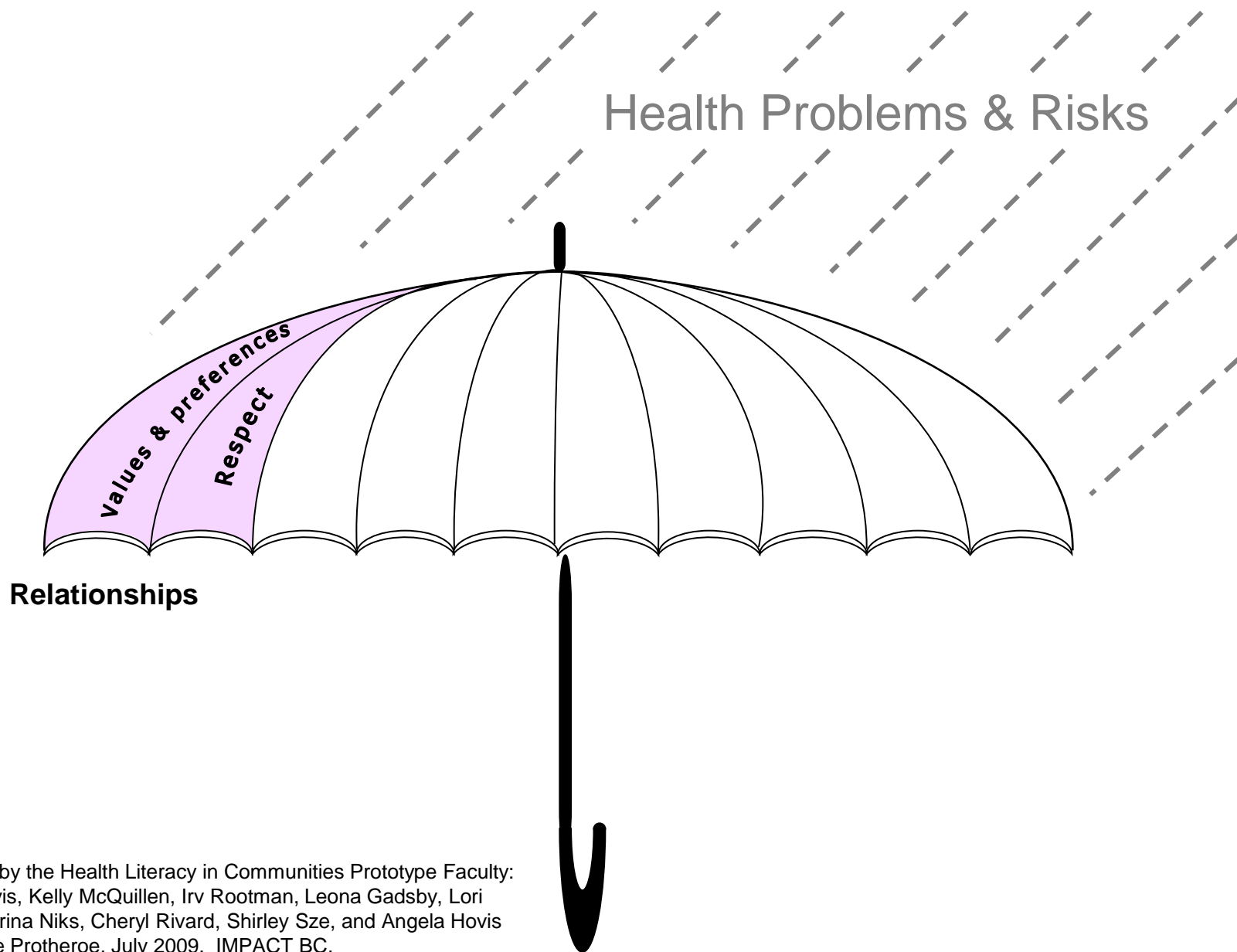
Developed by the Health Literacy in Communities Prototype Faculty:
Connie Davis, Kelly McQuillen, Irv Rootman, Leona Gadsby, Lori
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with Joanne Protheroe, July 2009. IMPACT BC.

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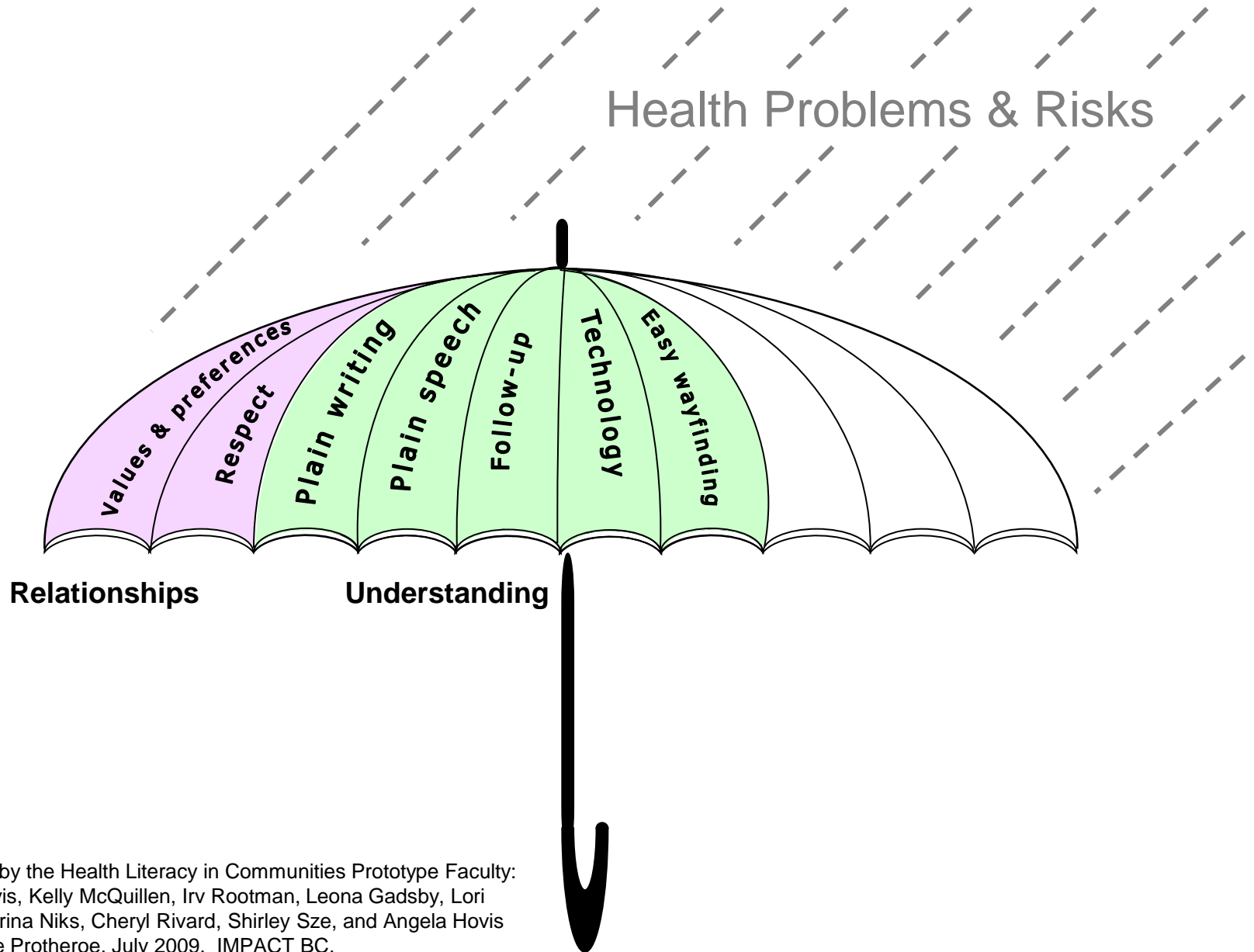
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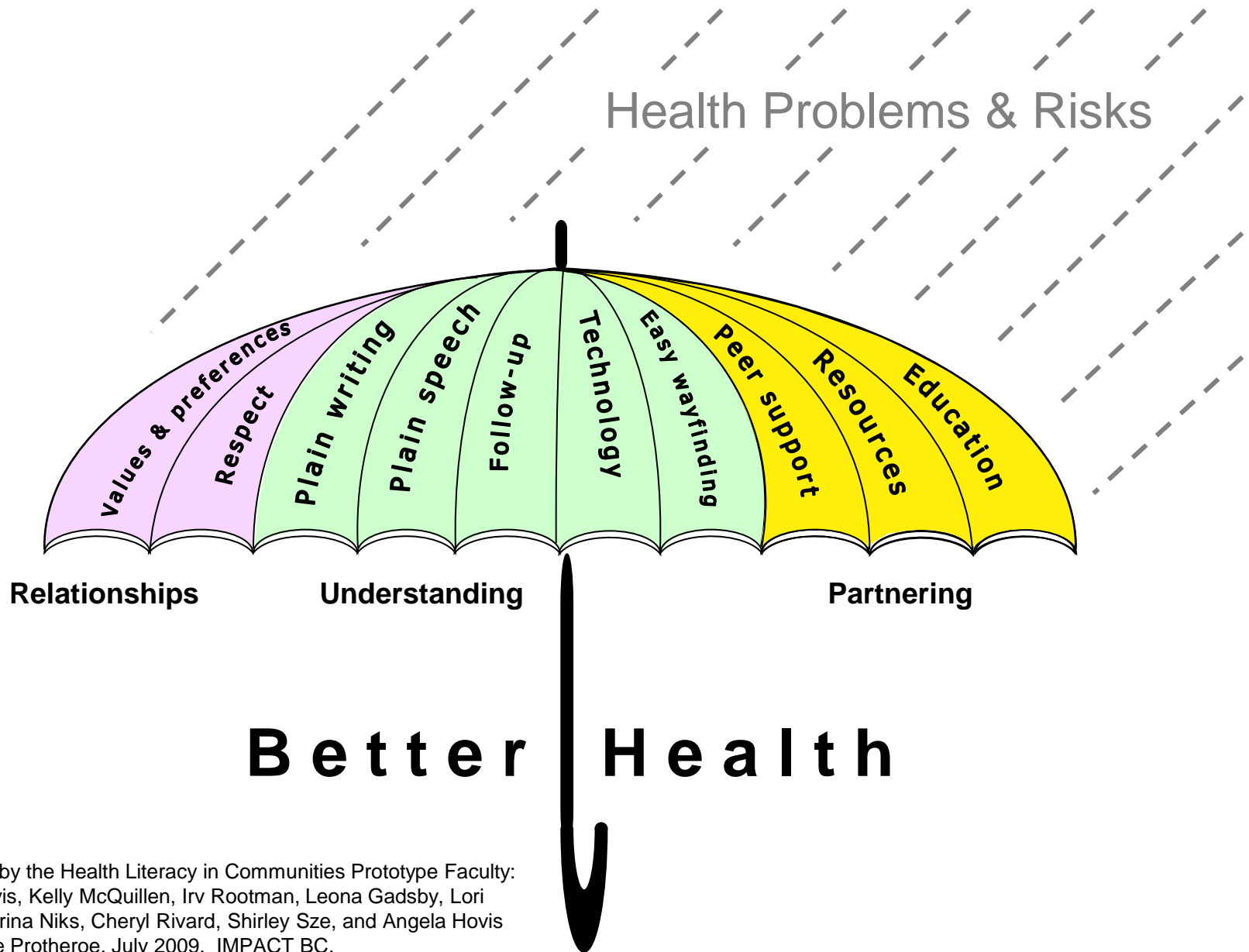
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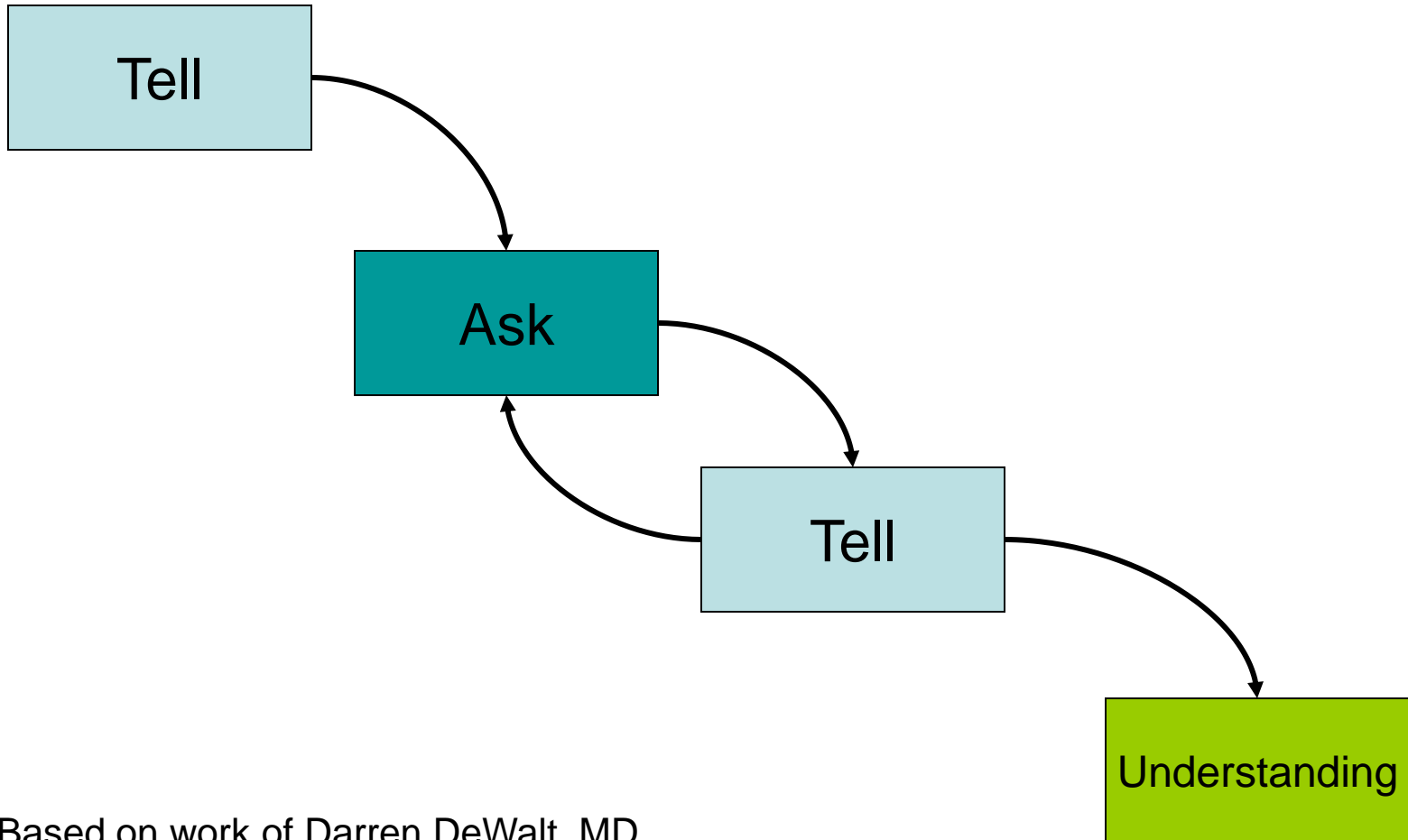
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Key Changes for Improving Health Literacy in Primary Care

Universal Precautions because...

- You can't tell by looking
- Even people with high literacy can have problems in medical situations
- Screening doesn't help you know what people will understand
- Everyone is helped by efforts to help people with lower literacy

Teach Back



Based on work of Darren DeWalt, MD

Using teach back has been shown to...

- Improve blood sugar control for people with diabetes (Schillinger, 2003)
- Decrease time it takes to get people taking warfarin (medication to prevent blood clots) to the right dose (Schillinger, 2007)
- Other publications show effectiveness for asthma patients and people with chronic heart failure titrating their own diuretic medication. (Paasche-Orlow, 2005; DeWalt, 2006)

“Teach Back” is especially important when instructions are given for:

- New medications
- New diagnoses
- Discharge instructions
- Self care
 - e.g. for chronic heart failure patients weighing themselves, ask, “How are you going to weigh yourself?”
- When to call the doctor for assistance
- How to prevent falls

Teach Back

- Health care professional (to patient): “I want to make sure I did a good job explaining your heart medications, because this can sometimes be confusing. Can you tell me how you will take the medications so I know that I was clear?”
- Note how the health care professional places the burden of any misunderstanding on him/herself. Teach-back is not a test of the patient, but of how well the health care professional explained the information.
Schillinger, 2003, 2006, 2007

Another way to do Teach-Back

- Health care professional: “When you leave here, a friend or family member is going to ask you about your visit. What are you going to tell them about...(insert what you want them to teach back here.)”
- Source: AMA video, Health Literacy and Patient Safety: Help Patients Understand

<http://www.ama-assn.org/ama/no-index/about-ama/8035.shtml>

Try using Teach-Back now



- Turn to someone seated next to you
- Tell them how to get from your house to the post office
- Ask them a teach-back question (can you tell me...so I know if I was clear)
- Repeat as needed

Brown Bag Medication Review



- All meds, herbals, traditionals, OTC to visit in a bag
- Ask
 - How do you take this medication?
 - What is it for?
- Check refill dates
- Do you use any aides? (mediset, blisterpack, etc.)

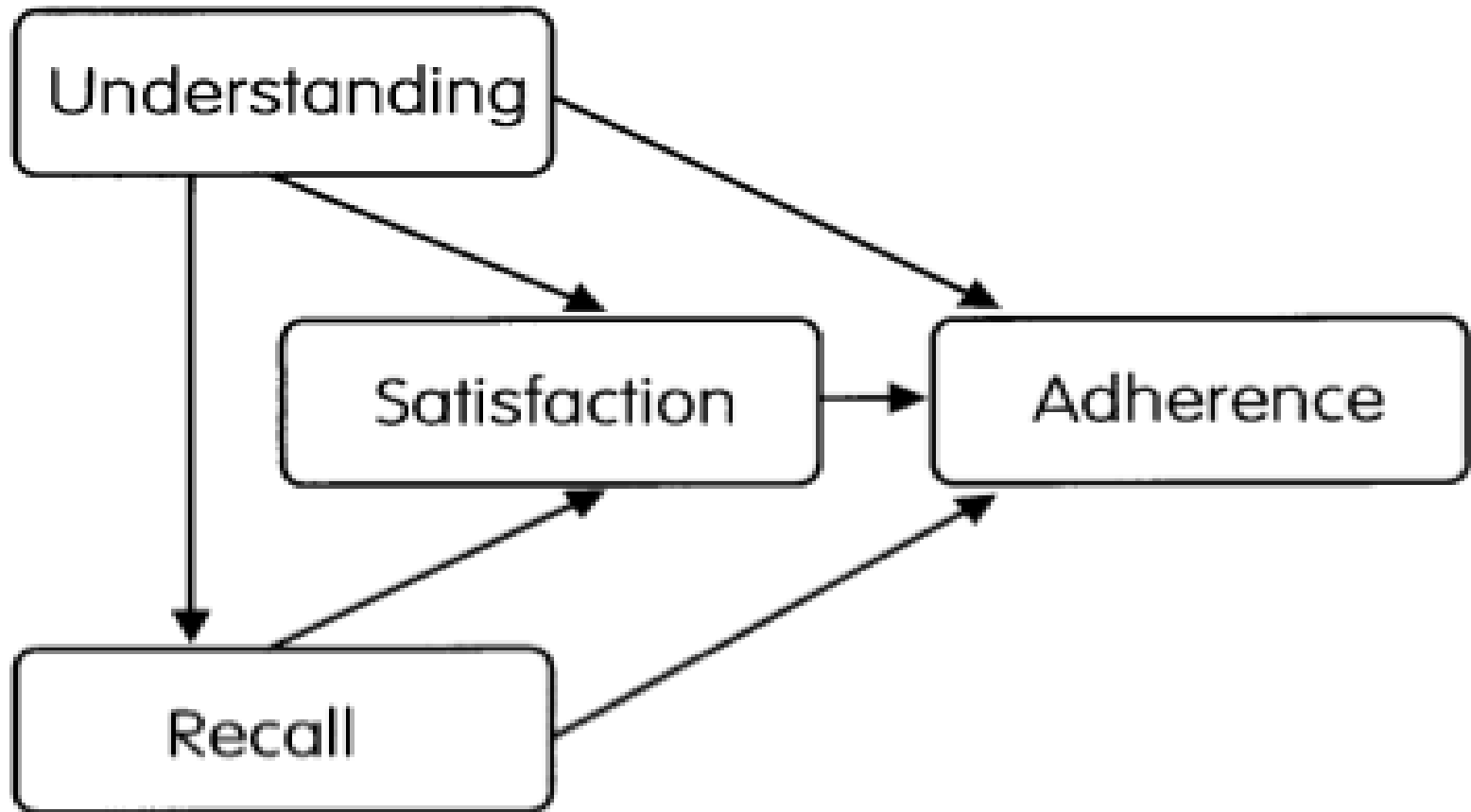


Figure 1 Overview of Ley's model on the interactions between patient-related factors and therapy adherence (see Ref. 3)

Plain Language Tips

- “Living Room Language”
- See Clear Doc Tip Sheet
 - Simple words
 - Short sentences
 - Short paragraphs
 - Active voice
 - Personal tone
 - Clear message

Source: Literacy Partners of Manitoba “Clear Doc”

Bonus for...

- Question and answer format
- Bullets
- Personal greeting in a letter
- Bold for emphasis
- Effective illustrations
- Subheadings

Subtract points if...

- Unexplained terms
- Unusual type or font
 - Underlining
 - Italics
 - Reverse type
 - All caps
- Distracting colors

How to Give Information

- Avoid organizing info by ~~medical~~ model
 - Description of problem
 - Statistics
 - Treatment and Efficacy
- Try a newspaper model
 - Most important information first
- Social/cognitive model
 - Beyond knowledge to behavior
 - Attention to motivation, self-efficacy, problem-solving

Doak, 1996; Seligman, 2007

Let's try it now!

Dear Mr. _____

When I did your upper endoscopy at _____s Hospital on 30 September 2009, I found esophageal dysmotility, a loose lower esophageal valve, and florid bulbar duodenitis. Also, your physical examination revealed a swollen left mandibular node or salivary gland.

Biopsies were obtained in the outlet of the stomach and were normal. Biopsies at the lower end of the esophagus did show acid-induced damage but no cancer or precancer. I did dilate your esophagus to 18 mm. Hopefully your swallowing troubles have improved somewhat. No cancer or precancer was detected. I believe that your difficulties are due to the Parkinson's disease. As it relates to the lymph node, _____ has been informed of this finding and will pursue it as warranted.

If your swallowing troubles impair your nutrition, a feeding tube (percutaneous endoscopic gastrostomy) could be placed by our service. _____ your outpatient gastroenterologist, will be available for assistance with these matters should they arise after your discharge.

Sincerely,

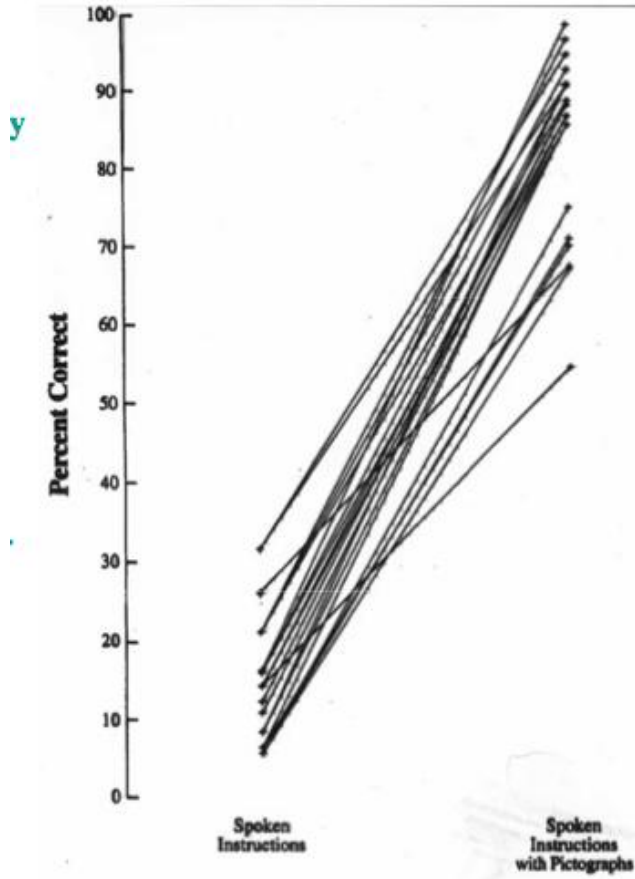
- Find anything you give to your patients
- Check it out with the "Clear Doc" list

How to use materials effectively

- Circle or underline key points
- Draw pictures
- Personalize

Written information is to enhance spoken communication! It does not replace it.

Effectiveness of Pictures



Houts et al 1998

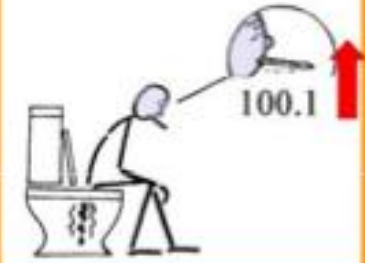
Examples



When to call the doctor



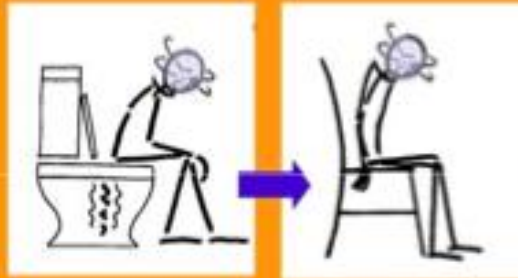
Stomach pain
with diarrhea



Diarrhea with a temperature
of 100.1 or higher



Blood in the diarrhea stool



Dizziness during
and after diarrhea



Diarrhea and vomiting
in the same day

A successful health literacy intervention for CHF

- Individualized education session
- Education booklet at <6th grade level
- Digital bathroom scale
- Scheduled follow-up phone calls
- Facilitated access
- **RESULTS: 47% lower hospitalization rate**

Health Literacy Universal Precautions Toolkit



<http://www.ahrq.gov/qual/literacy/>

Health literacy in a broad context: Domains that influence health literacy

- Health systems
- Educational systems
- Media marketplace
- Home and community settings
- Workplace settings
- Policy making arenas

Resources

Universal Precautions Health Literacy Toolkit

<http://www.ahrq.gov/qual/literacy/>

Health Literacy Assessment

www.DiversityRx.org

Plain Language Service

www.plainlanguage.mb.literacy.ca/resource.htm

Resources

Health Literacy Missouri

www.healthliteracymissouri.org

Healthy Roads Media

<http://www.healthyroadsmedia.org/index.htm>

Google:

Health Literacy Listserv

AMA Health Literacy Video (viewable on-line)