What We Know
- Low health literacy is pervasive, affecting over one-third of U.S. adults and is associated with numerous adverse health-related outcomes.
- Increasing and improving medical education on the topic of health literacy has been recommended by numerous groups.
- A number of approaches have been described for teaching healthcare professionals about health literacy, and many U.S. Medical Schools have begun teaching students about health literacy.
- Health literacy curricula have been shown to improve healthcare professionals’ perceived knowledge and skills, as well as planned behaviors for communicating with patients with low health literacy.
- No health literacy education studies have included long-term follow-up.

Our Goals
- Determine whether a health literacy training video can improve medical students’ perceived knowledge and intended behaviors.
- Determine the impact of a follow-up training one year after initial training.

Study Methods
Participants
- 128 OHSU 3rd year medical students attending a required course entitled Principles of Clinical Medicine were invited to participate, with follow-up 1 year later.
- Survey: Health Literacy Survey Tool developed by Mackert et al, using a 5-point Likert scale.
- Questions were answered with anonymous, electronic on-screen “clicker” system.
- 4 health literacy knowledge items; 2 health literacy attitude items.
- 6 current/planned behavior items.
- Post-survey item: “I originally over-estimated my understanding of health literacy” prior to training.

Timing:
- 4 survey administrations over 2 years.
- Immediately before each year’s health literacy training.
- Immediately after each year’s health literacy training.

Findings
- Students showed persistent gains in knowledge of low health literacy prevalence, understanding health outcomes associated with low HL, & use of the technique of limiting the amount of information given and repeating it.
- After the 1st year training (Video) students disagreed (2.65/5) that they initially over-estimated their own understanding of health literacy.
- However, after the more detailed 2nd year training, students agreed with the statement (4.16/5).

Data Analysis
- Student’s T-Test, assigned significance to p-value ≤0.05
- Looked for change before and after each training, and compared to baseline (Year 1, pre-training survey).
- Used “intention to treat” model of participant inclusion.
- Compared responses from students who attended lectures both years to those who attended only 1st year to look for self-selection bias (none found).
- Compared demographics of participants to class demographics.

Training Intervention
1st Year Training:
- 5 minute introduction to health literacy
- Viewing of 23 minute video: Health Literacy: Help Your Patients Understand produced by American Medical Association
- 30 minute facilitated large group discussion on reflections from video and early clinical experiences with health literacy

2nd Year Training:
- 2 journal articles: optional reading
- 1 hour didactic lecture, focusing on:
  - Literacy and health literacy epidemiology
  - A rationale for “universal precautions” approach to health communication
- Best practices for improving spoken and written communication with patients

Clinical experiences & Patient interaction

Results
Participants
- Year 1: 110/128 students (86%)
- Year 2: 58/128 students (45%)

Findings
- 46.2% female
- Most common age (mode) ≤ 25 years

Use of Health Literacy Techniques
- Use of technique: Speaking Slightly Slower (Never 1 - Frequently 5)
- Use of technique: Using plain, non-medical language (Never 1 - Frequently 5)
- Use of technique: Limit the amount of information provided and repeat it (Never 1 - Frequently 5)
- Use of technique: Teach health book or show me techniques (Never 1 - Frequently 5)

Conclusions
- Immediately following a health literacy training, 1st-year and 2nd-year medical students report broad improvements in knowledge and intentions to use health literacy techniques.
- After 1 year, some self-perceived knowledge and self-reported use of limiting information is retained, but most gains do not persist.
- Preclinical students appear to retain and incorporate knowledge and techniques most suited to their clinical education and responsibility levels.
- The lower magnitude gains noted after the more detailed training in Year 2, and the increase in reporting having initially over-estimated their initial understanding of health literacy, may reflect students gaining a more nuanced appreciation for the complexity of the issues, or learning more novel or difficult information in Year 2.
- Instruction about health literacy information and techniques should be tailored to student education levels and clinical responsibility.
- More frequent instruction on health literacy for medical students should be considered.

Next Steps
- Further study with longer-term follow-up among students in the clinical years, and investigating actual rather than self-reported behaviors, is needed.

Acknowledgments
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