

University of Massachusetts Medical School

eScholarship@UMMS

---

UMass Center for Clinical and Translational  
Science Research Retreat

2013 UMass Center for Clinical and  
Translational Science Research Retreat

---

May 8th, 12:30 PM - 1:30 PM

## Health Literacy and Cancer Prevention: It's Not What You Say It's What They Hear

Kathleen M. Mazor

*University of Massachusetts Medical School*

*Et al.*

Let us know how access to this document benefits you.

Follow this and additional works at: [https://escholarship.umassmed.edu/cts\\_retreat](https://escholarship.umassmed.edu/cts_retreat)



Part of the [Community Health and Preventive Medicine Commons](#), [Neoplasms Commons](#), [Oncology Commons](#), [Public Health Education and Promotion Commons](#), and the [Translational Medical Research Commons](#)

---

### Repository Citation

Mazor KM, Roblin DW, Williams AE, Han PJ, Costanza ME, Cutrona SL, Field TS, Gaglio B, Wagner JL, Robinson BE, Vijayadeva V. (2013). Health Literacy and Cancer Prevention: It's Not What You Say It's What They Hear. UMass Center for Clinical and Translational Science Research Retreat. <https://doi.org/10.13028/8gym-9f77>. Retrieved from [https://escholarship.umassmed.edu/cts\\_retreat/2013/posters/28](https://escholarship.umassmed.edu/cts_retreat/2013/posters/28)

Creative Commons License



This work is licensed under a [Creative Commons Attribution-NonCommercial-Share Alike 3.0 License](#).

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in UMass Center for Clinical and Translational Science Research Retreat by an authorized administrator of eScholarship@UMMS. For more information, please contact [Lisa.Palmer@umassmed.edu](mailto:Lisa.Palmer@umassmed.edu).

## Health Literacy and Cancer Prevention: It's Not What You Say It's What They Hear

Kathleen M. Mazor, EdD<sup>1,2</sup>; Douglas W. Roblin; PhD<sup>3</sup>; Andrew Williams, PhD<sup>4</sup>; Paul J.K. Han, MD, MPH<sup>5</sup>; Mary E. Costanza, MD<sup>1</sup>; Sarah L. Cutrona, MD, MPH<sup>1,2</sup>; Terry S. Field, DSc<sup>1,2</sup>; Bridget Gaglio, PhD<sup>6</sup>; Joann L. Wagner, MSW<sup>2</sup>; Brandi E. Robinson, MPH<sup>3</sup>; Vinutha Vijayadeva, PhD<sup>4</sup>

<sup>1</sup>University of Massachusetts Medical School, Worcester, MA; <sup>2</sup>Meyers Primary Care Institute is a joint endeavor of Fallon Community Health Plan, Reliant Medical Group and the University of Massachusetts Medical School, Worcester, MA; <sup>3</sup>Kaiser Permanente, Atlanta, GA; <sup>4</sup>Kaiser Permanente, Honolulu, HI; <sup>5</sup>Center for Outcomes Research and Evaluation, Portland, ME, <sup>6</sup>Mid-Atlantic Permanente Research Institute/Kaiser Permanente Mid-Atlantic States, Rockville, MD

### **Primary Author Contact information:**

Kathleen M. Mazor  
Meyers Primary Care Institute  
630 Plantation Street  
Worcester, MA 01605  
508-791-7392  
[Kathleen.Mazor@umassmed.edu](mailto:Kathleen.Mazor@umassmed.edu)

**Abstract Word Count:** 343

**Background:** A growing body of literature documents the relationship between health literacy and important health behaviors and outcomes. Most research to date has focused on print literacy—few studies have examined literacy with respect to spoken information (“spoken health literacy”). We sought to examine the extent to which responses to physician advice about cancer prevention and screening were associated with spoken health literacy.

**Methods:** Participants listened to 3 simulated physician-patient discussions addressing: 1) Prostate Specific Antigen (PSA) testing; 2) tamoxifen for breast cancer prevention; and 3) colorectal cancer (CRC) screening. The physician provided information on risks and benefits but did not endorse one course of action. Post-vignette questions assessed understanding and reactions to the physician’s advice. Participants had previously completed the Cancer Message Literacy Test-Listening (CMLT-L), a measure of spoken health literacy. Bivariate analyses examined the relationship between CMLT-L scores and comprehension, attitudes, and behavioral intentions.

**Results:** Four hundred thirty-eight adults from 3 HMORN sites participated. *Comprehension:* Post-vignette comprehension scores were correlated with CMLT-L scores ( $r=0.62$ ,  $p<.001$ ) and those scoring in the lowest CMLT-L quartile scored significantly lower on the vignette-specific comprehension scales ( $p<.001$ ). *Attitudes:* Participants scoring in the lowest CMLT-L quartile were more likely to report their views had become more favorable on PSA testing ( $p<.001$ ) and CRC screening ( $p<.001$ ) as a result of the vignette. *Behavioral intentions:* Participants who scored in the lowest CMLT-L quartile expressed stronger intent than higher scoring participants to undergo PSA testing ( $p=.028$ ) and to take tamoxifen for chemoprevention ( $p=.017$ ).

**Discussion:** The ability to understand spoken information is a critical component of health literacy. In this study, spoken health literacy influenced patients’ comprehension of, and reaction to spoken health information provided by a physician. The findings that participants scoring in the lowest quartile on the CMLT-L were more likely to respond favorably to physician

advice on cancer prevention but were less likely to comprehend content of the vignettes, may indicate that physician mention of a prevention service is interpreted as endorsement of a prevention service in the absence of a full understanding of its risks and benefits.