Markey Cancer Center
Network

How Oncology Team Communication Shapes Quality of Life During Cancer Care

Adam Strong, MPP, MLS (ASCP)CM, et al.

University of Kentucky College of Medicine

18 April 2026

Disclosures

“No Conflicts of Interest”

Purpose

Quality Improvement:

Facilitate research to practice through research informed insights on high-quality oncology team communication elements that are associated with higher patient quality of life during cancer care.

This presentation leverages data collected through the Markey Cancer Center and represents a patient population we all hold dear.

Objectives

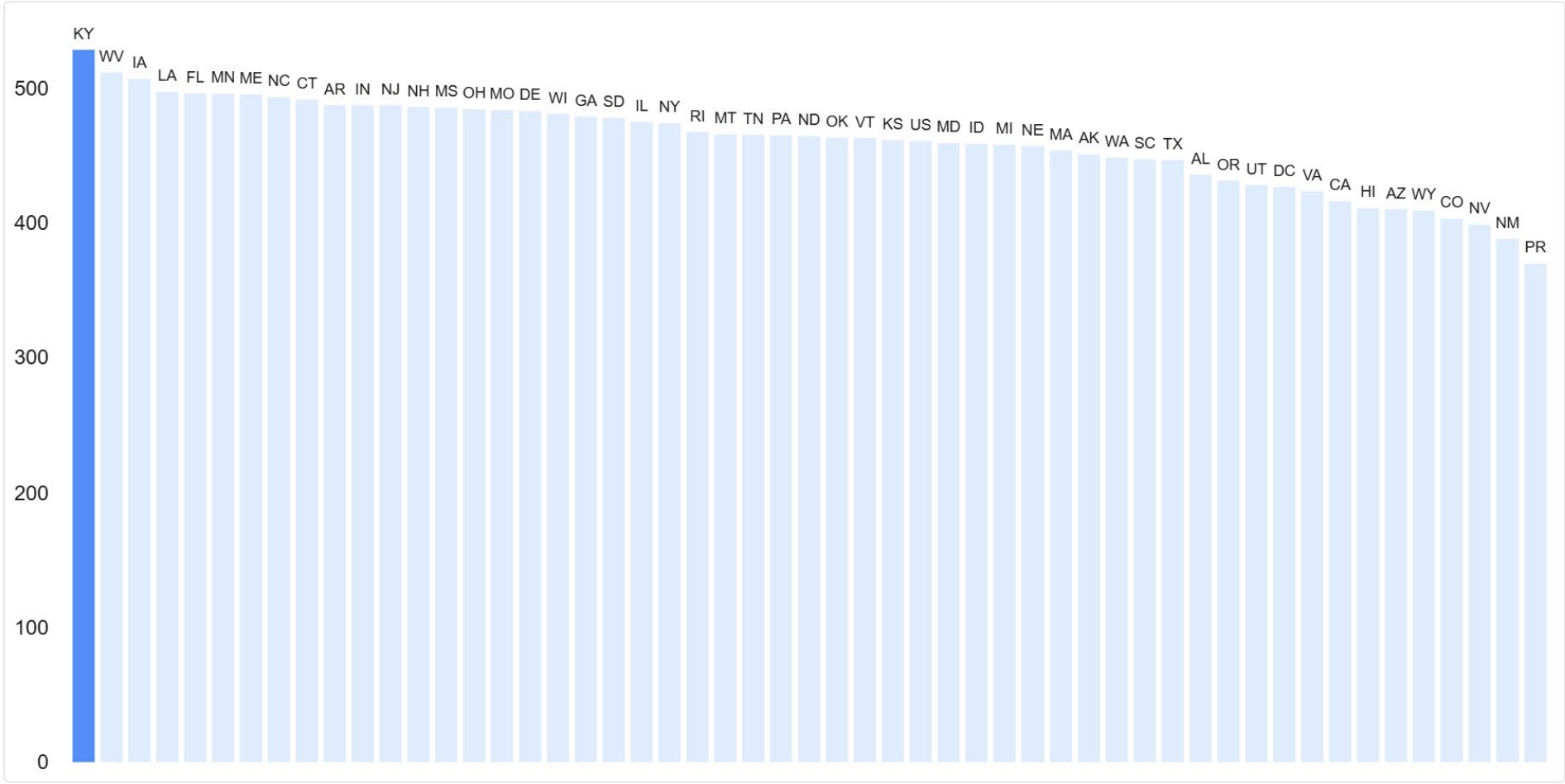
Upon completion of this educational activity, you will be able to:

1. Describe the relationship between patient-perceived oncology team communication during active cancer treatment and patient-reported quality of life at four months among patients receiving care in rural and Appalachian Kentucky.
2. Recognize key components of high-quality oncology team communication including attentive listening, respect, clear explanations, and spending adequate time to address patient concerns within the CAHPS communication framework.
3. Interpret standardized (β) and unstandardized (B) regression coefficients to assess both the relative strength and clinical meaning of oncology team communication as a predictor of patient-reported quality of life.
4. Discuss how oncology team communication may function as a potentially modifiable, team-based factor within integrated cancer care models to support patient-reported quality of life in rural and Appalachian settings.

Expected Outcome

1) Learn elements of high-quality oncology team communication that are associated with higher patient quality of life during cancer care.
2) Reflect on ways you may be able to improve the patient care experiences to improve patient outcomes.
3) Reduce disparities in cancer survivorship outcomes.

Kentucky Cancer Incidence



How does Kentucky compare?

528.3

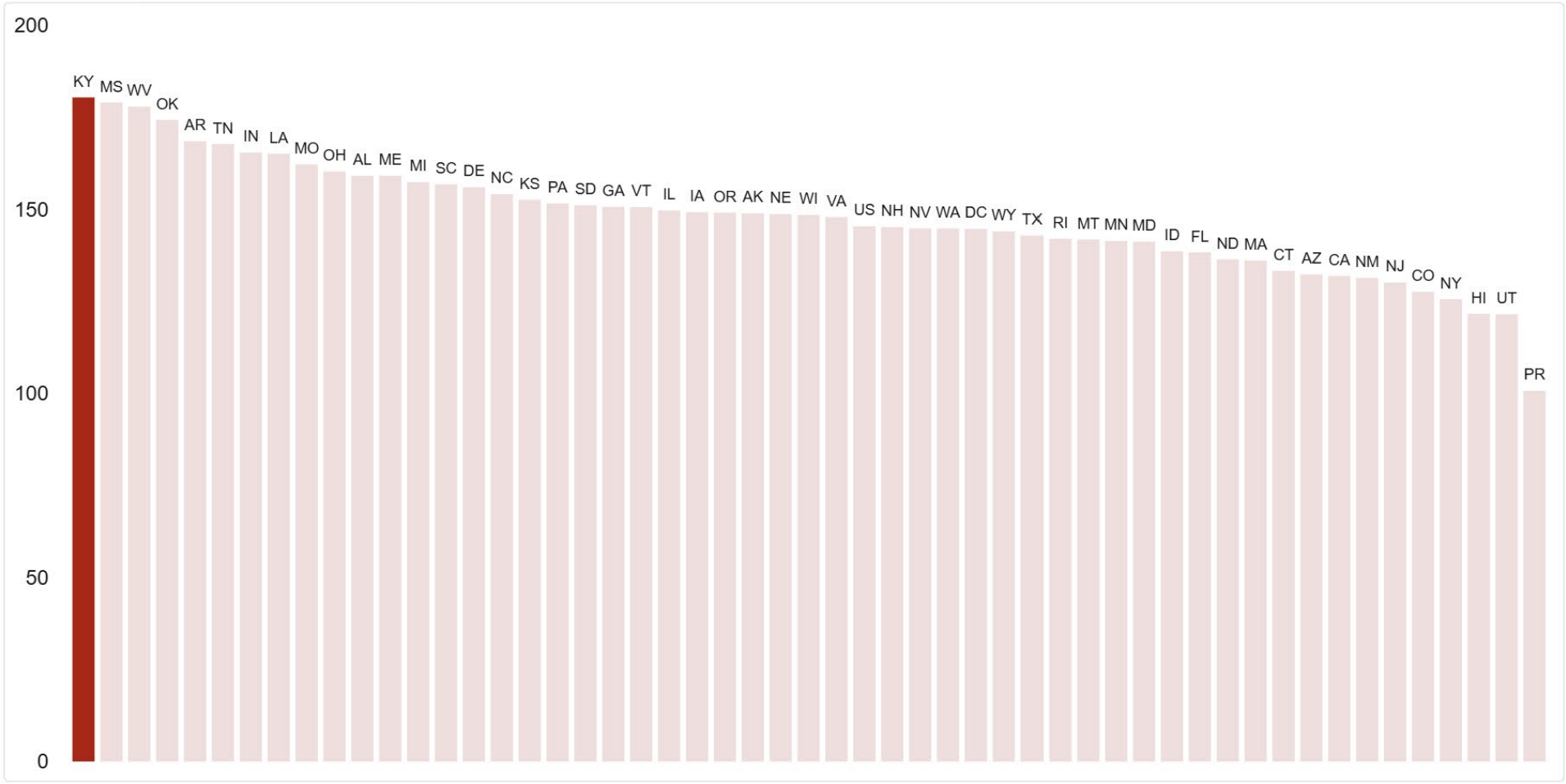
Kentucky's incidence rate is higher than the national rate

460.6

National incidence rate

Incidence rates for 2018-2022

Kentucky Cancer Mortality



How does Kentucky compare?

180.4

Kentucky's mortality rate is higher than the national rate

145.4

National mortality rate

Mortality rates for 2019-2023

Cancer Mortality (age-adj per 100k)

All Cancer Site

(All Races, All Sexes)

NCHS, 2019 - 2023

111.07 265.77

Markey Cancer Center
C4 Program

Original Research Question

How do oncology team communication and health literacy predict quality of life four months into cancer care?

What We Know from Prior Literature

- Communication → QoL
- Communication → adherence, trust, outcomes

Methods

Patients receiving cancer care completed a survey at 4 months (N = 79).

Measures include:

[1]CAHPS: Oncology Team Communication
[2]FACT-G7: Quality of Life,
[3]FACIT-COST: Financial well-being,
[4]Brief Screening Tool: Health literacy,

General linear regression models were used to examine

1) oncology team communication,
2) financial well-being, and
3) health literacy

association with quality of life at four months of cancer care.

Models were adjusted for age, sex, highest educational attainment, and household income.

Patient Reported Quality of Life During Cancer Care (FACT-G7)

- I have a lack of energy
- I have pain
- I have nausea
- I worry that my condition will get worse
- I am sleeping well
- I am able to enjoy life
- I am content with the quality of my life right now

Study Results

Study Population Demographics

The cohort was predominantly female, lower-income, with substantial proportions of rural and Appalachian patients, with high rates of financial toxicity and limited health literacy.

Characteristics	Cohort at 4 Months
Participants	n = 79
Mean age	56.7 ± 12.2 years
Female	67%
Rural county residence	47%
Most common cancer types	Breast (xx%), GI (xx%), Lung (xx%)
≤ High school graduate	31%
= Some college	32%
Household income ≤$40,000	74%
Limited health literacy	22%
Marginal health literacy	24%
Mild Financial Toxicity	48%
Severe Financial Toxicity	25%

Associations with Quality of Life Multiple Linear Regression

Four months after starting cancer treatment, higher financial well-being and better patient-perceived oncology team communication were positively associated with quality of life.

The overall model was statistically significant ($F(7,71)=7.23$, $p<.001$; adjusted $r^2=.358$).

Predictor	Standardized β	Unstandardized B	P-Values	95% CI
Age	.196	.099	**.045***	**.002-.195**
Sex	-.168	-2.167	.098	-4.742-.408
Health Literacy	.214	.310	.068	-.024-.644
Education	.091	.508	.410	-.714-1.729
Household Income	-.029	-.093	.776	-.744-.558
Financial Well-being	.378	.218	**<.001***	.108-.329
Oncology Team Communication	.293	3.138	**.004***	1.041-5.235

Financial Well-Being (FACIT-COST)

Survey Question Themes

- **Financial Stress**
  - Worry about finances
- **Financial Strain**
  - Financial adequacy & cognitive appraisal
- **Work-Related Financial toxicity**
  - Work and income concerns and disruptions
- **Treatment Related Financial Burden**
  - Unexpected costs and lack of financial control

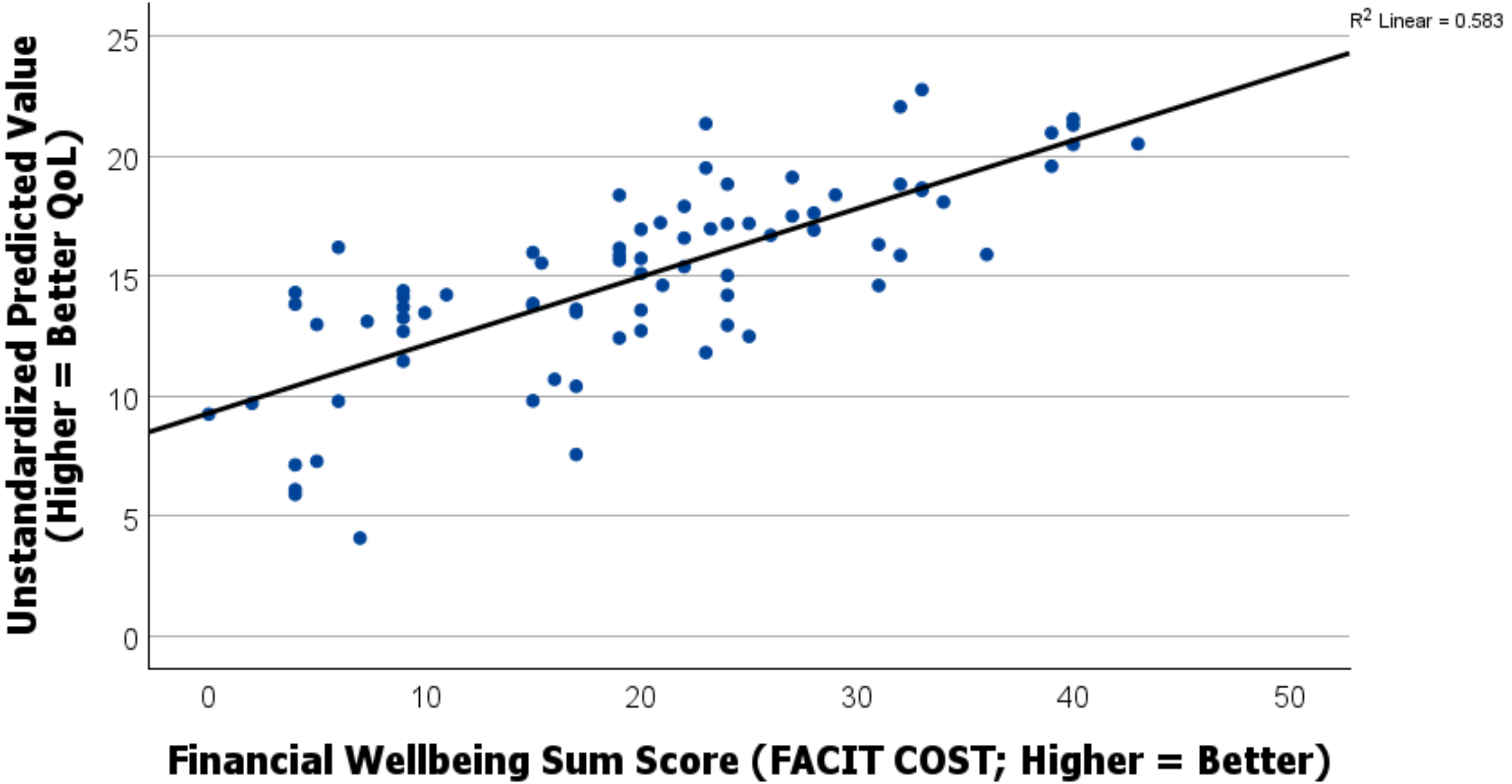
What does a standardized β = .378 mean clinically?

A one std change in FWB is associated with a .378 std change in QoL.

Standardized β Utility?

- Compares the relative strength of predictors
- Allows comparison across different measurement scales
- Identifies which factors matter most in the model
- Larger β = stronger association

Higher Financial Well-Being (FACIT-COST) is Associated with Higher Quality of Life During Cancer Care



Associations with Quality of Life Multiple Linear Regression

Four months after starting cancer treatment, higher financial well-being and better patient-perceived oncology team communication were positively associated with quality of life.

The overall model was statistically significant ($F(7,71)=7.23$, $p<.001$; adjusted $r^2=.358$).

Predictor	Standardized β	Unstandardized B	P-Values	95% CI
Age	.196	.099	**.045***	**.002-.195**
Sex	-.168	-2.167	.098	-4.742-.408
Health Literacy	.214	.310	.068	-.024-.644
Education	.091	.508	.410	-.714-1.729
Household Income	-.029	-.093	.776	-.744-.558
Financial Well-being	.378	.218	**<.001***	.108-.329
Oncology Team Communication	.293	3.138	**.004***	1.041-5.235

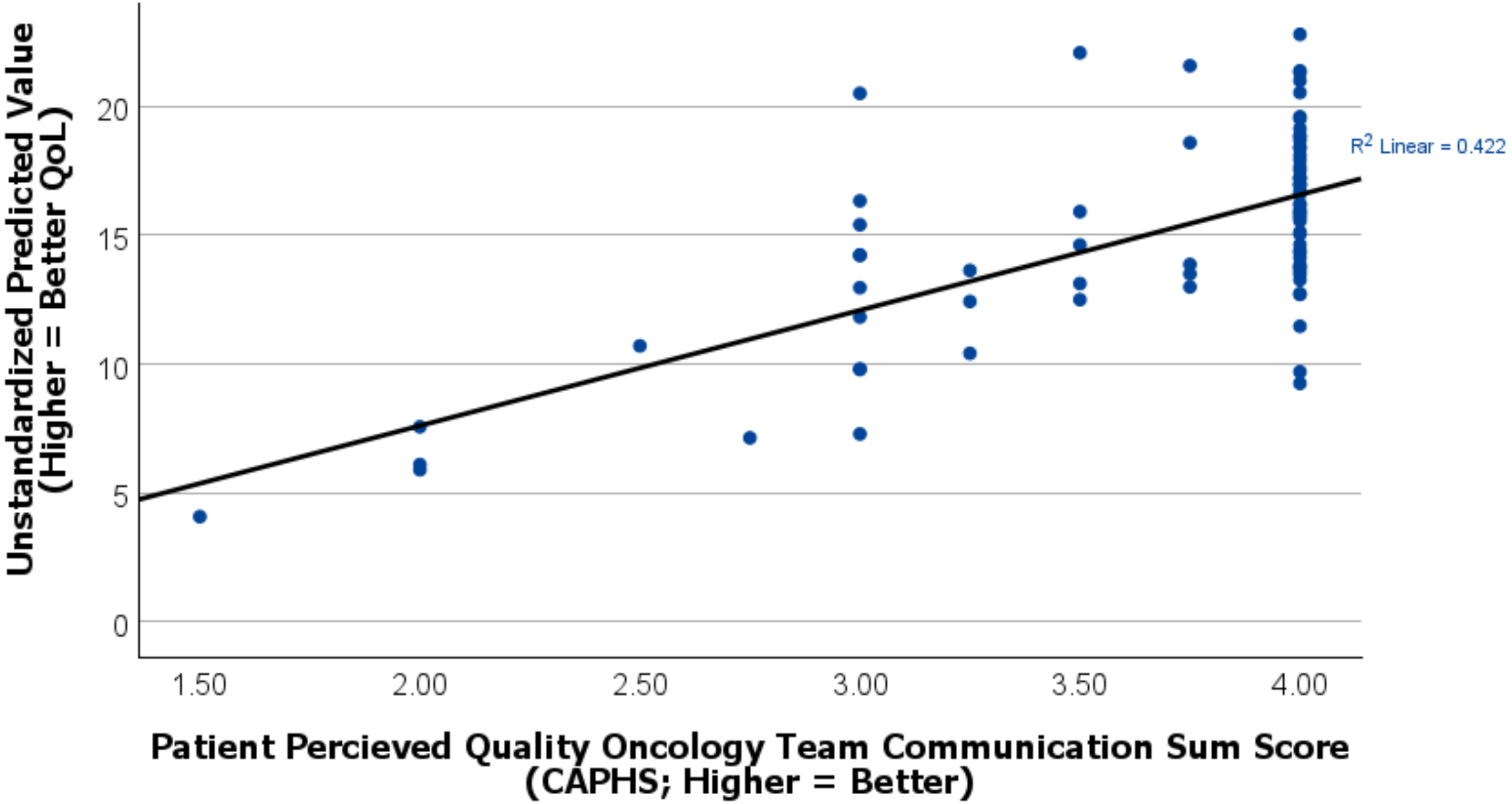
Interpreting the Clinical Meaning: CAHPS
What Does an unstandardized B = 3.138 Mean Clinically?

A 1-point increase in patient perceived quality of oncology team communication (represents 40% of its observed range) is associated with a 3.1-point higher QoL score, which is equal to a 12% higher QoL range within our sample.

Higher Oncology Team communication may improve QoL by helping patients:

- Feel heard and understood
- Better understand what to expect
- Feel respected and supported
- Have enough time to make informed decisions

Higher Patient Perceived Oncology Team Communication (CAHPS) is Associated with Higher Quality of Life During Cancer Care



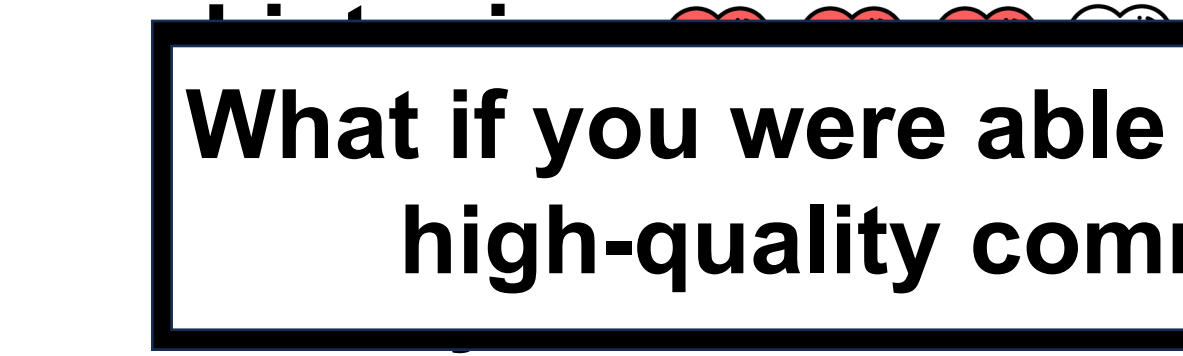
Patient Perceived Quality of Oncology Team Communication (CAHPS)

- **Listening** intently
- **Respecting** what patients had to say
- **Explaining things clearly**
- **Spending enough time** addressing patient concerns

In practice, what does an increase in quality of oncology team communication look like?

A 1-point increase in a patient's perception of the oncology team listening intently to what they had to say is associated with a 3% higher Quality of Life range in our patient cohort.

Theoretical Baseline



Time

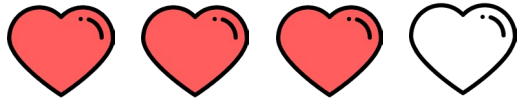
Quality Improvement

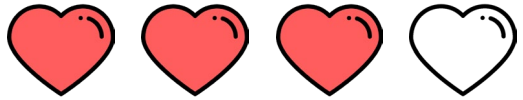
Time

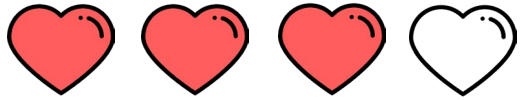
What if you were able to improve each element of high-quality communication by 1-point?

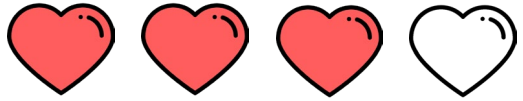
A 1-point increase in patient's perception of the overall quality of oncology team communication is associated with a 12% higher Quality of Life range in our patient cohort.

Theoretical Baseline

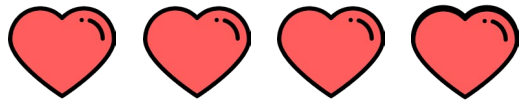
Listening 

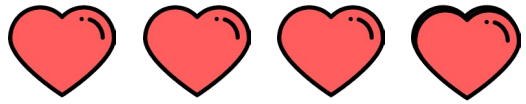
Respect 

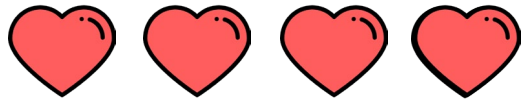
Clarity 

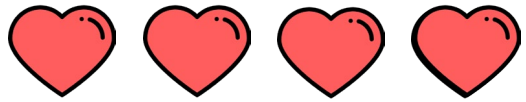
Time 

Quality Improvement

Listening 

Respect 

Clarity 

Time 

Which Element of High-Quality Oncology Team Communication Matters Most?

Methods

Patients receiving cancer care completed a survey at 4 months (N = 79).

Measures include:

[1]CAHPS: Oncology Team Communication
[2]FACT-G7: Quality of Life,
[3]Highest Educational Attainment,
[5]House-Hold Income,
[6]Age,
7Sex.

General linear models and multivariate analyses (MANOVA) were conducted to examine the effects of

on patient reported quality of life at four months of cancer care.

Associations with Quality of Life Multiple Linear Regression Analyses

When included simultaneously, only perceived respect remained significant (standardized β=.455, p=.025).

This pattern suggests shared variance across elements, with perceived respect accounting for the largest independent association with QoL.

Predictor	Standardized β	Unstandardized B	P-Values	95% CI
Independent Regression Analyses				
Listening	.345	3.469	**.002***	1.304-5.634
Respect	.443	4.743	**<.001***	2.541-6.945
Clarity	.337	2.819	**.002***	1.041-4.597
Time	.333	3.115	**.003***	1.073-5.158
Combined Regression Analysis				
Respect	.455	4.869	**.025***	.628-9.109

Markey Cancer Center
Network

Exploratory Moderation Analysis

Educational attainment was associated with QoL *only* in the model examining perceived adequacy of time spent p = .043.

Methods

Patients receiving cancer care completed a survey at 4 months (N = 79).

Measures include:

[1]CAHPS: Spending Enough Time
[2]FACT-G7: Quality of Life,
[3]Brief Screening Tool: Health Literacy
[4]Highest Educational Attainment,
[5]House-Hold Income,
[6]Age,
[7]Sex.

Given the observed association between educational attainment and QoL in adjusted models,

a moderation analysis (PROCESS Model 1) was conducted

to evaluate whether education modified the association between patient-perceived adequacy of time spent and QoL.

Educational Attainment Moderated the Association Between Perceived Time Spent and Quality of Life

Moderation Result

- The association between perceived adequate time spent and QoL differed by educational attainment (interaction p = .003).
- Among patients with lower education, higher perceived adequacy of time spent was strongly associated with improved QoL (B = 7.02, p < .001)
- No statistically significant association was observed among patients with higher education

Interpreting the Clinical Meaning: What Does an unstandardized B = 7.02 Mean Clinically?

Each 1-point increase in perceived adequacy of time spent among patients with lower educational attainment is associated with a 7-point higher QoL score, which is equal to a 25% higher QoL range within our sample.

Adequate time may improve QoL by helping patients:

- Feel heard and respected
- Better understand what to expect
- Feel less overwhelmed or uncertain
- Build trust in the care team

Why This Finding Matters:
The Effect Was Independent of Health Literacy

Patients with lower educational attainment appeared particularly sensitive to whether they felt their oncology team spent enough time with them, even after accounting for health literacy.

Educational attainment appears to capture additional aspects of the clinical encounter, such as:

- Comfort asking questions
- Need for reassurance
- Confidence navigating the healthcare system
- Reliance on the clinical visit for support and guidance

Why Might This Effect Differ by Educational Attainment?

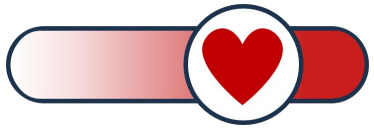
Patients with lower educational attainment may derive disproportionately greater benefit from feeling that their oncology team was not rushed.

Lower Educational Attainment	Higher Educational Attainment
More reliant on the visit itself for information, support, and reassurance	May have more resources outside the visit
May benefit more from slower-paced discussion and additional time	May independently seek information or ask targeted questions
More vulnerable to feeling rushed or unsupported	Less dependent on visit length alone
Larger QoL benefit when adequate time is perceived	Smaller or absent association with QoL

Markey Cancer Center
Network

What we've learned so far?

Key Findings



Higher patient perceived quality of oncology team communication is positively associated with QoL during cancer care at 4-months.

All communication elements, including respect, listening carefully, explaining things clearly, and spending enough time with patients were significantly associated with QoL in individual models

Only perceived respect remained statistically significant when modeled together, suggesting it may represent a central component of high-quality oncology team communication

Each 1-point increase in perceived adequacy of time spent among patients with lower educational attainment is associated with a 7-point higher QoL score, which is equal to a 25% higher QoL range within our sample.

Markey Cancer Center
Network

NCI Comprehensive Cancer Center
A Cancer Center Designated by the National Cancer Institute

BEST HOSPITALS U.S.News & WORLD REPORT CANCER 2023-2024

THANK YOU

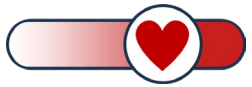
For more information!

Adam Strong
M2 Student UKCOM
adam.strong@uky.edu

Joseph Alexander
Clinical Research Project Manager
MCC Research Network
joseph.alexander@uky.edu

Extra/Alternative Slides

Key Findings Summary



Higher patient perceived quality of oncology team communication is positively associated with quality of life during cancer care at 4-months.

All communication elements, including respect, listening carefully, explaining things clearly, and spending enough time with patients were significantly associated with QoL in individual models

Only perceived respect remained statistically significant when modeled together, suggesting it may represent a central component of high-quality oncology team communication

Each 1-point increase in perceived adequacy of time spent among patients with lower educational attainment is associated with a 7-point higher QoL score, which is equal to a 25% higher QoL range within our sample.