



HEALTH LITERACY AMONG COLONOSCOPY PATIENTS LIVING IN RURAL AREAS WITH REGARD TO INCOME



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INTRODUCTION

Overall

- Colorectal cancer (CRC) is a major cause of cancer-related morbidity and mortality (in the U.S. in 2011, 141,210 people diagnosed, 49,380 deaths).¹
- Guideline recommended care for stage III disease and some with stage II, includes adjuvant chemotherapy treatment after surgery.
- Despite guidelines, research indicates notable disparities in the receipt of adjuvant chemotherapy (AC): racial /ethnic, gender, age and marital status.⁴
- In general, we seek to gain a better understanding of how patients and their caregivers, who differ by race (Black, White), income, gender, marital status, and age, make the decision to undergo adjuvant chemotherapy (AC) for stage II and III colorectal cancer.

Poster: CRC patients living in rural areas are diagnosed later and get fewer treatments than patients in urban areas. It is unknown if the disparity is due to location, income or an interaction of both. Examining patient literacy questions while controlling for income may allow for the identification of opportunities for discussions and intervention points to reduce this disparity.

METHODS

Specific Aims	Subjects	Procedure	Instrument	Analysis
<p>Overall: To investigate whether verbal and nonverbal communication and behaviors of GI's & nurses (a); are associated with how adjuvant chemotherapy is framed by Pt's & CG's (e.g., perceptions of the seriousness and risk for death associated with their disease). (B) differ by patients' race, gender, income, and age. (C) differ by colonoscopy outcomes; and (D) differ by GI's /PCP's pre-procedure concern for cancer (i.e., screening or diagnostic study).</p> <p>Poster: To determine if there is a difference in literacy rates among individuals from households of income above the poverty line and individuals from households below the poverty line who are living furthest away from the colonoscopy clinic.</p>	<p>Goal: 4300 colonoscopy patients and caregiver dyads</p> <p>Current: Over 1388 colonoscopy patient and caregiver dyads collected over a period of 16 months.</p> <p>Included in this analysis: 102 patients</p>	<p>Participants are recruited from colonoscopy centers & hospital based endoscopy suites. Colonoscopy patients and caregivers complete a pre survey on the day of but before procedure, CG's complete an immediate post survey.</p>	<p>Paper-based survey including perception of treatment discrepancies and medical trust. Participants reported their level of agreement with 12 statements (see variable description)</p>	<p>Quantitative data analyzed using SPSS</p> <p>Poster: Independent samples t-test</p>

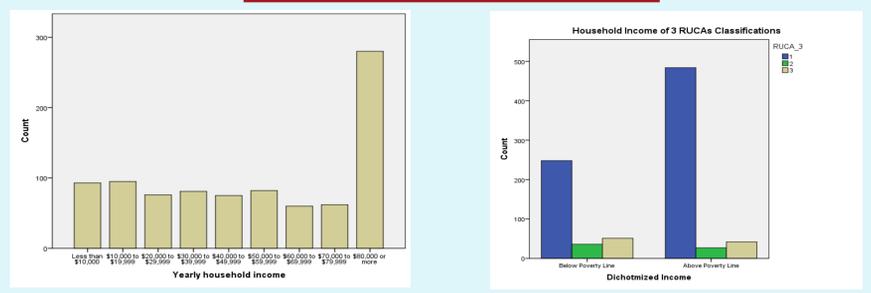
RUCA DESIGNATION

Every zip code reported was given a corresponding Rural-Urban Community Area (RUCA) code. Developed as a new Census tract-based classification scheme, RUCA "utilizes the standard Bureau of Census Urbanized Area and Urban Cluster definitions in combination with work commuting information to characterize all of the nation's Census tracts regarding their rural and urban status and relationships."⁸

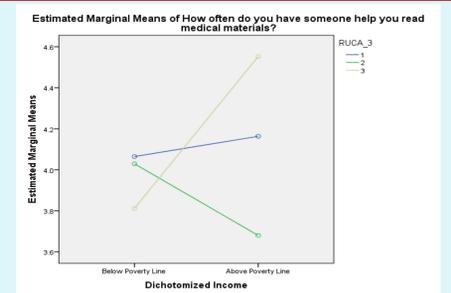
Patients were categorized into the following 3 levels:

- 1-Metropolitan area core: primary flow within an Urbanized Area (UA)
- 2-Metropolitan area high commuting: primary flow 30% or more to a UA
- 3-Metropolitan area low commuting: primary flow 10% to 30% to a UA; Micropolitan area core: primary flow within an Urban Cluster (UC) of 10,000 through 49,999 (large UC); Micropolitan high commuting: primary flow 30% or more to a larger UC.

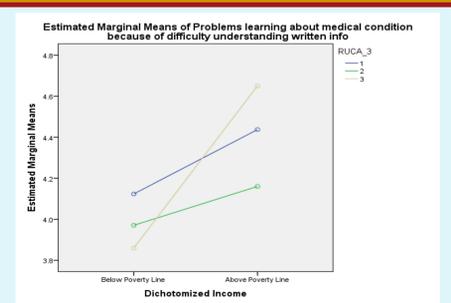
INCOME DISTRIBUTION



INCOME/HELP WITH MEDICAL MATERIALS INTERACTION



INCOME/PROBLEMS LEARNING INTERACTION



INDEPENDENT SAMPLES T-TEST

Household Income		Q18			Q19		
		Mean	T Test	P-Value	Mean	T Test	P-Value
	Below Poverty Line	3.81	-3.364	0.001	3.86	-4.318	0.000
	Above Poverty Line	4.55			4.65		

On a 5-point Likert scale from Always to Never:
 Q18: How often do you have someone help you read medical materials?
 Q19: How often do you have problems learning about your medical condition because of difficulty understanding written information?

FINDINGS

- There was a significant interaction between the RUCA "3" classification and the following two questions: 1) "How often do you have someone help you read medical materials?" and 2) "How often do you have problems learning about your medical condition because of difficulty understanding written information?"
- When analyzing just the individuals within the RUCA 3 classification and dichotomizing income, there is a significant difference between households below the poverty line (<\$40,000) and above the poverty line (≥\$40,000).

DISCUSSION/CONCLUSION

These two questions show that patients who live in low commuting areas, areas that are further away from urbanized areas, or in a micropolitan areas encounter health literacy problems. This difficulty could impact these rural patients' care if their providers are in urban centers. Doctors and physicians may also encounter difficulty communicating with these particular patients.

To further develop this research, a health literacy index can be created as a better measurement to compare levels of health literacy throughout various RUCA levels. It would also be interesting to investigate who these patients turn to for instrumental support. Interventions can be designed to train physicians to recognize the differences in their patients, understand the differences in rural and urban patients, and possess the skills and tools for better communication.

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This project was approved by the University of Florida Institutional Review Board 166-2011