Results of a Pilot to Increase Colorectal Cancer Screening in Patients with Low-Health Literacy

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BACKGROUND

- Health literacy is defined as "the degree to which individuals have the capacity to obtain, process and understand basic health information needed to make appropriate health decisions" (HRSA, 2015).
- Low-health literacy poses a significant barrier to programs attempting to increase colorectal cancer (CRC) screening rates
- Iowa Colorectal Cancer Control Program created three patient education videos aimed at individuals ages 50-75 who were not up to date on CRC screening and who had low health literacy.

Video 1- "Your Colon"
Video 2- "Colon Cancer"
Video 3- "Screening Tests"

- Video format was utilized to ensure individuals with low-reading abilities could obtain information. Other video features:
  - Slow pace to allow individuals to take in information that may be new to them
  - Plain, non-clinical language and terminology *(e.g. "poop" instead of "feces")*
  - Under 5-minutes to hold attention
  - "Mix and match" format to cater information to needs of patients
  - Used light affiliative humor to reduce maladaptive responses
- Pilot test was conducted in Iowa's federally qualified health centers (n=6) which serve high numbers of patients with low health literacy

Acknowledgements
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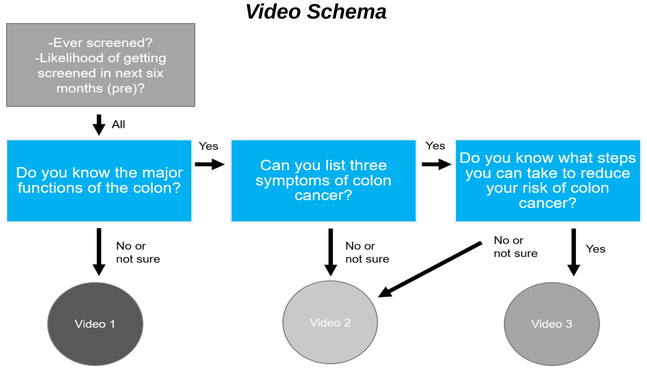
METHODS

A pilot test with pre/post design-meant to gauge:
- patient reactions;
- knowledge gains, and;
- changes in screening intention

Videos and pre- /post-tests were embedded in Qualtrics survey software. Participants watched one of the three videos based on their answers to three screener questions (see below).

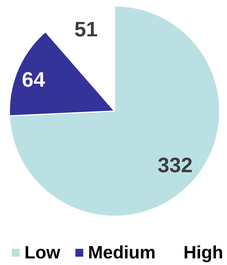
FQHC staff determined how many patients were offered the video for ease of implementation.

Video Schema

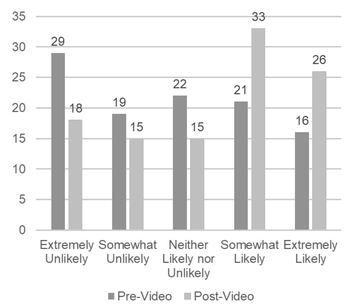


RESULTS

Baseline CRC Knowledge (n=447)



Video 1 Paired T-Test of Means (n=107):



Pre- (M=2.78, SD=1.42); Post-(M=3.32, SD=1.42)

Paired t(106)=-4.174, p=.000***
****Indicates Significance at the .01 level*

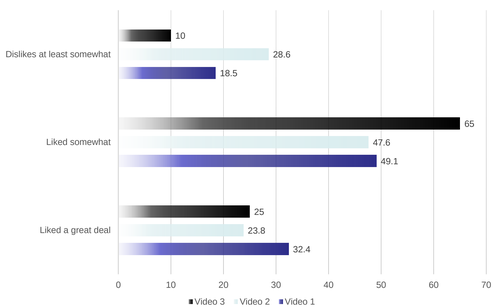
Cohen's *d=.38*

Relationships

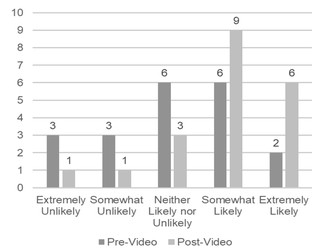
Positive and significant association between likelihood of getting screened and how much respondent liked video

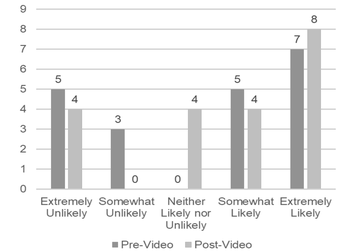
Spearman rank correlation=.346*** (small correlation)

Patient Liking for All Videos



Video 2 (n=20) & Video 3 (n=20))





V2-Pre- (M=3.05, SD=1.23);Post-(M=3.90, SD=1.07)
V3-Pre- (M=3.30, SD=1.69);Post-(M=3.60, SD=1.54)
No analysis due to small n

DISCUSSION

This pilot provides promising results for Video 1 with its significant small effect on screening intentions. However there are several data points that need to considered:

- 74.3% of patients that opted into video had lowest level of health literacy for CRC. This demonstrates a key need for creation and maintenance of interventions focused on this population.
- Significant amount of attrition occurred between pre- and post-test for each video.
  - Video 1 332-> 107
  - Video 2 64-> 20
  - Video 3 51->20

- Small N limits conclusions we can make about Video 2 and 3 in terms of effectiveness, but V2 seems to have largest capacity for changing intention
  - Video 1 Change=.54
  - Video 2 Change=.85
  - Video 3 Change=.30
- Current data could be signal that the videos or questionnaires need to be shortened or that FQHC staff need to be instructed to set aside more time to watch videos
- Additional testing needs to be done, especially on V2 and V3 and to investigate staff or clinic level factors that affect the time patients spend with video