UNC
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FOR HEALTH SERVICES RESEARCH

Promoting Shared Decision Making for Colorectal Cancer Screening in Primary Care

Alison Brenner, PhD MPH

Background – Colon Cancer

- Colon cancer is the third leading cause of cancer death in the United States
- Colon cancer screening is highly effective at detecting cancer at an early, treatable stage
- Only 60% of age eligible adults are up to date with current screening recommendations
- Suboptimal decision-making may contribute to low screening rates
- Shared decision making can improve the quality of colon cancer screening discussion
- Shared decision-making interventions have shown improvements in screening up-take

Background – Decision Aids

- Patient decision aids are educational tools that provide balanced, evidence-based information for preference sensitive medical decisions
- Decision aids can:
  - Improve decision-specific knowledge about colon cancer screening and improve shared decisions
  - Reduce “decisional conflict” and regret about screening choices
  - Improve participation in colon cancer screening, to varying degrees
- Decision aids are difficult to implement systematically!

Decision Aid Interventions

- Decision support interventions:
  - Patient decision aid ONLY
  - Patient decision aid plus Academic Detailing
  - Patient decision aid plus patient navigation
- System-level changes
  - Standing orders
  - Patient navigation

Decision Aid Efficacy Study

- Randomized controlled trial conducted in the late 1990s at the University of North Carolina General Internal Medicine Clinic
- Compared a decision aid with accompanying color-coded brochures indicating readiness to be screened and a corresponding marker on the chart with usual care
- 21 percentage point improvement in test ordering
- 14 percentage point improvement in test completion
- Conclusion: this decision aid and system intervention improved screening test ordering and screening test completion.

1. Pignone MP, Harris R, Kinsinger L. Videotape-Based Decision Aid for Colon Cancer Screening. Annals of Internal Medicine. 2000;133(10):761-769.

Practice Improvement Projects

- Time-frame: 2005-2007
- Study design: Controlled trial
- Decision Support Approach: Patient decision aid ONLY
- System Approach: Standing orders
  - FOBT card delivery
  - Endoscopy scheduling
- Comparison group: usual care, delayed intervention

1. Lewis CL, Brenner AT, Griffith JM, Pignone MP. The uptake and effect of a mailed multi-modal colon cancer screening intervention: a pilot controlled trial. *Implementation Science.* 2008;3:32-32.
2. Lewis CL, Brenner AT, Griffith JM, Moore CG, Pignone MP. Two controlled trials to determine the effectiveness of a mailed intervention to increase colon cancer screening. *North Carolina Medical Journal.* 2012;73(2):93-98.

Practice Improvement Projects: Paper 1 Methods

- Participants: A sample of age-eligible patients of attending physicians at the UNC General Internal Medicine clinic with no documentation of screening
- Intervention:
  - Letter from PCP encouraging screening
  - Decision aid (VHS & DVD)
  - Instructions for obtaining FOBT cards or scheduling colonoscopy
  - NOT associated with a clinic visit
- Outcomes
  - Completed Screening at 5 months (Chart Review)
  - Cost per additional patient screening(Estimated Cost of Intervention/Additional patients screened)

Practice Improvement Projects: Paper 1 Results

	Intervention	Control
N	137	100
Age	62	62
% Female	60	61
% White	60	62
%Black	30	28
Watched DA	8.0%	--
% Screened at 5 months	15%*	4%*
Cost per additional patient screened	$94	--

*p=0.01

Practice Improvement Projects: Paper 2 Methods

- Participants: A sample of age-eligible patients of resident or attending physicians at the UNC General Internal Medicine clinic with no documentation of screening
- Intervention:
  - Letter from either **PCP (wave A) or clinic medical director (wave B)** encouraging screening
  - Decision aid (VHS & DVD) **by request**
  - Instructions for obtaining FOBT cards or scheduling colonoscopy
  - NOT associated with a clinic visit
- Outcomes
  - Completed Screening at 5 months (Chart Review)
  - Cost per additional patient screening(Estimated Cost of Intervention/Additional patients screened)

Practice Improvement Projects: Paper 2

	Wave A Attending Patients		Wave B Resident Patients		Wave B Attending Patients	
	Intervention	Control	Intervention	Control	Intervention	Control
N	168	172	461	483	87	127
Age	62.5	61.6	61.1	60.0	64.1	62.3
% Female	60	56	50	54	52	57
% White	68	67	50	46	71	66
% Black	26	27	43	45	23	31
Watched DA	1%	--	1%	--	--	--
% Screened at 5 months	13.1%	4.1%	1.3%	1.9%	6.9%	2.4%
Cost	$30	--	--	--	--	--

- Wave A participants received a letter signed by their PCP, whereas Wave B participants received a letter signed by the clinic's medical director

Practice Improvement Projects: Limitations and Implications

- Limitations:
  - Limited follow up time (5 months) and no assessment of screening outside of health system
  - Video viewing assessed by self report, and many did not return surveys
  - May not be generalizable outside of the one academic practice
- Implications:
  - A mailed decision aid unassociated with a clinic visit may improve screening rates in some populations but not others
  - A letter signed by a patient's own provider may be more motivating than a more generic letter
  - Decision aid use was low; allowing patients to request decision aids is more cost efficient than sending them unrequested

The CDC CHOICE Trial

- Time-frame: 2005-2007
- Study design: Cluster-randomized controlled trial
- Decision Support Approach: Patient decision aid PLUS Academic Detailing
- System Approach: Limited support from insurance provider
- Comparison Group: Usual care practices

1. Lewis CL, Pignone MP, Schild La, et al. Effectiveness of a patient- and practice-level colorectal cancer screening intervention in health plan members: design and baseline findings of the CHOICE trial. Cancer. 2010;116(7):1664-1673.
2. Pignone M, Winquist A, Schild LA, et al. Effectiveness of a patient and practice-level colorectal cancer screening intervention in health plan members: the CHOICE trial. Cancer. Aug 1 2011;117(15):3352-3362.

CDC CHOICE: Methods

- Participants:
  - Practices: Recruited physician practices participating in the Aetna HMO in Atlanta, Tampa, and Orlando with a minimum of 50 Aetna members between ages 52 and 75.
  - Patients: Recruited patients from those practices who were Aetna members, aged 52-75, average risk for colon cancer, not up-to-date with screening
- Intervention:
  - Practice-level: 2 Academic Detailing sessions with physician detailers educating practice physicians about colon cancer screening
  - Patient-level: Mailed decision aid
- Outcomes:
  - Screening completion at 12 months: Aetna claims data and self report

CDC CHOICE: Results

	Intervention	Control	Difference
N	172	208	
Screened at 12 months	39%	32%	6.7% (-3.46;16.94.)
aOR	1.64 (0.98;2.73)*		

* adjusted for practice-level clustering and individual-level baseline differences

- 83% who responded reported watching some or all of the decision aid

CDC CHOICE: Limitations and Implications

- Limitations
  - Allocated at the practice level
  - Large number of practices and members contacted for participation
  - Cannot separate effects of academic detailing and decision aid mailings
  - Claims data not available for all participants
- Conclusions
  - Combined intervention may have had a modest effect on screening test completion
  - No effect directly attributable to use of the decision aid materials
  - EXPENSIVE!!

OPCIONES Study

- Time-frame: On going
- Study design: Randomized controlled trial, pragmatic.
- Decision support approach: Patient decision aid PLUS patient navigation
- System approach: Standing orders, patient navigation
- Comparison Group: Usual Care and “attention control” video

1. Brenner A, Getrich CM, Pignone M, et al. Comparing the effect of a decision aid plus patient navigation with usual care on colorectal cancer screening completion in vulnerable populations: Study protocol for a randomized controlled trial. *Trials. Under Review*.

OPCIONES Study: Methods

- Two clinic sites in Charlotte, NC and Albuquerque, NM
- Participants:
  - Age 50-75, average risk for colon cancer, not up-to-date with screening
  - Oversampling Hispanics
  - Recruited by phone ahead of visit or on-site day of visit
- Intervention:
  - Patient decision aid (CHOICES in English; OPCIONES in Spanish)
  - Patient navigator (bilingual/bicultural)
- Outcomes:
  - Final: Colon cancer screening at 6 months
  - Preliminary: Change in knowledge

OPCIONES: Preliminary Results

	Intervention	Control
N	33	33
Age	59	57
% Female	46	70
Hispanic n(%) Spanish-speaking English Speaking	17 (52) 15 (46) 2 (6)	26(79) 21 (64) 5 (15)
Pre-Intervention Knowledge Score	1.9*	2.4
Post-Intervention Knowledge Score	4.3*	2.2
Discussed CRC screening with provider	75%	38%

*p<0.001

OPCIONES: Conclusions and Implications

- A decision aid PLUS patient navigator improves decision-specific knowledge about colon cancer screening and promotes patient-physician conversation about colon cancer screening
- If successful, we will show that this combined intervention is successful in low-income Hispanic and Non-Hispanic White populations
- May be influential in designing screening programs for similar populations

General Conclusions

- Colon cancer screening is a complex process, requiring a patient to overcome many disparate barriers
- Decision aids can help promote shared decision making and can address certain barriers, but not all
- Mailed decision aids tend to have low uptake (PIP Study) unless there is a lot of follow up effort (CDC CHOICE Study)
- System-level interventions can help patients overcome some barriers that decision aids cannot address (eg test ordering or navigating the system)
- Patient decision aids + system level interventions (standing orders and patient navigation) appear to be promising

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THANK YOU!

Alison Brenner

alison.brenner@unc.edu