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.

Practice Improvement Projects

- 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

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

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>137</td>
<td>100</td>
</tr>
<tr>
<td>Age</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>% Female</td>
<td>60</td>
<td>61</td>
</tr>
<tr>
<td>% White</td>
<td>60</td>
<td>62</td>
</tr>
<tr>
<td>% Black</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Watched DA</td>
<td>8.0%</td>
<td>--</td>
</tr>
<tr>
<td>% Screened at 5 months</td>
<td>15%*</td>
<td>4%*</td>
</tr>
<tr>
<td>Cost per additional patient screened</td>
<td>$94</td>
<td>--</td>
</tr>
</tbody>
</table>

*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**

<table>
<thead>
<tr>
<th></th>
<th>Wave A Attending Patients</th>
<th>Wave B Resident Patients</th>
<th>Wave B Attending Patients</th>
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</thead>
<tbody>
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<td>Intervention</td>
<td>Control</td>
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</tr>
<tr>
<td>N</td>
<td>168</td>
<td>172</td>
<td>461</td>
</tr>
<tr>
<td>Age</td>
<td>62.5</td>
<td>61.6</td>
<td>61.1</td>
</tr>
<tr>
<td>% Female</td>
<td>60</td>
<td>56</td>
<td>50</td>
</tr>
<tr>
<td>% White</td>
<td>68</td>
<td>67</td>
<td>50</td>
</tr>
<tr>
<td>% Black</td>
<td>26</td>
<td>27</td>
<td>43</td>
</tr>
<tr>
<td>Watched DA</td>
<td>1%</td>
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<td>1%</td>
</tr>
<tr>
<td>% Screened at 5 months</td>
<td>13.1%</td>
<td>4.1%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Cost</td>
<td>$30</td>
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<td>--</td>
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</table>

- 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

- 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

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

<table>
<thead>
<tr>
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<th>Intervention</th>
<th>Control</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>172</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Screened at 12 months</td>
<td>39%</td>
<td>32%</td>
<td>6.7% (-3.46;16.94.)</td>
</tr>
<tr>
<td>aOR</td>
<td>1.64 (0.98;2.73)*</td>
<td></td>
<td></td>
</tr>
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</table>

* 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

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

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

*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!

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