A Randomized Controlled Trial of Patient Navigation to Promote Colorectal Cancer Screening in Community Health Centers

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Background-Patient Navigation

- Increases colorectal cancer (CRC) screening rates among underserved adults
- Patient navigators
  - from the community
  - guide patients through the health care system
  - advocacy and coordination
- Prior studies have not included Haitian Creole and Portuguese-speaking patients
Objective

To conduct a six-month RCT of patient navigation versus usual care to promote CRC screening among six community health centers in greater Boston with substantial numbers of Haitian Creole and Portuguese-speaking patients.
Study setting: Cambridge and Somerville, MA

- 6 community health centers
- Multi-cultural, low-income population
- Centers not part of MA Department of Health Patient Navigation Program
- Common EMR
Inclusion and Exclusion Criteria

Included patients
• Aged 50–74 overdue for CRC screening based on national guidelines
• Speaking English, Portuguese, Spanish and Haitian Creole

Excluded patients with
• Significant comorbid medical disease (e.g. severe CAD, COPD, or CHF)
• Active substance use or severe mental illness on their problem list
Enrollment

September 2008 to March 2009; one year follow-up
CONSORT Flow diagram

Assessed for eligibility (n=823)

Excluded (n=358)
- mental illness (n=111)
- medical comorbidity (n=95)
- active substance abuse (n=38)
- active GI symptoms (n=37)
- other reasons (PCP leaving, patient out of town; n=77)

Randomized in a 1:1 ratio (n=465)

Assigned to intervention group (n=235)
- Contacted by navigator (n=181)
- Not reached by navigator (n=54)

Included in primary analysis (n=235)

Assigned to control group (n=230)

Included in primary analysis (n=230)
Intervention

• Letters, signed by PCP, notifying patients about patient navigator outreach
• CRC screening brochure at sixth-grade reading level in study languages
• Maximum of six hours of patient navigation over a six-month period or usual care
• 3 female navigators, based in Depts. of Medicine and Community Affairs
• Trained in CRC screening, motivational interviewing
Intervention

• Intervention framed around a “stages of change” model
• Contacted the intervention patients using a staged roll-out procedure, by health center
• Lead navigator in close contact with scheduling RN in GI Center
• Evenings and weekends, flexibility
• Review prep instructions
• Meet patient in colonoscopy suite
• Help with insurance issues
Randomization, Outcomes, & Analysis

- Randomized at the patient level, stratified by health center and by language
- Primary outcome: completion of CRC screening 12 months post-enrollment
- Chart reviews blinded to intervention assignments
- Intention-to-treat analysis; planned subgroup analysis based on language
- Chi-square and Fisher’s exact tests to compare proportions between groups.
## Baseline Patient Characteristics

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<th>Intervention n = 235</th>
<th>Control n = 230</th>
<th>P</th>
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<tbody>
<tr>
<td>Age, y</td>
<td>61.1</td>
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<td>.35</td>
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<tr>
<td>Female, %</td>
<td>60.4</td>
<td>62.6</td>
<td>.63</td>
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<tr>
<td>White race, %</td>
<td>47.7</td>
<td>47.4</td>
<td>.44</td>
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<tr>
<td>Private insurance</td>
<td>32.3</td>
<td>33.5</td>
<td>.41</td>
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## Baseline Patient Characteristics

<table>
<thead>
<tr>
<th>%</th>
<th>Intervention n = 235</th>
<th>Control n = 230</th>
<th>P</th>
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</thead>
<tbody>
<tr>
<td>English</td>
<td>47.7</td>
<td>48.7</td>
<td>.99</td>
</tr>
<tr>
<td>Portuguese</td>
<td>20.4</td>
<td>19.6</td>
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<tr>
<td>Haitian Creole</td>
<td>17.9</td>
<td>18.3</td>
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<tr>
<td>Spanish</td>
<td>14.0</td>
<td>13.5</td>
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</table>
Main Results at 12 months: Screening completed (%)

Control: 20%
Intervention: 32.8%

P = .002
Intervention Patients: Screening completed (%)
Colonoscopy Screening Completed (%)

P=.0004
Patients with adenomas or cancer (%)

P = .05
Patients with high-risk lesions (%)

P = .06
Significant subgroup analyses: screening completed (%)

\[ p < .01 \text{ for all comparisons} \]
Effective Components of Intervention

- Patient navigation support; 25% of screened intervention patients had navigator present at GI suite
- Reinforcement of message in letter, from PCP, and from navigator (43%)
- Insurance coverage was not a common barrier to screening
Conclusions

- Patient navigators significantly improved CRC screening rates among ethnically and linguistically diverse patients served by community health centers.
- The intervention increased colonoscopy screening rates, and was particularly effective among non-English speaking patients.

Limitations

• Single geographic location
• Usual care group began to receive mailed outreach about CRC screening in early 2009
• Planned care outreach became community standard of care
• Health center closings and PCP turnover
Implications

• Future research will need to address whether health systems can afford navigation to achieve this degree of benefit, outside of the RCT setting
• Targeting patient navigation to non-English speaking patients may be one approach to reducing cancer screening disparities
Implications for the VA

- Differing demographics/patterns of disparities
- Concerns about overutilization of CRC screening at VA among patients with poor health/severe comorbidity
- Studies that include patients with substance use and mental illness (who have lower CRC screening rates at the VA) are warranted and could show benefit among VA patients
Acknowledgement of support

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