A Patient Navigation Program for Increasing Colorectal Cancer Screening Rates of Residents of West Philadelphia: A Pilot Study

Leonard Davis Institute of Health Economics
Summer Undergraduate Minority Research Program
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What is a Patient Navigator?

- An individual that guides patients through procedures or treatments
- Meets with patients directly and/or communicates via telephone
- Identifies and addresses barriers to care
- Mitigates patient concerns
- Goal: ensure timely diagnosis and treatment
History of Patient Navigation

- Started in Harlem Hospital in New York City in 1990
- Aimed at helping poor Hispanic and African-American patients
- Targeted increasing breast cancer survival rates

Source: http://ps.columbia.edu/
History of Patient Navigation

- Study of breast cancer screening rates after initiating the program compared to historical controls
- Significant results
- Served as a springboard for further studies

Colorectal Cancer (CRC) Background

- Third most commonly diagnosed cancer in the U.S. (ACS 2011)
- Usually develops slowly over 10-15 years
- A colonoscopy is the only screening test proven to prevent CRC (ACS 2011).
- Only 63% of Americans have undergone CRC screening (BRFSS 2011).
- Racial/ethnic minorities, non-English speakers and low income individuals have lower rates of screening and present with more advanced stage cancer.

Source: http://medicineworld.org/
Project Significance

Local: CRC that has grown into the colon wall (90% five-year survival)
Regional: CRC has spread through the wall to nearby tissues (68% survival)
Distant: CRC has metastasized (10% survival)

Source: SEER 2007
Project Goals

**Clinical Goal**
- Launch and pilot test a Patient Navigation Program at the University of Pennsylvania Health System (UPHS) specifically related to Colorectal Cancer Screening (CRCS) of West Philadelphia Patients

**Research Goals**
- Better understand the barriers to CRCS in the West Philadelphia population
- Improve CRCS rates in West Philadelphia, especially among African-Americans
- Determine patients’ levels of satisfaction with the navigation program
SUMR Project Specific Aims

- To determine if a navigation program affects *knowledge* about CRC and CRCS
- To determine if a navigation program affects *attitudes* about CRC and CRCS
- To determine if a navigation program increases *willingness* to undergo CRCS
- To determine *patient satisfaction* with the CRCS navigation program
Project Population

- Inclusion Criteria
  - West Philadelphia resident
  - Over 50 years old
  - Doctor had to order CRCS for patient
  - Appointment was never scheduled or patient failed to show up for his/her appointment

Source: http://westphillydata.library.upenn.edu/
Research Methods

- Create and pilot test a twenty minute questionnaire that was administered via telephone

- Quantitative Components
  - Knowledge
    - True/False statements
    - Yes/No questions
  - Attitudes and Beliefs
    - Five point Likert Scale
  - Willingness to undergo CRCS
    - Determined on a zero to ten scale
  - Agreement with Common Barriers
    - Four point Likert Scale

- Qualitative Components
  - Asked patients why they were unable to complete their previously ordered colonoscopies
  - Asked patients about the barriers to undergoing CRCS in the future
Navigating Patients

- Reviewed the literature for commonly cited barriers
- An open ended question to collect additional barriers
- Algorithms were created to address these barriers prior to the program’s launch
Sample Patient

- Male, 52 years old
- West Philadelphia Resident
- Unemployed
- Lives Alone
- Many Comorbidities, Including Hep. C
- History of Drug Use
- Asked for CRCS
- Prior CRCS Appointment Not Kept

Source: http://www.clker.com/
Sample Patient

- **First Phone Call**
  - Police Sirens
  - “…I would not have gone to my appointment had you not called”
  - Barriers Identified

- **Follow-up Calls**

- **Colonoscopy**

Source: [http://www.clker.com/](http://www.clker.com/)
## Preliminary Demographics

<table>
<thead>
<tr>
<th>Demographic (n=10)</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>58 (50-70)</td>
</tr>
<tr>
<td>Sex</td>
<td>Male: 30%</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Married: 50%; Single: 30%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10%</td>
</tr>
<tr>
<td>Race</td>
<td>White: 50%; Black: 40%</td>
</tr>
<tr>
<td>Education</td>
<td>Grad. Degree: 40%; Some HS: 10%</td>
</tr>
<tr>
<td>Household Size</td>
<td>2.1 (1-4)</td>
</tr>
<tr>
<td>Below Poverty Line</td>
<td>20%</td>
</tr>
<tr>
<td>Insurance</td>
<td>90%</td>
</tr>
<tr>
<td>Medicare</td>
<td>10%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>10%</td>
</tr>
<tr>
<td>Previous Colonoscopy</td>
<td>10%</td>
</tr>
</tbody>
</table>
Why were you unable to complete your previous CRCS appointment?

- “I don’t have medical insurance.”
- “I was a little scared.”
- “I don’t have a family history, so I don’t feel it is highly urgent.”
- “There is a possibility that they will puncture my intestine.”
- “I just never did it.”
Preliminary Findings

- **Most common missed questions**
  - People of African-American race *are* at a higher risk for developing CRC.
  - A lack of exercise *is* a risk factor for CRC.
  - Alcohol use *is* a risk factor for CRC.
  - Diabetes *is* a risk factor for CRC.

<table>
<thead>
<tr>
<th>KNOWLEDGE</th>
<th>Average</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect Responses</td>
<td>4.2</td>
<td>(1,9)</td>
</tr>
<tr>
<td>Score</td>
<td>79%</td>
<td>(55%, 95%)</td>
</tr>
</tbody>
</table>
# Preliminary Findings

## ATTITUDES

<table>
<thead>
<tr>
<th>Statement</th>
<th>Proportion who Agree or Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC is a serious illness.</td>
<td>100%</td>
</tr>
<tr>
<td>I feel that I am at risk for CRC.</td>
<td>20%</td>
</tr>
<tr>
<td>If I have CRC, I would want to know.</td>
<td>100%</td>
</tr>
<tr>
<td>If I am diagnosed with CRC, I have a good chance of being cured.</td>
<td>100%</td>
</tr>
<tr>
<td>A colonoscopy will prevent me from getting CRC.</td>
<td>50%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statement</th>
<th>Proportion who Disagree or Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I have CRC, it is meant to be.</td>
<td>10%</td>
</tr>
<tr>
<td>The methods used to treat CRC (like chemotherapy, radiation, or surgery) concern me.</td>
<td>20%</td>
</tr>
</tbody>
</table>
## Preliminary Findings

<table>
<thead>
<tr>
<th>WILLINGNESS</th>
<th>Average</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>8.2</td>
<td>(5,10)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BARRIERS</th>
<th>Proportion Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconvenient prep</td>
<td>70%</td>
</tr>
<tr>
<td>Uncomfortable prep</td>
<td>70%</td>
</tr>
<tr>
<td>Fear of colonoscopy</td>
<td>50%</td>
</tr>
<tr>
<td>Fear of sedation</td>
<td>50%</td>
</tr>
<tr>
<td>Lack of transportation</td>
<td>50%</td>
</tr>
</tbody>
</table>
What will prevent you from completing CRCS?

- “My lack of insurance”
- “Just chickening out”
- “If I can’t find a ride home afterwards”
- “I’ve just been lazy.”
Limitations of Findings

- Pilot study data collection is not complete
- VERY small sample size (n = 10)
- Hard to contact patients
- Only half of the patients surveyed were from West Philadelphia
Lessons Learned

- Complications of creating a questionnaire
- Created a Microsoft Access Database
- Drafted an IRB Proposal
- Complexities of conducting a research study
- More informed about CRC and CRCS
- The limitless possibilities of research
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