Making the Business Case for Patient Navigation

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Dialogue for Action
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Objectives

1. Patient Navigation for Screening Colonoscopy
   a. Currently there is no reimbursement for navigation
2. Focus on African American and Latino Primary Care Patients
3. Return on Investment for the Institution
4. Return on Investment for Society
Mount Sinai Patient Navigation Program
Standard of Care

- Direct Referral System
- Navigation process
- Grant funded $^2,$ $^3$
Direct Referral System

- Patients medically cleared by their Primary Care Physician at the time of referral
- Schedule for colonoscopy directly
- No need for a pre-procedure office visit with Gastroenterologist
Navigator

- Who were the navigators?
  - Trained health educators
  - Training lay volunteers – previous personal screening experience
  - From the same communities

- Manualized training materials
  - Formalized curriculum
  - Scripted navigation calls

- Ethnically and linguistically similar
Navigation Process \(^{2,3}\)

- Series of 3 Phone Calls (following medical clearance) by a navigator
  - Scripted to avoid drift
- Call 1 – schedule the procedure
  - 1-2 weeks following PCP visit
  - Briefly review prep and need for escort
  - Mail prep instructions
- Call 2 – 2-week Reminder call
  - Review of prep – ensure that they have a plan to purchase it
  - How to use the prep reviewed
  - Need for (and plan) for an escort
  - Answer any questions/concerns
  - Ability to reschedule and back fill the slot
- Call 3 – 3-day Reminder call
  - Location
  - Dietary changes
  - Plan for starting the prep
  - Escort plan
Return on Investment to Institution
Calculation of Costs – Navigation

- Patients who completed colonoscopy (78.5%) and those who didn’t
- Navigator time for each of the calls, as well as call attempts
  - 38 minutes for completers; 29 for non-completers
- Number of times a patient rescheduled
  - Particularly if too late to reschedule that time slot
- Type of colonoscopy completed
  - Screening; with biopsy; with snare polypectomy
- Supply and other costs
  - Mailing and printing of materials
  - Prep cost if we purchased for the participant
  - Car service
Calculation of Costs – Institution

- Contribution margin of each procedure
  - Revenue generated subtracting out direct medical costs
- Direct medical costs
  - Staffing in endoscopy
  - Endoscopy costs
    - Supplies; room time
  - Program costs
    - Administrative
  - Support services
    - Housekeeping, laundry, record keeping
- Did not include professional fees
  - All endoscopists salaried
Results

- Cost of Navigation – Sample of ~500 people
  - $14,027
  - Includes navigation for completer and non-completers
  - Add on costs
  - Did not include oversight

- Colonoscopy Revenue
  - Screening Colonoscopy (53.4%)
  - Colonoscopy with biopsy (30.1%)
  - Colonoscopy with snare polypoctomy (16.5%)
  - Total Revenue = $95,266 (395 completers)

- Net Income: $81,238

- Modeling conducted on Theoretical Cohorts
Return on Investment from a societal perspective
CRC screening via Colonoscopy

- Examined the cost-effectiveness of navigation for screening colonoscopy – Payor view
  - Minority population
  - Minority screening rates generally lower than for whites
  - Mortality also high for some groups (e.g. African Americans)
  - Analyzed based on Mount Sinai sample and 10,000 case-cohorts

- Cost of navigation included
  - No reimbursement for navigation – so need to prove its worthiness

- Goal of improving Population Health
  - Potential to also reduce health disparities
Model

- 1-time screening; real-world based on our population
  - Then modeled on larger cohorts
- Mixed population – both on race/ethnicity and age
- Screening reproduces the natural history if adenomas and CRC without screening
  - Normal -> small polyp -> CRC -> Death
Comparisons

- Colonoscopy every 10 years
  - Adherence at 40% without navigation; 65% with navigation

- Annual FOBT or FIT
  - If positive → colonoscopy offered

- Ages 50 to 80

- Based costs using Medicare reimbursement and CRC care costs

- Measurement of QALY
  - quality adjusted life year – measure of disease burden
  - Assess the value for money of a medical intervention
Results

- Colonoscopy **without** navigation more effective and less costly than no screening
- Colonoscopy **with** navigation dominant over colonoscopy without navigation
- Cost-effectiveness shown due to increase in screening achieved when navigation was available
- QALY – Patient navigation for screening colonoscopy may increase life expectancy while decreasing costs
Final Thoughts

- Patient Navigation for colonoscopy appears to be cost effective in several models
- May help to reduce health disparities in cancer screening and mortality
- Still non-reimbursable

Caveats
- Samples gathered in a research setting
- Didn’t include overhead costs such as the training and supervision of the navigators
- Open access referral system
- Closed system for procedures
- Did not account for PCP visit or Endoscopist
References


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