Increasing Immunochemical Fecal Occult Blood Test (iFOBT) kit return rate in a Federally Qualified Healthcare Center

Incorporation of telephone reminder system and population specific patient education into the iFOBT kit critical path, along with recommendations for workflow improvement and sustainability at Watts Healthcare Corporation.

Christina Vu
Watts Health Center
Los Angeles, California
Introduction

• This study focuses on the low iFOBT return rate.
• Adoption of PCMH model 2011
  • PCMH Level 2 recognition - 2014
  • Grant amount: $5,000 - rationale: Using reminders to increase colorectal screening rates
  • CDSS alert system implemented 2013, March 2013 educational brochures
    • increased screens by 5%
• Statistics
  • 2012: 54.3% ; 2013: 61.4%
  • Healthy People 2020 goals: 70.5 percent.
  • Many studies address increasing screens, but not return rate. There are many limitations in resource at FQHCs.
• Follow protocols for improvement:
  • Root Cause Analysis
  • Use Plan Do Study Act model for testing
    • telephone reminder system
    • educational/instructional flyer
  • Implementation, then analyze and test for sustainability
• Analyze workflow and provide recommendations for future improvement projects.
Background

- Colorectal cancer is the third most common cancers in men and women and remains the second leading cause of death by cancer in the United States.
- Screening can detect precancerous polyps and removal can be done before the polyps become cancerous.
- Eighty percent of colorectal cancer may be preventable through removal of colon polyps during endoscopic colorectal screening.
- The InSure FIT test has an 87% sensitivity for colorectal cancer.
- Why is it important to improve colorectal screening Watts Health Center?
  - Colorectal cancer screening disparities are linked to a combination of socioeconomic disadvantages from lower education and income, place of residence, and inadequate insurance.
  - According to the Centers for Disease Control and Prevention, African/Black americans had highest incidence rates of colorectal cancers followed by Whites and Hispanic/Latinos.
  - Majority patient population at Watts include African American/Black (80.8%) and Hispanic/Latino (45.7%), and 99.0% patients are at or below 200% poverty level.
  - Patient Centered Medical Home (PCMH) status level 2
  - Getting screens is a measure of population health.
2 “Plan, Do, Study, Act” (PDSA) cycles were ran and observations were made for Work Flow for iFOBT screens:

**PDSA cycle 1**

**PLAN:**
AIM: Increase iFOBT return rates to increase overall iFOBT screens per year.

First test of Change: Telephone Reminder system

Questions & Predictions: Will increase iFOBT return with reminder calls

Plan to carry out cycle: Group A will be 80 random patients without reminder calls. Group B will be 80 random patients that I will call 7-10 days after appointment to remind them about the iFOBT kits. ECW will be used to collect data.

Measure determine if successful: Group B will have higher rate of iFOBT kit returns than group A.

**DO**
Describe what actually happened when you ran the test:
• Problems with reaching patients via phone.
• Patients did not know where or when to bring the test kit back.

**STUDY**
Describe the measured results and how they compared to the predictions
Group B will have higher rate of iFOBT kit returns than group A. It was as predicted

**ACT**
• Implement telephone reminder system
• Add a flyer with directions for patients to bring home so patients will not be confused (PDSA 2)

**PDSA cycle 2**

**PLAN:**
AIM: Increase iFOBT return rates to increase overall iFOBT screens per year.

First test of Change: Educational/Instructional flyer in response to previous PDSA.

Questions & Predictions: Will increase iFOBT return with by supplementing reminder calls.

Plan to carry out cycle: Group C will be 80 random patients who receive the education/instructional flyer to bring home with the iFOBT kits.

Measure determine if successful: Group C will have higher rate of iFOBT kit returns than group A.

**DO**
Describe what actually happened when you ran the test:
• iFOBT kits ran out, only 30 patients received the iFOBT kits with the flyer. Data was insufficient.
• There was only one week to collect data, no 4 weeks as group A and B

**STUDY**
Describe the measured results and how they compared to the predictions
• Group C had 6 out of 30 (20%) patients who brought back the iFOBT. Data is insufficient.

**ACT**
• Repeat PDSA cycle 2 again with changed protocols for reordering PDSA kits
• Implement a new protocol for reordering kits.
### Results - PDSA cycle 1 & 2

<table>
<thead>
<tr>
<th></th>
<th>Total eligible patients that were given iFOBT kits at appointment</th>
<th>Total patients that brought back by August 8,2014</th>
<th>Return rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A</strong> did not receive reminder calls</td>
<td>80</td>
<td>37</td>
<td>46.2%</td>
</tr>
<tr>
<td>start: June 16, 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group B</strong> received reminder calls</td>
<td>80</td>
<td>49</td>
<td>61.2%</td>
</tr>
<tr>
<td>start: August 15, 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group C</strong> received Educational/instructional flyer with</td>
<td>30</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>start: July 24, 2014</td>
<td>(invalid amount because adult medicine ran out of kits)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 37 out of 80 patients in group A had a return rate of 46.2%
- 49 out of 80 patients in group B had a return rate of 61.2%
- Group C cycle was discontinued at 30 patients. Out of the 30 patients who received the educational/instructional flyer 6 patients brought the kit back in one week.
During chart preparations, medical assistants, licensed vocational nurse adds into the CDSS alert system that patient is due for a colorectal screen.

Patient comes into waiting room and checks in.

Patient gets called in, sees the medical assistant or nurse to get an initial assessment/vitals

Patient sees provider. Provider gets an alert from CDSS showing that patient is due for their colorectal cancer screening (usually over the age of 50), the doctor puts in an order for the iFOBT colorectal cancer screen kit. Provider explains about colorectal cancer and the importance of iFOBT annual screenings.

At discharge, medical assistants or nurses reviews the orders and checks off when kit is given to the patients. This marks on eClinical Works that the lab order is transmitted to the lab. The medical assistant or nurse hands out the iFOBT kit to the patient. The yellow envelope with Quest diagnostic lab address is taken out of the kit. The medical assistant or nurse explains to the patient how to take the sample and when to bring it back. Medical assistant or nurse will hand out the educational/instructional flyer to the patient with the iFOBT kit, and write out date to bring it back by. Hand out spanish instructions if necessary.

Medical assistant will go into eClinicalWorks and select reminder message.

When iFOBT kit is down to a few boxes, the head LVN will be notified and he/she will reorder.

A computerized message reminding patients to bring back the iFOBT kit will be placed one week after patient receives the iFOBT kit.

Patient takes the iFOBT kit home, collects the sample, and brings it back to Watts Health Laboratory.

CRITICALLY ABNORMAL

When Quest receives the sample, they check collected in eClinicalWorks (date stamp). After sample is analyzed, report is placed on eClinicalWorks and another date is displayed.

Lab faxes attention to nurses

ABNORMAL

Provider informs nurses to call patients to come in for same day appointment or ASAP

NORMAL

If normal, patient is not informed and is told at the next appointment by provider

Provider reviews labs when they come in during administrative time. Provider changes results status (normal or abnormal) on eClinical Works and checks “reviewed” on eClinicalWorks,
Discussion

• Telephone call reminder
  • Preliminary study shows telephone reminder calls help.
  • Set up computerized message and SMS and collect data for the year. Study was
done with live calls. Compare difference between live versus computerized for this
population.

• Educational/instructional flyer
  • Could not be run to full potential because iFOBT kits ran out.
  • Limitation in time as PCLP scholar.
  • Must be repeated with new protocol for reordering iFOBT kits.
  • Medical assistants expressed that these helped them out.

• Workflow improvements for the future:
  • educational video in waiting room
  • provider give out kit, have intensive education with patient; followed by
reinforcement from medical assistants/nurses.
Recommendations

- Implementation of telephone system - Train all medical assistants and nurses during monthly staff meeting the new protocols for setting up reminder message. Director of Clinical Operations must follow up with reports monthly to make sure reminders are being sent out.

- Implementation of education flyer - mail room to start printing. Promote patient education about screening.

- Continue PDSA to further make improvements.

- Find solutions geared towards increasing patient activation. Use workflow template to create improvements.
Conclusion

• Ultimate goal is to improve health of patient population at Watts Health Center. Create access to resources and education for patients.

• It is important to provide access about colorectal cancer screening to patients, especially since SPA-6 has the highest death rates from cancer.

• There will always be ways for improvement.
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