Applying a Clinical Microsystems Approach to Improving Colorectal Cancer Screening in a Community Health Center

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Problem

• Colorectal cancer (CRC) is the second most common cause of cancer death in the United States.
• More than half of all cases are attributable to modifiable risk factors and could be mitigated by appropriate screening and surveillance.
• Massachusetts led the nation in CRC screening (CRCS) rates in 2020.
• Wide disparities in CRCS exist based on income level and insurance status.
• 79% of patients >200% FPL vs. 55%<100% FPL.
• 74% of patients w/ private insurance or Medicare vs. 30% uninsured.

Setting

• Duffy Health Center is a federally qualified community health center specializing in care for people experiencing homelessness in Hyannis, Massachusetts.
• Duffy Health Center is a participant in a Massachusetts Department of Public Health/Massachusetts League of Community Health Centers’ Learning Collaborative to promote improvements in CRCS in low-income populations.

Aims

Global Aim: Sustainably improve Duffy Health Center’s CRCS rates by use of maintainable workflow development, staff training, removal of barriers, patient education, and use of data systems for health interventions.

Specific Aims:
• Improve Duffy Health Center’s overall ordered colonoscopy completion rate to 20% by Dec 31, 2022.
• Improve Duffy Health Center’s follow-up colonoscopy completion rate to 50% within 6 months of a positive FIT test by Dec 31, 2022.

Methods

Utilizing the clinical Microsystems framework set forth by Nelson et al in Quality By Design, we:
• Defined our microsystem of focus: Duffy Primary Care
• Mapped the anatomy of the process we sought to improve
• Identified areas ripe for improvement via fishbone diagram
• Implemented simple, standardized changes to the process
• Tracked and measured progress for future augmentation

Action Plan

1. Shadow Duffy PCPs during clinical encounters with patients requiring CRCS.
2. Conduct interviews with Duffy referrals and local GI specialists and their office staff to identify challenging patterns in the referral/scheduling/procedure process associated with Duffy patients.
3. Survey and interview Duffy patients who have colonoscopies are referred to colonoscopy to identify common barriers to colonoscopy.
4. Meet with Duffy GI and PCP staff to generate a fishbone diagram and process map for the colonoscopy process.
5. Standardize the existing barrier screening protocol for long-term, seamless implementation into referral process.
6. August referral process by including a form with embedded case manager contact info as well as preferred patient communication styles in the faxed referral forms.
7. Develop patient education tools to enhance patient competency in coordinating the procedure and completing their bowel prep.
8. Track and measure progress.

Results

Lessons Learned & Next Steps

Lessons Learned
• Sustainable improvement requires time and momentum
• Implementation is as much an art as it is a science
• Walking through a process like a patient reveals simple opportunities for improvement that might be otherwise missed when viewing the system from above.

Next Steps
• Fine-tune the implementation of patient education tools
• Work with incoming CHWs/MAs to establish a standardized process for patient education as it relates to CRCS
• Continue developing partnerships with local GI specialists to strengthen the pipeline between Duffy and specialists.

Process Mapping

Fishbone Diagram

Patient Education Tools

Scan for References