

## Problem

- Colorectal cancer (CRC) is the second most common cause of cancer death in the United States<sup>1</sup>
- More than half of all cases are attributable to modifiable risk factors and could be mitigated by appropriate screening and surveillance<sup>2</sup>
- Massachusetts led the nation in CRC screening (CRCS) rates in 2020<sup>3</sup>
- Wide disparities in CRCS exist based on income level and insurance status
  - 70% of patients >200% FPL vs. 55% <100% FPL<sup>1</sup>
  - 74% of patients w/ private insurance or Medicare vs. 30% uninsured<sup>1</sup>

## 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
- \*Learning Collaborative is sponsored and funded by the Centers for Disease Control.



## Aims

### Global Aim:

Sustainably improve Duffy Health Center's CRCS rate by use of maintainable workflow development, staff training, removal of barriers, patient education, and use of data systems for health interventions

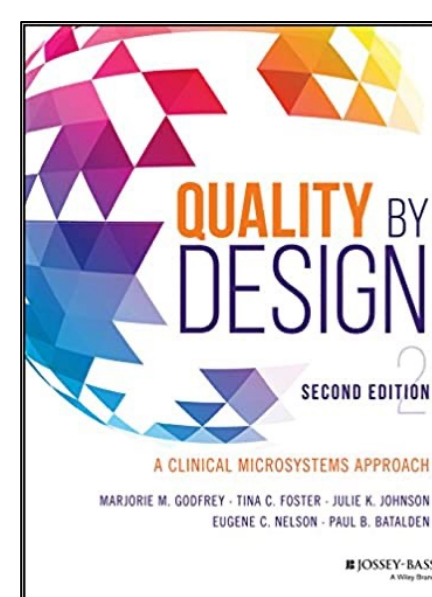
### Specific Aims:

- 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*<sup>3</sup>, we:

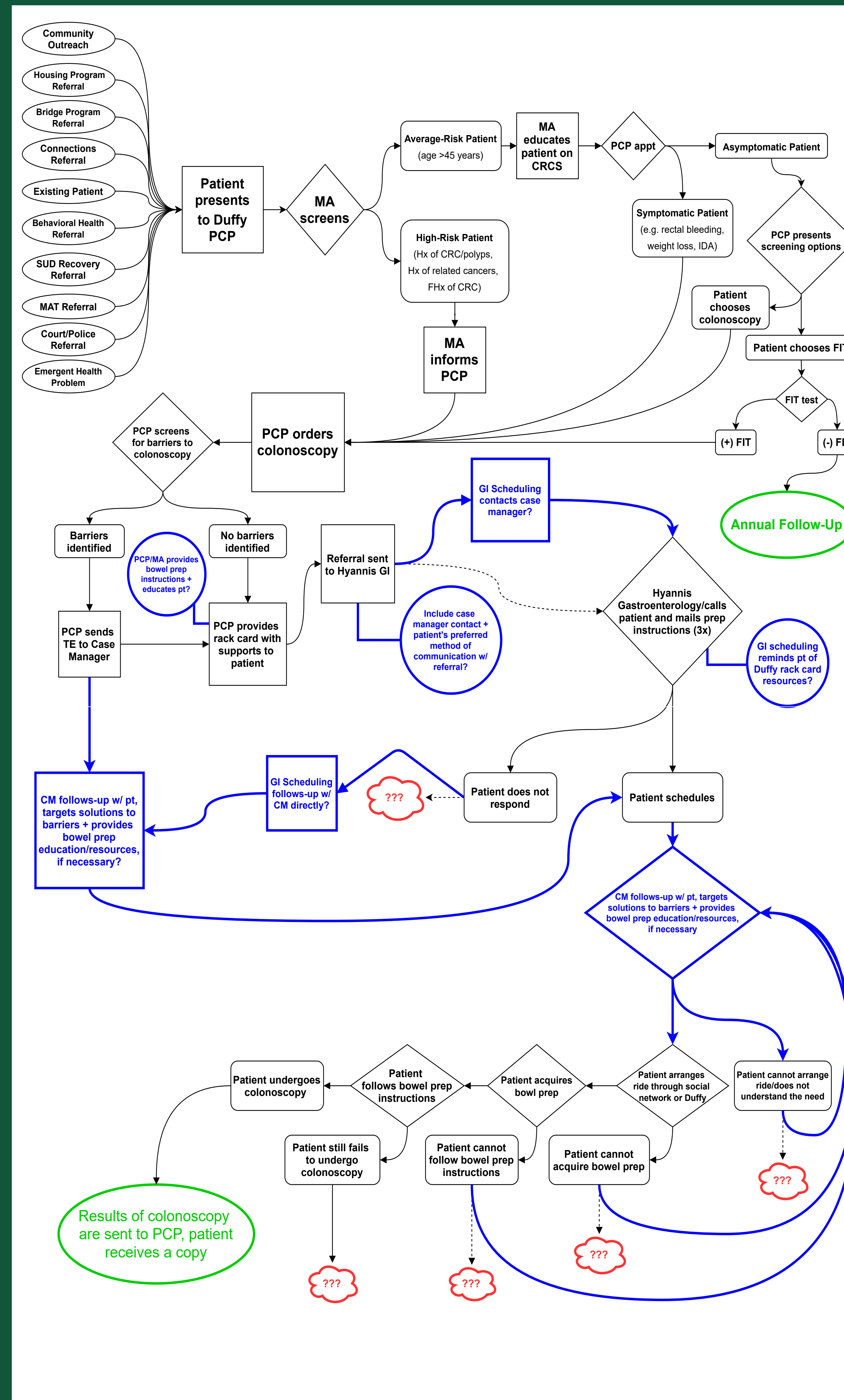
- Defined our microsystem of focus: Duffy Primary Care
- Mapped the anatomy of the process we sought to improve
- Identified areas ripe for improvement via fishbone diagram
- Implemented simple, standardized changes to the process
- Tracked and measured progress for future augmentation



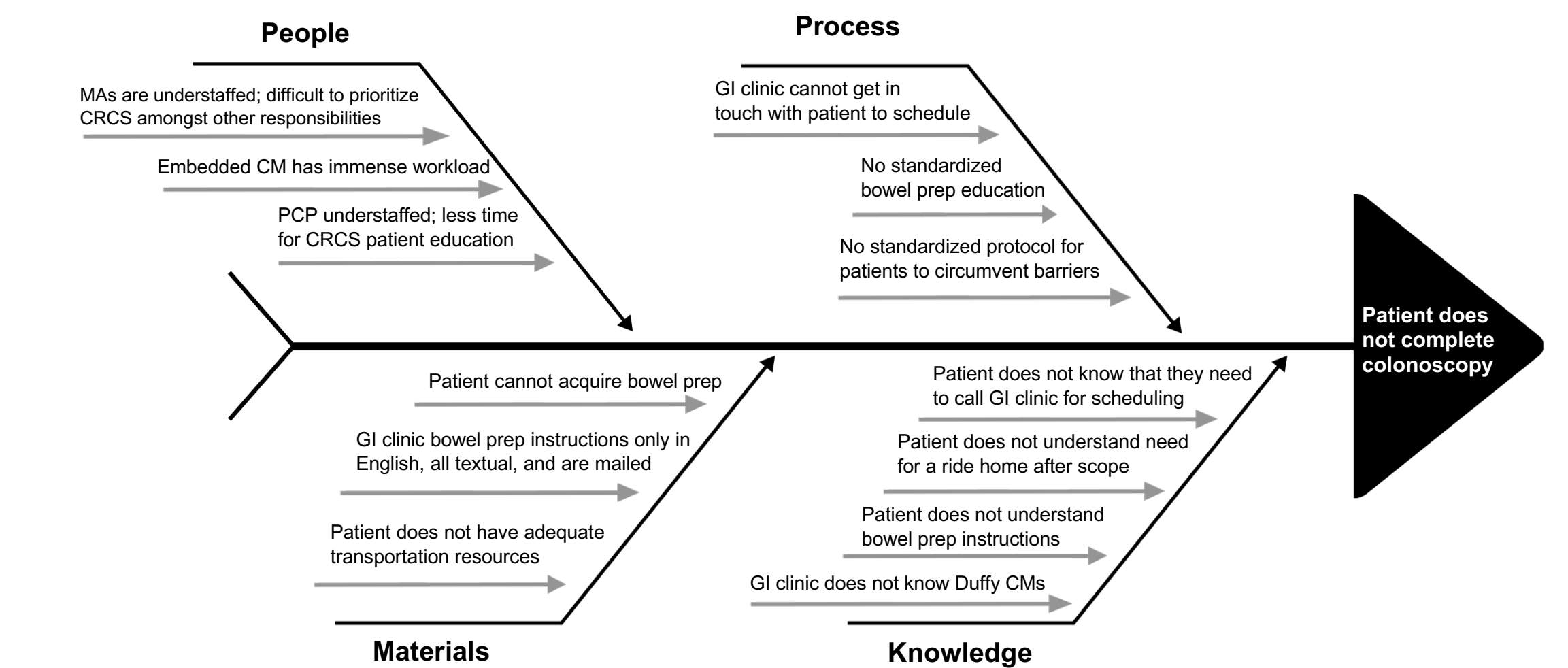
## Action Plan

- Shadow Duffy PCPs during clinical encounters with patients requiring CRCS.
- 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.
- Survey and interview Duffy patients who have colonoscopies/are referred to colonoscopy to identify common barriers to colonoscopy.
- Meet with Duffy QI and PCP staff to generate a fishbone diagram and process map for the colonoscopy process.
- Standardize the existing barrier screening protocol for long-term, seamless implementation into referral process.
- Augment referral process by including a form with embedded case manager contact info as well as preferred patient communication styles in the faxed referral forms.
- Develop patient education tools to enhance patient competency in coordinating their procedure and completing their bowel prep.
- Track and measure progress.


## Process Mapping



## Fishbone Diagram



## Patient Education Tools



### Bowel Prep for Colonoscopy: Instructions for Patients Using Miralax + Dulcolax

For 5 days prior to your colonoscopy:  
Stop taking any iron tablets

For 3 days prior to your colonoscopy:  
DO NOT eat corn, nuts, or seeds

The day BEFORE your colonoscopy:  
ONLY DRINK CLEAR OR SEE-THROUGH FLUIDS  
NO SOLID FOOD! (see next page for a list of OK foods)

The day OF your colonoscopy:  
DO NOT EAT OR DRINK ANYTHING  
(a sip of water for daily meds is OK)

#### Miralax + Dulcolax-Specific Instructions

At a local pharmacy, buy:


- One pack of Dulcolax
- One 288gm bottle of Miralax
- TWO 32oz bottles of Gatorade/Powerade (NO purple or red flavors)

At 4pm the day before your colonoscopy, take 4 Dulcolax tablets.

At 6pm the night before your colonoscopy, mix half of the Miralax bottle with one 32oz Gatorade bottle. Drink until all of the bottle is gone.

At 10pm the night before your colonoscopy, mix the rest of the Miralax bottle with another 32 oz bottle of Gatorade.

- If your colonoscopy is before 10am the next morning, drink all of the bottle.
- If your colonoscopy is after 10am the next morning, drink all of the bottle by 4-5 hours before your colonoscopy.



### Bowel Prep for Colonoscopy: Foods You Can Eat

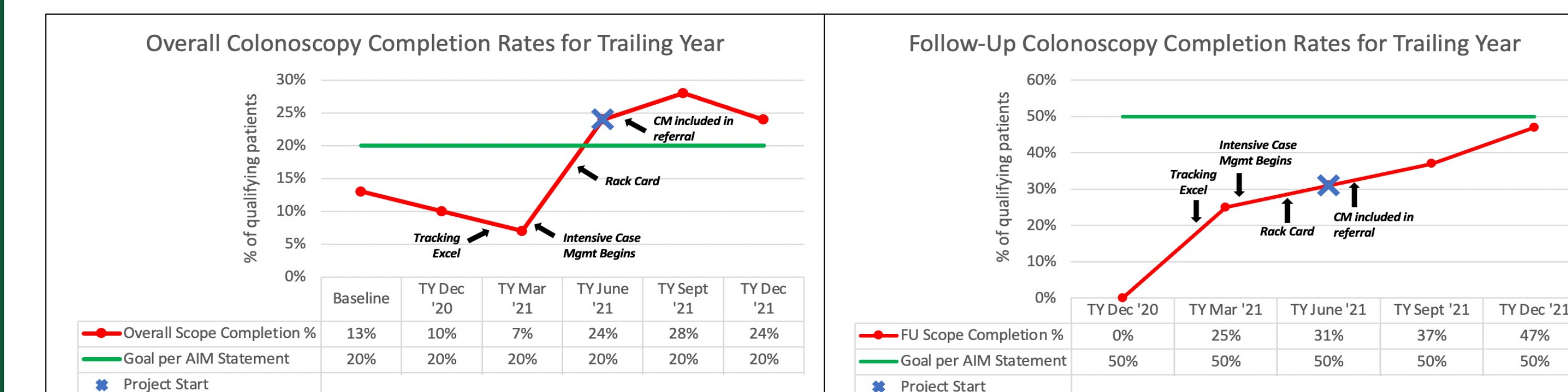
Remember: You can **NOT** eat ANYTHING the DAY OF your colonoscopy!!!

The day before your colonoscopy, you can only eat clear or see-through liquids:

- WATER!!! (hydration is important)
- Gatorade or Powerade (note: NO red or purple flavors!)
- Clear fruit juices (white grape or apple, NO pulp)
- Kool-Aid or Crystal Light (NO red or purple)
- Tea or coffee (NO milk or cream)
- Soda (regular or diet Coke/Pepsi, sprite, 7-Up, ginger ale, orange soda)
- Broth or bouillon (chicken, beef, or vegetable)
- Jell-O (NO red or purple)
- Popsicle or Italian ice (NO red or purple)
- Hard candies (NO red or purple)

GENERAL RULE: IF YOU CAN SEE THROUGH IT, YOU CAN DRINK IT! (BUT NO RED OR PURPLE!)

## 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

