

# Describing Colorectal Cancer Screening in a Family Medicine Clinic: Examine the EHR

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## BACKGROUND

- Incidence and mortality rates for colorectal cancer (CRC) are the second highest (after lung cancer) among cancers that affect both men and women in eastern North Carolina.
- USPSTF recommends several screening modalities to detect polyps and early cancer lesions.
- CMS requires providers to document in the Patient Quality Reporting System (PQRS) completion rates for CRC screening. At time of the project, ECUP baseline in Family Medicine was 44 % and the PQRS goal is >50%.

## PROJECT AIM

- Objectives:
  - Describe CRC screening guidelines and Quality Reporting Standards
  - Outline process for identifying screening completion in Electronic Health Record (HER),
  - Determine if underestimate of colorectal cancer screening rate may be, in part, due to misclassification with the EHR
- Problem Statement:
  - Documentation placement within EHR may lead to underestimate of actual CRC screening rate (proportion).
- Aim:
  - ECU Physician documentation of colorectal cancer screening aims to be improved to >50% from August to December 2015.

## PROJECT DESIGN/STRATEGY

- CRC screening is not always recorded in the Health Maintenance Section of the EHR.
- The net impact of screening results misplacement underestimates the true CRC screening rate.
- To improve screening aims, screening results in encounter notes and the 'image' section were added to the Health Maintenance Profile

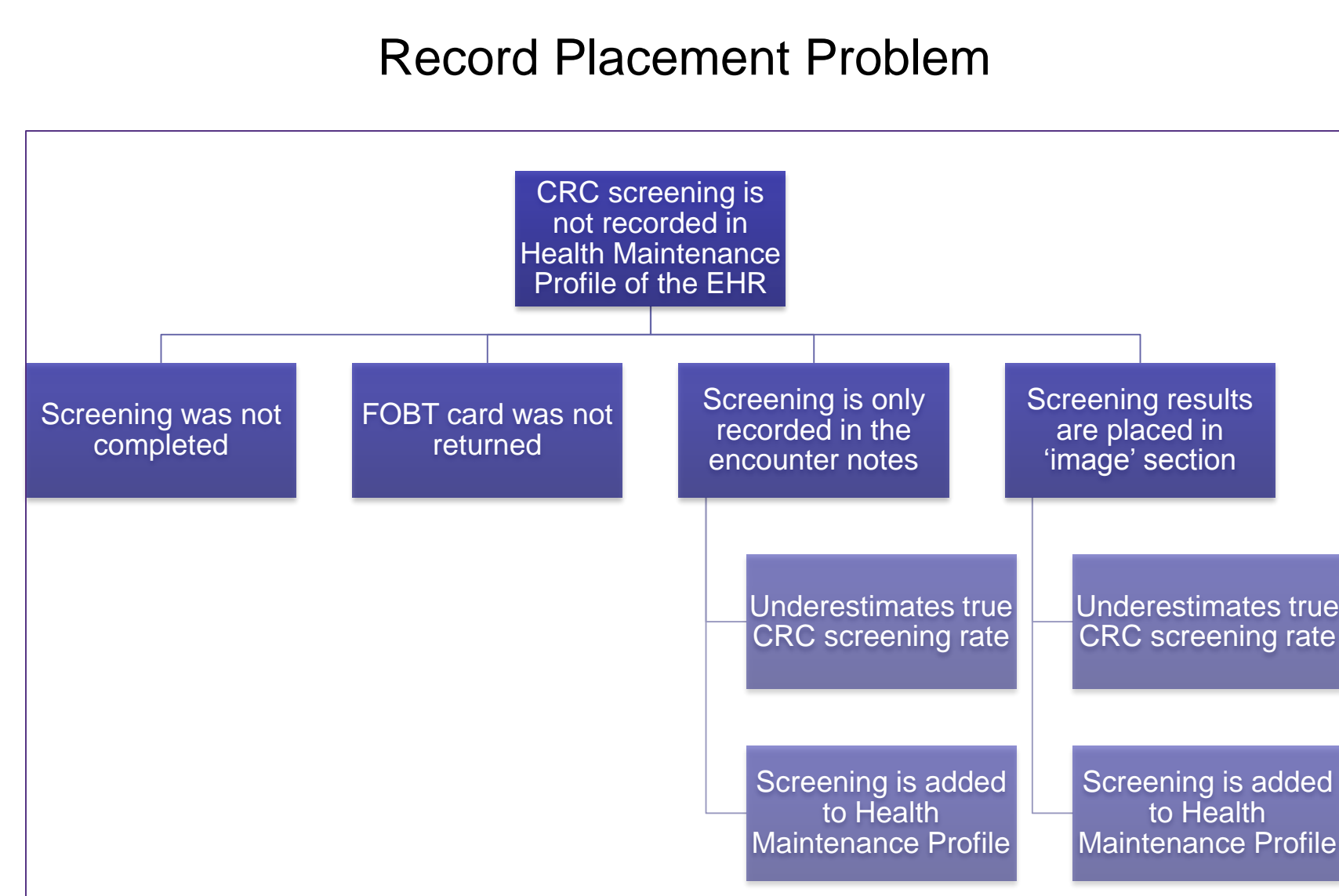


Figure 1. Flow chart of problems and solutions

## CHANGES MADE (PDSA CYCLES)

### ECU Family Medicine Dataset

- Provided by QI Leader for ECUP
- Patient roster originated from NC-BCBS insured patient population obtained through HEDIS
- A subset of 366 ECUP-Family Medicine patients insured by BCBS and reported to ECU to be out of compliance with CRC screening guidelines as of September 1, 2015 was included in the dataset.

### Individual Patient Records (n=356)

- Patients charts were analyzed to identify:
  - Type of Screening
    - Colonoscopy, Sigmoidoscopy or Occult blood
  - Status of CRC Screening
    - Overdue or not overdue
  - Risk level
  - Polyps Count
  - Comorbidities

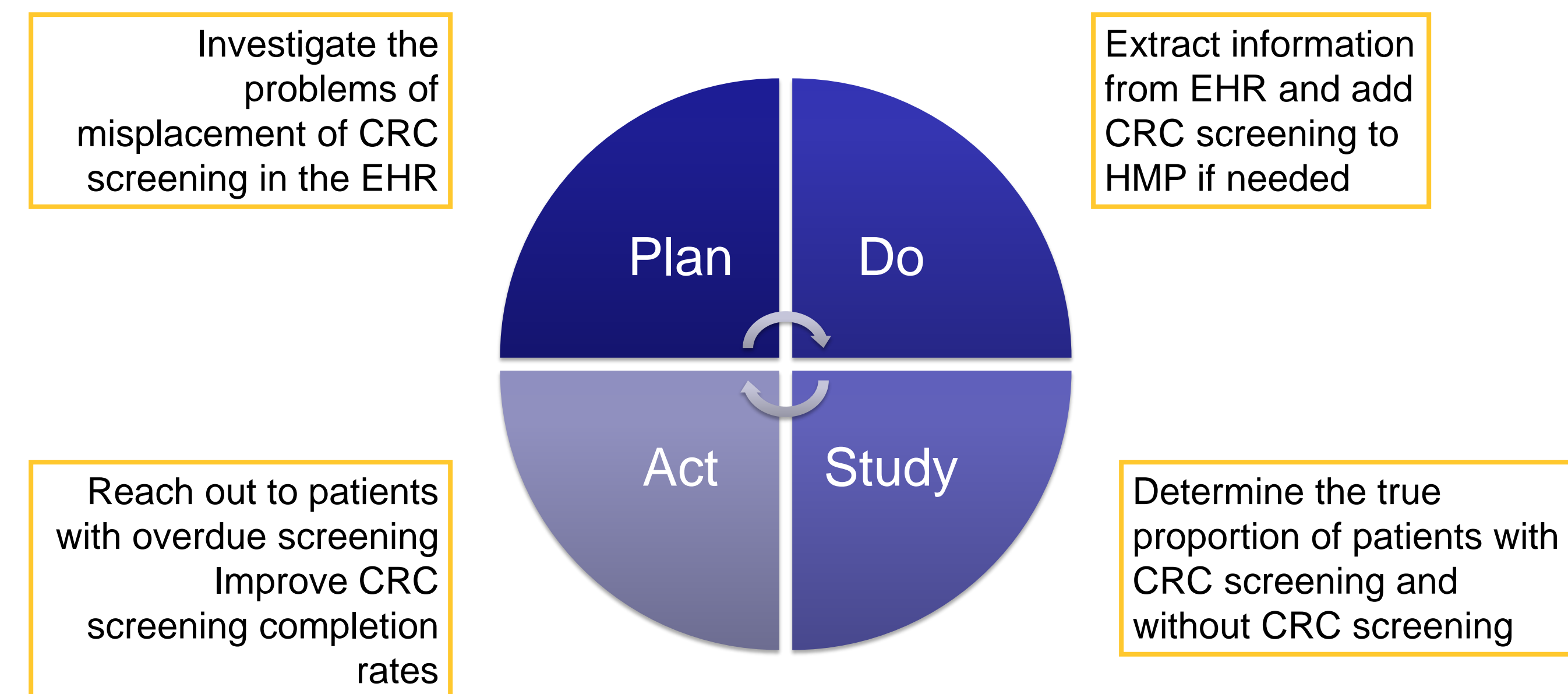


Figure 2. Plan Do Act Study Cycle for CRC Screening Quality Improvement

### Outcome Measures for Each Patient (n=356)

- Number (%) of updates to HMP
- Number (%) of Type of update to HMP
- Referral Appointment completion proportion
- Number with polyps and/or invasive cancer
- Number (%) overdue for screening
- Number (%) never screened

## RESULTS/OUTCOMES

- 44% (157/356) (54 m, 103 f) were up-to-date on screening (not overdue).
  - Among records up to date, 64% (100/157) were documented in the HMP
  - In 36% (n=57) of records, screening was not documented in the HMP.
- 55% were not up to date (199/356)
  - Among those not up to date, 68% (135/199) had no evidence in chart of ever being screened.
  - 32% (64/199) of patients overdue were screened in past but overdue.

Table 1. EHR Audit of 356 Patients Insured by NC BCBS Said to be Out of Compliance with CRC Screening as of September 1, 2015

Up-to-date in EHR		Overdue			Total
Up-to-date in HMP	Up-to-date Not in HMP	Total Up-to-date	Screened in past, now Overdue	Never Screened	
100 (64%)	57 (36%)	157 (100)	64 (32%)	135 (68%)	199 (100)
28%	16%	44%	18%	38%	56%

Table 2. Referral Information Based on Screening Status

Referral Status in EHR	Total	Up-to-date, in HMP	Up-to-date, not in HMP	Overdue	p=0.000
No information <sup>a</sup>	N=356	n=100	n=57	n=199	
Yes <sup>b</sup>	219 (62)	39 (39)	39 (68)	141 (71)	
Among 137 'Yes', Status of Referral Appointment					p=0.000
Referral fulfilled	80 (22)	61 (61)	17 (30)	2 (1)	
No show	18 (5)	0 (0)	0 (0)	18 (9)	Outreach to these pts.
Cancelled	19 (5)	0 (0)	0 (0)	19 (10)	
Scheduled	20 (6)	0 (0)	1 (2)	19 (10)	

<sup>a</sup> Not in chart or not documented as 'referral.' Cannot be determined in EHR  
<sup>b</sup> Patient referred outside ECUP/Vidant

## LESSONS LEARNED

### Summary of Results

- 39% of patients required some type of update to HMP
- 56% of patients were overdue for screening
- 38% of patients were never screened
- 28% of patients that were listed by the BCBS database as out of compliance with CRC screening were in fact in compliance and documentation was listed in the HMP
- 16% of patients that were listed by the BCBS database as out of compliance with CRC screening were in fact in compliance, but documentation was listed elsewhere in the EHR and not in the HMP

### Summary for Patients with Overdue CRC Screening

- 18% completed CRC screening in the past but are not overdue
- 29% of patients overdue for CRC screening were referred and 9% of those patients did not show up to their referral appointment.

## NEXT STEPS

- While insurance coverage with or without BCBS may affect eligibility to complete screening, opportunity exists to link patients into CRC screening using evidence based strategies.
- Outreach to patients with overdue screening will continue to improve the completion rates for CRC screening and exceed the goal of >50% of patients screened.
- Our data support that training the health care professionals to record results of CRC screening in the Health Maintenance Profile will improve the accuracy of data.

## ACKNOWLEDGEMENTS

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