

Maximizing Mammography: A Quality Improvement Project to Boost Screening Rates in the Residency Clinic



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1. Introduction

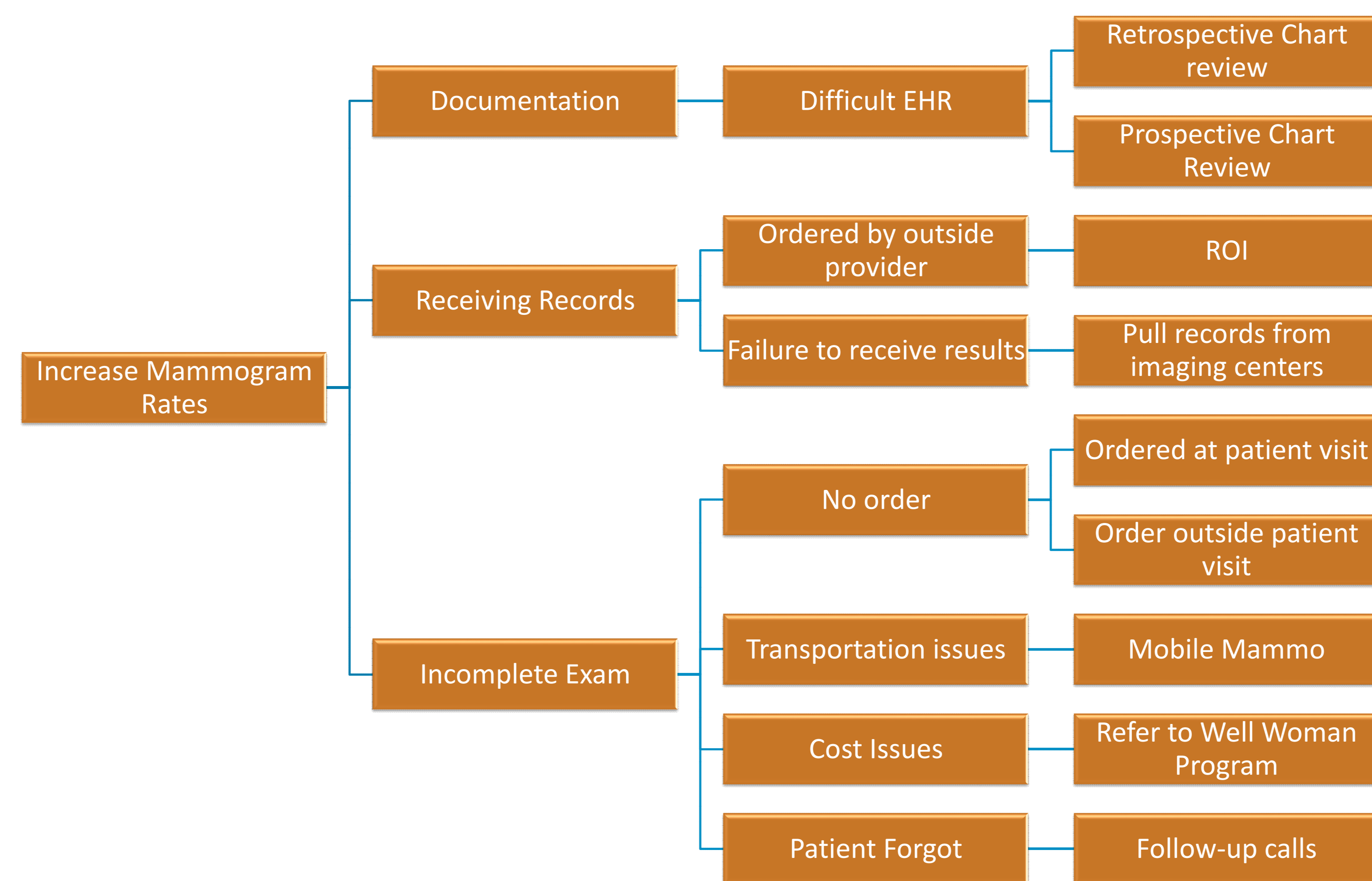
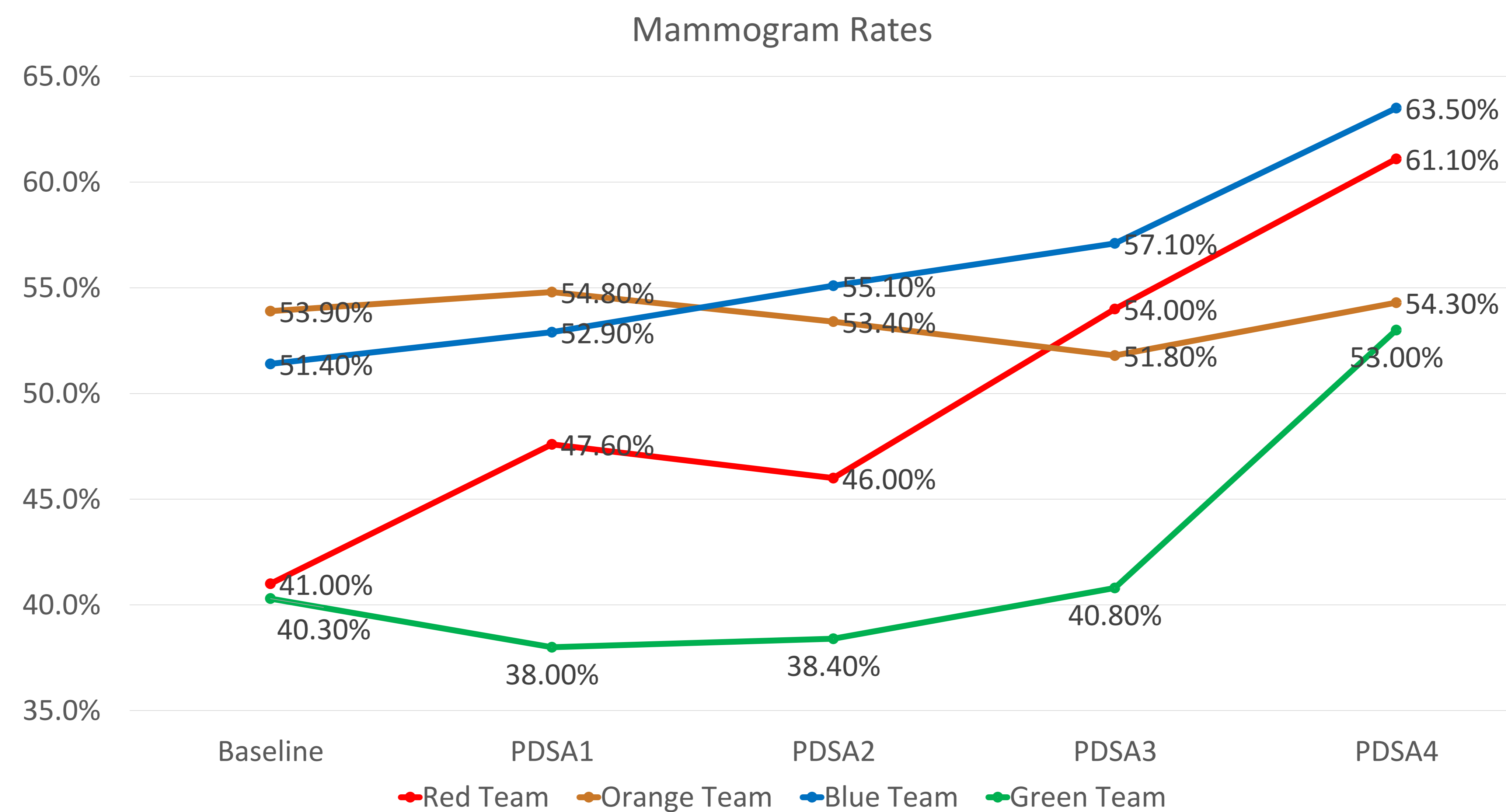
Breast cancer remains a significant public health concern, and disparities in screening rates persist. As the most prevalent cancer globally, early detection through routine screening significantly improves prognosis and treatment outcomes. Despite the clear benefits, breast cancer screening rates often fall below optimal levels. This quality improvement project addresses the challenge of suboptimal breast cancer screening rates within our residency clinic. The aim is to enhance early detection by increasing mammogram rates above 55%. Multiple interventions were systematically applied to four distinct groups within the clinic, allowing for an exploration to identify the most effective intervention strategy.

2. Methods

All residents (PGY1-PGY3) and faculty were organized into four teams (Blue, Green, Orange, and Red Team). Utilizing data from our Electronic Medical Record, mammogram rates for patients assigned to physicians in each team were identified. Patient deficiency in breast cancer screening was defined as the absence of a mammogram in the previous 26 months. Each team constructed a driver diagram (shown on the right) to identify causes of low breast cancer screening rates within our clinic. The Rapid Plan-Do-Study-Act (PDSA) approach guided our quality improvement initiative. For each PDSA cycle (three cycles in total, each lasting six weeks), teams selected specific interventions based on their driver diagrams (shown below). Results were reported and each team decided whether to adopt, adapt, or abandon their interventions. Teams could employ the same interventions as other teams.

Team	PDSA 1	PDSA 2	PDSA 3	PDSA 4
Orange	Mammogram Capture Sheet	Mammogram capture sheet, work with PRR team to give to patients upon check-in	Refine Mammogram captures sheet, Huddle with PRR	Check Records Directly from Imaging Centers, Placed outstanding orders
Blue	Retrospective Chart Review	Review outstanding mammograms, place orders, contact via MA, phone calls, portal message, or letters	Continue contacting patients that are on gap	Check Records Directly from Imaging Centers
Red	Prospective Chart Review	Review AZARA, Place orders after MA huddle	Text patients that are due for mammograms, place orders	Check Records Directly from Imaging Centers
Green	Retrospective Chart Review	Review Outstanding Mammograms, Place orders, Contact patient via MA	Review AZARA PVP tool with MA when in clinic, order mammograms	Check Records Directly from Imaging Centers and Review PVP

3. Results



4. Conclusion

Our QI project reveals a spectrum of outcomes. We have identified a myriad of challenges, including:

- Inaccurate capture of mammograms within our Electronic Health Record (EHR)
- Dependence on patient attendance for mammogram capture through AZARA PVP and in-clinic methods
- Variability in the efficacy of interventions due to rotations, particularly in inpatient or rural settings
- Deficiencies in our system for managing patients who disengage from our clinic
- Impediments posed by language barriers to the implementation of certain interventions
- Challenges stemming from technological limitations, hindering the effectiveness of specific interventions
- Difficulty in securing timely mammogram appointments.
- The six-week intervention cycle—sufficiently lengthy to obscure the focus of interventions yet potentially too brief to discern their effects
- The influence of sample size (N) on team outcomes; smaller teams face hurdles in effecting change due to limited patient numbers, while larger teams encounter the challenge of navigating a higher volume of patients to achieve measurable impact

Overall, interventions that required orders to be placed during a patient's visit were less successful than placing orders outside of a visit. Furthermore, pulling records directly from the outside imaging centers resulted in an increase in mammogram capture rates. In addition, the competitive nature of the QI project study design may have affected the overall results. The competitive aspect of the project has been particularly beneficial, stimulating a higher level of engagement and commitment, and driving residents to push their boundaries for the betterment of patient care.



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