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# Addressing Barriers to Breast Cancer Screening: Where to Intervene to Increase Mammogram Completion Rates

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## INTRODUCTION

Breast cancer is the second leading cause of cancer death in women in the USA. Mortality rates have decreased 2.2% per year since 1990, much of which is attributed to mammography.

- Mammogram is effective for early detection of primary breast cancers
  - 97% 5-year survival rate in those with localized disease
  - 20% 5-year survival rate in those with metastatic disease
- United States Preventative Services Task Force (USPSTF) and American College of Family Physicians (AAFP) recommend biennial screening of women for breast cancer between the ages of 50 and 74 (Grade B)
- American College of Gynecology (ACOG) and American Cancer Society (ACS) recommend annual breast cancer screening of women for breast cancer between the ages of 50 and 74. (Qualified recommendation)
- USPSTF and AAFP agree screening women 40-49 years old only after a discussion between the patient and the provider (Grade C)

## METHODS

Study sought to determine if an intervention would aid in increasing mammogram screening rates in the Jefferson Family Medicine Associates practice.

- Intervention would provide informational handouts to patients along with the mammogram order form prior to discharge from the office
  - Mammogram scheduling instructions at Jefferson Breast Center
  - Mammogram education
- Training for Team 3 medical assistants
- Email to Team 3 providers outlining the new intervention
- Inclusion Criteria
  - Women
  - 40-74 years of age
  - Patients seen in Team 3
  - Mammography due at time of visit:
    - Due: last mammogram 12 months or greater from date of appointment
    - Not Due: Mammography performed in last year from date of appointment.
- Pre-intervention Control Period: 1/1/17-1/31/17
  - Mammography to be completed by 3/14/17
- Intervention Period: 2/1/17-2/28/17, Handout Provided
  - Mammography to be completed by 4/11/17

## RESULTS

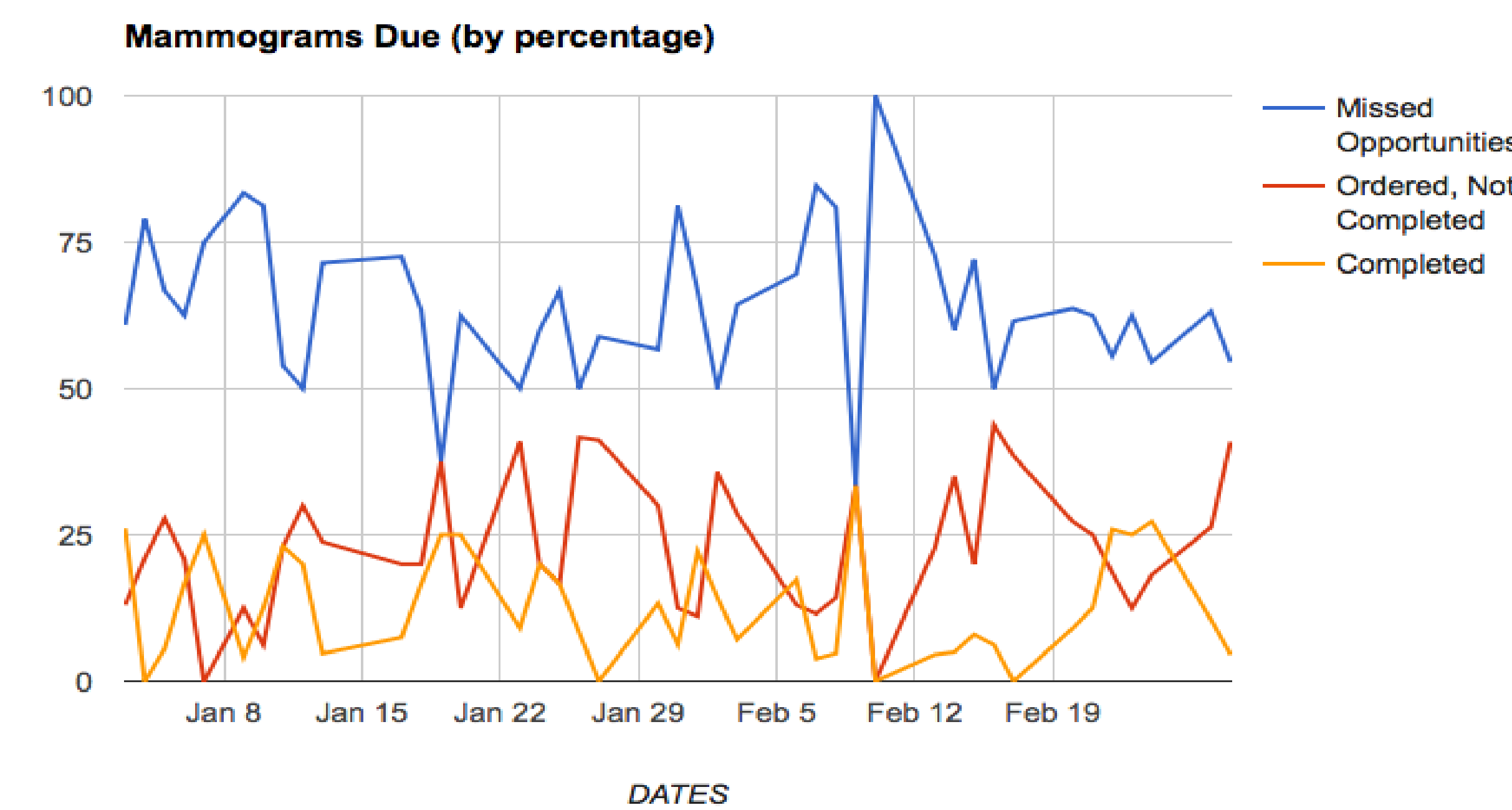


Figure 1. Daily percentage representation of total mammograms ordered, mammograms ordered and completed by patients and mammograms ordered and not completed by patients.

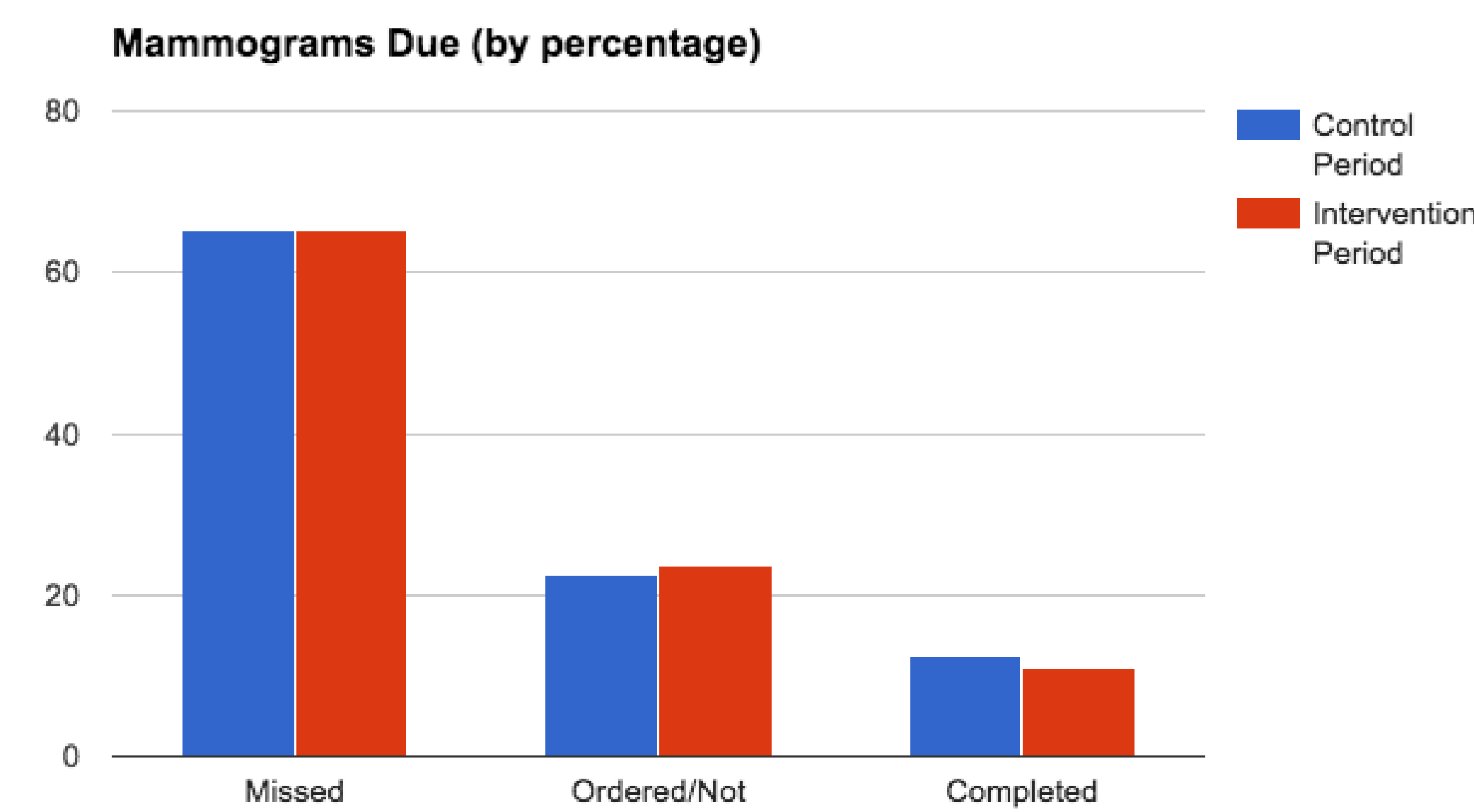


Figure 2. Comparison of percentage representation of total missed opportunities for mammograms to be ordered, mammograms ordered and completed by patients and mammograms ordered and not completed by patients in the pre and post intervention periods.

## STATISTICAL ANALYSIS

- Comparative Error was utilized in order to assess for statistical significance of the intervention
- The calculated comparative error was 11.33 and the absolute percentage difference was 4%
- As the comparative error is greater than the absolute percentage difference, there was no significant difference caused by the intervention.

## LIMITATIONS

- The most conservative inclusion criteria used
  - All women 40-74 were assessed according to annual screening criteria
  - Did not screen for women on biennial screening schedules
  - Did not screen for women who through shared decision making with their physicians have different screening schedules
- Transition to Epic electronic medical record changed office practices
  - Accuracy of Health Maintenance tabs not fully assessed in transition
  - Epic requisition forms have scheduling information included
  - Planning of the study was based on different office practices
  - Change of MA practice ad workflow
- Unable to reliably track if intervention handouts were given to patients
- Patients attending acute care visits were included in final analysis
- Months with differing number of days were compared in final analysis

## CONCLUSIONS

- The intervention made had no statistically significant difference on the outcome measured
  - There was no improvement in mammography completion rates
- Individual providers and teams collectively are missing opportunities to discuss mammography with patients
  - This should be where an intervention is made.
- Lack of mammogram completion rates largely influenced by missed opportunities to order the study and discuss the specifics of the study with patients.

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