Breast Care Program

Cancer Center | University of Virginia Health System

Reducing Recall Rates for Screening Mammography: How We Achieved our Goal

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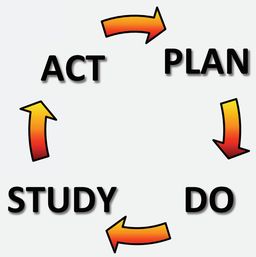
Purpose

The American College of Radiology and the U.S. Agency for Health Care Policy and Research recommend an overall recall rate of 5-12% for screening mammography. There is evidence that beyond about a 12% recall rate, there is little or no gain in cancer detection rate with an increase in false positive examinations. The negative effects of false positive screening examinations can be anxiety provoking for the patient and associated additional medical costs in the absence of disease.

On routine review of our MQSA data, our practice noticed a trend toward increasing screening recall rates which prior to this project, had peaked at 16% for the group. Call back rates for individual radiologists varied from 20% to 12%. A Practice Quality Improvement Project (PQI) was created to improve performance. This exhibit will review our quality initiative.

Methods

At our institution, screening mammograms are read by a group of four radiologists dedicated to breast imaging. Years of experience at the time of this project ranged from 2 to 20 years (mean = 8 years). Following the ABR guidelines for PQI projects, a Plan-Do-Study-Act (PDSA) process was created.



PLAN: Our group identified screening mammography recall rates as an area for practice improvement. An initial target goal of reducing recall rates to 10- 12% was established.

DO: Recall rates and cancer detection rates were collected from our mammography reporting system, Magview. Data for individual radiologists and the group were made available to all breast imagers. Individual recall rates were anonymized. This information was distributed at our monthly faculty meeting.

STUDY: Root cause analysis was performed to identify factors leading to increased screening recall rates among individual radiologists. Potential causes identified included fear of "missing" a cancer, years of experience, and recent implementation of tomosynthesis.

ACT: Our improvement plan consisted of "double reading" all of our screening call backs. All BI-RADS 0 screening examinations, underwent a second, independent review by a different radiologist. The second reviewer agreed or disagreed with the call back. If there was disagreement, a discussion of the case ensued. The primary reader was left to decide the final impression and BI-RADS assessment category for each case. If the patient's screening mammogram was deemed a BI-RADS 1 or 2, both radiologists' names were issued on the final report; with the primary reader as the "reader" and the secondary reviewer as an "agreer".

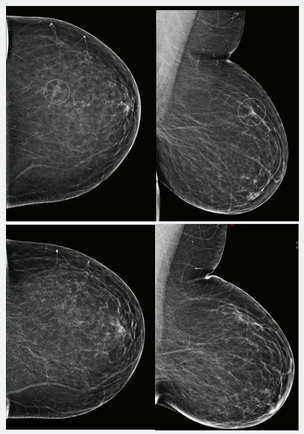


Figure 1. Example of screening recall that was changed to "negative" following double reading. **(a.)** Current year with an area of suspected architectural distortion in the left breast. (circle) Review of prior films **(b.)** reveals a similar area of tissue without distortion. Finding was felt to represent confluence of tissue and summation. Case was reviewed by both radiologists. The final assessment and management was determined by the original interpreting radiologist.

Radiologist	*Screening Recall Rate*	
	Month 1	Month 2
A	15.47%	11.35%
B	20.80%	10.37%
C	19.22%	11.24%
D	16.24%	10.66%
Overall	**17.34%**	**10.97**
Cancer detection rate per 1000	**6.5**	**4.3**

Table 1. Example of screening recall rates for the individual radiologist and for the group. This information was distributed at our monthly faculty meetings. Individual radiologists were only aware of their assigned letter. The master key was kept confidential.

Results

A total of four PDSA cycles were performed. Recall rates and cancer detection rates were recorded monthly. Cancer detection rates were collected > 30 days after the designated time period to allow time for diagnostic work up and tissue diagnosis of positive screening examinations. Participants discussed data and recommended adjustments in the improvement plan. Comparison was made at the end of each cycle to determine if there had been improvement.

During the initial study period, the combined screening recall rate was 17.34% for the group (range 15.47 – 20.80%). This number decreased considerably during the first PDSA cycle to 10.97% (range 10.37 – 11.35%). These rates were maintained on subsequent cycles at 11.19% and 11.86% . Cancer detection rate was 6.5/1000 during the initial study period and was maintained at 4.3/1000, 5.2/1000 and 6.1/1000 during each of the four cycles. Radiologists expressed value in discussing difficult cases and appreciated advice and differences in approach gained from peer review.

Decision to end the PDSA cycle was made when we had reached our goal and maintained desired call back rates over several cycles.

Conclusion

Screening recall rates were reduced and maintained to the desired level by implementation of this PQI initiative. Although recall rates were reduced, we did not experience a negative impact on the cancer detection rates for the group. Individual case feedback from peer review was deemed a crucial component. By following current ABR guidelines, our project had the added benefit of meeting requirements for the ABR's Maintenance of Certification (MOC). PDSA design is translatable to other practice settings.

References

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