Abnormal Interpretation Rates of Screening Mammography Among Massachusetts Medicare Hospitals: Unexplained Variation Impacting Quality

Teresa Russell, B.S. B.A.; Luis Riba, MD; Ted James, MD, MS, FACS; Tejas Mehta, MD, MPH, FACR

1Department of Surgery / BreastCare Center, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA.
2Division of Breast Imaging, Department of Radiology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA.
Disclosures

None of the investigators have any relevant disclosures.
Introduction

• Abnormal Interpretation Rates (AIR): quality metric of screening mammograms which require follow-up imaging within 45 days

• National average: **8.8%**
  - Rates too close to 0% may indicate missed cancers
  - Rates greater than 14% may indicate excessive false positive recalls

• **Purpose**: Evaluate AIR in Massachusetts Medicare hospitals and characterize performance based on geographic, demographic, socioeconomic, or facility accreditation factors
Methods

- Retrospective analysis of Medicare Hospital Compare database containing the percentage of outpatients who had a follow-up mammogram, breast ultrasound, or breast MRI within the 45 days after a screening mammogram
  - 07/2015-06/2016 data
  - Hospital data used: name, location, mammography follow-up score for AIR
- American Hospital Directory used to gather information on facility characteristics
- US Census data used to find population demographics and income statistics for each hospital by ZIP code
- Breast Imaging Center of Excellence (BCOE) designation was found using the American College of Radiology (ACR) accreditation search site
Results

• 63 hospitals total
  • 54 had mammography follow-up score on record
  • 29 BCOE accredited

• No significant association between sociodemographic variables and AIR of hospital

• AIR ranged from 3.8-19.5%

• Average AIR
  • BCOE: 8.8% (range 3.8-19.5%)
  • Non-BCOE: 8.1 (range 3.9-15.3%)
  • p=NS
Average Mammography Follow-up Rates in Breast Centers of Excellence (BCOE) and Non-BCOE Hospitals Compared to the National Average
Conclusions

• Wide unexplained variation in AIR amongst MA hospitals
  • Mean AIR was at the recommended national average
  • BUT, many facilities were far above or below this standard
• No significant association with AIR was observed among the sociodemographic variables of each hospital
• BCOE designation had no significant effect on AIR
• **Efforts beyond the current accreditation process are needed to reduce variation and improve quality of care**
Thank you!