Increasing Breast Cancer Screening Rates through an Alert System in the Electronic Medical Record

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**SIGNIFICANCE**
- Breast cancer is the second leading cause of female death in the United States, with nearly 40,000 deaths annually
- Mammography has been shown to reduce breast cancer mortality
- Routine screening recommended by primary care providers (PCPs) could decrease late stage diagnosis of breast cancer
- Lowest screening rates are among those uninsured and non-whites
- A system strategy through the EMR can identify all women due for mammography

**PURPOSE**
- To implement a Best Practice Advisory (BPA) alert into a system-wide electronic medical record (EMR) in order to increase breast cancer screening
- To make health care providers aware of the process necessary to make such a practice change

**BEST PRACTICE ADVISORY ALERT**

**METHODS**
- Proposed practice change
- Eligible women were those aged 39-75 years who had no recorded screening mammogram in the EMR within the last two years to date.
- Women with a personal history of breast cancer were not eligible
- Implementation occurred at CHI Health Clinics including Internal Medicine, Family Medicine, and Women’s Health.
- Performance reports track provider utilization of the BPA as well as completed mammogram reports
- Reports track disparity between insured and uninsured patients, in collaboration with the Population Health Team’s efforts of Patient Centered Medical Home (PCMH)

**PROCESS LEADING TO CHANGE**

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Activity</th>
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<tbody>
<tr>
<td>June-July 2016</td>
<td>Idea of Mammography BPA</td>
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<tr>
<td>July-Aug 2016</td>
<td>Present to Medical Director of Informatics</td>
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<tr>
<td>Aug-Nov 2016</td>
<td>Approval</td>
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<tr>
<td>Aug-Nov 2016</td>
<td>Build BPA</td>
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<tr>
<td>Nov-Jan 2017</td>
<td>Testing</td>
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<td>Jan-March 2017</td>
<td>Test in Live Environment</td>
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<td>Tip Sheet to End Users</td>
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<td>Live</td>
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<td>Production</td>
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**SMARTSET**
- Use the CHI AMB MAMMO for BPA SmartSet to place applicable orders

**DISCUSSION**
- An alert system can increase mammography uptake
- Providers are encouraged to discuss individualized education and recommendations with the patient
- Cost effective and replicable
- Additional research is needed to assist PCPs to identify a woman’s personal risk and eliminate barriers to breast cancer screening
- Advanced practice implications include:
  - Foster communication and leadership skills
  - Utilize features of the EMR and support informatics
  - Awareness of federal and state assistance programs
  - Provide patient education and awareness
  - Provider and staff resources
  - Establish patient-provider relationship

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