Solis Mammography: The pain and joy of improvement at scale

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  Chief Medical Officer, Solis Mammography
# About Solis Mammography

The nation’s largest independent provider of breast screening and diagnostic services

<table>
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<tr>
<th>1M+</th>
<th>100+</th>
<th>30+</th>
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<td>Serves more than 1 million women each year.</td>
<td>Operates more than 100 locations in the U.S.</td>
<td>Helping women achieve breast health for more than 30 years.</td>
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Cohort 1: April to November 2022
Project Team

- 2 Strategic locations chosen:
  - Rose Medical Denver (large)
  - Progressive BelAir MD (small)
- Project Sponsor: Chirag Parghi, MD
- Each site project team consisted of:
  - Team Leader (the local center director)
  - Physician Leader (LIP)
  - QI Coach
  - Team of 3-4 Staff Technologists
Initial Audit Data

236 screening mammograms between Apr-May 2022

Overall Case Score (Pass/Fail)

Major Criteria

Minor Criteria

RLI Power Hour Webinar Series
Analysis

Process Map

Cause and Effect Diagram

Pareto Analysis

Inconsistent mammography quality
Key Drivers

Root Causes

- Patient cooperation/understanding of positioning importance
- Difficult body habituses
- Lack of standardization on quality
- Feedback limited to EQUIP and technical recalls
- Variances in technologist training and background

Key Drivers

- Improved patient education
- Alignment on what defines image quality
- Image quality feedback system
- Technologist coaching on positioning troubleshooting
- Structured new tech onboarding
- Empowered technologists
Interventions

**Improved patient education**

*Better Education = Better Cooperation = Better Imaging*

**Technologist coaching on positioning troubleshooting**

- Patient Education Sheet
- Tech to Patient Communication
- Pink ribbon for feet position

- Positioning Articles/Videos
- Case of the month
- Positioning coach

- Standardized method
- Quality standards
- Auditing positioning skills

**Reliability Level:**

1. Individuals: feedback, checklists, training, basic standards
2. Procedures: embedded standard work, reminders, constraints
3. Systems: Process design, fail safe, physical layout, built-in feedback, automated systems, concentration of responsibility

**Maturity Bars:**

0: Untested idea
1: Early tests / PDCA
2: Multiple POPOs
3: Early implementation
4: Working well in operation

**Progress**

**Barrier**

**Abandoned**
Interventions

Alignment on what defines image quality

Image quality feedback system

Empowered technologists

• Educational tool with examples of quality images

• Meaningful feedback from Rads to techs
  • Regular random audits

• Techs engaged in audits
  • Learning together, accountability
Results

Empowered techs = Higher Quality
Results

Sustained trend ABOVE 85% for 10 weeks!
Empowerment is KEY!
Cohort 2: March to September 2023
Evolution of Learning

Cohort 1: Belair, Md & Denver, Co

Cohort 2: 3 sites in greater Houston area

Larger, scalable audit process throughout Solis
My learning lessons from the ACR Mammo Collaborative

- Change is the healthy antidote to complacency
- Ambiguity and subjective self-evaluations of quality aren’t good enough
- Meaningful improvement requires deep introspection before action
- Change at scale is different from change in a clinic
- Tight labor markets are opportunities for creativity!