

RLI Power Hour

Presentation Date

Spreading and Scaling Change Across Institutions

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Learning Objectives

- Leading change across large multi-site institutions.
- Recognizing when to scale down in order to make small tests of change.
- How to scale back up once the small tests of change are proven to work.



About AdventHealth







Leading change thru congestion



- Go see the process
- Talk to front-line staff
- Ask what they think is causing the problem
- Collect data
- Decide how to scale the project



CT Quality Assurance: CT Missing Images

Problem Statement

Missing Images represents the top CT quality (QA) feedback and is the top-quality opportunity. 0.75% of all post-processed exams in the 3D lab have images missing.

Background

CT studies submitted with missing images from 72 scanners delays interpretation, causes rework, and delays patient care. Missing images is the most frequent quality issue in our entire process. 700 out of 3000 QA's are due to missing images. Audits from the 3D lab will be used to measure performance.

Target State: SMART Goal

Reduce percentage of studies with missing images from 0.75% to 0.30% for studies processed by the 3D lab by 12/31/2020. This would result in a 60% improvement.



SMART Goal





Root Causes & Key Drivers

Key Drivers

Image send automation

Root Causes

- > Auto-send not consistently turned on
- Splitting exams with multiple orders
- PACS workflow not clearly defined

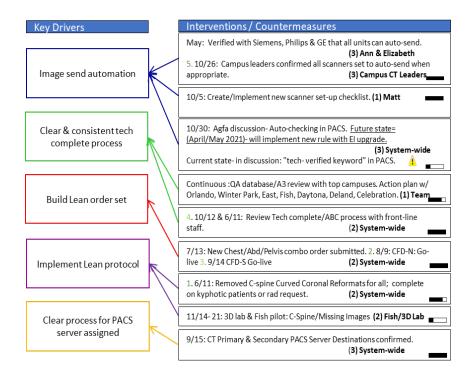
Clear & consistent tech complete process

Build Lean order set

Implement Lean protocol

Clear process for PACS server assigned

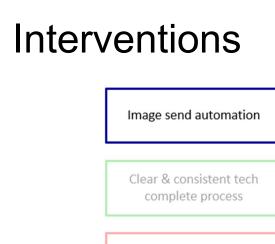




Most Impactful Interventions

- 1. Automation
- 2. Create combination order
- 3. Remove Cervical spine curved coronal reformats





Build Lean order set

Implement Lean protocol

Clear process for PACS server assigned







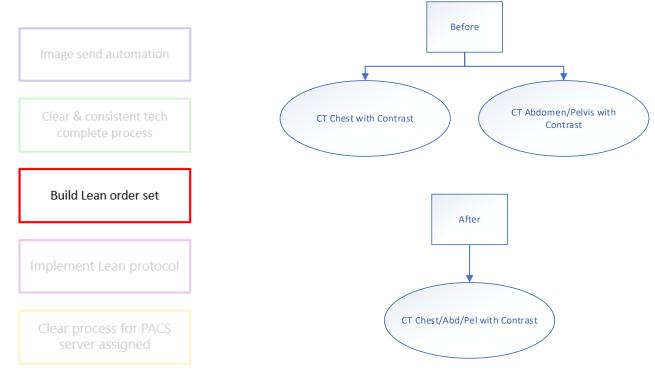




Image send automation

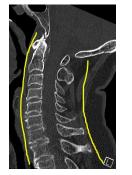
Clear & consistent tech complete process

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Before:





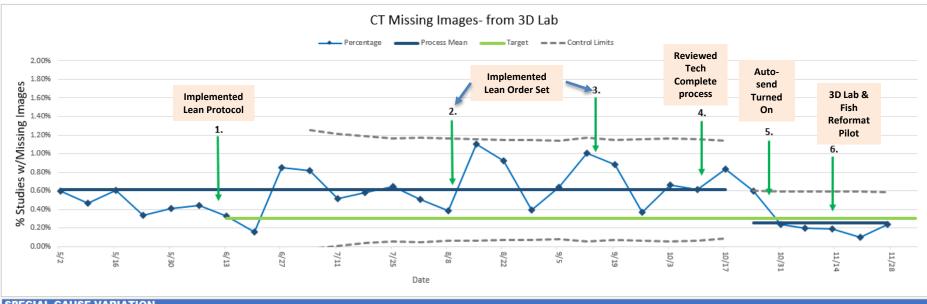






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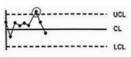
After:



SPECIAL CAUSE VARIATION

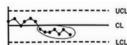


Any point on or outside the limit is considered abnormal and requires investigation.



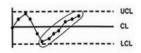
SHIFT (RUN):

A shift is indicated when 7 consecutive points lie continually on one side of the center line.



TRENDS:

Seven consecutive points in an upward or downward direction could indicate special cause





Improving Prostate MR Image Quality

Problem Statement

Non-diagnostic MR prostate diffusion exams can lead to deficient quality images and repeat studies.

Global Aim

To improve clinically significant prostate cancer detection and localization.

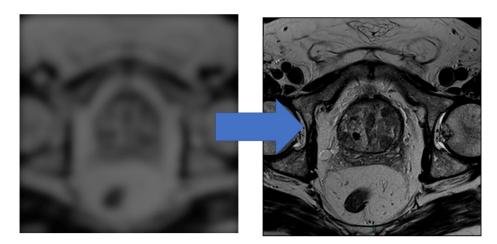
Target State: SMART Goal

To improve the percentage of MR prostate exams that meet criteria from 89% to 94% by November 2022.



SMART Goal

To improve the percentage of MR prostate exams that meet PI-QUAL 4 or 5 criteria from 89% to 94% by November 2022.





Key Drivers

Root Causes

- 1. There is not clarity around what constitutes "good" image quality
- 2. Need for a bowel prep
- 3. DWI parameters are not standardized across the system
- 4. Protocols are not optimized on the scanners

Key Drivers	
Gain alignment around image quality	
Implement a more effective patient prep	
Standardize DWI parameters	
Optimize protocol management	



Gain alignment around image quality

Key Drivers

Implement a more effective patient prep

Standardize DWI parameters

Optimize protocol management

Interventions / Countermeasures

\square	Implement quality feedback program (3)
	Add images showing good/poor quality to protocol (2)
\mathcal{H}	Educate techs thru Siemens flex coach & campus MR leader (1)
Н	Clear & consistent bathroom instructions across sites (2)
	Methods to remove air/feces before & upon arrival (2)
\square	Use of an enema & refrain from ejaculation Epic scheduling prompt (2)
\backslash	Standardize Epic scheduling questions (at prostate order level) (2)
\sum	Update provider with new prep (1)
	Patient has ability to complete MR Hx/Screening form prior to exam (3)
	Develop Epic status pre-screening report (3)
$\langle \rangle$	Implement methods to reduce motion/fecal matter/air on DWI (2)
$\langle \rangle \rangle$	Call or email patient prep instructions prior to exam (2)
	Motion reduction techniques (2)
\sum	Develop standards for when to contact a radiologist (2)
	Implement standardized prostate sequence order (1)
N	Develop standards for when patients cannot receive contrast (1)

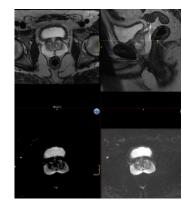
Most impactful interventions

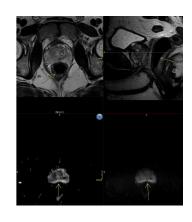
- 1. Adding references images to the protocol
- 2. Implementing bowel prep
- 3. Standardizing scheduling questions/prep
- 4. Calling the patient 2-3 days prior to exam
- 5. Motion reduction techniques
- 6. Standardizing protocol & sequence order



Gain alignment around image quality

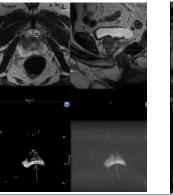
Implement a more effective patient prep

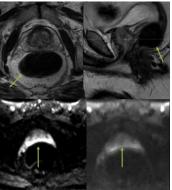


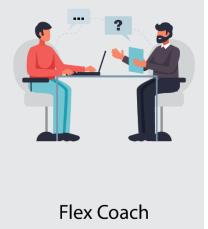




Optimize protoco management









Gain alignment around image quality

Implement a more effective patient prep

Standardize Diffusionweighted (DWI) parameters

> Optimize protocol management









Gain alignment around image quality

Implement a more effective patient prep

Standardize Diffusionweighted (DWI) parameters

> Optimize protoco management



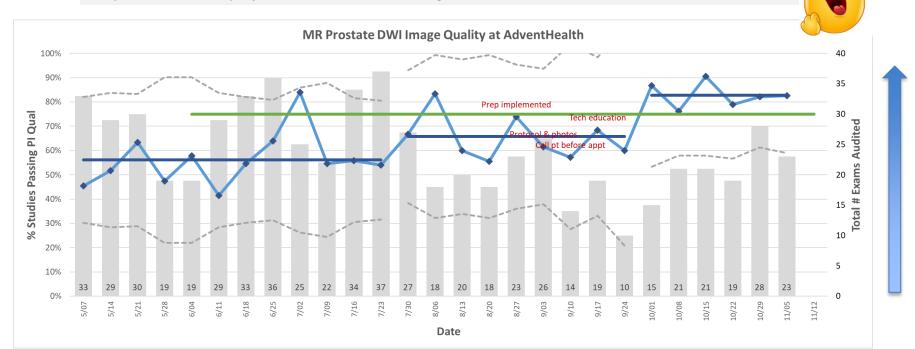






Results- DWI Score

• By the end of the project, we far exceeded our goal of 75% & have been at 82%



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Key Learning Points

- I. "Don't be afraid to fail: Fail Fast, Fail Small, Fail Friendly!"
- II. Resist the urge to solve the problem upfront and let the process work.
- III. Narrow your project scope to start small and intervene sooner.

