

# Increasing Trust Between ED and Radiology

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Communicating Urgent Discrepancies Between Preliminary and Final  
Reports

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# Problem: Published preliminary reports increases complexity

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- On call radiology residents at our institution publish full-length preliminary reports
- Emergency physicians rely on preliminary reports to make early triage and treatment decisions
- Studies have shown the resident-to-attending report discrepancy rate to be less than  $<2\%$ <sup>1-3</sup>
- McWilliams<sup>2</sup> reported that changes in patient management occurred in 44.6% of cases with discrepancies, primarily in the form of repeat imaging
- Discrepancies in reports marked by attending radiologists as “urgent” were directly communicated to ordering providers in only 75% of cases within our institution

1) Wu MZ, McInnes MDF, Blair Macdonald D, Kielar AZ, Duigenan S. CT in Adults: Systematic Review and Meta-Analysis of Interpretation Discrepancy Rates. *Radiology*. 2014;270(3):717-735.

2) McWilliams SR, Smith C, Oweis Y, Mawad K, Raptis C, Mellnick V. The Clinical Impact of Resident-attending Discrepancies in On-call Radiology Reporting: A Retrospective Assessment. *Academic Radiology*. 2018;25(6):727-732.

3) Ruutiainen AT, Scanlon MH, Itri JN. Identifying Benchmarks for Discrepancy Rates in Preliminary Interpretations Provided by Radiology Trainees at an Academic Institution. *Journal of the American College of Radiology*. 2011;8(9):644-648.

# Team: Diverse perspectives and unique insight

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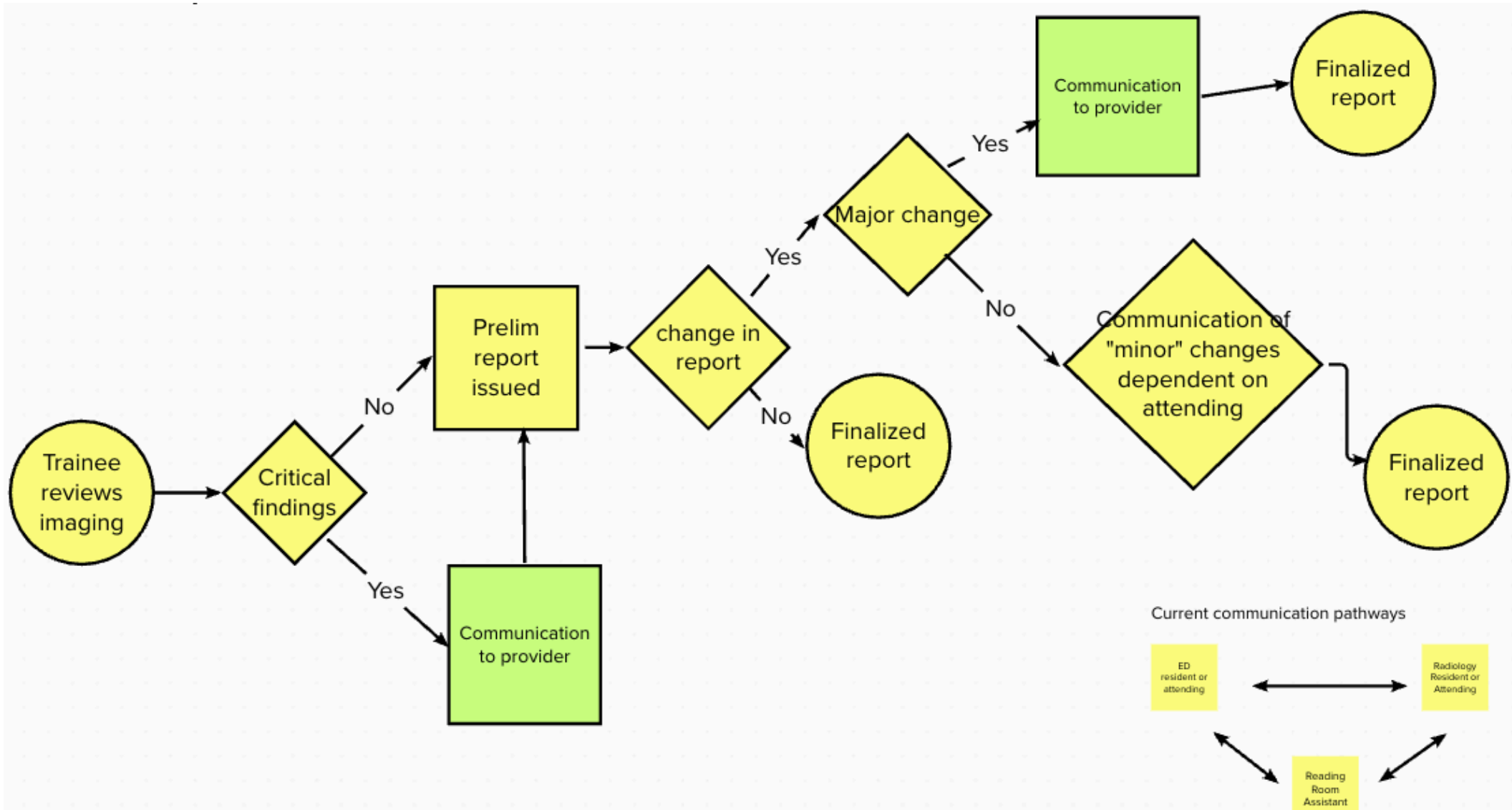
- Team Leads: Neuroradiologist and Emergency Medicine Administration Fellow
- Quality Improvement Coach
- Radiology Residents (PGY-2, PGY-3, PGY-5)
- Radiology Reading Room Assistant
- Emergency Room Nurse Manager
- Radiology Program Manager
- ED and Radiology Sponsors: Associate Chairs of Quality Improvement

# SMART goal targeted to increasing communication

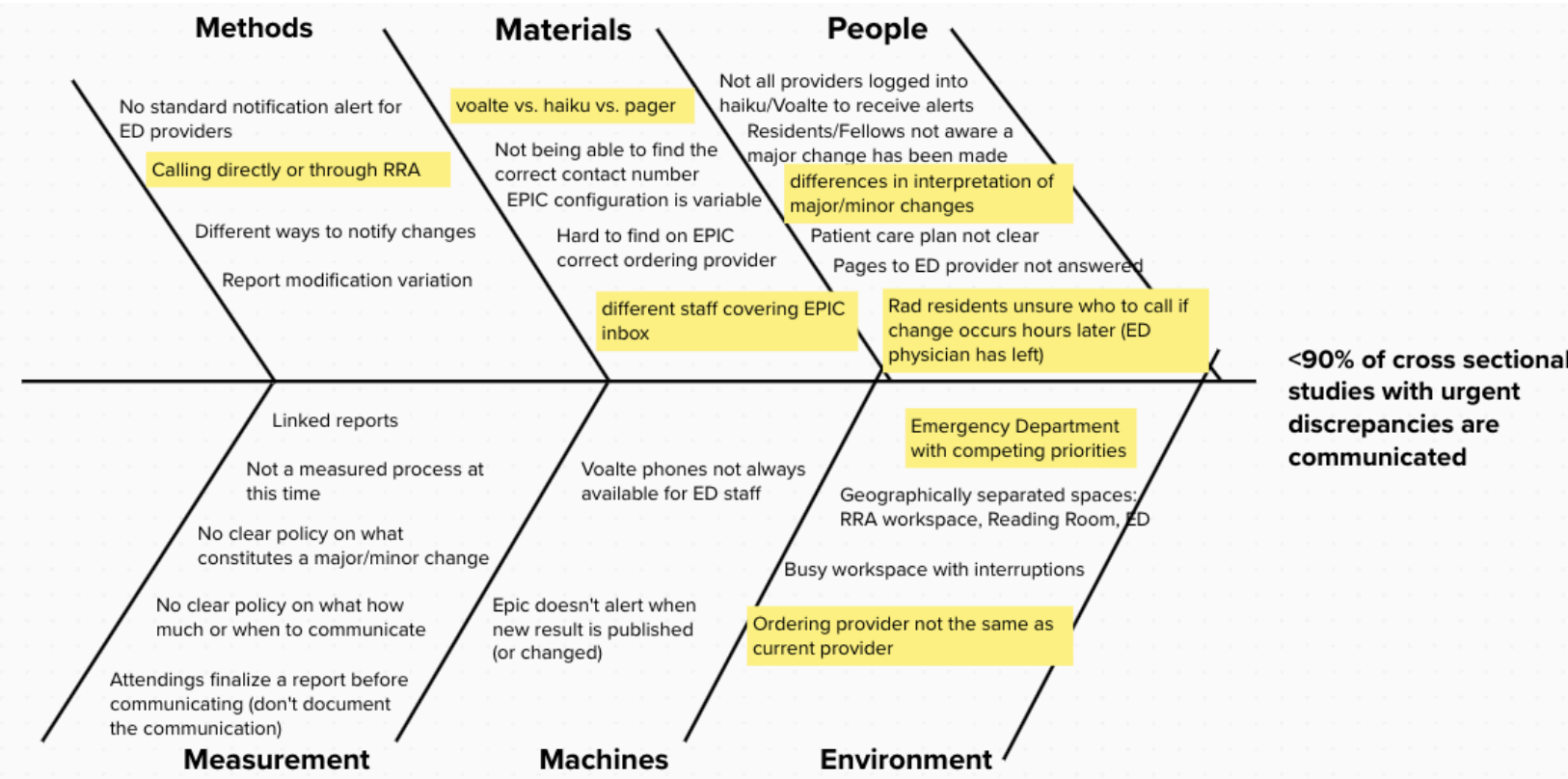
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**"Increase the rate of communication of urgent discrepancies between preliminary and final radiology reports for cross-sectional studies from 75% to 90% in 20 weeks."**

# Process mapping helped identify opportunities to communicate



# Cause and effect analysis identified key drivers



## Key Drivers

**Communicating report changes must be clear and easy**

**Urgent and non-urgent report changes must be mutually understood**

**Knowing who to contact must be easy to find**

**Determining whether a report is a finalized must be obvious**

# Interventions were mapped to key drivers

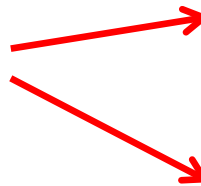
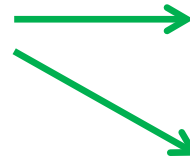
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## Interventions / Countermeasures

Enable multiple communication methods (phone, Voalte messaging, EPIC inbox) – Medium reliability

Standardize communication process for urgent and non-urgent changes – Medium reliability

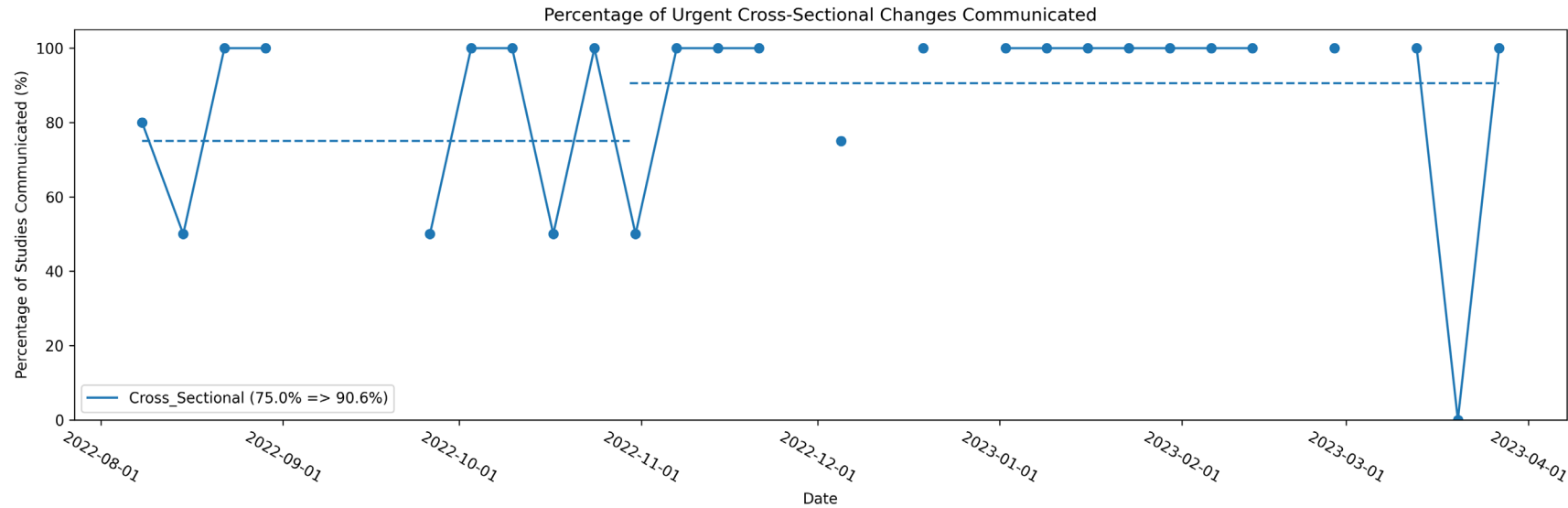
Interdisciplinary conferences to review cases with report changes – Low reliability

Reading Room Assistants to use Voalte to identify ordering/covering provider – Medium reliability

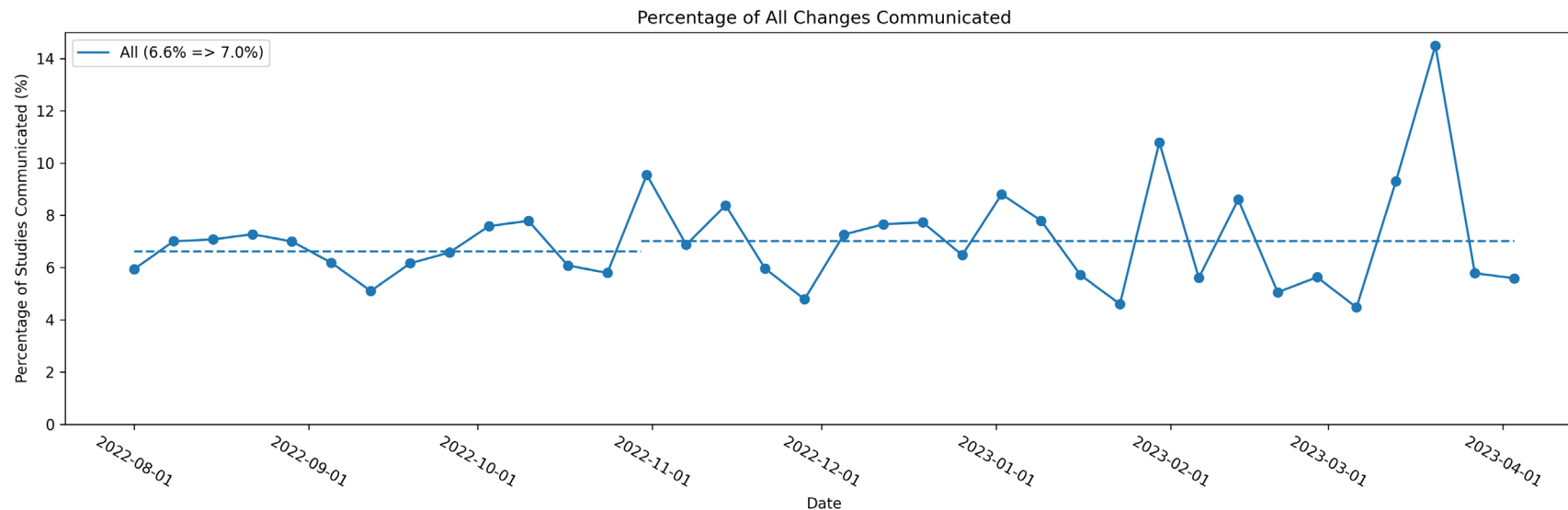
Reading Room Assistant phone listed on the report to reduce friction for ordering providers – High reliability

Use the phrase “Study Status – Final” on the top of a finalized report in Epic – High reliability

# Early results show promise for broadening implementation



**Communication of urgent discrepancies on cross-sectional exams increased to 90.6% percent**



**Communication of all discrepancies (including non-urgent and plain films) did not increase**



# Collaboration between departments increases trust

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## Key Learning Points

- Hospital technology infrastructure should be designed to reduce communication barriers.
- Cross-departmental projects enable team members to understand problems from a unique perspective.
- Communication is highly dependent on individual preferences and not necessarily improved with additional communication methods.

## Next Steps – Sustain Plan

- Increase communication across all study types and urgency levels by:
- Developing a process for flagging report discrepancies without appropriate communication documentation at time of final signing.
  - Operationalizing a definition for urgent and non-urgent report changes through regular multidisciplinary case review.
  - Incorporating review of communication errors into division-wide and resident-specific Peer Learning.

# Thank You

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Questions or comments can be directed to  
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