

Impact of Online Safety Screening on Outpatient MRI Workflow

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MRI Safety screening: Mandatory!

Pre-arrival phone
screening



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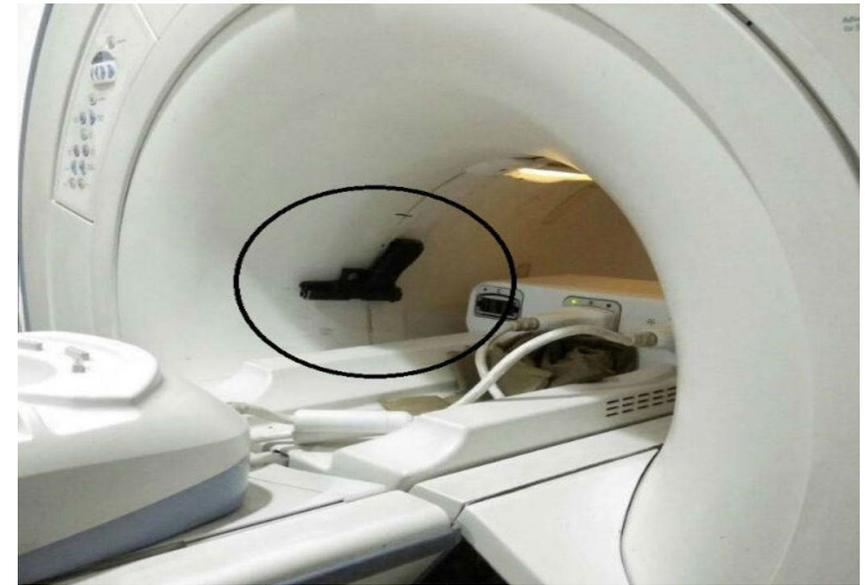
Cancellations

Incomplete
Information

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Patient
dissatisfaction

Delays



Implementation of an Online Screening and Check-In Process to Optimize Patient Workflow Before Outpatient MRI Studies

Ali Pirasteh, MD, Maia VanDyke, BS, Jamie Bolton-Ronacher, RT, Yin Xi, PhD, Robin Eastland, RT, Denise Young, RT, Jennifer Escobar, BS, Cecilia Hernandez, BS, Seth Toomay, MD, Travis Browning, MD, Ivan Pedrosa, MD

Assess impact of online MRI safety screening

Automatic analytics

Larger group of patients

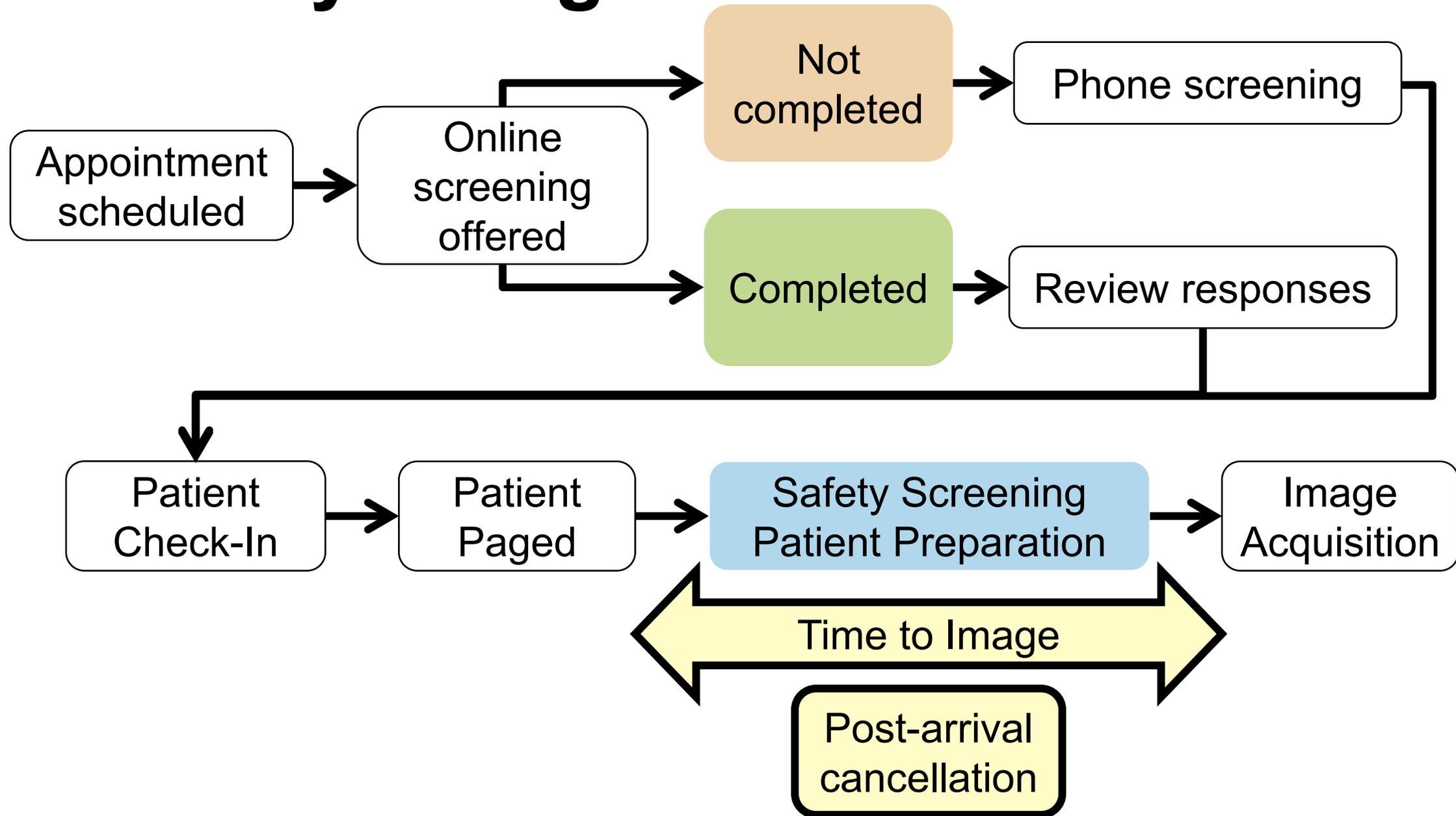
Delays

Post-arrival cancellations

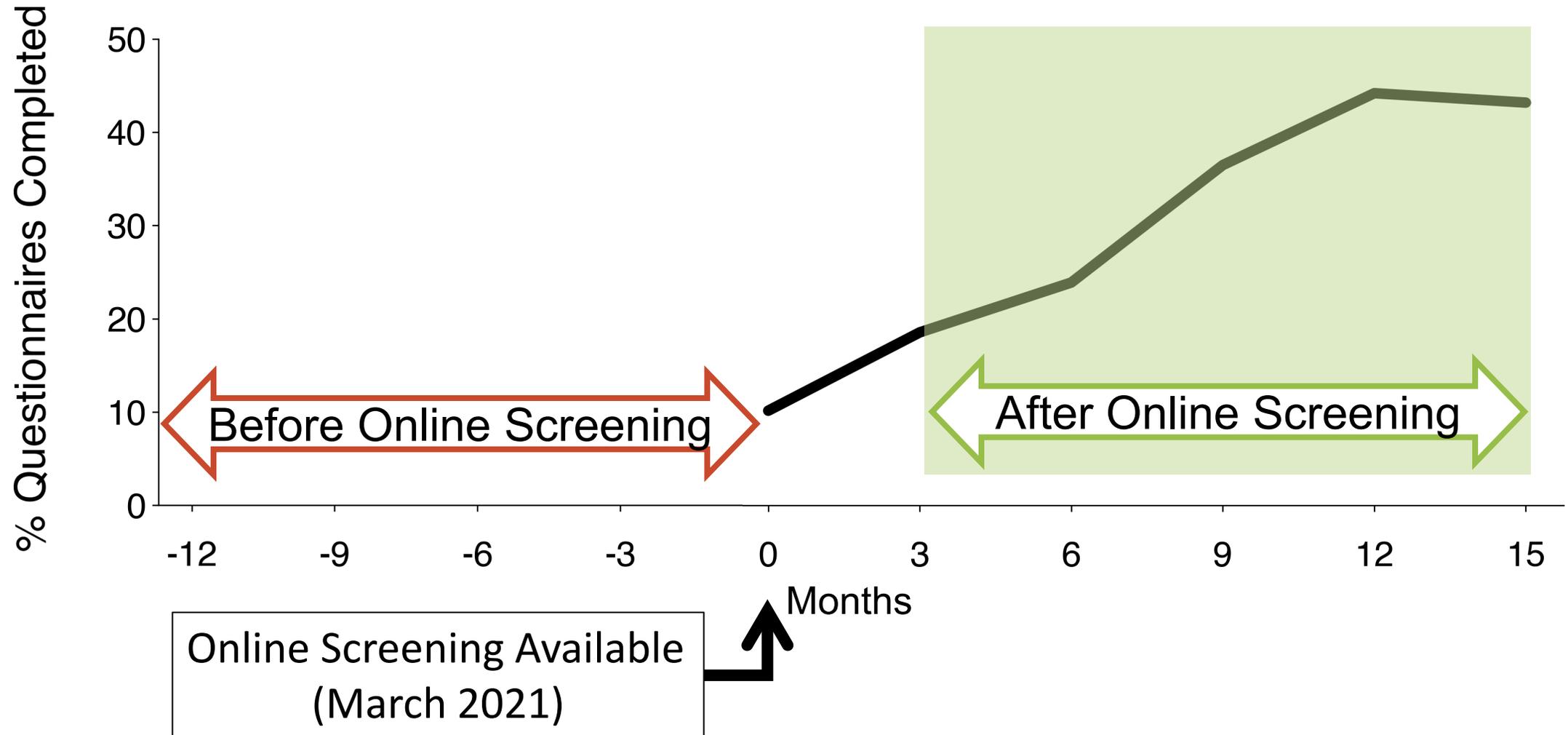
Purpose: demonstrate the power of analytics to assess patient outcomes



Study Design



Online Screening Utilization



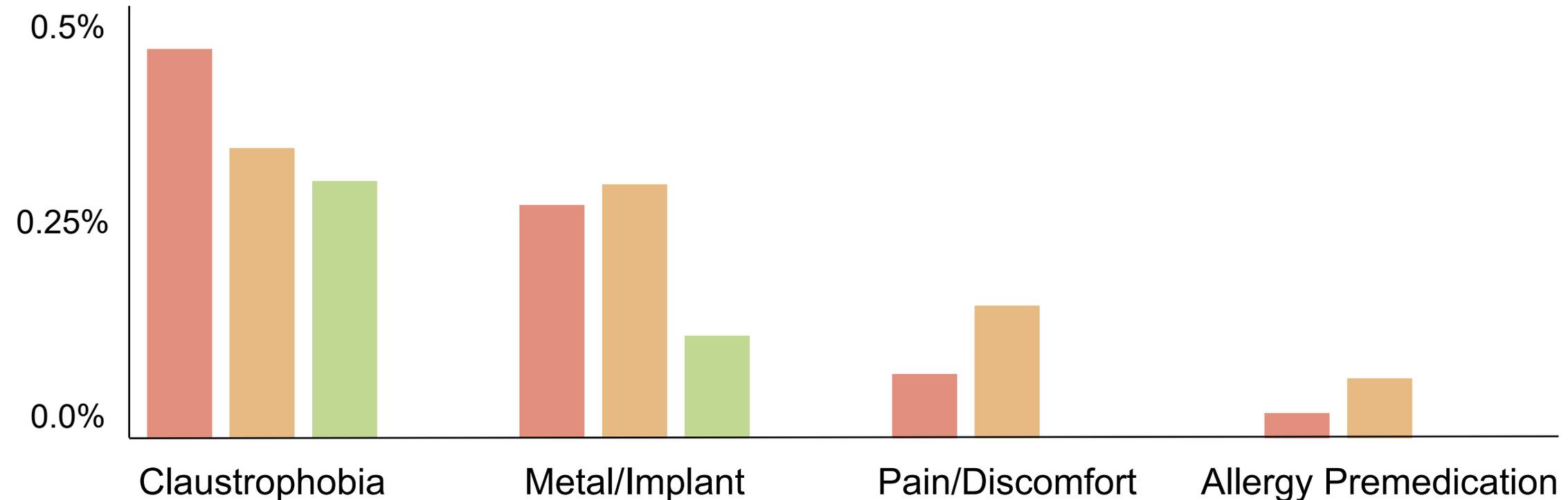
Demographics

| | Before online screening | After online screening | | Total |
|-----------------------------|----------------------------|---------------------------|---------------------|------------|
| | Traditional screening | Traditional screening | Online screening | |
| All MRI appointments | 6,337 | 5,191 | 2,927 | 8,118 |
| Missing time-stamps | 38 (0.55%) | 56 (1.1%) | 20 (0.68%) | 75 (0.92%) |
| Multiple MRIs | 114 (1.8%) | 247 (4.8%) | 103 (3.5%) | 350 (4.3%) |
| Repeat MRIs | 544 (8.6%) | 450 (8.7%) | 285 (9.7%) | 572 (7.0%) |
| Included exams | 5,641 | 4,438 | 2,519 | 6,957 |
| Average age | 54 | 57 | 56 | 56 |
| % Female | 55.5% | 53.6% | 59.6% | 55.7% |



Post-arrival cancellations

| | Before online screening | After online screening | | Total |
|----------------------------|----------------------------|---------------------------|---------------------|-------|
| | Traditional screening | Traditional screening | Online screening | |
| Post-arrival cancellations | 1.33% | 1.80% | 0.52% | 1.34% |



Time-to-image

| | Before online screening | After online screening | | Total |
|----------------------|-----------------------------------|----------------------------------|----------------------------|--------------|
| | Traditional screening | Traditional screening | Online screening | |
| Average (min) | 38.9 | 38.7 | 37.0 | 38.1 |
| Std dev | 20.6 | 20.0 | 18.9 | 19.6 |



Limitations

Retrospective

Selection bias?

Time-to-image as an accurate measure?



Conclusion & Future Work

Successful use of an automated analytics tool

Online screening:

- Lower same-day cancellations

- Shorter time-to-image

- Identify areas of workflow improvement opportunity

 - (e.g., claustrophobic patients)

Patient satisfaction?

