

# Quality Matters: Driving Excellence in Radiology through QA



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## Background

Quality assurance (QA) is a critical part of radiology practice, directly influencing patient safety, diagnostic accuracy, and operational efficiency.

Radiology involves the use of ionizing radiation, making robust QA programs essential to ensure radiation doses are kept *As Low As Reasonably Achievable (ALARA)*. Prioritizing QA supports patient safety by verifying that imaging equipment functions correctly and consistently, protocols are followed and repeat examinations due to technical errors are minimized, thereby reducing unnecessary radiation exposure.

High-quality diagnostic images are fundamental to accurate interpretation and clinical decision-making. QA programs promote proper image acquisition, patient positioning, and protocol adherence. Inadequate image quality can result in missed pathology, misdiagnosis, or unnecessary follow-up imaging, increasing patient risk and healthcare costs.

In multi-site locations, such as urgent care environments, QA plays a key role in standardizing imaging practices across locations and technologists. Consistent QA processes reduce variability in image quality and patient experience while increasing radiologist confidence when interpreting studies across multiple sites.

It is common for radiology leadership to hold Peer Review Group (PRG) meetings and then cascade information to technologists. In the urgent care environment radiology leadership is limited, meaning no one was reviewing QA data. The Ambulatory PRG was developed to take information and feedback directly to radiologic technologist (RT(R)s), rather than receiving information second hand.

Effective QA programs also identify workflow inefficiencies, training gaps, and common causes of image rejection or repeat examinations. QA data can be leveraged to identify trends, drive continuous process improvement, support technologist coaching and competency development, and inform structured mentorship and preceptor programs.

## Summary

A structured Ambulatory PRG program was implemented in Atrium Health Urgent Care in 2025 to enhance quality assurance, standardize imaging practices, and engage RT(R)s across a multi-site urgent care operation. Monthly review of QA metrics, combined with educational content, recognition, and Just-Culture based feedback supports patient safety, diagnostic accuracy, and operational consistency. This model demonstrates a scalable and sustainable approach to QA in ambulatory settings.

## Method

Modeled after an acute care Diagnostic Peer Review Group (PRG), the Ambulatory PRG was implemented in January 2025 to support quality assurance in urgent care radiology. The program is designed to increase radiologic technologist RT(R) engagement, standardize communication, and promote continuous quality improvement in a multi-site environment.

Metrics are extracted monthly from the imaging informatics system and radiologist QA reports and reviewed in aggregate during Ambulatory PRG calls.

- Monthly Team's calls for all clinical RT(R)s
  - Recorded for asynchronous access

### Ambulatory PRG Call Agenda

- Shoutouts and/or recognition for RT(R)s
- Report out of following metrics:
  - Total exams performed
  - Correct reading priority modifier utilization
  - Average repeat rate
  - Average Deviation Index (DI) value
  - QA exams flagged by radiologist group
- Imaging protocol updates
- Imaging spotlight to review exam standards
- Compliance Corner
- Professional organization updates

Also included on the Ambulatory PRG calls are clinical and laboratory updates since these are common workflows of our RT(R)s.

Following all Ambulatory PRG calls all RT(R)s are sent an email with highlighted updates, a link for the recorded call, a read only version of the PowerPoint presentation, and a debrief Forms survey to ensure review of materials. Participation is documented through either live attendance or completion of post-session review materials and debrief survey, ensuring equitable access and accountability across shifts.

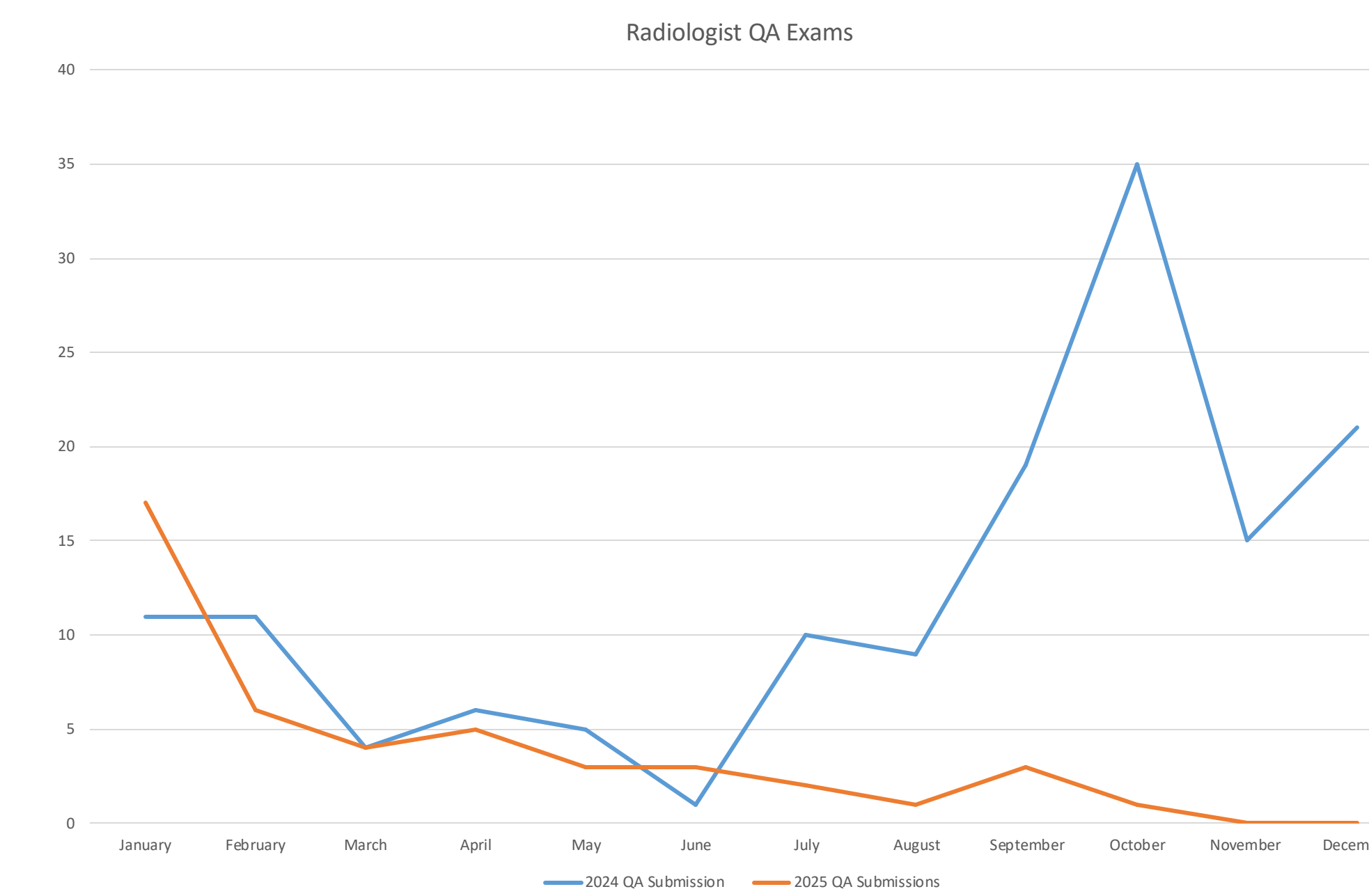
In addition to the creation of the Ambulatory PRG the Radiology Supervisor also began sending any QA exams from the radiologist group directly to the RT(R)s and their practice managers. These communications included:

- Exam information that was flagged by radiologist
- Reason the exam was flagged
- Screenshots of images of concern, removing Protected Medical Information (PMI)
- Recommendations for future exams

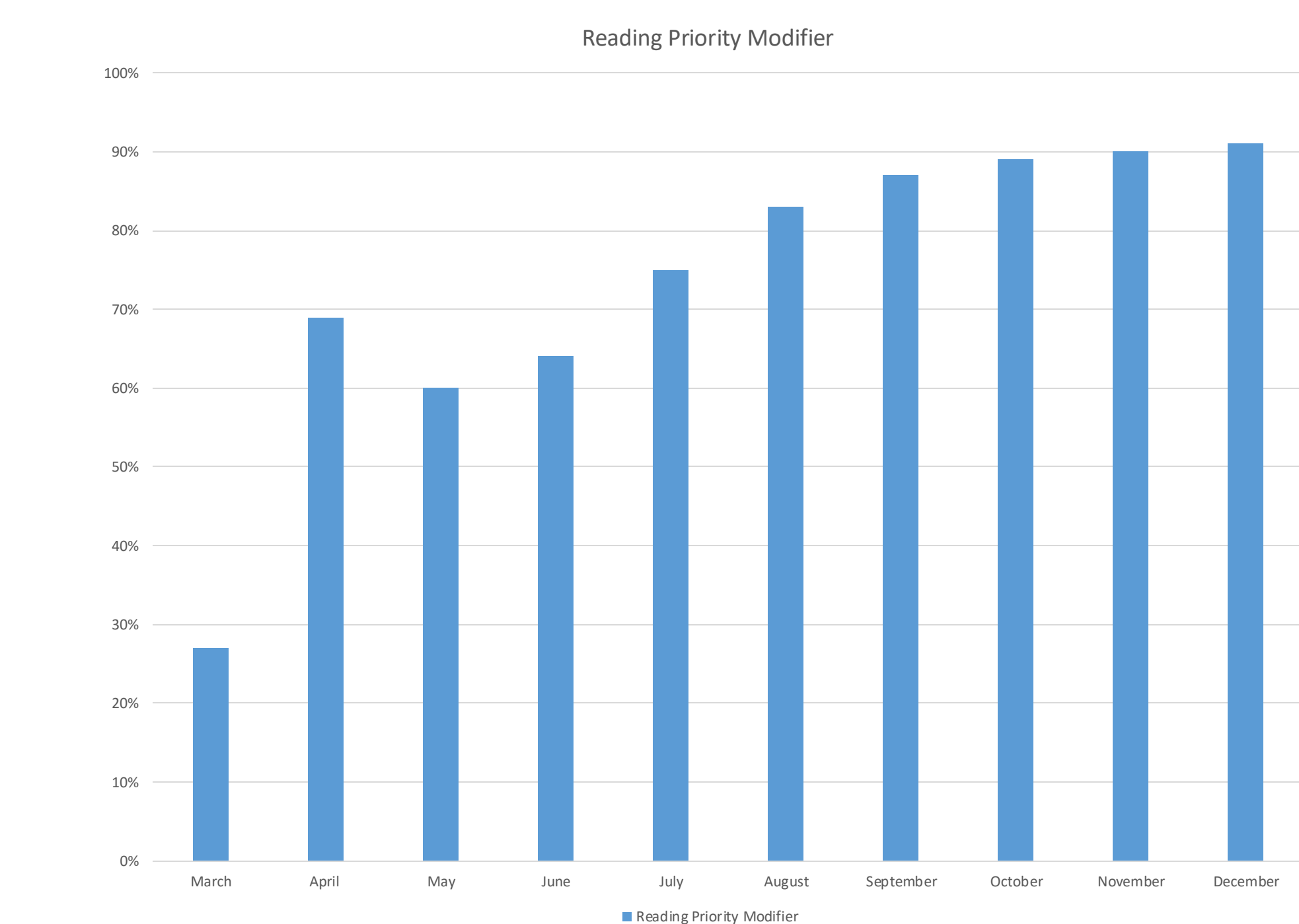
To support a Just Culture approach, individual QA feedback is delivered privately, framed as educational, and focused on exam-level learning rather than individual performance metrics.

## Results

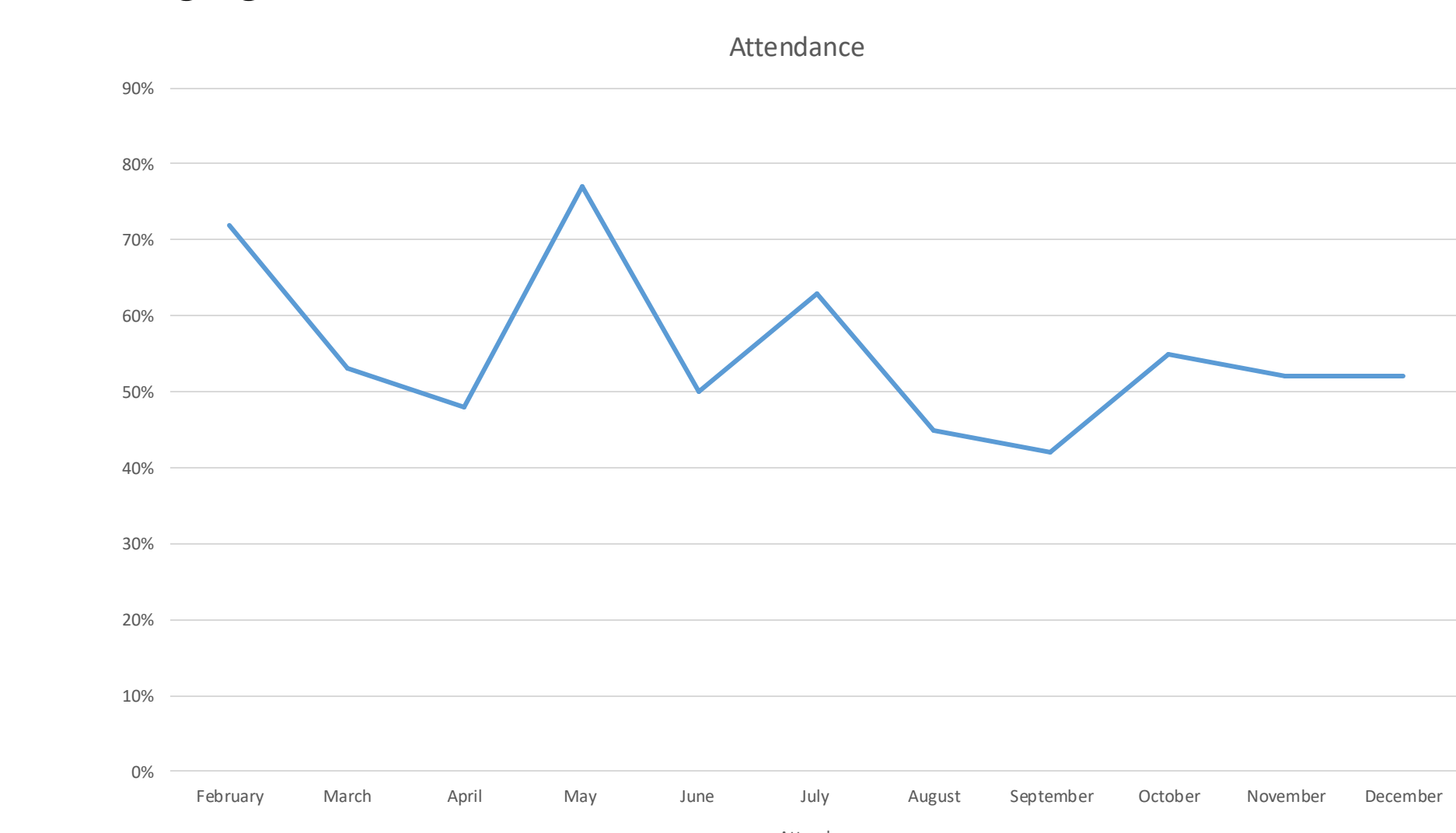
- QA exams flagged by radiologist decreased by 59% in 2025 from 2024 following implementation of Ambulatory PRG.



- Reading modifier correct use above 90%, exceeding internal targets



- Despite voluntary participation, attendance consistently exceeds 40%, indicating sustained technologist engagement



## Discussion

The implementation of the Ambulatory Peer Review Group (PRG) demonstrated that structured quality assurance programs traditionally used in acute care settings can be successfully adapted to the urgent care setting. Bringing even more value is connecting directly with front-line RT(R)s rather than just leadership and relying on information to be cascaded down. By reviewing standardized QA metrics in a collaborative forum, the program promotes consistency in imaging practices across multiple sites and supports radiologist confidence in image interpretation.

Regular review of repeat rates, DI values, and radiologist flagged QA exams allows early identification of trends related to technique, protocol adherence, and workflow variation. Sharing this data in team environment reinforces system-level growth rather than individual blame, aligning with Just Culture framework

The inclusion of recognition, education, protocol updates, and professional resources on PRG calls supports technologist engagement and development. Additionally, providing asynchronous access and documented participation ensures equitable access across shifts and locations. This addresses common challenges across multiple site organizations. Direct but private QA feedback delivered at the exam level not only reinforces learning but preserves psychological safety. Together these approaches position QA as a continuous improvement focused on education and growth rather than a punitive process.

## Take-Home Points

- QA is fundamental to patient safety and diagnostic accuracy
- Peer review models can be successfully adapted from acute care to urgent care for radiology
- Standardized QA metrics reviewed in aggregate promote consistency and reduce variability across sites
- Technologist engagement increases when QA includes education, recognition, and transparent communication
- Just-Culture based exam-level feedback supports learning while maintaining trust and accountability.
- Asynchronous access and documented participation ensures access and promotes engagement
- QA data can drive broader implementations, including workflow optimization, targeted coaching, and mentorship development

## Acknowledgements

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