

# Implementation of a Novel Peer Comparison Evaluation System in an EM Residency Program

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## BACKGROUND

- Resident evaluation is currently done through a milestone system developed by the ACGME, which has been shown to be imperfect and subjective
- Peer comparison has been shown to improve performance in ultrasonography, but, to our knowledge, no study has evaluated the use of peer comparison on other metrics traditionally used to evaluate emergency department (ED) performance.

## OBJECTIVES

- To evaluate the implementation of an objective peer comparison system for metrics on quality and safety, efficiency and throughput, and utilization.
- We hypothesized that the peer comparison metrics would be well received by residents and lead to a greater improvement year over year in metrics.

## METHODS

- This study took place at an academic, tertiary care center with a three-year residency and 14 residents per post graduate year (PGY) class.
- Peer comparison metrics were generated from the electronic medical record (EMR).
- Metrics quantified quality and safety (percent of electrocardiogram and x-ray interpretations, time to note complete), throughput and efficiency (patients per ED block, room to physician evaluation, evaluation to disposition), and utilization (percent of procedure notes and diagnostic images per patient).
- Metrics were provided on a graded scale. PGY1s received metrics on quality and safety, PGY2s additionally received metrics on throughput and efficiency, and PGY3s received all metrics.
- Surveys were distributed to all residents after metrics were received.
- Metrics were compared year over year.

Metric Category	Metric(s)	Metric Definitions
Quality and Safety	% EKG reads	Of all EKGs ordered per patient, number of interpretations entered
	% X-Ray reads	Of all X-Rays ordered per discharged patient, number of interpretations entered
Throughput and Efficiency	Patients per ED Block	Total number of patients seen divided by number of EM blocks during study time frame
	Room to Physician Evaluation	Time from when the patient was placed in a room until the physician evaluation occurred
	Physician Evaluation to Disposition Decision	Time from physician evaluation to disposition entered in EMR
Utilization	Procedure Notes	Number of procedures documented per patient
	Diagnostic Images	Number of diagnostic images ordered per patient

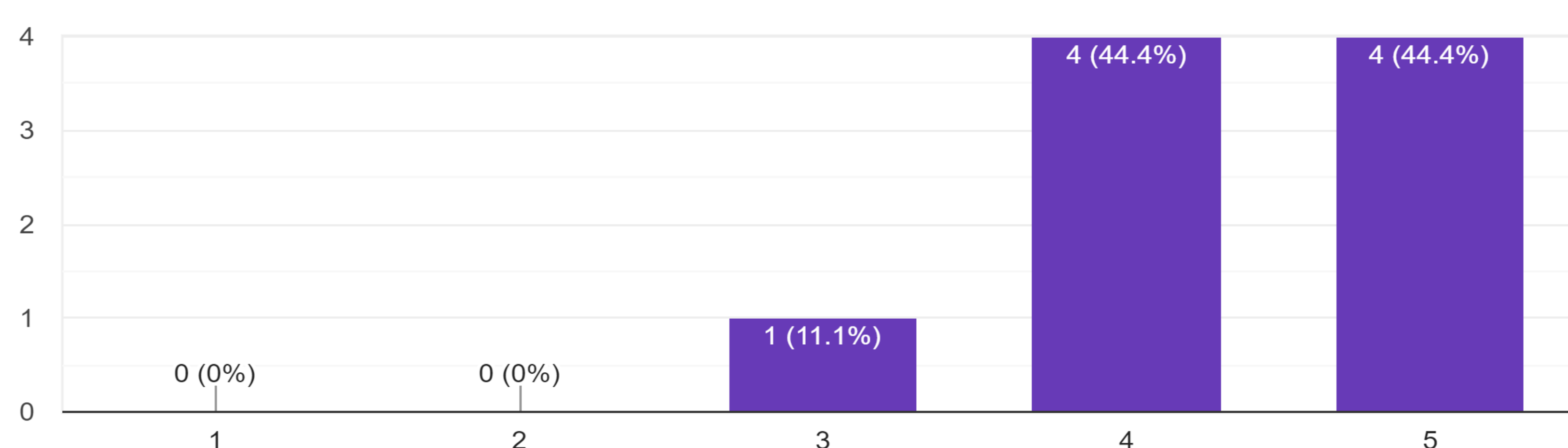
## RESULTS

- Peer comparison metrics were well received by the majority of residents in the study program.
- Preliminary analysis showed an improvement in just over two-thirds of the measured metrics since implementation.
- Compared to prior PGY classes, quality and safety and throughput and efficiency metrics improved. Utilization metrics were improved in some classes, but not in others.
- Metrics were well received based on survey results

Metric Category	Metric(s)	FY21 vs FY 20			FY21 vs FY 19		
		PGY3	PGY2	PGY1	PGY3	PGY2	PGY1
Quality and Safety	% EKG reads	●	●	●	●	●	●
	% X-Ray reads	●	●	●	●	●	●
Throughput and Efficiency	Patients per ED Block	●	●	●	●	●	●
	Room to Physician Evaluation	●	●	●	●	●	●
	Physician Evaluation to Disposition Decision	●	●	●	●	●	●
Utilization	Procedure Notes	●	●	●	●	●	●
	Diagnostic Images	●	●	●	●	●	●

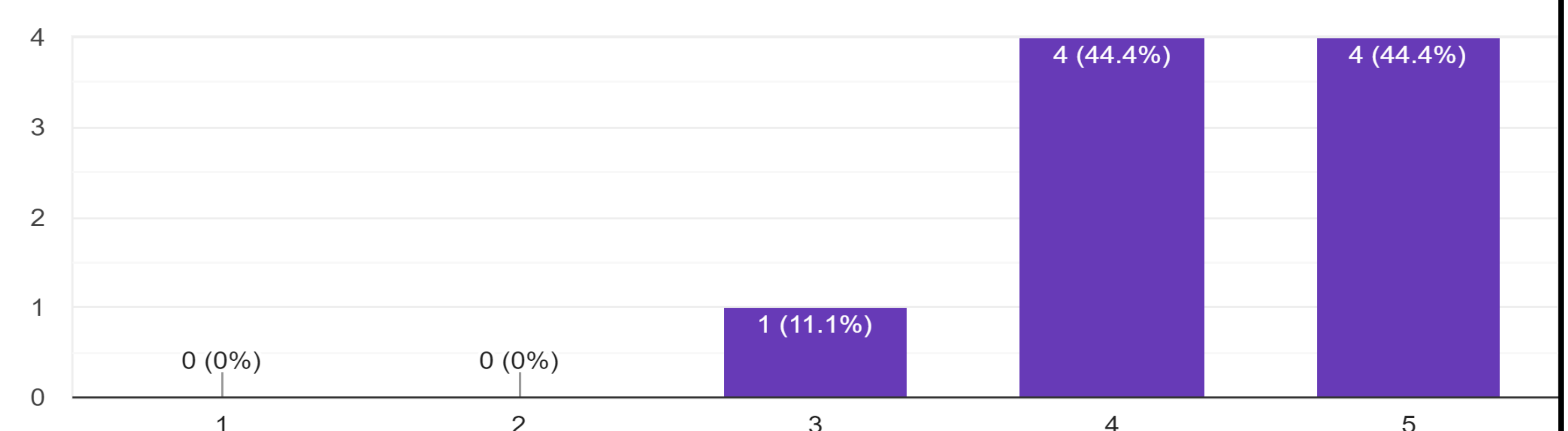
3. Do you find this data is useful in your understanding of your clinical practice?

9 responses



4. Do you agree that these are actionable metrics that you're motivated to improve?

9 responses



## CONCLUSION

- Early evaluation of the objective peer comparison program was overwhelmingly positive.
- The initial benefit perceived by residents suggests that peer comparison metrics should be more widely used throughout residency training
- It could provide an objective addition to the subjective milestone evaluation system currently in use.