

Streamlining an MRI Implant Clearance Process to Improve Radiology Workflow

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Disclosures

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Introduction

Evaluation of a patient's implants or foreign bodies is critical to ensure the patient's safety when undergoing an MRI. Implanted devices which may be MR Conditional or unsafe are being utilized at an increasing rate. They require appropriate clearance to ensure MRI compatibility and safety.

To prioritize patient safety and minimize cancellations for MR Conditional or Unsafe implants, we created a centralized database to improve and expedite our implant clearance process. The goal of this project was to evaluate the impact of a streamlined MRI implant clearance process on operational workflow.

Methods

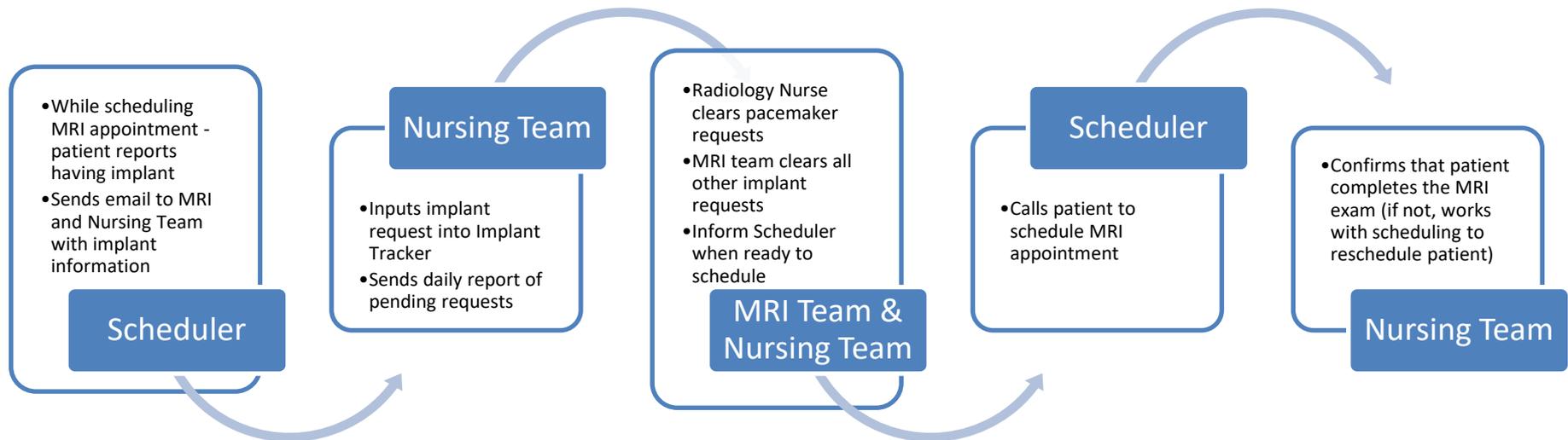
This study was performed in the Department of Radiology at a quaternary academic hospital.

A centralized HIPAA-compliant Excel tracker was created in May 2021 to document the following data for patients receiving an outpatient MRI: date requested, scheduler, patient's name and medical record number, reason for clearance, clearance status (cleared, in progress, or not cleared), date request completed, appointment scheduled date, and additional notes.

Date req	Scheduler	MRN	Last Name	First Name	Exam	Reason for Clearance	Status	Date Completed	Sch?	Schedule date	Days to completion	Case complete	Notes
05/20/21	XX	XX	XX	XX	MRI Sella WO/W Contrast	bladder stimulator	Cleared	05/21/21	Yes	5/27/21	1	Yes	5/21/21 patient is cleared for 1.5T and needs to bring her fully charged handheld device.

Methods

A Radiology Quality Team consisting of MRI techs (Supervisor, Lead Tech, and Senior Tech), Nursing (Quality Nurse and Radiology Nurse), and Scheduling (Lead Schedulers) were able to access and update this tracker to ensure proper implant clearance.

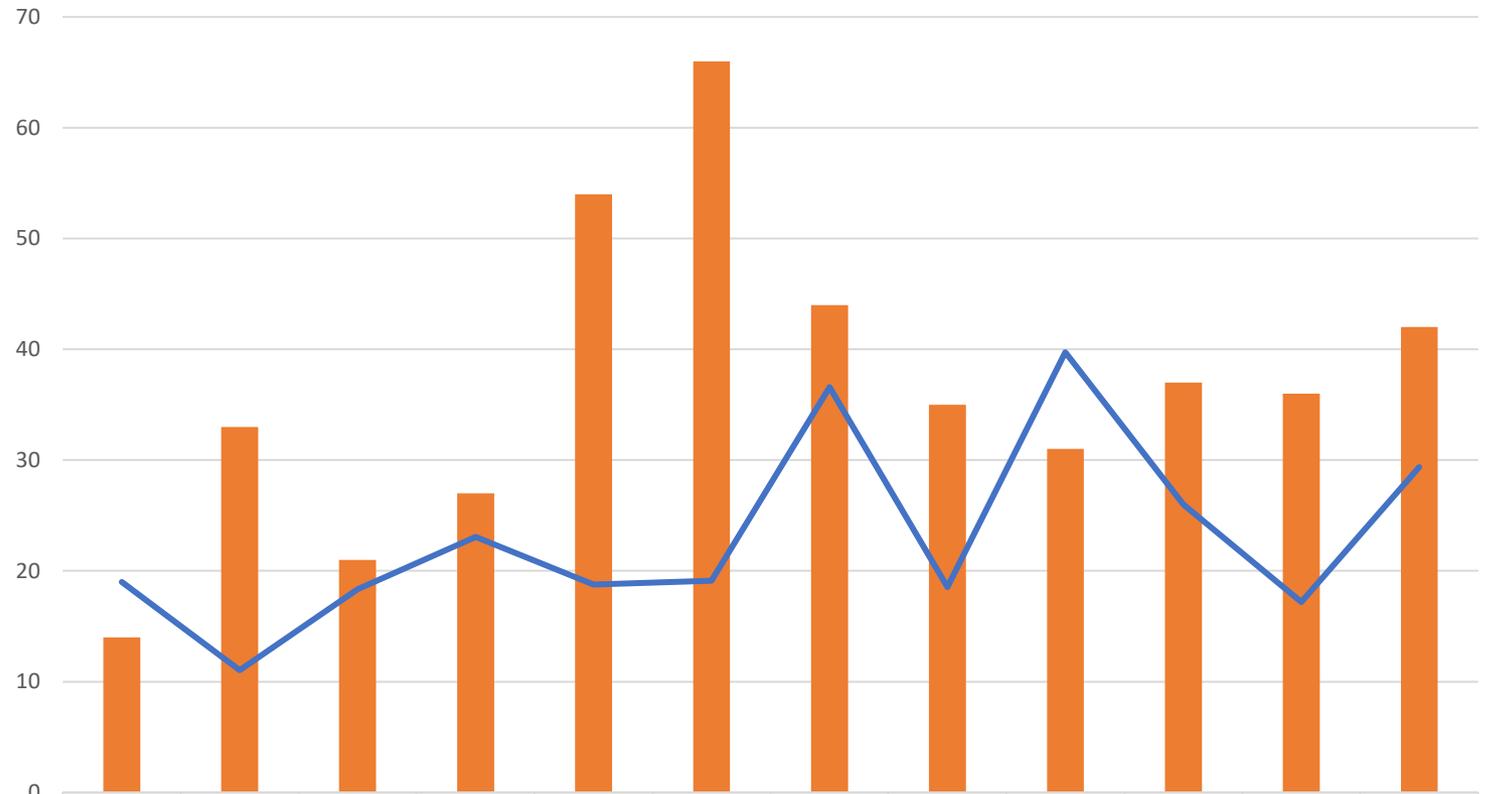


Results

Our metrics for quality improvement included average time from notification of an implant-to-implant clearance (“notification-to-clearance”) and average time from implant clearance to scheduling time (“clearance-to-scheduling”).

From May 2021 to April 2022, there were 440 implant requests that needed clearance for MRI. The average number of days for “notification-to-clearance” was less than 6 days, with 291 requests completed in 3 days or less. Next figure shows the average number of days for “notification-to-clearance” by month. Taking out the outliers of request date to schedule date of >31 days, the average “clearance-to-scheduling” time was 14 days for outpatients.

Results



	May 2021	June 2021	July 2021	Aug 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	March 2022	April 2022
Number of requests	14	33	21	27	54	66	44	35	31	37	36	42
Average days to clearance	2.7	1.6	2.6	3.3	2.7	2.7	5.2	2.6	5.7	3.7	2.5	4.2

Conclusions

The implementation of a streamlined implant clearance process has minimized the different ways of keeping track of these cases and decreased the chances of having a request go unnoticed or mismanaged. The shared tracker ensures that implant requests are cleared prior to the patient coming in for their MRI appointment and facilitates collaboration among the Quality Team in addressing this patient safety issue.

Limitations of the study include not accounting for other factors which are difficult to measure but may affect the “clearance-to-scheduling” time, such as MRI availability.