

Improving MRI Inpatient Access

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Improving MRI Inpatient Access

Purpose: To improve MRI access for inpatients (exam order to begin) by:

- Identifying and addressing reasons for current exam delays
- Scheduling all inpatient exams

Desired Outcomes:

- Improve patient and provider satisfaction
- Accelerate treatment
- Reduce length of stay
- Improve MRI efficiency / utilization



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Phase I: Collect baseline data on the number of inpatient MRI exams ordered

PDSA 1: MRI Technologists asked to assign all inpatient exams a scheduled appointment time

5/3/2017-5/17/2017	
Total Exam Count	Average Turn-Around-Time Order to Begin Exam (minutes)
227	766

6/7/2017-6/21/2017	
Total Exam Count	Average Turn-Around-Time Order to Begin Exam (minutes)
212	626

Percent (%) improvement in TAT from baseline	18.3%
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Lessons learned: It was difficult for MRI Technologists to schedule all inpatient exams while performing other required duties. Therefore scheduling not consistent.



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PDSA 2: Only Lead MRI Technologists were assigned to schedule inpatient exams.

PDSA 3: - All MRI Technologists were re-educated on scheduling process.

- Implemented scripting for Technologists to communicate with RNs regarding patient readiness.
- Assigned a specific Technologist per shift, per day to be responsible for scheduling all inpatient exams.

7/10/2017-7/24/2017	
Total Exam Count	Average Turn-Around-Time Order to Begin Exam (minutes)
220	670

8/14/2017-8/27/2017	
Total Exam Count	Average Turn-Around-Time Order to Begin Exam (minutes)
175	420

Percent (%) improvement in TAT from baseline	12.6 %
Percent (%) improvement in TAT from PDSA 1	-7%

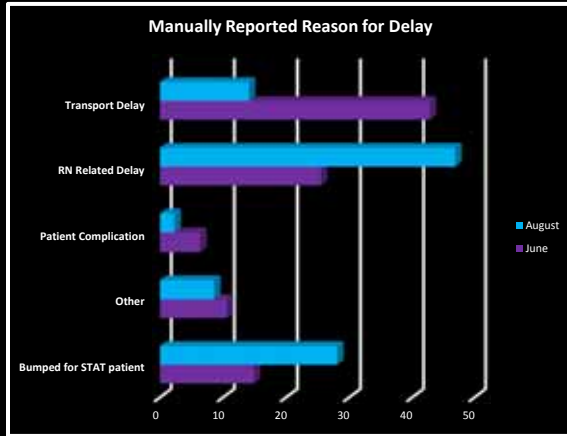
Percent (%) improvement in TAT from baseline	45.2%
Percent (%) improvement in TAT from PDSA 2	37.4%

Lessons learned: It was difficult for only Lead MRI Technologists to schedule all inpatient exams while performing other required duties. Therefore scheduling was not consistent.

Lessons learned: Assigning a specific person to be responsible for scheduling all inpatient exams led to marked improvement in order-to-exam TAT



Phase II: Identified Barriers and Obstacles to Performing Inpatient Exams in a Timely Manner



Category	Specific Reasons
Transport Delay	<ul style="list-style-type: none"> - Transport order cancelled without informing staff - Technologist had to transport patient - Transport arrived after scheduled time
RN Related Delay	<ul style="list-style-type: none"> - Screening Form not completed - Patient not prepped - Tele not removed - Shift Change
Patient Complication	<ul style="list-style-type: none"> - Patient Refused Exam / Uncooperative - Patient in Pain / Could not hold still - Patient unstable. Could not be transported - Patient having other procedure/test
Other	<ul style="list-style-type: none"> - Exams/ Sequences added while patient on table - Exam Cancelled - Technologist Error
Bumped for STAT Patient	<ul style="list-style-type: none"> - STAT patient took priority - Previous patient took longer than scheduled - Outpatient volumes required use of inpatient scanner



Leadership meeting involving Radiology, Inpatient Nursing and Transport occurred to discuss identified reasons for delays:

- Transport Issues involved communication with MRI staff and consistent availability of hospital wide transport staff.
- RNs felt many delays were unavoidable, but expressed unease in being responsible for completing MRI screening forms.
- Outcomes:
 - A document was developed for inpatient nursing reviewing MRI procedures, preps and the importance of screening form accuracy
 - Two additional PDSA projects were approved:
 - Trial a dedicated MRI Transporter
 - Assign responsibility for reviewing screening form with inpatients to MRI Technologists



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PDSA 4: Dedicated Transporter implemented for 1 week

9/18/2017-9/22/2017	
Total Exam Count	Average Turn-Around-Time Order to Begin Exam (minutes)
317	570

Percent (%) improvement in TAT from baseline	25.6%
Percent (%) improvement in TAT from PDSA 3	-35.7%

Lessons learned: Single transporter not always able to move patients alone. Many still required accompanying RN

PDSA 5: MRI Technologists called units to complete screening forms

1/8/2018-1/21/2018	
Total Exam Count	Average Turn-Around-Time Order to Begin Exam (minutes)
351	345

Percent (%) improvement in TAT from baseline	55%
Percent (%) improvement in TAT from PDSA 4	39.5%

Lessons learned: RN's didn't always feel comfortable completing screening forms or understand the importance of accuracy. Having MRI Technologists review screening forms directly with inpatients improved accuracy, completeness and thus efficiency in bringing patients to Department.



Conclusions

- Inpatient Access to MRI exams can be improved by assigning a scheduled exam time to all patients: **Overall improvement: 45.2%**
- Requiring MRI Technologists to complete screening forms with inpatients increased improvement (in addition to scheduling inpatient exams): **Overall improvement: 55%**



Conclusions and Next Steps

- Scheduling all inpatient MRI exams results in a marked improvement in TAT, which resulted in:
 - Improved patient satisfaction
 - Improved referring provider satisfaction
 - Improved efficiency and utilization of MRI equipment
- Working with hospital staff involved in inpatient care (RNs, Transport) helped identify reasons for patient delays to MRI and lead to understanding and implementing long-term solutions for improving exam TAT.
- Assigning MRI staff to oversee inpatient screening process improves timeliness and accuracy of screening form, which results in increased patient safety in MRI environment
- Working with key hospital staff to develop educational guides for MRI safety and patient prep ensures ongoing education of new RN staff, which contributes to sustainability of TAT improvement and patient safety
- Continue to monitor TAT to ensure compliance and sustain improvements