

"Ahead Of Schedule":
A Review of the Patient Scheduling Process In Radiology:
Processes and Strategies for Improvement



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WE HAVE NO ACTUAL OR POTENTIAL CONFLICT OF INTEREST IN RELATION TO THIS PRESENTATION.



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Introduction:

Outpatient imaging centers can be highly congested, with the radiology departments providing care for over thousands of outpatients every year. The lead time for scheduling patients for outpatient examinations oftentimes exceeds 2 weeks, which can be below expectations for patients and referring physicians.

Failure to meet scheduling time requirements may result in treatment delays and diminished quality of care, as well as lower patient and employee satisfaction scoring.

An effective patient scheduling process is essential to deliver effective patient care. There is a need for systems that have efficient scheduling of appointments with tools that manage and evaluate the effectiveness of these systems.

The purpose of this review is to assess the various methods and technologies for creating appointments, to evaluate the lead time from outpatient order acquisition to scheduled procedure, and to identify and develop strategies to decrease the process time.



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Scheduling Process in Radiology

The final product of a diagnostic imaging study is the completed image set on the radiologists' PACS and radiology information system worklist. Before the case is completed, multiple prior steps are required:

1. Order received from referring physician.
2. Examination protocol must be completed by radiologists.
3. Insurance preauthorization must be obtained.
4. Schedulers check availability and book the imaging examination.
5. Assign anesthesia to the case if needed.
6. Calls to patient with date/time of examination.



Significance of Communication

The timeliness of orders, protocols, and insurance preauthorization is necessary to ensure efficient scheduling.

Communication problems at any one of scheduling steps can result in delays in patient tests, professional fee reimbursements, and insurance denial.

In fact, the majority of communication errors occur at steps before the communication of results, and these errors can negatively affect patient care.



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Defining and Measuring Scheduling Time

The scheduling time was defined as the time from when an order is received until it is officially scheduled in the electronic medical record by the scheduling staff.

The scheduling time was identified as the target measure that would determine the success of quality improvement. Tools used to quantify and measure the various elements



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Critical Factors Causing Delay

Interruptions

Patient medical conditions

Cancellations/No shows

Physician schedule conflict

Room availability

Unable to reach patient

Type of procedure



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Strategies to Minimize Delay

Use electronic checklist

Reduce unnecessary paperwork

Provide physician schedule and daily assignments early

Optimize order entry function in the electronic medical record

Continually track scheduling

Create standard of workflow

Ask patients for specific contacting time

Enhance communication with referring physician offices

Set up and provide education on instructions for referring physician offices

Establish standard operating procedures for emergency add-on examinations



Strategies to Minimize Delay

Many times a radiology order is scheduled with the patient but not completely reviewed by the staff until the patient arrives.

- This cause delays for the patient and a rush for all involved to obtain the proper prescription and insurance clearance.
- If lab work is required, the patient will be delayed further
- The patient is often cancelled and rescheduled for another day causing dissatisfaction.



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Strategies to Minimize Delay

To minimize patient delays, shift the review of radiology orders to be done at scheduling.

- Have the scheduler “own” the exam until it’s completed. The scheduler needs verify insurance clearance and check that everything else is in place for the patient arrives
- At scheduling, send the order to the Radiologist to check on the appropriateness and protocol the exam if needed
- At scheduling, send the order to the nurse to check for lab values and pre-plan any needs for the visit.
- At scheduling, send the order to the technologist to make sure everything is completed prior to the patient arrival.

Any problems that are found early gives everyone plenty of time to resolve well before the patient arrives.



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One Step Further: LEAN Approach

The term “LEAN” is a philosophy and method of continuous comprehensive quality improvement approaches initially introduced at Toyota Motor Company and integrated into the Toyota Production System in the 1950s.

LEAN is partly inspired by Western scientific management and developed by the Toyota after visiting the Ford Company assembly line production in Detroit.

The LEAN approach is a set of principles that allow staff and organizations to become and remain efficient. LEAN is not a short-term process; it is a commitment to lifelong learning and implementation of LEAN principles.



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Five Principles of LEAN

1. Specify what creates value for the customer-to see our production from the patients' point of view
2. Identify all the steps in the value stream and eliminate the steps that do not create value for the customer-going through the whole process from referral to the final report was very valuable, and an eye-opener for many staff
3. Make the processes flow smoothly-e.g. eliminate piles of reports waiting to be signed and other inappropriate ways of working
4. Let the needs of the customer lead the process-examination times convenient to the patient and/or referral unit
5. Strive for perfection by continually removing waste



Summary

In any radiology department/imaging center, there are continuous requests by referring physicians for studies. This high demand, coupled with finite resources, leads to bottlenecks occurring in the scheduling process, causing delays in patient treatment.

These inefficiencies ultimately may lead to increased patient length of stay, a negative impact on patient outcomes, increased health care costs, and reduced overall patient satisfaction.



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Summary cont.

Quality improvement measures such as LEAN promotes growth while preserving quality; it continuously analyzes a radiology practice's management systems and workflows to free up resources via standardization of work and improvement of the flow of all system processes.

The resulting efficiency and productivity gains improve the quality and reliability of services a radiology practice provide to patients and clinicians, while at the same time also lower costs

An appropriate and streamlined scheduling process can significantly improve ease of scheduling, timely scheduling of procedures after referral, and drastically increase patient/referrer satisfaction, all of which are vital to the growth of a radiology practice.



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