



U.S. Department of Veterans Affairs
Veterans Health Administration
VA Ann Arbor Healthcare System



Improving Veterans Access to Ultrasound Clinic in VA Ann Arbor Healthcare System Within 30 Days of Order Date

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Purpose

- 14 % of Veterans Administration patients at the Ann Arbor Healthcare system had to wait more than 30 days to have their ultrasound study done.
- Radiology Services QA committee started a project to eliminate any occurrence of a Veteran waiting longer than 30 days for an ultrasound appointment, by improving utilization of available resources.
- A team of 4 industrial and operations engineering (IOEs) students at the University of Michigan, was formed and were tasked to conduct time studies, assess workflow, and ultimately provide recommendations to increase capacity of the Ultrasound Clinic.



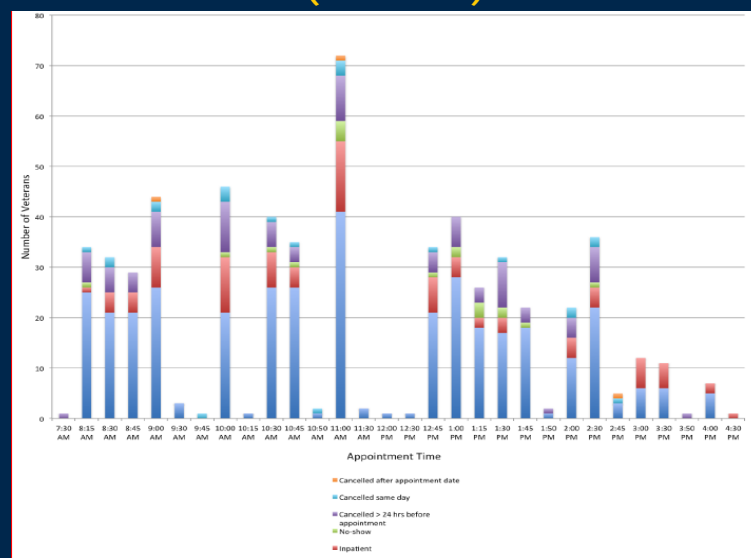
Methods

- Historical Data:
- Appointments From October 1 until December 31, 2015.
- Data Collected:
- 1. Quantify time spent by technicians to complete a study or Ultrasound guided procedure.
- 2. Quantify how much time the MSAs spend to schedule an appointment.
- 3. Time Study, patient "Follow Me" time study and "Minute-By-Minute" shadowing, for 75 Veterans, observing 3 ultrasound rooms and 4 ultrasound technicians, a total of 12 shifts (4 hours) for 3 weeks.



Historic data: Histogram of Scheduled Appointments Oct.-Dec. 2015 (n=1649)

- Designated catch-up times where no appointments are scheduled mainly around noon time and after 2:30 pm, losing opportunities to scan Veterans.

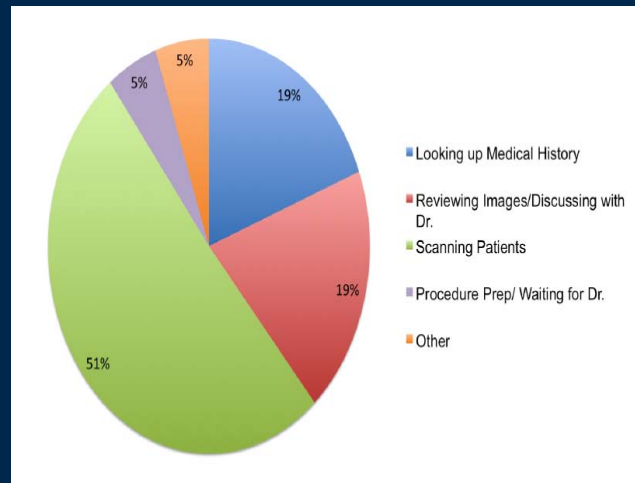


Results

1. Quantify time spent by technicians (Pie Chart)

Average U/S technologist scanning time was 51% of the day.

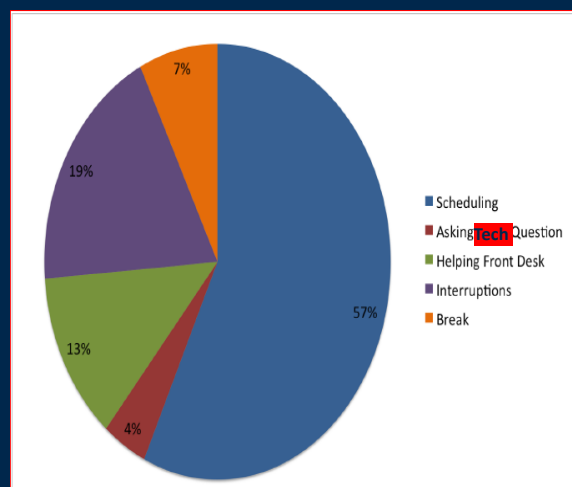
19% of the techs time, was looking up patient history, to assess appropriateness of study.



Results

2. Quantify time spent by MSA (Pie Chart)

- MSAs spent 72% of their time scheduling patients.
- Average time to Schedule a patient is 3 minutes, which is much longer if patient did not respond to phone call (due to EMR documentation).
- Daily average new orders to be scheduled was 66.
- Daily average appointments scheduled was 61.

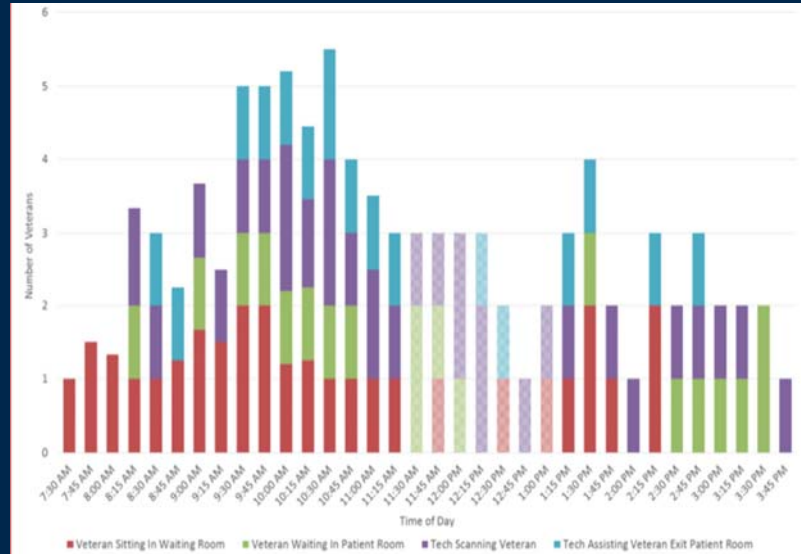


Results

Patient "Follow Me" Time Study

Average of 3.8 Veterans in Ultrasound clinic during the morning

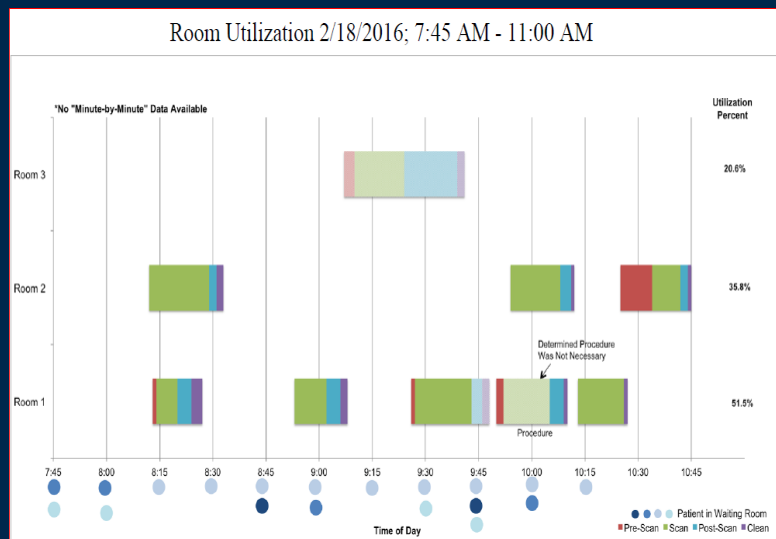
Average of 1.6 Veterans in the Ultrasound Clinic during the afternoon



Results

"Minute-By-Minute" shadowing, Room Utilization (Sample)

Average utilization of the 3 ultrasound rooms is 42%.



Conclusion

- Instead of adding more slots to improve utilization of the ultrasound rooms we implemented a process in coordination with out-patient primary care and specialty clinics, to send all patients who need an ultrasound exam after their clinic visit, directly to radiology services reception desk for either having an exam done if there is availability, or personally schedule an appointment.
- This provided almost constant flow of patients to fill any gaps in the ultrasound schedule due to no show or patient tardiness.
- After implementing these changes, the monthly report in June 2016 demonstrates only 2% of veterans had to wait more than 30 days to access the ultrasound clinic.



Conclusion

- Scheduling the patient in person cut down on the scheduling time spent by MSAs on calling, sending letters to patients, and documenting these activities in the electronic medical record (EMR).
- The patients who got their exams performed on the same day were very pleased, and saved travel time and expense.
- The VA system will save travel pay money for an additional veterans visit to have an ultrasound exam done.
- For those patients with significant exam findings, they were sent back to their physicians, for further management, which expedited patient care.
- Positive feedback from physicians, when exam results were quickly available.

