

Increasing Treadmill Echo Stress Test Throughput and Efficiency

By Aaron Lum, Ibrahim Aljammaz, Mohammed Alangari, Obed Meyers, Varrick Anderson

Problem Description and Project Goals



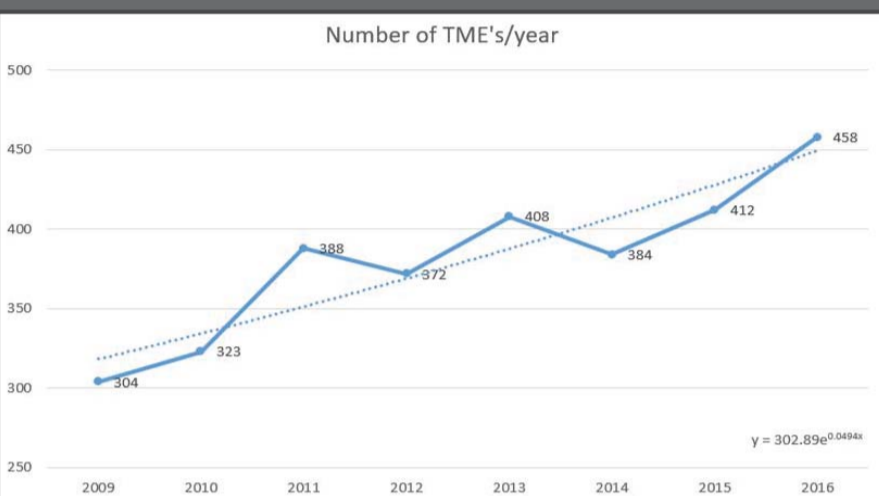
Problem

- Appointments are currently booked 4-5 weeks in advance
- More than 20% of appointments take longer than expected
- Resources are underutilized



Goals

- Decrease lead time to 2 weeks
- Increase number of tests per day
- Decrease delays and wastes
- Increase resource utilization



What is a Treadmill Echo Stress Test?

Treadmill Echo Stress Tests (TME) take ultrasound images of a patient's heart before and after running on a treadmill.



Medical Personnel



Sonographers

- Take pre and post images
- Assist patient from treadmill to bed



Nurses

- Monitors the patient's blood pressure
- Administer IV medications



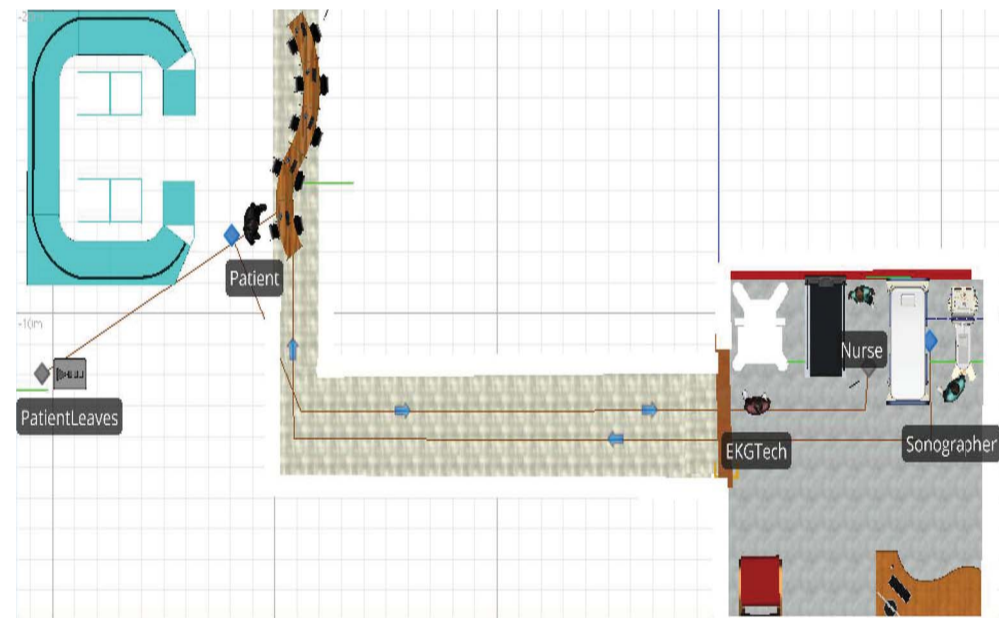
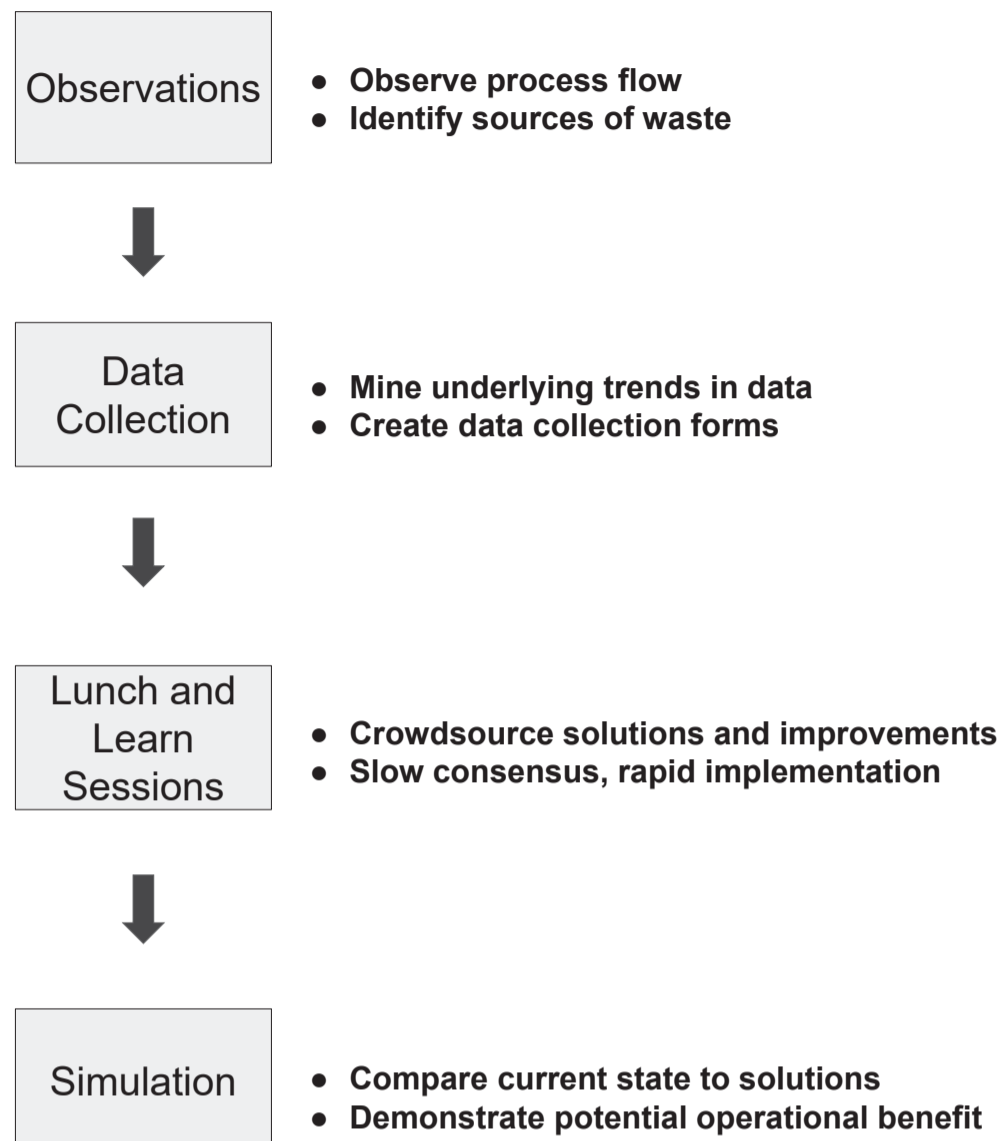
EKG Technicians

- Monitor heart rhythms
- Assist patient with 12 lead

Projected Results

- 66%** Increase in throughput
- 35%** Decrease in lead time
- 18%** Increase in utilization
- 10%** Decrease in process time

Solution Methodology



Solution 1: Adopt Team Based Approach

Three person teams should be dedicated to run TME Tests for an entire day. The teams will stay in treadmill room and will not work on other tasks.

- **Eliminates** time **waiting** for personnel to arrive
- **Reduces wastes** in motion and transportation
- **Increases utilization** of staff and equipment



Solution 2: Implement Streamlined Procedures:

Quick improvement ideas generated from Lunch and Learn sessions should be introduced to workflow. Additional improvement ideas should be identified.

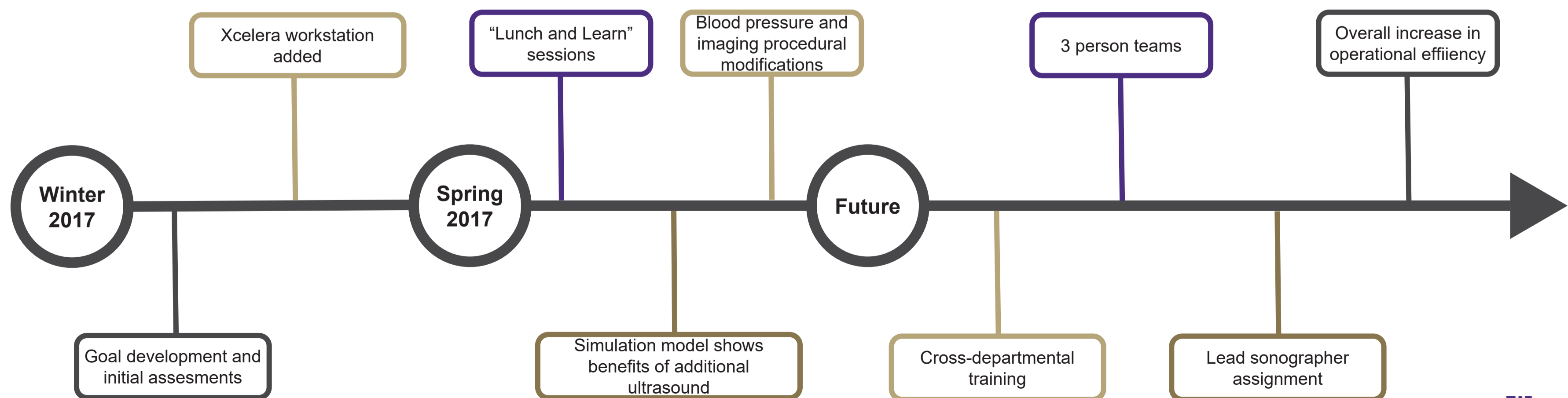
- **Improves test accuracy** by guaranteeing complete images
- **Decreases** probability of requiring **repeat** testing
- **Enables** Echo Lab to continuously **improve** workflow, methods, and teamwork



Solution 3: Improve Resource Utilization:

Ensure machines are not idle, and personnel are given ideal working conditions. Use simulation to identify needs.

- **Reduces** number of **delays** during daily operations
- **Shortens lead time** in booking appointments
- **Increases efficiency** and number of tests per day



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