Expanding After-hours Access for Echocardiography Services

Project Background
The Department of Cardiovascular Diseases (DCD) at Mayo Clinic Arizona provides a range of echocardiography services to the greater Phoenix area. Echocardiograms are common in many specialties in which a specialty-trained cardiac sonographer takes multiple ultrasound images of the heart. These images are interpreted by an echocardiographer to determine the patient’s cardiac health.

Research Methods
Stakeholder Engagement: Multiple stakeholder engagement meetings were held and a focus group was held in April 2019 to explore ways to show them how the need for late night shifts within the echocardiography lab had increased. Additional analysis showed that the need for late shifts had increased beyond what was evident based on the existing data.

Results: Overall Hospital Outpatient Echo Volume

Implementation
Change Management Tools: Change management tools such as DJD® and the Mayo Collaborative for Outcomes Research and Evaluation were utilized to improve care for patients seeking care before 9 PM. This included the appointment setting system, TTE appointment scheduling, and the Echos lab to better utilize their fixed capital assets and increase access.

Results: 6:40 PM Appointments

Findings
The pilot achieved or exceeded many operational and financial targets.

Increased Volume:
- Gross revenue for the MCA Echo Lab by October 2019 was $1.5 million
- Total hospital echocardiographic volumes increased 56%

Appointment Fill Rate:
- 6:40 PM appointment utilization rate: 90%
- 5:20 PM appointment utilization rate: 50%
- 6:40 PM appointment rate: 86%

Patient Demographics:
- Age and gender demographics for patients aged 50% of all patients compared to 45% of all patients
- 20% of all patients were aged 65 or older compared to 80% of all patients

Success Metrics:
- Local shift volumes accounted for 20% of total hospital volumes
- The after-hours volume was 71% of the total increase in gross revenues for the MCA Echo Lab by October 2018

Conclusions
The success of the pilot confirmed that there is patient demand for after-hours echocardiography services.

The expanded after-hours model was implemented in September 2019 and continued year-round 2020.