



# Referral to Listing Throughput Improvement Heart Program

Attig, Stacie, MSN, AGPCNP, CCTC; Bahr, Matt, BS; Al-Saleh, Stacy, BSN, CCTC ; Zaragoza, Erika, R.N., C.C.T.C. ; Anacker, Danielle K., R.N., C.C.T.C.; Smith, Allison T., R.N., C.C.T.C. Engholdt, Kevin, MS, MBA  
Mayo Clinic, Phoenix, AZ

## Define/Problem Statement

From January 2015 to June 8<sup>th</sup>, 2017, the average **Referral to Listing time for Heart candidates was 72 days (median: 43.5; N: 106 patients).** Additionally, during Jan 2016 to March of 2016, our patient satisfaction was **78.5%**. This causes delays in our patients ability to get a transplant, reduces patient satisfaction, reduces transplant volumes, and ultimately can impact patient outcomes and satisfaction. Reducing this timeframe can increase access to transplant care for patients, increase patient satisfaction, increase volumes, and increase outcomes.

## Aim Statement

We aim to reduce the average Referral to Listing timeframe for Heart candidates by **25%**, **maintain or improve our patient satisfaction of 75%** by May 2018.

## Measure

High level process maps were used (SIPOC) to help scope the problem, defined customer requirements, as well as gather baseline data on those requirements. In addition, a process map was developed for further deep dive into the referral to listing process.

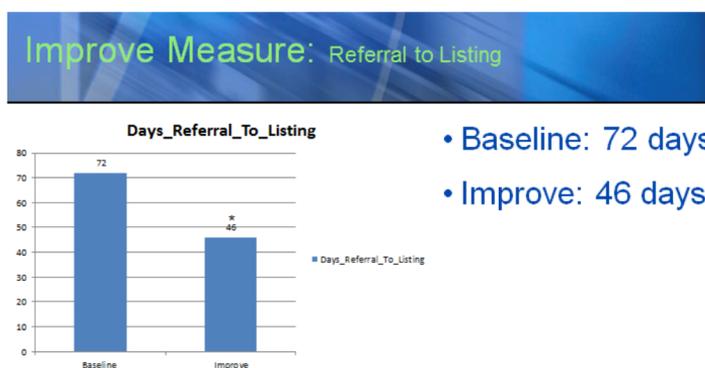
## Analyze

A Cause and Effect (CE) Matrix, Failure Modes and Effects Analysis (FMEA) were completed. Pareto Analysis, and lean tools around Theory of Constraints were used to identify key factors contributing to the reasons for delay and opportunities were discussed using root cause analysis process

## Improvement

Interventions were made in requiring criteria to be completed prior to coming to selection conference, the selection conference process and presentation of patients, a dictation code change, and finance education for our physician leadership.

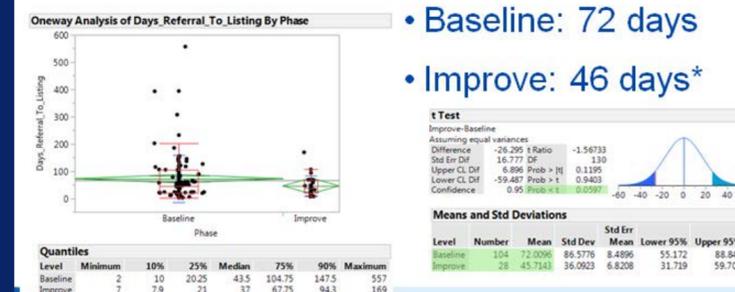
## Figure 1



- Baseline: 72 days
- Improve: 46 days\*

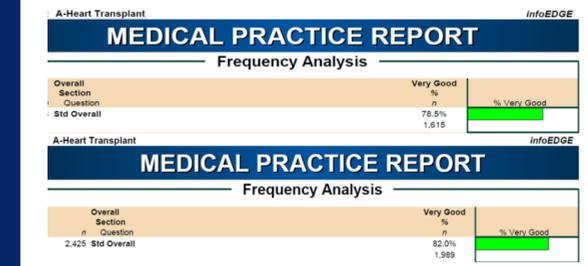
## Figure 2

Improve Measure: Referral to Listing



- Baseline: 72 days
- Improve: 46 days\*

## Figure 4



## Control

A control plan was developed to sustain the gains, while lessons learned, and communicated out at our Transplant Quarterly Meeting. The Before and After data went from 72 days from Referral to Listing to 46 days. Our countermeasure of patient satisfaction went from 78.5% to 82%. All measures showed a statistically significant difference ( $P < .05$ ) that solidified the process improvement efforts were due to the project and not random chance.

## Benefits

Promotes transplant volumes as standardized workflows and optimized system from Referral to Listing. Patients are listed faster and ultimately able to get a transplant faster under the new leaned out system.

## Figure 3



- Baseline: 72 days
- Improve: 46 days\*