

# Beth Israel Deaconess Hospital-Milton

## Laboratory: Decreasing Emergency Department Troponin Result Times

### The Problem

During 2012, the Lab did not achieve its goal for 1 hour resulted time for ED Troponin testing (Mean: 61.1%).

Troponin testing is critical in the determination of Acute Myocardial Infarction in patients presenting to the Emergency Department.

### Aim/Goal

Increase % of ED Troponin tests that are resulted within 1 hour of collection time from 61.1% in 2012, to 82.5% by the end of 2013.

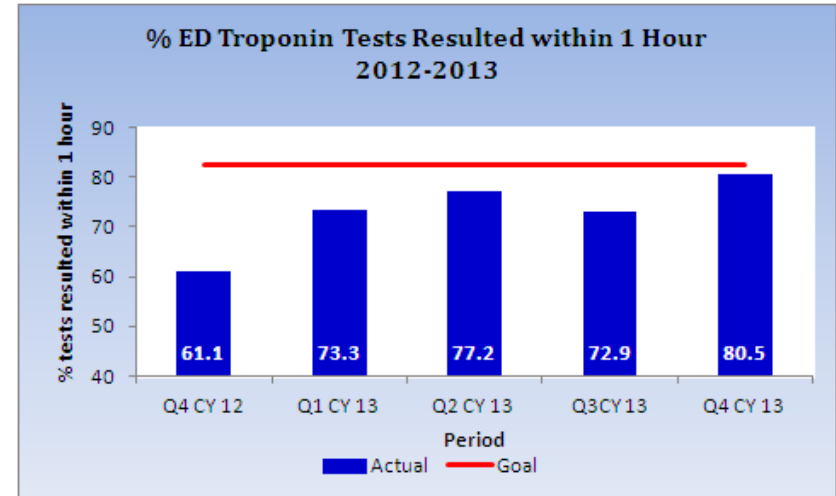
### The Team

- Phlebotomists
- Laboratory Technicians
- Emergency Department Nursing Staff
- Transport Services
- Volunteer Services
- Medical Staff

### The Interventions (Select Actions Taken)

- Laboratory staff educated as to importance of timely processing and testing
- Auto-verification of tests allows for more rapid release of results that are within “normal limits”
- New instrumentation allows Troponin testing to be run on multiple platforms
- Shortened centrifugation time to five minutes to speed up testing
- Close monitoring of “specimen received” to “specimen verified” time
- New Troponin assay introduced in December 2013

### The Results/Progress to Date



- Although goal was not met, there has been significant improvement in ED Troponin tests that are resulted *within 1 hour of collection*
- Once samples have been received in the Laboratory, 95.6% are resulted *within one hour of receipt in the lab*, with an average time of 38 minutes

### Lessons Learned

- Major opportunities for further reduction in the analytical time for Troponin testing exhausted
- Mean time from collecting the ED sample to receiving it in the lab is currently 16 minutes (down from 26 minutes)
- Phlebotomist draws multiple patients in the ED, thus increasing ‘transport time’ and ‘result time’
- Specimen transport time by volunteers is slower than by other modalities
- Demand-capacity matching of Phlebotomy staffing implemented in November 2013

### Next Steps/What Should Happen Next

- Examine other transport options (pneumatic tube system, robot )
- Work with ED to reduce the ‘order to collect time’ to less than 10 minutes