High-Sensitivity Troponin Implementation

Overview

MUNSON HEALTHCARE

Situation

What is Changing?

- Our current Troponin assay will be replaced by the new generation High Sensitivity Troponin (hs-TnI) assay across the entire MHC system.

- hs-TnI assays detect very low levels of troponin resulting in detectable troponin even in healthy patients
  - Very few people will have a “negative” troponin
  - Clinicians will learn new normal ranges for hs-TnI labs

- The hs-TnI assay is focused less on initial levels of troponins and more on the change of hs-TnI over time *(the delta)* to help rule-in or rule-out ACS

Background

Why Are Making This Change?

- **Most patients presenting to the the ED with a chief complaint of chest pain are *not* having an acute coronary syndrome (ACS).**

- **Current Troponin**:
  - Identifying low risk patients for safe discharge can be challenging and time consuming – 6 to 12 hours with our current troponin (Tn) assay

- **hs-TnI:**
  - ***For Low Risk Patients:*** Faster identification of low risk patients in 1 to 3 hours facilitating earlier discharge and reducing unnecessary OBS stays
  - ***For those experiencing MI or true cardiac issues:*** Faster identification with this assay allowing earlier triage and intervention

Assessment

Why are We Changing Now?

- Scientific literature, real-world experience, and lab technology behind the use of hs-TnI has reached a point that we feel MHC is poised to transition and improve care system wide.

- All the major medical centers in Michigan have transitioned to new generation hs-TnI testing.

Assessment

Analyzing the Change

- Benefits
  - hs-TnI testing is now the biomarker of choice/Gold Standard chest pain
  - Pooled data demonstrates the NPV for a major adverse cardiac event using a hs-TnI algorithm is 99.6%.
  - Low risk patients will be able to continue their evaluation in the ambulatory setting with their PCP and/or cardiologist and avoid unnecessary OBS stays or admissions

- What Happens if We Don't Implement
  - Longer than necessary ED/OBS stays with associated testing, resulting in higher healthcare costs for our patients
  - Forced rapid change if current testing is discontinued at some point in the future
  - Counterproductive to the goals to increase efficiency and quality of care to our patients

Recommendation

How Will This Change be Implemented?

- Projected go-live date across the system is April 12, 2022

- The effort is being led by a multidisciplinary team including Drs. Kanner, Recchia, and Archer and supported by experts from Lab Medicine, Physician Services, Continuous Improvement, IT, and Ambulatory Leadership.

Resources

Patient Care Algorithm

Resource **Website**

[High-Sensitivity Troponin Implementation (munsonhealthcare.org)]