High-Sensitivity Troponin Testing Transition

Why are we changing our Troponin Testing?

- Most patients presenting to the Emergency Department with a chief complaint of chest pain are not having an acute coronary syndrome (ACS).
- Identifying low risk patients for safe discharge can be challenging and time consuming – 6 to 12 hours with our current troponin (Tn) assay
- The new generation high-sensitivity troponin (hs-TnI) allows accurate identification of low risk patients in 1 to 3 hours facilitating earlier discharge from the ED and obviating need for overnight observation.
- The hs-TnI assay also identifies patients with MI faster allowing earlier triage of these patients to cardiology care.

What is changing?

- The current Tn assay will be replaced by the new generation 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 will have a "negative" troponin.
- 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.

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.

How will this change happen?

- The effort is being led by a multidisciplinary team including Dr. Kanner, Dr. Recchia, Dr. Gibbs, and Dr. Archer and supported by experts from Lab Medicine, Physician Services, Continuous Improvement and Ambulatory Leadership.
- The projected go-live date with the hs-TnI assay across the system is April 12, 2022.

What are the benefits of changing?

- hs-TnI testing is now the biomarker of choice for rapid decision making in patients with chest pain.
- Pooled data demonstrates the negative predictive value for a major adverse cardiac event using a hs-TnI algorithm is 99.6%. This will reduce ER times and reduce unnecessary hospital observation admissions and testing.
- Low risk patients will be able to continue their evaluation in the ambulatory setting with their PCP and/or cardiologist.

What are the consequences for NOT changing?

- Longer than necessary ED/Observation 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

Who else is using hs-TnI testing currently?

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

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