



MEMORANDUM

DATE: November 14, 2012

TO: Physicians, Nurse Practitioners, Nursing Staff, and Clinical Educators,
Hamilton Health Sciences and St. Joseph's Healthcare

FROM: Dr. Tony Chetty, Discipline Director for Clinical Chemistry and Immunology

RE: TROPONIN I ANALYSIS AT HRLMP LABORATORIES

Concurrent with changing the core clinical chemistry analytical platforms within the Hamilton Hospitals on November 28, 2012, we will also be changing troponin assays. At this time we will be switching from the 4th generation Troponin T assay (Roche Diagnostics) to the Abbott Diagnostics Architect Stat Troponin I assay. The cutoff for the Abbott Architect STAT Troponin I assay per the Third Universal Definition of Myocardial Infarction is a troponin concentration greater than the 99th percentile upper reference limit from a healthy population (i.e., >0.03 ug/L). Therefore, concentrations 0.04 ug/L and higher will be flagged as "H" (reference interval: <0.01-0.03 ug/L or <0.04 ug/L) with the following comment appended to each result:

<0.04 ug/L No evidence of myocardial injury
>= 0.04 ug/L Evidence of myocardial injury

To evaluate patients with suspected Acute Coronary Syndrome, blood samples for the measurement of troponin I should be drawn on first assessment and repeated 3–6 hours later. Later samples are required if further ischaemic episodes occur, or when the timing of the initial symptoms is unclear.

For further information, please contact:

Dr. Peter Kavsak, 905 527-4322, Ext. 76293, Email kavsak@hhsc.ca.

Dr. Stephen Hill, 905 521-2100, Ext. 76595, Email hillstev@hhsc.ca.

References:

- Thygesen K, et al. Third Universal Definition of Myocardial Infarction. *Circulation* 2012;126: 2020-35.
- Keller T, et al. Serial changes in highly sensitive troponin I assay and early diagnosis of myocardial infarction. *JAMA* 2011;306: 2684-93.
- Reichlin T, et al. Early diagnosis of myocardial infarction with sensitive cardiac troponin assays. *N Engl J Med* 2009; 361:858-67.
- MacRae AR, et al. Assessing the requirement for the six-hour interval between specimens in the American Heart Association classification of myocardial infarction in epidemiology and clinical research studies. *Clin Chem* 2006; 52:812–18.