

MEMORANDUM

To: All Physicians, Nurse Practitioners, Directors of Nursing,
Clinical Instructors/Educators, Laboratory and Nurse Managers,
Clinical Chemistry Laboratories

From: Ruth Sellers, MD
Medical Director, Health PEI, Provincial Laboratory Services

SUBJECT: **Laboratory Utilization: Lactate Dehydrogenase (LD/LDH)**
A frequently ordered test with limited clinical utility

DATE: November 20, 2012

Background: Lactate dehydrogenase, a hydrogen transfer enzyme that catalyzes the oxidation of L-lactate to pyruvate is present in all cells of the body with the highest concentrations in erythrocytes, skeletal and cardiac muscle, liver and lung.

Serum elevations are nonspecific. Clinical indications for the test have evolved as more sensitive and specific markers of cardiac injury (Troponin) and hepatocellular damage (ALT) have been identified.

LD/LDH is currently of value in the evaluation of hemolytic anemia and interstitial lung disease and the work up/monitoring of some malignancies. It has been replaced by Troponin as a marker of cardiac muscle injury. ALT is a more specific marker of liver injury.

Review of testing practices in PEI:

In the six month period between October 1, 2011 and March 31, 2012
6301 tests were performed in PEI Laboratories with the following distribution by location.

| QEH | PCH | Western H | CH | KCMH | Souris H |
|-------------|----------------|----------------|---------------|---------------|----------|
| 2206 | 2614 | 1025 | 286 | 200 | 0 |
| 35% testing | 41% of testing | 16% of testing | 5% of testing | 3% of testing | 0 |

Clinical utility and management implications should be assessed when ordering LD/LDH. The laboratory will continue to monitor use of this widely ordered but low value test and provide feedback regarding testing patterns. LD will no longer be part of the care set for evaluation of chest pain in the emergency department.

Questions may be directed to Dr. R. Sellers at 894-2303.

pc: Jamie MacDonald
Bill Bylhouwer

