



Memorandum

Date: August 29, 2016

To: Calgary Zone Rural Sites (HRH, OGH, CLRH, SDHS, DDHS, CGH, VGH, OHWC, BMSH)
Calgary Zone Urgent Care Centres (SCHC, SMCHC, ACHC, CCHC)
Poison and Drug Information Service (PADIS), Calgary Zone

From: Dr. Ethan Flynn, Clinical Section Chief General Pathology
Dr. Hossein Sadrzadeh, Clinical Section Chief Clinical Biochemistry

Re: Potential Interference from N-acetylcysteine (NAC) in VITROS® Chemistry Assays for Blood Glucose, Lactate, and Urate Measurement in Calgary Rural Hospitals and Calgary Health Centre Laboratories

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Key Messages:

- An Urgent Product Correction Notification was issued on August 12, 2016 by Ortho Clinical Diagnostics (manufacturer of VITROS® chemistry products slide assays) regarding interference by N-Acetylcysteine.
- N-Acetylcysteine (NAC) (Mucomyst®, Acetadote®, Cetylev®, Parvolex®) may interfere with specific chemistry assays on the VITROS® chemistry analyzers using Slide Assays® with NAC concentrations associated with intravenous (IV) therapeutic use of NAC, or with concentrations greater than 2.6 times the oral therapeutic dose of NAC.
- This affects testing of glucose, lactate and urate performed only at Calgary Zone Rural Hospitals and Calgary Health Centre Laboratories, which use VITROS analyzers:
 - Glucose** – possible negative bias (falsely **low** glucose) up to 1.0 mmol/L for normal concentrations
 - Lactate** – possible negative bias (falsely **low** lactate) of 0.30 mmol/L at normal concentrations to 0.60 mmol/L at elevated concentrations
 - Urate** – possible positive bias (falsely **elevated** urate) of up to 50 µmol/L
- This does not affect testing performed at Calgary Zone hospital Rapid Response Laboratories (RRLs) and at the CLS Diagnostic & Scientific Centre (DSC).

Importance/Impact:

- Awareness of potentially falsely low glucose and lactate levels, and falsely elevated urate levels, in patients being administered IV NAC (for example, for acetaminophen overdose) or in patients taking oral NAC who have significant renal or hepatic impairment in whom drug clearance/elimination may be prolonged.

Action Required:

- None

Inquiries and feedback may be directed to:

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This memorandum has been reviewed and approved by:

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