Capital Health

MEMORANDUM

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To: Capital Health Clinics and Physicians
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From: Dr. Amy Lou
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Date: January 14, 2013

Subject: **Change of the Reference Range for Insulin Testing**

Effective January 21, 2013, reference ranges for serum insulin testing will be changed from 14-145 pmol/L to ***<=209 pmol/L***. This change is necessary because the vendor has modified the assay to improve alignment with the World Health Organization (WHO) standards.

Ordering Recommendations for Serum Insulin:

- Insulin is majorly used for diagnosing insulinoma, when used in conjunction with proinsulin and C-peptide measurements.
- It is also used in the evaluation of patients with polycystic ovary syndrome who may be candidates for treatment aimed at lowering insulin resistance in the absence of overt diabetes or glucose intolerance.
- Importantly, routine testing of insulin or C-peptide is not recommended for differentiation between type 1 and type 2 diabetes, nor in the diagnosis of the metabolic syndrome.

Specimen Requirements and Cautions:

- A fasting serum sample is required for insulin testing.
- Simultaneous testing of serum glucose is required for adequate interpretation of the results.
- Patients on insulin therapy may develop anti-insulin antibodies. These antibodies may interfere in the assay system, causing inaccurate results.
- This assay has a great cross-reactivity with recombinant human insulin (Novolin R and Novolin N), but much less with commonly used analogues of injectable insulin (ie, insulin lispro, insulin aspart, and insulin glargine).

If you have any questions, please contact Bassam.Nassar@cdha.nshealth.ca at (902) 473-2225, Amy.Lou@cdha.nshealth.ca at (902) 473-1528 or Shauna.Thompson@cdha.nshealth.ca at (902) 473-4065.

Thank you for your attention,

CC. Ms. Fran O'Brien
Dr. Godfrey Heathcote
Ms. Sandy Schlay
Ms Faye Lively

References:

1. Immulite 2000 Insulin package insert (PIL2KIN-29, 2009-10-06).
2. Clinical Chemistry 50, No. 1, 2004.
3. Siemens Urgent Field Safety Notice 4003-CA, April 2012.