

Pathology and Laboratory Medicine Memorandum

To: NSHA Physicians, Health Service Directors and Laboratories

From: Program of Pathology and Laboratory Medicine

Date: January 31, 2019

Subject: Standardization of Glucose Reference Ranges, Critical Values and Reporting Comments

Effective immediately, glucose reporting will be standardized across the province for both in-laboratory and Point of Care Testing (POCT).

Glucose tests processed on laboratory chemistry instruments, blood gas (BG) instruments or POCT platforms will be reported as follows:

Reference ranges:

Fasting: 3.8- 6.0 mmol/L
Random: 3.8- 7.8 mmol/L

The standardized upper limit of the reference range now flags the change of a patient's glucose level towards impaired fasting glycemia or impaired glucose tolerance rather than the transition into overt diabetes mellitus, as some laboratories around the province have been reporting.

Critical values

Low: <2.5 mmol/L
High: >25 mmol/L for age >16 years
>15 mmol/L for age <= 16yrs

In addition, the following comments will be added to the laboratory report when testing is performed using:

- **a laboratory chemistry platform:** *“Note: For full diagnostic workup of diabetes mellitus and achieving glycemic control in patients with known diabetes - please refer to the most recent version of the Diabetes Canada Clinical Practice Guidelines”*
- **glucose meters (POCT):** *“Note: glucose results from glucose meters cannot be used for diagnosis of diabetes. A glucose value of ≤ 4.0 mmol/L in a patient known to have diabetes mellitus is considered as relative hypoglycemia that requires action as per diabetes care protocol”*

If you have any queries on the above, please contact Dr. Manal Elnenaie at 902-473-5194 or Manal.Elnenaie@nshealth.ca.