

<b>DATE:</b>	3 September 2024
<b>TO:</b>	All Zones: All Healthcare Professionals and Providers
<b>FROM:</b>	Clinical Biochemistry and Point of Care Testing, Alberta Precision Laboratories (APL)
<b>RE:</b>	Reference Interval Changes for Glucose in Neonates

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## PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

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### Key Message

- Effective September 4, 2024, the lower age range for fasting and random glucose reference intervals will change from less than 30 days to less than 72 hours. The lower end of the less than 72 hour reference interval will be adjusted from 2.5 mmol/L to 2.6 mmol/L.

Age range	Fasting Updated reference interval	Random Updated reference interval
Less than 72 hours	2.6 – 5.5 mmol/L	2.6 – 11.0 mmol/L
72 hours – 150 years	3.3 – 6.0 mmol/L	3.3 – 11.0 mmol/L

- These changes are necessary to align with glucose reference intervals published in the Maternal, Newborn, Child & Youth (MNCY) Strategic Clinical Network (SCN) protocol: “*Hypoglycemia Identification and Management in the Newborn Less Than 72 Hours of Age (HCS-310-01)*.”

### Background

- Assessment for hypoglycemia is required for all newborns with risk factors for hypoglycemia and those identified with possible symptoms of hypoglycemia.
  - The Canadian Pediatric Society advises a cut-off for blood glucose concentration in newborns less than 72 hours of age as 2.6 mmol/L. This lower limit increases for newborns outside of the neonatal transitional period (greater than 72 hours) to 3.3 mmol/L.
  - Previously, the lower age range for glucose reference intervals was less than 30 days old and did not align with guidance provided by the MNCY SCN or the Canadian Pediatric Society.

### How this will impact you

- Updated provincially standardized reference intervals will change interpretation for glucose test results for patients less than 30 days old.

### Action Required

- Be aware of and take action to share this reference interval change and impact to your clinical practice area, including awareness on result flagging interpretation on POCT glucose meters.



**Questions/Concerns**

- Dr. Heather Paul, POCT Medical Lead, South Sector, APL; [heather.paul@aplabs.ca](mailto:heather.paul@aplabs.ca)
- Dr. Dustin Proctor, Clinical Biochemist, Edmonton, APL; [dustin.proctor@aplabs.ca](mailto:dustin.proctor@aplabs.ca)

**Approved by**

- Dr. Allison Venner, Clinical Biochemistry Section Chief, South Sector, & Provincial POCT Medical Lead, APL
- Dr. Carolyn O'Hara, Chief Medical Laboratory Officer (Interim), APL

*Effective September 1, 2023, APL has become the sole provider of all public lab services in Alberta. As a result, community lab services formally provided by DynaLIFE Medical Labs will become the responsibility of Alberta Precision Labs (APL). This change impacts all zones.*