

DATE:	23 June 2025
TO:	All Healthcare Providers
FROM:	Clinical Biochemistry and Point of Care Testing (POCT), Alberta Precision Laboratories (APL)
RE:	Reference Interval Changes: Anion Gap on Vitros and i-STAT Instruments

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Key Message

- Effective June 26, 2025, the reference intervals for Anion Gap (AGAP) will be updated at sites using QuidelOrtho Vitros and Abbott i-STAT instruments (within lab testing and POCT):

Reference Intervals	Current	New
Vitros (Chemistry)	8-15 mmol/L	4-16 mmol/L
i-STAT (Chemistry and POCT)	13-21 mmol/L	7-16 mmol/L

Background

- AGAP reference intervals are instrument-specific due to variability in instrument testing.
- Previously used AGAP reference intervals for Vitros and i-STAT instruments, which are utilized in rural and suburban hospital laboratories and POCT settings throughout the province, required review due to a higher rate of abnormal AGAP flags.
 - This excessive flagging led to confusion among ordering clinicians and, in some instances, unnecessary instrument troubleshooting by laboratory staff.
- The new provincial AGAP reference intervals are evidence-based and derived from Alberta data using population-level statistical analysis.

How this will impact you

- The new AGAP reference intervals will reduce the frequency of abnormal flags at sites using Vitros and iSTAT instruments, which will enhance clinical interpretation clarity and minimize unnecessary follow-up.
- There are no changes to the AGAP reference intervals at the sites with alternate instrumentation to Vitros and iSTAT.

Action Required

- Familiarize yourself with the updated AGAP reference intervals for Vitros and i-STAT instruments.
- The reference intervals for the specific instrument that was used to analyze the sample will be reported with the result.

Questions/Concerns

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Approved by

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