

DATE:	2 February 2024
TO:	Healthcare providers at Northwest Healthcare Centre (High Level) and St. Theresa General Hospital (Fort Vermilion)
FROM:	North Zone, Alberta Precision Laboratories (APL)
RE:	Implementation of Beckman Access 2 Instruments – BNP reporting in High Level and Fort Vermilion

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Key Message

- Effective **February 5th, 2024**, the Northwest Health Centre Laboratory (High Level) will implement a new chemistry immunoassay instrument, Beckman Access 2. The St. Theresa General Hospital Laboratory (Fort Vermilion) will follow in 1-2 months.
- The new instrument will offer high sensitivity troponin I (hs-TnI), B-natriuretic peptide (BNP) and quantitative serum beta-HCG (bHCG).
- Changes in troponin and bHCG testing, reporting and interpretation have been previously communicated as part of a larger North Zone wide implementation.
 - Bulletin available at: <https://www.albertahealthservices.ca/assets/wf/lab/if-lab-hp-bulletin-implementation-of-beckman-access-2-instruments-high-sensitivity-troponin-i-hs-tnl-with-2-hr-chest-pain-pathway-quantitative-serum-beta-hcg-and-bnp.pdf>
- In High Level and Fort Vermilion, BNP testing will replace NT-proBNP as the local natriuretic peptide available for testing.
- **B-natriuretic Peptide (BNP)**
 - The Beckman BNP assay will replace the Siemens NT-proBNP assay.
 - Results for BNP are extremely different from NT-proBNP and cannot be used interchangeably.
 - Interpret BNP results with appropriate medical decision limits (see table A).
 - When ordering natriuretic peptides, the test will default to the local site test, which is BNP. The Epic test order name remains the same (“B-Natriuretic Peptide (BNP or NT-ProBNP)”).

Why this is important

- The provincial rural immunoassay analyzer project is a large-scale provincial project which will improve access to vital laboratory testing in many of Alberta’s rural hospitals and improve standardization in instrumentation.
 - High Level and Fort Vermilion were one of only a handful of rural facilities across Alberta performing NT-proBNP as their on-site natriuretic peptide. Switching to BNP will bring further standardization with similar facilities across the province
- Adoption of the 2-hr Beckman hs-TnI chest pain pathway with rapid rule-in/rule-out cut points is gradually expanding across the province and improving flow of patients through emergency rooms.

Background

- This change is part of a larger province wide standardization effort to implement an immunoassay analyzer across many rural acute care hospitals in Alberta, which will benefit patients by offering a high sensitivity troponin I and associated 2-hour chest pain pathway with rapid rule-in/rule-out cut points.



Action Required

- Please refer to previously released [bulletin](#) for summary of changes for troponin and quantitative hCG testing.
- Please be aware of the changes in assay, container type and reporting of troponin, BNP and bHCG, summarized in Tables A and B.
 - Interpret BNP results with appropriate medical decision limits.

Questions/Concerns

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Approved by

- Dr. Kareena Schnabl, Section Chief, Clinical Biochemistry, North Sector, APL
- Dr. Michael Mengel, Medical Director, North Sector, APL



Table A: Summary of changes in Reference intervals, critical limits and interpretive comments (High Level and Fort Vermilion)

Test (units)	Ordering name	New RIs, critical limits or interpretive comments	Notes
hs-TnI (ng/L)	Troponin	RI: <18 Critical limit (only phoned for outpatient/community results): ≥ 50	<ul style="list-style-type: none"> • See previous bulletin for rule in and rule out pathway • Results and units differ significantly from previous methodology and cannot be used interchangeably. • Blood collection container type is changing from green top lithium heparin plasma to Barricor lithium heparin plasma
BNP (ng/L)	B-Natriuretic Peptide (BNP or NT-ProBNP)	RI: <100 <u>Interpretive comment:</u> In an acute setting in the presence of appropriate clinical evaluation, the diagnosis of heart failure is: < 100: Unlikely 100 to 400: Possible, but other diagnoses must be considered. >400 ng/L: Very likely 2017 CCS HF Guidelines, CJC 2017	<ul style="list-style-type: none"> • Results differ significantly from NT-proBNP and cannot be used interchangeably. • Blood collection container type will change from green top lithium heparin plasma to lavender top EDTA tubes.
bHCG (IU/L)	Beta hCG, quantitative	No change	<ul style="list-style-type: none"> • The Beckman Access method does not compare numerically to the other methods in Alberta and should not be used for trending.

RI = reference interval

Table B: Summary of changes to default collection container type (High Level and Fort Vermilion)

Test	Current container type	New container type	Notes
Troponin	Lithium heparin PST (green top tubes)	Barricor lithium heparin plasma	<ul style="list-style-type: none"> • Drawing of blood into a syringe followed by transfer into the Barricor via a metal needle is UNACCEPTABLE. • Order of draw is lithium heparin first (PST), followed by Barricor.
BNP	Lithium heparin PST (green top tubes)	EDTA plasma (lavender top tubes)	
bHCG	Lithium heparin PST (green top tubes)	No change	

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.