

March 25, 2026

CLINICAL BIOCHEMISTRY

NT-proBNP Testing

Date effective: April 7, 2026**Background Information:**

- NT-proBNP has a very high diagnostic accuracy in discriminating heart failure (HF) from other causes of dyspnea: the higher the value, the higher the likelihood that dyspnea is caused by HF.
- NT-proBNP testing can be considered for patients presenting with atraumatic dyspnea without obvious cause, where history, physical exam, CXR and POCUS are not diagnostic or not available.
- Perioperative NT-proBNP is a prognostic indicator for post-surgical outcomes and can be used to identify high risk patients and plan care appropriately.

Change in Test Procedure:

- Effective April 7, NT-proBNP testing will be available to both hospital and community patients. On-site NT-proBNP testing will be available at Brandon Regional Health Centre/Westman Lab, HSC and SBH.
- Over the next 6 months, a phased role out of on-site NT-proBNP testing will occur for Grace Hospital, Seven Oaks General Hospital, Dauphin General Hospital, Bethesda Regional Health Centre, Selkirk & District General Hospital, Portage Hospital, Thompson General Hospital, The Pas Health Complex (St. Anthony), Boundary Trails Health Centre, Swan Valley Health Centre, Flin Flon General Hospital, Victoria General Hospital, Concordia Hospital, and Neepawa. Role out at some sites is pending analyzer upgrades that are underway.
- Order by writing NT-proBNP or the lab code NBNP on the laboratory requisition you use for ordering chemistry tests.
- Where testing is available on site, results for hospital patients will be available within 2 hours of the laboratory receiving the sample in lab.
- Samples collected at a non-testing site will be sent by routine courier to a laboratory that provides this testing. Turnaround time will vary depending on collection site and courier routes.

Cautions:

- NT-proBNP is a marker of myocardial stress, as such may be elevated among patients with severe respiratory illnesses typically in the absence of elevated filling pressures or clinical heart failure.
- Patients with heart failure and obesity show lower than expected NT-proBNP results.
- Laboratory Reports provide age specific cutoff values indicating probability of Heart Failure in adults. These are not “normal” reference values. In healthy individuals NT-proBNP results are dependent on age (young children and older adults have higher values), gender (females have higher values than males) and body size.
- NT-proBNP cannot identify the underlying cause of HF and, therefore, if elevated, must always be used in conjunction with cardiac imaging.

- NT-proBNP measurements should always be used in conjunction with all other clinical information.

Patient Impact:

- Improve diagnosis and treatment for patients with symptoms of heart failure
- NT-proBNP available for patients in the community

System Improvements:

- Improved access and turnaround time for NT-proBNP testing.

More Information:

The Canadian Cardiovascular Society – Is it Heart Failure and What Should I Do? [88067 CCS - HF Eng 2021 REV10](https://ccs.ca/wp-content/uploads/2021/05/2021-HF-Gui-PG-EN-2.pdf) <https://ccs.ca/wp-content/uploads/2021/05/2021-HF-Gui-PG-EN-2.pdf>

Shared Health Lab Information Manual <https://apps.sbgh.mb.ca/labmanual/test/findTestPrepare>

References:

1. Ezekowitz JA, *et al.* 2017 Comprehensive update of the Canadian Cardiovascular Society Guidelines for the management of heart failure. *Can J Cardiol.* (2017) 33(11):1342-1433.
2. Kozhuharov N, *et al.* Clinical effect of obesity on N-terminal pro-B-type natriuretic peptide cut-off concentrations for the diagnosis of acute heart failure. *European Journal of Heart Failure* (2022) 24, 1545–1554
3. Welsh P, *et al.* Reference Ranges for NT-proBNP (N-Terminal Pro-B-Type Natriuretic Peptide) and Risk Factors for Higher NT-proBNP Concentrations in a Large General Population Cohort. *Circ Heart Fail.* (2022) Oct;15(10):e009427.
4. Canadian Cardiovascular Society Guidelines on Perioperative Cardiac Risk Assessment and Management for Patients Who Undergo Noncardiac Surgery. *Can J Cardiol* 2017;22;17-32

Authorship/Endorsements:

Dr. Laurel Thorlacius PhD, FCACB, Medical Director, Clinical Biochemistry, Diagnostic Services, Shared Health, Email: lthorlacius@sharedhealthmb.ca

Dr. Shelley Zieroth FRCPC, Professor, University of Manitoba, Director Heart Function Clinic, Cardiac Sciences Manitoba

Dr. Paul Ratana LLB, LLM, MD, FRCPC, Head, Department of Emergency Medicine, University of Manitoba, Provincial Specialty Lead, Emergency Medicine, Shared Health

Dr. Bojan N. Paunovic MD, FRCPC, Provincial Medical Specialty Lead – Adult Critical Care - Shared Health, WRHA Medical Specialty Lead - Adult Critical Care, Section Head - Critical Care – Dept. of Internal Medicine, Assistant Professor - University of Manitoba, Site Critical Care Lead - Health Sciences Center - Winnipeg