

NT-proBNP Testing in Primary Care: Clinical Guidance for Suspected Heart Failure

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Introduction

Heart Failure Definition

Heart failure (HF) is a clinical syndrome in which a structural or functional heart problem leads to typical symptoms (e.g., dyspnea, fatigue) with or without signs of congestion (e.g., edema, crackles, elevated jugular venous pressure)¹. In primary care, HF is diagnosed when the clinical presentation is supported by objective evidence of cardiac dysfunction and/or elevated filling pressures, typically identified on echocardiography². Natriuretic peptides can help support the diagnosis and prioritize further cardiac testing.³

Use of NT-proBNP for Diagnosis and Early Management of Heart Failure

This guide helps primary care clinicians know when to order the N-terminal pro-B-type natriuretic peptide (NT-proBNP) test and how to interpret the result when HF is suspected.

- NT-proBNP does not determine HF subtype or etiology (e.g., heart failure with preserved ejection fraction [HFpEF] vs heart failure with reduced ejection fraction [HFrEF]).
- A low NT-proBNP (≤ 125 ng/L)⁴ makes HF unlikely but does not exclude HF, particularly in obesity, HFpEF, isolated right-sided HF, pericardial disease, or after treatment of acute decompensated HF. Interpret results in clinical context.

OHIP Schedule of Benefits: NT-proBNP

Effective April 1, 2026, Regulation 552 under the Health Insurance Act was updated to transition select tests from the Community Access Pilot (CAP) to the [Schedule of Benefits for Laboratory Services](#). This update includes the NT-proBNP blood test, which is now an insured OHIP service available through licensed community laboratories in Ontario. Further details are outlined in the [OHIP Bulletin 260310](#). This expanded access supports timely outpatient evaluation of suspected heart failure, enabling earlier diagnosis, risk stratification, and appropriate referral.

Provincial Clinical Guidance

The purpose of this document is to support primary care clinicians to order NT-proBNP for appropriate clinical indications and to use and interpret results correctly when HF is suspected, including guidance on prioritization for follow-up investigations and referral.

Information is for guidance only and is not a requirement. Time goals are not standards for medicolegal purposes; timelines may vary based on presentation and local pathways.

Scope and intended use

Intended for: Primary care clinicians assessing adults with suspected HF, including higher-risk patients with new symptoms or signs.

Not intended for: Asymptomatic population screening, or the acute decompensated HF/emergency department (ED) pathway; urgent/emergent presentations should be managed per local emergency processes.

Key point: NT-proBNP supports assessment when HF is suspected and helps clinicians prioritize follow-up; it does not establish HF subtype or etiology on its own.

When to order NT-proBNP test

When HF is suspected, clinicians are encouraged to order the NT-proBNP test at the first visit (or earliest opportunity). NT-proBNP testing is not indicated for population screening of asymptomatic patients; instead, it is for target case-finding in suspected HF.

Consider NT-proBNP testing in patients with:

- Symptoms suggestive of HF (e.g., dyspnea, orthopnea/ Paroxysmal Nocturnal Dyspnea (PND), reduced exercise tolerance, edema)
- Higher-risk conditions (e.g., coronary artery disease, hypertension, diabetes, obesity/metabolic syndrome, valvular heart disease, atrial fibrillation, obstructive sleep apnea)

In-office assessment

- Focused history and physical examination (including volume status; cardiac/respiratory exam)
- Medication review and risk factor assessment
- Baseline investigations (at minimum): electrocardiogram (ECG), chest X-ray, and initial laboratory investigations (e.g., complete blood count (CBC), electrolytes, creatinine/estimated glomerular filtration rate (eGFR)). Add other tests based on presentation (e.g., liver enzymes, Thyroid-Stimulating Hormone (TSH), ferritin/iron studies, A1C/lipids, urinalysis; Holter monitoring for palpitations or syncope; stress testing when ischemia is suspected)

NT-proBNP interpretation (what to do next)

NT-proBNP (ng/L)	What it suggests	Primary care action
> 2000	Very high; poorer prognosis	Arrange urgent specialist assessment/HF Clinic AND echocardiogram within 2 weeks. In patients with clinical congestion, consider initiating diuretics and evidence-based HF therapies as appropriate while awaiting echocardiography and specialist review.
400–2000	Elevated; HF possible/likely	Arrange specialist/HF Clinic assessment AND echocardiogram within 6 weeks. In patients with clinical congestion, consider initiating diuretics and evidence-based HF therapies as appropriate while awaiting echocardiography and specialist review.
126–399	Intermediate; HF less likely but cannot be excluded	Assess for alternative causes and contributing conditions. If symptoms persist, risk is high, or clinical suspicion remains, arrange echocardiography and/or discuss/consult specialist or HF clinic based on local pathways.
≤ 125	HF unlikely	Assess alternative causes. If ongoing concern (e.g., high clinical suspicion or confounding factors), consider echocardiography and/or specialist advice.

Important Clinical Considerations

- Where specialist/Heart Function clinic access is limited, prioritize echocardiography and use available supports (e.g., regional pathways, virtual consult/advice, local specialist resources) to guide management and referral
- While awaiting echocardiography or specialist assessment, initiate Guideline-Directed Medical Therapy (GDMT) without delay in the absence of contraindications. SGLT2 inhibitors and Mineralocorticoid receptor antagonists (MRAs) should be started as early as possible, given their benefit across the LVEF spectrum, with other GDMT introduced as clinically appropriate.

Implementation and Safety Considerations

To support safe and standardized use of NT-proBNP testing across community settings, clinicians and organizations should:

- Ensure NT-proBNP orders are directed to licensed community laboratories operating under the Laboratory and Specimen Collection Centre Licensing Act (LSCCLA)
- Use NT-proBNP testing for targeted clinical indications, avoiding inappropriate population screening of asymptomatic patient
- Embed NT-proBNP guidance into local clinical pathways, referral processes, and decision-support tools where possible
- Provide education to clinical and administrative teams regarding insured status, appropriate test use, and interpretation

We would like to thank the members of the Heart Failure NT-proBNP Task Group for their contributions to this document.

Name	Organization	Task Group Role
Dr. Stephanie Poon	Sunnybrook Health Sciences Centre	Task Group Chair; Cardiologist
Dr. Aws Almufleh	Kingston Health Sciences Centre	Cardiologist
Dr. Susanna Mak	Sinai Health	Cardiologist
Dr. Heather Ross	University Health Network	Cardiologist
Dr. Mali Worme	University Health Network	Cardiologist
Ms. Morgan Krauter	Royal Victoria Hospital	DN, MN – NP (Adult)
Ms. Colleen Lackey	Ontario Health	RN, Lead Clinical

Need this information in an accessible format? 1-877-280-8538, TTY 1-800-855-0511, info@ontariohealth.ca.
Document disponible en français en contactant info@ontariohealth.ca

References

1. Canadian Heart Failure Society. (2024). *Patient and caregivers with lived experience with heart failure* [PDF]. https://heartfailure.ca/sites/default/files/chfs-hfaw_patient_and_caregivers_with_lived_experience_with_heart_failure_handout-en-digital_final.pdf
2. National Institute for Health and Care Excellence. (2018). *Chronic heart failure in adults: Diagnosis and management* (NICE guideline NG106).
3. Ezekowitz JA, O'Meara E, McDonald MA, et al. (2017). 2017 Comprehensive Update of the Canadian Cardiovascular Society Guidelines for the Management of Heart Failure. *Canadian Journal of Cardiology*, 33(11), 1342–1433.
4. Canadian Cardiovascular Society. (2017). *Heart Failure – Management of HF: Chapter 5. Diagnosis of HF*. Canadian Cardiovascular Society guideline. <https://ccs.ca/guideline/2017-heart-failure-management-of-hf/chapter-5-diagnosis-of-hf/>

Additional Resources

1. Canadian Cardiovascular Society. (n.d.). *Guidelines & knowledge translation tools*. <https://ccs.ca/guidelines/>
2. Canadian Cardiovascular Society. (n.d.). *Pocket guides*. <https://ccs.ca/pocket-guides/>
3. Ontario Health (formerly Health Quality Ontario & CorHealth Ontario). (2022). *Heart failure: Care in the community for adults* (Quality standard) [PDF]. <https://www.hqontario.ca/Portals/0/documents/evidence/quality-standards/qs-heart-failure-quality-standard-en.pdf>
4. Health Quality Ontario (Health Technology Assessment). (2021). *Use of B-Type Natriuretic Peptide (BNP) and N-Terminal proBNP (NT-proBNP) as diagnostic tests in adults with suspected heart failure: A health technology assessment*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC8129637/>