Enhanced Community Care (ECC)

GP Direct Access to Diagnostics

NTproBNP

Frequently Asked Questions

26th October, 2021 V1

For further clarification, contact community.diagnostics@hse.ie

Background

Reflecting the Sláintecare vision, the 2019 GP Agreement and the Winter 2020/2021 plan, the Enhanced Community Care (ECC) Programme will enable the delivery of increased levels of healthcare in the community and primary care settings. Empowering General Practice to care for their patients as close to home as possible must be a central component of Ireland's health reform. In recognition of this, the ECC will support direct, equitable access for all GPs to chronic disease diagnostics, including NTproBNP. These services will support GPs to diagnose chronic disease early in their at-risk patients, to intervene early and to work with their patients to optimise their chronic conditions and thus, support hospital avoidance and improved patient outcomes.

In addition, as part of the GP Agreement 2019, between the DOH, HSE & IMO, a new structured Chronic Disease Management (CDM) Programme is being introduced in two phases. The structured CDM Programme which commenced with Phase 1 from January 2021 aims to prevent and manage patient's chronic diseases using a population approach. It is available for people with a GMS/GPVC and who have one or more of the agreed chronic diseases. i.e. Asthma, COPD, CVD including heart failure, heart attack, stroke, atrial fibrillation and type 2 Diabetes.

As per the 2019 GP Agreement, continued implementation of an integrated model of the structured CDM Programme is preparing for the launch of Phase 2 from January 2022 onwards with full roll out continuing on a phased basis as planned over the four year period 2020 – 2023. Should you have any questions or require further clarification regarding the GP Agreement 2019 or opt in for the CDM Programme please do not hesitate to contact the National Contracts Office at Natcontractsoffice@hse.ie.

Building on the work already underway in the community to augment GP direct access to radiology. GPs are being provided, on a phased basis dependent on Laboratory capacity, with direct access to NTproBNP blood testing via public hospitals for the full adult population. Direct GP access to this blood test will enhance the diagnosis and management of individuals with **heart failure, atrial fibrillation, type 2 diabetes, and ischemic heart disease** in primary care. Laboratory's will contact GP's directly to advise when the laboratory is commencing the provision of the service.

The rollout of GP direct access to NTproBNP testing continues work to address the challenges that GPs face in accessing chronic disease diagnostics; challenges which have been further compounded by COVID-19. Additional resources for the 23 public laboratories have been secured for the provision of a ring-fenced direct NTproBNP service to GPs. This significant uplift in dedicated laboratory staff is being resourced through the ECC Programme.

The aim of this document is to address the common questions that GPs may have as to how to appropriately access the NTproBNP service for their patients.

Direct access to spirometry and echocardiogram will also be made available to GPs in 2022.

1.0 Background FAQs

1.1 What is NTproBNP?

N-terminal b-type natriuretic peptide (NTproBNP), similar to b-type natiuretic peptide (BNP) is a substance made by the heart. High levels of BNP or NTproBNP in the blood indicate that the walls of the heart are stretched and that the heart is struggling to meet the body's demands.

While both BNP and NTproBNP can be measured as part of the investigation of heart failure, NTproBNP is significantly more stable and can be stored at room temperature for longer than BNP and hence, it is a more suitable investigation to be undertaken in General Practice. Therefore, GPs are now being offered direct access to NTproBNP testing for their patients.

1.2 Are BNP and NTproBNP results comparable?

BNP and NT-proBNP test results are not interchangeable and they cannot be directly compared. They have different half-lives, different modes of degradation and critically, different decision cut-off values.

1.3 What are the clinical indications for undertaking an NTproBNP test?

1. NTproBNP may be used as part of the diagnostic work up for heart failure for a patient in General Practice, where clinically indicated. NTproBNP can be used as an initial diagnostic test in the non-acute setting when echocardiography is not immediately available. An elevated NTproBNP may help establish an initial working diagnosis, identifying those who require further cardiac investigation; patients with values below the cut-off point for the exclusion of important cardiac dysfunction do not require echocardiography (see Figure 1).
2. NTproBNP can support early diagnosis and intervention in a population at high risk of heart failure (i.e. individual with a diagnosis of atrial fibrillation, ischaemic heart disease, type 2 diabetes mellitus). In the Irish based STOP-HF Randomised Trial, BNP-based screening and collaborative care among selected patients at high risk of heart failure resulted in a reduction in the combined rates of left ventricular systolic dysfunction, diastolic dysfunction and heart failure.
3. NTproBNP may be used as part of the investigation of an individual with a diagnosis of heart failure who presents with a deterioration in their symptoms.

1.4 Who should not have an NTproBNP test done?

NT-proBNP testing is <u>not recommended</u> in the following patient cohorts:

1. Patients with classic signs of acute decompensated heart failure (i.e. prior episodes of acute decompensated heart failure, volume overload) or those with shortness of breath consistent with other aetiologies (i.e. asthma, COPD). In these instances, NTproBNP is not likely to assist in the diagnostic workup. If you are concerned that a patient has acute decompensated heart failure, please use available referral channels to obtain specialist input, as required.

2. Screening for asymptomatic ventricular dysfunction in a low risk population. In a low risk population, lower pre-test probability renders NTproBNP sub-optimal for screening purposes.

1.5 When can I start ordering NTproBNP tests for patients?

Additional resources for the public hospital laboratories have been secured for the provision of a ring-fenced direct NTproBNP service for GPs. Once laboratory recruitment has been completed, GPs will be contacted by the laboratory in their catchment area to confirm commencement of the service and to provide instruction as to how to access their local NTproBNP service.

1.6 Where does clinical governance lie when a patient has been referred for an NTproBNP test?

Similar to other blood tests, the GP retains responsibility for the follow up of the test result and for the management of the patient.

1.7 What sample tube is required for an NTproBNP sample?

A venous blood sample is required for testing. Laboratory requirements may vary depending on location. You will receive notification from your local laboratory once the service is up and running in your area. This communication will outline your local laboratory's specific requirements for undertaking the NTproBNP test.

2.0 Referral FAQ

2.1 What patients are eligible for an NTproBNP test?

The NTproBNP service is available to all adults regardless of their GMS status, who also fulfil one or more of the criteria below.

The national criteria for GP direct access to NTproBNP are as follows:

- One NTproBNP test will be facilitated for the first GP Structured Chronic Disease Management registration visit for each patient who has a diagnosis of **type 2 diabetes, ischemic heart disease or atrial fibrillation**. This is in line with the GP Agreement 2019. An allowance may also be made for individuals who have a pre-existing clinical diagnosis of one of the above chronic diseases and who are already registered on the Structured Chronic Disease Management Programme but who still require an NTproBNP test to establish a baseline for their condition;
- Outside of these parameters, an NTproBNP may be ordered in the following circumstances, where the GP feels it's clinically indicated:
    - For investigation of a patient who has a diagnosis of heart failure and who presents with deterioration in symptoms;
    - As part of the investigative work up of a patient who presents with symptoms consistent with heart failure.

Please ensure that you do not send samples which do not meet these criteria, unless discussed and agreed with the laboratory. There is a limited capacity to provide this test, which needs to be used to support chronic disease management as intended. GPs must

state on the referral form the indication for the NTproBNP test. If no information is provided to the laboratory, the NT proBNP test will not be done.

2.2 Are there clinical guidelines to support my decision-making when considering whether to undertake an NTproBNP test for a patient?

The GP Structured Chronic Disease Management software will prompt you where an NTproBNP test may be indicated. Please refer to the National Model of Care for Heart Failure, the GP Quick Reference Summary for Heart Failure Diagnosis and Management, the GP Quick Reference Summary for Good Practice Points on Cardiovascular Disease, the NICE guideline Chronic heart failure in adults: diagnosis and management and the Laboratory Testing for Natriuretic Peptides (NP)-BNP / NT- proBNP to guide your decision making in relation to the NTproBNP test.

In addition, please consider whether the patient meets the referral criteria as stated above in question 2.1.

2.3 How do I undertake an NTproBNP blood test?

The patient must fulfil the referral requirements as outlined in question 2.1.

The blood samples for NTproBNP should be transferred to the same public hospital laboratory as your general patient bloods. Specific laboratory requirements for NTproBNP may vary depending on location. Your local laboratory will send you information as to what they require in order to process your NTproBNP test requests e.g. type of sample tube, days of the week the samples can be submitted for processing etc. The GP must state the indication for the NTproBNP request, as it relates to the above referral criteria, on the laboratory request form.

2.4 Is there a limit to the number of NTproBNP requests that I can order in a week/month?

No, there is no limit to the number of NTproBNP tests that can be ordered by your practice. However, there are clear referral criteria that must be fulfilled for each test request. The GP must state the indication for the test as it relates to the referral criteria, on the laboratory referral form. If no information is given on the test request form, the NTproBNP test will not be done. Repeat NTproBNP tests are not recommended outside of the above referral criteria. If you are concerned about a patient, please contact your local cardiology service for further advice.

3.0 Results FAQs

3.1 What is the turnaround time for the NTproBNP test?

The turnaround time will vary depending on your geographical location as some NTproBNP tests will be transported onwards from your local laboratory to a different laboratory for testing. The average turnaround time for an NTproBNP test will be three days approximately. You will receive the result for this blood test via Healthlink, similar to how you receive your other routine blood results.

3.2 What is an abnormal NTproBNP result?

NTproBNP should always be interpreted within the clinical context and should consider factors which either increase (age, gender [F>M] and other co-morbidities [e.g. renal function]) or decrease levels (obesity, drug therapy [diuretics, beta blockers, ACEi, ARNI etc]).

NTproBNP cut-off value	Interpretation of result
NTproBNP <400pg/ml	Heart failure diagnosis unlikely
NTproBNP 400 – 2000pg/ml	Indeterminate result
NTproBNP >2000pg/ml	Heart failure likely. Compare with patient's stable value if available

3.3 The NTproBNP result has come back as abnormal. What should I do next?

NTproBNP helps rule out heart failure. If the level is normal it is unlikely the person has heart failure. If the level is elevated the patient may have heart failure but there are many causes of raised NTproBNP. To confirm the diagnosis you need an echocardiogram.

The GP caring for the patient is responsible for arranging any follow up that a patient requires. For suspected non-acute onset of heart failure in primary care, please see algorithm below (Figure 1) for further information. Please refer to the GP Quick Reference Summary for Heart Failure Diagnosis and Management and the National Model of Care for Heart Failure for more detailed information.

3.4 What other developments are underway?

Further expansion of direct GP access to chronic disease diagnostic services is underway. It is anticipated that GPs will be able to directly refer their patients for spirometry/echo, where clinically indicated, in 2022. Further information in relation to these services will be provided soon.

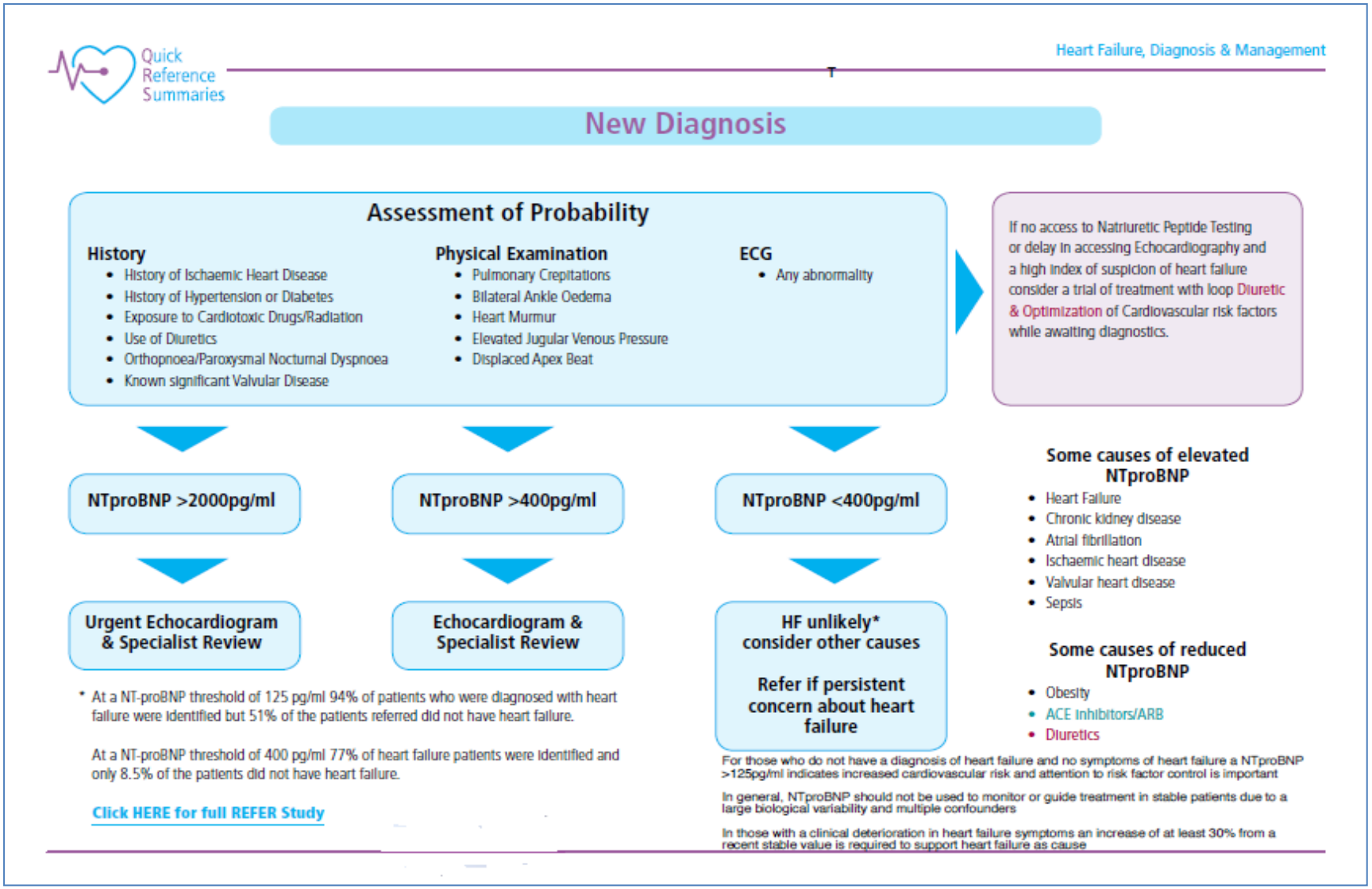

Figure 1 Clinical care pathway for suspected non-acute heart failure