

Population
Patients age 55 or over presenting with symptoms suggestive of heart failure

Primary Care Consultation
All patients presenting to GPs with symptoms suggestive of heart failure (i.e. new onset symptoms of breathlessness, lethargy or ankle oedema of over 48 hours duration) are eligible.
GP screens patients for study eligibility

Informed Consent: Verbal Consent
taken by GP (n = 500)

Baseline Clinical Information
1) GP records clinical information from history and examination
2) GP records their perceived referral or investigates decision as if this were routine care

Patients consented to the study
Chest x-ray (GP standard referral)
GP refers patient to research assessment clinic (within 7 days)

Research Assessment Clinic
Written informed consent
History and clinical examination
ECG
Echocardiogram
Quality of life questionnaires (EQ-5D; SF12)
NT-proBNP
Creatinine

Excluded patients
Pre-existing confirmed heart failure or LVSD
Severe symptoms requiring urgent assessment or stabilisation (e.g. breathless at rest, hypotension, confusion)
Obvious clinically determined alternative diagnoses (e.g. chest infection, exacerbation of COPD or asthma)
Recent acute coronary syndrome (within 60 days)
Major co-morbidity or other alternative diagnoses of no obvious acute and self limiting cause
Inability to provide informed consent

GP Review
Test results are fed back to GP for review and further action if required (e.g. referral to consultant care, initiation of medication)

Reference Standard with estimation of any incorporation bias
Expert Consensus Panel (3 cardiology specialists):
Step 1: initially blinded to NT-proBNP results and CDR variables, will establish final diagnosis using the results of all the other clinical assessments (i.e. signs & symptoms, ECG, Echocardiogram, chest x-ray, creatinine, and Quality of life data).
Step 2: CDR variables will then be made available to the panel and comparison made with initial diagnosis.
Step 3: NT-proBNP test results will be made available, and comparison made with initial diagnosis (the Reference Standard).

Additional Data Collection
(6 + 12 months)
Medical Note review of recruited patients
Follow-up Quality of Life questionnaires