Practice Delivery Agreement / Quality and Outcomes Framework: Heart Failure

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Heart Failure and ventricular function

- Heart failure is a clinical syndrome with
  - typical symptoms: breathlessness, ankle swelling, fatigue
  - and signs: elevated jugular venous pressure, basal crepitations, peripheral oedema

- Heart failure is *caused* by a structural and/or functional abnormality that impairs the ability of the ventricle to fill or eject blood, for example:
  - Left ventricular systolic dysfunction (i.e. reduced ejection fraction < 49%)
  - Cardiomyopathy or other left ventricular dysfunction (i.e. have symptoms and signs of heart failure, but normal left ventricular ejection fraction ≥50%)

Quality and Outcome Framework

Indicator		Points	Thresholds
HF001 The contractor establishes and maintains a register of patients with heart failure	Register 1 - heart failure	4	–
HF005 The percentage of patients with a diagnosis of heart failure (diagnosed on or after 1 April 2021) which 1. Has been confirmed by an echocardiogram or by specialist assessment between 3 months before or 6 months after entering on to the register; or 2. If newly registered in the preceding 12 months, with no record of the diagnosis originally being confirmed by echocardiogram or specialist assessment, a record of an echocardiogram or a specialist assessment within 6 months of the date of registration	Register 1 - heart failure	6	50–90%
HF003 In those patients with a current diagnosis of heart failure due to left ventricular systolic dysfunction, the percentage of patients who are currently treated with an ACE-I or ARB	Register 2 – heart failure AND LVSD	6	60–92%
HF006 The percentage of patients with a current diagnosis of heart failure due to left ventricular systolic dysfunction, who are currently treated with a beta-blocker licensed for heart failure	Register 2 – heart failure AND LVSD	9	60–92%
HF007 The percentage of patients with a diagnosis of heart failure on the register, who have had a review in the preceding 12 months, including an assessment of functional capacity and a review of medication to ensure medicines optimisation at maximal tolerated doses.	Register 1 - heart failure	7	50–90%

Heart Failure and LVSD Registers

Register 1: patients with HF is used to calculate prevalence for HF001, HF008, and HF007.

Snomed Code	Pathway Reference	Abbreviation and Ejection Fraction	
446221000 Heart failure with normal ejection fraction	Heart failure with preserved EF	HFpEF EF>50% (with raised BNP/NTProBNP and symptoms)	
788950000 Heart failure with mid range ejection fraction	Heart failure with mild OR moderately reduced EF	HFmrEF EF 41-49%	This codes **will not** add the patient to the LVSD Register 2 below
703272007 Heart failure with reduced ejection fraction	Heart failure with severely reduced EF	HFsrEF EF<40%	This code **will** add the patient to the LVSD register 2 below
New York Heart Association Classification codes (finding)			

Register 2: patients with HF due to left ventricular systolic dysfunction (LVSD) is used to calculate prevalence for HF003 and HF006.

134401001 Left ventricular systolic dysfunction (disorder)

407596008 Echocardiogram shows left ventricular systolic dysfunction (finding)

698592004 Asymptomatic left ventricular systolic dysfunction (disorder)

Optional:

250908004 Left Ventricular Ejection Fraction (% value, N.B. add as numeric in S1) **This code will not add the patient to either register**

Register 2 is a sub-set of register 1 and is composed of patients with a diagnostic code for LVSD as well as for HF.

A note on LVSD on echo post Myocardial Infarction

Two options:

1. Wait for 3 month repeat echo (However, ACEi/ARB and BB post MI still need up titrating to maximum tolerated dose), so ….
2. Code as HF and LVSD (mid range – mild/moderate, or severe) immediately post MI, but if 3 month post MI echo shows normal LV function (EF >50%) :
   - add 'HF resolved' if no symptoms of heart failure
   - add 'Heart failure with normal ejection fraction' (HFpEF) if symptoms of heart failure and raised BNP/NTProBNP
3. If LV dysfunction persists update severity if necessary – mid range – mild/moderate, severe LVSD

Note NICE recommendations [2020] for Beta blocker post MI *without* reduced EF:

Consider continuing a beta-blocker for 12 months after an MI for people without reduced left ventricular ejection fraction. Discuss the potential benefits and risks of stopping or continuing beta-blockers beyond 12 months. Include in the discussion:

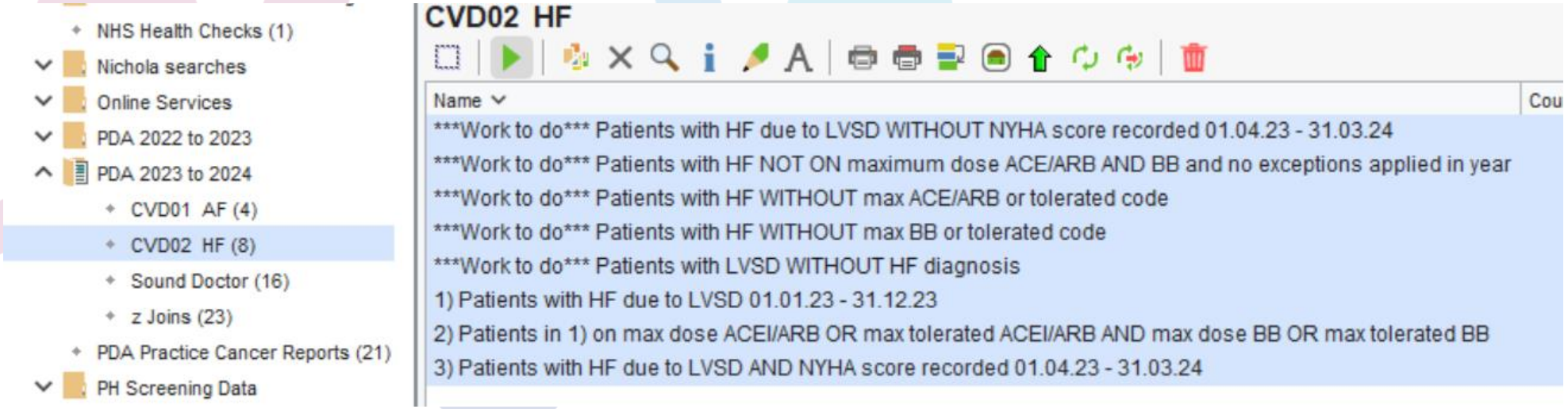
- the lack of evidence on the relative benefits and harms of continuing beyond 12 months
- the person's experience of adverse effects.

PDA requirements: Heart Failure

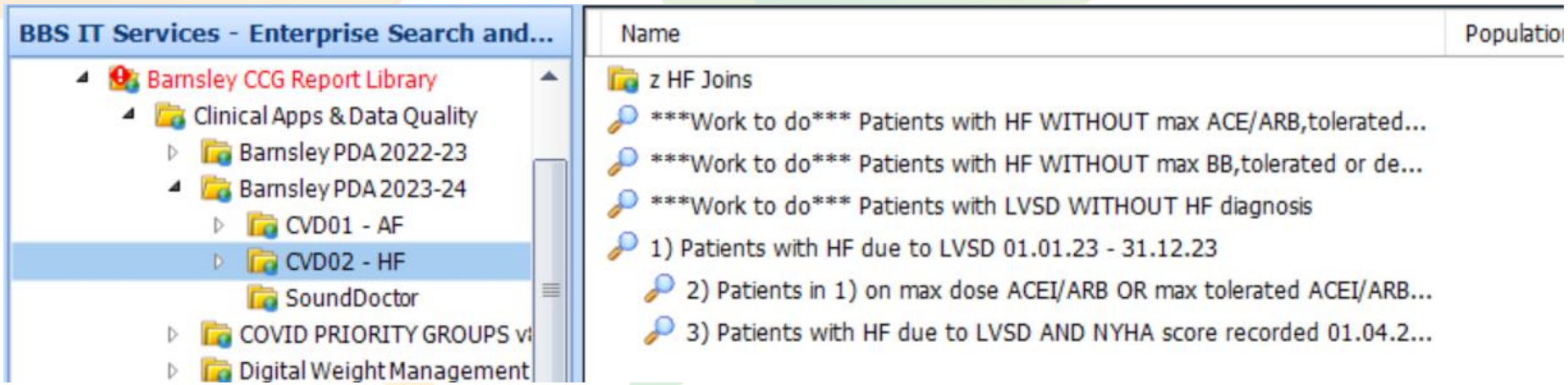
- CVD-02a: Practices should review patients with *recent* diagnosis of HF due to LVSD and ensure ACEi/ARB and beta-blockers are titrated to the maximum tolerated dose. Any exceptions should be added to the record, and these will be excluded. *Lower threshold 50% - 20 points, upper threshold 70% - 40 points*
- CVD-02b: Practices should ensure all patients with a HF due to LVSD have had their functional capacity assessed and record the New York Heart Association (NYHA) functional classification score. Consideration should be given for additional medication (i.e. MRA and SGL2) as per local/national guidance if patients remain symptomatic. *Lower threshold 50% - 5 points, upper threshold 70% - 10 points*
- Practices should engage in the review of local heart failure pathway design.
- Measure serum natriuretic peptides (NT proBNP) on people with suspected heart failure and refer to HF diagnostic clinic as per local guidance.

PDA system searches

SystmOne – found in Clinical Reporting under Barnsley TPP Practices folder:



EMIS – can be copied and imported to your system from EMIS Enterprise Searches and Reports under Barnsley CCG Report Library – Clinical Apps and data quality folder.



Exceptions

- Patient on maximum tolerated dose
- Target dose achieved (ACEi only) – if prescribed a split dose, e.g. ramipril 5mg BD
- Not tolerated (i.e. not prescribed)
- Declined
- Contraindicated (e.g. ACEi/ARB if on Entresto)

New York Heart Association functional scoring

- Based on severity of symptoms and limitation of physical activity [Yancy, 2017; ESC, 2021]:
  - **Class I** — no limitation of physical activity. Ordinary physical activity does not cause undue fatigue, breathlessness, or palpitations.
  - **Class II** — slight limitation of physical activity. Comfortable at rest but ordinary physical activity results in undue breathlessness, fatigue, or palpitations.
  - **Class III** — marked limitation of physical activity. Comfortable at rest but less than ordinary physical activity results in undue breathlessness, fatigue, or palpitations.
  - **Class IV** — unable to carry out any physical activity without discomfort. Symptoms at rest can be present. If any physical activity is undertaken discomfort is increased.

Update: BNP v. NTProBNP

In Barnsley, currently using BNP, but in the process of switching to NTProBNP, which is recommended by NICE

Brain Natriuretic Peptide (BNP):

- above 400 ng/L, refer urgently to the heart failure diagnostic clinic - to be seen within **2 weeks.**
- between 100-400 ng/L, refer to the heart failure diagnostic clinic - to be seen within **6 weeks.**
- less than 400 ng/L, be aware that a diagnosis of heart failure is less likely. Consider discussion with a physician with subspeciality training in heart failure if a clinical suspicion of heart failure persists.

N terminal probrain natriuretic peptide (NTproBNP):

- above 2000 ng/L, refer urgently to the heart failure diagnostic clinic - to be seen within **2 weeks**.
- between 400–2000 ng/L, refer to the heart failure diagnostic clinic - to be seen within **6 weeks**.
- less than 400 ng/L, be aware that a diagnosis of heart failure is less likely. Consider discussion with a physician with subspeciality training in heart failure if a clinical suspicion of heart failure persists.

ANY QUESTIONS ?