Introduction The 2021 ESC guidelines emphasise the importance of appropriate diagnosis and management of heart failure as it represents a condition with significant heterogeneity. Based on the NICOR heart failure audit 2021, the mortality rates are high with 40% of newly diagnosed patient are dying within a year and 50% of patients are either readmitted to hospital or dying within a year of admission to hospital. Pharmacotherapies such as beta blockers, angiotensin-converting enzyme inhibitors (ACEi) / angiotensin receptor neprilysin inhibitor (ARNI), sodium-glucose co-transporter 2 inhibitor (SGLT2i) and mineralocorticoid receptor antagonists (MRA) have proven to show marked reduction in mortality and morbidity. It is the cornerstone prior to considering non-pharmacological interventions such as device therapy. The aim of our study is to assess prescribing practice in commencing appropriate medications in patients with heart failure with reduced ejection fraction (HFrEF) in a district general hospital setting.

Method A retrospective analysis based on data from NICOR of patients presenting to Kings Mill Hospital with diagnosis of heart failure between December 2020 – December 2021 was performed. We looked into parameters such as co-morbidities including a diagnosis of pre-existing heart failure, echocardiography results, heart failure medications on admission and on discharge, blood tests (potassium levels and eGFR) and haemodynamic (blood pressure and heart rates) were collected and collated.

Results A total of 219 patients with diagnosis of heart failure were admitted. The mean age is 80 years old with a slight predominance of female patients at 51%. It was noted that 55% of these admissions had pre-existing diagnosis of HFrEF. 51% of the patients had echocardiogram during the admission and 40.2% have HFrEF. The calculated mortality is 26.5% in this cohort.

Patients with new diagnosis of HFrEF were better optimised with medications (Figure 1) compared to the ones with pre-existing diagnosis. Substandard heart failure medication optimisations are due to medication intolerance, worsening renal function / hyperkalaemia and haemodynamic effects such as hypotension. Only 2% of patients were on SGLT2i and ARNI compared to ACEI/ARB due to lack of familiarity of indication for prescribing. All patients had appropriate potassium levels as well as establishment of optimal heart rate and blood pressure control prior to discharge.

Conclusion This analysis highlights that patients are not fully optimized on oral heart failure therapies prior to hospital discharge. Robust measures must be taken in commencing on SGLT2i and ARNI. We need to take opportunities to optimise the medications of patients with established diagnosis. These findings will form the basis of our quality improvement project on heart failure medications optimization and more analysis will follow in future.

Conflict of Interest None