

# Characterising disease and prescribing patterns in people with heart failure and multiple chronic conditions: a single-centre descriptive cohort study

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## Abstract

**Introduction:** Heart failure (HF) is a complex condition often accompanied by comorbidities such as renal dysfunction, diabetes mellitus (DM), chronic respiratory diseases, frailty, and anaemia, necessitating intricate management involving multiple therapeutics. **Objectives:** This retrospective cohort study aims to characterize prescribing patterns and identify potentially inappropriate polypharmacy in individuals with HF and multimorbidity. **Methods:** Data was collected from 234 HF adults with multimorbidity under the care of the HF multidisciplinary team at Liverpool University Hospital Foundation Trust (LUHFT) from January 2020 -February 2021. **Results:** The mean age was  $71.5 \pm 13.9$  and 44% were female. ACCI was  $6.9 \pm 3.3$ , CFS was  $5.5 \pm 3.2$ , polypharmacy burden was high at  $10.2 \pm 3.9$ , and ACB was  $1.45 \pm 0.9$ . ACB was higher in those with CFS $\geq 6$  vs. those with CFS $< 6$  ( $1.5 \pm 1.1$  vs.  $1.1 \pm 0.9$ ;  $p=0.02$ ). The proportion of adults with HF on treatment for depression was 19.7%, chronic pain 35%, and chronic constipation 19.7%. Fifteen percent received oral iron instead of the appropriate intravenous iron replacement, while 17.9% of the cohort were observed to be nearing the end of their lives. Regarding PIM use, 9% were on either DAPT/anticoagulant plus anti-platelet therapy beyond 12 months of an acute coronary event. One in five patients received PPIs without clear justification. **Conclusion:** Adults with frailty and HF have a higher ACB. This study identifies targets for de-prescribing interventions in HF, including inappropriate PPI and DAPT/anticoagulant plus anti-platelet therapy, which are seeing in 1:5 and 1:10 adults with HF in the clinic, respectively. Tailored guidelines can aid shared decision-making, reducing drug-related complications in this group.

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