

Methods For the period April 2013 to March 2016 (2013–16), Hospital Episode Statistics (HES) data from all NHS hospitals in England were evaluated for spells in which HF was coded as the primary diagnosis. This was based on the International Statistical Classification of Diseases and Related Health Problems (ICD-10) codes: I11.0 (hypertensive heart disease with [congestive] heart failure); I25.5 (ischaemic cardiomyopathy); I42.0 (dilated cardiomyopathy); I42.9 (cardiomyopathy, unspecified); I50.0 (congestive heart failure); I50.1 (left ventricular failure); and I50.9 (heart failure, unspecified). These records were then categorised according to those with or without a secondary diagnosis of ID or iron deficiency anaemia (IDA), based on ICD-10 codes E611 (latent ID), D500 (IDA secondary to blood loss [chronic]), D508 (other IDA), and D509 (IDA unspecified).

Results In 2013–16, there were 2 02 444 hospital spells in England attributed to a primary diagnosis of HF. Of these, 28 727 spells (14.2%) had a secondary diagnosis of ID/IDA, and 1 73 717 (85.8%) did not. Spells with a secondary diagnosis of IDA/ID were more likely to be encountered in females ($p < 0.0001$) and older patients ($p < 0.0001$); were more likely to be unplanned (95.9% vs 86.4% – difference 9.5%; 95% CIs: 9.2%, 8%); had a longer mean length of stay (16.5 vs 13.1 days – difference 3.4 days; 95% CIs: 3.2, 3.6); and had a higher readmission rate within 30 days under the same ICD-10 code (14.2% vs 12.1% – difference 2.1%; 95% CIs: 1.8%, 2.6%). The total cost associated with all hospital admissions with a primary diagnosis of HF was £553.3 million, equivalent to £2733 per spell. HF hospital spells with a secondary diagnosis of ID/IDA were significantly more expensive than those without (cost difference: £138 per spell [95% confidence interval {CI}: £98, £178]). Unplanned spells with a secondary diagnosis of ID/IDA were even more expensive compared to those without ID/IDA (cost difference: £217 [95% CI: £181, £253]).

Conclusions In this analysis of HES data from England, about 14% of hospital spells coded with a primary diagnosis of HF included ID/IDA in the secondary position. These spells were longer, more expensive, and more likely to lead to readmission. Although probably under recognised in those admitted with HF, ID/IDA appears to be a significant comorbidity associated with poorer outcomes across the health economy.

5 THE RELATION BETWEEN LENGTH OF STAY, A&E ATTENDANCE AND READMISSION FOR HEART FAILURE PATIENTS

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Introduction Many patients with heart failure (HF) have repeated hospitalisations, often unplanned. Hospitals are being penalised for what are considered to be preventable readmissions, but understanding of what drives high readmission rates is limited. Better understanding of the relationship between A and E attendance, the odds of admission during that attendance and overall hospital readmission rates will support hospitals to reduce overall readmissions and improve services for their HF patients.

Method Using admissions data for all acute hospitals in England (April 2010–March 2012), the index admission for each patient was defined as their first emergency admission with a

primary diagnosis of HF for at least three years. A and E attendances, admissions and death within one year from index discharge were linked by patient. Hospital trusts were divided into quartiles based on their overall 30 day HF readmission rate. Logistic regression and ANOVA were used to identify any differences in A and E attendances, admissions and patient characteristics between hospital quartiles.

Results A total of 77 801 patients had their first HF admission during the study period; 66 177 (85%) were discharged alive. Table 1 gives the first outcome within 30 days of that index discharge. Overall, 23% of emergency readmissions were not through A and E. Patients who attended hospitals with readmission rates above the median were more likely to visit A and E than patients who were discharged from hospitals with lower readmission rates. Having arrived at A and E, the odds of admission was the same irrespective of hospital readmission rate, even after patient characteristics were taken into account.

The key difference between high- and low-readmitting hospitals appeared to be the length of stay of the index HF admission, with high-readmitting trusts having a higher proportion of patients discharged with no overnight stay these patients have the highest readmission rate.

Abstract 5 Table 1

Readmission Quartile and number of patients	Died without readmission	Readmitted – not through A and E	Visited A and E	A and E admission rate
1 13 628	359 (2.6%)	594 (4.4%)	2114 (15.5%)	77.5% (1638)
2 17 748	439 (2.5%)	1233 (7.0%)	2637 (14.9%)	76.3% (2013)
3 19 167	403 (2.1%)	869 (4.5%)	3807 (19.9%)	76.5% (2914)
4 15 631	377 (2.4%)	823 (5.3%)	3241 (20.7%)	77.0% (2496)
Totals	1578 (2.4%)	3519 (5.3%)	11 799 (17.8%)	76.8% (9061)

Table 1 First outcome of heart failure patients within 30 days of their index discharge. Readmission quartile is based on the HF readmission rate of the index hospital.

Conclusions and Implications For patients with HF, high hospital-level readmission rates are partly driven by same-day index discharges, with their subsequent greater likelihood of attending A and E, and more admissions via the GP or clinic, and not by admitting a higher proportion of A and E attenders. This suggests that patients who are same-day discharges are not inappropriate attenders but potentially prematurely sent home.

6 PROGNOSTIC VALUE OF MALNUTRITION SCREENING TOOLS IN PATIENTS WITH CHRONIC HEART FAILURE

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Background Malnutrition is a common clinical feature in patients with acute heart failure (AHF), but its prevalence and