

Factors associated with hospital emergency readmission and mortality rates in patients with heart failure or chronic obstructive pulmonary disease: a national observational study

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Plain English summary

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Plain English summary

Heart failure (HF) and chronic obstructive pulmonary disease (COPD) each affect around 900,000 people in the UK, and numbers are rising, with many more cases still undiagnosed. HF and COPD are serious chronic diseases that can worsen over time, and an important stage of the disease is when the patient is hospitalised as an emergency admission for the first time. Much progress remains to be made in improving survival and preventing further admissions. Using various existing NHS databases, we examined what factors predicted the use of accident and emergency (A&E) attendance, readmission and death after this first admission. Our results suggest that patients were at a higher risk of mortality if they were elderly, had other medical problems, had previously missed clinic appointments or went to hospitals with fewer doctors per bed; these factors plus small hospital size also predicted readmission. Some patients seemed to have been sent home too soon and had to be readmitted.

Hospitals are often judged on their emergency readmission rates, which are high for patients with HF or COPD, but our statistical analysis suggests that hospitals should also track their performance with A&E visits. There has been surprisingly little research into how patients use A&E after their first admission and what factors predict who gets admitted to the wards when they do visit A&E. We found that patients were more likely to visit A&E after being discharged from their first admission for HF or COPD if they were older, lived alone, had multiple medical problems or were from poorer areas or areas with fewer general practitioners. However, for COPD it was the younger patients who were admitted more often. Further work should look into how patients use community services and how rising demand for hospital beds, and doctors' perception of how sick the patient is, affects doctors' decision-making and patient outcomes.

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