A Tertiary Care Ambulatory Heart Failure Pathway
managing one third of all admissions including older patients with similar quality to inpatient management

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INTRODUCTION
- Heart failure (HF) is the commonest cause of adult hospital admissions in >65s
- Over 67,000 admissions in England and Wales per year
- Average hospital stay lasts 13 days and costs an average £3,800
- Increased use of Same Day Emergency Care (SDEC) services provide opportunity for novel HF management pathways

METHODS
- A unique Ambulatory heart failure pathway (Fig. 1) was established in a Medical SDEC unit at the John Radcliffe Hospital, Oxford
- Supported by specialist HF team and a Hospital At Home service
- The service provides intravenous diuretic therapy, clinical assessment and point-of-care diagnostics
- Data were collected from August 2019 to January 2021 on every index HF admission as part of the National Heart Failure Audit

RESULTS
- From August 2019 to January 2021, 398/1919 (31%) HF admissions were managed on the ambulatory pathway
- Factors associated with inpatient management were hypotension, higher NYHA class, faster heart rate, higher NT-pro BNP, lower haemoglobin, and living alone (Table 1)
- Age was not associated with inpatient management
- Patients managed via the ambulatory pathway were more likely to be referred to heart failure nurses and follow up on discharge
- There was no difference in the proportion seen by specialist team within 24 hours, or having an echocardiogram
- Savings of approximately 5000 estimated bed-days

DISCUSSION
- A third of heart failure management can be achieved via an ambulatory pathway
- There was no difference in quality outcomes when compared with inpatient care
- Potential large saving in inpatient bed usage, but needs to be balanced against resource requirements to setup and support outreach nursing teams
- Mortality differences likely represent patient selection
- Further evaluation needed to understand which patients benefit most from ambulatory services

REFERENCES
2. An integrated approach to managing heart failure in the community. British Heart Foundation 2015
3. 2021-22 National Tariff Payment System, NHS England

Fig. 1 Ambulatory heart failure pathway

Table 1: Patient characteristics and mortality for heart failure index admissions

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Inpatient N (1212)</th>
<th>Ambulatory N (707)</th>
<th>Data censoring</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td>62 (74.8)</td>
<td>56 (76.7)</td>
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<tr>
<td>Age Group</td>
<td>70-74</td>
<td>70-74</td>
<td>1</td>
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<tr>
<td>Hypertension</td>
<td>542 (44.7)</td>
<td>298 (42.5)</td>
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<tr>
<td>Diabetes</td>
<td>227 (18.8)</td>
<td>105 (15)</td>
<td>0.027</td>
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<tr>
<td>Haemoglobin</td>
<td>690 (57.1)</td>
<td>559 (79)</td>
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<tr>
<td>NT-pro BNP</td>
<td>140 (11.6)</td>
<td>117 (16.5)</td>
<td>0.487</td>
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<td>NYHA Class</td>
<td>1 (0.4)</td>
<td>2 (0.3)</td>
<td>0.275</td>
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<td>Valvular Heart Disease</td>
<td>122 (10)</td>
<td>6 (1)</td>
<td>0.519</td>
</tr>
<tr>
<td>Diabetes</td>
<td>227 (18.8)</td>
<td>105 (15)</td>
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</tbody>
</table>

Want to set up your own ambulatory heart failure service?
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