Performance Profiles

Chronic Disease Care: Another piece of the picture
Western NSW Local Health District

Hospitalisations and unplanned readmissions for Chronic Obstructive Pulmonary Disease (COPD) and Congestive Heart Failure (CHF) July 2009 to June 2010

The Insights Series
Volume 2, PART 2
Western NSW LHD: Hospitalisation patterns for adults living in the LHD
July 2009 to June 2010

Adults with COPD alive at start of 2009–10: 2,626
Those who died from any cause during 2009–10: 264
Adults with COPD alive at end of 2009–10: 2,362

### Adults with COPD alive at end of 2009–10:

<table>
<thead>
<tr>
<th>Number of Hospitalisations</th>
<th>All-cause</th>
<th>COPD-principal diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (%)</td>
<td>Bed days (%)</td>
</tr>
<tr>
<td>0 hospitalisations</td>
<td>1,111 (47%)</td>
<td>1,971 (83%)</td>
</tr>
<tr>
<td>1 hospitalisation</td>
<td>522 (22%)</td>
<td>3,789 (20%)</td>
</tr>
<tr>
<td>2 hospitalisations</td>
<td>309 (13%)</td>
<td>3,792 (20%)</td>
</tr>
<tr>
<td>3+ hospitalisations</td>
<td>420 (18%)</td>
<td>11,325 (60%)</td>
</tr>
</tbody>
</table>

**Western NSW LHD: COPD hospitalisations and associated bed days among adults with COPD**
July 2009 to June 2010

- No COPD hospitalisations: 83% of 2,362 adults
- 1 COPD hospitalisation: 10% of 2,362 adults
- 2 COPD hospitalisations: 4% of 2,362 adults
- 3+ COPD hospitalisations: 3% of 2,362 adults

- 68 COPD patients (3%) were hospitalised 3+ times for 1,604 (4%) COPD bed days
- 227 COPD patients (10%) were hospitalised once, accounting for 1,313 (26%) COPD bed days
- 96 COPD patients (4%) were hospitalised twice, for 1,028 (18%) COPD bed days

**Percentage of adults with COPD by number of hospitalisations (2,362 adults):**

- 83%
- 10%
- 4%
- 3%

**Percentage of COPD bed days used by adults with COPD (3,946 bed days):**

- 33%
- 26%
- 41%

1. Adults resident in the LHD admitted into any NSW hospital (excluding Albury Base Hospital) between July 2005 and June 2009, with COPD listed in the first 20 diagnostic codes were analysed for hospitalisations in 2009–10.
2. Episodes of care for which COPD was coded as the principal diagnosis (ICD codes are listed on page 26). If two episodes of care with primary diagnosis of COPD were separated only by a type change separation or a transfer, then these two episodes were treated as one hospitalisation. Excludes hospitalisations for dialysis.
3. Only Principal Referral, B Metropolitan and B Non-Metropolitan hospital results are tabulated. All other public hospitals in the LHD are included under ‘Other’. For private hospital data, see Chronic Disease Care: Another piece of the picture.
4. Discharges followed by unplanned readmissions for COPD to any NSW hospital within 28 days, per 100 total COPD principal diagnosis hospitalisations.
5. Rate per 100 discharges standardised for age and sex.
6. Percentage of hospitalisations with DRG code catastrophic or severe comorbidities or complications.
7. Percentage of hospitalisations that were for adults living in the most socioeconomically disadvantaged quintile.

(*) Suppressed due to small numbers or relative standard error ≥40%.
(†) Interpret with caution: relative standard error ≥30% and <40%.

Note: 449 of the adults alive at the end of 2009–10 had both COPD and CHF.
Source: HOIST, Centre for Epidemiology and Evidence, NSW Ministry of Health. Data extracted 8 August, 2011.
Western NSW LHD hospitals: COPD hospitalisations, readmissions within 28 days and context
July 2009 to June 2010

### Western NSW Local Health District (WNSWLHD)

<table>
<thead>
<tr>
<th></th>
<th>Number of COPD hospitalisations</th>
<th>Crude readmission rate</th>
<th>Standardised readmission rate</th>
<th>Percent coded as severe</th>
<th>Percent most disadvantaged quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dubbo Base Hospital</td>
<td>160</td>
<td>11.3</td>
<td>9.8</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Orange Base Hospital</td>
<td>177</td>
<td>18.1</td>
<td>17.2</td>
<td>27</td>
<td>9</td>
</tr>
<tr>
<td>Other WNSWLHD</td>
<td>873</td>
<td>16.0</td>
<td>14.8</td>
<td>22</td>
<td>64</td>
</tr>
<tr>
<td>Total WNSWLHD</td>
<td>1,210</td>
<td>15.7</td>
<td>15.0</td>
<td>24</td>
<td>52</td>
</tr>
<tr>
<td>Total NSW</td>
<td>17,469</td>
<td>13.0</td>
<td>13.0</td>
<td>34</td>
<td>31</td>
</tr>
</tbody>
</table>

Western NSW LHD hospitals: Unplanned readmissions within 28 days relative to NSW rate
July 2009 to June 2010

Number of COPD hospitalisations:
- **High volume:** >400 hospitalisations
- **Medium volume:** 201–400 hospitalisations
- **Low volume:** <200 hospitalisations

Dot colour indicates standardised unplanned readmission rate relative to the NSW rate:
- **Lower than NSW rate** (13.0 per 100 discharges)
- **Higher than NSW rate** (13.0 per 100 discharges)

Western NSW LHD hospitals: COPD hospitalisations, readmissions within 28 days and context
July 2009 to June 2010

Quintiles:
- **Quintile 1:** Most disadvantaged
- **Quintile 5:** Least disadvantaged

### Western NSW LHD hospitals

- **Dubbo Base Hospital:**
  - Number of COPD hospitalisations: 160
  - Crude readmission rate: 11.3
  - Standardised readmission rate: 9.8
  - Percent coded as severe: 31
  - Percent most disadvantaged quintile: 31

- **Orange Base Hospital:**
  - Number of COPD hospitalisations: 177
  - Crude readmission rate: 18.1
  - Standardised readmission rate: 17.2
  - Percent coded as severe: 27
  - Percent most disadvantaged quintile: 9

- **Other WNSWLHD:**
  - Number of COPD hospitalisations: 873
  - Crude readmission rate: 16.0
  - Standardised readmission rate: 14.8
  - Percent coded as severe: 22
  - Percent most disadvantaged quintile: 64

- **Total WNSWLHD:**
  - Number of COPD hospitalisations: 1,210
  - Crude readmission rate: 15.7
  - Standardised readmission rate: 15.0
  - Percent coded as severe: 24
  - Percent most disadvantaged quintile: 52

- **Total NSW:**
  - Number of COPD hospitalisations: 17,469
  - Crude readmission rate: 13.0
  - Standardised readmission rate: 13.0
  - Percent coded as severe: 34
  - Percent most disadvantaged quintile: 31
Western NSW LHD: Hospitalisation patterns for adults living in the LHD
July 2009 to June 2010

Adults with CHF alive at start of 2009–10
Those who died from any cause during 2009–10
Adults with CHF alive at end of 2009–10

<table>
<thead>
<tr>
<th>Adults with CHF alive at end of 2009–10</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 hospitalisations</td>
<td>825</td>
</tr>
<tr>
<td>1 hospitalisation</td>
<td>1,627</td>
</tr>
<tr>
<td>2 hospitalisations</td>
<td>408</td>
</tr>
<tr>
<td>3+ hospitalisations</td>
<td>222</td>
</tr>
<tr>
<td></td>
<td>326</td>
</tr>
</tbody>
</table>

Western NSW LHD: CHF hospitalisations and associated bed days among adults with CHF
July 2009 to June 2010

<table>
<thead>
<tr>
<th>Percentage of adults with CHF by number of hospitalisations (1,781 patients)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No CHF hospitalisations</td>
</tr>
<tr>
<td>1 CHF hospitalisation</td>
</tr>
<tr>
<td>2 CHF hospitalisations</td>
</tr>
<tr>
<td>3+ CHF hospitalisations</td>
</tr>
<tr>
<td>35 CHF patients (2%) were hospitalised twice, for 639 (47%) CHF bed days</td>
</tr>
<tr>
<td>12 CHF patients (1%) were hospitalised 3+ times for 255 (19%) CHF bed days</td>
</tr>
<tr>
<td>47%</td>
</tr>
<tr>
<td>19%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of CHF bed days used by adults with CHF (1,349 bed days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No CHF hospitalisations</td>
</tr>
<tr>
<td>1 CHF hospitalisation</td>
</tr>
<tr>
<td>2 CHF hospitalisations</td>
</tr>
<tr>
<td>3+ CHF hospitalisations</td>
</tr>
<tr>
<td>12 CHF patients (1%) were hospitalised 3+ times for 255 (19%) CHF bed days</td>
</tr>
<tr>
<td>47%</td>
</tr>
<tr>
<td>19%</td>
</tr>
</tbody>
</table>

1. Adults resident in the LHD admitted into any NSW hospital (excluding Albury Base Hospital) between July 2005 and June 2009, with CHF listed in the first 20 diagnostic codes were analysed for hospitalisations in 2009–10.
2. Episodes of care for which CHF was coded as the principal diagnosis (ICD codes are listed on page 26). If two episodes of care with primary diagnosis of CHF were separated only by a type change separation or a transfer, then these two episodes were treated as one hospitalisation. Excludes hospitalisations for dialysis.
3. Only Principal Referral, B Metropolitan and B Non-Metropolitan hospital results are tabulated. All other public hospitals in the LHD are included in ‘Other’. For private hospital data, see Chronic Disease Care: Another piece of the picture.
4. Discharges followed by unplanned readmissions for CHF to any NSW hospital within 28 days, per 100 total CHF principal diagnosis hospitalisations.
5. Rates per 100 discharges standardised for age and sex.
6. Percentage of hospitalisations with DRG code catastrophic or severe comorbidities or complications.
7. Percentage of hospitalisations that were for adults living in the most socioeconomically disadvantaged quintile.

(*) Suppressed due to small numbers or relative standard error ≥40%.
(†) Interpret with caution: relative standard error ≥30% and <40%.

Note: 449 of the adults alive at the end of 2009–10 had both COPD and CHF.

Source: HOIST, Centre for Epidemiology and Evidence, NSW Ministry of Health. Data extracted 8 August, 2011.
### Western NSW LHD hospitals: CHF hospitalisations, readmissions within 28 days and context
July 2009 to June 2010

<table>
<thead>
<tr>
<th>Western NSW Local Health District (WNSWLHD)</th>
<th>Number of CHF hospitalisations¹</th>
<th>Crude readmission rate²</th>
<th>Standardised readmission rate³</th>
<th>Percent coded as severe⁴</th>
<th>Percent most disadvantaged quintile⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dubbo Base Hospital</td>
<td>113</td>
<td>5.3</td>
<td>*</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>Orange Base Hospital</td>
<td>122</td>
<td>14.8</td>
<td>10.6</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Other WNSWLHD</td>
<td>331</td>
<td>11.8</td>
<td>10.9</td>
<td>9</td>
<td>49</td>
</tr>
<tr>
<td>Total WNSWLHD</td>
<td>566</td>
<td>11.1</td>
<td>10.0</td>
<td>14</td>
<td>37</td>
</tr>
<tr>
<td>Total NSW</td>
<td>11,088</td>
<td>8.8</td>
<td>8.8</td>
<td>25</td>
<td>27</td>
</tr>
</tbody>
</table>

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### Western NSW LHD hospitals: Unplanned readmissions within 28 days relative to NSW rate
July 2009 to June 2010

- **High volume:** >400 hospitalisations
- **Medium volume:** 201–400 hospitalisations
- **Low volume:** <200 hospitalisations

#### Dot colour indicates standardised unplanned readmission rate relative to the NSW rate
- Lower than NSW rate (8.8 per 100 discharges)
- Higher than NSW rate (8.8 per 100 discharges)
The Bureau of Health Information provides the community, healthcare professionals and the NSW Parliament with timely, accurate and comparable information on the performance of the NSW public health system in ways that enhance the system’s accountability and inform efforts to increase its beneficial impact on the health and wellbeing of the people of NSW.

The Bureau is an independent, board-governed statutory health corporation. The conclusions in this report are those of the Bureau and no official endorsement by the NSW Minister for Health, the NSW Ministry of Health or any other NSW statutory health corporation is intended or should be inferred.

Download our reports

The report, *Chronic Disease Care: Another piece of the picture - hospitalisations and unplanned readmissions for chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF), July 2009 to June 2010*, and related reports are available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

The suite of products includes:

- **The main report** presenting new insights into care for adults with COPD and CHF
- **Performance Profiles** (hospitalisation patterns, and readmissions for 16 Local Health Districts)
- **Technical Supplement** (presenting research methods and statistical analyses)
- The preceding report, *Chronic Disease Care (PART 1)*, presenting information about the number of potentially avoidable admissions for COPD and CHF.

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