Diabetes Mellitus in NSW

Service Utilisation and Impact on Resources

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An overview

- Methodology and approach to data extraction

- Key results

- Service Utilisation & Impact on Resources
  - of diabetes hospitalisations in NSW public hospitals; and
  - hospitalisations for diabetes related foot conditions.
Data extraction

- Activity data extracted from the NSW Ministry of Health’s Admitted Patient, Emergency Department and Deaths Register (APEDDR) and population estimates as sourced from Secure Analytics for Population Health Research and Intelligence (SAPHaRI)

- All NSW residents admitted with diabetes mellitus in public hospitals for all ages was extracted for three financial years (2012-13 to 2014-15)

- Analysis based on selected Primary and Secondary diabetes diagnosis ICD-10-AM codes

- Financial calculations are based on NSW NWAU14 price of $4,583
Key findings

- In 2014-15, diabetes related hospitalisations accounted for 11% of all admissions in NSW public hospitals.

- 1 person in every 11 in NSW (aged 16 and over) has diabetes.

- The number of people with diabetes in NSW has increased from 7% in 2002 to 9% in 2014.

- The majority of people (95%) with diabetes are admitted with diabetes as an additional diagnosis not as the primary diagnosis.
Key findings (con’t)

- Over three years (2012-13 to 2014-15):
  - People with diabetes had an average length of stay of 6 days compared to 4 days for all admitted patients
  - People with diabetes foot related hospitalisations stay in hospital between 9 and 26 days

- Resources spent on diabetes patients in NSW public hospitals increased by 8% per annum on average from $1.2 billion in 2012-13 to $1.4 billion in 2014-15.
Diabetes hospitalisations by age & sex

- Majority (>70%) of patients admitted to hospital for diabetes are aged more than 60.
- Males aged 75-79 years and females aged 85+ years had the highest number of hospitalisations.
NSW diabetes hospitalisations 2014-15

2014-15 Hospitalisations

All other hospitalisations, 1,645,863 or 89%

Diabetes hospitalisations, 207,454 or 11%
The majority of diabetes hospitalisations were for Type 2 (88%) in both years.

Diabetes hospitalisations increased on average by 8% annually (same as for people with Type 2 Diabetes).
2014-15: activity and resourcing by type of diabetes in NSW

<table>
<thead>
<tr>
<th></th>
<th>Type 1</th>
<th>Type 2</th>
<th>Gestational</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total separations</td>
<td>10,637</td>
<td>183,432</td>
<td>11,252</td>
<td>2,133</td>
<td>207,454</td>
</tr>
<tr>
<td>ALOS (days)</td>
<td>4.5</td>
<td>6.2</td>
<td>3.3</td>
<td>6.6</td>
<td>5.9</td>
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<tr>
<td>Impact on Resources</td>
<td>$64.6 M</td>
<td>$1.2 B</td>
<td>$69.8 M</td>
<td>$19.8 M</td>
<td>$1.4 B</td>
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</tbody>
</table>

- Impact on resources of Diabetes hospitalisation in 2014-15: $1.4B
- Highest volume of activity and resources was for Type 2 diabetes
High risk foot services in NSW: 2014-15

- Of the total diabetes hospitalisations in 2014-15, 17% were for diabetic foot related conditions.

- Hospitalisation for people diabetic foot related conditions increased on average by 12% annually.
High risk foot services in NSW: 2014-15

- **30,489**, 86%: Diabetic foot related infections/ulcers of foot or lower limb
- **4,462**, 13%: Lower limb amputation due to diabetes
- **351**, 1%: Rehabilitation following lower limb amputation due to diabetes
- **63**, 0%: Diabetic foot procedures
- **80**, 0%: Excision of bone due to osteomyelitis with diabetes as co-morbidity
## HRF: impact on resources

<table>
<thead>
<tr>
<th></th>
<th>2012-13</th>
<th>2013-14</th>
<th>2014-15</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All HRF groups</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Seps</td>
<td>28,340</td>
<td>31,532</td>
<td>35,445</td>
<td>95,317</td>
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<tr>
<td>NWAUs</td>
<td>56,488</td>
<td>62,757</td>
<td>71,268</td>
<td>190,512</td>
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<tr>
<td>Impact on resources ($ M)</td>
<td>258.88</td>
<td>287.61</td>
<td>326.62</td>
<td>873.12</td>
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<tr>
<td><strong>Diabetic foot related infections/ulcers of foot or lower limb</strong></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Seps</td>
<td>24,141</td>
<td>26,913</td>
<td>30,489</td>
<td>81,543</td>
<td>86%</td>
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<tr>
<td>NWAUs</td>
<td>44,378</td>
<td>49,593</td>
<td>56,881</td>
<td>150,852</td>
<td>79%</td>
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<tr>
<td>Av. NWAU</td>
<td>1.84</td>
<td>1.84</td>
<td>1.87</td>
<td>1.85</td>
<td></td>
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<tr>
<td><strong>Other HRF Groups</strong></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Seps</td>
<td>4,199</td>
<td>4,619</td>
<td>4,956</td>
<td>13,774</td>
<td>14%</td>
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<tr>
<td>NWAUs</td>
<td>12,110</td>
<td>13,164</td>
<td>14,387</td>
<td>39,660</td>
<td>21%</td>
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<tr>
<td>Av. NWAU</td>
<td>2.88</td>
<td>2.85</td>
<td>2.90</td>
<td>2.88</td>
<td></td>
</tr>
</tbody>
</table>

Infections/ulcers of foot or lower limb are less resource intensive than Other HRF Groups.
Comparison of ALOS for diabetic foot related hospitalisations

- ALOS for diabetes foot related hospitalisations ranges from 9 – 26 days
- Higher than all patients with diabetes (6) and all admitted (4 days)
Projected impact on resources of diabetes related hospitalisations to 2025/26 (incl HRF)
Questions?