Does the shortage of diabetes specialists in regional and rural Australia matter?

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Background
- Rural Australian populations have increased risk factors for diabetes, and increased life-years lost to diabetes-related disability and mortality
- Rural Australians with diabetes see GPs less frequently, receive less specialist-level care, may receive less intensive risk factor management by GPs and experience higher hospital admission rates due to diabetes

Aim
- To compare key indicators of biomedical risk, self-management and psychosocial outcomes and access to healthcare in regional/rural and metropolitan (metro) dwelling Australian adults with diabetes

Method
- Diabetes MILES – Australia was a national survey (conducted in 2011) of adults with diabetes, which focused on psychosocial and behavioural issues
- A random sample of 15,000 registrants of the National Diabetes Services Scheme (NDSS) were posted a survey; an online version was advertised nationally
- 3,338 eligible respondents took part
  - 1,700 lived in metro areas: 46.6% had type 1 diabetes
  - 1,574 lived in regional/rural areas: 35.2% had type 2 diabetes
- Detailed methods are published elsewhere

Results
- Rural/regional respondents:
  - were older
  - had lower socioeconomic status
  - were more likely to be women
  - were less likely to be in paid employment
  - were more likely to receive a disability pension
- 21.1% of regional/rural versus 40.9% metro respondents relied most on an endocrinologist or other specialist for their diabetes care (p<0.0001)
  - Type 1: 42.3% rural/regional versus 64.0% metro relied most on an endocrinologist
  - Type 2: 9.2% rural/regional versus 20.3% metro relied most on an endocrinologist
- 64.7% regional/rural versus 49.0% metro respondents relied most on their GP for diabetes care (p<0.0001)
- After adjusting for diabetes type, age, gender and socio-economic status, regional/rural respondents were:
  - less likely to have consulted an endocrinologist during the past 12 months (RR 0.82, 95% CI 0.76-0.89)
  - more likely to have consulted a diabetes educator (RR 1.16, 95% CI 1.05-1.26), dietitian (RR 1.18, 95% CI 1.08-1.33) or practice nurse (RR 1.32, 95% CI 1.01-1.72)

There was no difference in mean self-reported HbA1c, number of hypoglycaemic events during the past week, level of satisfaction with blood glucose levels (BGLs) or frequency of recording or uploading BGLs

There were no differences in scores on psychosocial outcomes (e.g. WHO-5, PWI)

Table 1. Demographic and clinical characteristics by area

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<thead>
<tr>
<th></th>
<th>Rural/Regional</th>
<th>Metro</th>
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<tbody>
<tr>
<td></td>
<td>Mean±SD or (CI)</td>
<td></td>
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<tr>
<td>Body Mass Index*</td>
<td>29.7 (29.3-30.1)</td>
<td>30.2 (29.8-30.6)</td>
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<td>Diabetes duration (years)</td>
<td>11±10.1</td>
<td>11±10.6</td>
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<tr>
<td>HbA1c</td>
<td>7.6±1.77</td>
<td>7.49±1.61</td>
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<tr>
<td>Hypoglycaemic events during past week</td>
<td>2.2±2.78</td>
<td>2.3±2.38</td>
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<tr>
<td>Self-rated health (EQ-SD)**</td>
<td>71.8 (70.8-72.7)</td>
<td>71.9 (71.0-73.9)</td>
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<td>Subjective wellbeing (PWI)</td>
<td>68.6±18.6</td>
<td>68.6±17.3</td>
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<td>General psychological wellbeing (WHO-5)</td>
<td>227 (14.7)</td>
<td>229 (13.6)</td>
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* Only the visual analogue scale was used in this analysis
* Adjusted for age, gender and socio-economic status
** Adjusted for diabetes type, age, gender and socio-economic status

Conclusions
- Despite differences in access to diabetes specialists, there was no difference in self-reported health and psychosocial outcomes
- Non-medical primary services in rural areas may be providing additional care to rural participants to make up for the lack of access to medical and, in particular, specialist services

References

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