ABSTRACT

The 2015 New Zealand Child and Youth Epidemiology Service reports to DHBs on the health status of children and young people found that constipation was the primary diagnosis for over 1,000 acute and arranged hospitalisations of New Zealand children in the 0–14 age group.1 Constipation is common in young children, a frequent cause of referral secondary care, and can become chronic in more than one-third of those affected. Community prevalence may be as high as 30% depending on the diagnostic criteria used, and is highest in toddlers.2,3 The most common form is idiopathic constipation, where there is no anatomical or physiological explanation for the symptoms.2 Children and young people with Down syndrome, autism and cerebral palsy are particularly prone to idiopathic constipation. There is also a higher prevalence in children and young people in local authority care.2 Severe constipation can be associated with faecal soiling which can have a significant emotional impact on children and young people and be stressful for parents and carers; prolonged support may be required to address social, psychological and educational consequences.2

The exact cause of idiopathic constipation is also not fully understood; contributing factors may include pain, fever, dehydration, dietary and fluid intake, psychological issues, toilet training, medicines and family history of constipation.2 A strong social gradient has been observed internationally, with higher rates among less advantaged populations.4 If simple measures such as increasing fluid intake, increasing fruit and vegetables in the child’s diet, encouraging a regular toileting habit and encouraging more exercise are not effective then early assessment by a health professional is important.4

METHODS

Data on hospitalisations of 0–24 year olds where constipation was the primary diagnosis or included within any of the first 15 diagnoses were extracted from the National Minimum dataset (SMDS) using the ICD-10-AM code K59.0. Rates were calculated using a Statistics New Zealand Estimated Resident Population denominator. Relevant recent publications were identified from New Zealand and international guideline repositories and through a rapid literature review in PubMed using the MESH term Constipation with filters ‘Review’ ‘Publication in past 5 years’ and ‘Child birth–18 years.’

RESULTS

Between 2011 and 2015, 0–24 year olds were hospitalised in almost 19,000 hospitalisations with constipation listed within the first 15 diagnoses. Constipation was the primary diagnosis in half of these hospitalisations for 0–14 year olds and one-quarter for 15–24 year olds (All:Primary diagnosis ratio 1.89 compared with 4.03) (Table 1).

Table 1. 0–24 year olds hospitalised with constipation New Zealand 2011–2015

<table>
<thead>
<tr>
<th>Age group</th>
<th>Unique individuals (n)</th>
<th>Hospitalisations (n)</th>
<th>Primary diagnosis</th>
<th>All cases</th>
<th>Ratio All:Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–24 years</td>
<td>14,578</td>
<td>18,721</td>
<td>13,900</td>
<td>25,421</td>
<td>2.40</td>
</tr>
<tr>
<td>0–14 years</td>
<td>8,541</td>
<td>11,247</td>
<td>8,095</td>
<td>12,436</td>
<td>1.89</td>
</tr>
<tr>
<td>15–24 years</td>
<td>6,108</td>
<td>7,476</td>
<td>5,805</td>
<td>9,985</td>
<td>4.03</td>
</tr>
</tbody>
</table>

Source: National Minimum Dataset. ‘Primary’ corresponds to hospitalisations where constipation was primary diagnosis; ‘All cases’ corresponds to hospitalisations with constipation listed in any of the first 15 diagnoses; the sum of the age groups may total to more than the 0–24 year old total.

RESULTS continued

Hospitalisation rates of 0–24 year olds for constipation were stable from 2000 to 2006 and rose from 2007 to 2015 in all age groups and the rise was most marked for 15–24 year olds; hospitalisation rates were consistently highest for 0–4 year olds (Figure 1).

In the five years from 2011 to 2015 there was a slight but statistically significant social gradient with increasing prevalence of constipation requiring hospitalisation for individuals living at each increasing NZDep2013 quintile, compared with those living in NZDep2013 deciles 1–2. The rate of constipation requiring hospitalisation was higher among Middle Eastern, Latin American and African, and lower for Asian/Indian 0–24 year olds compared with their European Other, Māori and Pacific peers. Hospitalisation prevalence rates were significantly higher for females compared with males. Rates were higher for 0–4 year olds and lower for 5–14 year olds compared to 15–24 year olds.

The rapid literature review identified guidelines from the National Institute for Health and Care Excellence (UK),4 Starship Children’s Health (NZ),5 that provide guidance to clinicians in managing constipation. The KidHealth website provides information for parents and whānau.6 Consistent messages from the variety of healthcare professionals from whom children and young people with idiopathic constipation seek advice is important to: reduce rates of ED presentation and unplanned hospitalisation for constipation; reduce rates of recurrent constipation and/or impaction in children and young people; increase parent or carer satisfaction with information and advice; and enable children and young people to satisfactorily manage constipation.7 Despite the high community prevalence and healthcare costs associated with severe constipation there are few published reviews of high quality studies. Polyethylene glycol and liquid paraffin (mineral oil) have costs associated with severe constipation there are few published reviews of high quality clinical guidelines for efficacy.

The contribution of the common problem of chronic constipation to use of child health service resources in New Zealand is increasingly recognised, particularly for 0–4 year olds. Well-planned and evaluated health service interventions will add to the currently sparse literature on this topic. Such research is important to develop cost-effective services that can reduce the incidence and impact of constipation and contribute to better outcomes for children and young people and their families.

REFERENCES