

# 'The kids are alright' – Changes in GP consultations with children 2000–15

Clare Bayram, Christopher Harrison, Janice Charles, Helena Britt



*The ageing of Australia's population has led to a focus on the health resources required for older patients, and there has been concern that this might be at the expense of children's healthcare.<sup>1</sup> Over the past few decades the number of children in Australia has increased, but has steadily declined as a proportion of the population.<sup>2</sup> This has paralleled an increase in the absolute number of general practitioner (GP) encounters with children aged <15 years, but a decline in the percentage of GP workload from 14.3% in 2000–01 to 11.2% in 2013–14.<sup>3,4</sup> There are disparities in the use of general practice services by age, with children making up a greater proportion of the population (19.3%) than of GP visits (13.0%), while people aged 65 years and older accounted for 13.0% of the population and 26.5% of visits in 2006.<sup>5</sup> It is unclear whether the decline in the proportion of GP workload accounted for by children reflects a change in the way children use these general practice services, or a redistribution based on the ageing of the patient population.*

Over time, there have been marked changes in the types of problems managed in children. From the 1990s to 2001, Australia's children became well vaccinated and decreasingly likely to have 'traditional' childhood illnesses (notably infections).<sup>6</sup> More recently, there has been significant growth in the management of child mental health problems in general practice, although mental health problems account for a small proportion of childhood problems managed.<sup>7</sup> We examined children's use of general practice services and the problems managed in 2000–03 and 2012–15 to determine whether their service use has been influenced by the demands associated with the management of older Australians, and whether trends in problems managed identified in early studies have continued.

## Method

We analysed GP encounters with children aged <15 years that were collected in the Bettering the Evaluation and Care of Health (BEACH) program from April 2000 to March 2003 and April 2012 to March 2015, referred to as 2000–03 and 2012–15, respectively. The methods of the BEACH program are described in detail elsewhere.<sup>8</sup> The average use of general practice services

by children aged <15 years in the population was calculated using Medicare claims data (supplied by Australian Government Department of Health) and Australian Bureau of Statistics (ABS) population data.<sup>2</sup> We used annual population estimates for June 2000 to June 2002 for 2000–03 calculations, and June 2012 to June 2014 data for 2012–15 calculations.

## Results

GP encounters with children aged <15 years in BEACH accounted for a significantly smaller proportion of total consultations in 2012–15 (11.4%; 95% CI: 11.1–11.7) than in 2000–03 (12.9%; 95% CI: 12.6–13.2). Similarly, the proportion of the population aged <15 years decreased over the same period from 20.5% to 18.9%. By contrast, the population-based usage of general practice services in children was unchanged. For the period 2000–03, an average of 81.8% of children attended a GP at least once in each year, while in 2012–15 the average was 82.9%. In both periods, the average visit rate per head of population was 3.8 visits per year.

The types of problems commonly managed at encounters with children stayed relatively constant in 2000–03 and 2012–15, with upper respiratory tract infection (URTI), immunisation and ear

infection the most common (Table 1). Management of problems classified as infections decreased from 56.8 (95% CI: 56.0–57.6) per 100 encounters with children in 2000–03 to 52.1 (95% CI: 51.3–53.0) in 2012–15. The most common infections for which management rates decreased included:

- acute otitis media/myringitis
- acute bronchitis/bronchiolitis
- tonsillitis
- gastroenteritis
- conjunctivitis.

The management rate of asthma also decreased significantly from 5.4 per 100 encounters in 2000–03 to 4.5 in 2012–15. The management rate of general check-ups and contact dermatitis increased over the period investigated (Table 1).

In terms of broad problem groups, respiratory conditions remained the most frequently managed, accounting for one-third of all problems managed. This did not change over time. General and unspecified problems (which include check-ups and immunisation) rose significantly from 22.9 (95% CI: 22.2–23.5) per 100 encounters to 25.6 (95% CI: 24.9–26.4). While psychological problems were not among the most frequently managed childhood problems, their management increased almost three-fold at encounters with children, from 1.7 (95% CI: 1.6–1.9) per 100 encounters in 2000–03 to 5.0 (95% CI: 4.6–5.4) per 100 encounters in 2012–15. This was reflected in increased management frequency of behavioural problems, anxiety, autism and attention-deficit hyperactivity disorder (results not tabled).

## Discussion

Our study allays the concern that children are being ‘crowded out’ from seeing GPs due to increased attendance by older patients. We found that children used general practice services at a similar rate in 2012–15 as they did in 2000–03. The shift in GP workload towards older patients is not at the expense of younger patients’ healthcare. The apparent decrease in encounters with children is due to an overall increase in the annual number of GP encounters. This increase is being driven by the rising number of older Australians who see their GP more often.<sup>9</sup>

The decreased management rates of infections and asthma, and increased management rates of contact dermatitis and psychological problems in children, reflect continuation of trends since the early 1990s identified in earlier research.<sup>6,7</sup> To some extent, these trends reflect changes in management strategies (eg new medications, antibiotic awareness campaigns, introduction of initiatives including the GP Mental Health Care items) and, in the case of psychological problems, a global trend to recognise and manage mental health problems among children.<sup>7</sup>

The continued high management rate of immunisation and increased rate of general check-ups suggest that preventive care is a predominant feature of management of children in general practice. This is reassuring as one of the concerns raised about changing GP workload was that preventive care may be ‘crowded out’.<sup>1</sup> The increase in check-ups may be due to the 2008 introduction of Medicare items for the ‘Healthy Kids Check’

**Table 1. Comparison of the childhood problems most frequently managed by GPs in 2000–03 and 2012–15**

Problem managed	Rate per 100 encounters with children aged <15 years (95% CI)	
	2000–03 (n = 38,202)	2012–15 (n = 33,111)
Upper respiratory tract infection	16.7 (16.1–17.2)	16.2 (15.6–16.8)
Immunisation/vaccination – all*	11.5 (11.0–12.0)	11.0 (10.5–11.5)
Acute otitis media/myringitis	7.4 (7.1–7.7)	6.1 (5.8–6.5)
General check-up*	1.9 (1.7–2.1)	4.7 (4.4–5.0)
Asthma	5.4 (5.1–5.6)	4.5 (4.2–4.8)
Viral disease, other/NOS	4.0 (3.7–4.3)	3.7 (3.4–4.0)
Acute bronchitis/bronchiolitis	3.9 (3.6–4.1)	3.4 (3.1–3.6)
Dermatitis, contact/allergic	2.9 (2.7–3.0)	3.2 (3.0–3.4)
Tonsillitis*	4.0 (3.7–4.2)	3.0 (2.7–3.2)
Gastroenteritis*	3.2 (3.0–3.4)	2.5 (2.3–2.6)
Conjunctivitis	2.0 (1.9–2.2)	1.6 (1.4–1.7)

Note: problems managed are presented in 2012–15 order of frequency.

CI, confidence interval; n, number of encounters; NOS, not otherwise specified.

\*Includes multiple ICP-2 (International Classification of Primary Care, version 2) or ICP-2 PLUS codes (see [http://ses.library.usyd.edu.au/bitstream/2123/11882/5/Appendix4\\_YEAR\\_16.pdf](http://ses.library.usyd.edu.au/bitstream/2123/11882/5/Appendix4_YEAR_16.pdf))

in children aged 4 years.<sup>10</sup> Funding for the Healthy Kids Checks items is due to cease from November 2015. It will be interesting to see if this leads to a decrease in check-ups among children.

## Conclusion

The use of general practice services by children in the Australian population has remained constant, despite encounters with children accounting for a smaller proportion of the total GP workload in 2012–15 than in 2000–03. The increased share of GP time taken up by older patients has not come at the expense of time for children's healthcare. The high management rate of immunisation and increasing rate of check-ups suggest preventive care is routinely delivered at encounters with children. Trends identified in the types of problems managed since the early 1990s are continuing (eg decreasing rates of infections and asthma). The results of our investigation led us to conclude that in Australia, in terms of their healthcare, the kids are alright.

## Authors

Clare Bayram BAppSc (HIM) (Hons), PhD, Research Fellow and Project Manager, BEACH Program, Family Medicine Research Centre, University of Sydney, Sydney, NSW

Christopher Harrison BPsych (Hons), MSocHlth, Senior Research Analyst, Family Medicine Research Centre, University of Sydney, NSW

Janice Charles BA, MSc (Med), Senior Researcher, Family Medicine Research Centre, University of Sydney, NSW

Helena Britt BA, PhD, Director Family Medicine Research Centre, University of Sydney, NSW

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correspondence [afp@racgp.org.au](mailto:afp@racgp.org.au)