The estimated prevalence of Type 1 diabetes in children aged 0–14 years in Australia in 2008 and 2013

Anne-Marie Waters1, Roslyn Seselja1, Susana Senes1, Jeff R. Flack2, Maria E. Craig3
1Cardiovascular, Diabetes and Kidney Unit, Australian Institute of Health and Welfare (AIHW), Canberra, ACT, Australia
2Diabetes Centre, Bankstown-Lidcombe Hospital and Conjoint Associate Professor, University of NSW, Sydney, NSW, Australia
3University of NSW, University of Sydney, The Children’s Hospital at Westmead, Australia

Introduction
The AIHW’s National Diabetes Register (NDR) covers people living in Australia with all forms of insulin-treated diabetes who began using insulin from 1 January 1999. Its two independent data sources are the National Diabetes Services Scheme (NDSS) database administered by Diabetes Australia; and the Australasian Paediatric Endocrine Group’s (APEG) state and territory databases. The NDR now holds 10-years of data and, for the first time, has been used to estimate the prevalence of type 1 diabetes (T1D) in children aged 0–14 years.

Aim
To estimate the prevalence of T1D in Australian children aged 0–14 years in 2008 and the projected prevalence in 2013.

Methods
Case ascertainment (97.2%) for 1999–2008 was estimated using the capture-recapture method. Prevalence was estimated using (i) NDR data for children diagnosed with T1D between 1999–2008 who were aged 0–14 years at 31 December 2008; and (ii) Poisson regression model estimates of new cases of T1D during 1994–1998 in children who would have been aged 10–14 years at 31 December 2008. The projected prevalence of T1D in 0–14 year olds in 2013 was estimated based on the assumption that incidence would continue to rise at the same rate as it did during 2000–2008.

Results
- The prevalence of T1D in Australian children is high by international standards.
- Prevalence of T1D was not different between boys and girls, but it increased with age and varied by state and territory.
- The age-adjusted prevalence of T1D in Australian children is projected to increase markedly between 2008 and 2013.

Conclusions
The prevalence rate of T1D in children aged 0–14 years is high and is projected to increase. This has important implications for health care resource planning.

Acknowledgements: National Diabetes Data Working Group which is the Advisory Committee to the National Centre for Monitoring Diabetes [incorporating the National Diabetes Register] at AIHW; APEG and APEG data managers; Diabetes Australia; and Australian Government Department of Health and Ageing.

Reviewers: Please note that numerical results will be publically available once the report upon which this abstract is based is published on 17 June 2011.