

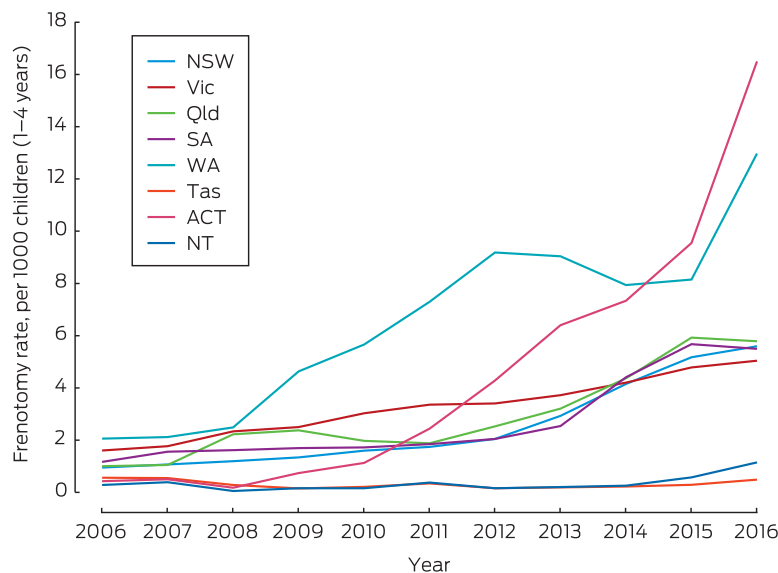
Frenotomy for tongue-tie in Australian children, 2006–2016: an increasing problem

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There is no universally accepted definition of tongue-tie or ankyloglossia, but it may be described as a congenital abnormality of the lingual frenulum that limits the range of

scissors and laser surgery. Increases in the number of tongue-tie diagnoses and in lingual frenotomy rates have recently been reported in Canada and the United States.^{3,4}

1 Frenotomy rates in Australia, 2006–2016, based on Medicare data*



* Numbers of items coded by Medicare item codes, 30278, 30281, 52081, 52084. ♦

movement of the tongue, interfering with feeding or speech.^{1,2} There is little consensus among health professionals about how tongue-ties should be managed,¹ and little reliable evidence for the benefits of frenotomy.² A range of techniques are employed to treat clinically significant ties surgically (frenotomy or frenectomy), including

the Australian Capital Territory in 2016 (16.5 per 1000 population; Box 1). The frenotomy rate increased significantly across the study period in the ACT (by 3710%), Western Australia (530%), New South Wales (487%) and Queensland (474%), but not in Tasmania (Box 2).

Clinically significant tongue-tie in breastfeeding pairs was overlooked during the second half of the 20th century. Tongue-tie (and the newer diagnoses of upper lip tie and posterior tongue-tie) have received increased attention following the resurgent commitment of women to breastfeeding over the past decade and the growth in numbers of breastfeeding support professionals.^{1,5}

We retrospectively investigated temporal trends in frenotomy rates in Australia for children aged 0–4 years by analysing de-identified Medicare data for the period 2006–2016 (tongue-tie surgery item codes: 30278, 30281, 52081, 52084). The population of children aged 0–4 years was estimated from Australian Bureau of Statistics census data.⁶ Categorical data were analysed in χ^2 tests, using Stata 14.1 (StataCorp). The Children’s Health Queensland Human Research Ethics Committee granted an ethics review waiver for the study.

During 2006–2016, 52 473 Medicare frenotomy items for 0- to 4-year-old children were recorded; the rate increased from 1.22 per 1000 population in 2006 to 6.35 per 1000 in 2016. The highest rate was for

2 Changes in frenotomy rates in Australia, 2006–2016, by state, derived from Medicare data*

Region	2006			2016			Change in rate, 2006–2016
	Children (0–4 yrs)	Frenotomies	Rate per 1000 children (0–4 yrs)	Children (0–4 yrs)	Frenotomies	Rate per 1000 children (0–4 yrs)	
Australian Capital Territory	20 781	9	0.43	27 816	459	16.5	3710% [†]
Western Australia	129 770	267	2.06	175 292	2274	13.0 [†]	530% [‡]
New South Wales	431 534	411	0.95	495 452	2771	5.59 [†]	487% [‡]
Queensland	263 024	265	1.01	319 561	1849	5.79 [†]	474% [‡]
South Australia	89 004	104	1.17	101 567	558	5.49 [†]	370% [‡]
Northern Territory	17 561	5	0.28	19 171	22	1.15 [†]	303% [‡]
Victoria	312 581	502	1.61	396 693	1999	5.04 [†]	214% [‡]
Tasmania	30 123	17	0.56	30 615	15	0.49 [†]	–13%
Australia	1 294 378	1580	1.22	1 566 167	9947	6.35	420%

* Medicare item codes: 30278, 30281, 52081, 52084. [†] Compared with rate for Australian Capital Territory: $P < 0.001$. [‡] Calculations used unrounded rates for 2006 and 2016. For all states and territories, except Tasmania: $P < 0.001$. ♦

Our results indicate that frenotomy rates in most of Australia have increased significantly over the past decade. Increases have similarly been reported for British Columbia in Canada (2004–2013: 89% increase) and the United States (1997–2012: 866% increase).^{3,4} Medicare data underestimate the frenotomy rate, as this information does not capture frenotomies in public hospitals, where Medicare rebates are usually not applied. More significantly, Medicare data do not capture frenotomies performed by dentists, particularly laser frenotomy. In the ACT, however, the limited availability of laser frenotomy before 2016 means that Medicare data probably capture most procedures not undertaken in public hospitals.

The almost 40-fold increase in the rate of Medicare-rebated frenotomies in the ACT was much greater than the nevertheless marked increases in other Australian states. The magnitude of this increase may provide an indication of how the national frenotomy rate will increase over the next few years, and lead us to question whether this surgical management approach is supported by sufficient evidence.

Competing interests: No relevant disclosures.

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