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Developmental Language Disorder: A disability, health and education challenge.

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This paper was developed at the Deeble Institute for Health Policy Research, Australian Hospital and Healthcare Association with Speech and Language Development Australia (SALDA).

what is it?

Developmental language disorder (DLD) is a life-long condition characterised by difficulties with understanding and/or using spoken language. DLD is a neurodevelopmental condition that cannot be explained by known biomedical conditions; it is likely the result of a number of biological, genetic and environmental risk factors (RCSLT, 2018).

prevalence in Australia

The prevalence rate of DLD among children across the world is approximately seven and a half percent (Gooch et al., 2016). This translates to approximately two children being diagnosed with DLD within a typical Australian classroom of 30 students.

There is minimal data on the incidence and prevalence of DLD within Australia; population-based studies that use broad criteria for DLD indicate that the prevalence may be as high as 17 percent, with much higher rates in children from disadvantaged backgrounds (Law et al., 2000; McKinnon et al., 2007; Senate Community Affairs, 2014; Tomblin et al., 1997). In Australia, this group includes Aboriginal and Torres Strait Islander children, children from low socioeconomic backgrounds and children from non-English speaking backgrounds (Roy and Chiat, 2013).

Based on these estimates, DLD is more prevalent than autism spectrum disorder (approximately one percent) (Baird et al., 2006) and could be considered as prevalent as asthma (approximately ten percent) (ABS, 2018) and childhood obesity (approximately 28 percent) (Huse et al., 2018).

poor employment outcomes

DLD is a public health concern (Law et al., 2013), associated with increased risk of academic failure (Conti-Ramsden and Durkin, 2016), poor employment outcomes (Conti-Ramsden et al., 2012) and social, emotional, and behavioural difficulties (Yew and O'Kearney, 2013).

There is limited evidence demonstrating the long-term effects of language impairment within Australia. International longitudinal studies have found that children with language disorders who do not receive intervention achieve lower levels of education (Barnard-Brak and Sulak, 2010) and are subsequently at higher risk of lower wages and reliance on welfare and of higher levels of redundancy (Cirrin and Gillam, 2008), under-employment and workplace conflict (Cleg et al., 2005).

impact on the Australian economy

The economic impact of DLD within Australia is significant. Research indicates societal costs to be between $1.362 billion per year and $3.308 billion per year, based on a prevalence range seven to 17 percent (Cronin and Paula, 2017). In 2017, the annual cost per child with language difficulties was estimated to be $4,353; with the largest proportion of this cost being associated with productivity losses (Cronin and Paula, 2017):

- 42 percent attributable to productivity losses of the child's mother,
- 30 percent attributable to productivity losses of the child, and
- 28 percent attributable to costs borne by the health and welfare system.

When considering the economic costs associated with DLD, it is important to factor additional costs associated with youth justice and education. Research indicates that a disproportionate number of young people who come into contact with youth justice services, between 46-51 percent of young male offenders, have language impairment (Bryan et al., 2007; Lount et al., 2017; Snow and Powell, 2011).

public health policy

Current government policies and services for children with DLD are divided across the health, education and disability sectors, across national, state and territory jurisdictions. In 2013, a Senate inquiry was established to respond to the lifelong challenges that communication disorders pose to individuals, communities and service providers (Cronin, 2017). The inquiry highlighted the fragmentation of policy frameworks as a consequence of service division, resulting in differences in eligibility criteria and, therefore, differences in access to services for children diagnosed with communication impairment, including DLD (Cronin and Paula, 2017).

In a review of health, education and disability legislation, it was further found that there are 'clear policy gaps in the area of communication impairment causing many children to miss out on appropriate and timely interventions' (McLeod et al., 2010).

access to services

As part of the Senate inquiry, the national body Speech Pathology Australia (SPA) reviewed access to early intervention in the public health and disability sectors (SPA, 2014a) and found the following:

- All Australian families can self-refer to a GP, early childhood intervention (ECI) and Community Child Health (CCH) services in each state and territory. These services are available for children who meet certain service-based criteria and typically are aged six years and under.
- Private services are available for families although there is a high financial cost attached to assessment and intervention services.

- Private health insurance rebates vary hugely, but are usually less than half of the service fee, or are capped after very few services.
- Access to funded support through the Enhanced Primary Care program for children with chronic and complex needs is possible for some children although services are limited to five sessions per year.

Australian research has identified that approximately 30 percent of children with identifiable communication problems present for help between one and four years (Skeat et al., 2010) and this increases to only 45 percent of children between four to five years (Skeat et al., 2013).

The huge divide between communication problems and access to help likely reflects a multitude of barriers including public health waiting times, costs, and distance to travel, as well as other barriers such as competing family priorities and lack of knowledge about where or how to access help (O'Callaghan et al., 2005; Rannard et al., 2005; Paradice and Adewusi, 2002).

As of 2020, discrepancies in public waitlists remain an area of media interest with the ABC recently reporting that children with disabilities, including DLD, in suburbs with low socio-economic status can wait up to two years longer for access to health services such as speech pathology when compared to children based in wealthier suburbs (Dalzell, 2020). This has been described as "developmental apartheid," and is likely to increase the known economic, academic and developmental gap for children diagnosed with DLD from an early age (Dalzell, 2020).

In 2014, the Community Affairs Reference Committee (Australian Government, 2017) recommended that the Australian Government Department of Health, in collaboration with state and territory governments and other key stakeholders prepare a position paper on the most appropriate model of service provision for speech pathologists working across sectors including early childhood intervention services, the education system and the healthcare system (Senate Community Affairs, 2014). The Australian Government responded to this recommendation in 2017, stating that 'state and territory governments have primary responsibility for the day to day management of schools, including provision of services such as speech pathology' (Australian Government, 2017).'

in the education setting

Access to speech pathology services by Australian school children is an area with significant variability and major gaps. Policy initiatives that are significant for children with DLD include *The Disability Standards for Education* (2005) and the *National Disability Insurance Scheme* (NDIS), which commenced in 2010 (Commonwealth of Australia, 2005).

In 2019, the Australian Institute of Health and Welfare (AIHW) reported that 22 percent of Australian children were developmentally vulnerable on one or more domains of school entry and 11 percent of children were developmentally vulnerable in two or more domains of school entry; including:

- language and cognitive skills (school-based),
- social competence and
- communication skills and general knowledge (AIHW, 2019).

Victoria, Queensland, Australian Capital Territory, South Australia and Tasmania provide a speech pathology service for students in public schools, through the relevant Department of Education. New South Wales, Northern Territory, and Western Australia either have no services in education, or have very limited provision (Community Affairs References, 2014). Even in states and territories with department of education provided speech pathology support, resources are not always available to support children in an ideal model (Community Affairs References, 2014).

For example, the key state funder of speech pathology services for children in the school years is the Victorian state government Department of Education and Early Childhood Development (DEECD) who employs and contracts Speech Pathologists to work in schools. In their response to the national inquiry in 2014, the Peninsula Model for Primary Health Planning stated:

'In 2012, there were 140 full time positions in Victorian government schools, funded by DEECD. This represents a significant unmet need. By way of example, the current ratio of Speech Pathologists is 1:4512, or six times less than the recommended norm,' (Children's Heath Allliance).

To compare this to international models, approximately 51.4 percent of certified speech pathologists are employed by education departments within the United States of America (American Speech-Language-Hearing Association, 2019) (ASLHA, 2019).

funding support

For children who are diagnosed with DLD, funded support also varies widely between states.

Western Australia, New South Wales and Tasmania do not provide categories of funded support for children with communication disability, including speech/language disorder, while Victoria, Queensland, South Australia and the ACT do.

In QLD, SA and the ACT, children must demonstrate severe impairment (two standard deviations below the mean on a standardised test) whereas in Victoria children must demonstrate a severity level of three standard deviations below the mean, (SPA, 2014).

limitations of service provision

There is limited research on the prevalence of communication disorders in Australian adolescents and this is subsequently reflected in a lack of services available (SPA, 2016). Research indicates that 13.04 percent of adolescent Australian students present with a language-based communication disorder (McLeod and McKinnon, 2007). Despite the known prevalence, persistence and negative impact of DLD there are few options to support these students; education funding tends to be prioritised to lower-primary students and across all states, there are no ongoing health-funded intervention options for students beyond approximately seven years of age (SPA, 2014b).

For some children diagnosed with DLD and an additional differentiating condition (such as Cerebral Palsy), it may be possible to access to NDIS. However, DLD typically occurs in the absence of known biomedical causes (SPA, 2019). As a consequence, access to services for children with DLD under the NDIS is inconsistent and variable depending on the point in time within transition, the jurisdiction, and individual planner decisions (SPA, 2019).

challenges and opportunities

Children with DLD use services across health, education and disability policy settings. As DLD is a 'hidden' disorder, many children remain undiagnosed until primary school or later and therefore, remain untreated. Children with DLD are at high risk of educational failure without appropriate support. Language difficulties are likely to place an increasingly larger burden on the health and welfare system as these children move through school and after they leave school.

Reviewing the known gaps across the health, education and disability legislation which relate to childhood language disorders, with special consideration of the current economic impact and burden of DLD within Australia, is required to reduce the burden of this condition on children, families and government.

key reading

- Cronin, P. 2017, The Economic Impact of Childhood Developmental Language Disorder, doctoral thesis, University of Technology Sydney, viewed 28 December 2019, https://opus.lib.uts.edu.au/handle/10453/123261

  Examines the economic impact of childhood DLD on individuals, families and society, using a national Australian panel data set of 10, 0000 children, (Longitudinal Study). Provides decision makers with a picture of the global burden of DLD and the major costs components and areas where cost containment policies would have significant impact.

- Community Affairs References Committee 2014, "Prevalence of different types of speech, language and communication disorders and speech pathology services in Australia," viewed on 25 May 2020, https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Speech_Pathology/Report , pp. 68.

Parliamentary inquiry into the prevalence of different types of speech, language and communication disorders and speech pathology services in Australia.

- McLeod S, Press F and Phelan C. 2010 "The (In)visibility of Children with Communication Impairment in Australian Health, Education and Disability Legislation and Policies" *Asia Pacific Journal of Speech, Language and Hearing,* vol 13 no. 1 pp.67-75.

  This study highlights how Australian legislation and policy does not adequately address the needs of children with communication disorder, particularly those with communication impairment of unknown origin (including DLD). There is specific reference to policy gaps between Australian allied health, education and disability sectors and the negative impact that this has on service delivery.

- Australian Government 2017 "Australian Government response to the Senate Community Affairs References Committee report: The prevalence of different types of speech, language and communication disorders and speech pathology services in Australia," viewed on 3 January 2020, https://www.health.gov.au/sites/default/files/response-speech-pathology-services-in-australia.pdf

  On 9 December 2013, the Senate referred to the Community Affairs References Committee (the Committee) an inquiry into the prevalence of different types of speech, language and communication disorders and speech pathology services in Australia. In 2017, the Australian Government issued a response to the main recommendations developed from the national inquiry.

- Law J, Levickis P, McKean C, Goldfeld S, Snow Pand Reilly S. (2017) "Child Language in a Public Health Context." Melbourne: Murdoch Children/s Research Institute, viewed on 3 January 2020, https://www.mcri.edu.au/sites/default/files/media/documents/cres/cre-cl_policy_brief_2_dld_public_health.pdf

  This policy brief outlines that DLD meets the criteria for a domain that fits within public health framework due to its societal burden and unfair distribution as it places a large burden on society. It proposes a population health approach and provides specific recommendations in the development and review of policy and processes impacting DLD.

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