EVIDENCE BRIEF

DEVELOPMENTAL LANGUAGE DISORDER (DLD) – DECEMBER 2022

THE DLD PROJECT

This document is a summary of the current evidence on the incidence, assessment, diagnosis and treatment of Developmental Language Disorder (DLD) within the Australian context.

Key Points

- Developmental Language Disorder (DLD) is a permanent, lifelong disability that affects 1 in 14 people (Norbury et al, 2016). A recent Australian prevalence study found 6.4% of children with DLD at 10 years of age (Calder et al., 2022). DLD is a hidden or invisible disability with less than 20% of Australians having heard of it (Kim et al., 2022), which adds to its stigma in the community. Those who receive a diagnosis often feel isolated and alone due to a lack of awareness and support.

- DLD is the internationally recognised diagnostic term for people who have difficulties understanding and using language. The criteria for diagnosis relate to these difficulties being lifelong, having a functional impact on daily life and cannot be explained by an associated biomedical condition (e.g. Autism, Deaf/Hard-of-Hearing). The term 'developmental' refers to the fact that the disorder is present from childhood rather than being an acquired condition (Bishop et al., 2017).

- DLD replaces previous terminology, such as Specific Language Impairment, Language Disorder and Language Delay, following an international consensus study in 2017. Speech pathologists are the primary diagnosticians of DLD and utilise the Bishop et al. (2017) criteria. While the DSM-5 still uses the term Language Disorder, the ICD-11 addresses DLD and categorises it as a neurodevelopmental disorder. For the purposes of the NDIS Act, DLD is best described as a "neurological" condition.

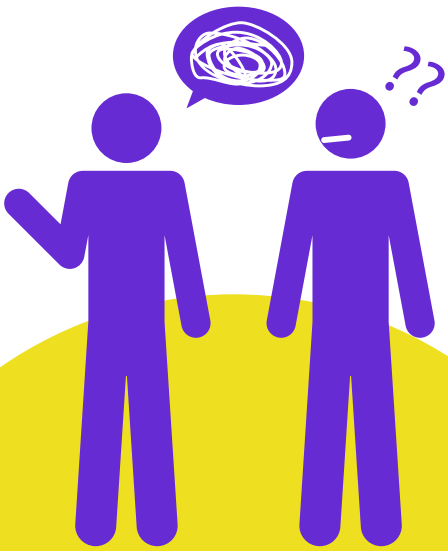
Key Points Continued

- There is no known cure for DLD and longitudinal studies demonstrate that a person does not grow out of DLD (Conti-Ramsden et al., 2018). Reasonable and necessary supports from health professionals are needed to ensure people with DLD live an ordinary life and achieve their goals.
- Unfortunately, DLD often goes undiagnosed, or is not diagnosed until school age. DLD often goes untreated, because children do not always present with other associated conditions which are more widely understood and easily identified.

Background

"Developmental language disorder (DLD) is a neurodevelopmental condition that emerges in early childhood and frequently persists into adulthood. People with DLD have significant difficulty learning, understanding, and using spoken language." (McGregor, 2020)

DLD is a type of speech, language, and communication need (SLCN) that affects the way that people understand and use language (Bishop et al., 2017). It is a neurodevelopmental condition that can affect a person's ability to learn effectively, establish relationships and seek gainful employment (Cronin, 2017).



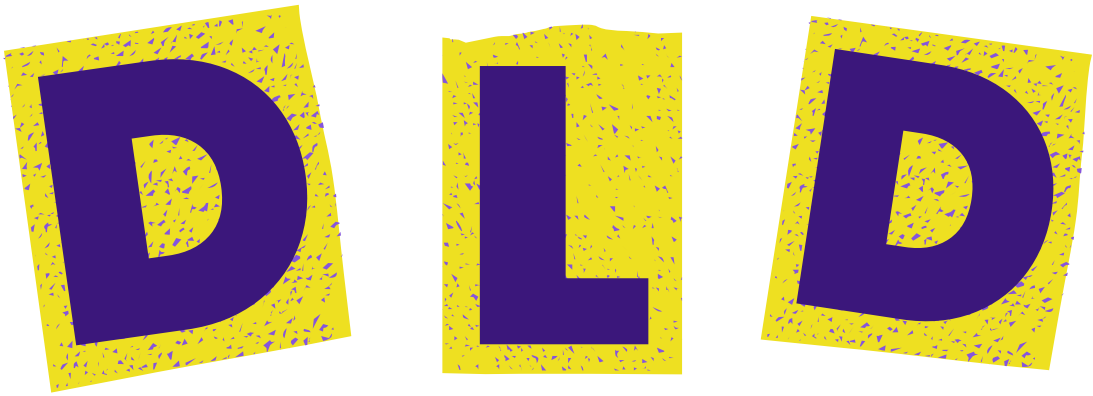
New Label, But Not A New Disability

Over the past 200 years, there have been a huge range of terms used to describe people with difficulties understanding and using language (Reilly, 2014), including 'Specific Language Impairment,' 'Developmental Aphasia,' 'Language Learning Impairment' and 'Language Disorder.'

Inconsistent terminology has been directly linked to poor public awareness of DLD (McGregor et al., 2020), as well as hindered educational practices, therapeutic support and research.

This led to the formation of an international panel led by Professor Dorothy Bishop (University of Oxford, United Kingdom), which consisted of 57 experts, including: speech language therapists/pathologists (SLPs), psychologists (educational), paediatricians, psychiatrists, specialist teachers and charity representatives. This group called the CATALISE Consortium undertook a multinational and multidisciplinary Delphi process to reach consensus on the diagnostic criteria and terminology for Developmental Language Disorder (Bishop et al., 2016, 2017).

The term DLD has been endorsed by Speech Pathology Australia as the peak body for speech pathologists. The World Health Organisation have revised the International Classification of Diseases, 11th Edition (ICD-11) to include DLD, while the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition Revised (DSM-5-TR) continues to utilise the term, 'Language Disorder', with more restrictive diagnostic criteria than other recommendations.



Prevalent and Lifelong

DLD is a permanent, lifelong disability that affects 1 in 14 people (Norbury et al., 2016), which equates to two children in a classroom of 30 students.

"It's not that you're not listening or paying attention. DLD feels like everything is going over my head all the time. When I talk, it feels a bit like I'm about to stutter. Everything rushes to your mouth at once. I have to stop the sentence and restart or move onto something else.

I have mind blanks a lot. When I'm in class and trying to write a paragraph I just have a mind blank and forget what I'm writing.

It's ok to have DLD. You can't get rid of it. Knowing you have DLD means you don't beat yourself up over it. People need to be patient and not get frustrated."

17 year old Parker from Brisbane

The prevalence of DLD in a representative Australian sample of children was 6.4% at 10 years (Calder et al., 2022). DLD is 50 times more prevalent than hearing impairment and five times more prevalent than Autism Spectrum Disorder (ASD) (McGregor, 2020).

DLD is 5 times more prevalent than Autism

The estimated male-to-female prevalence ratio within the DLD population is 1.3:1 (Tomblin et al., 1997). Girls and boys may present with different profiles of strengths and weaknesses in language (McGregor et al., 2020). They may also have differences in social behaviour that can magnify or camouflage their language weaknesses (Hart et al., 2004; Toseeb et al., 2017).

Longitudinal studies show that DLD is a lifelong condition. While DLD is often diagnosed in childhood, many features will persist into adolescence and adulthood (Nippold et al., 2009). This can impact on friendships, learning at school and employment.

Assessment and Diagnosis

DLD is diagnosed by a qualified speech pathologist/therapist. The person with suspected language difficulties will participate in a case history, observations and assessments. There is currently no blood test, body scan or genetic analysis that can identify DLD. A diagnosis will be provided when:

- The person's language skills are lower than would be expected for their ages.
- The language difficulties are persistent and have not resolved by 5 years of age.
- The language difficulties are having a functional impact on the person's life (e.g. learning at school, participating at work).

The term DLD is used when a person's language difficulties are not due to another biomedical condition, such as a genetic syndrome (e.g. Down Syndrome), sensorineural hearing loss, neurological disease, Autism Spectrum Disorder or Intellectual Disability.

These are considered to be 'differentiating conditions', which are likely to impact on language development. However, all of these conditions do not need to be excluded to diagnose DLD.

Impairments in learning, motor or behaviour can co-occur with DLD. These co-occurring conditions include:

- Anxiety and depression
- Attention Deficit Hyperactivity Disorder (ADHD)
- Behavioural and emotional disorders
- Developmental Coordination Disorder
- Dyslexia/dysgraphia/ dyscalculia
- Speech Sound Disorders

Risk Factors

There is increasing research showing people with DLD are at greater risk of facing challenges from childhood to adulthood.

- **Students with DLD are 6 times more likely to have reading disabilities, 6 times more likely to have significant spelling problems, 4 times more likely to struggle with math, and 12 times more likely to face all three of these difficulties combined (Young et al., 2002).**

- Adults with DLD are twice more likely to go over a year without employment than other adults (Law et al., 2009).
- People who have DLD are 6 times more likely to experience clinical levels of anxiety and 3 times more likely to have clinical depression (Conti-Ramsden & Bottin, 2008).

- Girls with DLD are 3 times more likely to experience sexual abuse (Brownlie et al., 2007).
- Boys with DLD are 4 times more likely to engage in delinquent behaviour (Brownlie et al., 2004).
- Individuals with Developmental Language Disorder may have difficulties with functional tasks such as learning to drive (Durkin et al., 2016).

Intervention and Support

No cure exists for Developmental Language Disorder and there is no "one size fits all" treatment. The goal for intervention is to maximise the person with DLD's abilities, while reducing the barriers in their daily life.

Behavioural interventions are the most common approach for working with people with DLD. These interventions are typically carried out by speech pathologists, however families, educators, health professionals and employers play an important role in facilitating these supports.

Interventions can significantly enhance a person with DLD's ability to communicate and develop their language skills (Law et al., 2017).

Children with DLD can learn aspects of language through participating in intensive and individualised support. Changing the trajectory of language development remains challenging and requires considerable time and ongoing support.

For school aged children with DLD, the curriculum needs to be adapted and scaffolded using a multidisciplinary approach to ensure inclusion and success in the classroom. Adults with DLD benefit from accessing speech pathology services to help them achieve positive outcomes (Toseeb et al., 2017).

Accessing DLD Support in Australia

There is currently no unified funding scheme in Australia to enable people with DLD to access interventions and support. Five subsidised speech pathology sessions may be granted by a general practitioner (GP) under the Chronic Disease Management (CDM) plan.

However, research supports the need for a minimum of 8 sessions to see progress in language. Significantly more intervention is required for people with DLD.

Access to speech pathology services in schools is inconsistent across every state and territory. This means that although a child with DLD may be eligible for support under the Nationally Consistent Collection of Data (NCCD) and the Disability Standards for Education, there isn't a professional in every school to diagnose these children and ensure they receive intervention and support.

People with DLD cannot rely on existing funding and supports to live like a peer who does not have DLD. The government is putting the burden of communication disabilities back on the average Australian to self-fund these interventions and supports resulting in significant inequality and long term detriment to society.

DLD and the NDIS

DLD is not currently a disability included on List A or B. The National Disability Insurance Agency (NDIA) has advised The DLD Project this should not be a barrier to a person with DLD or their family from applying to access the National Disability Insurance Scheme (NDIS).

According to the NDIA, access to the NDIS is not driven by diagnosis of health condition or disorder.

Rather each application must be assessed against the access criteria set out in the NDIS Act 2013, which takes into consideration the evidence provided by an applicant and their treating professional(s).

An applicant's diagnosis does not need to be on the lists to access the NDIS. Applicants must demonstrate their disability is lifelong and has a functional impact.

Under Section 24 of the NDIS Act 2013, a person with DLD is likely to meet the disability requirement, because:

- The disability has a neurological basis as language processing occurs in the brain (Section 24 (1)(a)); -
- The disability is known to be permanent if present after the age of 5 (Section 24 (1)(b);
- The disability will substantially reduce capacity in one or more of the following areas, including communication, social interaction, learning, mobility, self-care or self-management (Section 24 (1)(c)).
- The disability will likely result in more than 50% having mental health issues that impact on social participation. Adults with DLD frequently obtain less skilled employment and are poorly represented in professional roles (e.g., teacher, accountant).
- The disability will likely require lifelong support from a range of health professionals, including speech pathologists, psychologists, occupational therapists, physiotherapists, paediatricians etc.

DLD and the NDIS Continued

Examples of areas of reduced capacity for a person with DLD might include:

Communication	Social Interaction	Learning
• Challenges with understanding the meaning of what people say. • Issues speaking in grammatically correct sentences. • May act out because they cannot communicate well; or, in contrast, may be shy/quiet.	• Trouble building relationships with peers and colleagues. • Challenges maintaining and keeping friendships. • Difficulty communicating puts them at risk of social isolation and bullying.	• Issues developing functional reading and writing skills for filling in forms and using the internet. • Struggles with using numeracy skills in the community such as reading bus timetables and using an ATM.
Mobility	**Self-care**	**Self-management**
• Challenges with utilising fine and gross motor skills to complete everyday tasks.	• Issues managing situations safely. • Trouble completing daily routines, such as dressing, grooming.	• Struggle to plan daily tasks. • Challenges with problem solving situations.

People with DLD benefit from direct intervention from speech pathologists, who have the necessary knowledge and skills to help an individual build their capacity in communication, social interaction, learning and self-management.

Psychologists and occupational therapists have complimentary knowledge and skills across these areas and others. As DLD is primarily diagnosed by a speech pathologist, a person with DLD may need to work with their GP or paediatrician to develop an understanding of their multidisciplinary support needs.

People with DLD can also experience low muscle tone which can be addressed with the support of a physiotherapist. Children with DLD may need to access private coaching for extracurricular activities such as sport or tutoring to learn due to higher support needs.

Recommendations to Improve the Lifetime Outlook for People With DLD

1. Parents and carers of children with DLD should be offered training and support when a child is diagnosed.

2. People diagnosed with DLD should have access to the NDIS, if their functional needs demonstrate the access criteria is met.

3. There needs to be a greater focus on supporting students with DLD in school and tertiary settings.

4. There should be greater involvement of GPs and paediatricians in the identification, diagnosis and treatment of the disorder.

5. Children should be given clear pathways for treatment and support into adolescence and adulthood.

6. There should be a focus on early, intensive interventions, such as speech pathology services to reduce the impact of DLD on longer term outcomes.

7. NDIS Planners and Local Area Coordinators should have training in DLD and communication disability.

8. More research needs to be funded to increase our understanding of DLD and its impacts.

CASE STUDY – A Comparison of the Impact of Autism (LEVEL 2-3) & DLD

Autism (Levels 2 & 3) is identified on NDIS List A and therefore considered to be a condition funded by the NDIS. DLD is not approved on List A, B or C yet its lifelong impacts are consistent with those experienced by an autistic individual. The lack of awareness and understanding of how DLD impacts a person's life is preventing people with DLD from receiving necessary support.

Impact	Autism Level 2–3	DLD
Marked difficulties in verbal and nonverbal social communication skills • responding appropriately to others • initiating or maintaining a conversation • discussing their interests in detail • understanding another person's perspective	✓	✓
May have very limited speech	✓	✓
May be able to only express their basic needs	✓	✓
Will have difficulties forming friendships	✓	✓
Will have difficulty coping with changes to their routine or environment	✓	✓
Issues with theory of mind, verbal short-term memory and phonological processing	✓	✓
Significant risk of psychological disorder	✓	✓

Developmental Language Disorder (DLD) is a Permanent, Lifelong Disability That Affects 1 in 14 Australians.

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