

Down Syndrome in the Early Years

Introduction

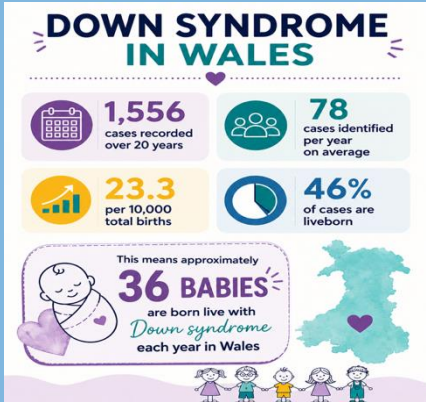
Down syndrome is a lifelong genetic condition caused by an additional copy of chromosome 21 (National Down Syndrome Society, 2024). NHS Inform (2024) reports that approximately one in every 700 babies born in the United Kingdom has Down syndrome, making it the most common chromosomal condition. Within early years practice, however, the significance of identification lies less in diagnosis itself than in its capacity to enable timely, individualised support, particularly because the impact of Down syndrome varies between children and provision should not rest on diagnosis alone (Soccorso *et al.*, 2024). In Wales, this reflects the principles of the Additional Learning Needs Code (Welsh Government, 2021), which emphasises early identification and prompt response to reduce barriers to participation and learning. This poster critically evaluates the identification and diagnosis of Down syndrome, analyses two barriers affecting children in early years education, and explores visual supports as an appropriate strategy in relation to the cognitive and communicative profile commonly associated with the condition.



Source: Image of a young child with Down syndrome in an early year's classroom. (OpenAI ChatGPT, 2026b).

Identification and Diagnosis

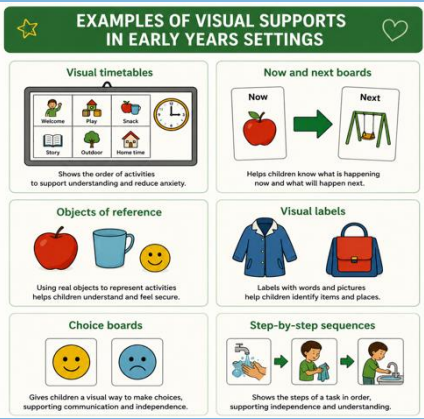
Prenatal screening for Down syndrome typically uses the combined test, comprising a maternal blood test and an ultrasound scan in early pregnancy (NHS, 2025). A higher-chance result does not confirm a diagnosis and is usually followed by invasive procedures such as chorionic villus sampling (Public Health England, 2021). This creates a significant tension, as parents must interpret inconclusive information while considering further testing (van Schendel *et al.*, 2017). Ternby *et al.* (2024) note that some parents decline screening, as decisions are shaped by personal values and attitudes towards disability, while Thomas (2017) argues that routine screening can communicate implicit assumptions about the value of disabled lives, raising ethical questions practitioners must acknowledge. Where screening is declined or inconclusive, Down syndrome may be recognised postnatally through clinical characteristics and confirmed through genetic testing (Bull, 2020). Nevertheless, the value of early identification lies not in the diagnostic label itself, but in whether it facilitates timely, individualised and non-deficit-based support for the child and family (Welsh Government, 2021). This is reflected in the Individual Development Plan (IDP) process under the *Additional Learning Needs and Education Tribunal (Wales) Act 2018*, through which provision can be tailored to the child's emerging strengths and needs. However, Windsperger and Hoehl (2021) caution that developmental outcomes vary considerably, meaning diagnosis alone cannot determine a child's future needs. The principal challenge for early years practitioners, therefore, lies not in establishing a diagnosis but in ensuring provision responds to the child's individual profile rather than condition-based assumptions (Welsh Government, 2021; Soccorso *et al.*, 2024).



Source: Infographic on Down Syndrome in Wales (OpenAI ChatGPT, 2026, based on data from Public Health Wales, 2018).

Barriers

Hypotonia, or reduced muscle tone, is a characteristic feature of Down syndrome (Bull, 2020), associated with delays in gross motor milestones and difficulties in postural stability, fine motor control and the oral-motor coordination underpinning feeding and speech (Marchal *et al.*, 2016; Diciere-Pereira *et al.*, 2022). Interpreted through the medical model, such difficulties are conceptualised as impairments situated within the child and typically addressed through clinical intervention, including physiotherapy and occupational therapy (Antonarakis *et al.*, 2020; Bull *et al.*, 2022). In early years settings, hypotonia may constitute a substantial barrier to participation, limiting physical play, exploration and social interaction with other children, all of which are central to the holistic outcomes articulated in the Curriculum for Wales (Welsh Government, 2020). Such restrictions may also affect a child's emerging sense of competence and their participation in early social relationships, with consequences extending beyond motor development alone (Maciver *et al.*, 2019). However, as Guevara (2021) contends, framing hypotonia predominantly as an individual deficit risks naturalising reduced participation as an inevitable consequence of impairment, rather than recognising it as a barrier amenable to environmental and pedagogical modification, such as adapted seating and unhurried transitions. Consequently, exclusive reliance on this framing may underestimate the role of inclusive practice in enabling children's participation (Maciver *et al.*, 2019; Antonarakis *et al.*, 2020). Children with Down syndrome frequently demonstrate relative strengths in visual and receptive communication alongside difficulty with expressive verbal language, partly linked to oral-motor hypotonia and the high prevalence of conductive hearing loss (Smith, Næss and Jarrold, 2017). In settings reliant on spoken instruction, this profile may restrict children's capacity to express needs, follow transitions and sustain social interaction with other children (Therrien, Light and Pope, 2016), undermining the child-centred principles of the Additional Learning Needs Code (Welsh Government, 2021). Further significant barrier, therefore, arises where augmentative and alternative communication, or AAC, is absent (Barbosa *et al.*, 2018). Interpreted through the social model, such difficulties are understood not as consequences of the child's profile, but as products of environments that fail to provide accessible, multimodal interaction (Beukelman and Light, 2020). Furthermore, where communication is organised primarily around speech, reduced participation may be misread as inevitable rather than as a barrier produced by the setting (Goodley, 2017). Moreover, McFadden *et al.* (2017) caution that AAC alone does not guarantee inclusion, as its effectiveness depends on practitioner training and consistent embedding within routines. Consequently, while AAC offers a means of widening communicative access, its impact depends on inclusive environments and informed practice (McFadden *et al.*, 2017; Beukelman and Light, 2020).



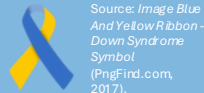
Source: Examples of Visual Supports in Early Years Settings (OpenAI ChatGPT, 2026a).

Strategies

Visual supports, including picture symbols, photographs, visual timetables and now-and-next boards, are an appropriate strategy for supporting children with Down syndrome in early years settings (Boundy *et al.*, 2023; Baxter, 2025). As Onnivello *et al.* (2022) observe, the cognitive profile associated with Down syndrome often combines relative strengths in visual processing with difficulties in verbal and short-term auditory memory. However, profiles vary considerably, and for some children visual information may be processed and retained more effectively than spoken language (Channell *et al.*, 2021). In early years settings, visual supports can therefore function as a form of scaffolding within Vygotsky's (1978) zone of proximal development, helping children to understand routines, anticipate transitions and communicate choices in ways that underpin play, belonging and learning (Welsh Government, 2020). Although this aligns with the person-centred principles of the Additional Learning Needs Code (Welsh Government, 2021) and the Curriculum for Wales (Welsh Government, 2020), policy alignment alone does not ensure effective practice. Soccorso *et al.* (2024) note considerable variation, suggesting that visual supports may lose effectiveness when applied through condition-based assumptions rather than being shaped around the child's individual needs. Ronski *et al.* (2023) exploratory findings suggest that parent-implemented augmented communication can support routines, transitions and expressive communication, although the evidence remains promising rather than conclusive. Likewise, O'Leary, Lyons and Frizelle (2025) found that consistent implementation depended on training, time and whole-setting commitment, suggesting that the strategy's success is shaped as much by institutional capacity as by theoretical suitability. Ryan and Quinlan (2018) and Kendall (2019) further suggest that such supports are less effective without parental collaboration, since parents' knowledge of communication preferences is essential for consistency across contexts. Scarpapolo (2025) similarly argues that listening to parents deepens practitioners' understanding, reinforcing the view that effective inclusion depends on partnership as well as provision. Furthermore, visual supports, if applied uniformly or used as a substitute for relational interaction, risk over-structuring children's experiences (Goodley, 2017). Consequently, while visual supports may widen communicative access, their value depends on informed implementation, family collaboration and a wider inclusive ethos rather than on the resource alone (Soccorso *et al.*, 2024; O'Leary, Lyons and Frizelle, 2025).

Conclusion

In conclusion, the key issue for early years practice is not diagnosis itself but how effectively provision responds to each child's individual profile. Barriers such as hypotonia and inaccessible communication environments may restrict participation when understood through deficit-based assumptions. Visual supports offer a valuable strategy within Welsh early years practice, but their effectiveness depends on informed implementation, family partnership and an inclusive ethos that seeks to remove barriers rather than place responsibility solely on the child.



Source: Image Blue And Yellow Ribbon - Down Syndrome Symbol (PngFind.com, 2017).