Assessment of speech, language and communication in children

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Speech and language is the way in which we communicate and share thoughts, ideas and emotions. It is a responsibility of the Community Health Nurse (CHN) to work with parents to monitor whether or not a child’s speech and language development are progressing normally. It should be noted that although there is a pattern for speech and communication development, every child is different and will develop at their own pace.

Speech and language development is not a necessary assessment required in the Community Health Policies, Procedures and Guidelines Manual however problems that may inhibit speech development may be highlighted during a universal contact visit. Parental concerns are an important indicator of a potential issue.

Speech and language development are the most common developmental concern expressed by parents for children aged 1 to 3 years. Early intervention is critical, not only as many of these issues are easily resolved in the early years, but also if left untreated, speech and language delays can impact on a child’s ability to use later language, their behaviour and how they learn and persisting problems in later childhood and adolescence.

Speech and language areas
There are a range of skills that are involved in speech and language. Difficulties in any of the following areas when compared to other children of a similar age could warrant further investigation and possible referral to a speech pathologist.

- **Expressive language** refers to what a child says. It includes the words they know, and how they combine words together to make sentences and later stories
- **Receptive language** (comprehension) refers to what a child can understand, including concepts, questions and instructions
- **Speech** refers to the sounds a child uses when saying words, and how clear they are when they speak.
- **Pragmatics** refers to the understanding of ‘rules’ of conversation, such as using eye contact, taking turns to speak and being able to talk about a topic

Speech and language developmental issues
Speech and language delays are often non-specific in cause. However, at times a delay can be an indication of a more complex underlying developmental issue. If a child is suspected to be at risk of development delay, investigation of the communicative behaviours is needed to determine if there are significant delays in other developmental domains.

Speech and language delays can also be concurrent with hearing difficulties such as those caused by ear infections which are common in children, and this should also be considered.

Early intervention for speech and language development
There is significant evidence for ‘critical periods’ for development of speech and language, during which time, the brain is best able to absorb a language and gain communications skills. The most critical period of speech and language development is in the first three to four years of life. Research suggests that an environment that is rich with sounds, sights, and consistent
positive interaction with others to promote communication is the best environment in which to promote speech and language skills.

**Language development**

The beginning of communication for newborns is crying to alert needs such as hunger, comfort and companionship. In infancy, important sounds are recognised in the infant's surroundings such as the sound of a parent's voice.

Between 3 and 12 months the baby will learn to coo and laugh, and begin to make different sounds and communicate through gestures such as waving and pointing. Babbling develops during the first year and is a critical developmental indicator. By the end of the first year some words are beginning to form and they should be able to respond to and understand simple commands such as 'no' and recognise their own name.

Between 12 and 18 months, first words emerge and by 18 months, children are expected to use more than 10 to 20 words. Toddlers should be able to respond to and understand simple commands such as 'come here' and 'get your shoes'. During this period children rapidly learn that words symbolise objects or actions and thoughts.

By 2 years of age, the child will have a vocabulary of about 300 words and will start to put them together in short sentences. Referral to a Speech Pathologist is indicated if at 2 years of age, a child does not use more than 50 words and combine words together. Toddlers should be able to understand simple instructions with two things to remember such as ‘give mummy the cup’.

Children aged 2 to 3 years are able to speak in longer and more complex sentences. Their vocabulary will continue to expand and so will their ability to understand what is being said to them.

There is cause for concern if a child is not:
- babbling by 12 months
- comprehending simple commands by 15 months
- using more than 50 words and combining words by 24 months
- using sentences by 3 years and is mostly intelligible
- telling a simple story by 4-5 years of age, or has difficulty doing so.

**Speech development**

A speech delay or disorder is apparent when a child’s speech production does not follow the normal developmental pattern at the right time. Speech issues can be caused by either issues with production of sound or the patterns of sounds that are produced. Speech difficulties can include:
- phonological delay/disorder
- childhood apraxia of speech
- articulation difficulties due to structural or function issues (eg. cleft palate).
Delayed/disordered speech is of concern when the child is unclear compared to other children their age, they are becoming frustrated, or it is impacting on their overall development. Structural/functional issues require investigation and management.

**Evaluation**

**Child health nurse assessment**
In response to parental concerns (including PEDS) or deviation from the normal speech and language developmental pathways, a CHN should be considerate of other signs or symptoms at the appropriate ages. Testing of speech and language is primarily reliant on parent’s observation. Dialogue with the parents regarding their child’s development is important to ascertain if a problem exists and to ensure an early detection and intervention process is applied.

Physical examination can also help in early identification of some types of speech delay, such as dysmorphic features and other abnormal physical findings that may contribute to obstruction of development.

**Speech pathology assessment**
Examination by a speech pathologist will formally assess the child’s speech and language function relative to their developmental expectations for that age. Assessment by a speech pathologist may include, but is not limited to, observation of the child’s communication skills such as eye contact, shyness, use of social greetings and willingness to engage in play. Parent-child interaction may be involved, such as parents giving instruction to the child and their response.

Based on assessment findings, the speech pathologist may follow one of several pathways, which include
- parental education about communication development and ways to support their child’s communication skills
- individual or group therapy targeting speech and language needs
- ongoing reviews and monitoring
- referral to CDS team services

**Hearing assessment**
A hearing test is used to rule out hearing loss as a reason for speech and language development issues. This is done through an audiological evaluation.

**Speech and language delay in ‘at risk’ populations**

**Aboriginal children**
Due to extreme socioeconomic disadvantage, Aboriginal children are at a higher risk of developmental problems. Middle ear disease is more common in Aboriginal children and can lead to conductive hearing loss, which can contribute to speech and language delays.
Problems can also exist in language acquisition later in childhood because of the different language spoken at home.

In WA, Aboriginal English children are under-represented in speech pathology clinics and language development units.

There are some existing intervention programs and resources that are specifically targeted at speech and language development in Aboriginal children, including:
- Yarning Together: Department of Health resources to encourage parents to read to their children
- Time for Talk: Department of Education resource for school aged children
- Do you hear what I hear?: Information examining the effects of Otitis Media on hearing and learning
- Growing children up: Culturally appropriate information on normal child development

**Culturally and linguistically diverse (CALD) children/families**

When working with CALD families, information should be derived from multiple sources to ensure that assessment procedures and processes are culturally appropriate and that appropriate language assessment parameters for non-English speaking children are used. Visual information (including photos and video) may be used to enhance the message and assist in decision making.

Learning to communicate in more than one language is considered positive for learning. A child develops their first language in the home which is attached to family relationships, so giving up this first language may have emotional and social costs for the child and is not recommended.

Parents are encouraged to parent in their primary language (typically the language they were parented in). If children develop strong skills in their family language, this can assist them to learn English.

Services should be offered in languages other than English when ever possible if they are required, through use of interpreter services.

**Referral options**

Evidence of a speech and/or language delay will likely require further investigation by a speech pathologist, and possibly by a multidisciplinary team. Speech Pathologists are specialists that have been trained to assess and treat people with communication problems. They are experts in all forms of communication including speech, language, language for literacy, signs, symbols and gestures.
For referrals to WA Health services there are two referral pathways:

**Developmental concerns: Child Developmental Service**
The Child Development Service (CDS) provides a range of assessment, early intervention and treatment services to children with or at risk of developmental disorders and delay. The CDS is an important referral point from universal and specialist health service providers. CDS currently has 11 teams that are located across the metropolitan area and include Armadale, Bentley, Clarkson, Fremantle, Joondalup, Koondoola, Lockridge, Midland, Peel, Rockingham/Kwinana and West Perth/State. Rural and remote children may access the service through State CDS. Referrals can be made by a CHN directly to the service using the standard CDS referral form.

**Structural/functional/medical concerns: PMH Speech Pathology**
The speech pathology services at PMH are specialist services directed primarily at children with associated medical (not developmental) conditions that may consequently impair their ability to speak or communicate. Conditions underlying the speech and/or language delay may include brain or spinal injury, spina bifida, epilepsy or a hearing impairment resulting in cochlear implant. Children with disabilities may be referred from the Early Intervention Clinic and other departments within PMH (neurology, oncology, tracheostomy). Referrals to the PMH speech pathology department require referral via a GP/paediatrician or from a department within PMH.

**Private speech pathologists**
In addition to these government service providers, private speech pathologists are available across Western Australia. A referral is not required for private services and parents can contact a private practitioner directly. Private services may have shorter waiting times, however access may be dependent on the family’s resources and level of health cover.

**Follow up**
CHN’s should be aware of the potential impact that speech and language difficulties have on long term outcomes. It is important that communication difficulties are monitored long term and followed up to ensure that children identified at risk or delayed are engaged with effective support services. The monitoring and follow up process is demonstrated through the clinical pathway.

Any developmental problems that may be associated with the communication delay should be managed as early as possible.


Princess Margaret Hospital. Speech Pathology Department. Perth, Department of Health, Child and Adolescent Health Service. 2009.

