

# Wānanga Resource Booklet

## Whakakotahitanga

### Neurodevelopmental Assessment and FASD Diagnosis Training

**Aotearoa New Zealand – 2026**

The Whakakotahitanga neurodevelopmental assessment and FASD diagnosis training supports clinicians to develop culturally safe, multidisciplinary capability in comprehensive neurodevelopmental assessment and FASD diagnosis.

Coordinated by Hāpai Te Hauora, the training is delivered by a team of tangata whenua and tangata tiriti clinicians with expertise in paediatrics, psychology, and speech-language therapy.

The programme supports the consistent implementation of the Whakakotahitanga FASD Diagnostic Guidelines for Aotearoa New Zealand, while strengthening whānau-centred and culturally grounded assessment practices.



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**Good  
Practice  
Statements**

# GOOD PRACTICE STATEMENTS

The following Good Practice Statements (GPS) have been designed to support the assessment process. They are adapted from the Australian Guidelines for Assessment and Diagnosis of Fetal Alcohol Spectrum Disorder or Neurodevelopmental Disorder Associated with Prenatal Alcohol Exposure (Australian Guideline Development Group, 2024). These have been applied to the Aotearoa (NZ) guidelines with input from stakeholders and clinicians and are aligned with the local context and available evidence.

## Holistic and whānau centred approach

**Approach:** Take a holistic, needs-based, and whānau-centred approach. This involves considering the strengths, challenges, functioning, environment, culture, and supports of the individual. The information should be gathered in a way that is comfortable for the individual and their whānau or support network.

**Understanding Complexities:** Consider the wide range of complex factors that individuals and families may be experiencing, and how these factors influence functioning, well-being, and participation.

**Collaborative Goal Setting:** Involve the individual and their whānau/support network in setting collaborative goals. This ensures the gathering of personalised information about their strengths, interests, resources, and future aspirations.

**Tailored Assessment Plan:** Create a plan tailored to the person's developmental needs, considering current concerns, developmental age, history, past assessments, medical and school records, and social or cultural factors. Ensure that hearing and vision tests are included if they have not been done before.

## Multiple timepoints and sources for assessment

**Ongoing Assessment:** Depending on the person's presentation, it might be best to plan assessments across different timepoints to monitor persistent challenges. Assessments can be conducted in

various settings, such as primary health care, schools, and private practitioners, not only in specialist services.

**Diverse Information Sources:** Gather information using multiple methods—naturalistic observation, function assessments, direct testing, and feedback from various observers (self-reports, parents, whānau, teachers, work colleagues, support workers, and professionals). This helps overcome limitations inherent in any single method.

## Prioritising neurodevelopmental domains

**Comprehensive vs. Targeted Assessment:** While comprehensive assessments are valuable for understanding developmental challenges, sometimes it may not be feasible or appropriate. Practitioners should prioritize the neurodevelopmental domains based on current functioning and the level of assessment needed to identify clinically significant impairments.

## Gestalt approach to interpretation

**Gestalt Perspective:** When interpreting assessment results, consider the overlap between neurodevelopmental domains and environmental factors. Use a gestalt approach—understanding the whole picture. This requires assessing the validity of measures for different populations and acknowledging the range of prenatal and postnatal factors influencing outcomes.

## Diagnostic possibilities

**Offering Diagnostic Explanations:** Practitioners should offer and explain relevant diagnostic possibilities. Summarize what is most likely after considering less likely or unlikely explanations based on the individual's presenting concerns and assessment findings.

# PRENATAL ALCOHOL EXPOSURE ASSESSMENT

These good practice statements guide clinicians in approaching PAE assessments with sensitivity, accuracy, and respect for the individuals and whānau involved.

## Building trust and sensitivity in conversations

- Asking about prenatal alcohol exposure (PAE) is sensitive and should occur within a respectful and trusting relationship.
- Discussions about alcohol use and its risks should be part of routine antenatal and postnatal care and handled with sensitivity and respect.

## Routine pregnancy history taking

- Alcohol use should be included in routine pregnancy history taking alongside other prenatal exposures such as medications, tobacco, illicit drugs, infections, diet, exercise, stress, and pregnancy complications.

## Pre- and post-pregnancy recognition of alcohol use

- Separate the assessment of alcohol use into two phases:
- Pre-pregnancy recognition: Alcohol use before the individual knew they were pregnant
- Pre-pregnancy recognition: Alcohol use after the individual found out they were pregnant

## Risk assessment and screening tools

- To support accurate assessment of PAE, it is important to evaluate alcohol use before and after pregnancy recognition. Standardised tools like the AUDIT-C can be used for this purpose.

## Defining a standard drink

- Some individuals may not understand what constitutes a standard drink (i.e., 10g of ethanol). The definition should be clearly explained before using the AUDIT-C tool.
- Providing a guide, such as the one in the

Ministry of Health guidelines, can help communicate what a standard drink is. Clinicians may also convert the individual's reported alcohol intake into standard drinks.

## Compassionate information collection

- Collect PAE information in a supportive, compassionate, and non-judgmental manner, acknowledging that many factors might have influenced alcohol use during pregnancy.
- Recognize that individuals may face ongoing challenges with alcohol or other complex issues and should be referred for appropriate support when necessary.

## Information sources for assessing PAE

- If possible and appropriate, contact the biological parents directly to assess PAE. If this is not possible, carefully review other reliable sources of information, such as medical or legal records.
- A history of alcohol use without evidence of consumption during the index pregnancy is insufficient to confirm PAE.

## Considerations for self-reports of PAE

- Self-reports of PAE can be influenced by various factors, such as the context in which the information was gathered (e.g., in child protection settings) and the timing of the report (e.g., during pregnancy or later in the child's life).
- Practitioners may want to contact biological parents to verify previously collected information.

## Handling inconsistencies in PAE information

- In cases where inconsistencies about PAE arise from different sources, prioritize information collected directly from the pregnant woman/person during an assessment.
- Document any inconsistencies and indicate that reassessment may be needed if new information becomes available.

# NEURODEVELOPMENTAL ASSESSMENT

These good practice statements aim to support clinicians in delivering thorough, flexible, and context-sensitive neurodevelopmental assessments.

## Comprehensive assessment approach

Conducting a comprehensive assessment across neurodevelopmental domains is valuable for identifying developmental and behavioural challenges. However, in certain cases, a full assessment may not be feasible or appropriate. In these instances, clinicians should determine the necessary scope of the assessment to evaluate whether clinically significant impairments are present and meet diagnostic criteria.

## Holistic interpretation of results

When interpreting results, a holistic approach is essential. Consider the overlap between neurodevelopmental domains and the complex interactions between the environment and neurodevelopmental processes. This includes understanding the validity of applied measures across different populations and considering prenatal, postnatal, and environmental factors.

## Integration of multiple methods

Convergence of information from various assessment methods is crucial to overcome the limitations of any single method. These methods may include naturalistic observation, functional assessments, direct testing, and gathering data from various informants (e.g., parents, whānau, teachers, work colleagues, or healthcare professionals).

## Concurrent and previous assessments

Assessing neurodevelopmental domains concurrently is advantageous. However, previous assessments may be used when current impairments are unlikely to have changed, or when behavioural challenges prevent re-assessment. Clinicians should exercise discretion in determining when prior results are sufficient.

## Reassessment considerations

Practitioners must be aware of the complexities involved in reassessing individuals, particularly practice effects, task familiarity, and testing habituation. Decisions to retest should be based on clinical reasoning and a thorough understanding of the individual's context, needs, and potential changes over time.

## Use of previous assessments results

Previous assessment results and diagnostic outcomes can inform clinical decision-making when evaluating whether significant impairments exist. Clinicians should consider all available information and the individual's full context, including other explanations for their presentation (e.g., whānau history or environmental factors like educational access).

## Shared-care approach

Assessment and diagnostic services may vary depending on available resources. Where single-service settings cannot meet an individual's needs, a shared-care approach, engaging with other services, is recommended to improve accessibility.

# MEDICAL ASSESSMENT

These good practice statements provide a framework for medical assessments that respect individual and whānau collaboration, account for variability in development, and use appropriate tools and standards.

## Comprehensive medical examination

A thorough medical examination and detailed history are essential parts of the assessment process. Practitioners should work collaboratively with individuals and their whānau to decide which aspects of the medical assessment are appropriate.

## Facial features assessment

**Lip-Philtrum Guide:** Use the University of Washington (UW) Lip-Philtrum Guide. Guide 1 is recommended for individuals with a less full lip/philtrum, and Guide 2 for those with a fuller lip/philtrum.

**Palpebral Fissure Norms:** Apply the Strömmland et al. (1999) palpebral fissure norms from birth to adulthood.

**Facial Measurements:** Utilize the University of Washington facial analysis software for palpebral fissure length measurement or, if unavailable, use a small clear plastic ruler for manual assessment.

## Documentation of dysmorphic features

Document additional facial and body dysmorphic features, including any history of major birth defects affecting the cardiac, renal, neurological, visual, auditory, or skeletal systems.

## Differential diagnosis and genetic testing

- Consider the possibility of other syndromes or genetic conditions that could be contributing to the individual's presentation. Refer the individual to a clinical geneticist if unsure about the differential diagnosis.
- With informed consent, practitioners may request chromosome microarray (CMA) and DNA testing for fragile X syndrome (FXS). Both

tests can be conducted using blood or buccal swabs in accordance with local health service guidelines. If concerns arise from these tests, refer the individual to a local genetic health service.

## Additional medical tests

Additional tests (e.g., thyroid functioning, vitamin B12, iron studies, imaging) can be ordered if clinically indicated to better understand the individual's current functioning.

## Physical size and growth standards

**Physical Size Variation:** Recognize that physical size can vary widely due to demographic, maternal, placental, and fetal factors. Assessments should involve both medical evaluation and consideration of individual risk factors. Avoid over-reliance on growth charts, as this could misinterpret normal variations or overlook children in need of support.

**Birth Records:** For full-term infants, assess birth weight, length, and head circumference using the WHO (2006) growth standards. Collect this information from birth records or the individual's personal health records (e.g., red, blue, or yellow books).

**Preterm Infants:** For preterm infants, adjust birth weight, length, and head circumference for gestational age until the child reaches 24 months.

**Height, Weight, and Head Circumference:** For individuals whose measurements fall outside of norms for height, weight, or head circumference, consider differential diagnoses and investigate as needed.

# FEEDBACK AND SUPPORT PLANNING

These good practice statements aim to guide practitioners in delivering effective and respectful feedback and support planning that is aligned with the needs and values of the individual and their whānau.

## Creating an individualised profile

Gather all information from the assessment to develop a holistic profile of the individual, summarizing key developmental factors. Ideally, practitioners from different disciplines should review and contribute to this profile.

## Consideration of influencing factors

Take into account all possible factors, including prenatal and postnatal influences, that may affect developmental outcomes. Offer and explain one or more diagnostic possibilities, weighing what is most likely against what is less likely, based on the individual's presenting concerns and assessment findings.

## Awareness of diagnostic overshadowing

Be mindful of diagnostic overshadowing, where mental health concerns might be wrongly attributed to the primary diagnosis rather than a concurrent condition. Provide diagnoses that help explain the individual's presentation, enabling access to targeted treatments and supports.

## Self-awareness in diagnostic decisions

Practitioners should reflect on how their own background, training, and unconscious biases might impact diagnostic decisions. For example, they may overemphasize trauma while underestimating the role of alcohol, or vice versa.

## Involve individuals and whānau

Actively involve the individual being assessed and their whānau in the diagnostic decision-making process. Individuals and their whānau should have the right to decide if a diagnosis is appropriate, given their personal, social, and cultural context and beliefs. Balancing the rights of a child with the rights of a parent or caregiver can be challenging but engaging all parties throughout the process can help overcome these challenges.

## Developmentally appropriate feedback

Provide feedback on the assessment and diagnosis in a manner that is appropriate for the individual's developmental level. This feedback can include whānau and key support people. The feedback should highlight strengths and areas of challenge, focusing on what the individual and whānau see as the most immediate areas requiring support.

## Acknowledging multiple explanations

Recognise that observed challenges may have multiple explanations and communicate this to the individual and whānau to facilitate effective support strategies.

## Involvement in support planning

Actively include individuals, whānau, and key support people in the support planning process. Practitioners should help them identify areas most important to them and determine what kind of support is needed. This should take into account the individual's personal, social, and cultural context, offering relevant strategies and connections to local or nationwide service providers.





# Psychometric Tools

# PSYCHOMETRIC TOOLS FOR FASD DIAGNOSIS

In the first instance please refer to Good Practice Statements on page 86-87 of Whakakotahitanga – FASD Diagnostic Guidelines for Aotearoa.

Specifically, when using psychometric tools:

- Understand the validity of measures applied to different groups of people, how different neurodevelopmental domains interact and fit together, and considering the wide range of factors that influence neurodevelopmental outcomes (e.g., other prenatal and postnatal exposures and events) to provide the best possible understanding of an individual's presentation
- The table below is not an exhaustive list of psychometric tests, and not every test is required for assessment. The assessment needs to show enough evidence for severe and pervasive impairment in at least 3 domains.
- Information from direct and indirect assessment must be triangulated with other tests, questionnaires, interviews and observation.
- Note, whilst it may not be necessary or appropriate to administer every test in each battery, the decision to include or exclude tests must be based on sound reasoning.
- Administration of a subtest may assess skills in several domains. It is important to understand which skills are causing difficulty and not attribute the same impairment to multiple domains.

Domain	Psychometric Tests
General Intellectual Abilities (Cognition)	<p>Wechsler Intelligence Scale for Children, Fifth Edition: Australian and New Zealand Standardised Edition (WISC-V) Age range 6:0-16:11</p> <p>Wechsler Adult Intelligence Scale - Fourth Edition: Australian and New Zealand Language Adapted Edition (WAIS-IV) Age range 16:0-90:11</p> <p>Woodcock Johnson IV (WJ-IV) Age range 2+</p> <p>Test of Nonverbal Intelligence   Fourth Edition (TONI-4) Age range 6:0-89:11</p> <p>Universal Nonverbal Intelligence Test (UNIT2) Ages 5:0-21:11</p> <p>Wechsler Nonverbal Scale of Ability (WNV) Ages 4:0-21:11</p> <p>Bayley Scales of Infant and Toddler Development, 4th Edition: Australian and New Zealand Standardised Edition (Bayley-4) Age range 16 days – 42 months (Cognitive Domain)</p> <p>Griffiths Scales of Child Development 3rd Edition (GRIFFITHS-III) Age range 1mth – 6 yrs</p>
Communication (Language Skills)	<p>The tests in bold require experience in assessing communication and or working alongside and formulating with Speech-Language Therapists</p> <p>Clinical Evaluation of Language Fundamentals Australian and New Zealand Fifth Edition (CELF-5) Age range 5:0-21:11</p> <p>Test of Problem Solving-3:Elementary (TOPS-3:E) Age range 6:0-11:11 years and Adolescent version 12:0-17:11</p> <p>Test of Narrative Language - 2nd Edition: TNL-2 5:0-15:11</p> <p>Social Language Development Test – Elementary (SLDT-E) 6:0-11:11 and Adolescent version 12:0-17:11</p> <p>Verbal Comprehension Index from the WISC-V or WAIS-IV.</p> <p>NEPSY   Second Edition (NEPSY-II) Age range 3-16 years – Language Domain</p> <p>Bayley Scales of Infant and Toddler Development, 4th Edition: Australian and New Zealand Standardised Edition (Bayley-4) Age range 16 days – 42 months (Language Domain)</p> <p>Communication domain of Vineland Adaptive Behavior Scales, Third Edition (Vineland-3) Age range Birth-90. Questionnaires and Structured Interview.</p> <p>Adaptive Behaviour Assessment System – 3rd Edition (ABAS-3) Age range Birth to 89 years.</p>

Motor Skills	<p>The tests in bold require experience in assessing motor skills and or working alongside and formulating with Occupational Therapists</p> <p>Movement Assessment Battery for Children, 2nd Edition (Movement ABC-2) Age range 3:0-16:11</p> <p>Peabody Developmental Motor Scales   Second Edition (PDMS-2) Age range 0-5:00</p> <p>Bruininks-Oseretsky Test of Motor Proficiency, Third Edition (BOT-3) 4:0-25:11</p> <p>Bruininks Motor Ability Test (BMAT) Age range 40+</p> <p>Bayley Scales of Infant and Toddler Development, 4th Edition: Australian and New Zealand Standardised Edition (Bayley-4) Age range 16 days – 42 months (Motor Domain)</p> <p>Beery Buktenica Developmental Test of Visual Motor Integration 6th Edition (Beery VMI) Age range 2- Adult</p> <p>Motor Domain of Vineland Adaptive Behavior Scales, Third Edition (Vineland-3) Age range Birth-9 years. Questionnaires and Structured Interview.</p> <p>NEPSY   Second Edition (NEPSY-II) Age range 3-16 years – Sensorimotor Domain</p>
Memory	<p>Children's Memory Scale (CMS) 5:0-16 years</p> <p>Wide Range Assessment of Memory and Learning   Third Edition (WRAML3) Age range 5:0-90:11</p> <p>NEPSY   Second Edition (NEPSY-II) Age range 3-16 years – Memory and Learning Domain</p> <p>California Verbal Learning Test   Third Edition (CVLT3) Age range 16:0-90:0</p> <p>Rey Complex Figure Test and Recognition Trial (RCFT) Age range 6-89 years</p>
Attention	<p>Test of Everyday Attention for Children, 2nd Edition (TEA-Ch2) Age range 5-15</p> <p>NEPSY   Second Edition (NEPSY-II) Age range 3-16 years – Executive Function and Attention Domain</p> <p>Conners 4th Edition (Conners 4) Age range Parent and Teacher: 6 to 18 years, Self-report: 8 to 18 years. Plus adult version</p> <p>Conners Adult ADHD Rating Scales. 2nd Edition (CAARS 2) Age range 18+ years (Self report and Observer)</p> <p>Integrated Visual and Auditory (IVA) Continuous Performance Test (CPT) 5-90+ years</p> <p>Conners Continuous Performance Test (Conners CPT) Age range 8+ years</p> <p>Conners Continuous Auditory Test of Attention (Conners CATA) Age range 8+ years</p> <p>Processing Speed Index of the WISC-V and WAIS-IV</p> <p>Attention domain of Child Behavior Checklist (CBCL) Completed by parents. Teacher Report Form (TRF) and Youth Self Report (YSR). Age range 1.5 – 5:11 years and 6-18 years.</p>
Executive Functioning	<p>NEPSY   Second Edition (NEPSY-II) Age range 3-16 years – Executive Function and Attention Domain and Visuospatial Processing</p> <p>Delis-Kaplan Executive Function System (D-KEFS) Age range 8-89 years</p> <p>Behavioural Assessment of the Dysexecutive Syndrome in Children (BADS-C) Age range 8-16 yrs</p> <p>Working Memory Index of the WISC-V and WAIS-IV</p> <p>Fluid Reasoning Index of the WISC-V and Perceptual Reasoning Index of the WAIS</p> <p>Rey Complex Figure Test and Recognition Trial (RCFT) Age range 6-89 years</p> <p>Test of Problem Solving-3:Elementary (TOPS-3:E) Age range 6:0-11:11 years and Adolescent version 12:0-17:11</p> <p>Behavior Rating Inventory of Executive Function, Second Edition (BRIEF-2) Age range Parent and teacher forms 5-18 years, Self-report 11-18 years.</p>

Emotional and/or behavioural regulation	<p>Child Behavior Checklist (CBCL) Completed by parents. Teacher Report Form (TRF) and Youth Self Report (YSR). Age range 1.5 – 5:11 years and 6-18 years.</p> <p>Behaviour Assessment System for Children, Third Edition (BASC-3) Age range 2:0-21:11. Child and adolescent versions Parent and Teacher report 2-21 and Self-report of personality 8-21 years.</p> <p>Maladaptive Behavior Domain of Vineland Adaptive Behavior Scales, Third Edition (Vineland-3) Age range Birth-90. Questionnaires and Structured Interview.</p> <p>Conners 4th Edition (Conners 4) Age range Parent and Teacher: 6 to 18 years, Self-report: 8 to 18 years. Plus adult version</p> <p>Conners Adult ADHD Rating Scales. 2nd Edition (CAARS 2) Age range 18+ years (Self report and Observer)</p>
Literacy and/or Numeracy	<p>Wide Range Achievement Test   Fifth Edition (WRAT5) Age range 5-85+</p> <p>Wechsler Individual Achievement Test   Fourth Edition (WIAT-4) Age range 4:0-50:11</p>
Adaptive / social functioning	<p>Vineland Adaptive Behavior Scales, Third Edition (Vineland-3) Age range Birth-90.</p> <p>Questionnaires and Structured Interview.</p> <p>Adaptive Behaviour Assessment System – 3rd Edition (ABAS-3) Age range Birth to 89 years.</p> <p>Test of Problem Solving-3:Elementary (TOPS-3:E) Age range 6:0-11:11 years and Adolescent version 12:0-17:11</p> <p>NEPSY   Second Edition (NEPSY-II) Age range 3-16 years – Social Perception Domain</p> <p>Bayley Scales of Infant and Toddler Development, 4th Edition: Australian and New Zealand.</p> <p>Standardised Edition (Bayley-4) Age range 16 days – 42 months (Adaptive Behaviour Domain)</p>





# Referral Considerations

# Referral Considerations

The aim of the assessment and diagnosis process is to understand a person's FASD status, their needs and how to promote wellbeing. This may include health and development needs identified by the whānau, increasing understanding of behaviour and establishing strategies to support development.

The assessment must address the needs of the individual and whānau within their everyday context and environment. Before an FASD assessment begins, it is important for the professionals involved and the individual and whānau to be clear about the purpose of an assessment and diagnosis.

This will inform how, when and with whom the assessment will occur for example at home, at school, in the clinic, or in justice settings. **The assessment context influences how an individual may present,** and this must be included in interpretation of any assessment results.

Care must be taken to ensure that the individual and whānau understand what an FASD diagnosis will mean to that person and where to access further support.

The following questions serve as prompts to encourage thoughtful provision of service which acts in the best interests of the individual and whānau:

- **Why is an FASD diagnosis required now? Is it the right time for this person? What else is going on for them?**
- **How does this assessment fit with other assessments that are being conducted?**
- **How will the individual consent for this assessment?**
- **Who will be supporting and in the room with the individual being assessed?**
- **Who is funding the assessment and for what reason?**
- **Where will the assessment be conducted? Is this the right place for this person? Do they have to travel, is it a new location, how many times?**
- **What assessment tools are appropriate? Are they appropriate for this persons' age, level of communication?**
- **What role will each professional have in the assessment and how the report will be finalised?**
- **How will information be collated and shared with the individual and whānau?**
- **Do I have the skills needed to work safely with this whānau? If not, what do I do next?**

These questions require practitioners to engage in reflective practice and use both clinical and cultural supervision to navigating these types of challenges. All of the potential impacts on the person such as environment, clinician, language, culture and test norming should be accounted for when considering validity of results.

Furthermore, many of these decisions can be made with the whānau for example where is the best place for assessments to take place.





# Standard Drinks

## Standard drinks – know how much alcohol you’re really drinking

The standard drinks measure is a simple way to work out how much alcohol you are drinking. All bottles of wine, beer and spirits, and all cans or casks now have standard drinks content on the label – so you can easily tell how many standard drinks there are in what you’re drinking.

### What are standard drinks?



**ONE STANDARD DRINK EQUALS 10 GRAMS OF PURE ALCOHOL**

Standard drinks measures the amount of pure alcohol you are drinking.

**It’s not the amount of liquid you’re drinking that’s important – it’s the amount of alcohol.**

### APPROX. 10G PURE ALCOHOL



Each of these is one standard drink containing approximately 10 grams of alcohol, depending on the alcohol percentage.

A standard drink is a measure of the amount of alcohol, not the amount of liquid you’re drinking – because it’s the alcohol content that’s most important to track.

Because drinks have different amounts of alcohol in them, the number of standard drinks in each bottle, can or cask will be different.

**The straight up guide to standard drinks**

KNOW HOW MUCH ALCOHOL YOU’RE REALLY DRINKING


Health New Zealand  
Te Whatu Ora

**Table 1.**

Definitions of PAE levels per week used in the evidence review.

*Note. these definitions are not intended as rigid cut offs in practice but rather provided as information to inform clinical decision making.*

PAE level	Total number of standard drinks per week	Grams (g) of ethanol (pure alcohol) per week
Light	Up to 2 drinks	1 – 20 g
Moderate	>2 and up to 10 drinks	21 – 100 g
Heavy	>10 and up to 20 drinks	101 – 200 g
Very Heavy	>20 drinks	>200 g
Any	Exposure dichotomised as ‘yes’ or ‘no’	
Confirmed/unquantifiable	Exposure confirmed but enough detail available to quantify the specific level, but generally reported as heavy or very heavy PAE.	



**Table 3.**  
**Overview of**  
**neurodevelopmental**  
**domain definitions and**  
**specific assessment**  
**considerations**

# TABLE 3 RESOURCE

See pages 78–85 of the Guidelines for more detail.

## GENERAL INTELLECTUAL ABILITIES (COGNITION)

### Definition:

Clinicians should apply accepted models of intelligence, which often include abstraction, problem-solving, and acquiring new skills. Clinicians are advised to consider the implications of their selected model and stay updated on this area.

### Considerations:

- Impairment may be identified through deficits in the general factor of intelligence ('g') or subdomains like Verbal Comprehension, Visual Spatial Index, Fluid Reasoning, Working Memory, and Processing Speed (Wechsler) or constructs in the Cattell-Horn-Carroll Model.
- Working memory may fall under this domain or the attention/executive functioning domains.
- Consider the person's overall functioning when planning assessments.
- Nonverbal assessments may be used if appropriate.
- Consider language impairments during verbal tasks.
- Discrepancy analysis in test scores should not be used alone to demonstrate impairment.

## COMMUNICATION (LANGUAGE SKILLS)

### Definition:

Communication involves the exchange of ideas, emotions, and other information, which can vary based on context, partner, and setting. Language skills refer to words, syntax, and pragmatics in both oral and written forms.

### Considerations:

- Criteria should be met if the individual's language is disordered, but "disordered" terminology should be used with cultural sensitivity.
- Dynamic assessments should be used for accuracy, especially considering hearing or language exposure issues.
- Tests should assess heterogeneous language skills: phonology, syntax, word-finding, semantics, pragmatic language, discourse, and verbal learning/memory.
- Functional language skills should be included in the evaluation.
- Language disorders should be reported if identified, associated with FASD where appropriate.

*Refer to Appendix B: Communication Assessment Considerations for more information*

## MOTOR SKILLS

### Definition:

Motor skills include fine motor, gross motor, graphomotor (handwriting), and visual motor integration abilities.

### Considerations:

- Multiple aspects of motor skills should be assessed to understand strengths and challenges.
- Gross motor skills may need a comprehensive assessment.
- Visual-motor integration impairments should be verified as motor-related, not due to visual-spatial deficits.
- Graphomotor tasks require learned skills and appropriate interventions before assessment.
- Assess the impact of vestibular, musculoskeletal, or peripheral nervous systems.

## MEMORY

### Definition:

Memory includes encoding, storing, and retrieving information, which may be divided into declarative (explicit) and procedural memory. Explicit memory is further divided by modality (verbal, visual) and type (episodic, semantic).

### Considerations:

- Assess basic attentional processes (e.g., visual scanning, immediate attention span) and consider their potential impact on other domains (e.g., executive functioning, communication, memory).
- Ensure hearing and vision fall within the typical range before assigning attention impairments.
- Be aware of prescribed medications and the testing environment.
- Consider memory abilities across multiple settings e.g. home, school, work, community.

# TABLE 3 RESOURCE

See pages 78–85 of the Guidelines for more detail.

## ATTENTION

### Definition:

A commonly used framework considers attention with the following components:

- Selective (i.e., focusing on a particular stimulus);
- Sustained attention (i.e., attending for longer periods of time with resistance to distractions);
- Distractibility (i.e., susceptibility to distractions).

### Considerations:

- Attention refers to both auditory and visual modalities.
- More basic attentional processes (i.e. visual scanning, immediate attention span) could be considered as part of the attention domain while more complex attention processes (e.g., inhibition, dividing, shifting/switching) could be considered as contributing to other domains (executive functioning, communication, memory, literacy/numeracy).
- Always check vision and hearing before assessing attention.
- Consider the impact of prescribed medications, engagement/rapport and assessment environment.

## EXECUTIVE FUNCTIONING (EF)

### Definition:

Executive functions are higher-order cognitive functions (e.g., initiation, inhibition, flexibility, problem-solving, planning and emotion regulation). Some models differentiate between “hot” (reward/emotion-driven) and “cold” (cognitive) EFs.

### Considerations:

- Consider EF across multiple settings and use observations, interviews and questionnaires to triangulate assessment results.
- Consider how insight may be affected by EF challenges when using self-report information.
- Depending on assessment results, emotion driven (reward, arousal, affective based) EFs may be considered under the behavioural regulation domain.
- Be aware of the impact of prescribed medications and the testing environment.

## EMOTIONAL OR BEHAVIOURAL REGULATION

### Definition:

Emotional and behavioural regulation may involve difficulties with mood (e.g., depression, anxiety), emotional regulation (e.g., irritability, mood lability), and behavioural control (e.g., rule-breaking, aggression).

### Considerations:

- Behaviours should be disproportionate and inappropriate for developmental age and persist across contexts.
- Historical factors such as family history or postnatal exposures should be considered.
- Access to evidence-based treatments and responses should be evaluated.
- Criminal justice involvement should not be used as sole evidence of impairment.
- Only consider these impairments for diagnosis when evidence shows they result from PAE or secondary effects of PAE disabilities.
- Consider the impact of factors such as trauma, family history and the postnatal environment.

## LITERACY & NUMERACY

### Definition:

Literacy includes reading, writing, and spelling, while numeracy relates to mathematical skills.

### Considerations:

- Ensure the individual has had appropriate educational access and interventions before diagnosing impairments.
- Consider their educational background (e.g., remote location, multilingual setting) and opportunities.
- Impairments in literacy/numeracy may result from combined impacts of impairments in other neurodevelopmental domains (e.g., attention, memory).

# TABLE 3 RESOURCE

See pages 78–85 of the Guidelines for more detail.

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## ADAPTIVE/SOCIAL FUNCTIONING

### Definition:

Adaptive/social functioning refers to the collection of skills people use to meet cultural and societal expectations, including daily living skills, interpersonal skills, and social problem-solving

### Considerations:

- Consider informal and formal supports the individual may receive and their impact.
- Evaluate the influence of different developmental stages and settings.
- Conduct direct functional assessments of adaptive/social skills along with informant rating scales.
- Consider the impacts of language skills on social interactions and problem-solving abilities.





# Ngā Rauru ā Māui

## Whakapapa: Inherited characteristics/ genetics/ talents/ thinking and learning skills

- Who does your tamaiti remind you of? (Dad/ Mum's side, other whānau?)
- In what way? (Describe their character traits)
- What are they mean at? (What are they amazing at)
- What are their strengths/ interests at home, in the community, at school, or with mahi? (hobbies/ picking up new skills/ sports/ social skills)?
- What are your tamaiti's thinking and learning abilities at school/ work (subject/ task specific)
- What is their memory like?
- How about their ability to pay attention/ process information quickly?
- How do they communicate with others (receptive and expressive language skills)?
- What is their level of independence at home, in the community, at school, or with mahi (self-care)?
- How do they do at home with tasks? Can they finish projects/ chores by themselves?
- Do they need prompts and reminders, or a step-by-step approach?
- Is there any whānau history of medical/ learning/ mental health/ sensory sensitivities or challenges with managing emotions (in the wider whānau?)
- Consider epigenetics

## Hononga: Relationships/ how others see them/ how they engage with the world

- Ngākau/ heart: Who are they most connected to? (May not see them often/ may have passed/ could be a friend, a mentor or even a pet)
- Who are the people in their world? (Whānau genogram/ sports coaches/ teachers/ trainers/ employers/ support staff)
- Underline strong relationships/ past & present (What made it positive?)
- Relationships that are challenging/ strained/ need support (Always looking for relationships to foster/ better manage)
- What do close whānau say? What do wider whānau say about them?
- What do Kaiako/ Employers say?
- How do others see them? Are they like others their age?
- How do they present themselves to the world? (confident/ leader or a follower/ do they try new things/ how is their self-esteem)
- When people meet them, what is the impression they are left with? e.g., If I met them briefly and they walk away, how would I describe them? 'An old soul', 'Cheeky', 'Funny' etc.
- How do they perceive themselves. What do they say? How do they describe themselves?
- Do they see themselves differently in various settings?
- Are they confident? Do they try new things?
- How are they in group settings?
- Do they engage differently with strangers versus people they are comfortable with?
- When do they lead or follow?
- When thinking about your tamaiti at home, in education/work settings, and in the community; what do they struggle with?
- Any barriers to attendance/ engagement/ learning/ success?
- What is your tamaiti 'at risk' of? e.g., running across the road/impulsiveness/social isolation/ depression/substance use (will be different things based on their age/ developmental stage)
- How do they process their emotions. What triggers them? How long are they upset?
- What calms them down? (What they do themselves/ What others can do?)
- What is the impact on others, on their relationships, how does this affect them?

# Ngā Wheako Ora:: Lived Experiences

## Developmental experiences

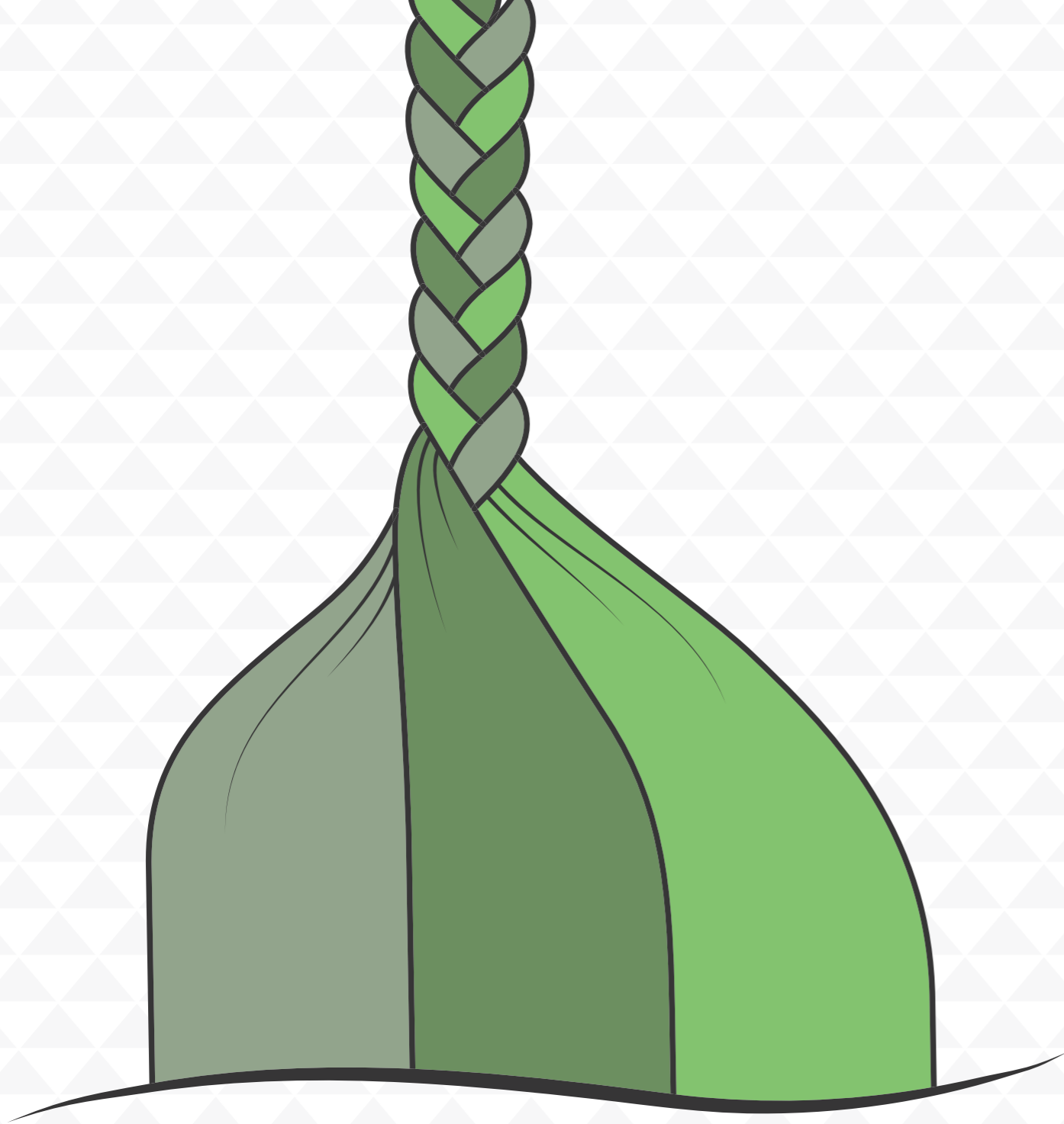
- Family relationships before, during and after birth
- Prenatal exposure to substances
- Feeding/ sleep patterns/ developmental milestones
- Developmental & medical history (hospital stays/ head injuries)
- Trauma (grief, accidents, verbal/ emotional/ physical/ sexual abuse)
- Living situation/ Parenting style (when a child/ as an adult)
- Travels/ moves/ transitions
- Positive cultural/ social experiences

## Social/ whānau identity

*(the building of cultural/ social concepts collectively or individually)*

- What activities do you enjoy together as a family? (hunting/ games etc.)
- Whānau, hapū, iwi connections (any Pou within the whānau)
- Identity and lived social experiences, culture, religion, activities etc.
- What is their social identity? (sportsperson/ helper/ online gamer etc.)
- What are their strengths outside of classroom settings (chess/ fishing)
- What has been their experience of school and learning? (as well as whānau experiences)





# **Ngā Rauru ā Māui**

Whakapapa ♦ Hononga ♦ Ngā Wheako Ora

**Ngā Rauru ā Māui**  
Hononga



**Ngā Rauru ā Māui**  
Ngā Wheako Ora





**HĀPAI TE HAUORA**  
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