



Diagnosing Fetal Alcohol Spectrum Disorder (FASD)

Diagnosis, misdiagnosis and many diagnoses associated with FASD

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Diagnosis and Assessment of FASD

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Acknowledgement of country

The University of Western Australia acknowledges that its campus is situated on Noongar land, and that Noongar people remain the spiritual and cultural custodians of their land, and continue to practise their values, languages, beliefs and knowledge.



Artist: Dr Richard Barry Walley OAM

Session overview

1. Introducing FASD
2. Prevalence of FASD
3. Importance of diagnosis
4. FASD in Australian cultural context
5. Assessing PAE
6. Facial Features
7. Neurodevelopmental domains
8. Special considerations
9. Common comorbidities
10. Final thoughts
11. Further training
12. Additional resources

Introduction to FASD

What is FASD?

What is FASD?

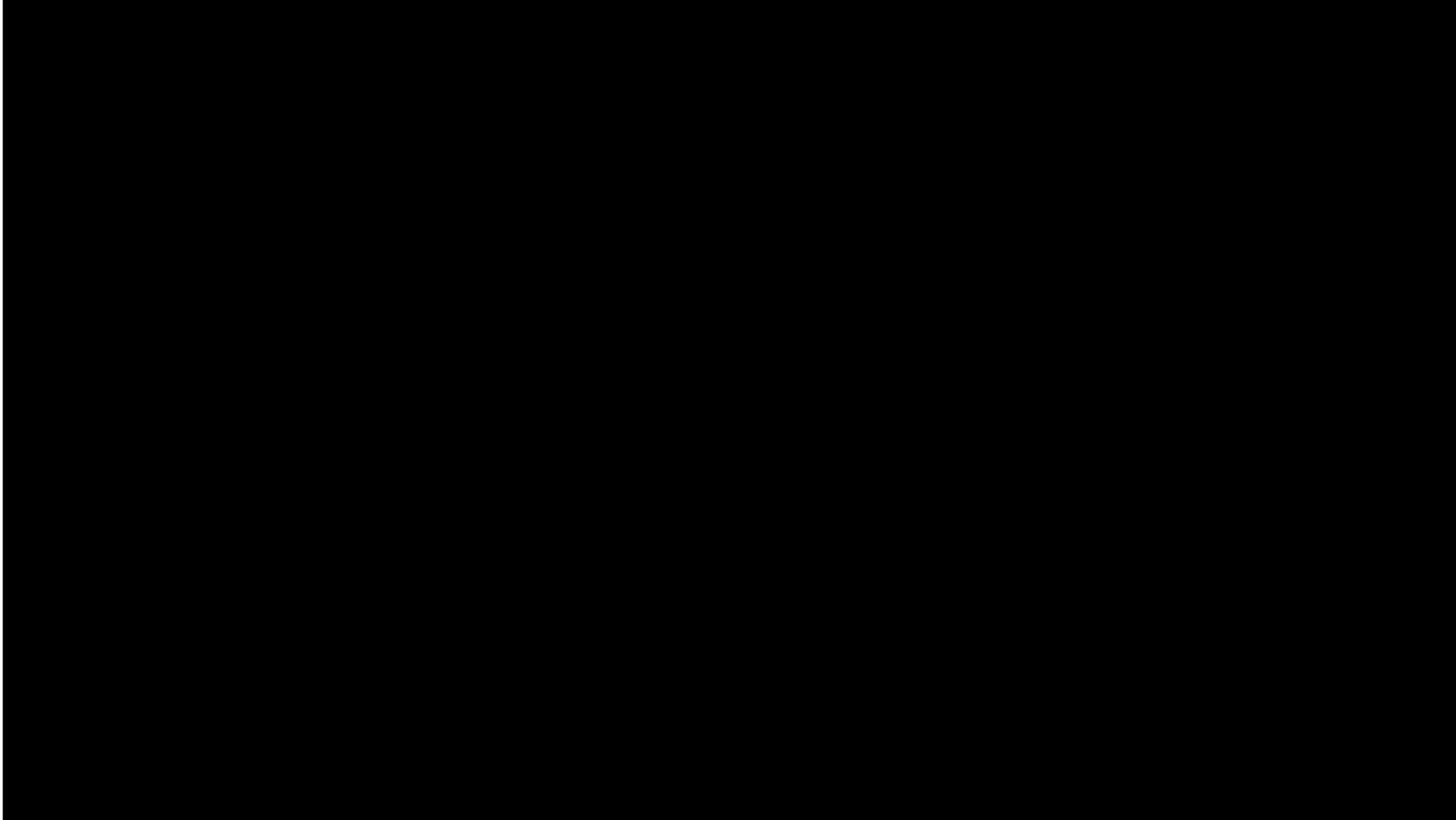
Fetal Alcohol Spectrum Disorder (FASD) is a **diagnostic term** that encompasses a spectrum of disorders of neurodevelopment and behaviour, caused by alcohol exposure in utero



FASD with 3 sentinel facial features

FASD with < 3 sentinel facial features

Is there a safe amount of alcohol to drink during pregnancy?



Alcohol in pregnancy - What is a safe amount to drink?

<https://www.youtube.com/watch?v=CldBi6ZZMB8>

(Telethon Kids Institute, 2016, 7 Dec)

Alcohol in utero

Alcohol is a **teratogen** (i.e. poisonous to the developing brain), which can lead to congenital defects (West and Goodlett 1990, Jacobson, Jacobson et al. 1993, Goodlett, Horn et al. 2005)

Ethanol (alcohol) is a small molecule that can **cross the placental barrier** easily, and at *any* point during pregnancy (Miller, 1996, 2006; Mooney & Miller, 2001)

Currently ***no known safe amount*** of alcohol to drink during pregnancy (Feldman et al., 2012)

Australian guidelines to reduce health risks from drinking alcohol advise **no alcohol during pregnancy** (National Health and Medical Research Council 2009)

Australian diagnostic criteria and categories for FASD (Bower & Elliott, 2016)



FASD with 3 sentinel facial features

FASD with less than 3 sentinel facial features

Prenatal Alcohol Exposure

Confirmed or Unknown

Confirmed

Neurodevelopmental domains (see 1-10 below)

3 or more severely impaired* neurodevelopmental domains

Facial features (see 1-3 below)

3 facial features

0, 1 or 2 facial features

1. Short Palpebral Fissure Length
2. Smooth Philtrum
3. Thin Upper Lip

1. Brain Structure & Neurology
2. Motor skills
3. Cognition
4. Language
5. Academic Achievement
6. Memory
7. Attention
8. Executive Function, Impulse Control & Hyperactivity
9. Affect Regulation
10. Adaptive Behaviour, Social Skills or Social Communication

* Severe impairment is defined as 2.5 standard deviations below the mean, or less than the 3rd percentile

‘At risk of FASD’ (Bower and Elliott 2016, on behalf of the Steering Group)

You may consider an individual to be ‘at risk’ of developing FASD if:

- Neurodevelopmental assessment is *incomplete* or *inconclusive*
- Impairment in less than three neurodevelopmental domains is found, despite confirmation of prenatal alcohol exposure
- Domain impairment is not severe enough to meet criteria, though lower than average scores are found on 3 or more domains
- Age-appropriate assessments are not available, hampering ability to complete a comprehensive assessment (eg. infants and children under 6)

Prevalence of FASD

National and international

FASD: Prevalence

- Prevalence of FASD in the general community 2-5% (May et al, 2015; May et al., 2018)
- No current estimates of FASD in Australia
 - Full FAS (i.e. FASD with 3 facial features) affects between 0.01 and 0.68 per 1000 live births (Burns, Breen, Bower, O' Leary, & Elliott, 2013)
- Much higher prevalence in 'at risk' populations
 - Significantly, it is estimated that 25-44% of juveniles in detention have a diagnosis on the FASD spectrum (Ospina & Denett, 2013; Bower et al 2019)
 - Prevalence of 120 per 1000 of FAS or pFAS in remote community in WA (Fitzpatrick et al., 2015)

FASD is *not* an Aboriginal problem

It is commonly assumed that FASD is an Aboriginal problem

- Although prevalence tends to be higher in Aboriginal and Torres Strait Islander people, this is thought to be due to the socioeconomic disadvantage and cultural displacement experienced by this group

FASD affects all socioeconomic status groups

- Reports suggest that the highest SES groups were most likely to consume alcohol while pregnant, though lower SES groups tend to drink at riskier levels (Australian Institute of Family Studies, 2011)

“I think the problem is too much alcohol, real alcoholics. That can cause brain injuries. We learnt about Foetal Alcohol Syndrome as part of midwifery training. **But I think it is an issue in Aboriginal women**” (midwife #3)
(Crawford-Williams, Steen, Esterman, Fielder, & Mikocka-Walus, 2015)



Aboriginal people are at higher risk of FASD

- In WA, 0.02/1000 live births for non-Aboriginal children, and 2.76/1000 live births for Aboriginal children (Bower, Silva, Henderson, Ryan, & Rudy, 2000)
- In NT, 0.68/1,000 live births and 1.87-4.7/1,000 live births for Aboriginal children (Harris & Bucens, 2003)



Primarily due to sociocultural disadvantage

- May live in rural or remote communities (reduced access to health care, education, other supports)
- Targets of racism (Larson, Gillies, Howard & Coffin, 2007) so may be reluctant to access supports
- Lower SES associated with poorer diet, education, increased risk of exposure to environmental pollutants

Why diagnose FASD?

Understanding the complexity of a FASD diagnosis

Why bother with diagnosis?

**Reduce the impact of
cognitive &
educational difficulties**

**Reduces recidivism &
the impact on the
Justice system**

**Reduces the impact of
co-morbidities as they
mature.**

**Paradigm shift in
attitudes of justice staff,
family, school &
community**

**Open doors for
development of
appropriate services**

**New strategies &
interventions in the
institution & in the
community upon
release**

**Facilitates Peer
counsellors, mentors,
adapted training
programs
(employment, life skills,
education etc.)**

**Help young people to
make sense of
themselves**

Problems with not diagnosing

Lack of access to supports and services

Exacerbation of secondary issues e.g. mental illness

Blaming self for difficulties

Lack of understanding from parents and teachers, children seen as “naughty”

Parents may blame themselves and think they are “bad” parents

Risk of substance abuse

Risk of incarceration

Lack of understanding by justice system, unfair treatment by prison staff

Perspectives from an adult recently diagnosed with FASD



2019, prior to official diagnosis:

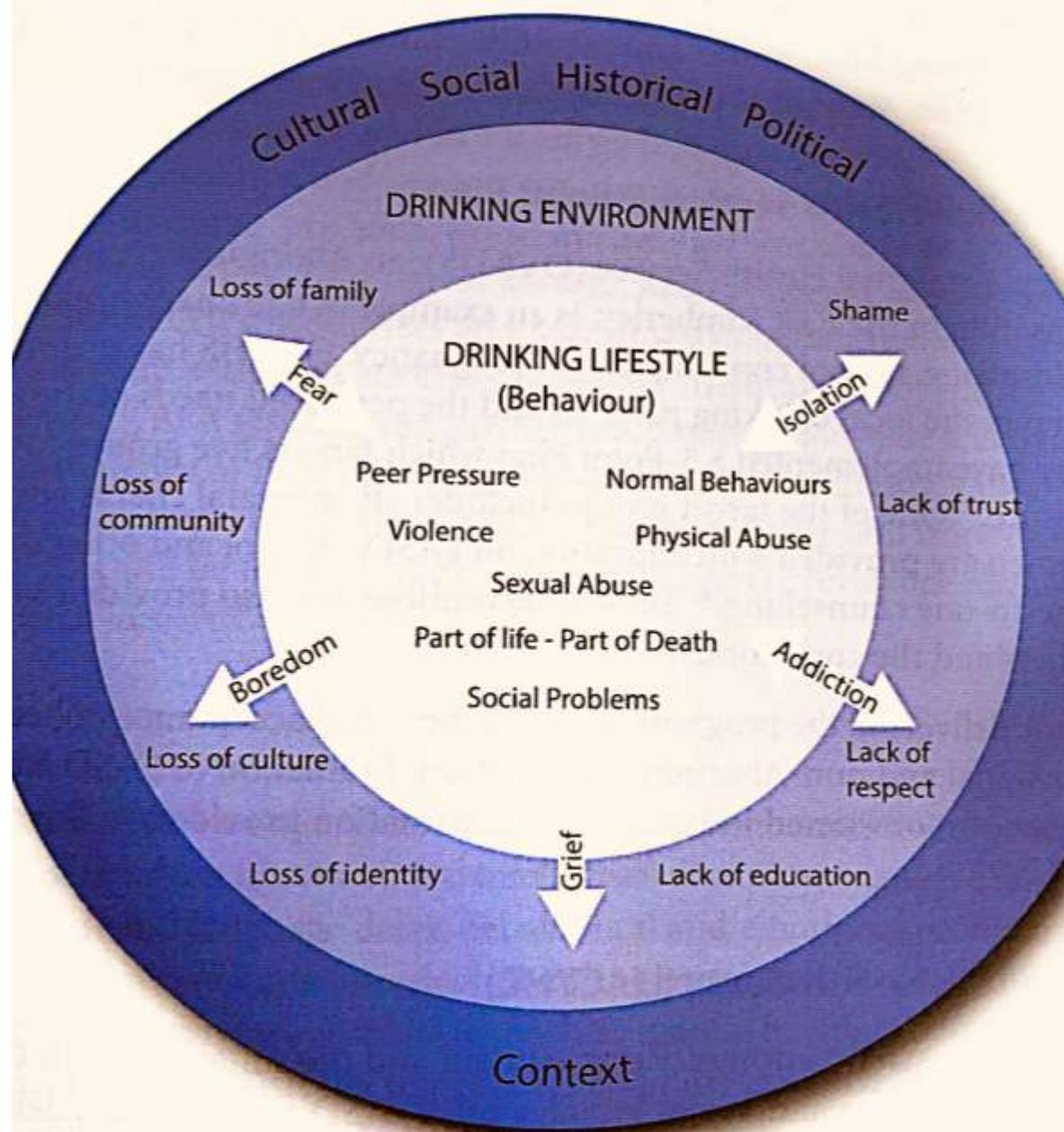
- *What is important for health professionals to know?*

2020, 1-year post-diagnosis:

*“There are many reasons for the deterioration of someone’s mental health, but I can’t be more clear in saying that **my depression and anxiety** was a symptom of trying to survive in the world with a **hidden disability** that no one could see or understand. Understanding **my unique functioning** and being **supported by health care professionals that also understand** has completely changed my life; I have confidence now that issues can be **circumvented with support**, and the willingness of my practitioners to **help me realise my goals** in this constructive way has allowed a lot of healing and life-affirming outcomes.”*

FASD in context of Aboriginal and Torres Strait Islander people

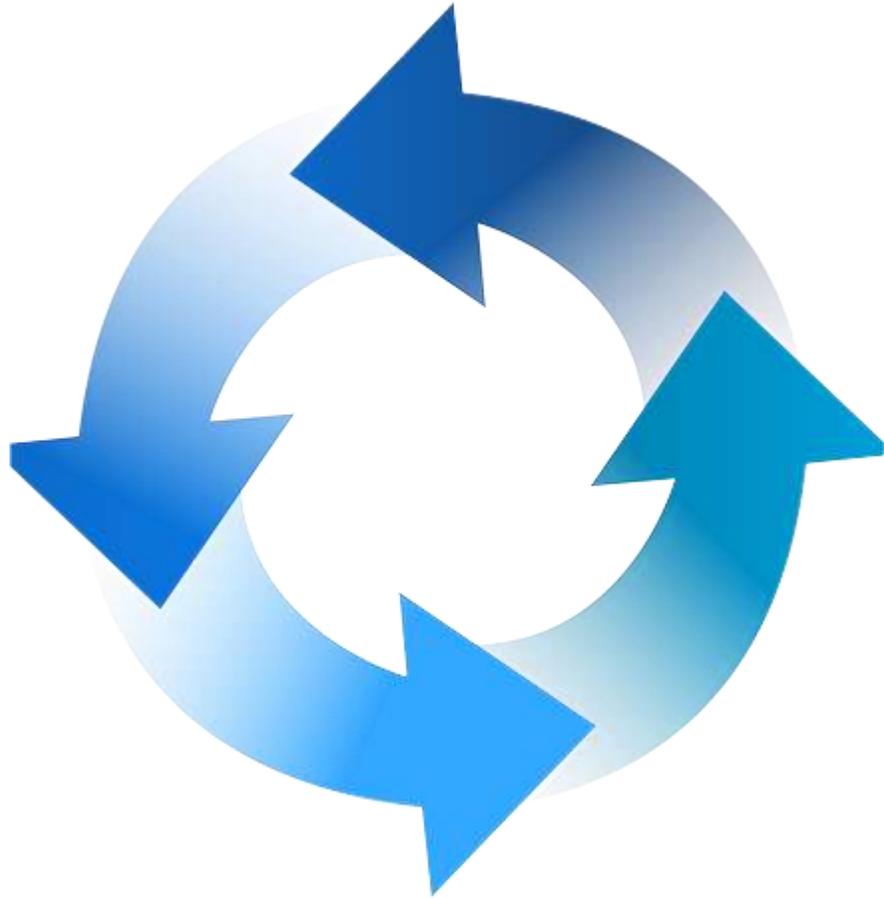
Overview



The reasons for drinking at harmful levels are complex

Figure 20.1 'Drinking influences' adapted from Hayes, L., D'Antoine, H., & Carter, M. (2014). Addressing Fetal Alcohol Spectrum Disorder in Aboriginal Communities. In P. Dudgeon, H. Milroy, & R. Walker (Eds.), *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice* (Vol. 2). Barton, ACT: Commonwealth of Australia.

Lifecycle of alcohol use



- Hayes (2014) – describes Erikson's Psychosocial Stages in the context of an Aboriginal Australian child in a drinking environment
 - Shapes the way thoughts and feelings are expressed
 - Being surrounded by alcohol throughout life (particularly early-life) can lead to the cycle of addiction continuing
 - More likely to drink during pregnancy



“Understanding issues such as FASD in Aboriginal communities can only result from listening to the Aboriginal perception of health and illness” (p. 367, Hayes, 2014)

Cultural perspectives on FASD screening & diagnosis (Hamilton et al., 2021)

- Hamilton et al. (2020a, 2020b) – qualitative research with Aboriginal Youth and Carers who had undergone FASD diagnostic assessments
- **Understanding of diagnosis**
 - Viewed the FASD diagnosis in the context of family and communities
 - Management of diagnosis occurring within the community, rather than institutions
 - Difficult to interpret diagnostic report
 - Need for culturally safe resources
- **Shame**
 - Intergenerational shame
- **Stigma**
 - Not wanting to know about FASD diagnosis

Assessing for PAE

Considerations

AUDIT-C (Appendix A1, pg. 3, Bower et al., 2016)

AUDIT-C questions

Source of reported information on alcohol use: Birth mother Other (please specify)

1. How often did the birth mother have a drink containing alcohol during this pregnancy?

Unknown	Never [skip Q2+Q3]	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week	1. Frequency
<input type="checkbox"/>	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	

2. How many standard drinks did the birth mother have on a typical day when she was drinking during this pregnancy?

Unknown	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	2. Quantity
<input type="checkbox"/>	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	

3. How often did the birth mother have 5 or more standard drinks on one occasion during this pregnancy?

Unknown	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	3. Risky-drinking
<input type="checkbox"/>	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	

AUDIT-C score this pregnancy: (Q1+Q2+Q3)= _____ Scores= 0=no exposure 1-4= confirmed exposure 5+= confirmed high-risk exposure

No
PAE

Sensitivity around assessing PAE

The stigma around drinking during pregnancy makes it extremely difficult for mothers who have consumed alcohol while pregnant (and sometimes their loved ones) to disclose drinking

- respect that their honesty takes courage

In some cases, mothers may fear making a disclosure for worry of legal repercussions (e.g. losing custody)

- should emphasise that we ask to support an accurate diagnosis, not to blame or shame parents

Tips for assessing alcohol consumption

Remember that women may drink because:

- They do not know they're pregnant (and may have changed drinking habits once pregnancy confirmed)
- They do not know the risk drinking poses to their child
- They may be in the midst of other life difficulties, including struggles with mental and/or physical health
 - Eg. addiction and trauma
- Partners and friends may drink around them or encourage them to drink (e.g. on holidays)

Be non-judgemental

As clinicians, we may be reluctant to ask – but we should ask all our clients

Being culturally safe when asking about alcohol use

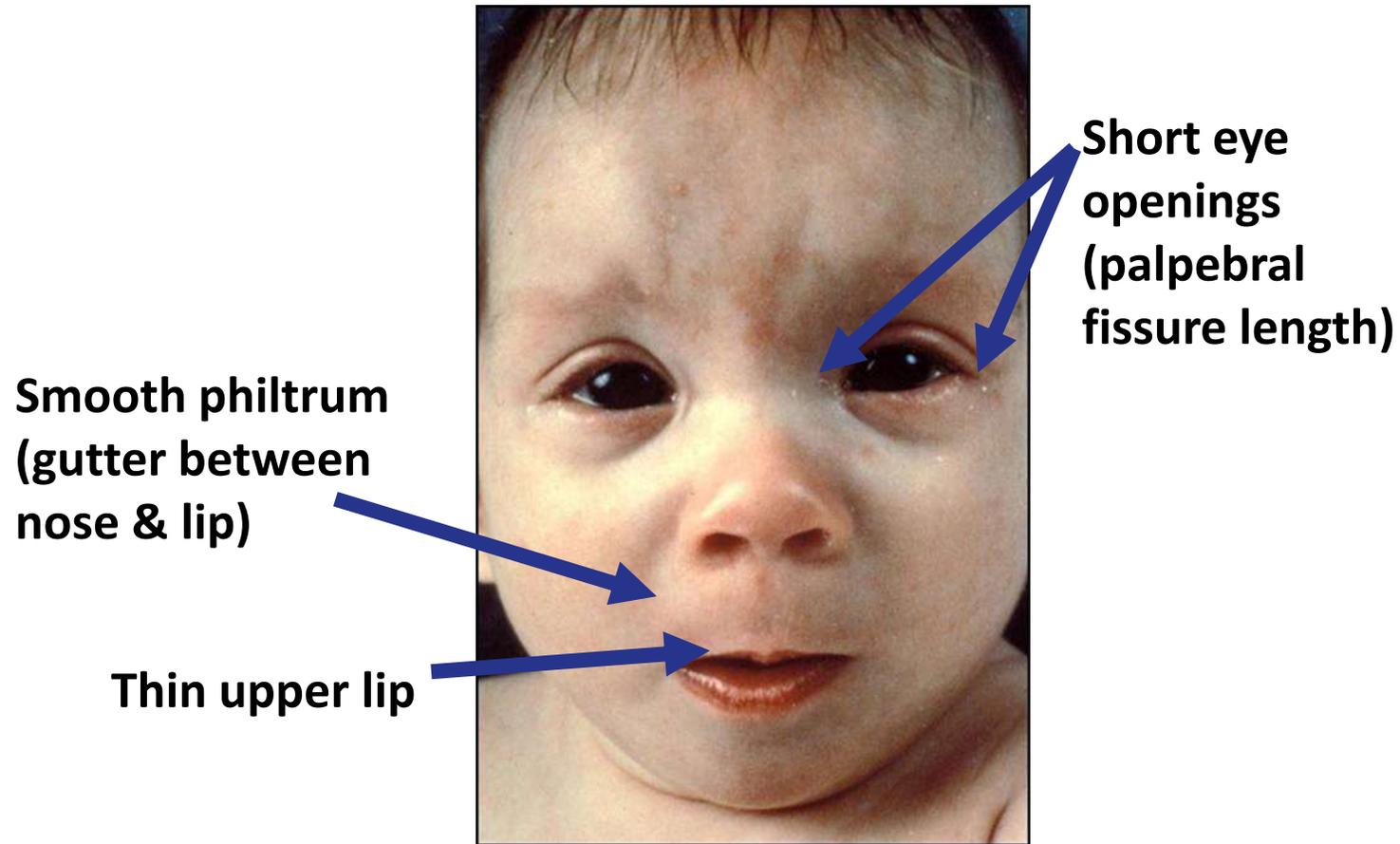


Stay Strong & Healthy FASD – Professional
<https://www.youtube.com/watch?v=oPR9-PhQB9k>
NSW Health, 2016

Facial features

Brief introduction

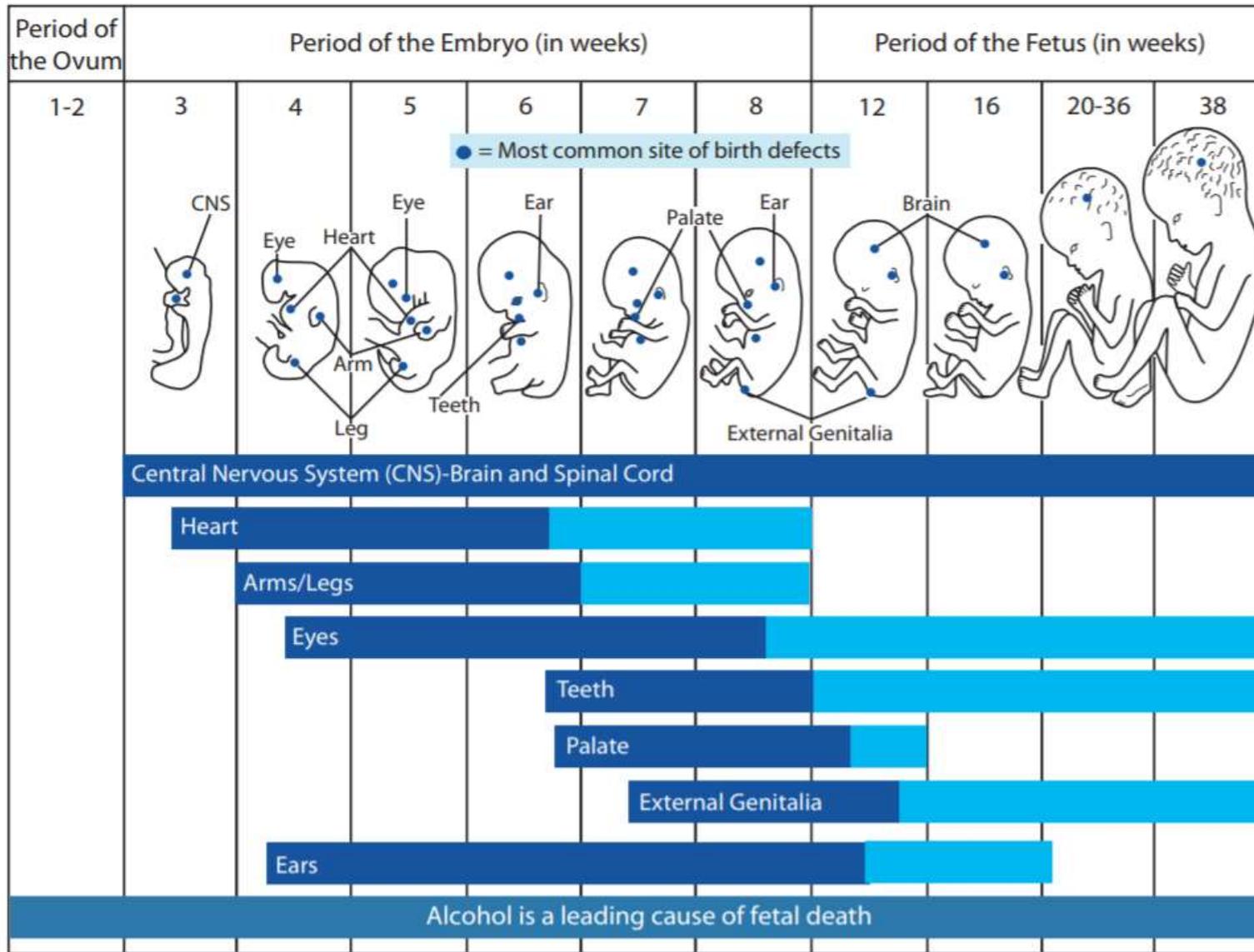
Facial Features of FASD



*Photo courtesy Ken Jones
and this child's family*

Facial features

- Diagnosis of FASD can be made with or without facial features
 - Eg. Bower et al. (2018) – 58% of individuals diagnosed with FASD in W.A. detention centres did not have *any* facial features
- Individuals without FASD can also exhibit these features, however, the combination of the three features is very specific to FASD
- Lack of facial features in some individuals is one of contributors to the underdiagnoses of FASD
- The critical period for the development of facial features is within the first 12 weeks (Astley, Magnuson, Omnell, & Clarren, 1999; Feldman et al., 2012; Jacobson, 1997)



Adopted from: Jacobson, S. Assessing the impact of maternal drinking during and after pregnancy. *Alcohol Health & Research World*, 21(3), 1997.

The chart shows the developing baby's vulnerability to alcohol-related defects during specific periods of development. The dark blue segments represent the most sensitive periods.

University of Washington guide

- **Short palpebral fissure length** (PFL) 2 or more standard deviations below the population mean (or <3rd percentile). This equates to a z-score of -2 or more.
- **Smooth philtrum** – Rank 4 or 5 on the University of Washington Lip-Philtrum Guide
- **Thin upper lip** – Rank 4 or 5 on the University of Washington Lip-Philtrum Guide

<https://depts.washington.edu/fasdpn/htmls/4-digit-code.htm>

Lip and philtrum guides

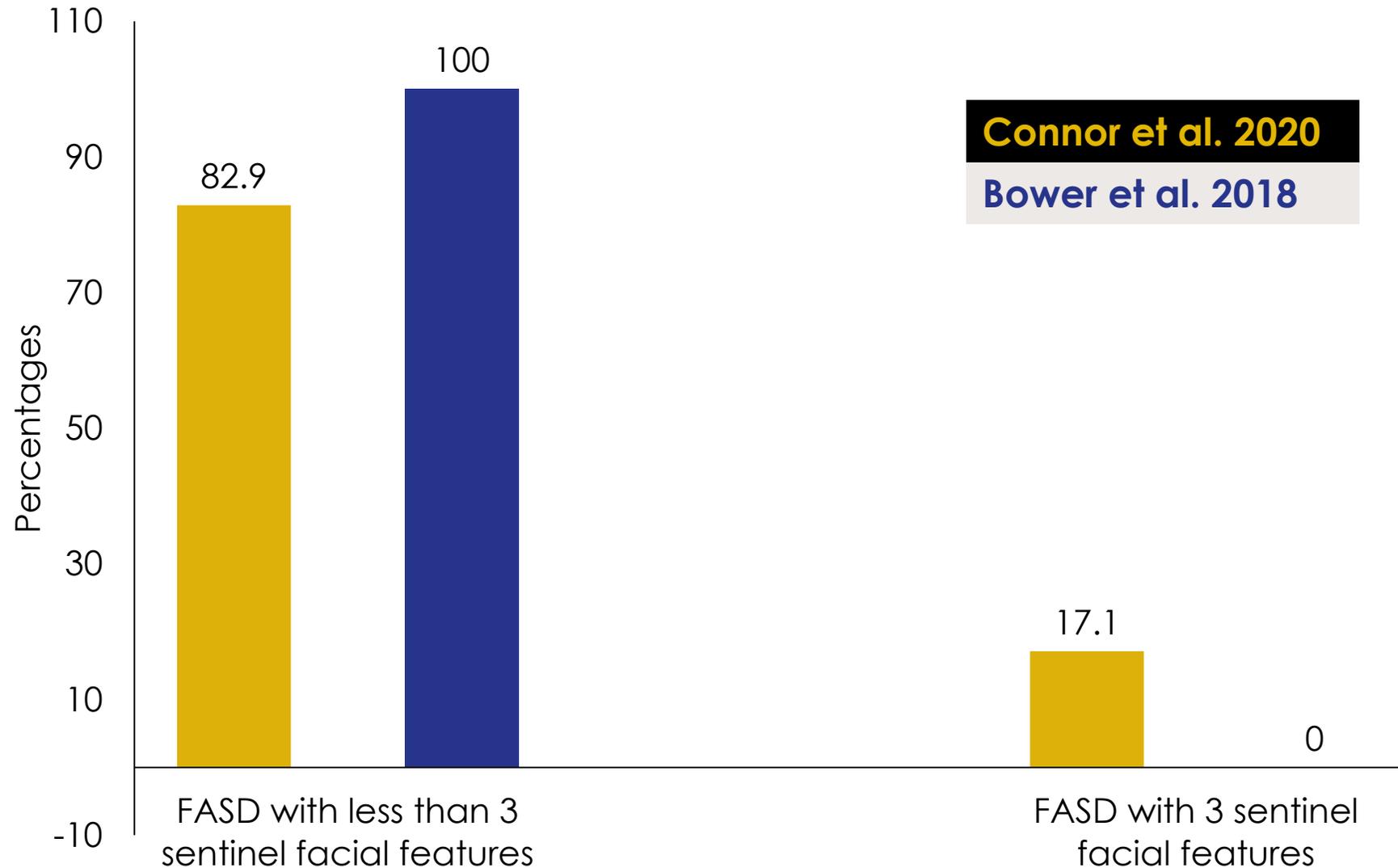


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ADDITIONAL RESOURCE

Facial Features

(Connor, Tan, Pestell, & Fitzpatrick, 2020; Bower et al. 2018)



Neurodevelopmental domains

Brief overview

Bower, C., & Elliott, E. J. (2016, on behalf of the Steering Group). *Report to the Australian Government Department of Health: "Australian Guide to the diagnosis of Fetal Alcohol Spectrum Disorder (FASD)"*.

Brief overview of domains (Bower & Elliott, 2016)

Domain of impairment	Defined in Bower & Elliott (2016)	How is it assessed?	Who assesses?	Important considerations
1. Brain structure & neurology	<ul style="list-style-type: none"> Abnormal occipitofrontal head circumference Structural brain abnormalities Seizure disorder not due to known postnatal causes Significant neurological diagnoses otherwise unexplained 	<ul style="list-style-type: none"> Typically history and head circumference assessed by Paediatrician/Physician Can be referred to others for further assessment (e.g. imaging) 	<p>Core MDT:</p> <ul style="list-style-type: none"> Paediatrician or Physician <p>Other additional MDT:</p> <ul style="list-style-type: none"> Neurologist Geneticist 	<ul style="list-style-type: none"> Often under assessed For microcephaly, it is important that other causes are excluded Neuroimaging is <i>not</i> required for diagnosis, unless clinically specified
2. Cognition	Cognition includes IQ, verbal and non-verbal reasoning skills, processing speed, and working memory.	Direct measures of assessment (e.g. WISC)	<p>Core MDT:</p> <ul style="list-style-type: none"> Psychologist 	<ul style="list-style-type: none"> Cannot use subdomain scores of Cognition to support multiple domains of impairment (e.g. language) Nonverbal assessments may be more appropriate for Aboriginal and Torres Strait Islander people
3. Language	Language includes expressive and receptive language skills.	Direct measures of assessment (e.g. CELF)	<p>Core MDT</p> <ul style="list-style-type: none"> <i>Ideally</i> Speech Pathologist Psychologist 	<ul style="list-style-type: none"> Important to consider individuals first language

Brief overview of domains (Bower & Elliott, 2016)

Domain of impairment	Defined in Bower & Elliott (2016)	How is it assessed?	Who assesses?	Important considerations
4. Academic achievement	Academic achievement includes skills in reading, mathematics, and/or literacy (including written expression and spelling).	<ul style="list-style-type: none"> • Direct assessment (e.g. WIAT) • Indirect assessment (e.g. school reports) 	Core MDT: <ul style="list-style-type: none"> • Psychologist for direct assessment • Other allied health can help to gather indirect measures 	<ul style="list-style-type: none"> • Specific Learning Disorder fulfils criteria • Consider school attendance and access • Consider intervention already accessed
5. Memory	Memory includes overall memory, verbal memory, and visual memory	Direct measures of assessment (e.g. WRAML)	Core MDT: <ul style="list-style-type: none"> • Psychologist 	<ul style="list-style-type: none"> • Working memory should be considered under executive functioning
6. Attention	Attention has several components: <ul style="list-style-type: none"> • <i>selective</i> attention • <i>divided</i> attention • <i>alternating</i> attention • <i>sustained</i> attention 	<ul style="list-style-type: none"> • Direct assessment (e.g. Connors Continuous Performance Test) • Indirect assessment (e.g. clinical interview) 	Core MDT: <ul style="list-style-type: none"> • Psychologist 	<ul style="list-style-type: none"> • Deficits in inhibition, impulse control or hyperactivity should be considered under executive functioning • ADHD combined or inattentive type fulfils criteria for impairment

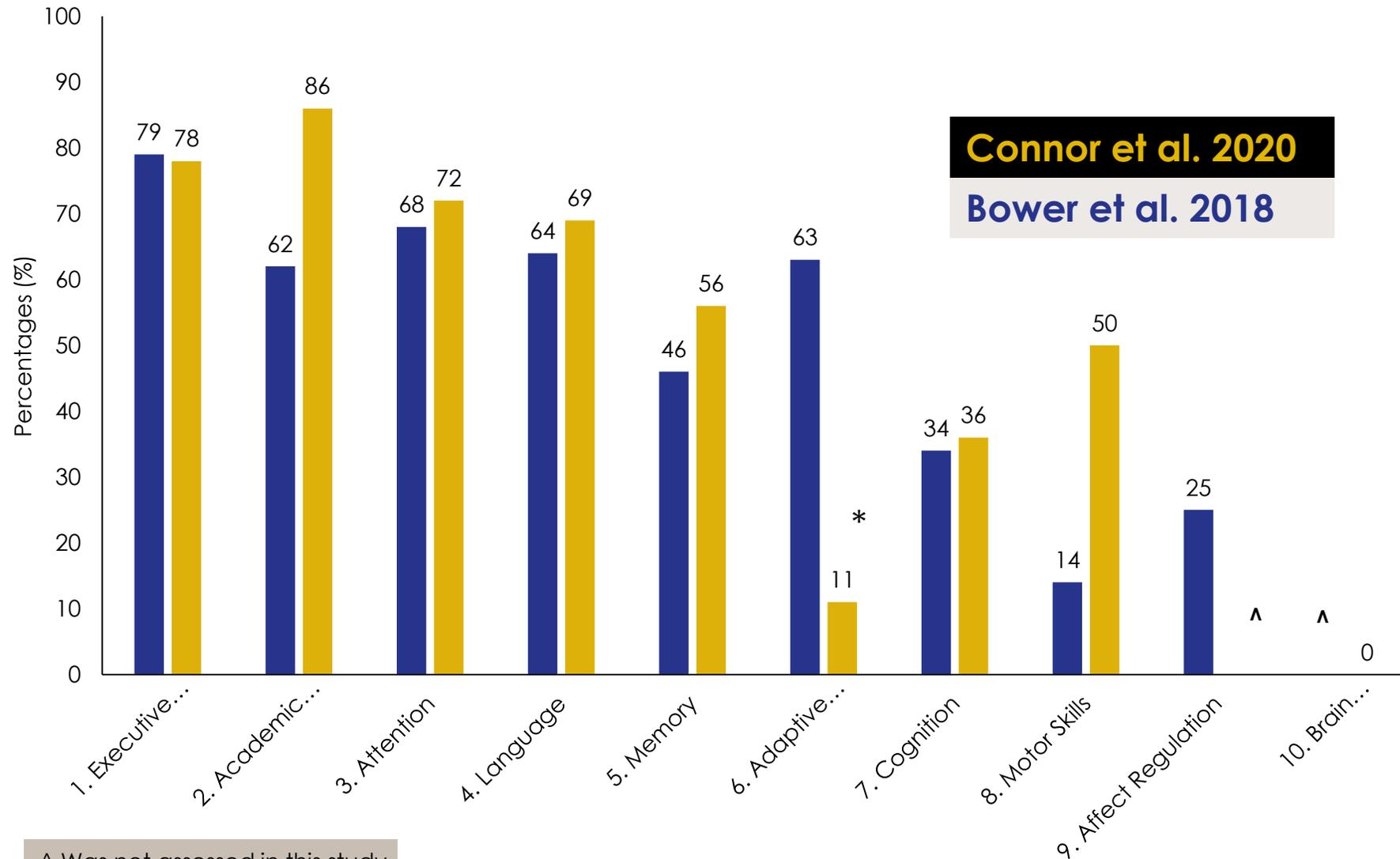
Brief overview of domains (Bower & Elliott, 2016)

Domain of impairment	Defined in Bower & Elliott (2016)	How is it assessed?	Who assesses?	Important considerations
7. Executive functioning	Executive function refers to a set of higher-level skills involved in organising and controlling one's own thoughts and behaviours in order to fulfil a goal with maximum efficiency.	<ul style="list-style-type: none"> • Direct assessment (e.g. DKEFS) • Indirect assessment (e.g. BRIEF) 	Core MDT: <ul style="list-style-type: none"> • Psychologist for direct assessment • Other allied health can help to gather indirect measures 	<ul style="list-style-type: none"> • ADHD diagnosis can be used as corroborating evidence, though does <i>not</i> fulfil criteria for impairment • Weight should be given to indirect assessments
8. Affect regulation	Affect regulation includes mood and anxiety disorders.	<ul style="list-style-type: none"> • Needs to meet DSM-5 criteria for a mood or anxiety disorder (see diagnostic guide) • Indirect screening measures 	Core MDT: <ul style="list-style-type: none"> • Psychologist and Paediatrician can potentially provide diagnoses within assessment • MDT to help gather indirect measures 	<ul style="list-style-type: none"> • You are on the look-out for <i>longstanding</i> dysregulation

Brief overview of domains (Bower & Elliott, 2016)

Domain of impairment	Defined in Bower & Elliott (2016)	How is it assessed?	Who assesses?	Important considerations
9. Adaptive behaviour, social skills & social communication	<p><i>Adaptive behaviour</i> is defined as the life skills which enable an individual to live independently in a safe and socially responsible manner, and how well they cope with everyday tasks. These include:</p> <ul style="list-style-type: none"> • <i>Conceptual</i> • <i>Social skills</i> • <i>Practical skills</i> <p>Social communication is a critical component of adaptive function but can be assessed separately.</p>	<ul style="list-style-type: none"> • Direct assessment (e.g. Social Language Development Test) • Indirect assessment (e.g. Vineland) 	<p>Core MDT:</p> <ul style="list-style-type: none"> • Psychologist, OT, Speech Pathologist • Paediatrician can help to gather history 	<ul style="list-style-type: none"> • Autism Spectrum Disorder meets criteria for social communication difficulty • Need to consider how you may gather information about adaptive behaviour in adults
10. Motor skills	<p><i>Motor skills</i> include fine motor skills (manual dexterity, precision), gross motor skills (balance, strength, coordination, ball skills and agility), graphomotor skills (handwriting) and visuo-motor integration</p>	<ul style="list-style-type: none"> • Direct assessment (e.g. BOT) • Indirect assessment – clinical assessment can provide supporting evidence 	<p>Core MDT:</p> <ul style="list-style-type: none"> • Typically OT • Psychologist may complete tests of indirect assessment 	<ul style="list-style-type: none"> • Requires a comprehensive assessment to be adequately assessed

Domains of impairment



Connor et al. 2020

Bower et al. 2018

^ Was not assessed in this study

* Only a small proportion of individuals were assessed for Social Communication **only**

Groups requiring special considerations

Considerations for age and culture

Talking FASD (Williams, 2018)



One on one

55.4%



Small groups

45.5%



Community forums

18.2%



Online

14.9%



Not sure

14.0%

Assessment of adaptive functioning: Life Skills Checklist

- Family rating
- Cultural and spiritual understanding
- Managing money
- Daily living
- Community and well-being
- Communication
- Social/emotional
- Employment

Life Skills Checklist¹

Name of child: _____ DOB: _____ Age: _____

Your name: _____ Today's date: _____

Your relationship (i.e. parent, teacher or carer): _____

Please read each statement carefully and rate how well the child is able to complete the life skill right now. Record your response in the rating column below.

	Never does this	Does not do this well	Does this fairly well	Does this very well	Not applicable/ No opportunity

This version adapted from Ainge, David(2001) 'Life Skills Checklist for Students who Identify as Indigenous', Innovations in Education and Teaching International, 39: 2, 107 – 116

Examples from the Life Skills Checklist

FAMILY RATING					
1. Shares with other family members	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
2. Cares for family (e.g. younger brothers or sisters, elders)	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
3. Takes on responsibilities within the family	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
4. Understands extended family relationships	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
5. Has an identified role within the family	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
CULTURAL AND SPIRITUAL UNDERSTANDING					
6. Understands Aboriginal customs, beliefs and storytelling	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
7. Expresses own culture through art, drawing, music, or dance	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
8. Understands own personal cultural identity	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
9. Participates appropriately at weddings, funerals & ceremonies	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉
10. Able to appreciate and be respectful of other cultures	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₉

This version adapted from Ainge, David(2001) 'Life Skills Checklist for Students who Identify as Indigenous', Innovations in Education and Teaching International, 39: 2, 107 – 116

©Carmela Pestell, Stephen Zubrick, & Carol Bower, 2015.

Minimising bias (Westerman, 2010)



Rely less on acquired knowledge



Provide a practical context



Involve spatial processing



Visually based



Observation and imitation are used as the primary medium



Not timed

May give additional time on time-limited tests



Visual tests are linked with visual or spatial items



Limit the number of items on subtests

E.g. Administer odd items, multiply scores by 2 to get a scaled score



Using gestures to provide feedback (i.e. less focus on expressive language)

Some cognitive assessments that reduce cultural bias (Westerman, 2012)

Naglieri Nonverbal Ability Test - Second Edition (NNAT-2)

- Ages 4-18 years
- Solve figural matrix items

Wechsler Non-Verbal Scale of Ability (WNV)

- Ages 4-21 years
- Brief and full version available
- Tests Object Assembly, Coding, Recognition, Spatial Span, Picture Arrangement

Universal Nonverbal Intelligence Test (UNIT)

- 5-18 years
- Symbolic Memory, Spatial Memory, Cube Design, Analogic Reasoning

Assessing communication assessment in Aboriginal children (Salter, 2013)

Bangu Du Bat (*Bangu the Flying
Fox*)

Non-word repetition task

Dingo and Crow

Symptoms across the lifespan



Infancy and early childhood

- Global development
- Gross or fine motor control, visuomotor integration
- Attachment
- Irritability
- Sleep
- Feeding



Childhood and adolescence

- School readiness, attendance, engagement and performance
- Adaptive functioning
- Internalising and externalizing behaviours, impulsivity, attentional difficulties
- Language
- Emotional and behavioural responses to sensory input



Adulthood

- Mental health problems
- Substance abuse
- Social exclusion
- Social vulnerability
- Trouble with the law



Infants and children under 6 (Bower and Elliott 2016, on behalf of the Steering Group)

Developing brain still has capacity to change!

- Neuroplasticity and continually developing neural connections (depend on environmental stressors & other impacts)
- Assessment may be more difficult & limited (e.g. executive functioning is still developing)
- Some functional expressions won't develop until later (such as Academic Achievement)

Older adolescents and adults (Bower and Elliott 2016, on behalf of the Steering Group)

Physical features can change with development

- Though there is research to suggest that facial features are still found in adults (e.g. Astley et al. 2013)

Obtaining early developmental information and details of pregnancy (including prenatal alcohol exposure) may be difficult

Functional manifestations are different in adolescents and older adults (e.g. risk taking behaviour)

Older adolescents and adults (Bower and Elliott 2016, on behalf of the Steering Group)

Assessment considerations:

- May require different types of assessments than children
- Validity of observer reports may be impacted by social and family situation

Assessment should include:

- Evaluation of general and sexual health
- Substance use
- Risk taking behaviour
- Protective factors

A pair of black-rimmed glasses with round lenses is resting on an open book. The book has a red bookmark visible on the left side. The background is blurred, showing what appears to be a desk or table.

Older adolescents and adults (Bower and Elliott 2016, on behalf of the Steering Group)

- Domain specific considerations: *Adaptive functioning, social skills or social communication*
- Indirect rating scale (eg. Vineland) for adaptive behaviour is preferred
- May be required for access to some services

Common comorbidities

A brief overview



Comorbidity of fetal alcohol spectrum disorder: a systematic review and meta-analysis

Svetlana Popova, Shannon Lange, Kevin Shield, Alanna Mihic, Albert E Chudley, Raja A S Mukherjee, Dennis Bekmuradov, Jürgen Rehm. Comorbidity of fetal alcohol spectrum disorder: a systematic review & meta-analysis, *The Lancet*, 387, 10022, 2016, 978-987, [https://doi.org/10.1016/S0140-6736\(15\)01345-8](https://doi.org/10.1016/S0140-6736(15)01345-8)

127 studies examined - 428 comorbid conditions co-occurring in individuals with FASD

- Comorbidities span across 18 of 22 chapters in the ICD-10
- Most commonly: congenital malformations, deformities or chromosomal abnormalities
- 33 studies used in meta-analysis looking at the frequency
- The 5 comorbid conditions with the highest pooled prevalence (between 50% - 91%) included:
 1. Abnormal results of function studies of peripheral nervous system & special senses
 2. Conduct disorder
 3. Receptive language disorder
 4. Chronic serous otitis media
 5. Expressive language disorder

Primary characteristics

Secondary characteristics

Present from birth, thought to be a direct result of structural differences in the brain

Symptoms not present at birth, develop over time due to a lack of appropriate supports

Attention-Deficit/Hyperactivity Disorder (ADHD)

Oppositional Defiant Disorder (ODD) & Conduct Disorder

Attachment Disorders

Language Disorders

Sensory processing difficulties

Trauma*

Mood and Anxiety Disorders*

Trouble with the Law

Substance Use Disorders

Sleep difficulties

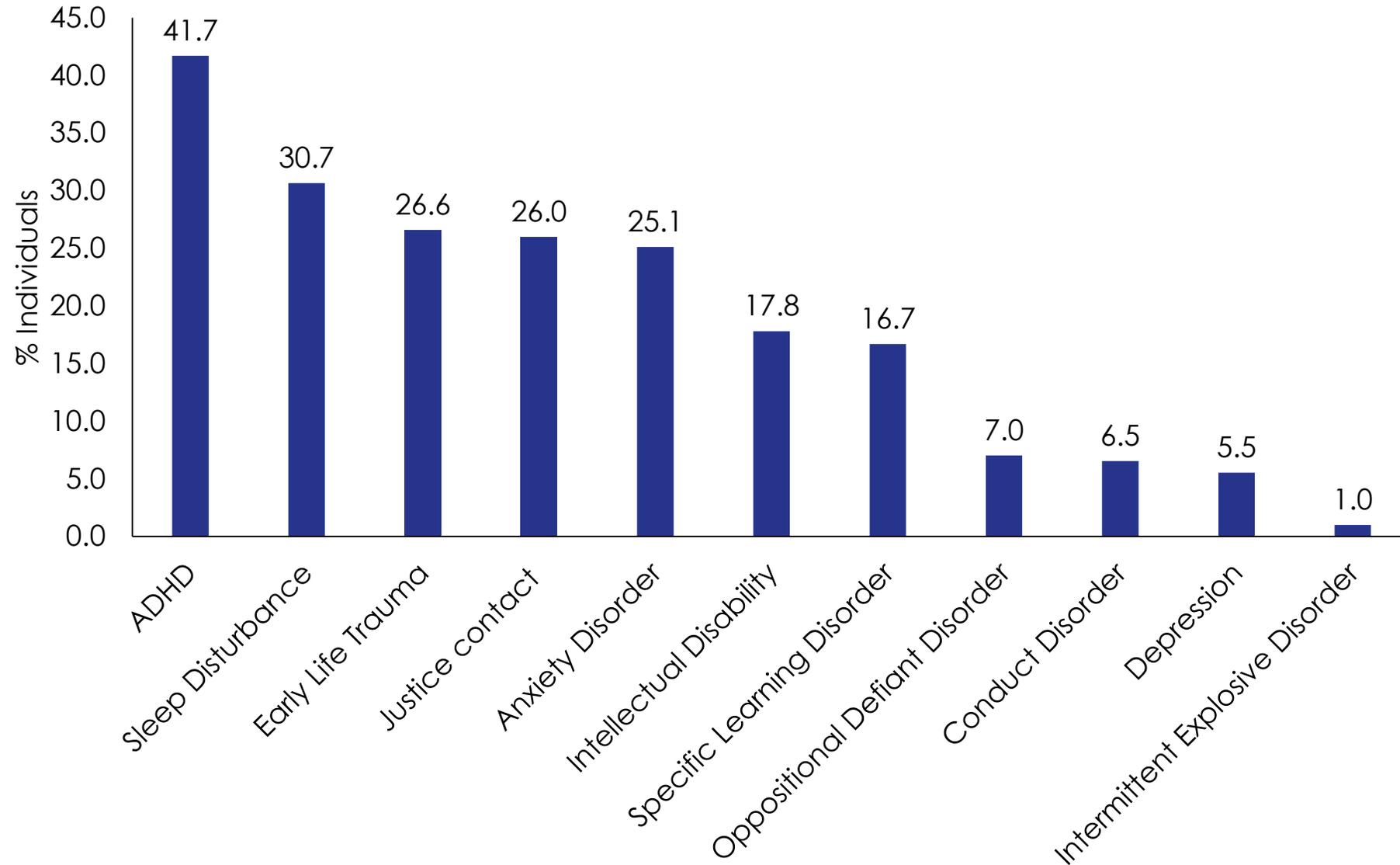
Secondary issues have marked impact

At 21 years of age: (Streissguth et al., 2005)



Comorbidities & Secondary Issues

(Connor, Tan, Pestell, & Fitzpatrick, 2020)



Final thoughts

What is our role?



Exercise caution

- Avoid giving a child with known PAE exposure a ‘clean bill of health’ – they may grow into their difficulties
- Executive functioning, academic and social difficulties in particular tend to emerge as children grow older
- Increasing demands on these functions in adolescence and adulthood
- Consider placing in ‘At Risk’ category



Using the right language

<https://www.fasdhub.org.au/siteassets/pdfs/language-guide-v11.pdf?fbclid=IwAR1YLfcWKQaSN9bvMcXW7JwytbBeHcVnC2n6Mh38B7TzjspZe9vSUftaom8>

Please take the time to read this Language Guide, as it will impact the way we talk about FASD with clients, health professionals and other members of the community



Further training

What can we do?

Lack of training in health professionals

Knowledge about FASD (as a diagnostic term) amongst health professionals is relatively good (Eyal & O'Connor, 2011; Brems, Boschma-Wynn, Dewane, Edwards, & Robinson, 2010; Gahagan et al., 2006; Nanson, Bolaria, Snyder, Morse, & Weiner, 1995)

Yet knowledge of core features is less prevalent (Crawford-Williams, Steen, Esterman, Fielder, & Mikocka-Walus, 2015)

- Many clinicians still believe you can tell someone has FASD by looking at their face (Brems et al., 2010)

“Could I actually delineate what the adverse effects are? Well no I can't actually describe that, I could google it and tell you all about it. I know that **they are funny looking kids** and I think they have got retardation problems and developmental problems but certainly couldn't describe a lot more” (GP #2)
(Crawford-Williams, Steen, Esterman, Fielder, & Mikocka-Walus, 2015)

What can we do?

We need champions of FASD in the community to help spread knowledge of FASD

- Help with prevention efforts
- Help identify those that may be at risk

We need trained professionals to refer, assess & diagnose FASD

Graduate Certificate

UWA offers a Graduate Certificate in the Diagnosis and Assessment of FASD to nationally and internationally

The online course provides graduates trained in relevant disciplines (including psychology) with the specialist knowledge and clinical skills required to participate in team-based diagnosis and assessment of FASD

Applications for 2022 intake close 31st January 2022

For further information, please email:

- Kirsten.panton@uwa.edu.au or visit
- <https://study.uwa.edu.au/courses/graduate-certificate-in-the-diagnosis-and-assessment-of-fetal-alcohol-spectrum-disorders-fasd>

FASD short courses

- Arises from the need for a university course that focuses on foundational FASD knowledge, and providing students with the most up-to-date research in the field
 - The GCFASD focusses on *diagnosis and assessment* of FASD
- Both micro-credentials will cover the basic characteristics of FASD and will include lived experience perspectives on FASD.
 - **PSYCM501 - History and characteristics of Fetal Alcohol Spectrum Disorder):** historical and social context of FASD and common comorbidities
 - **PSYCM502 - Considerations for Fetal Alcohol Spectrum Disorder diagnosis:** ethical issues in FASD assessment and diagnosis and intervention strategies

Next intake: 1st April – 30th June 2022

FASD Short courses

Entry requirements & course credit

- There are *no entry requirements* for these short courses, and the completion of the units are self-paced.
- As both courses are delivered completely **online**, students can access this content from anywhere in the world.
- Students completing both micro-credentials will be eligible to receive course-credit for the first coursework unit in the Graduate Certificate in the Diagnosis and Assessment of FASD
 - *Note: GCFASD entry requirements still apply*

GCFASD FAQ's



Location

- You can complete this course *anywhere* in the world – you do not need to be in Western Australia
- The coursework units are run entirely online

Contact hours

- Course work units: 1 x 2 hour (online) lecture per week
- Practicum: 1 x 1 hour (online) Peer supervision per month + individual supervision (as required)

Practicum

- The practicum is competency based, and completion is not contingent on number of hours, but rather number of cases
- The practicum location will be organised locally to you and/or telehealth alternatives may be offered

Course load

- Part-time only
- Course can be completed over 1 or 2 years

Course fees

- All questions regarding fees must be directed to <https://www.ask.uwa.edu.au/>
- You can also visit [Fee Calculator Help](#)
- This course is now subsidised by the Australian Government as a Commonwealth supported place (CSP). [Find out how much you can save](#) with a CSP place.

Scholarships

- Scholarships are listed on the course page: <https://www.uwa.edu.au/study/courses/graduate-certificate-in-the-diagnosis-and-assessment-of-fetal-alcohol-spectrum-disorders-fasd#fees-and-scholarships>

ADDITIONAL RESOURCE

Micro-credential FAQ's



Order

- You do not need to complete PSYCM501 prior to PSYCM502 – these can be completed independently.
- PSYCM501 covers more foundational material, so it is recommended to be completed prior to PSYCM502

Location

- You can complete this course *anywhere* in the world – you do not need to be in Western Australia
- The coursework units are run entirely online

Contact hours

- There are no formal contact hours for this course
- Each micro is 3 credit points which is equivalent to approximately 75 hours of effort (over 8 weeks)

Course fees

- All questions regarding fees must be directed to <https://www.ask.uwa.edu.au/>
- You can also visit [Fee Calculator Help](#)

Useful links & resources: *Recommended Australian resources*

- Australian Guide to the Diagnosis of FASD:
https://www.fasdhub.org.au/siteassets/pdfs/australian-guide-to-diagnosis-of-fasd_all-appendices.pdf
- National Organisation for FASD (NOFASD) Australia: <https://www.nofasd.org.au/>
- FASD Hub: <https://www.fasdhub.org.au/>
- Telethon Kids Institute: <https://alcoholpregnancy.telethonkids.org.au/resources/>
- Kimberley developed FASD resource has lots of practical strategies for schools and families: www.kimberleyfasdresource.com.au
- Australian guidelines to reduce health risks from drinking alcohol: <https://nhmrc.gov.au/about-us/publications/australian-guidelines-reduce-health-risks-drinking-alcohol>
- Australian Medical Association position statement: <https://ama.com.au/position-statement/fetal-alcohol-spectrum-disorder-fasd-2016>
- Russel Family Fetal Alcohol Spectrum Disorders Association: <https://rffada.org/>

Useful links & resources: *Additional resources*

- FAScets: www.fascets.org
- Calmer Classrooms: school strategies for children who have experienced trauma: http://www.ccyv.vic.gov.au/childsafetycommissioner/downloads/calmer_classrooms.pdf
- FASD Diagnostic and Prevention Network: <https://depts.washington.edu/fasdpn/>
- Perspectives on FASD prevention: <https://fasdprevention.wordpress.com/>

Lived experience:

- CJ Lutke's Blog - Adult with FASD: <https://www.nofasd.org.au/community/cj-lutke-blog/>
- Mama Maremma's Blog - full-time carer: <https://www.nofasd.org.au/community/mama-maremmas-blog/>
- Myles Himmelreich: <http://www.myleshimmelreich.com/>

Questions
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