

Determining Prenatal Alcohol Exposure for a Fetal Alcohol Spectrum Disorder (FASD) Diagnostic Clinic

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The recently revised *Fetal alcohol spectrum disorder: a guideline for diagnosis across the lifespan* provides specific recommendations for quantifying levels of prenatal alcohol exposure (PAE) that are known to put the embryo/fetus at risk for neurobehavioural dysfunction.¹

For a FASD diagnosis, the general consensus is confirmation of more than 7 standard drinks per week or more than 4-5 drinks per occasion (within 2 hours) on at least 2 occasions. The effect sizes seen with a single binge episode are relatively small, therefore a threshold of 2 binge episodes is recommended as a minimum for diagnosis. In Canada, a standard serving of alcohol contains 0.6 ounces (17.7 mL) of pure ethanol, which approximates the amount of ethanol in a 12-ounce serving of regular beer (5%), a 5-ounce glass of wine (12%), or a 1.5-ounce glass (44.4 mL) of a 40% spirit.

Prenatal alcohol exposure (PAE) confirmation

Referrals to a FASD diagnostic clinic may originate from many different sources, including social services, the educational system or they may be court ordered. Biological, adoptive parents or other legal guardians may also request an assessment for their child. Individuals may be referred from addictions and mental health. These types of referrals are made when there is suspected prenatal alcohol exposure.

Confirmation of prenatal alcohol exposure is an essential part of the assessment process once a referral is received at a FASD diagnostic clinic. This can be a complicated process, due to inaccurate recollection and/or biases and the use of indirect evidence for PAE. In some cases, it is difficult or impossible to obtain reliable antenatal or other records. For some biological families, this can be a difficult question to answer. A decision must be made based on the collected information as to whether it is probable that the patient/client was exposed to a significant amount of alcohol in utero.

As obtaining confirmation of PAE can be a challenging and sensitive process, care must be exercised when interviewing the biological mother.² The process requires sensitivity and should be done in a non-judgmental and tactful manner. For the mother it can raise feelings of guilt, shame and stigma.³ Team members tasked with this role must have or receive appropriate training to interview and support the mother.

At risk for PAE

It is not possible to determine the exact amount of prenatal alcohol exposure likely to cause FASD. Data from the 2009 Canadian Maternity Experiences Survey indicated that 62.4% of women reported drinking alcohol during the three months prior to pregnancy but only 10.5% of the women surveyed reported that they consumed alcohol during pregnancy, and of these women, 0.7% drank frequently and 9.7% infrequently. Binge drinking was reported by 11% of women before the recognition of pregnancy.⁴

Since at least 50% of pregnancies are unplanned it is likely that alcohol consumption during pregnancy is significantly under reported. Other surveys have reported alcohol use by ~80% of women over the age of 15 years. In Western Canada, 32% of non-pregnant women reported binge drinking.⁵

Thus, it is likely that though there is high incidence of PAE, but only a small percentage meets the criteria for FASD.

How do we decide who is at risk for FASD?

A dose-response relationship for PAE has been presented, suggesting that as exposure to alcohol increases with increasing doses (e.g. bingeing), the probability of adverse effects also increases.^{6,7} However, it is important to note that not all cases with confirmed heavy PAE lead to a FASD diagnosis, and nor does low PAE preclude a FASD diagnosis.

There are multiple prenatal and postnatal factors that may mediate and influence the effects of alcohol on the developing fetus.⁸

Importantly, the egg is implanted onto the placenta by 14 days (average 7 to 10 days) after fertilization. Alcohol consumption in the first 2 weeks therefore does not appear to affect the embryo/fetus.⁹

When collecting details of alcohol use during pregnancy, reports provided by the biological mother may be inaccurate due to difficulty in recall or the amounts may be under-reported due to feelings of guilt, self-blame or stigma. For this reason, alcohol consumption behaviour prior to pregnancy recognition may be a more reliable indicator of pattern of alcohol use during the pregnancy.¹⁰ Depending on the context and company, social drinking, or drinking to relieve stress or anxiety may lead to risky drinking.¹¹

Determining PAE exposure

Confirmation of PAE is vital as there can be other reasons for intellectual and adaptive deficits. The most reliable source is the biological mother. Whenever possible the birth mother should be contacted and interviewed even if she is not the primary care provider. If the mother denies alcohol consumption during pregnancy then a FASD diagnosis is not normally considered at that time. The mother may confirm alcohol consumption at a later date, as her circumstances change, and at which point an assessment would be indicated.

The next best source for confirmation of PAE is records from the time of pregnancy or birth. Birth records are normally accurate and, even if amounts of alcohol are not indicated, it can be assumed that if PAE was confirmed, this is sufficient to consider FASD. Unfortunately, PAE information on the birth records is often not recorded; however, this does not negate other positive sources that may be available.

Child welfare and legal documents are frequent sources of PAE confirmation. Details involving amounts of alcohol consumed are not usually available but a history of intoxication is sufficient to be considered a binge. If there is documentation of ongoing alcohol use this may be considered confirmation of PAE, along with other supporting evidence pertaining to the index pregnancy. Referral or attendance to an alcohol abuse treatment centre during pregnancy should be considered adequate evidence of PAE, as would positive blood alcohol level during pregnancy. On occasion the documentation in the child welfare files can be used to support the probability of PAE.

A third party, who drank with the mother, can be a valid source of PAE when other options are not available. The motivation for third party confirmation of maternal alcohol use needs to be considered. If a child custody or access conflict is occurring extreme caution needs to be used when collecting this information and considering its reliability.

In some circumstances, indirect confirmation may be sufficient. For example the maternal grandmother may indicate that her daughter drank during the pregnancy. Ideally she would be a third party witness to either the drinking or intoxication. Sometimes the grandmother can only confirm PAE on the balance of probability based on the mother's lifestyle at the time. Caution should be used and disclosure motivation considered in these situations. If there is no other option (mother deceased or otherwise not able to contact), some clinics may consider proceeding.

It is important to note that in addition to suspected PAE, there should be evidence of behavioural, neurodevelopmental and/or mental health concerns at a level that affects everyday function before referring to a diagnostic clinic.

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