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Fetal alcohol spectrum disorder: A global perspective seeing the unseen: Fetal alcohol spectrum disorder (s) in child welfare service provision. A discussion paper

William Curran

Simmons University, School of Social Work, Boston, MA, USA

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ABSTRACT

Children involved in child welfare systems frequently experience complex and overlapping biopsychosocial adversities, including neurodevelopmental impairments associated with prenatal alcohol exposure (PAE) and Fetal Alcohol Spectrum Disorder (FASD). Despite evidence indicating disproportionately high rates of FASD among child welfare populations, identification and response pathways remain inconsistent, with many systems lacking structured approaches to screening, assessment, and intervention. Consequently, neurodevelopmental impairments are often misunderstood, resulting in inappropriate behavioral interpretations, ineffective interventions, placement instability, and poor long-term outcomes. This discussion paper examines the role of neurodevelopmentally informed practice within child welfare and situates the 5-Step Neurodevelopmental Screening Pathway within a biopsychosocial framework. Developed from practitioner-generated data and frontline social work experience, the pathway offers a structured, non-diagnostic approach to information gathering, functional observation, pattern recognition, and decision-making in environments where specialist assessment is often unavailable or inaccessible. The model supports earlier recognition of neurodevelopmental vulnerability while promoting disability-informed responses that extend beyond diagnostic status alone. This paper argues that strengthening neurodevelopmental literacy within child welfare practice is both a clinical and organizational imperative. Embedding structured screening pathways into routine assessment processes may improve intervention planning, enhance interprofessional collaboration, and strengthen the capacity of child welfare agencies to fulfil their responsibilities as corporate parents. Ultimately, a proactive neurodevelopmental approach has the potential to reduce escalation into crisis services, youth justice involvement, homelessness, substance misuse, and adverse lifelong outcomes for children and young people affected by PAE and FASD.

1. Introduction

For more than half a century, Fetal Alcohol Spectrum Disorders (FASDs) have been the subject of extensive global research (Donaldson, 2021), yet the translation of this knowledge into meaningful policy and frontline Child Welfare Services (CWS) practice remains strikingly ad-hoc or ignored. While the evidence base documenting the profound impact of Prenatal alcohol Exposure (PAE) on children, families, and public systems continues to grow (Popova, 2019; Badry & Choate, 2015; Burns et al., 2021) the voices and experiences of Child Welfare Social Workers (CWSW) have remained comparatively absent from within the broader FASD discourse (Curran & Danbrook, 2023b) Although a substantial body of scholarly literature has emerged to address this identified gap within child welfare services (Curran & Danbrook, 2023a), much of this work has remained insufficiently connected to the frontline practitioners, caregivers, and service systems for whom it was originally intended. This omission is significant. It may reflect a misguided concern at the corporate parenting level within child welfare that acknowledging the prevalence of FASD would increase the costs associated with diagnosis.

CWSW's are often the first professionals to encounter the complex realities of children and young people living with invisible neurodevelopmental impairments associated with PAE (Curran & Danbrook, 2023a). Positioned at the intersection of protection, caregiving, advocacy, and systems intervention, they occupy a pivotal yet under-recognized role in responding to FASD within contemporary

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E-mail address: william.curran@mail.concordia.ca.

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discussions. This paper provides a brief overview of the historical evolution of FASD knowledge and outlines current understandings of the disorder(s), with particular attention to their implications for child welfare policy and practice.(Chudley, 2008; Curran & Danbrook, 2023a; Prindle et al., 2018, 2018, 2018).

2. FASD – what is it?

Fetal Alcohol Spectrum Disorders (FASDs) is an umbrella term describing a range of neurodevelopmental conditions associated with PAE (Bertrand et al., 2004). FASDs are widely recognized as one of the leading preventable causes of developmental disability globally (Hoyme et al., 2026). The term encompasses a continuum of adverse outcomes, including physical and central nervous system (CNS) abnormalities, growth deficits, and neurocognitive impairments affecting behavior, self-regulation, and adaptive functioning (Nash et al., 2017) Diagnostic classifications include Fetal Alcohol Syndrome (FAS), Partial Fetal Alcohol Syndrome (pFAS), Alcohol-Related Neurodevelopmental Disorder (ARND), Alcohol-Related Birth Defects (ARBD), and Neurobehavioral Disorder Associated with Prenatal Alcohol Exposure (ND-PAE) (Turchi & Smith, 2018; Williams et al., 2015). Among these, FAS remains the most clinically accepted diagnosis within the spectrum of FASDs, primarily due to the visible signs of facial dysmorphic features (Hoyme et al., 2026). It should be noted that ND-PAE although included in the DSM-V, it is listed as 'conditions for further research'(Hagan Jr et al., 2016) a factor which may add to professional frustration in social and clinical practice.

The term FAS first emerged following the landmark study by Jones and Smith published in The Lancet (Jones et al., 1973), which identified a pattern of physical, cognitive, and developmental impairments associated with PAE. Notably, many of the children in the study were initially known to child welfare services under labels such as neglect and failure to thrive before being reclassified as having FAS. This work marked a significant turning point in understanding the teratogenic effects of alcohol and the implications for child welfare systems globally. Diagnostic recognition later expanded through inclusion of FAS clinical guidelines within the World Health Organization International Classification of Diseases (ICD-9 and ICD-10) (Donaldson, 2021), strengthening Global recognition of PAE, as a major public health and social care concern. Despite advances in diagnostic frameworks, the lived realities of individuals with FASD, particularly within child welfare systems, remains insufficiently understood (Lange et al., 2017; Jamuar et al., 2018; Pedruzzi et al., 2021; Prindle et al., 2018).

3. Translational science or lack of

Research has consistently demonstrated that children impacted by PAE are disproportionately represented within child protection, foster care, mental health, education, adoption, and juvenile justice systems (Badry & Choate, 2015; Curran & Danbrook, 2023a; Popova et al., n.d.; Walker, 2014). However, the role of frontline CWSWs in identifying, screening, and responding to FASD remains underdeveloped within policy and practice literature. This discussion article draws on qualitative research conducted by the author with frontline CWSWs in Ireland (Curran, 2007, 2020; Curran & Danbrook, 2023a, 2023b). Both qualitative studies identified themes of "palpable concern" and "advocating against the tide," offering a portrait of social work and allied health professionals operating within the FASD discourse. Grounded in lived practice experience, the research explored how practitioners understood and responded to neurodevelopmental vulnerability associated with PAE. This paper further seeks to bridge the gap between evidence and practice by highlighting systemic barriers, challenges in knowledge translation, and the need for pragmatic screening pathways and neurodevelopmentally informed interventions. Importantly, FASD frequently remains unrecognized within child welfare systems, particularly among individuals who do not present with sentinel facial features. These "hidden" presentations, although very visibly seen in foster care advocacy narratives, create significant challenges for identification, assessment, and interventions (Chudley, 2008; Curran & Danbrook, 2023a; Prindle et al., 2018). Evidence further suggests the adolescent stage of development often represents the period of greatest functional difficulty, as increasing societal expectations conflict with the individual's neurodevelopmental capacity to adapt and conform (Flannigan et al., 2021; Foltran et al., 2011)

4. FASD in child welfare systems: epidemiology and likely prevalence

A notable gap in the FASD literature is the limited integration of epidemiological evidence on prenatal alcohol exposure (PAE) across cultural contexts. While research has largely focused on diagnosis, prevention, and neurodevelopmental outcomes, less attention has been paid to the sociocultural patterns of alcohol use during pregnancy that influence FASD prevalence. Epidemiological studies demonstrate considerable international variation in alcohol consumption during pregnancy, with some of the highest rates reported in parts of Eastern and Western Europe (Lange et al., 2013; Popova et al., n.d.; Walker, 2014). In Europe, the United Kingdom reported one of the highest rates of alcohol consumption during pregnancy at 75%, ranking fourth overall. This figure is surpassed by Ireland, which has reported the highest documented prevalence globally at 82% (O'Keeffe et al., 2015). These findings highlight the substantial variation in prenatal alcohol exposure across cultural contexts and underscore the importance of considering population-level drinking patterns when examining international differences in FASD prevalence. In contrast, countries such as the United States and Canada have reported measurable reductions in prenatal alcohol exposure through sustained public health campaigns, mandatory or voluntary warning labels, routine screening in prenatal care, and coordinated prevention initiatives (Adebiyi et al., 2019; May et al., 2018). These outcomes are supported by more established public health infrastructures that integrate maternal health services, health promotion, surveillance, and early intervention. They also reflect differences in cultural norms regarding alcohol use during pregnancy, with greater public awareness of the risks of prenatal alcohol exposure and more consistent public health messaging. By comparison, where alcohol consumption is more socially normalized, awareness campaigns are less developed, or prevention strategies are inconsistently implemented, reductions in prenatal alcohol exposure have been more difficult to achieve (Donaldson et al., 2025).

Within child welfare systems (CWS), elevated rates of FASD are not isolated phenomena but reflect wider population-level patterns of PAE. In jurisdictions where alcohol use during pregnancy is more prevalent, higher rates of neurodevelopmental impairment among children entering child protection, foster care, and adoption services have been documented. This relationship is compounded by the overlap between risk factors associated with PAE and those linked to child welfare involvement, including poverty, domestic violence, parental mental health difficulties, substance misuse, and intergenerational trauma (Popova et al., 2019). Consequently, child welfare systems in high-PAE settings are likely accommodating these documented prevalence rates, but frequently unrecognized population of children and youth affected by FASD. Research consistently demonstrates that FASD is significantly overrepresented in child welfare populations. Prevalence estimates suggest rates are between 10 and 40 times higher than those observed in the general population (Popova et al., 2019). A meta-analysis by Lange et al. (2013) reported a pooled FASD prevalence of 16.9% among children in care, with Fetal Alcohol Syndrome (FAS) accounting for approximately 6%. Scoping reviews indicate foster care prevalence may be even higher, approaching 18.8%, while an estimated 30.5% of individuals with FASD experience foster care placement. Similarly, Walker (2014) reported confirmed PAE in 21% of children within an Australian sample, increasing to 40% among those subject to care orders.

Children with, or suspected of having, FASD often present with complex neurodevelopmental strengths and deficits ranging from mild to severe. Without appropriate screening and assessment frameworks, their cognitive, behavioral, educational, and emotional difficulties may be misinterpreted as behavioral non-compliance rather than manifestations of underlying disability (Badry & Choate, 2015; Curran & Danbrook, 2023a; Durkin, 2016; Popova et al., n.d.). Limited workforce knowledge, the absence of routine screening, and inadequate assessment pathways contribute to under-identification, placement instability, and missed opportunities for intervention (Hill, 2012; Pelech et al., 2013). Taken together, these findings indicate that child welfare populations constitute a high-risk population for FASD. This elevated prevalence is consistent with the convergence of prenatal alcohol exposure and the psychosocial adversities associated with child welfare involvement, rather than prenatal alcohol exposure alone. Depending on cultural and societal context, prevalence rates among children in care may be several times higher than those observed in the general population. FASD should therefore be understood as a significant child welfare issue, shaped by patterns of alcohol use in pregnancy, structural disadvantage, and persistent systemic under-identification (Badry, 2009; Badry & Choate, 2015; Popova et al., 2019).

5. Child welfare services: disentangling neurodisability and trauma

As demonstrated in the seminal work on "secondary disabilities" by Ann Streissguth, the impact of FASDs within child welfare services extends beyond behavioral dysregulation (Streissguth et al., 1996). Streissguth argued that outcomes commonly observed in child protection populations, including school disruption, mental health difficulties, substance misuse, legal involvement, placement instability, and relational breakdown, often emerge from the interaction between primary neurodevelopmental impairments associated with prenatal alcohol exposure (PAE) and adverse environments, rather than trauma or attachment disruption alone. This distinction is critical, as neurodisability is frequently misinterpreted as oppositionality, noncompliance, personality pathology, or trauma-related behavior (Streissguth et al., 1996). Consequently, many children with suspected FASD receive trauma-focused interventions while underlying impairments in executive functioning, adaptive functioning, memory, impulse control, and consequential thinking remain unidentified and unsupported. Streissguth reframed these presentations as manifestations of brain-based disability interacting with environmental adversity rather than intentional misconduct. This position has since been reinforced across literature addressing both caregiver needs and professional practice responses (Catterick & Curran, 2014; Charness et al., 2016; Malbin, 2004; Riley & McGee, 2005).

Within this context, the 5-Step Screening Pathway (Curran & Danbrook, 2023a) proposes a clinically and socially relevant framework for differentiating neurodevelopmental disabilities from trauma and other overlapping presentations within child welfare practice. Children with PAE frequently experience trauma, abuse, neglect, disrupted attachment, and placement instability simultaneously, creating significant symptom overlap (Mukherjee et al., 2015). However, trauma-informed practice alone is insufficient when alcohol-related neurodisability remains unrecognized. The 5-Step approach provides social workers with a pragmatic process to identify possible PAE, recognize neurodevelopmental indicators, and shift intervention from behavioral control toward disability-informed support, environmental accommodation, and long-term planning (Curran & Danbrook, 2023a, 2023b) In many respects, the pathway operationalizes Streissguth's central warning that secondary disabilities emerge when primary neurodevelopmental impairments remain misunderstood or unsupported (Streissguth et al., 1996).

6. The human and system costs of ignoring FASD in child welfare

The literature consistently argues that child welfare systems (CWS) continue to struggle to integrate Fetal Alcohol Spectrum Disorder (FASD) into mainstream policy, assessment, and intervention frameworks (Badry & Choate, 2015). Despite decades of evidence regarding the neurodevelopmental impacts of prenatal alcohol exposure (PAE), many systems remain ill-equipped to recognize and respond to the disability-related needs of affected children and young people. Such failures can have significant legal and financial consequences, including litigation arising from the nondisclosure of suspected FASD during foster care and adoption processes (Williams et al., 2011) .

Serious incident and child fatality reviews further demonstrate the consequences of inadequate FASD-informed practice. International reviews have documented cases involving premature death, victimization, placement instability, justice system involvement, and serious harm despite the presence of an FASD diagnosis (Badry & Choate, 2015; Linton, n.d.; Pringle, 2014). The lack of systemic awareness on the post diagnostic needs is a significant factor in preventing such tragedies. Across these cases, diagnosis alone did not translate into protection or appropriate support. Investigations frequently identified failures in assessment, information sharing, care planning, and professional understanding of the neurodevelopmental impacts of prenatal alcohol exposure. In several cases, diagnostic information was poorly communicated or insufficiently integrated into decision-making, resulting in care environments that failed to accommodate disability-related needs. These findings suggest that the challenge lies not only in identifying FASD, but in translating diagnostic knowledge into effective practice. Within child welfare settings, impairments in executive functioning, adaptive behavior, memory, emotional regulation, and social cognition may be misinterpreted as non-compliance or conduct problems. Such misunderstandings can lead to responses that increase risk rather than provide the accommodations and relational supports necessary to promote safety and stability (Hammond et al., 2022; Tan et al., 2022).

As discussed earlier, the voice of social work is largely absent in inquiry's the follow child welfare failings within FASD discourse. This absence is significant given social workers' central roles in assessment, safeguarding, placement, and permanency planning. While inquiry reports frequently identify organizational shortcomings, they often overlook frontline realities, including limited training, unclear practice pathways, and inadequate neurodevelopmental service structures. As Reder, Duncan, and Gray (1993) observed, practitioners may operate within "a kind of intellectual fog" (p. 9) when managing complex child protection concerns without adequate conceptual or organizational support.

Overall, the failure to integrate FASD into child welfare practice has profound implications for children, caregivers, and practitioners. Without systematic screening, disability-informed assessment, and interventions grounded in the social model of disability, children with FASD remain at increased risk of placement instability, criminalization, exploitation, mental health difficulties, and premature mortality (Curran & Danbrook, 2023a). The evidence increasingly supports a shift beyond diagnosis-focused approaches toward biopsychosocial, evidence-informed responses that recognize and accommodate neurodevelopmental need throughout the child welfare continuum.

7. FASD in child welfare: the consequences of systemic non-engagement

Despite decades of evidence documenting the lifelong neurodevelopmental consequences of PAE, many systems remain poorly equipped to recognize and respond to the disability-related needs of impacted children and young people. Greenspan et al. (2016), offered that individuals with FASD are "among those most victimized by the current practice" (p. 244). Globally, child fatality and serious incident

reviews from countries including Australia and Canada have exposed repeated failures in communication, placement planning, professional understanding, and disability-informed care involving children and young people with diagnosed FASD (Badry & Choate, 2015; Linton, 2018). Across many cases, diagnosis alone failed to offer meaningful protection, accommodation, or long-term support. A recurring theme within these failures is the inability to recognize FASD as a complex neurodevelopmental disability requiring environmental accommodation and relational support. The lack of policy, procedure and protocols to manage FASD both pre and post diagnostically is evident is such failures. Consequently, impairments in executive functioning, adaptive behavior, emotional regulation, memory, and social comprehension are frequently interpreted through behavioral or risk-based lenses, often escalating rather than reducing vulnerability. These fatalities also expose the relative absence of the CWSWs voice within the FASD discourse, as their contributions on such failures is muted.

Although social workers occupy central roles in assessment, safeguarding, placement planning, and permanency decision-making, evidence-informed guidance for responding to suspected FASD in practice remains limited. As discussed by Reader, Duncan, and Gray, practitioners may operate within a form of "intellectual fog," a concept that strongly resonates with contemporary child welfare responses to FASD (Paley & O'Connor, 2011). Collectively, the evidence suggests that failure to engage with the neurodevelopmental realities of FASD carries significant consequences for children, caregivers, and practitioners alike. Without systematic screening, disability-informed pathways, and stronger integration of the social model of disability into child welfare practice, children with or suspected of having FASD remain at heightened risk of placement instability, criminalization, exploitation, mental health difficulties, and premature mortality (Curran & Danbrook, 2023a).

8. The biopsychosocial model and FASD

Evidence emerging in recent years has demonstrated that, due to the often-invisible nature of neurodevelopmental impairments associated with PAE, a significant proportion of impacted individuals will never meet the strict diagnostic thresholds required for formal diagnosis. This reality has prompted increasing calls for a more nuanced and practice-informed approach to FASD. As Burd and Popova (2019), observed, child welfare systems cannot realistically diagnose every suspected case of FASD and must instead adopt practical modifications and responsive interventions capable of addressing the needs of this often-invisible cohort. Similarly, Badry and Choate (2015) argued that the FASD field is in "urgent need of what social work can offer." They further contended that any meaningful policy or procedural development within child welfare Services must place the child welfare social worker at its center. Achieving this will require a paradigm shift away from the dominant focus on "epidemiological, diagnostic, and behavioral containment" approaches toward a more relational, developmental, and disability-informed model of practice (p. 29). More recently a group of Canadian doctors stated the diagnosis of FASD now does more harm than good (Eliason et al., 2024). Perhaps the most significant statement regarding FASD diagnosis came in June 2026, when the American Academy of Pediatrics (AAP) acknowledged that "because a diagnosis of an FASD other than fetal alcohol syndrome rests entirely on a history of prenatal exposure" (Waite et al., 2026), many children without documented prenatal alcohol exposure may be unable to receive a formal diagnosis despite exhibiting clinically significant neurodevelopmental impairments. This recognition underscores the limitations of diagnosis as the primary gateway to support and highlights the need for function-based assessment and intervention.

As such, this paper builds on previous work of the author, by situating a proposed pathway for social work practice within a biopsychosocial framework to enhance practitioners' capacity when intervening in cases of suspected FASD (Curran & Danbrook, 2023a, 2023b). Too often, assessments are driven by the presence of a diagnosis or the pursuit of one. While diagnosis has an important role within the FASD discourse, predicating intervention on diagnosis as a first step risks excluding a substantial cohort of individuals who will never meet strict diagnostic criteria, particularly due to the absence of confirmed PAE. Current practice frequently relies on behavioral checklists or observations limited to home and school environments. While useful, these approaches do not capture the full complexity of FASD (Pedruzzi et al., 2021). A robust assessment requires a biopsychosocial approach, one that understands the child within context. Originally articulated by Engel (1977), noting the biopsychosocial model integrates biological, psychological, and social dimensions of health. Rather than reducing difficulties to physiological processes alone, it recognizes the dynamic interaction between brain function and neurodevelopment (biological), cognition and behavior (psychological), and relationships and environment (social). (Engel, 1977; Borrell-Carrió et al., 2004). This framework is particularly relevant in CWS's where complex presentations including FASD, cannot be adequately understood through a single lens. It supports a call for more comprehensive assessment, formulation, and intervention, ultimately improving outcomes through coordinated, person-centered care (Nash et al., 2017).

9. Further prevalence issues in child welfare

FASD prevalence in the general population is estimated at 1–5%; however, rates in child welfare populations are significantly higher. Studies suggest prevalence rates of approximately 16.9% to 18.8% among children in foster care (Popova et al., 2019; Flannigan et al., 2021), with some estimates reaching as high as 25%. Research further indicates that FASD may be 10 to 40 times more prevalent in child welfare populations compared to the general population (Popova & Burd, 2019). A substantial proportion of children involved in care systems remain undetected highlighting the strong association between PAE and system involvement (Maguire et al., 2024; Streissguth et al., 2004). It is important to note that not all children in state care reside in foster homes. CWS also include residential, group, kinship, and alternative care settings, where rates of undetected and undiagnosed FASD are likely even higher due to placement instability and complexity of needs. A further consideration is the need to connect epidemiological data on alcohol use in pregnancy with expected prevalence rates within specific cultural contexts. This has direct implications for CWSW, as the likelihood of FASD within their caseload is shaped by broader population-level patterns of PAE.

10. FASD and child protection practice

The neurodisabilities associated with FASD, or suspected FASD, must be explicitly recognized in child protection protocols because they fundamentally alter how vulnerability is presented, interpreted, and responded to within child welfare systems. Children and young people with FASD frequently display dysmaturity, a significant gap between chronological age and developmental functioning, resulting in behaviors that are often misinterpreted as willful noncompliance rather than manifestations of underlying brain-based impairment (Malbin, 2002). Such misunderstandings increase the risk of punitive responses, placement instability, school exclusion, exploitation, substance misuse, and progression into juvenile justice systems (Hill, 2012; Streissguth et al., 1996) These vulnerabilities become particularly pronounced during early adolescence, when expectations for judgment, impulse control, and risk awareness often exceed neurodevelopmental capacity. This mismatch increases the likelihood of adverse outcomes for adolescents with, or suspected of having, FASD when their needs remain unidentified and unsupported (Streissguth et al., 1996; Svetlana Popova et al., 2017). Supporting this concern, Walker (2014) reported prenatal alcohol exposure (PAE) rates of 21% among children involved with child welfare services, rising to 40% among those subject to Protection Orders

and up to 88% in some care settings.

Embedding FASD-informed frameworks within child protection practice by aligning them with neurodevelopmental and trauma-informed approaches ensures that assessments, safety planning, and permanency decisions account for impairments in executive functioning, adaptive functioning, memory, and social cognition. (Jirikowic et al., 2008; Nash et al., 2015; Tan et al., 2022). Failure to integrate this knowledge risks the systemic neglect of a highly vulnerable population whose needs often remain hidden (Sharpe et al., 2004; Mukherjee et al., 2015). Importantly, FASD-informed risk assessment requires a reconceptualization of "risk" itself. Traditional child welfare assessments frequently prioritize environmental and behavioral indicators, whereas neurodevelopmental functioning may constitute a primary risk variable in young people with suspected or diagnosed FASD. Accordingly, assessments should consider functional alongside chronological age and interpret behaviors as neurocognitive manifestations rather than compliance failures (Badry & Choate, 2015; Malbin, 2002). CWSW's can incorporate structured neurodevelopmental screening (with support) where indicators such as prenatal substance exposure, school exclusion, placement instability, or repeated "non-compliance" are present. A safer, more responsive practice should be provided in response to any identified neurodevelopmental delays, regardless of an etiology.

Given the memory impairments and confabulation associated with or suspected FASD, practitioners should rely on collateral and longitudinal information rather than self-report alone. Equally, risk management should move beyond referral pathways toward practical environmental scaffolding, including structured routines, supported decision-making, monitored peer contact, and supervised technology use. Ultimately, integrating a neurodevelopmental screening into child protection practice requires a shift from asking, "What is this young person doing?" to "What is this young person capable of doing under these circumstances, and what does that mean for their safety?" Such a recalibration is essential if child welfare systems are to recognize vulnerability accurately and provide care planning that reduces, rather than inadvertently amplifies the associated risks.

10.1. The absent voice: Child Welfare Social Workers in the FASD discourse

Researchers have emphasized that FASD is frequently underidentified and misinterpreted within service systems, leading to inappropriate interventions and poor outcomes (Chasnoff et al., 2015; Flannigan et al., 2021). Similarly, Popova et al. (2019) underscore the scale of FASD within care populations, reinforcing the necessity for practitioners to have the skills to recognize and respond to its complex presentations. Importantly, this gap is also reflected in practice-based research. In *Hearing the Voice of Social Workers* (Curran & Danbrook, 2023a), frontline practitioners explicitly called for the development of a clear, structured pathway to guide intervention in cases of suspected FASD, highlighting uncertainty and inconsistency in current responses. Without targeted training in neurodevelopment, trauma-informed care, and functional assessment, social workers remain under-equipped to translate evidence into practice. Addressing this gap requires a concerted investment in professional education and knowledge translation, positioning CWSWs not as peripheral actors, but as key agents in bridging research, policy, and frontline intervention in FASD-informed child welfare systems.

10.2. Embedding FASD in child welfare policy, procedure, and protocol

Policy serves as the foundational commitment of a child welfare organization to recognize FASD as a significant neurodevelopmental and safeguarding issue within practice. Without explicit policy direction, social workers are frequently left navigating suspected PAE cases through generalized behavioral, trauma, attachment, or parenting frameworks that may fail to adequately recognize the underlying brain-based impairments associated with PAE. Policy establishes organizational intent, clarifies accountability, defines priorities for workforce development, and signals institutional recognition that FASD requires systematic consideration within child welfare decision-making. Importantly, policy also creates the administrative legitimacy necessary for agencies to allocate resources toward training, screening pathways, interdisciplinary collaboration, and long-term support planning. Increasingly, child welfare scholars, federal agencies, and practice organizations are calling for explicit policy responses to FASD within child welfare systems, including standardized screening pathways, workforce education, multidisciplinary collaboration, and neurodevelopmentally informed practice frameworks (Sharpe et al., 2004).

Procedure operationalizes policy by outlining how practitioners are expected to respond when concerns relating to PAE or suspected FASD emerge. In the absence of clear procedures, practice often becomes reactive, inconsistent, and dependent upon individual practitioner knowledge or confidence levels. This creates substantial variability across cases and jurisdictions, resulting in missed opportunities for early identification and intervention. Standardized procedures provide social workers with structured guidance regarding information gathering, prenatal history inquiry, screening pathways, referral mechanisms, multidisciplinary consultation, caregiver engagement, documentation practices, and case formulation. Procedures also reduce professional uncertainty and enhance consistency across teams, particularly in high-pressure child protection environments where competing demands often limit reflective practice.

Protocol provides the practical mechanism through which policy and procedure are implemented consistently in day-to-day practice. Protocols translate abstract organizational commitments into actionable, repeatable practice behaviors that can be embedded within frontline child welfare systems (Fixsen, 2005). The implementation of structured screening protocols, such as the 5-Step neurodevelopmental screening pathway, offers practitioners a pragmatic method for recognizing children and youth who may require further assessment or support. Importantly, this protocol helps shift child welfare responses away from purely behavioral interpretations of children's difficulties toward a neurodevelopmentally informed understanding of functioning.

11. Practice frameworks: moving evidence to practice

A practical framework for Child Welfare Social Workers (CWSWs) is provided through the 5-Step Neurodevelopmental Screening Approach (Curran & Danbrook, 2023b), which prioritizes functional assessment over diagnostic labeling and aligns with a biopsychosocial, social model of disability. The approach encourages practitioners to recognize indicators of neurodevelopmental difficulty, gather relevant developmental and prenatal histories, utilize standardized screening tools, analyze patterns of functioning, and facilitate referral for further assessment where indicated. This framework acknowledges that children with, or suspected of having, FASD often present with complex behavioral, cognitive, and adaptive needs that extend beyond the presence or absence of a diagnosis. While a diagnosis may clarify etiology, it does not in itself address the child's day-to-day support needs. Consistent with the recommendations of Burd and Popova (2019), child welfare systems may not be positioned to diagnose all suspected cases of FASD, but they can implement timely and appropriate accommodations. By focusing on functional needs and early intervention, the 5-Step approach provides CWSWs with a practical pathway to improve assessment, care planning, placement stability, and access to support without waiting for a formal diagnosis (Blackburn, 2016; Chasnoff et al., 2015). A brief overview of the five steps follows.

11.1. Genetic screening

Most congenital and neurodevelopmental conditions arise through an interaction between genetic and environmental factors rather than a

single cause (Clarren, 2018). Genetic screening has been used for over 50 years to identify underlying conditions in children (Pasquier et al., 2019). Given that several neurodisabilities present with symptomology overlapping with FASD, genetic testing represents an essential best-practice step in clarifying the etiology of cognitive and behavioral presentations. Genetic screening can help exclude inherited or chromosomal causes of developmental difficulties, although a negative result does not confirm PAE. Ethical practice also requires thorough pre-test counseling, as findings may have wider family implications (Ross et al., 2013). Leading FASD assessment centers, particularly in the United Kingdom, routinely require genetic testing, including microarray analysis, prior to diagnosis to reduce misdiagnosis. Appling a genetic lens to this non-genetic condition greatly helps to improve clinical accuracy of identification (Hoyme et al., 2019; Jamuar et al., 2018).

11.2. Child behavior checklist (CBCL)

The CBCL is a widely used tool assessing behavioral and emotional functioning across key domains, including internalizing and externalizing problems (Achenbach & Edelbrock, 1980). It includes 113 items rated on a 3-point scale. For CWSW, the CBCL offers a structured, low-cost non-stigmatizing way to document behavior without relying on diagnostic labels. This is particularly useful given that many children in care present with trauma-related behaviors that may resemble FASD but stem from environmental adversity.

11.3. Vineland adaptive behavior scales (vineland-2/3)

Adaptive functioning, how well an individual manages everyday life, is a core area of assessment (Edwards & Greenspan, 2010). The Vineland measures communication, daily living skills, socialization, and motor skills, along with maladaptive behaviors (Sparrow, 2011). This tool provides critical insight into functional abilities, supporting care planning regardless of diagnosis.

11.4. Delis rating of executive function (D-REF)

Executive functioning deficits are a hallmark challenge in FASD (Green et al., 2009). The D-REF assesses behavioral, emotional, and cognitive regulation in children aged 5–18 and 19–to late adulthood (Delis, 2012). It includes parent, teacher, and self-report forms, offering a comprehensive view of functioning across contexts.

12. A social model pathway in child welfare

This is an incremental, pre-diagnostic approach, using validated tools such as CBCL, Vineland, and D-REF, cumulating in Step 5 of multidisciplinary discussion, allows CWSWs to identify needs early and plan appropriate supports. This aligns with a social model of disability, focusing on functional needs rather than diagnostic labels. (Brown & Reynolds, 2021; Turk et al., 2019). Evidence highlights executive and adaptive functioning as key areas of difficulty in FASD (Diamond, 2013; Jirikowic et al., 2008). Addressing these through a biopsychosocial lens can improve outcomes for children and caregivers. This approach is supported by practice recommendations, such as those from the Australian Coroner's inquiry (Linton, 2018), which advocate for routine developmental screening at entry into care. Global models, particularly in Canada, demonstrate the effectiveness of structured screening pathways linked to multidisciplinary assessment (Coons-Harding et al., 2019; Shankar, 2015). Overall, early screening combined with a social model framework offers a pragmatic, ethical pathway for improving identification, care planning, and outcomes for children with suspected FASD. Again, all of this is predicated on the belief that a diagnosis if needed, should follow assessment and not be a qualifying criterion for approval of an assessment process.

CWSW need to maintain a high index of suspicion when children present with persistent functional impairments across multiple domains of brain functioning. Indicators may include inconsistent performance, poor response to interventions, placement instability, and repeated breakdowns in care (Curran & Danbrook, 2023a; Engesether et al., 2024; Maguire et al., 2024) Confirmed PAE is essential for diagnosis in the absence of facial features. Documentation should include maternal report, medical records, or collateral sources. Where evidence is unavailable, this should be recorded as “unknown” rather than “negative.” Genetic testing may be required to rule out alternative neurodevelopmental conditions, as FASD symptomology often overlaps with genetically based disorders. Additionally, trauma and FASD frequently co-occur and present with similar behavioral profiles, necessitating an integrated trauma-informed and neurodevelopmental approach to assessment (Paley & O’Connor, 2011). Incomplete assessment increases the risk of misdiagnosis, which is common in this population (Chasnoff et al., 2015). Misdiagnosis leads to mismatched interventions, which often worsen outcomes rather than improve them. FASD presents a unique challenge due to its largely invisible nature. Behavioral overlap with conditions such as ADHD often results in default diagnostic assumptions, reflecting broader systemic tendencies to favor familiar diagnostic narratives over more complex neurodevelopmental formulations. The professional task of differentiating between ADHD and a wide range of hidden neurodisabilities is a mammoth task for the CWSW trying to ascertain what is happening with the child/youth on their case load. This reality underscores the complexity of CWSW practice and highlights the need for enhanced knowledge, structured frameworks, and system-level supports to accurately identify and respond to FASD.

13. Policy, procedure, and protocol needs in CWS responses to FASD

Global research documenting the overrepresentation of children and youth with FASD within child welfare systems presents an urgent call for policy (Jonsson, 2019), leading to the development of procedure's and protocols. Despite decades of evidence demonstrating elevated prevalence PAE and FASD among children involved in foster care, kinship care, residential services, and adoption systems, many child welfare agencies continue to operate without formalized frameworks to aid professional responses to neurodevelopmental disabilities. The glaring absence of coherent of the policy, has contributed to inconsistent practice approaches, fragmented assessments, delayed recognition of neurodevelopmental impairment, and poor permanency outcomes for vulnerable children and families (Badry et al., 2022; Badry & Choate, 2015; Curran & Danbrook, 2023a).

Policy serves as the foundational commitment of a child welfare organization to recognize FASD as a significant neurodevelopmental and safeguarding issue within practice (Shipe et al., 2022). Without explicit policy direction, social workers are frequently left navigating suspected PAE cases through generalized behavioral, trauma, attachment, or parenting frameworks that may fail to adequately recognize the underlying brain-based impairments associated with PAE (Badry & Choate, 2015; Curran & Danbrook, 2023b). Policy establishes organizational intent, clarifies accountability, defines priorities for workforce development, and signals institutional recognition that FASD requires systematic consideration within child welfare decision-making. Importantly, policy also creates the administrative legitimacy necessary for agencies to allocate resources toward training, screening pathways, interdisciplinary collaboration, and long-term support planning.

Procedure operationalizes policy by outlining how practitioners are expected to respond when concerns relating to PAE or suspected FASD emerge. Procedure operationalizes policy by outlining how practitioners are expected to respond when concerns regarding child safety and welfare arise, ensuring consistency in safeguarding and assessment practices (Cameron & Statham, 2006; Shipe et al., 2022). In the absence of clear procedures, practice often becomes reactive, inconsistent, and

dependent upon individual practitioner knowledge or confidence levels. This creates substantial variability across cases and jurisdictions, resulting in missed opportunities for early identification and intervention. Standardized procedures provide social workers with structured guidance regarding information gathering, prenatal history inquiry, screening pathways, referral mechanisms, multidisciplinary consultation, caregiver engagement, documentation practices, and case formulation. Procedures also reduce professional uncertainty and enhance consistency across teams, particularly in high-pressure child protection environments where competing demands often limit reflective practice.

Protocols provides the practical mechanism through which policy and procedure are operationalized consistently in day-to-day practice, serving as the "how to" component of implementation (Proctor et al., 2013). Protocols translate abstract organizational commitments into actionable, repeatable practice behaviors that can be embedded within frontline child welfare systems. The implementation of structured screening protocols, such as the 5-Step neurodevelopmental screening pathway, offers practitioners a pragmatic method for recognizing children and youth who may require further assessment or support (Curran & Danbrook, 2023a). Importantly, protocols help shift child welfare responses away from purely behavioral interpretations of children's difficulties toward a neurodevelopmentally informed understanding of functioning.

14. Global reality in child welfare services

The absence of integrated policy, procedure, and protocol within child welfare systems has broader systemic implications. Children with unidentified FASD often experience repeated placement disruptions, educational instability, involvement with youth justice systems, and worsening mental health outcomes. Caregivers and foster parents frequently report feeling unsupported and underprepared to manage the complex needs associated with neurodevelopmental disability(R. Mukherjee et al., 2013). Social workers themselves may experience professional frustration and decision-making fatigue when traditional interventions repeatedly fail to produce sustainable outcomes. Without organizational frameworks specifically designed to recognize and respond to FASD, systems risk perpetuating cycles of misunderstanding, placement breakdown, and secondary disability.

Importantly, the need for policy, procedure, and protocol is not solely a clinical concern but a child protection and disability rights issue. Child welfare systems routinely intervene to address harm, neglect, and developmental vulnerability; however, without frameworks acknowledging the lifelong neurodevelopmental consequences of prenatal alcohol exposure, services may fail to adequately safeguard impacted children and young people. The integration of FASD-informed policy infrastructures provides an opportunity to align child welfare practice more closely with contemporary understandings of neurodisability, trauma-informed care, and the social model of disability. Such integration also strengthens the capacity of social workers to engage in earlier identification, more effective permanency planning, improved caregiver support, and more realistic expectations regarding child functioning and developmental trajectories.

Ultimately, the development of policy, procedure and protocols would represent a critical step toward addressing the historical invisibility of FASDs within child welfare systems. As epidemiological evidence continues to demonstrate disproportionately high prevalence rates among children in care, child welfare agencies can no longer afford to rely upon informal knowledge or ad hoc practice responses. Structured organizational frameworks are essential if systems are to move beyond crisis-driven interventions toward evidence-informed, neurodevelopmentally responsive, and ethically sustainable practice with children and families impacted by PAE.

15. Conclusion

For decades, FASD discourse has been dominated by prevalence estimates, diagnostic debates, and academic inquiry, while comparatively less attention has been directed toward implementation within frontline child welfare practice. Yet the evidence is unequivocal: children involved with child welfare services experience disproportionately high rates of FASD and associated adverse outcomes, including placement instability, educational disruption, mental health challenges, substance misuse, justice involvement, and premature mortality (Lange et al., 2013; Svetlana Popova et al., 2019; Flannigan et al., 2021). Despite this, many child welfare systems continue to operate without structured screening pathways, disability-informed assessment frameworks, or operational protocols, leaving affected children vulnerable to misunderstanding, misidentification, and inappropriate intervention (Chasnoff et al., 2015).

The 5-Step Screening Protocol (Curran & Danbrook, 2023b) offers a pragmatic, evidence-informed approach to bridging this implementation gap. Although not diagnostic, it supports the early identification of prenatal alcohol exposure (PAE), recognition of neurodevelopmental vulnerabilities, and the application of disability-informed responses. By facilitating earlier recognition, environmental accommodation, and interprofessional collaboration, the protocol has the potential to improve outcomes for children and young people with suspected FASD. Increasingly, the literature suggests that FASD can no longer be viewed as a specialist concern operating at the margins of child welfare practice. Rather, it should be recognized as a core neurodevelopmental issue requiring embedded policy, procedure, protocol, and workforce education across child welfare systems (Badry & Choate, 2015; Greenspan et al., 2016). Furthermore, emerging scholarship argues for movement beyond diagnosis alone toward biopsychosocial approaches that prioritize functioning, adaptation, and support needs regardless of diagnostic status (Eliason et al., 2024).

The challenge facing child welfare is no longer one of awareness but of implementation. Knowledge translation frameworks such as the Knowledge-to-Action model (Graham et al., 2006) provide a pathway for embedding evidence-informed tools into routine practice. For corporate leaders acting as de facto parents to children in care, the responsibility is clear. Continued failure to recognize and respond to neurodevelopmental disability perpetuates inequitable outcomes for some of the most vulnerable children in society. The evidence exists, practical frameworks are available, and the economic and human costs of inaction are increasingly unsustainable (Jonsson, 2019; Lindsay et al., 2008, p. 3). The time has come for child welfare systems to move beyond recognition toward implementation, embedding neurodevelopmentally informed, socially just, and disability-responsive practices that promote dignity, equity, and lifelong wellbeing for children and families impacted by FASD.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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