

# The Blind Spot of Medico-Legal Implications of Prenatal Alcohol Exposure

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“The cognitively challenged are before our courts in unknown numbers. We prosecute them again and again and again. We sentence them again and again and again. We imprison them again and again and again. They commit crimes again and again and again. We wonder why they do not change. The wonder of it all is that we do not change.” Justice Trueman (Ref. 1, para 167)

In the quotation above, Justice Trueman described circumstances that are often manifest among individuals with prenatal alcohol exposure (PAE) involved in the criminal justice system (CJS). Professionals who bear responsibility for protecting the public fail to do so when they apply traditional approaches derived from work with neurotypical individuals to those with PAE effects. I intend to describe some of the reasons for such failures and to recommend the scope of the research, policy, and practice needed to properly identify and adequately support individuals with forensic sequelae of PAE. Only then can we target their unspoken needs and work to break their cycle of criminal involvement. This editorial challenges the practitioner to reconsider normal approaches with a view to accommodating overt and subtle neurocognitive deficits.

Fetal alcohol spectrum disorder (FASD) refers to the neurodevelopmental intellectual disability arising from prenatal alcohol exposure (PAE). As a teratogen, alcohol consumed during pregnancy crosses the placental barrier, affecting early fetal programming under the combined risk factors of malnutrition, stress, consumption of other toxic substances, and genetic predisposition of

the fetus.<sup>2</sup> FASD represents a group of disorders resulting from exposure of the fetus to alcohol. They present as a lifelong disability manifesting behavioral, cognitive, neurological, and functional abnormalities. Diagnosis is based on the presence of significant deficits in growth and facial and neurocognitive variables.<sup>3</sup> Individuals with FASD experience some degree of challenges in their daily living and need support with motor skills, physical health, learning, memory, attention, communication, emotional regulation, and social skills to reach their full potential. Each individual with FASD is unique and has areas of both strengths and challenges.<sup>4</sup>

In this editorial, I wish to alert practitioners and mental health professionals in the justice, correctional, and forensic systems to the following considerations: the role of the practitioner who encounters individuals who repeatedly enter the criminal justice system at various levels because of their hidden neurodevelopmental disability; the ability to recognize overt and subtle manifestations of neurocognitive deficits that contribute to criminal behavior; and the new skills and strategies that would help support neurodevelopmentally affected individuals and minimize victimization.

## Forensic Considerations Relevant to PAE

Scientific knowledge about the mental, social, and criminogenic outcomes of PAE has increased, as evidenced by publication of professional position statements, books, and scientific studies, and the acceptance and recognition of the outcome of PAE.<sup>5</sup> The *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (*DSM-5*)<sup>6</sup> lists the diagnostic categories of other specified neurodevelopmental disorders and neurobehavioral

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disorder associated with PAE (ND-PAE) as conditions for future study, which is an important step.<sup>7</sup> In a recent systematic review, Flannigan and colleagues<sup>8</sup> linked the effects of PAE and increased criminal involvement and recommended that the relationship should inform the future of CJS research, policy, and practice.

It is a challenge for clinicians to recognize, identify, diagnose, and intervene in those with ND-PAE/FASD within the criminal justice system. A conservative estimate is that one-third and one-half of patients in psychiatric outpatient clinics and forensic mental hospitals, respectively, have a history of PAE.<sup>9,10</sup> Similarly, the majority of individuals in the CJS with ND-PAE/FASD are not properly diagnosed as such, notwithstanding initial estimates that up to 60 percent of those in clinical settings who are diagnosed with ND-PAE/FASD and followed over 20 years were in contact with the CJS.<sup>11,12</sup> Only through research findings in case ascertainment studies, and not through clinical service, did up to 70 to 80 percent of all diagnoseable patients become aware of their diagnosis.<sup>11</sup> This means that a large number of individuals traverse the criminal justice system with deficits that aggravate their criminal involvement without ever knowing. Without recognition of such individuals' neurocognitive deficits and the associated negative outcomes, proper and effective diversion programs are unavailable and legal representation and advocacy are handicapped.

Depending on the subject population in active case ascertainment studies, 10 to 17 percent of adults and 23 to 36 percent of youth in custody were diagnosed with ND-PAE/FASD.<sup>8</sup> Systematic review evidence demonstrates that youth with FASD are 19 times more likely to encounter the CJS in comparison to their neurotypical counterparts.<sup>13</sup> Adults with ND-PAE/FASD are 30 times more likely than those without to have contact with the CJS.<sup>5,13</sup> Research is needed to quantify the contribution of PAE to the cost and clinical load of the system.

### **Unawareness of the Disorder**

Relative to established diagnoses, ND-PAE/FASD is a relatively new entity. Most clinicians had no formal instructions in diagnosing and managing the disorder. Psychiatric curricula have neglected this diagnosis even though it is the leading cause of intellectual disability, which contributes to much offending.<sup>14</sup> Deficiencies in diagnosing ND-PAE/FASD are found in the non-forensic clinical environment.<sup>6</sup> Surveys of correctional professionals, psychiatrists, and mental health experts

about familiarity with the effects of PAE show lack of awareness of the deficits of the disorder.<sup>15</sup> Lack of knowledge likely means reduced capacity for diagnosis, and all these deficits make it unlikely that sufficient attention is paid to those with the disorder. Many researchers, therefore, have advocated that additional knowledge, resources, and education for justice professionals are essential to correct this unawareness.<sup>5</sup> Increased awareness of ND-PAE/FASD is important for mental health practitioners and experts in sex offender treatment to facilitate their roles in supporting accused and convicted individuals. The stages of such support should exist on the continuum of services throughout the CJS. This is particularly important when, as experts, practitioners inform the courts about the neurobiological underpinnings of PAE and its relationship to offending behavior and psycho-legal functional abilities.

### **Traditional Assumptions and ND-PAE/FASD**

For the criminal justice system and the law to work, certain assumptions must exist. Individual or personal responsibility promotes the principle and belief that human beings choose and control their actions and destiny. If there is a deviation from expected behavior, punishment is prescribed to manage the negative outcome. This principle is inadequate in capturing the effect of the deficits associated with ND-PAE/FASD. Neurocognitive deficits decrease the capacity for personal responsibility. When these deficits are not recognized through a comprehensive functional assessment, affected persons will be expected to adhere to lawful behaviors even though they do not have the ability to conform.

Evaluators and clinicians without training in identifying ND-PAE/FASD can easily mistake affected persons as competent and criminally responsible when their apparent verbal fluency, for example, overshadows their lack of comprehension. Variation in brain domain functions is characteristic in PAE in the context of the complex array of neurocognitive deficits. Unfortunately, these neurocognitive deficits (e.g., memory, executive function, attention, and language) occur commonly in other disorders, contributing to misdiagnosis. Added to the lack of training is the reduced availability of ND-PAE/FASD specific diagnostic and support programs in the CJS. Not surprisingly, therefore, intervention programs are missing, and the diagnosis of ND-PAE/FASD has not been the focus of forensic mental health specialists.<sup>15</sup>

The patients are wrongly characterized and are neglected in a weakness of clinicians' acumen.

The task for forensic practitioners is to recognize the features of ND-PAE/FASD that distinguish them from other disabilities. For example, the consequences of PAE commonly present in a multifaceted and complex form, found characteristically among those with health inequalities. Disadvantages in social determinants of health, evidence of intergenerational stressors, and themes of stigma, adversity, and comorbidity stand out in individuals diagnosed with ND-PAE/FASD.<sup>16</sup> Knowing and applying these facts should help the clinician's acumen and inform specific identification efforts and targeted intervention.

### **Individuals with PAE in the CJS**

The deficits of PAE in the individual contribute to interactions with the CJS in important ways. This requires intentional focus by clinicians. The interactions span from the disadvantages the individual faces before offending, through the courts and correctional system, and to the framework needed in the community to support public safety.

### **Antecedents of Criminal Involvement**

Certain factors contribute to the overrepresentation of individuals with PAE in the CJS. Empirical research provides a degree of specificity in the antecedents to and progression of adolescent and adult criminal trajectories. The resulting complex array of developmental risk factors includes prenatal, genetic, and epigenetic variables.<sup>12,17</sup> These interact sufficiently with criminogenic variables common in ND-PAE/FASD (such as poor school records, childhood adversity, placement instability, unstable parenting, substance misuse, and unemployment) to elevate the risk of criminal involvement.<sup>13,18</sup> These factors feature prominently when general criminal activities are studied and form a critical element in understanding the mechanism of PAE in criminal activities.

Involvement with the CJS because of PAE-induced neurocognitive deficits of impulsivity, emotional dysregulation, and poor reasoning draws on the expertise of forensic psychiatrists. Because individuals with ND-PAE/FASD are undiagnosed and consequently not provided appropriate support, it is not surprising that the condition is overrepresented in justice, forensic and correctional populations. Adding to the similar and shared precrime factors is the aggravating effect of

low diagnostic capacity, low knowledge base of correctional and forensic mental health system professionals, and the absence of specific programs to address the medico-legal sequelae of PAE. Professionals familiar with the neurocognitive deficits and CJS outcomes of PAE are well placed to adequately support the affected individuals and, by extension, reduce victimization.

### **The Need for Better Markers**

Resource limitations and the high level of rigor involved in multidisciplinary assessment constitute system obstacles to adequately diagnose ND-PAE/FASD. With a limited supply of qualified professionals involved, the search for better markers is appropriate. Individuals with PAE are readily diagnosed with multiple comorbid disorders and conditions given that screening tools include disorders such as ADHD, oppositional defiant disorder, and conduct disorder.<sup>8</sup> No pathognomonic variables currently exist to facilitate recognition of PAE among offenders. Because of the lack of identification, the terms "hidden disorder" or "invisible disability" were ascribed to individuals diagnoseable with ND-PAE/FASD. Natalie Hughes and her colleagues argue this point eloquently after reviewing composite data on youth with PAE.<sup>5,6</sup>

To correct the misdiagnosis and missed diagnosis common in the field of PAE, clinicians should aspire to recognize the features of ND-PAE/FASD. One such factor is the unique facial dysmorphia of shortened palpebral fissure length, smooth and flattened philtrum, and thin upper lip. Identifying the constellation of these identifiable features requires training and only occurs, unfortunately, in about a tenth of all those with PAE.<sup>6</sup> Efforts should target combining the physical features and neuropsychological and social variables to aid identification and diagnosis. Tools and products of such endeavors would be invaluable in establishing the correct diagnosis among offenders in whom confirmation of PAE is more challenging and for whom other mental diagnoses are more often identified.<sup>19</sup>

### **Characteristic Types of Offenses**

If the elevated risk for criminal involvement among individuals with PAE translated into some recognized and agreed upon pattern of offending, such a finding could be used to improve identification given the barriers noted above. Unfortunately, the current level of evidence provides practitioners with no consensus on

the types of offenses associated with PAE. Systematic reviews have failed to delineate such distinct patterns.<sup>20</sup> Studies have suggested that ND-PAE/FASD was overrepresented among a number of offense types, including sexual offenses;<sup>21</sup> system-generated offenses or administrative charges (e.g., failure to attend court);<sup>17,18,22</sup> and offenses against the person, such as theft and domestic violence.<sup>18</sup> Another study reported that FASD was not considered among offenses forming the basis for sexually violent predator determinations.<sup>23</sup> It was suggested that PAE's adaptive deficits in social skills lead to difficulties with boundary violation, diminishing the evidence for intentional and malicious offending.<sup>24</sup> Future research should endeavor to understand the interaction of the neurocognitive deficits and types of offenses and specifically distinguish their effects on moral blameworthiness.

### Pre-Adjudicative Involvement

Law enforcement agents (LEA) have an opportunity to identify individuals requiring mental health attention, diverting some before arraignment before the courts. Such discretionary tasks require the responsible official to recognize signs of mental and behavioral disturbance or intellectual deficits that contribute to the offending. Some of these are subtle and may not be easily detected. When an individual offender with PAE does not grasp the social or legal significance of depriving someone of their property, as is the case in theft, repeated offending may result. Such an individual will intersect with the CJS, as may occur in individuals with PAE related neurocognitive deficits. When these individuals encounter the CJS, their deficits are most often unrecognized and thus not susceptible to diversion or intervention. Their presentation of abnormal executive function, combined with lack of impulse control and deficient social cognition, is an example of the factors associated with criminal involvement. Criminal behavior in ND-PAE/FASD can also be precipitated by the same criminogenic variables that increase the risk of PAE. Examples include parental substance use disorder, maternal depression, low socioeconomic status, and low level of parental education or intellect.<sup>20,21</sup> Practitioners of forensic psychiatry should note these factors as guideposts to first identifying those at risk of PAE. This should inform their duties to advocate crime preventive measures and educate LEAs to recognize the pattern of subtle presentations, such as offenses that arise from gullibility and risk unawareness, and ones suggesting a deficit in cause-and-effect reasoning.

False confession among those with ND-PAE/FASD is another major concern when professionals and LEA are unaware of the specific deficits. In well-popularized cases, the extent of the confessions was elaborate even when the investigative interviewing conforms to expected standards. Canadian (*R v. Henry*)<sup>25</sup> and New Zealand (*Queen v. Pora*)<sup>26</sup> cases raise significant concerns regarding access to justice and fairness. Properly trained LEAs would better understand the role of suggestibility during the pre-adjudicative period.

### Forensic Evaluations in ND-PAE/FASD

#### *Fitness to Stand Trial*

Case law in western civilization recognizes that ND-PAE/FASD meets the threshold of the legal definition of mental disorder and mental defect. This recognition formed the basis by which competency or fitness to stand trial cases were adjudicated.<sup>27</sup>

Because competency relies on cognitive variables that aid understanding and rationality, PAE induced impairments exert a negative effect on how affected individuals navigate adjudicative proceedings. Language abnormalities, also common in some diagnosed with ND-PAE/FASD, add to the complexity of determining fitness to stand trial. Abnormalities in the accused's receptive and expressive language complicates the much-needed communication with their legal representative. Legal practitioners are aware of this and other disadvantages and have responded. The American Bar Association and the Canadian Bar Association separately issued resolutions that recognize the need for enhanced expertise by clinicians who are asked to assess this vulnerable population.<sup>28,29</sup> The following PAE-based deficits can affect the capacity to effectively participate in one's defense: impulsivity, poor judgment, inability to foresee consequences and understand cause and effect, difficulty learning and generalizing from past mistakes, poor and fluctuating memory, deficient social skills, and impaired abstract reasoning.<sup>5</sup> Specifically, impairments in working memory, processing speed, and attention in individuals with PAE are prominently associated with concepts of competence, such as effective and meaningful participation in the legal process.<sup>30</sup>

For individuals with PAE-based impairments, assessment of their deficits should align with the functional capacities required for competence. Decision-making capacities are necessary for instructing counsel, pleading guilty, testifying, and bargaining. Impulsivity, a common finding in individuals with FASD, can lead

some to plead guilty “to get it done with.” An example of this kind of reasoning is the 2019 case of *R v. Keenatch*, where an individual with ND-PAE/FASD pled guilty to multiple charges related to repeated action.<sup>31</sup>

Individuals with FASD may lack true understanding of their circumstances and options as well as what is said to them because of the receptive language delays common in PAE.<sup>32</sup> This then enhances the rate of guilty pleas<sup>31</sup> and diminishes consideration of competence to stand trial. As an example, an individual lacking abstract thinking abilities and given to acting impulsively, could experience difficulty fully appreciating the outcomes of criminal proceedings.<sup>33</sup> McLachlan and colleagues reported the finding that individuals with ND-PAE/FASD have significantly higher rates of impairment in psycho-legal abilities and a considerable within group variability.<sup>15</sup> Reading comprehension and IQ predicted psycho-legal functioning among youth with PAE.<sup>5</sup> The findings raised the importance of comprehensive, individual assessments in advising about the remediation efforts needed to restore competence.

Biological interventions may be promoted to improve inattention, such as the use of stimulants to reduce impulsivity and improve attention in those with PAE.<sup>34</sup> Additional strategies should target relationship building, using simple and concrete language in communication, and parsing complex concepts into more easily understood ideas. A current focus of research is the use of visual aids and cognitive remediation specific to the neurocognitive deficits of ND-PAE/FASD.<sup>35</sup> For those determined to be irremediable, community support, intensive case management, and specific outcome-focused interventions should be part of the risk management focus guiding forensic clinicians in their roles. These considerations should also inform the potential role for diversionary programs in the trial process.<sup>7</sup>

### **Criminal Responsibility**

There is a dearth of cases of ND-PAE/FASD adjudicated as not criminally responsible or not guilty by reason of insanity. This is not surprising, as deficits of judgment, reasoning, planning, and problem solving are not elucidated by experts and presented as explanation for negating criminal responsibility.<sup>36</sup> These deficits, along with deficits in social cognition, language, memory, attention, executive functioning, emotional regulation, and impulse control,

fit within the cognitive prong of the defense.<sup>36</sup> This prompted Wartnik and Carlson to propose that “we should treat people severely affected by FASD as we now treat the criminally insane and others who are otherwise incompetent to stand trial or to be executed due to mental retardation or being under the age 18” (Ref. 37, p 77).

Signs of neurocognitive dysfunction, such as impulsivity and deficits of executive functioning and memory, when present, cast doubt on the accused’s state of mind at the time of the offense. Achieving the threshold of the standard legal definition of insanity used in conditions like psychosis is unlikely in those with ND-PAE/FASD. In fact, unlike the many ND-PAE/FASD cases of incompetence to stand trial, only a handful of cases in Canada were declared not criminally responsible.<sup>38</sup> To argue insanity, deficits in cause-and-effect thinking contributing to offending could be advanced. The reality, however, is that courts have yet to consider such deficits as sufficiently reaching the required threshold compared with features of impaired reality testing found in psychotic disorders.<sup>5</sup> Guina and colleagues identified a deficit in educational curricula regarding intellectual disorders in general contributing to a reduced focus by experts and evaluators.<sup>36</sup>

The suggestion was made a few years ago by Mela and Luther that, in addition to their mitigating effect during sentencing, the deficits of PAE lend themselves to invoking the diminished capacity legal framework.<sup>39</sup> In that regard, manifestations of deficits like impulsivity, poor reasoning, and cognitive inflexibility make it unlikely for affected individuals to conform their conduct to the requirement of the law.<sup>33</sup> Others have demonstrated that the cognitive deficits of FASD, including lack of cause-and-effect thinking, can contribute to failure to learn from mistakes.<sup>40</sup> The courts have rarely found that the threshold was met. A diminished responsibility case was reported in Australia, which resulted in a mitigated sentence in the case of a youth who was accused of murdering his child.<sup>41</sup>

### **Mitigation in Sentencing**

Sentencing considers the degree of responsibility of the offender. Only jurisdictions with schemes for diminished responsibility and the volitional criterion for insanity have allowances relevant to FASD in their legal framework. The behavioral pattern of repeated offending may represent a manifestation of

neurocognitive deficits of FASD. Fortunately, some courts have demonstrated that increased knowledge of FASD on the bench translates into judicial accommodations.<sup>33</sup> Mitigation of sentencing and acknowledgment of rehabilitation and treatability demonstrate such progress, as in the case of *R v. JP*.<sup>42</sup> In the appeal, the initial seven-year sentence for two counts of armed robbery was reduced to five years each, concurrent, for an individual with ND-PAE/FASD.

Cognitive deficits can limit the deterrent effect of imprisonment, questioning the principles of sentencing. The criteria for preventive detention legislation, which depends on predicting who will likely commit a further violent offense rely on criminogenic features that lead to repeated offending. Lack of impulse control, poor awareness of risk, inability to link cause and effect of actions and a general tendency toward rule breaking are the essential elements applied to designate an offender as dangerous. These factors also double as common expressions of the deficits of ND-PAE/FASD.<sup>43</sup> To accommodate deficits of ND-PAE/FASD, judges are crafting and imposing community-based therapeutic sentences instead of depending on the offender to adhere to a set of conditions.<sup>44</sup> Informed forensic practitioners can help support this task. In a Canadian case, the court was persuaded that PAE effects were amenable to interventions to sufficiently allow the offender to be in the community. This meant the offender avoided an indeterminate sentence.<sup>31</sup>

In *Atkins v. Virginia*,<sup>45</sup> the U.S. Supreme Court insinuated awareness and acceptance that executive dysfunction and cognitive deficits should be accommodated in death penalty cases. This should apply as well to FASD. Indeed, researchers reported that, based on FASD evidence, some accused avoided the death penalty.<sup>37</sup> This has not been the outcome in other cases.<sup>46,47</sup>

## Intervention Approaches in the CJS

### Supporting Community Supervision

Case managers and parole and probation officers who are equipped with the right education and training are effective agents of change. By first understanding the brain-behavior relationship and allowing that to inform how they accommodate those with PAE deficits, they adhere to the responsivity principles of effective intervention.<sup>48</sup> Case managers should adopt a modified approach when interacting with those

with PAE effects, using flexible, regular, short-duration check-in and appointment reminders. These have the potential to successfully guide the individual with PAE effects to navigate the community supervision period.

Recognizing the overrepresentation of childhood adverse events in those with ND-PAE/FASD helps shape the supervisors' perspective. This supports their implementation of the relevant trauma informed interventions. Focusing on the individual's strength and collaboratively working to achieve functional goals engages the affected persons. Sensitive approaches by supervisors should include acknowledgment of the disability, validation, and minimizing triggers as the first important steps. Visual aids and nonverbal instructions or icons work best for specific learning difficulties.<sup>49</sup>

### Mentoring and Peer Support

It is important to remember that although this editorial focused on perpetrators of offending who experience the consequences of PAE, the CJS must also serve many individuals with PAE who are victims. They endure hardship, are poorly represented, and their actions or lack thereof deprive them of justice. One unifying fact is that mentoring and peer support are effective approaches to both prevention and intervention. Interchange of personal experience, empathy, and understanding are essential ingredients of the relationship and shape outcomes.<sup>19</sup> The communication pattern of active listening and taking an experiential perspective with the offender are desirable.

## Conclusion

Agencies, professionals, and practitioners in the criminal justice system need to be sensitive to the uniqueness and invisibility of the manifestations of PAE when affected individuals encounter the system. The knowledge and expertise envisioned for practitioners of forensic psychiatry in this editorial, if acquired and practiced, should support individuals at several levels of the judicial process: trial proceedings, competency adjudication, criminal responsibility, sentencing guidelines, parole hearings, and future risk determinations. This would also apply to juvenile adjudications. Effective service to individuals with PAE requires forensic practitioners to attend closely to family histories of addiction, prenatal risk factors, childhood trauma, and early onset of school and

behavioral difficulties, and employ a collaborative strategy with members of multiple agencies.

It is important to follow the observed signs of PAE in individuals with a demand for a multidisciplinary comprehensive brain-based assessment of such persons. Focus, therefore, should be on the brain-based deficits of ND-PAE/FASD predisposing the individual to subsequent social disadvantage. Depending on the nature of the criminal act, some individuals with ND-PAE/FASD might not be appropriate for diversion from punishment; thus, some of these supports must be incorporated into the carceral system. By adapting to the deficits and modifying approaches and expectations, individuals with ND-PAE/FASD can be better supported wherever they may be placed.

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## Unveiling the Blind Spot of the Medico-Legal Implications of PAE

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