


Infants Prenatally Substance Exposed: Long Term Outcomes

Colorado Chapter

Authors: Amanda Bird Gilmartin, MD, and Laurie Halmo, MD
On behalf of the Colorado Hospital Substance Exposed Newborns
Quality Improvement Collaborative Steering Committee

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BACKGROUND:

There is a large body of literature describing long term outcomes for infants prenatally substance exposed (IPSE). Studies are often limited by heterogeneous populations (differences in dose/duration of substance use, polysubstance use, etc.) and social factors (e.g., poverty) which often confound findings. Despite these limitations, increasingly, literature supports that IPSEs are at risk for a variety of negative long term outcomes related to their in utero exposures. *This chart does not represent a comprehensive summary of the literature, but rather aims to highlight major findings in the literature that are relevant for child health care providers.*

Substance	Long Term Outcomes	Level of Evidence
Nicotine	<ul style="list-style-type: none"> Increased risk of obesity, hypertension Increased risk of asthma Increased risk of ADHD Increased risk of nicotine dependence Some suggestion of increased risk of cancer 	Substantial
Alcohol	<ul style="list-style-type: none"> Cognitive impairment (eg, lower IQ) Specific cognitive skills may be impaired (eg executive function, memory) even if global cognitive function (IQ) is within normal limits Difficulty with adaptive skills, social skills Increased risk of ADHD, ODD Increased risk of depression, substance use, some suggestion of increased risk of psychotic disorders (eg schizophrenia) 	Substantial
Cannabis	<ul style="list-style-type: none"> Increased risk of attention problems, reduced cognitive function and reduced academic performance Challenges with executive functioning (impulsivity, hyperactivity) Increased risk of mental health concerns in adolescence (depression, anxiety) Earlier initiation of cannabis use 	Moderate
Amphetamines (includes licit and illicit amphetamines such as methamphetamine)	<ul style="list-style-type: none"> Some data suggesting delayed development of motor skills in the first 2 years of life Heightened emotional reactivity Increased risk of anxiety and depression in toddler/early school years 	Limited
Cocaine	<ul style="list-style-type: none"> Difficulty with sustained attention Difficulty with behavioral self-regulation Increased risk of substance use 	Limited
Opioids (includes licit and illicit opioids)	<ul style="list-style-type: none"> Increased risk of ophthalmologic disorders (eg strabismus, nystagmus) Challenges with executive functioning (attention, impulsivity, hyperactivity) Increased risk of mental health concerns in adolescence (depression, anxiety) Some data suggests decreased cognitive function 	Limited
Benzodiazepines	<ul style="list-style-type: none"> Some data suggests increased risk of decreased cognitive function, reduced academic achievement, impaired motor development, and internalizing behaviors 	Scant
Poverty	<ul style="list-style-type: none"> Increased risks of accidents including accidental death Increased risk of illness including asthma and lung infections Increased risk of neurocognitive effects including unfulfilled potential educational and vocational achievement 	Substantial



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As the table demonstrates, IPSE outcomes are *highly variable*, and concerns regarding neurodevelopmental outcomes are particularly salient. Child health professionals are encouraged to utilize the practical strategies outlined below to help families optimize the post-natal environment and maximize positive childhood experiences.



- What does support look like for you?
- Who is supporting you?
- Who is supporting your child besides you?
- Do you have a list of 2-3 people that you could call to help you with the children if you needed to?

Help families identify and strengthen safe, stable, nurturing relationships.



Screenings to Consider

- **Caregiver**
 - Post-Partum Depression (Edinburgh Postnatal Depression Scale (EPDS))
 - Substance Use: the 5Ps, NIDA Quick Screen, one-question cannabis “Have you used any cannabis products in the past year?”
- **Infant/Toddler/Child**
 - *For development:* Ages and Stages Questionnaire (ASQ-3), Survey of Wellbeing of Young Children (SWYC)
 - *For autism:* Modified Checklist for Autism in Toddlers (M-CHAT-R/F)
- **Psychosocial/Social Drivers of Health (SDOH)**
 - Refer families to resources to assist with housing, employment, childcare, food, and transportation as needed.



Early Intervention (EI)/Child Find

Refer early! Early Intervention (< 3 years) referrals can occur through the online Early Intervention Colorado Centralized Referral System OR call 1-833-733-3734 (833-REFER-EI) OR refer directly to the county’s Early Intervention broker. Child Find (2 yrs 11 mos – 5 yrs) referrals occur through the school district where the child is living.



Parent-child Interaction Support

- Consider referring families for:
- Dyadic therapy modalities such as
 - Child parent psychotherapy (CPP)
 - Parent child interaction therapy (PCIT)



Continuity of Care

Ensuring children have a medical home for regular check ins on growth, development, parenting questions and supports has been demonstrated to improve outcomes for children.



Harm Reduction Techniques

Provide anticipatory guidance— safe sleep, safe and sober caretaking and driving, use lock boxes (substances/medications up, away, and out of sight), carry naloxone, know the Poison Control Number (1-800-222-1222), attend all well-child checks.



Out of Home Care

For children in foster or kinship care, welcome and include biological parents and family members as much as possible.

Suggested Language Chart	
Preferred	Past Language
Substance Use Disorder (SUD)	Addict or Junkie
Alcohol Use Disorder	Alcoholic
Testing negative, Abstinent from substances, not currently or actively using drugs	Clean
Testing positive, person who uses drugs	Dirty
Medication for Opioid Use Disorder (MOUD)	Medication Assisted Treatment (MAT)
Infant prenatally substance exposed (IPSE), newborn exposed to substances prenatally	Addicted baby
Person in recovery or long-term recovery	Former addict
Currently using substances, with active use	Addict
Use (Illicit); Misuse/Non-medical Use (Prescription Medications)	Abuse

As a healthcare provider check your biases around substance use disorder (SUD) and people who experience challenges with SUD. Use welcoming and non-stigmatizing language.



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This chart does not represent a comprehensive summary of the literature. Scan the QR code for more in depth resources. This project is supported by the Centers for Disease Control and Prevention (CDC) Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of cooperative agreements OT38000282 and U2DMC32394 with 100 percentage financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government.