

Preventing Costs, Supporting People: The Case for Investing in FASD

Fetal Alcohol Spectrum Disorders (FASDs) are a group of lifelong body and brain-based developmental disabilities associated with prenatal alcohol exposure (PAE). FASD places an economic strain on our healthcare, education, child welfare, justice, and employment systems. Relevant costs estimates are:

- A **Lifetime cost** per person is \$2.0 to \$2.4 million USD ^{1,2}
- An **Annual cost** per person is \$24 to \$45 thousand USD (amortized lifetime)
- Total US **annual expenditure of** approximately 215 billion USD (using 2% prevalence. ^{2,3}
- **Cost of inaction** per birth cohort is \$1.7 to \$2.0 billion USD/year for new births

These costs are avoided or reduced by prevention, early diagnosis, appropriate services and systemic support. These measures are **far more effective than ignoring this highly prevalent disability**. The cost of inaction—financially, socially, and morally—is far greater than the cost of proactive care.

- Alcohol screening & brief intervention returns \$4-\$5 for each \$1 invested ⁴
- Early diagnosis & coordinated support substantially reduce total costs throughout the lifespan.
- Supportive education/employment reduces long-term justice & disability costs.

FASD is often a non-apparent disability, but FASD is not rare, impacting up to 1 in 20 Americans. ^{5,6} Yet, programs and services addressing childhood disability and maternal health devote far less resources to FASD than its scale demands. FASD is often not included in discussions of disability and systems of care, including education, resulting in missed opportunities for early intervention, prevention, and family supports. Supporting individuals with FASD strengthens entire systems of care. When schools, healthcare providers, and public agencies are prepared to respond to FASD, they perform more efficiently and effectively, benefiting not just those with FASD, but all who rely on these systems.

Healthcare, Education, Welfare, Justice & Lost Productivity Costs

Healthcare

Individuals with FASD have elevated rates of **complex, lifelong medical conditions** that increase healthcare costs. Their medical needs often remain undiagnosed or misattributed, leading to repeated crises and inefficient service use. A recent survey by adults with FASD identified a range of physical health impacts.⁷

Specifically, individuals with FASD:

- Have **3–10× higher overall healthcare costs** than their peers due to hospitalizations, psychiatric care, and chronic disease management.^{8,9}
- Can have **428 identified comorbid conditions**, including congenital malformations, chromosomal abnormalities, and mental disorders. One study showed that **82 % of people with PAE had a co-occurring diagnosis**.^{10,11}
- Show a **higher prevalence of congenital heart defects (CHDs)**, hypertension, and heart murmurs. CHDs are **5x as common among US children with an FASD** compared to those without.¹²
- Have a high (13-40%) incidence of **cardiac anomalies**, including septal defects and outflow tract abnormalities.¹³
- Have an increased risk for **long-term cardiovascular dysfunction**, possibly due to autonomic dysregulation.¹⁴
- Have an increased risk of **Type 2 diabetes** in adulthood, as well as **insulin resistance** and glucose metabolism dysfunction.^{15,16}
- May have **altered pancreatic function** and stress hormone regulation, contributing to obesity and diabetes risk in later life.¹⁷
- Are at increased risk for a **significantly higher BMI and insulin levels**.¹⁸

Education

Most students with FASD require special education supports, including behavior plans and sometimes out-of-district placements. Impacts on education include difficulties with memory, executive functioning, and emotional regulation.¹⁹ Without appropriate interventions, high rates of school suspensions, expulsions, and dropout are common. Children with FASD have high rates of adverse childhood experiences (ACEs), with impacts on behavior.²⁰

- Children with FASD require specialized education plans costing **2–3× more per year** than general education.^{21,22}

Child Welfare

Studies have estimated the prevalence of FASD among children in foster care to be just under 19%, with 30% of children diagnosed with FASD coming into contact with the foster care system.²³ Notably, an overwhelming majority of these individuals did not receive a prior diagnosis, signaling that FASD may be overrepresented in the child welfare system and underrecognized in the general population.²⁴

- Placement instability and increased service requirements elevate costs to **\$50,000–\$100,000/year/child** in care.⁹
- A study found that 86.5% of youth with FASD in child welfare had never been previously diagnosed or had been misdiagnosed.²⁴

Criminal Justice

Cognitive and behavioral traits such as suggestibility, poor impulse control and inability to understand legal proceedings result in increased justice involvement.

- Individuals with FASD are **19× more likely to be incarcerated**.²⁵
- Average U.S. incarceration cost is **\$35,000–\$60,000/year per person**.²⁶

Lost Productivity

Lack of proper FASD identification and support often results in job loss, poverty and housing instability.

- Adults with FASD face high unemployment, often exceeding **70–80%**, with many relying on disability benefits and social services.²⁷

Prevention Is Cost-Effective at All Levels

Primary Prevention (Avoiding PAE)

Public health campaigns, pre-pregnancy education and reproductive health access are critical to preventing PAE. Each prevented case saves \$2.0-2.4M in lifetime costs.

- Universal alcohol screening and brief interventions in primary care **reduce alcohol exposure 20-40%**.²⁸ The front-end cost of screening yields substantial returns over time.
- More screening is needed. A study of obstetricians found that 11% used a validated screening instrument for substance use.²⁹
- The need for prevention is underscored by the finding that low levels of PAE are linked to measurable changes in brain structure and behavior, as well as an increased likelihood of early alcohol experimentation.³⁰

A cost-effective model of primary prevention is the **Parent-Child Assistance Program (PCAP)**, a holistic program for pregnant women and mothers with substance use disorders. The primary goals of PCAP include preventing substance-exposed pregnancies, assisting mothers in obtaining treatment, and assuring that children receive appropriate health care.

³¹

- A report concludes that, “PCAP has the potential for significant cost savings” in addition to “the societal benefits of keeping parents with their children.”
- Specific sources of cost savings through PCAP include reduced dependence on child welfare, fewer substance-exposed pregnancies, increased employment, and reduced utilization of public assistance.
- Temporary Assistance for Needy Families (TANF) was the main source of income for **61% of women entering PCAP compared to only 31% at exit**, according to a report from Washington State.³²

Secondary Prevention (Early Identification & Support)

Early diagnosis, combined with caregiver education and FASD-informed services, reduces the likelihood of adverse life outcomes. Intervention prevents costly outcomes, like school disruptions and incarceration.

- Children diagnosed before age 6 with access to early services are **2–4× less likely** to experience adverse life outcomes.²¹

Tertiary Prevention (Long-Term Interventions)

Community-based supports, case management, employment coaching and supported housing reduce long-term reliance on expensive crisis systems. Programs that are proven to reduce recidivism and improve stability include peer navigation, family support groups and restorative justice alternatives.^{33,34}

Individuals with FASD can lead successful lives when given the right services and support. There are many people with FASD who are thriving, learning and growing in school, living independently, successfully employed, and contributing to their community.³⁵ We can improve outcomes for individuals with FASD and their community, while reducing costs, through a shared commitment to prevention, early intervention, and appropriate support services.

References

¹ Popova, S., Lange, S., Burd, L., & Rehm, J. (2016). The economic burden of FASD in Canada. *Addiction*.

² May, P.A., et al. (2018). Prevalence of FASD among U.S. school children. *JAMA*.

³ Popova, S., Stade, B., Bekmuradov, D., Lange, S., & Rehm, J. (2011). What do we know about the economic impact of fetal alcohol spectrum disorder? A systematic literature review. *Alcohol and alcoholism* (Oxford, Oxfordshire)

⁴ Fleming MF, Mundt MP, French MT, Manwell LB, Stauffacher EA, Barry KL.(2002) Brief physician advice for problem drinkers: long-term efficacy and benefit-cost analysis. *Alcohol Clin Exp Res*.

⁵ Centers for Disease Control and Prevention. Data and Statistics on FASDs.
<https://www.cdc.gov/fasd/data/index.html>

⁶ Centers for Disease Control and Prevention. (2022). *Alcohol consumption and binge drinking during pregnancy among adults aged 18–49 years — United States, 2018–2020*. Morbidity and Mortality Weekly Report, 71(1), 10–13.
<https://www.cdc.gov/mmwr/volumes/71/wr/mm7101a2.htm>

⁷ Vanderpeet, Chelsea, et al. (2025). Beyond the Brain: The Physical Health and Whole-Body Impact of Fetal Alcohol Spectrum Disorders. *Alcohol Research: Current Reviews*

⁸ Amendah, D.D., Grosse, S.D., Bertrand, J., & Johnston, M.V. (2011). Medical expenditures of children in the United States with fetal alcohol syndrome. *Neurotoxicology and Teratology*.

⁹ Popova, S., et al. (2014). Health care burden and cost associated with FASD in Canada. *Child and Youth Care Forum*.

¹⁰ Popova, S., Lange, S., Shield, K., Mihic, A., Chudley, A. E., Mukherjee, R. A. S., Bekmuradov, D., & Rehm, J. (2016). Comorbidity of fetal alcohol spectrum disorder: a systematic review and meta-analysis. *Lancet* (London, England), 387(10022), 978–987. [https://doi.org/10.1016/S0140-6736\(15\)01345-8](https://doi.org/10.1016/S0140-6736(15)01345-8)

¹¹ Clark, C. A., Nakhid, D., Baldwin-Oneill, G., LaPointe, S., MacIsaac-Jones, M., Raja, S., & McMorris, C. A. (2024). Prevalence of co-occurring diagnoses in people exposed to alcohol prenatally: Findings from a meta-analysis. *Journal of affective disorders*, 358, 163–174. <https://doi.org/10.1016/j.jad.2024.05.035>

¹² Dorsey, A. N., Downing, K. F., Deputy, N. P., Weber, M. K., & Howards, P. P. (2025). Prevalence of congenital heart defects among children with and without diagnosed fetal alcohol spectrum disorders, 2016–2022. *Drug and Alcohol Dependence*, 274, Article 112790. <https://doi.org/10.1016/j.drugalcdep.2025.112790>

¹³ Strömblad, K., et al. (1994). Cardiac malformations in fetal alcohol syndrome. *Acta Paediatrica*.

¹⁴ Lindinger, A., et al. (2022). Autonomic and cardiovascular dysfunction in adolescents and adults with FASD. *Frontiers in Neuroscience*.

¹⁵ Chen, W.-J., & Nyomba, B.L.G. (2003). Prenatal alcohol exposure and postnatal metabolic dysfunction. *Am J Physiol Endocrinol Metab*.

¹⁶ Muggli, E., et al. (2017). Endocrine and metabolic implications of prenatal alcohol exposure. *J Dev Orig Health Dis*.

¹⁷ Dobson, C. C., Mongillo, D. L., et al. (2012). Chronic prenatal ethanol exposure increases adiposity and disrupts pancreatic morphology in adult guinea pig offspring. *Nutrition & diabetes*

¹⁸ Zhou, F.C., et al. (2022). Prenatal alcohol exposure and adult metabolic profiles. *Experimental Biology and Medicine*.

¹⁹ Felgueras, N., López-Díaz, J. M., & Garrote, I. (2024). Effects of Developmental Timing on Cognitive and Behavioral Profiles in Fetal Alcohol Spectrum Disorder: Considerations for Education. *Behavioral Sciences*

-
- ²⁰ Kautz-Turnbull, C., Rockhold, M., Handley, E. D., Olson, H. C., & Petrenko, C. (2023). Adverse childhood experiences in children with fetal alcohol spectrum disorders and their effects on behavior. *Alcohol, clinical & experimental research*
- ²¹ Streissguth, A.P., et al. (1996, 2004). Understanding secondary disabilities and outcomes in individuals with FASD.
- ²² Grant, T.M., et al. (2004, 2005). Educational and employment impacts of FASD.
- ²³ Engesether, B., Hoffner, M., Johnson, E., Klug, M. G., Popova, S., & Burd, L. (2024). Prevalence of fetal alcohol spectrum disorder in foster care: A scoping review. *Alcoholism: Clinical and Experimental Research*, 48(8), 1443–1450. <https://doi.org/10.1111/acer.15394>
- ²⁴ Chasnoff, I. J., Wells, A. M., & King, L. (2015). Misdiagnosis and missed diagnoses in foster and adopted children with prenatal alcohol exposure. *Pediatrics*
- ²⁵ Streissguth, A.P., et al. (1996, 2004). Understanding secondary disabilities and outcomes in individuals with FASD.
- ²⁶ Burd, L., et al. (2003). FASD in the Canadian correctional system. *Journal of FAS International*.
- ²⁷ Grant, T.M., et al. (2004, 2005). Educational and employment impacts of FASD.
- ²⁸ O'Connor, M.J., & Whaley, S.E. (2007). Brief intervention effectiveness in prenatal clinics.
- ²⁹ Ko, J. Y., Tong, V. T., Haight, S. C., Terplan, M., Stark, L., Snead, C., & Schulkin, J. (2020). Obstetrician-gynecologists' practices and attitudes on substance use screening during pregnancy. *Journal of perinatology : official journal of the California Perinatal Association*
- ³⁰ Brown, S. A., Jernigan, T. L., & Dowling, G. J. (2023). The adolescent brain cognitive development study. *Health Psychology*.
- ³¹ Parent-Child Assistance Program (PCAP). University of Washington School of Medicine - Addictions, Drug & Alcohol Institute. <https://pcap.psychiatry.uw.edu/>
- ³² “Parent-Child Assistance Program Outcomes Suggest Sources of Cost Savings for Washington State” (2013) Produced by Casey Family Programs and the University of Washington for the University of Washington.
- ³³ FASD United Justice Center Publications and Papers. <https://fasdunited.org/publications-and-papers/>

³⁴ Los Angeles County Department of Health Services. (2016). *Housing for Health: Permanent supportive housing program, 2016 annual report*. Los Angeles County. <https://dhs.lacounty.gov/housing-for-health/>

³⁵ Kautz-Turnbull, C., Adams, T. R., & Petrenko, C. L. M. (2022). The Strengths and Positive Influences of Children With Fetal Alcohol Spectrum Disorders. *American journal on intellectual and developmental disabilities*