Infants with Prenatal Substance Exposure

The 2021 Delaware Epidemiological Profile

Substance Use, Mental Health, and Related Issues

prepared for

Director Joanna Champney and the Delaware Division of Substance Abuse and Mental Health &

The Delaware State Epidemiological Outcomes Workgroup
The Role of the
Delaware State Epidemiological Outcomes Workgroup
and the Purpose of the Epidemiological Profile

All states, including Delaware, received support from the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Substance Abuse Prevention (CSAP) to establish a Statewide Epidemiological Outcomes Workgroup (SEOW). The Division of Substance Abuse and Mental Health (DSAMH) in the Department of Health and Social Services initially supported the SEOW through SAMHSA Strategic Prevention Framework grants and continues to sponsor the SEOW with SAMHSA funding. The SEOW is facilitated by a team at the Center for Drug and Health Studies at the University of Delaware that convenes a network of representatives from over 50 State and nonprofit agencies, community organizations, advocacy groups, and other entities. Formerly known as the Delaware Drug and Alcohol Tracking Alliance (DDATA), the SEOW’s mission is to bring data on behavioral health and associated issues to the forefront of prevention and treatment by pursuing the following goals:

- To build monitoring and surveillance systems to identify, analyze, and profile data from state and local sources;
- To provide current benchmarks, trends, and patterns of substance abuse consumption and consequences;
- To create data-guided products that inform prevention and treatment planning and policies;
- To train agencies and communities in understanding, using, and presenting data effectively.

The annual Delaware State Epidemiological Profile is a valuable data resource for strategic planning, decision-making, and evaluation. Using data that are available on an ongoing basis, the report highlights indicators of mental health and wellbeing, patterns of substance use and its consequences, and risk and protective factors for people in Delaware. The report also highlights crosscutting issues that warrant attention as well as populations that may experience disproportionate risk for these concerns.

This chapter provides an overview of infants with prenatal substance exposure in Delaware. To review the complete report, slides, infographics, and other SEOW data products, please visit the UD Center for Drug and Health Studies Delaware Epidemiological Reports page. Video recordings of select SEOW presentations referenced in this report are also available online.
SEOW Collaborators

Thank you for your participation and commitment to data-driven prevention planning, practice, and evaluation! We are especially grateful to the team at the Delaware Division of Substance Abuse and Mental Health for their guidance and collaboration.

atTAcK Addiction
Bellevue Community Center
Christiana Care Health System
Colonial School District
Delaware Academy of Medicine/Delaware Public Health Association
Delaware Afterschool Network
Delaware Center for Justice
Delaware Coalition Against Domestic Violence
Delaware Council on Gambling Problems
Delaware Courts - Office of the Child Advocate
Delaware Criminal Justice Council
Delaware Criminal Justice Information System
Delaware Department of Education
Delaware Department of Services for Children, Youth and their Families
  Division of Prevention and Behavioral Health Services
Delaware Department of Health and Social Services
  Division of Medicaid and Medical Assistance
  Division of Public Health
  Division of Services for Aging and Adults with Physical Disabilities
  Division of Substance Abuse and Mental Health
Delaware Department of Safety and Homeland Security
  Delaware State Police
  Division of Alcohol and Tobacco Enforcement
  Division of Forensic Science
Delaware Department of State
  Delaware Office of Controlled Substances
    Division of Professional Regulation, Prescription Monitoring Program
Delaware Domestic Violence Coordinating Council
Delaware Guidance Services
Delaware Information and Analysis Center
Delaware Multicultural and Civic Organization
Delaware Prevention Coalition
Delaware State Board of Education
Holcomb BHS/Open Door, Inc.
KIDS COUNT in Delaware, University of Delaware Center for Community Research & Service
La Esperanza Community Center
Latin American Community Center
Mental Health Association in Delaware
Milford School District
NAMI Delaware
Nemours Health and Prevention Services
New Castle County Police Department
Planned Parenthood of Delaware
Red Clay Consolidated School District
Sun Behavioral Delaware
Sussex County Health Coalition
Transitions Delaware
Trauma Matters Delaware
United Way of Delaware
University of Delaware
  College of Health Sciences
  College of Arts and Sciences
  Partnership for Healthy Communities
  Student Health & Wellness Promotion
Wesley College
West End Neighborhood House
Wilmington University

SEOW Facilitator Team at the University of Delaware Center for Drug and Health Studies: Cheryl Ackerman, Jessica Arnold, Rochelle Brittingham, David Borton, Darryl Chambers, Miller Finkelstein, Bill Gratton, Stephanie Ha, James Hightberger, Dana Holz, Steve Martin, Sharon Merriman-Nai, Dan O’Connell, Laura Rapp, Rachel Ryding, Meisje Scales, Rachael Schilling, Eileen Sparling, Wenjin Wang.

If your organization is interested in becoming an SEOW Collaborator, please contact Meisje Scales at: mjscales@udel.edu.
# Table of Contents

Table of Figures  
Notes on Data Reporting and Interpretation  

1. **Infants with Prenatal Substance Exposure**  
   1-1  
   National Overview  
   Delaware Overview  

2. **References**  
   Infants with Prenatal Substance Exposure  
   Data Sources  


# Table of Figures

Figure 1: Comparison of IPSE birth notifications to DFS .......................................................... 1-3  
Figure 2: IPSE birth notifications by county, 2020 .................................................................. 1-4  
Figure 3: IPSE birth notifications by 1, 2, or more substances .................................................. 1-4  
Figure 4: Prevalence of substances in single substance exposure among IPSE notifications ....... 1-5  
Figure 5: Prevalence of substances in 2 substance exposure among IPSE notifications .......... 1-6  
Figure 6: Prevalence of substances in 3 or more substance exposure among IPSE notifications . 1-7  
Figure 7: Table of maternal risk factors among cases involving IPSE births .............................. 1-8  
Figure 8: Mothers engaged in treatment at time of birth ............................................................ 1-9  
Figure 9: Placement following IPSE notifications after birth .................................................. 1-10  
Figure 10: Snapshot of DFS custody cases .............................................................................. 1-10  
Figure 11: Plans of Care prepared ............................................................................................ 1-11  
Figure 12: DFS Referrals for mothers, fathers, and child safety agreements .......................... 1-11
Notes on Data Reporting and Interpretation

In order to protect the anonymity of respondents and to ensure that the data reported meet certain statistical standards, the Center for Drug and Health Studies (CDHS) at the University of Delaware has established a set of guidelines for reporting and interpreting data from surveys that it administers to students across the state. As a result, in the Delaware State Epidemiological Profile, data in some tables and figures may be aggregated or otherwise reported differently than in years prior. The following notes summarize the guidelines for interpreting data presented in this report and provide an overview of changes relevant to this year:

- **Reporting small numbers:** For any estimate where the raw number of responses is less than 30, no statistical estimates are reported. Statistics computed from such a small proportion of the total number of students may be unreliable, inflating the significance of existing relationships in the data, and among some special populations, may put individuals at risk of being identified. In some data products such as our heat maps, multiple years of data have been combined in order to increase the sample sizes to a reportable figure.

- **Rounding:** All figures from Delaware School Survey (DSS) are rounded to the nearest whole percent. As such, in some cases the cells in a table may add up to slightly more or less than 100%.

- **Missing Observations:** In our analysis, any missing observations (responses) are not calculated into the total percentages. Because different questions have varying numbers of missing responses, the total sample size and percent missing may fluctuate slightly from question to question. This is due to a few factors:
  - Students may not answer all questions on a survey, particularly those towards the end if they run out of time or they tire of answering questions.
  - Students may also skip or decide not to respond to certain questions for various reasons (e.g., if they fear their responses will not be kept confidential; if they consider the question too personal or sensitive; if they do not understand the question; etc.)

- **Discrepancies in Reporting:** In some instances, there may be slight differences in estimates reported by the Center for Drug and Health Studies compared to those reported by other state or federal entities for the same data source. In most cases this is due to differing practices in rounding or handling missing observations in the data and does not substantially impact the overall prevalence estimates, trends, and relationships among these data points.

- **Statistical Significance:** Unless otherwise indicated, all reported correlations between variables are statistically significant at the $p<.05$ level. Null hypothesis testing, used to estimate statistical significance, provides an estimate of the likelihood that the relationship between two indicators is not due to random chance. If the $p$-value for a
given crosstab is less than .05, this suggests that in 95% of cases, the correlation between the relevant variables is because there is a relationship between them.

- **Weighted Data:** Weighting data is a correction technique that compensates for nonresponses, helps correct for unequal probabilities of being selected within the sample, and helps ensure that the sample drawn is representative of the Delaware student population. If data is weighted, there will be a notation indicating the data is weighted for the specific fact, figure, or table.
  - **A note about 2019 Youth Risk Behavior Survey (YRBS) Data:** In previous years, Delaware received weighted Delaware YRBS survey data from the CDC for both middle and high school samples. However, during the 2019 administration, participation rates for the Delaware high school survey did not meet the required threshold for weighting the data. Therefore, this report only includes 2019 middle school findings from the YRBS. Whenever available, trend data from the CDC Youth Online Data Portal is also reported. Additional high school YRBS data from previous years may be requested by following the Delaware Division of Public Data Information & Request Process.

- **Pandemic Impacts on Data Collection:** In 2020, the advent of the COVID-19 pandemic and subsequent school closures and shifts to remote learning greatly impacted our ability to collect school survey data. As a result, in 2020, we are unable to report any data from the Youth Tobacco Survey (YTS) for middle or high school, or from the Delaware School Survey (DSS) for 5th and 11th graders. We are, however, able to report figures from the 8th grade Delaware School Survey, based on responses from 3,799 respondents.
2021 DELAWARE STATE
EPIDEMIOLOGICAL PROFILE
SUBSTANCE USE AND RELATED ISSUES
1. Infants with Prenatal Substance Exposure

National Overview

Infants with prenatal substance exposure (IPSE) to opioids and other drugs are at increased risk for a host of challenges to healthy development. In addition to physical health risks related to direct substance exposure, continued substance use by the parent or caregiver may likely contribute to an unstable home life for the infant. Substance use is often identified among child abuse and neglect cases within child welfare systems (Child Welfare Information Gateway, 2014). Such traumas, in turn, are associated with increases in risk behaviors and negative health outcomes throughout the child’s lifespan. According to the CDC, the rate of women with opioid-related diagnoses at the time of delivery is on the rise; 2017 data from the Healthcare Cost and Utilization Project indicates that seven out of every 1,000 babies born are diagnosed with neonatal abstinence syndrome, a group of conditions that can develop when newborns experience withdrawal from specific substances (CDC, n.d.).

Delaware Overview

In Delaware, the Office of the Child Advocate tracks notifications of infants with prenatal substance exposure (IPSE) and examines associated characteristics. In October 2016, Delaware received a Substance-Exposed Infants In-Depth Technical Assistance (SEI-IDTA) grant from the National Center on Substance Abuse and Child Welfare. Governor Carney’s “Action Plan for Delaware,” published in January 2017, included the reduction in number of children born exposed to substances as one of his administration’s primary policy objectives (Transition Team Report, 2017). In Spring 2018, the Delaware General Assembly passed “Aiden’s Law,” which requires healthcare professionals to notify the Delaware Division of Family Services (DFS) of substance-exposed births and to provide for a collaborative, coordinated, and multidisciplinary plan of safe care (POSC) for the infant and their affected family or caregivers. As of August 2018, Delaware became the first state with universal implementation of POSCs at all birthing hospitals (Delaware Office of the Child Advocate, 2021).

In 2020, 702 cases of infants with prenatal substance exposure were reported in Delaware. Plans of safe care (POSC) were established for 653 cases.

Marijuana was the most commonly identified substance among infants with exposure to one or two substances, and opioids were most commonly identified in cases of polysubstance exposure. Fentanyl exposure has increased over time and was present in 92 cases.
IPSE notifications increased from 2015 through 2019. In 2020, 702 notifications were made, three fewer than reported in 2019 (Delaware Office of the Child Advocate, 2021). Two out of three cases involved a single substance exposure, with marijuana the most commonly identified substance. Among the 129 births involving exposure to two substances, marijuana was most prevalent followed by methadone and opioids. In cases of polysubstance exposure (three or more substances present at birth) opioids followed by methadone, fentanyl, and cocaine were most commonly identified. Fentanyl exposure has increased over time and was identified in 92 cases of IPSE births.

Among the more dramatic findings, 40% of the mothers who gave birth to prenatally substance exposed infants report that they themselves have a history of involvement with family services as a youth or a history of childhood trauma. More than half (56%) report a mental health condition, although the rate was slightly lower (47%) among infants born with exposure to marijuana only (Delaware Office of the Child Advocate, 2021).

Early, coordinated intervention and family support are critical to ameliorating negative impacts of prenatal substance use. In 2020, POSCs were established for 653 cases with the father identified as a plan participant in 371 of them. Pediatric referrals were made in 346 of these cases, and child safety agreements were made in 189. DFS provided 288 referrals for services for mothers and 57 referrals for fathers. With these supports, in 88% of 2020 IPSE notifications, the infant remained in the home with the mother at the time of discharge. The following figures highlight key findings from the 2020 program review by the Office of the Child Advocate.
Five Year Comparison of SEI Notifications to DFS, 2015-2020

Figure 1: Comparison of IPSE birth notifications to DFS

Note: The figure depicts the annual count of IPSE notifications made to the Division of Family Services from 2015 to 2020.

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

Back to table of figures
2020 IPSE Notifications by County (count and percentage)

Figure 2: IPSE birth notifications by county, 2020

2020 Extent of Substance Exposure (count and percentages)

Figure 3: IPSE birth notifications by 1, 2, or more substances

Note: The figures include both the count and percentage of a given category.
Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

Back to table of figures
### 2020 IPSE Notifications

#### Prevalence of Substances in Single Substance Exposure

(n=466)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCP</td>
<td>1</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>1</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>2</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>2</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>3</td>
</tr>
<tr>
<td>Cocaine</td>
<td>8</td>
</tr>
<tr>
<td>Suboxone</td>
<td>18</td>
</tr>
<tr>
<td>Subutex</td>
<td>24</td>
</tr>
<tr>
<td>Opioids</td>
<td>27</td>
</tr>
<tr>
<td>Methadone</td>
<td>36</td>
</tr>
<tr>
<td>Marijuana</td>
<td>344</td>
</tr>
</tbody>
</table>

**Figure 4:** Prevalence of substances in single substance exposure among IPSE notifications

Note: The figure includes the count of cases for each identified substance among single substance exposures.

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

[Back to table of figures]
2020 IPSE Notifications
Prevalence of Substances in Two Substance Exposure (n=129)

Figure 5: Prevalence of substances in 2 substance exposure among IPSE notifications

Note: The figure includes the count of cases for each identified substance among two substance exposures.

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

Back to table of figures
2020 IPSE Notifications
Prevalence of Substances in Poly (3 or More) Substance Exposure (n=89)

Figure 6: Prevalence of substances in 3 or more substance exposure among IPSE notifications

Note:
The figure includes the count of cases for each identified substance among poly (3 or more) substance exposures.

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

Back to table of figures
# 2020 IPSE Notifications

## Maternal Risk Factors, 2017-2020

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFS History/Trauma as Child</td>
<td>40%</td>
<td>43%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Mental Health Condition</td>
<td>34%</td>
<td>46%</td>
<td>56%</td>
<td>56%</td>
</tr>
<tr>
<td>Prior IPSE Birth</td>
<td>28%</td>
<td>25%</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>Prior DFS Substantiation</td>
<td>-</td>
<td>9%</td>
<td>10%</td>
<td>-</td>
</tr>
<tr>
<td>Unknown/Unnamed Father/Partner</td>
<td>-</td>
<td>16%</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>Engaged in SUD/MAT/MH Treatment (at time of Birth)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>38%</td>
</tr>
</tbody>
</table>

Figure 7: Table of maternal risk factors among cases involving IPSE births

Note: “-” No data was reported for a specific factor during that year.

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

[Back to table of figures]
2020 IPSE Notifications

Engaged in Treatments Services at Time of Birth Event

All Mothers/All Substances: 702

- 430, 61% (Treatment)
- 272, 39% (No Treatment)

Figure 8: Mothers engaged in treatment at time of birth

Note: Treatment includes MAT, mental health, substance use, or pain management treatment.

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

Back to table of figures
2020 IPSE Notifications

Placement

Remain in Home vs. Out of Home (702 cases)

<table>
<thead>
<tr>
<th>Placement Type</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Care Facility</td>
<td>1</td>
</tr>
<tr>
<td>Death (PICU)</td>
<td>1</td>
</tr>
<tr>
<td>Private Adoption</td>
<td>4</td>
</tr>
<tr>
<td>Out of State</td>
<td>5</td>
</tr>
<tr>
<td>Relative Safety Agreement</td>
<td>14</td>
</tr>
<tr>
<td>Guardianship</td>
<td>21</td>
</tr>
<tr>
<td>DFS Custody</td>
<td>38</td>
</tr>
<tr>
<td>Remained in Home</td>
<td>618</td>
</tr>
</tbody>
</table>

Figure 9: Placement following IPSE notifications after birth

Snapshot of DFS Custody Cases (n=38)

Extent of Exposure

- 1 Substance: 17, 45%
- 2 Substances: 8, 21%
- 3+ Substances: 13, 34%

Most Prevalent Substances

- Marijuana: 12
- Fentanyl: 12
- Methadone: 16
- Opiates: 18
- Cocaine: 21

Figure 10: Snapshot of DFS custody cases

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.  
Back to table of figures
2020 IPSE Notifications

Plans of Safe Care Prepared (n=653)

![Bar chart showing plans of care prepared by DFS, Contract Agency, and MAT Provider]

Figure 11: Plans of Care prepared

### DFS Referrals for Services

<table>
<thead>
<tr>
<th></th>
<th>For Mother</th>
<th>For Father/Other Caregiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plans of Safe Care Prepared (POSC) by DFS:</td>
<td>437</td>
<td></td>
</tr>
<tr>
<td>Father identified as POSC participant:</td>
<td>371</td>
<td></td>
</tr>
<tr>
<td>Child Safety Agreement with POSC:</td>
<td>189</td>
<td></td>
</tr>
<tr>
<td>Referrals made</td>
<td>288</td>
<td>57</td>
</tr>
<tr>
<td>No referrals made</td>
<td>149</td>
<td>314</td>
</tr>
</tbody>
</table>

Figure 12: DFS Referrals for mothers, fathers, and child safety agreements

Source: Delaware Infants with Prenatal Substance Exposure 2020 Year in Review, Division of Family Services, State of Delaware, Office of the Child Advocate.

Back to table of figures
2. References

Infants with Prenatal Substance Exposure


### Data Sources

<table>
<thead>
<tr>
<th>Data Instrument</th>
<th>Most Recent Data</th>
<th>Trend Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delaware’s Annual Traffic Statistical Report</td>
<td>2020</td>
<td>-</td>
</tr>
<tr>
<td>Delaware Behavioral Risk Factor Surveillance System (BRFSS)</td>
<td>2019</td>
<td>-</td>
</tr>
<tr>
<td>Delaware Prescription Monitoring Program (PMP)</td>
<td>2020</td>
<td>2012- 2020</td>
</tr>
</tbody>
</table>
| Delaware School Survey (DSS) – 5th and 11th grades 8th grade* | *2019
2020                                                   | *1999 - 2019
1999 - 2020                                           |
| Delaware Youth Risk Behavior Survey (YRBS) – High School | 2017             | 1999 - 2017          |
| Delaware Youth Risk Behavior Survey (YRBS) – Middle School | 2019             | 1999 - 2019          |
| DOMIP (Delaware Opioid Metric Intelligence Program)   | 2020             | -                    |
| Monitoring the Future – 8th, 10th, and 12th grades    | 2020             | 1999 - 2020          |
| Performance Measures, Delaware                        | 2018             | 2014-2019            |
| National Survey on Children’s Health (NSCH)           | 2019             | 2016 - 2019          |
| National Survey on Drug Use and Health (NSDUH)        | 2018-2019        | 2002 - 2019          |
| Delaware Infants with Prenatal Substance Exposure     | 2020             | 2015-2020            |
| Treatment Admissions Data                             | 2019             | -                    |
In addition to the data sources for the figures and tables in the 2021 report, the following data sources are also cited throughout the narrative:

- America’s Health Rankings
- American Psychological Association
- Bureau of Labor Statistics
- Center for Drug and Health Studies, University of Delaware
- Crisis Text Line
- Delaware Department of Education
- Delaware Department of Health and Social Services, Division of Public Health, My Healthy Community
- Delaware Department of Safety and Homeland Security, Division of Forensic Science
- Delaware Household Health Survey
- Drug Enforcement Administration
- KIDS COUNT in Delaware
- KFF
- National Academies of Sciences, Engineering, and Medicine
- National Center for Health Statistics
- National Conference of State Legislatures
- National Institute on Alcohol Abuse and Alcoholism
- National Institute on Drug Abuse
- National Institutes of Health
- National Institute on Mental Health
- Rapid Assessment of Pandemic Impact on Development – Early Childhood
- RTI International
- State of Delaware Economic Development Office
- The Trevor Project
- U.S. Census Bureau
- U.S. Centers for Disease Control and Prevention
- U.S. Health Resources and Services Administration