



Infants with Prenatal Substance Exposure

The 2022 Delaware Epidemiological Profile

Substance Use, Mental Health, and Related Issues

prepared for

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Delaware Division of Substance Abuse
and Mental Health*

&

*The Delaware State Epidemiological
Outcomes Workgroup*



The annual Delaware Epidemiological Profile is a publication of the Delaware State Epidemiological Outcomes Workgroup (SEOW) project. Funding for the SEOW has been provided by the Department of Health and Social Services, Division of Substance Abuse and Mental Health through funding from the Substance Abuse and Mental Health Services Administration (SAMHSA). Please address all inquiries to M.J. Scales, MPH, CPS, University of Delaware [Center for Drug and Health Studies](mailto:mjscales@udel.edu), Department of Sociology and Criminal Justice: mjscales@udel.edu.



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 approximately 55 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 efforts 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. 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
Beebe Healthcare
Children and Families First
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 Corrections
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 Overdose System of Care
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
Network Connect
New Castle County Behavioral Health Unit
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 States Department of Justice
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

We would like acknowledge the SEOW Facilitator Team and others from the University of Delaware Center for Drug and Health Studies and for their contributions to the 2022 Epidemiological Profile:

Jessica Arnold, Rochelle Brittingham, David Borton, Darryl Chambers, Bill Gratton, Stephanie Ha, James Highberger, Dana Holz, Sharon Merriman-Nai, Dan O’Connell, Laura Rapp, Rachel Ryding, Meisje Scales, Rachael Schilling, Eileen Sparling, and Madeline Stenger.

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

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Notes: 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 (i.e., 30 or above).
- **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](#).
- The 2021 Delaware School Survey (DSS) is administered annually to students in 5th, 8th, and 11th grades of participating public schools. There is one version designed for 5th graders and a secondary version for 8th and 11th graders. These data are important for monitoring behavioral health among youth and are included throughout the report. The sample sizes for the 2021 DSS are:
 - 5th grade: 2,601
 - 8th grade: 2,896
 - 11th grade: 1,597
- Pandemic Impacts on Data Collection: Since 2020, the COVID-19 pandemic has greatly affected data collection of all kinds. This report compiles the most recently accessible state and national data available to provide a comprehensive profile of behavioral health in Delaware. Given that the timing and methods of various data survey administrations may have changed within the past several years, it will be important to consider this when interpreting trends.
 - Prior to the onset of the COVID-19 pandemic, the Delaware School Survey was administered at participating schools in person and using paper and pencil copies. To accommodate the new pandemic-related protocols that were put in place when in person learning resumed, in 2021, the survey was administered to students using an online format. Data from the 2021 survey should be interpreted with this in mind, especially when comparing trends against previous years, as changes in the survey format may impact student participation in unknown ways.

A Note on Word Choice Used in this Report:

Language frames how we collectively think about behavioral health and is continuously evolving. The SEOW Facilitator Team strives to use word choices that are accurate, respectful, free of stigma, strength-based, trauma-informed, and inclusive and culturally sensitive in our data products. However, much of the data and information we report are drawn from other sources. To preserve accuracy, whenever possible, we use the words, phrases, and data labels that are used in the original sources even if these terms are not necessarily the terms we would use as researchers, practitioners, or prevention specialists. When it is necessary to edit an SEOW product in a way that uses different terminology from the original data source, we include the original phrasing in the accompanying notes.

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). Parental substance use disorders, in turn, are associated with increases in risk behaviors and negative health outcomes for the child throughout their lifespan. After peaking in 2017 at 7.3 cases of neonatal abstinence syndrome per 1,000 newborn hospitalizations, national rates declined to 6.8 cases per 1,000 in 2018 and declined again to 6.3 per 1,000 in 2019 (Agency for Healthcare Research and Quality, 2022).

Although Delaware rates of neonatal abstinence syndrome cases have declined steadily since 2016, they are among the highest in the U.S. at 18.8 per 1,000 newborn hospitalizations.

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.

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).

IPSE notifications increased from 2015 through 2019. According to the most recently available program data, 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%) of mothers report a mental health condition.

According to the Agency for Healthcare Research and Quality (AHRQ), Delaware rates of neonatal abstinence syndrome have been on the decline since 2016, from 26.4 per 1,000 newborn hospitalizations to 18.8 per 1,000 in 2019. However, this is nearly three times the national rate and Delaware ranks among the highest in the U.S. (Agency for Healthcare Research and Quality, 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 the most recently available key findings from the 2020 program review by the Office of the Child Advocate.¹

¹ The Delaware Infants with Prenatal Substance Exposure 2020 Program in Review data was provided by Jennifer Donahue, Esq., Investigation Coordinator, Office of the Child Advocate and Trenee Parker, MA, Director, Division of Family Services, Delaware Department of Services for Children, Youth & Their Families.

Five Year Comparison of SEI Notifications to DFS, 2015-2020

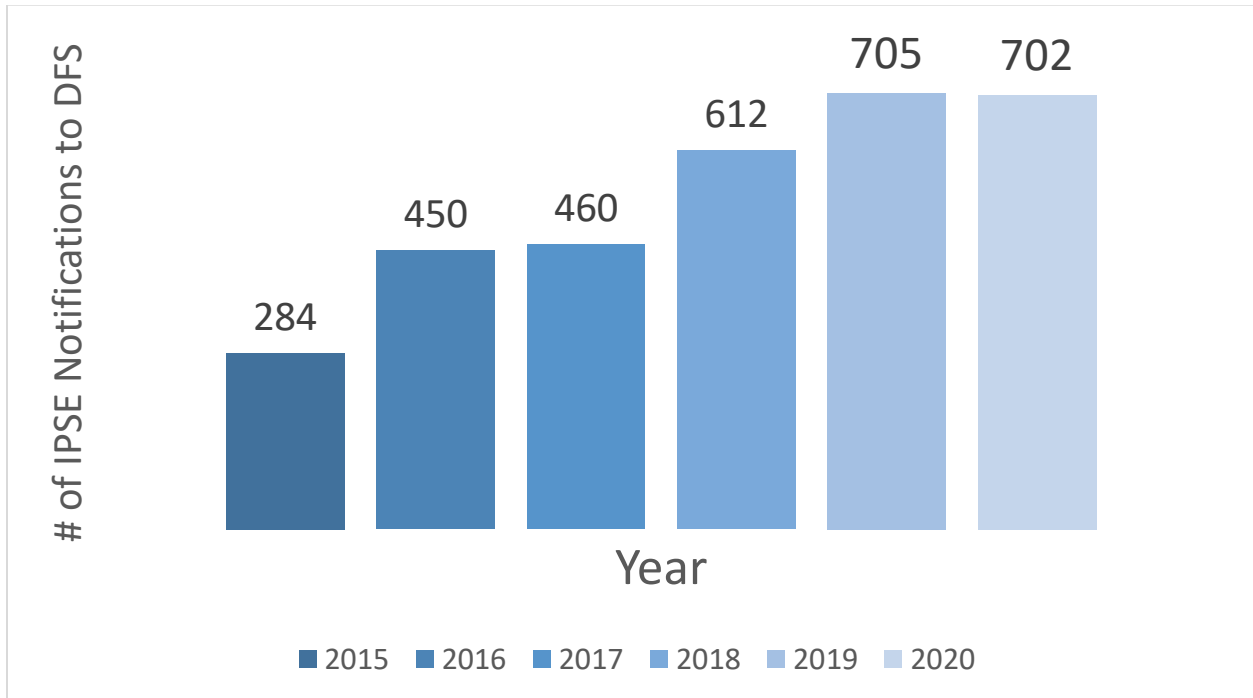


Figure 1: Comparison of IPSE birth notifications to DFS

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.

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2020 IPSE Notifications by County (count and percentage)

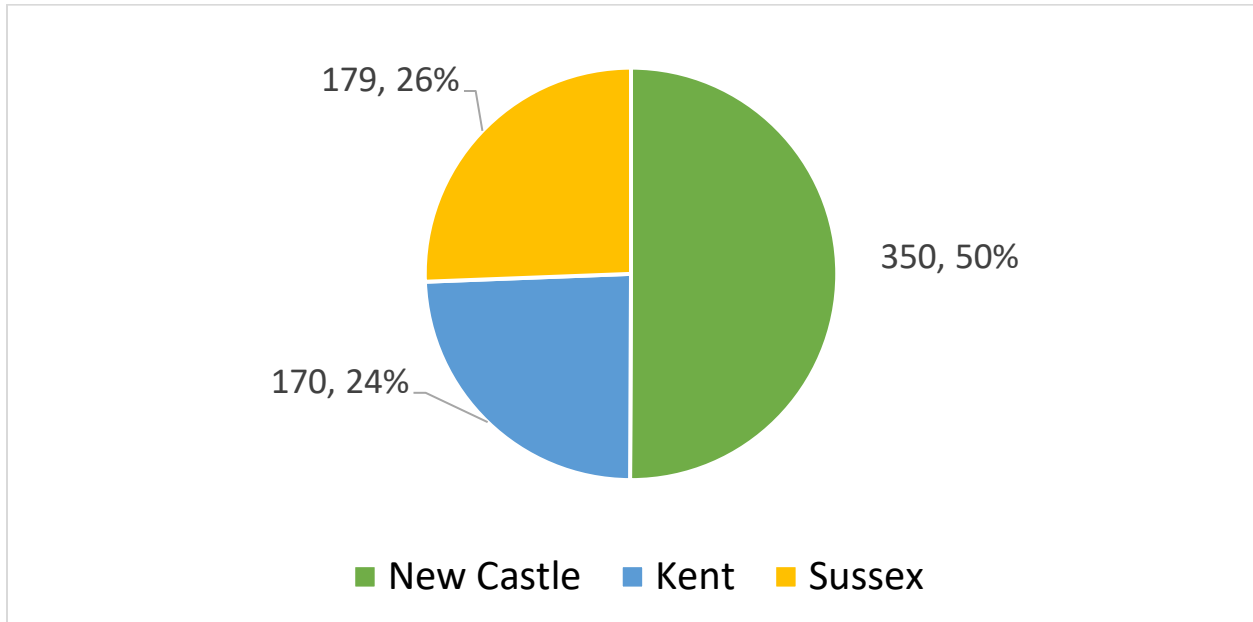


Figure 2: IPSE birth notifications by county, 2020

2020 Extent of Substance Exposure (count and percentages)

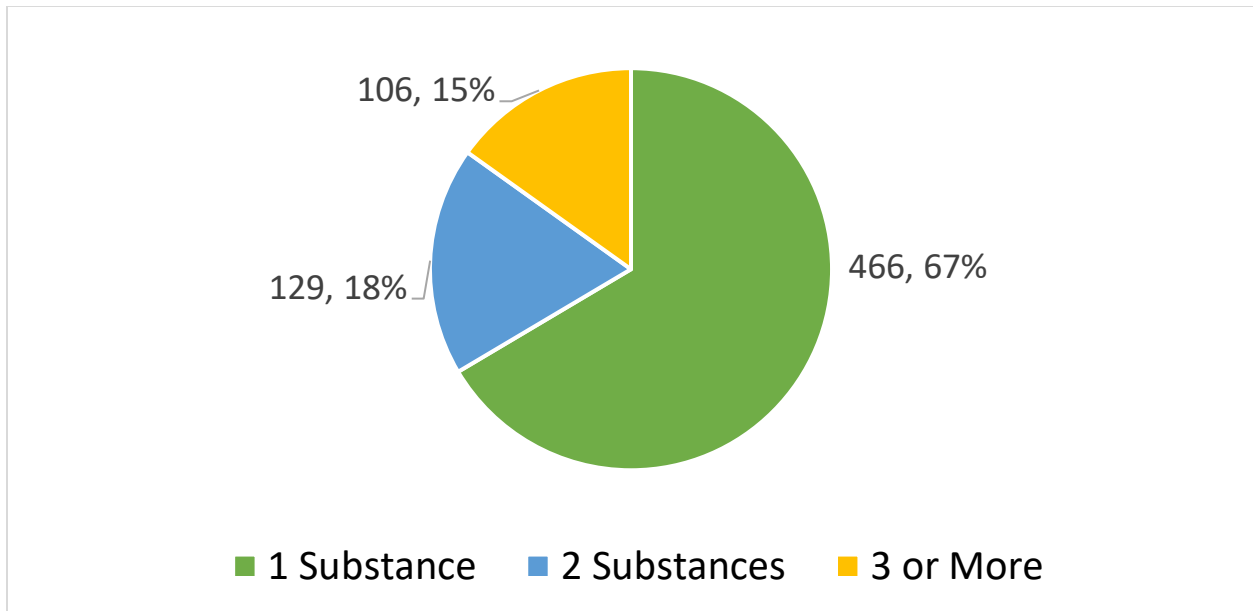


Figure 3: IPSE birth notifications by 1, 2, or more substances

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.

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2020 IPSE Notifications Prevalence of Substances in Single Substance Exposure (n=466)

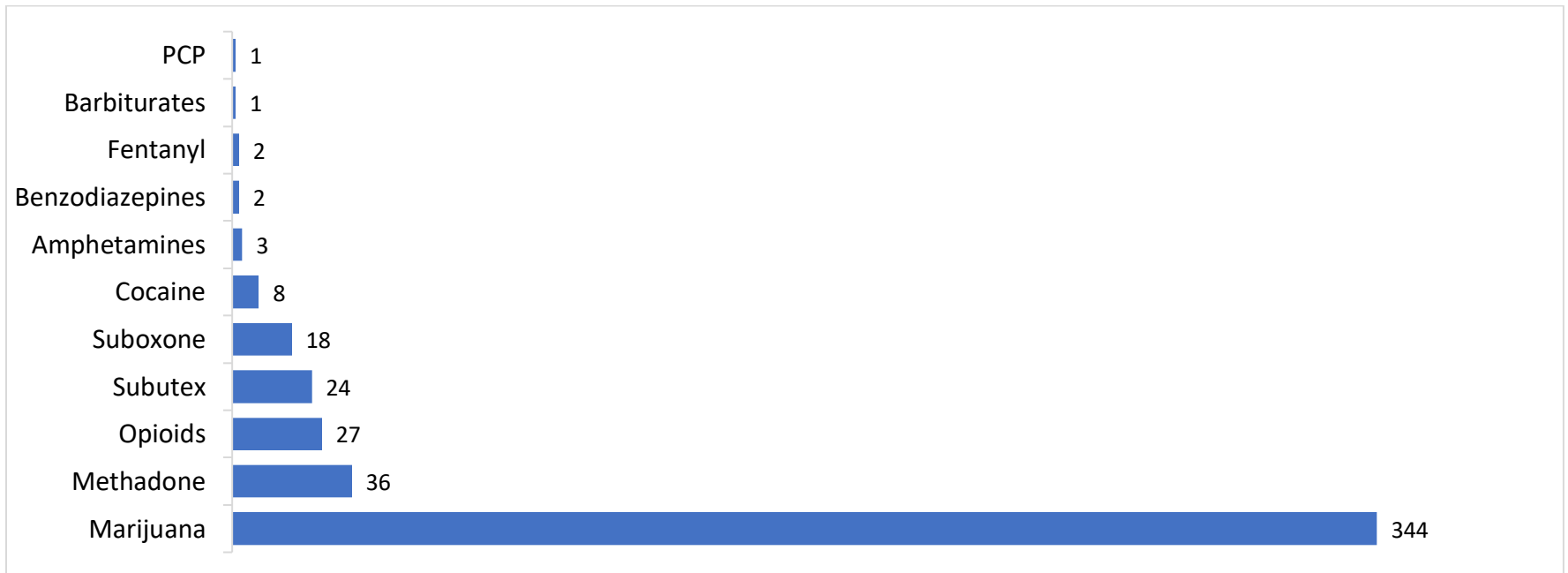


Figure 4: Prevalence of substances in single substance exposure among IPSE notifications

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.

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2020 IPSE Notifications Prevalence of Substances in Two Substance Exposure (n=129)

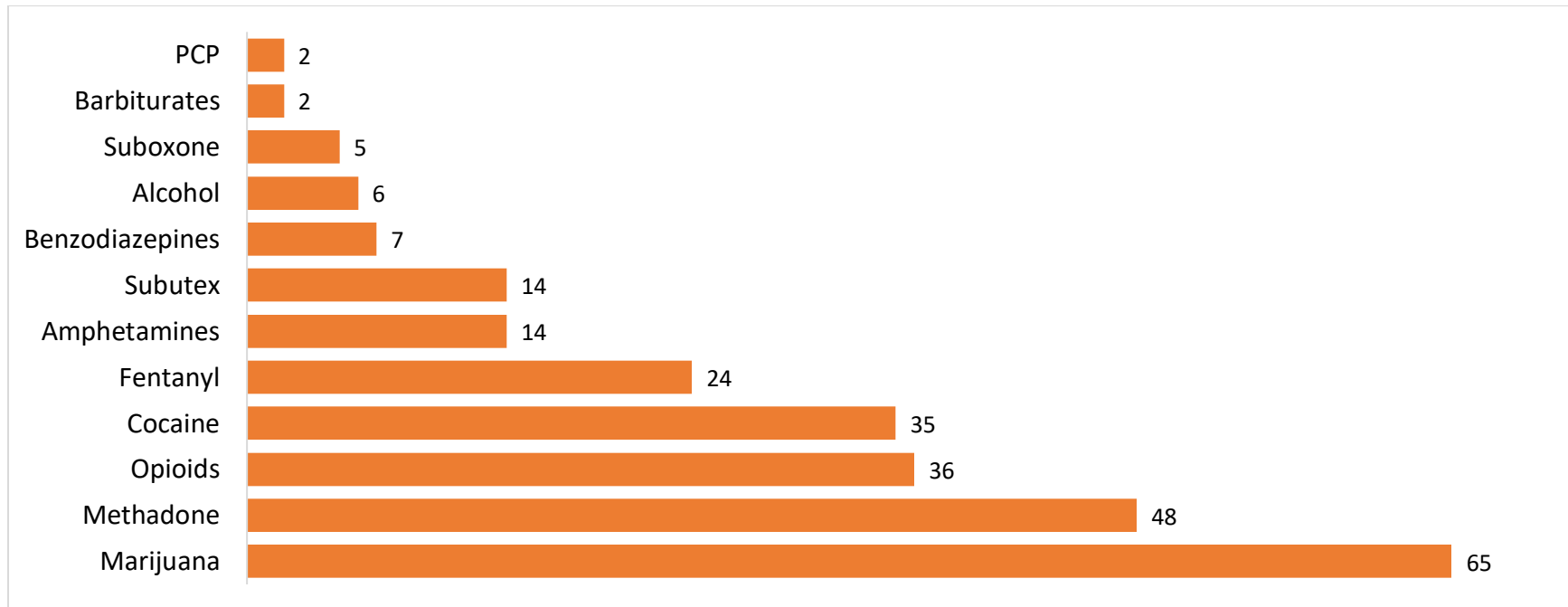


Figure 5: Prevalence of substances in 2 substance exposure among IPSE notifications

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.

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

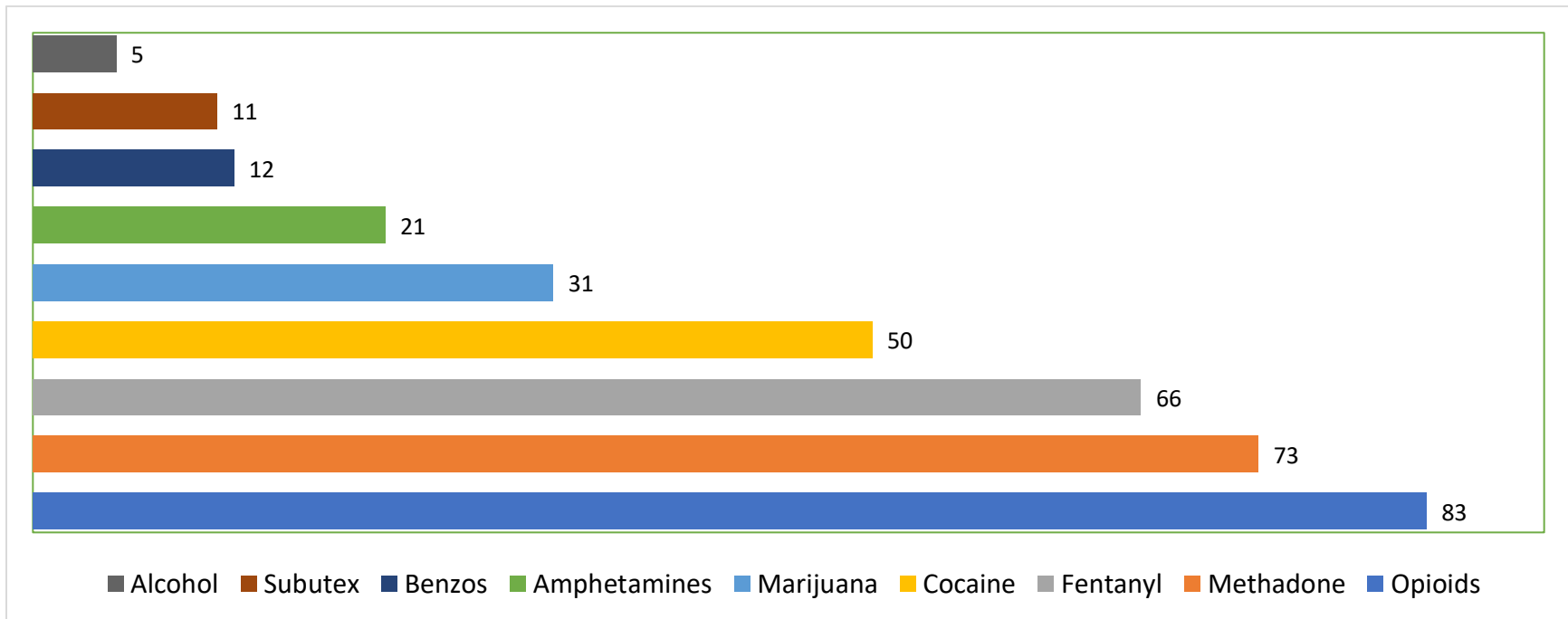


Figure 6: Prevalence of substances in 3 or more substance exposure among IPSE notifications

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.

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2020 IPSE Notifications Maternal Risk Factors, 2017-2020

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

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.

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2020 IPSE Notifications Engaged in Treatments Services at Time of Birth Event

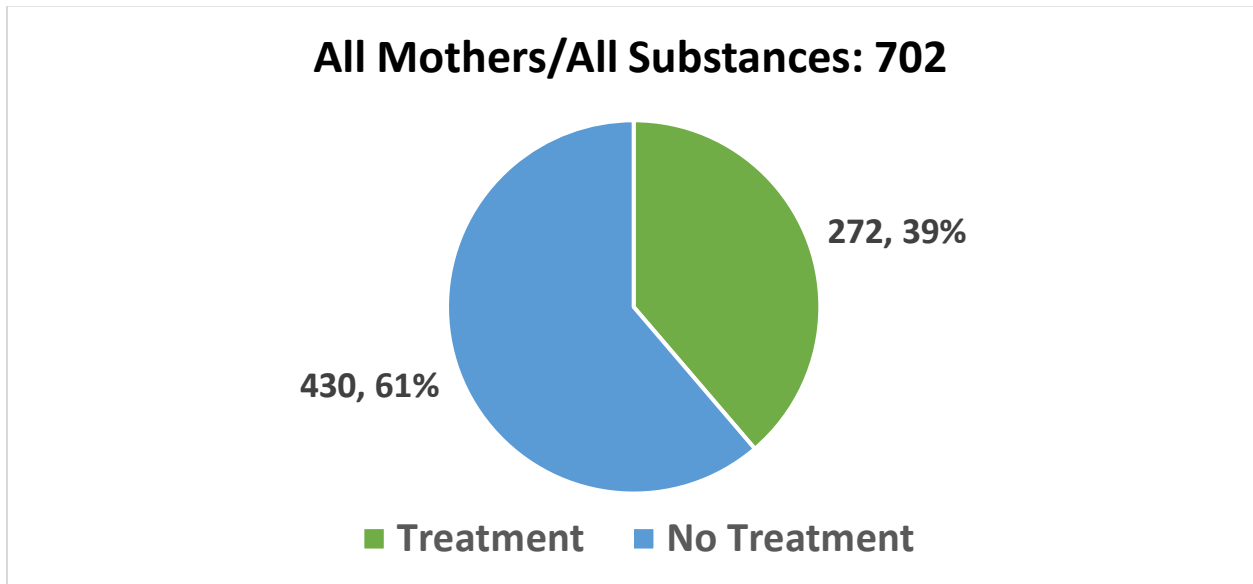


Figure 8: Mothers engaged in treatment at time of birth

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.

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2020 IPSE Notifications

Placement

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

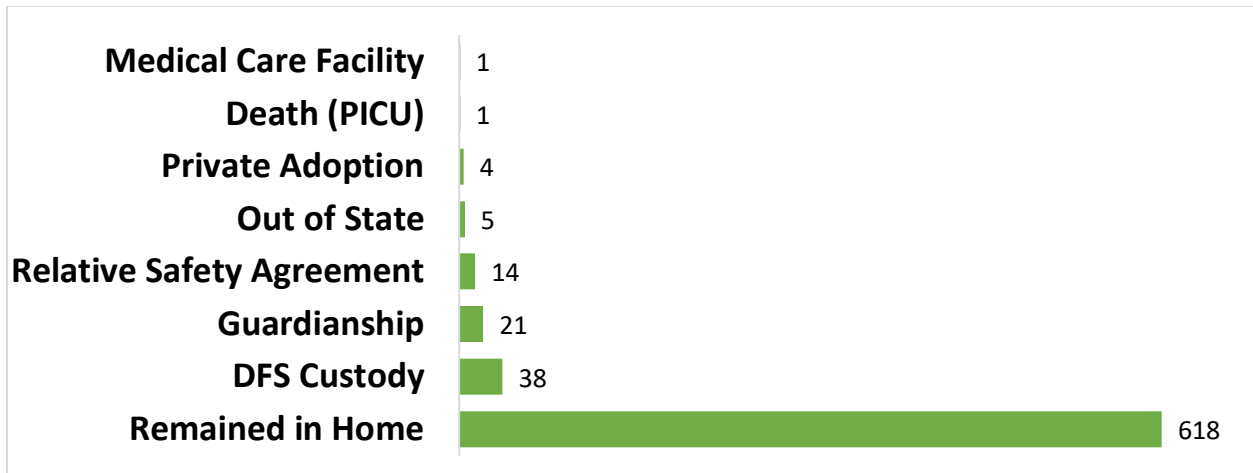


Figure 9: Placement following IPSE notifications after birth

Snapshot of DFS Custody Cases (n=38)

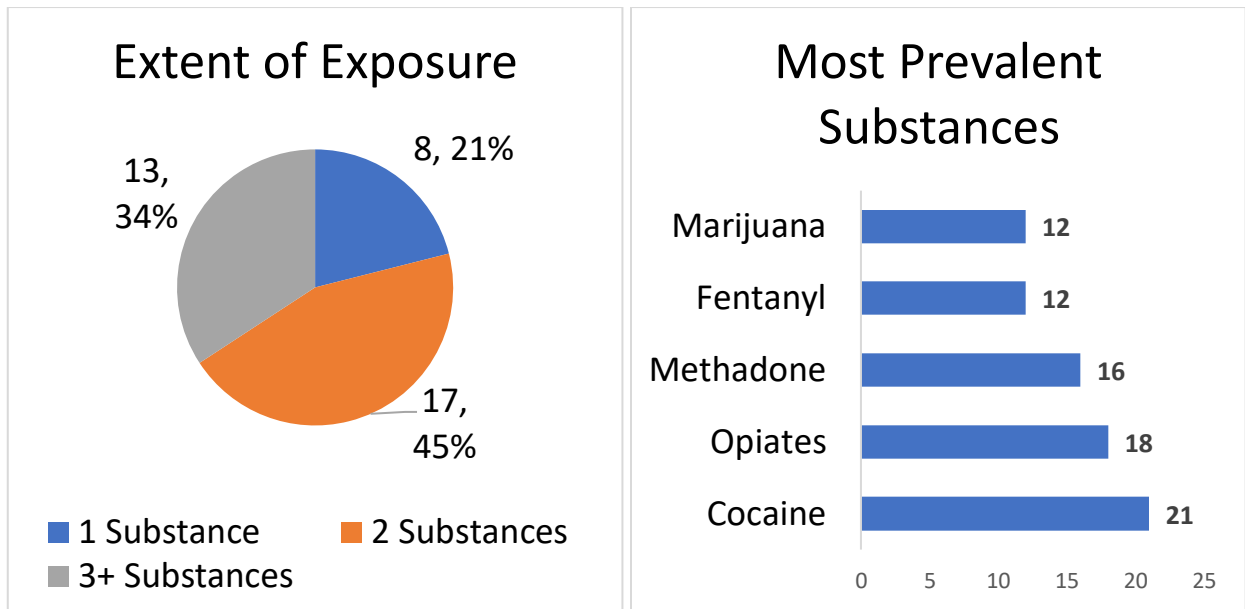


Figure 10: Snapshot of DFS custody cases

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

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2020 IPSE Notifications

Plans of Safe Care Prepared (n=653)

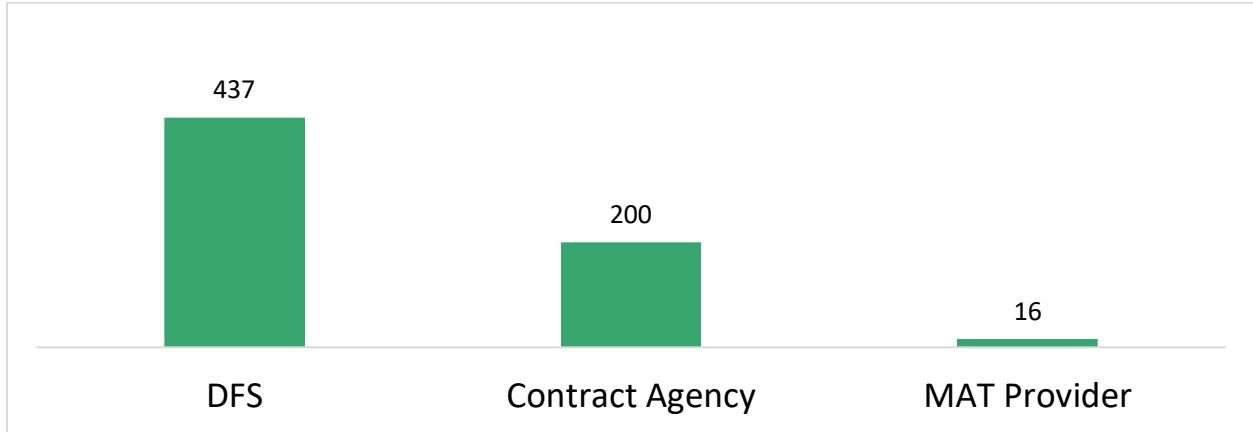


Figure 11: Plans of Care prepared

DFS Referrals for Services		
Plans of Safe Care Prepared (POSC) by DFS:	437	
Father identified as POSC participant:	371	
Child Safety Agreement with POSC:	189	
	For Mother	For Father/Other Caregiver
Referrals made	288	57
No referrals made	149	314

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.

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2. References

Infants with Prenatal Substance Exposure

Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, State Inpatient Databases 2009 to 2019. Neonatal Abstinence Syndrome. Retrieved on September 8, 2022 from <https://datatools.ahrq.gov/hcup-fast-stats>

Child Welfare Information Gateway. (October 2014). Parental substance use and the child welfare system. Retrieved on September 7, 2022 from <http://centerforchildwelfare.org/kb/subabuse/ParentSubAbuseAndCW.pdf>

Donahue, J. and Parker, T. (2021). [Presentation]. *Delaware infants with prenatal substance exposure - 2020 year in review*. State of Delaware Department of Services for Children, Youth and their Families, Division of Family Services, Office of the Child Advocate.

Governor-elect Carney's Transition Team. (2017). Action Plan for Delaware. Retrieved on September 2, 2022 from https://governor.delaware.gov/wp-content/uploads/sites/24/2017/01/ABC_23286_Transition_Team_Report.pdf

Data Sources

Data Instrument	Most Recent Data	Trend Range
Delaware's Annual Traffic Statistical Report	2021	-
Delaware Behavioral Risk Factor Surveillance System (BRFSS)	2020	-
Delaware Division of Forensic Science Annual Report	2021	2019 - 2021
Delaware Online/NewsJournal Gun Violence Database	2022	2017 - 2022
Delaware Prescription Monitoring Program (PMP)	2020	2012- 2020
Delaware School Survey (DSS) – 5 th grade	2021	1999 - 2021
8 th and 11 th grades	2021	1999 - 2021
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	-
Household Pulse Survey	2022	2021 - 2022
Monitoring the Future – 8 th , 10 th , and 12 th grades	2021	1999 - 2021
National Youth Risk Behavior Survey (YRBS) – National	2019	1999 - 2019
National Survey of Children's Health (NSCH)	2020	2016 - 2020

Data Instrument	Most Recent Data	Trend Range
National Survey on Drug Use and Health (NSDUH)	2019-2020	2002 - 2020
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 2022 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 Drug Monitoring Initiative
- Delaware Household Health Survey
- Drug Enforcement Administration
- Gallup
- 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
- State of Delaware Economic Development Office
- The Trevor Project
- The Williams Institute
- U.S. Bureau of Labor Statistics
- U.S. Census Bureau
- U.S. Centers for Disease Control and Prevention (Alcohol-Related Disease Impact [ARDI] Dashboard; Death Rate Maps & Graphs; State Overdose Death Reporting System [SUDORS])
- U.S. Health Resources and Services Administration