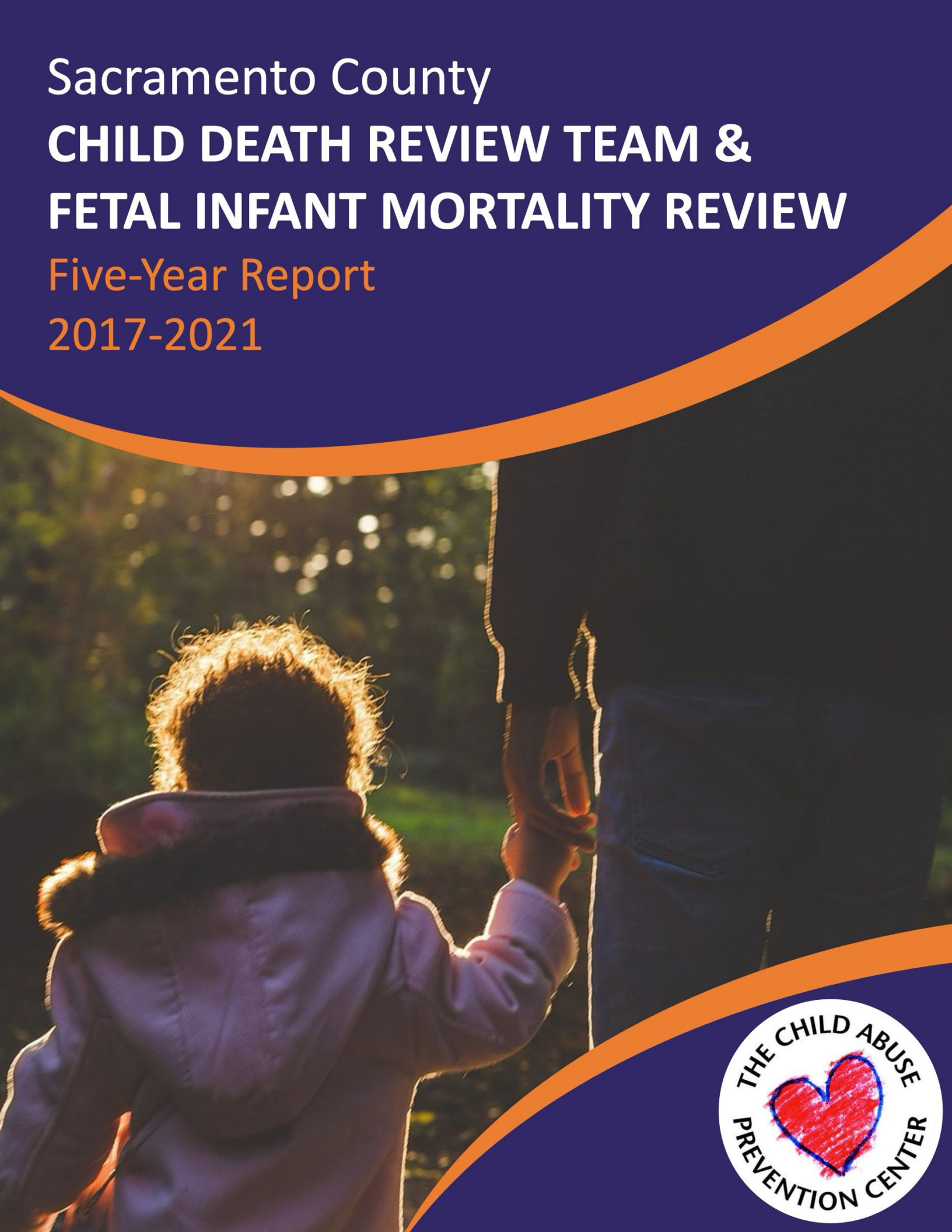
Sacramento County

CHILD DEATH REVIEW TEAM & FETAL INFANT MORTALITY REVIEW

Five-Year Report

2017-2021



THE CHILD ABUSE PREVENTION CENTER

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Acknowledgements

A Special **Thank You** to the People of Sacramento County

Dear Reader,

The death of a child under any circumstances is heartbreaking. Clearly, it is a life-changing event not only for the family, but also for every other person involved, no matter their role. Members of the Sacramento County Child Death Review Team (CDRT) recognize the significance of their part in the examination of the death of a child. Through support and funding from the Sacramento County Children's Coalition Children's Trust Fund, the CDRT has reviewed every child death in Sacramento County since 1990.

It should be noted that the configuration of the CDRT is multidisciplinary, and that decision has been a deliberate one. Together, representatives from the Sacramento County Coroner's Office, Child Protective Services, Public Health including Epidemiology, Probation, District Attorney's Office, and law enforcement, join pediatric experts from our local hospital systems to discuss not only the circumstances surrounding each child's death, but also the circumstances surrounding the child's life, even prior to birth. For older children, we also consult with the child's school district and County Behavioral Health.

Only by examining every aspect in detail can we as the CDRT identify patterns of preventable child death. During this process of examination, the CDRT identify previously unsuspected cases of abuse, malpractice, or homicide, and pass that information on to law enforcement. It should never be forgotten that many of the deaths reviewed by the CDRT disproportionately affect families who struggle with limited resources and support. A standing recommendation from the CDRT will always be for policy makers to appreciate the gravitas of the information contained herein and examine their allocation of finite resources to ensure people with the greatest need are prioritized.

The following Five-Year Report describes the current trends of childhood deaths in Sacramento County along with the Fetal Infant Mortality Review (FIMR). This report also provides recommendations developed by the CDRT through discussion with our cadre of Subject Matter Experts participating in the CDRT Prevention Advisory Committee.

On behalf of the CDRT, I extend my sympathy to the families and friends of those children whose deaths have been reviewed. We strive to ensure that these children did not die in vain, and that the details we learn about their deaths will help us better understand how to help prevent another child from experiencing the same circumstances.

Sincerely,

John Sydow, Sergeant
Sacramento County Sheriff's Office
Supervisor, Child Abuse Bureau
Sacramento County CDRT Chair, 2024-Present

Equity Statement

"Health equity science investigates patterns and underlying contributors to health inequities and builds an evidence base that can guide action across public health programs, surveillances, policies, communications, and scientific inquires to move toward eliminating, rather than simply documenting, inequities."

— The Centers for Disease Control and Prevention Health Equity Science Team

The Sacramento County Child Death Review Team (CDRT) and Fetal Infant Mortality Review (FIMR) Case Review Team are committed to promoting the practice of health equity science in their collection, review, and analysis of fetal and child death data, and an equity-centered approach to fatality review and prevention.

The CDR and FIMR Teams remain committed to using a health equity lens in case review and data analysis, which include identifying and promoting the visibility of disparities and disproportionality, and prevention recommendations that eliminate racial inequities. The CDR and FIMR Teams remain intentional and explicit in data collected, reviewed, and reported.

Land and Labor Acknowledgement

We acknowledge that this area was, and still is, the Tribal land of the Nisenan people. We would like to acknowledge the Southern Maidu people to the North, the Valley and Plains Miwok/ Me-Wuk Peoples to the south of the American River, and the Patwin Wintun Peoples to the west of the Sacramento River. We would also like to honor the Wilton Rancheria, the only federally recognized tribe in Sacramento County.

We must acknowledge that much of what we know of this country today, including its culture, economic growth, and development throughout history and across time, has been made possible by the labor of enslaved Africans and their ascendants who suffered the horror of chattel slavery. We must also acknowledge the violence and trauma throughout the generations and the resulting impact that can still be felt and witnessed today in our present systems.

We acknowledge that the Sacramento County Board of Supervisors has adopted a resolution declaring racism as a public health crisis and as such, all its citizens should have the opportunity to live their lives free

from systemic racism. This acknowledgment of our collective history is a step toward reconciliation and a constant reminder of our intentions, purpose, and goals for why we are coming together.[1,2,3]

Sacramento County Board of Supervisors Resolution

On November 17, 2020, the Sacramento County Board of Supervisors approved a resolution declaring racism as a public health crisis in Sacramento County. District 1 Supervisor, and at that time Board Chair, Phil Serna said, "The resolution we passed today acknowledges Sacramento County's commitment to face this crisis head-on through fair and just governance and service delivery." [4]

Executive Summary

The death of a child is a tragedy. Even more tragic is the preventable death of a child due to abuse and neglect. While some deaths are natural and unavoidable, such as a child's life lost as a result of cancer, many innocent children's lives are lost every year that could have been saved. Many of these unnatural and avoidable deaths are the direct result of child abuse and other preventable injuries.

The Sacramento County Child Death Review Team (CDRT) is a multidisciplinary team of professionals from different aspects of a child's and his/her family's life, from medical to academic to law enforcement to child protection. CDRT members share the information and history they have on each case and come to a mutual consensus on the category and classification of each death. In 2021, the Sacramento CDRT marked thirty-two years engaging in these efforts to identify how and why children die, and to better facilitate the creation and implementation of strategies to prevent future child deaths.

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[1] https://wiltonrancheria-nsn.gov

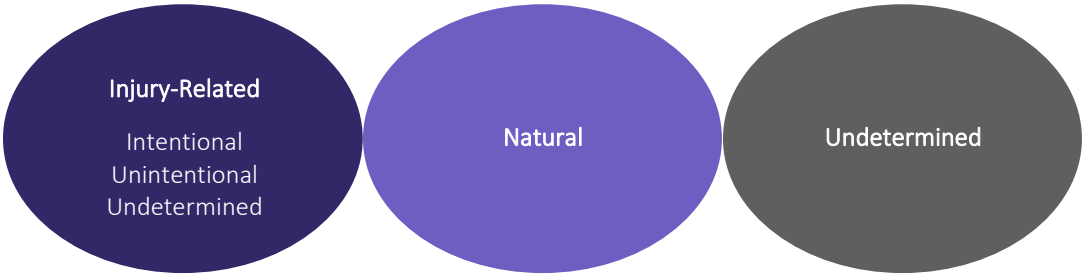
[2] https://www.snahc.org/wp-content/uploads/2021/10/Sacramento-Land-Acknowledgment.pdf?x98396

[3] https://drive.google.com/file/d/15GSbYgRXsOPyiC6OSOQf7YyshFMsln2q/view?usp=sharing

[4] https://www.saccounty.gov/news/latest-news/Pages/Board-Declares-Racism-As-Public-Health-Crisis.aspx

The following report presents a comprehensive five-year retrospective analysis of child deaths that occurred in Sacramento County from 2017-2021. Included are descriptions of all deaths, whether they were the result of injuries or natural causes (see Figure 1).

Figure 1. Classifications of Death



This Executive Summary includes an overview of child deaths in Sacramento County from 2017-2021, as well as findings and recommendations developed by the team. The opening chapter offers an insight into the CDRT, data, and process. Chapter Two delves into the critical area of child maltreatment and death due to child abuse and neglect. Chapter Three presents rates and systems involvement by category and classification. Beginning with Chapter Four, deaths are presented as Thematic Reviews. Chapter Four focuses on Injury-Related Deaths of youth, ages 10-17 years, with a focus on Suicide, and Chapter Five presents the Fetal Infant Mortality Review (FIMR) data. The FIMR Case Review Team (CRT) reviews fetal deaths and deaths of infants born prior to 23-weeks of gestation in Sacramento County, collecting information on maternal health, systems involvement, and life stressors to prevent future deaths.

SUMMARY OF 2017-2021 CHILD DEATHS

Between 2017-2021, a total of 600 Sacramento County resident children (birth through 17 years of age) died in Sacramento County. Additionally, there were 11 out-of-county residents whose injuries leading to death were sustained in Sacramento County, for a total of 611 children who died within the county. Among the 611 total deaths, 69 percent (419) were Natural Deaths, 27 percent (166) were Injury-Related Deaths, and 4 percent (26) were of Undetermined classification. For the 600 deaths of Sacramento County resident children, the average annual death rate was 33.0, a decrease from the 2016 rate of 36.5 per 100,000 children.

From 2017-2021, there were 492 Fetal Infant Mortality Review (FIMR) eligible cases among Sacramento County residents, of which 46 percent (229 of 492) were reviewed. Eligible cases include 88 infants who were born alive prior to 23-weeks of gestation and 404 fetal deaths that received fetal death certificates.

Table 1 summarizes the five-year total number of deaths, by classification and category, as well as mortality rates.

Table 1. Summary of 2017-2021 Child Deaths, Sacramento County Residents whose Death Occurred in Sacramento County

	2017-2019		2020-2021		2017-2021	
	Total Deaths	Mortality Rate	Total Deaths	Mortality Rate	Total Deaths	Mortality Rate
All Child Deaths	353	32.3	247	34.2	600	33.0
Injury-Related Classification	86	7.9	69	9.6	155	8.5
Natural Classification	246	22.5	173	24.0	419	23.1
Undetermined Classification	21	1.9	5	0.7	26	1.4
Child Maltreatment Deaths	22	2.0	23	3.2	45	2.5
Child Abuse & Neglect Homicides	12	1.1	8	1.1	20	1.1
FIMR: Fetal Deaths Only* (per 1,000 births)	249	4.4	155	4.3	404	4.3

*FIMR reviews both fetal deaths and live births (born prior to 23-weeks of gestation); however, this rate does not include the infant deaths that are counted in the "All Child Deaths" category (to prevent a duplicate count). Fetal Mortality Rate is calculated using number of births in Sacramento County, per 1,000; all other child death rates calculated using child population per 100,000.

KEY FINDINGS

The CDRT report gives an overview of Injury-Related Deaths, Natural Deaths, and Undetermined Deaths, including Child Maltreatment Deaths, Infant Sleep-Related Deaths, and African American Disproportionality. Findings highlight trends in child deaths for 2017-2021. The 2017-2021 Report is the third report that includes Fetal Infant Mortality Review (FIMR). Findings are presented in greater detail throughout the report.

Trends Over Time for All Child Deaths

- The five-year child death rate decreased from 36.5 in 2016 to 33.0 for 2017-2021
  - Rates vary by year, with a high of 37.3 in 2021, and a low in 2020 of 31.1.
  - Over the past ten years, the All Child Death rate for children living in Sacramento County decreased, while Injury-Related and Undetermined Deaths increased.
- 85 percent (522 of 611) of all child deaths had at least one or more systems involvement
- Government Aid is the number one system of involvement for all deaths across all five years
  - Families receiving government aid | 62 percent (376 of 611)
- Documented family history of domestic violence increased across all deaths, including those reviewed at CDRT and FIMR
  - Documented domestic violence history for All Child Deaths | 24 percent from 2020-2021, up from 21 percent from 2017-2019

    - High of **31 percent in 2021**

- Documented domestic violence history for reviewed Fetal Deaths | **20 percent** from 2020-2021, up from **15 percent** 2017-2019
    - High of **32 percent in 2020**

- Respiratory Deaths due to COVID-19 were tracked but occurred at a lower than reportable number (<5). However, there was an increase in overall child deaths, from 116 in 2020 (31.1 per 100,000) to 135 in 2021 (37.3 per 100,000). The increase in child deaths in 2021 can be linked to several social support challenges during the COVID-19 pandemic. Parental stress soared as families struggled with income loss, illness, and difficulties in accessing basic needs. Many parents, particularly those already vulnerable, faced overwhelming pressures with diminished social and economic support systems. Services that normally help families, like government aid and community programs, were either shut down or moved online, which was inaccessible to families without stable internet access, equipment, or the digital illiteracy to navigate these services (Help ChildrenNow | UNICEF USA). Furthermore, the closure of healthcare and child protection services meant children were at greater risk of neglect and abuse going unnoticed, with fewer eyes on them due to reduced social support (JAMA Network).

Homicides

Child Abuse and Neglect (CAN) Homicides	There were **20 CAN Homicides**, as a result of 18 incidents, from 2017-2021. All 20 were Sacramento County resident children and occurred in Sacramento County. • Decedents ages 0-5 years | **70 percent (14 of 20)** • Child Protective Services Involvement | **85 percent (17 of 20)**
Third-Party Homicides	There were **24 Third-Party Homicides**, from 2017-2021, who were Sacramento County residents that died in Sacramento County. There were two additional out-of-county residents whose injuries leading to death were sustained in Sacramento County, for a total of 26. • Black/African American Third-Party Homicide | **54 percent (14 of 26)**
Infant Sleep-Related Deaths	There were a total of 67 Infant Sleep-Related Deaths from 2017-2021, with a **low of ten in 2019** and **a high of 19 in 2021**. • Infant Sleep-Related Deaths with Sacramento County CPS involvement | **70 percent (47 of 67)**

African American Disproportionality	From 2017-2021, Black/African American Children represented an average of 10 percent of the Sacramento County Child Population and **21 percent of all 2017-2021 child deaths** among Sacramento County Residents. This is an increase from 15 percent in 2016. The Black/African Child Death Rate ranged from a **low of 53.5 in 2017** to **a high of 91.3 in 2021** compared to All Other Race/Ethnicity Child Death Rate of a low of 27.6 in 2020 to a high of 31.1 in 2021. For 2017-2021, in the four categories of death in which Black/African American children have historically been over-represented, Black/African American children comprised: • Third-Party Homicide | **54 percent (14 of 26)** • Infant Sleep-Related Deaths | **28 percent (19 of 67)** • Perinatal Conditions Deaths | **23 percent (36 of 157)** • CAN Homicides | **20 percent (4 of 20)**
Injury-Related Youth Deaths, Ages 10-17 Years	
Firearms	Firearms were used in 29 percent (26 of 90) of Injury-Related Youth (ages 10-17) Deaths, 2017-2021 including **56 percent (26 of 46)** of Third-Party Homicide and Suicide Deaths.
Poison/ Overdose Deaths	There were nine Poison/Overdose Deaths of Youth ages 10-17, in 2020-2021, compared to two Poison/Overdose Deaths of Youth ages 10-17, from 2017-2019. • Involved Fentanyl | **89 percent (8 of 9)** from 2020-2021, compared to zero from 2017-2019
Suicide	There were 26 Suicide deaths of children ages 10-17 from 2017-2021, with a **high of seven in 2017, 2018, and 2020**. All were Sacramento County resident children and occurred in Sacramento County. • Child Protective Services Family Involvement | **77 percent (20 of 26)** • Detailed school information known| **54 percent (14 of 26)** – **31 percent (8 of 26)** attended school districts that have not actively participated or have declined participation in the CDRT Youth Death Review Subcommittee, limiting access to more complete information to identify prevention strategies. Warning Signs for of Youth Suicide Death include: • Decedent history of mental health services | **54 percent (14 of 26)** • Decedent receiving mental health services at time of death | **12 percent (3 of 26)**

Youth Third-Party Homicides	There were **18 Third-Party Homicides of children ages 10-17 years**, from 2017-2021, who were Sacramento County residents. There were two additional out-of-county residents whose injuries leading to death were sustained in Sacramento County, for a total of 20. Third-Party Homicides were the **second leading cause of Injury-Related Youth Deaths** (ages 10-17 years) for the five-year period of 2017-2021. Preceded by Suicide (26)
Fetal Infant Mortality Review	From 2017-2021, there were 88 deaths of infants who were born prior to 23-weeks of gestation (Live-Birth Deaths) and 404 fetal deaths (deaths in utero) with fetal death certificates, for a total of 492 Fetal Infant Mortality Review (FIMR) cases among Sacramento County residents. Sacramento County's goal is to review at least 25 percent of FIMR cases. In 2017-2021, **53 percent (260 of 492)** of cases were reviewed.
Maternal Health (including substance use)	FIMR Deaths where mother's pre-pregnancy Body Mass Index (BMI) was Overweight or Obese • Fetal Deaths (2017-2021) | **66 percent (198 of 299)** • Live-Birth Deaths (2020-2021) | **54 percent (15 of 28)**
Prior Fetal Loss and Late-Term Loss	• Prior Fetal Loss | **26 percent (117 of 450)** • Late-Term Loss (at 37-weeks of gestation or more) | **19 percent (71 of 380)**

RECOMMENDATIONS

The Prevention Advisory Committee (PAC) serves as a Community Action Team, to review aggregate data, identify key findings, and develop prevention recommendations. The PAC comprises of members from CDRT, FIMR, and Youth Death Review Subcommittee (YDRS), as well as other prevention-focused representatives, including but not limited to, county agencies, Safe Kids Greater Sacramento, First 5 Sacramento, and Black Child Legacy Campaign. The following recommendations were created by the PAC for the 2017-2021 years and were approved by the CDRT.

Overall Recommendations

Continue quality improvements and culturally responsive updates to Mandated Child Abuse Reporter Training (MCART). Mandated Child Abuse Reporter Training is an important training that educates a mandated reporter on best practices for reporting suspected child abuse and neglect. MCART is also an opportunity to address stigmas, model cultural responsiveness, and inform mandated reporters about community resources that may also help the families they serve. Continue efforts to move from Mandated Reporting to Community Supporting. This includes, but is not limited to, supporting local initiative Family First Sacramento in their strategy and outcome goal of updating the Mandated Child Abuse Reporting

Training to decrease the number of referrals to the CPS hotline, with a focus on specifically reducing the disproportionality of Black/African American families and other families of color.

Finalize and implement the Family First Prevention Services Act (FFPSA) plan to increase and improve cross-sector collaboration, communication, and assessments for acuity, as it relates to quality referrals, warm handoffs, and follow up for services, by the end of 2025. The FFPSA plan should support and prioritize an assessment of caregiver needs to ensure children at risk of, or the victim of, child abuse and neglect have access to necessities. With essentials appropriately assessed, the FFPSA plan should improve the coordination of services across cities within Sacramento County, particularly in the unincorporated areas of the county. To ensure that families receive resources, referrals, and family connections, family serving public and private agencies should continue to partner with Sacramento County Child Protective Services and Sacramento County Probation. For services and supports to be available and accessible, there should be continued investment in family support services and service areas, with a focus on supports for parents with added stressors.

Child Safety Forward Sacramento Prevention Cabinet should continue to review social drivers of health involved in child death data and develop findings to prioritize Strategic Plan activities and actions. In January 2019, the Child Safety Forward Sacramento Prevention Cabinet was formed in response to the 2015 and 2016 CDRT Report recommendations where the CPS Oversight Committee request for the Board of Supervisors to appoint a commission to focus more broadly on systems, agencies, hospitals, law enforcement and others, and their collective responsibility to help address child safety in our community. In October 2019, the Child Abuse Prevention (CAP) Center was selected as one of five national demonstration sites to implement a three-year Child Safety Forward: A National Initiative to Reduce Child Abuse and Neglect Fatalities and Injuries Through a Collaborative Community-Based Approach, funded by the Department of Justice (DOJ), Office of Victims of Crime. The CAP Center joined St. Francis Hospital in Hartford, Connecticut; Cook County Health, Illinois; Indiana Department of Health; and Michigan Department of Health and Human Services. Within Our Reach, supported by Casey Family Programs, served as the national technical assistance provider. A one-year initiative extension was granted due to the impacts of the COVID-19 pandemic and concluded in September 2023. In July 2023, the CAP Center was awarded a California Accountable Community for Health Initiative (CACHI) grant to continue the work of the Prevention Cabinet. Both initiatives provided Sacramento County an unparalleled opportunity to learn from and be guided by local, statewide, and national child fatality experts in the development of a strategic plan to eliminate child abuse and neglect fatalities in our county by 2030. The Prevention Cabinet includes more than 40 members and 26 agencies/organizations, including Community Representatives with lived expertise.

Homicides

Child Abuse and Neglect Homicide

The Child Safety Forward Sacramento Prevention Cabinet should prioritize and implement their recommendations most directly related to children ages 0-5 in order to eliminate child abuse and neglect death and critical injuries. The Prevention Cabinet has developed a set of evidence-based recommendations that lay the foundation for a comprehensive county-wide strategy to improve policy,

systems, and services to eliminate child abuse and neglect deaths and critical injuries in Sacramento County by 2030. The 10-year strategic plan was informed by a 10-year review of Child Abuse and Neglect (CAN) Homicide data, provided by CDRT, and Critical Injury data, provided by Sacramento County Child Protective Services. The strategic plan is further informed by Community Listening Sessions, Community Gatherings, Community Representatives, and diverse public and private multidisciplinary membership, including representation from the Sacramento County Child Protective Systems Oversight Committee, and identifies children ages 0-5 years are most at risk. The 2017-2021 CAN Homicide data further validates this priority population. The Prevention Cabinet has identified the four strategy areas of community, parent, and youth voice, racial equity, trauma-informed systems and practices, and building and implementing a system of care that identify the need to use CDRT and other data to inform improved referral pathways and processes.

CDRT will continue to work with the Sacramento County Prevention Cabinet to identify patterns of systems involvement in children who die from CAN Homicides, to improve referrals and linkages to preventative resources. This includes identifying trends (strengths and challenges) for families with children ages 0-5, and services, including but not limited to, Birth & Beyond Family Resource Centers, and other First 5 Sacramento and county-funded programs who prioritize children ages 0-5.

Third-Party Homicide

Expand and enhance neighborhood-based programs focused on reducing Third-Party Homicide through violence prevention, interruption, and intervention, through cross-sector collaboration. Sacramento County should build on and expand the neighborhood infrastructure that has been created through the Black Child Legacy Campaign (BCLC). BCLC is part of a comprehensive strategy implemented by the Steering Committee on the Reduction of African American Child Death and provides a model for a county-wide prevention, interruption, and intervention program in neighborhoods and with children of the race/ethnicities that experience the highest rates of Third-Party Homicide. The county should increase support for the BCLC Healing the Hood Community Intervention Workers and case management interventions, so that more vulnerable children and youth in the neighborhoods that experience the highest rates of Third-Party Homicide receive culturally appropriate services, including mental health, trauma-informed care, and substance abuse treatment. County departments should adopt the crisis response protocol and expand coordination with local law enforcement agencies to ensure shared and consistent procedures in response to Third-Party Homicides and their aftermath. This recommendation is supported by the BCLC stakeholders, including community representatives and members of the Steering Committee on the Reduction of African American Child Death.

Infant Sleep Related Death

Expand training and education efforts to parents and caregivers of infants with Child Protective Services (CPS) referrals to decrease the prevalence of Infant Sleep-Related Deaths. The Safe Sleep Baby Collaborative, funded by First 5 Sacramento, should continue expanding the work of the Safe Sleep Baby campaign to educate parents and parent-serving providers, especially CPS, on the importance of safely sleeping babies Alone, on their Back, and in a Crib. CDRT identified a statistically significant relationship between a history of CPS referral and an Infant Sleep-related (ISR) death at a 99.9% confidence level. From

2012 – 2021, the ISR death rate was 5.1 times greater for infants with a CPS referral compared with those who had no history. This difference in the rate has increased over time; in 2007-2016 the rates was 2.6 times greater. The CDRT recommends that the Safe Sleep Baby Campaign continue to develop and pilot strategies to engage parents referred to CPS in Safe Sleep Baby education. CDRT appreciates the opportunity the five-year grant CAPC was awarded in 2024 for the Centers for Disease Control and Prevention's Sudden Unexpected Infant Death Registry. This grant ensures timely reviews of ISR deaths, expediting CDRT's awareness of risk and protective factors, and enhances prevention efforts.

The Safe Sleep Baby Education Campaign should build on existing efforts to further engage and educate parents, both prenatally and postnatally, who receive services from hospitals and local medical clinics, by strengthening the integration of infant safe sleep policies, practices, messaging, and training for staff. CAPC's Safe Sleep Baby trusted community messengers should continue to enhance and expand current efforts with Safe Sleep Baby Education by working together with Sacramento County hospital systems and local Medi-Cal Managed Care OB clinics to ensure Safe Sleep Baby Education is part of the service delivery for comprehensive prenatal and post-delivery services. The effort is funded by First 5 Sacramento through Community-Based Child Abuse Prevention ARPA funds.

A promising practice for expanding partnerships is for Sacramento County Behavioral Health to embed substance use prevention and treatment into the Healthy Beginnings curriculum, to further support the overarching Safe Sleep Baby Education Campaign in addressing risk factors and promoting infant safety and well-being.

African American Disproportionality

Continue to partner with, invest in, and fund the efforts to reduce the deaths of Black/African American children in Sacramento County, which is disproportionate to the deaths of other children. Sacramento County should continue the efforts of the Reduction of African American Child Deaths (RAACD) Steering Committee to reduce child death disparities between Black/African American children and other children in Sacramento County. CDRT recommends continuing and increasing programs and funding for community engagement and education focused on best practices identified to prevent Child Abuse and Neglect Homicides, Third-Part Homicides, Infant Sleep-Related Deaths, and deaths due to Perinatal Conditions, including, but not limited to, the Black Child Legacy Campaign; Birth & Beyond Family Resource Centers; Pregnancy Peer Support and Safe Sleep Baby campaign funded by First 5 Sacramento; Public Health Nursing programs such as Black Infant Health, Nurse Family Partnership, African American Perinatal Health; Sacramento city and county financial supports; and additional community efforts. Community engagement and education should continue to be informed by and should elevate and empower community voice.

Injury-Related Youth Deaths

Suicide

Based on available school information, the Youth Death Review Subcommittee recommends the continued use of the mental health screening tools, identified and currently used by San Juan, Folsom Cordova, and Sacramento City Unified School Districts and Robla School District. After learning from participating school districts on the Youth Death Review Subcommittee (YDRS), members advocate for the

implementation of mental health screening tools where they are not currently being used. To ensure support and model fidelity, YDRS members further advocate for the provision of continued training and sustaining/increasing supports in place for those faculty members/employees who participate in the screening and/or treatment. This includes, but is not limited to, Youth Mental Health First Aid Training and Train-the-Trainer opportunities. With support, education, and tools in place in schools, YDRS advocates for additional mental health resources for youth, including but not limited to, support for bullying, including cyberbullying. These resources should also identify ways to increase resilience in youth, to navigate difficult social situations

Improve data collection for Injury-Related Youth Deaths by encouraging full participation of Sacramento County School Districts, and Private and Charter Schools on the Youth Death Review Subcommittee (YDRS). YDRS has been identified as the only known partnership that collects and reviews all youth deaths, their accompanying risk factors, and identifies opportunities for prevention of injury-related deaths of youth. Understanding that schools have unique access and relationships with youth, full participation of all schools would provide more complete case review information crucial to learning more about risk factors and prevention of injury-related deaths of youth. Improved data collection includes the participation of Public, Private, and Charter Schools not currently participating in YDRS. Increased school participation will result in improved data collection. One identified opportunity for improved data collection is that school districts are now able to capture preferred pronouns and gender identity information for students.

Firearms

Sacramento County law enforcement should collaborate with the District Attorney's Office, Public Defender's Office, and trusted community groups/organizations, with the support of county agencies, to develop a community and culturally responsive strategic plan for action to reduce youth gun violence. The strategic plan development should include a comprehensive look at gun buy-back options and funding, and an investigation into firearms storage for Sacramento County residents. The completed strategic plan should include a protocol to find, create, and/or support a gun diversion program(s) to ensure the best possible effect with the lowest community impact, and a plan to evaluate effectiveness.

While the strategic plan is being drafted, law enforcement should invest in a simple and effective way to provide education on current and local gun laws including plans for regular updates, to capture ongoing changes. All materials should be written in accessible language, and in Sacramento County threshold languages.

Poison/Overdose

Substance use awareness should specifically include information/education on Fentanyl and the misuse of prescription medications. Awareness should be provided in schools and on social media and begin in the 6th Grade. Substance use awareness education should include information regarding new developments to be aware of, including drug sales accessible now via social media and gaming systems where children can "chat" and arrange purchases.

Continue supports that are already implemented that can be utilized and/or expanded. Sacramento County should support ongoing accessibility and education regarding Narcan and Fentanyl testing strips.

CDRT will continue to track Fentanyl as a contributing factor in Poison/Overdose Deaths. Additional supports include, but are not limited to, weekly check-ins at school for drug prevention (including Fentanyl specifically), family and community engagement meetings, in-school supports for children with parents with substance use disorders, Safer Sacramento, and participation in the Sacramento County Opioid Coalition.

Youth Third-Party Homicide

Increase access to community centers and recreational activities, including but not limited to, pools and parks to provide opportunities for community engagement of youth and families after 5:00pm. The 2022 Sacramento County Children's Report Card highlights the importance of the connection between youth and their community, stating that a strong connection supports feelings of responsibility and empowerment. Community recreation also benefits parents and caregivers with after school support and stress reduction. Consideration should be given to culturally responsiveness of available recreation, including, but not limited to, language accessibility, religious considerations, and financial stability.

Child Death Review Team and Fetal Infant Mortality Review Joint Recommendations

Per parents with Sacramento County Child Protective Services History as a Minor; Child, Youth and Family System of Care (AB2083) and Child Safety Forward Sacramento should review data and continue to identify opportunities for cross-sector collaboration. Quantitative Child Death Review Team and Sacramento County Child Protective Services data, as well as qualitative data provided by Community Representatives, community listening sessions, community gatherings, and community advisory boards should continue to be reviewed and used to identify opportunities for cross-sector collaboration in priority areas identified, including improving the coordination of services through one referral and/or application.

Continue to offer services to break generational cycles of child welfare involvement. Sacramento County Child Protective Services should continue to provide resources and referrals for instances of Evaluated Out referrals. This includes the ongoing use of the Information and Referral Specialist in partnership with the Child Abuse Prevention Center. "Closed loop" referrals to Home Visitation, Family Resource Centers, and prevention programs should be offered to families whenever possible.

To increase initial parent and caregiver receipt of services, there should be continued investment in outreach and engagement, to improve trust and reduce stigma in the community. Investment should include assessments on what the parent/caregiver needs and best ways to reach parents who have history in the child welfare system. The referral should allow parents/caregivers to prioritize their needs and include warm hand off, to ensure a closed loop referral.

Whenever possible, Sacramento County Child Protective Services should connect youth in permanency foster care to kin, life-long connections, and community. A promising practice identified by Sacramento County Child Protective Services is the creation and implementation of Review, Evaluate, Direct (RED) Teams.

Support local domestic violence service agencies in providing services to pregnant and parenting families. While the CDRT and FIMR Teams acknowledge that family history of domestic violence is often underreported and difficult to track, both CDRT and FIMR data identify an increase in documented domestic violence history from 2017-2021. Assessments for domestic violence during prenatal care are vital, and local service providers should continue to provide referrals and warm hand-offs to the local domestic violence service providers, whenever appropriate and safe to do so. Continued support and visibility for the Domestic Violence Death Review should also be a priority.

Fetal Infant Mortality Review

Continue to provide current and new education, supports, and services for maternal health. Sixty-six percent of mothers who experienced a fetal loss, from 2017-2021, were overweight or obese prior to pregnancy. Increased education surrounding pre-conception health is needed to better support future mothers and ensure they experience healthy pregnancy and positive birth outcomes. Additionally, services and supports are needed during pregnancy, to manage ongoing conditions. This includes new and upcoming supports and services such as Sacramento County Public Health's Perinatal Substance Use Program (PSU), designed to provide Public Health Nurse home visitation specifically to those first-time moms with substance abuse concerns who are too far along for involvement with Nurse Family Partnership.

Provide trauma informed support and care for families who have experienced prior fetal loss and/or late term loss. Twenty-six percent of mothers who had FIMR Deaths experienced at least one prior fetal loss, and 19 percent experienced a late term loss from 2017-2021. Birthing trauma can have long lasting psychological impacts. Expecting mothers need opportunities for trauma informed education at systems touchpoints. Education should include information on Adverse Childhood Experiences (ACEs) and continue beyond prenatal care. Families need additional supports with and after loss because mothers can experience post-partum depression after loss. Support should include assistance in finding, registering, and participating in applicable services, as services can be difficult to find and navigate. Engaging in services is further challenging as participation often requires self-motivation after a loss. Support and education must be culturally appropriate and intentionally include a lens of diversity, equity, inclusion, and belonging.

Chapter One

Introduction

Chapter One — Introduction

Child Death Review Team Purpose Statement

The purpose of the Sacramento County Child Death Review Team is to:

- Ensure that all child abuse-related deaths are identified
- Enhance the investigations of all child deaths through multi-agency review
- Develop a statistical description of all child deaths as an overall indicator of the status of children
- Develop recommendations for preventing and responding to child deaths based on the reviews and statistical information

A fundamental purpose of the Child Death Review Team (CDRT) is to develop an aggregate description of all child deaths, ages birth through 17, as an overall indicator of the well-being of Sacramento County children. This includes, but is not limited to, the type of death, information on the decedent, demographics, identified systems involvement associated with the decedent and/or the decedent's family, and conditions and circumstances around the death. In cases of child homicide, demographics and systems involvement associated with the perpetrator are also collected.

DATA SOURCES

There are two records of death used in this report. The Vital Statistics Branch of the Sacramento County Department of Health Services provides Certificates of Death for all children under 18 years of age who died in Sacramento County. Beginning in 2016, Sacramento County's Epidemiology program began providing CDRT with death certificate information for Sacramento County resident children who died in other counties in California. The second records are Fetal Death Certificates, obtained from Vital Statistics in the same way, and used for the Fetal Infant Mortality Review (FIMR).

REVIEW PROCESS

The CDRT meets monthly to review deaths of all children from birth through 17 years of age who die in Sacramento County, as well as Sacramento County residents who die in another county in California. The deaths are identified by the Vital Records Unit of the Sacramento County Department of Public Health and the death certificates are forwarded to the CDRT staff, who prepares them for review. All deaths included in the review have a death certificate issued or acquired by Sacramento County. This includes deaths of residents who died within the county's jurisdiction as well as non-residents who died while in the county.

All the children included in this report were Sacramento County residents at the time of their death or out-of-county residents whose injuries leading to death were sustained in Sacramento County. Other out-of-county cases are reviewed but are not included in any analysis used to make inferences about Sacramento County children.

CDRT representatives compile pertinent information their agency may have regarding each case. This information is brought to the monthly meetings so the CDRT can discuss all relevant case data. The team identifies trends in child abuse and neglect deaths, and other types of child deaths, in order to address needs in prevention efforts. The information is stored in a secure centralized database maintained by the Child Abuse Prevention Center (CAP Center) and data is analyzed in the aggregate to describe the information and identify any pertinent trends.

Because of the confidential nature of the information discussed, each CDRT member is required to sign a confidentiality agreement each year that they participate, which strictly prohibits the dissemination of any information discussed by the team unless otherwise provided by law.

In addition to the review of new cases, the status of each ongoing investigation is reviewed monthly and additional informational needs are identified. Upon request of the CDRT, non-member agencies may be contacted to provide information related to the CDRT's investigation. All cases remain under review until the team agrees that the underlying category of death has been determined as accurately as possible.

Categories of Death

Deaths are organized by *category* and by *classification*.

Cause of Death | Listed on the death certificate, medical findings coded according to the International Classification of Diseases, 10th edition (ICD-10). While an infant or child death may be the result of multiple causes, the primary underlying cause of death is reported here.

> ***Category of Death*** *| Sacramento County CDRT uses "Category of Death" to indicate the root cause of the child's death, using the coroner's "Cause of Death" to inform the ruling. The Sacramento County CDRT identifies 24 Categories of Death (See Appendix B: Glossary for an exhaustive list of Categories).*

Manner of Death | An additional finding listed on the death certificate, which includes the following five categories: Accident, Homicide, Natural, Suicide, and Could Not Be Determined.[5]

> ***Classification of Death*** *| Sacramento County CDRT uses "Classification of Death" to indicate the type of child death, using the coroner's "Manner of Death" to inform the ruling. The Sacramento County CDRT Categories of Death include Accident, Homicide, Natural, Suicide, and Undetermined.*

[5] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

The classification of death is an important consideration because prevention of child deaths, one of the central purposes of the Sacramento County CDRT, relies on the ability to differentiate between intentional and unintentional deaths. For example, strategies designed to reduce the number of unintentional drug overdose deaths from accidental exposure or access to drugs (poisoning/overdose) will differ from strategies designed to reduce intentional drug overdose deaths (suicide). Further, Sacramento County CDRT organizes the classifications of death into three areas:

Injury-Related Death | A death that is a direct result of an Injury-Related incident. Includes both intentional and unintentional injury deaths. Examples: Burn/Fire, Drowning, Homicide, Motor Vehicle Collision, Other-Injury, Suffocation, Suicide, and Undetermined-Injury Deaths.

> *Intentional Injury-Related Death | Death as a result of an injury that is purposely inflicted, by either oneself or another person. Intentional injuries include: Homicide and Suicide Deaths.*
>
> *Unintentional Injury-Related Death | Death as a result of an injury that was unplanned and unintended to happen. Includes: Burn/Fire, Drowning, Motor Vehicle Collision, Other-Injury, and Suffocation Deaths.*
>
> *Undetermined Injury-Related Death | An Injury-Related Death in which the cause of death may not be medically identifiable, or an Injury-Related Death in which there was insufficient evidence to determine whether the fatal injuries were inflicted or accidental. An injury for which the intentionality is unclear. Example: a case in which the coroner could not distinguish between an accident and suicide.*

Natural Death | A manner/classification of death that includes any natural disease.[6] Sacramento County CDRT Natural Deaths include Cancer, Congenital Anomalies, Infection/Respiratory, Perinatal Conditions, Respiratory, SIDS, SUIDS, Other-Natural, and Undetermined-Natural Deaths.

> *Other Natural Death | Deaths due to a natural cause not previously mentioned.*
>
> *Undetermined Natural Death | Natural death in which the cause of death may not be medically identifiable.*

Undetermined Death | A manner/classification of death that includes deaths where the cause/category of death and/or the circumstances of the death cannot be fully determined, in which case the classification remains undetermined.[7] Example: If the coroner was unable to determine if the death occurred naturally or if death was the result of an accidental or intentional injury.

Systems Involvement

In addition to tracking the classification and category of deaths, each case is also reviewed to identify systems involvement. The systems that are a part of every review include:

[6] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

[7] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

Child Protective Services Involvement | Records from Child Protective Services (CPS) are reviewed to determine the nature and extent of any involvement with CPS, including history for the decedent, siblings, and the parents (as minors). Sacramento County CPS involvement can be further broken down by type of CPS involvement, including but not limited to, substantiations, open cases, and foster care. (*Formerly "History of Child Abuse and Neglect")*

Medical/Mental Health Involvement | Medical risks may include a history of mental illness for the parent or decedent, inadequate prenatal or other medical care, concealment of pregnancy, or refusal of vaccinations. This information is typically provided by the hospital, coroner, or county mental health agency. (*Formerly "Medical Risk History")*

Alcohol and/or Drug Use | A history of drug or alcohol use by the parent or decedent, drugs or alcohol involved in the deaths, smoking during pregnancy, secondhand smoke exposure, and/or a baby born with positive toxicology. This information can come from law enforcement, hospitals, or the coroner.

Law Enforcement Involvement | Information on parent/caregiver and/or decedents' criminal records including domestic violence, gang history, as well as non-violent and violent crime, typically gathered from local law enforcement and/or probation. (*Formerly "Criminal History"*)

> *Domestic Violence | Also called domestic abuse, domestic violence is violence against a spouse, cohabitant, fiancée, or other person with whom the abuser has a dating relationship, or someone formerly in any of these relationships. Types of violence include sexual assault; placing a person in reasonable apprehension of being seriously injured (threats); intentionally or recklessly causing or attempting physical injury.*
>
> *Gang History | Indicates personal affiliation with a gang, by the decedent and/or the decedent's parent(s).*
>
> *Non-Violent Crime | A crime in which the offender does not use physical force or cause physical pain. Examples include, but are not limited to, drug sales/trafficking, theft, Driving Under the Influence (DUI), and prostitution. It does not include minor traffic arrests/tickets.*
>
> *Violent Crime | A crime in which the offender uses or threatens to use violent force upon the victim. This entails both crimes in which the violent act is the objective, such as a murder, as well as crimes in which violence is the means to an end. Violent crimes include crimes committed with and without weapons. Violent crime includes, but is not limited to, robbery, assault, and homicide.*

Government Aid | Because CDRT does not have access to income information, Government Aid is used as a proxy measure for poverty. This includes a decedent's family's enrollment in Medi-Cal, CalWORKs, CalFresh, and other services such as Social Security Income. CPS representatives provide information regarding a decedent's family's enrollment. Additional information is received or confirmed by other representatives including, but not limited to, California Children's Services (CCS) and Vital Records via Fetal and Child Death Certificates. *(Formerly "Poverty History")*

Special Case Details

Certain case criteria trigger the collection of specific case details. Additional case details are collected for:

- Deaths Involving a Weapon
- Drownings
- Fetal Death or Infant Death of children born prior to 23-weeks of gestation (FIMR dataset)
- Infant-Sleep Related Deaths
- Motor Vehicle Collisions
- Suicides
- Youth (10-17 years) Injury-Related Deaths and Perpetrators

REPORT STRENGTHS & LIMITATIONS

The primary purpose of the CDRT is to better identify child abuse and neglect deaths. During the review process, the team focuses on any suspicious circumstances surrounding the death of a child. Because of the involvement of multiple agencies, the team generates information that helps to clarify otherwise limited evidence of abuse and neglect. Such information can be critical to the death investigation and may ultimately result in a death certificate that more accurately reflects the occurrence of child abuse and neglect deaths.

As a result of this multi-agency investigation, the category of death identified by the team, particularly in cases of Child Abuse and Neglect (CAN) Homicide, may be more explicit than the category of death assigned by the local physician or coroner. Based on the team's findings, a more accurate description of the occurrence of child abuse and neglect deaths in Sacramento County can be provided by a CDRT Annual Report than the information provided by the death certificates filed with the state.

The Sacramento County CDRT is unique in its approach to investigating child deaths. By reviewing the circumstances surrounding each child death instead of sampling the childhood fatality population or focusing on suspicious cases only, the CDRT can capture a more detailed and accurate description of child mortality in Sacramento County. This broader understanding of child death and the ongoing identification and investigation of child abuse and neglect deaths has also provided for the development of effective prevention strategies.

Unfortunately, comparisons between Sacramento County and other jurisdictions are difficult. At the present time, there is no uniformity across the state or national levels in reporting, investigating, and validating cases of child abuse and neglect deaths. The criteria for selecting cases to review, and the definitions used for child abuse and neglect deaths, are established by each county's team and very few teams review all child deaths. In addition, there is an undercount of child abuse and neglect deaths reported in State Vital Statistics Death Records.

The development of the CDRT's Annual Report has been an evolving process. In 1996, the CDRT began following childhood fatality trends on an annual basis, which led to a more comprehensive record keeping of all child deaths. For this reason, aggregate data is available for the period beginning in 1996 through the

current report's years. Other data, such as injury type and demographics, comes primarily from death certificates and is available for all cases reviewed since 1990.

In response to data requests from community partners and the extensive information reported by representatives, CDRT has worked to continually improve data collection throughout this time period. The data collection forms and database CDRT uses were overhauled in 2004, further improvements were made in 2007, and again in 2019, to the collection and organization of various systems involvement indicators. The differences found in the availability and consistency of information are due to the different time periods used to present prior years' data.

Chapter Two

Deaths Related to Child Abuse & Neglect

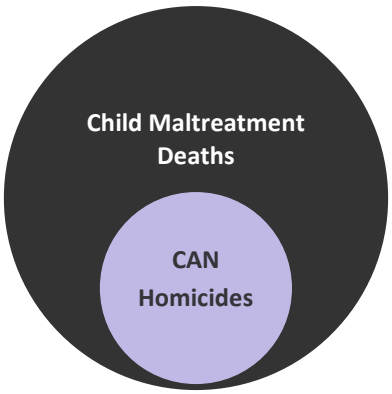
Chapter Two — Deaths Related to Child Abuse & Neglect

Three-year old Maiya passed away before she ever had a chance to experience her first day of school. Maiya had been living in an SUV with her mother and her mother's fiancé after moving to California. It was a hot summer day in June of 2017, when law enforcement investigated an SUV parked in the wrong direction. After searching the vehicle, Maiya was found deceased in the SUV, under several blankets. It was later found that Maiya spent several long periods of time buckled in her car seat and locked inside the SUV in the summer heat before she died. Mayia's mother said that she and her fiancé were trying to rid Maiya of "lustful demons." Maiya's mother and fiancé were both arrested and charged with murder. Mayia's mother was convicted and will serve the maximum sentence of 25 years to life in prison. The fiancé died prior to his trial.

One of the principal functions of the Sacramento County CDRT is to ensure that all child abuse and neglect and child abuse-related and neglect-related deaths are identified. Given the risks associated with children living in environments involving neglect, violence, or substance use, the CDRT gathers information on alcohol/drug use, child protective service involvement, and domestic violence as part of their comprehensive review of all child fatalities. This information is derived from law enforcement involvement histories, social service histories, and crime scene investigations.

The CDRT uses the umbrella classification of Child Maltreatment Deaths to refer to deaths involving some element of abuse or neglect. Child Abuse and Neglect (CAN) Homicide is the primary category of Child Maltreatment Deaths, in which the child's death was caused (directly or indirectly) by abuse or neglect perpetrated by a caregiver, including but not limited to, a parent, guardian, babysitter, or other relative.

Figure 2. Child Abuse and Neglect Homicides – A Subset of Child Maltreatment Deaths



Other deaths, however, might involve an element of child maltreatment even though the classification of homicide is not supported by the coroner's report. Deaths considered to involve child maltreatment fall into one of the following classifications:

Abuse Death | Death clearly due to abuse, supported by the coroner's reports or police/criminal investigation. Includes deaths caused intentionally or unintentionally by abuse where the perpetrator was a parent or a caregiver. Examples: shaken baby syndrome; murder/suicide (a parent kills his/her child and then him or herself); Homicide.

Abuse-Related Death | Death secondary to documented abuse. Child abuse was present and contributed in a concrete way to the child's death. Example: Suicide of a previously abused child.

Neglect Death | Death clearly due to neglect, supported by the coroner's reports or police/criminal investigation. Neglect was the direct cause, or was in the direct chain of causes, of the child's death. Deaths categorized by the negligent failure of a parent/guardian or caregiver to provide adequate food, clothing, shelter, or medical care. Examples: An abandoned newborn that dies of exposure; a child who dies from an untreated life-threatening infection; a parent or caregiver driving recklessly with a suspended license when involved in a motor vehicle collision.

Neglect-Related Death | Death secondary to documented neglect, including instances of supervision and situational neglect. Deaths that involve critical moments in which the child, left without adequate supervision, food, shelter, or medical care is killed by a suddenly arising danger. This category would also include any case where poor caregiver skills and/or judgment endangered the life of a child. Examples: An unattended infant who drowns in a bathtub; unrestrained child killed in a motor vehicle collision; motor vehicle collisions or house fires where caretaker was under the influence of drugs and/or alcohol.

Prenatal Substance Abuse Death | Death clearly due to prenatal substance abuse, supported by the coroner's report. Prenatal substance abuse where there is a clear medical link to infant death or death is secondary or known to probable prenatal substance abuse. Examples: Maternal methamphetamine use, which causes a premature birth and subsequent death; an infant exposed prenatal to cocaine and alcohol that dies from multiple birth defects.

Prenatal Substance Abuse-Related Death | Death secondary to known or probable substance abuse. Example: SIDS/SUIDS with known perinatal exposure to drugs.

Questionable Abuse/Neglect/Prenatal Substance Abuse Death | Death where there are no specific findings of abuse/neglect/substance use but there are such factors as: Substance use/abuse where substance exposure caused the caregiver to experience mental impairment; previously unaccountable for deaths in the same family; prior abuse/neglect of child or protective service referral.

CHILD MALTREATMENT DEATHS

From 2017-2021, child maltreatment was involved in the deaths of 45 of the 611 (7%) child deaths in Sacramento County. Of these 45 deaths, 20 died due to a Child Abuse and Neglect (CAN) Homicide. Table 2 outlines additional deaths where elements of abuse, neglect, or prenatal substance abuse were present. Varying levels of neglect were the most common maltreatment categories identified, including eight Drowning deaths which had elements of neglect identified.

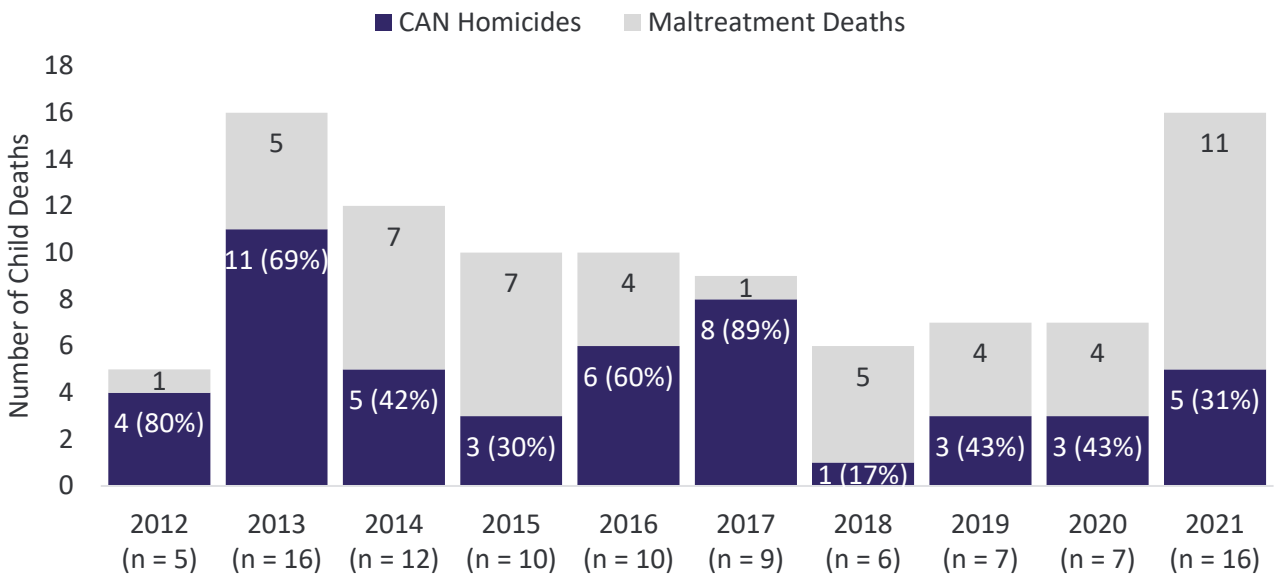
Table 2. Child Maltreatment Deaths by Category & Abuse and Neglect Classification, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2021

	Abuse	Questionable Abuse	Neglect	Neglect Related	Questionable Neglect	Prenatal Substance Abuse	Questionable Prenatal Substance	Total
CAN Homicide	80% (16)	-	20% (4)	-	-	-	-	**44% (20)**
Congenital Anomalies	-	-	-	-	-	100% (1)	-	**4% (1)**
Drowning	-	-	25% (2)	63% (5)	13% (1)	-	-	**18% (8)**
Perinatal Conditions	-	-	-	-	-	100% (3)	-	**7% (3)**
Poisoning/ Overdose	-	-	100% (2)	-	-	-	-	**4% (2)**
SUIDs	-	-	67% (2)	33% (1)	-	-	-	**7% (3)**
Third Party Homicide	-	-	33% (1)	67% (2)	-	-	-	**7% (3)**
Undetermined Injury	20% (1)	20% (1)	20% (1)	20% (1)	-	-	20% (1)	**11% (5)**
Total	**38% (17)**	**2% (1)**	**27% (12)**	**20% (9)**	**2% (1)**	**9% (4)**	**2% (1)**	**100% (45)**
	Abuse Sub-Total: 40% (18)		**Neglect Sub-Total: 49% (22)**			**Prenatal Abuse Sub-Total: 11% (5)**		

Note: Total percentage values may not equal 100% due to rounding.

Figure 3 shows the number of Child Maltreatment Deaths and the percentage comprised of CAN Homicides from 2012-2021. Until 2021, Child Maltreatment Deaths had been declining overall. In 2021, there was a total of 16 Child Maltreatment Deaths, the highest since 2013 (16).

Figure 3. Child Maltreatment Deaths and Percentage Comprised of CAN Homicides, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2012-2021



Systems Involvement and Life Stressors Related to Child Maltreatment Deaths

Table 3 highlights the systems involvement and life stressors prevalent in families with Child Maltreatment Deaths. The most common systems involvement in Child Maltreatment Deaths from 2017-2021 included CPS involvement (91%), alcohol and/or drug use (69%), and law enforcement involvement (73%).

Table 3. Child Maltreatment Deaths by Systems Involvement and Life Stressors Present, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2021

Type of Systems Involvement	Child Maltreatment Deaths					
	CAN Homicides		Other Maltreatment		Total	
CPS Involvement	**17**	**85%**	**24**	**96%**	**41**	**91%**
Decedent Victim	*10*	*50%*	*18*	*72%*	*28*	*62%*
Sibling Victim	*8*	*40%*	*21*	*84%*	*29*	*64%*
Parent Victim (As Child)	*9*	*45%*	*15*	*60%*	*24*	*53%*
Alcohol and/or Drug Use	**11**	**55%**	**20**	**80%**	**31**	**69%**
Law Enforcement Involvement	**13**	**65%**	**20**	**80%**	**33**	**73%**
Violent and/or Non-Violent Crime	*11*	*55%*	*19*	*76%*	*30*	*67%*
Domestic Violence	*7*	*35%*	*14*	*56%*	*21*	*47%*
Gang Affiliation	*2*	*10%*	*5*	*20%*	*7*	*16%*
Government Aid (Poverty)	**12**	**60%**	**19**	**76%**	**31**	**69%**
Medical/Mental Health Involvement	**1**	**5%**	**13**	**52%**	**14**	**31%**
Mental Health	*0*	*0%*	*4*	*16%*	*4*	*9%*
Other | Mother <21 Years of Age at Death*	**1**	**5%**	**2**	**8%**	**3**	**7%**
Total Deaths	**20**	**44%**	**25**	**56%**	**45**	**100%**

*Mother's date of birth available for 17 CAN cases and 21 Other Maltreatment cases.

CHILD ABUSE AND NEGLECT HOMICIDES

Child homicides fall into two broad categories: those resulting from caregiver abuse or neglect and those perpetrated by a third party, such as a friend or stranger. CAN Homicides are a subset of Child Maltreatment Deaths, in which the child's death was caused (directly or indirectly) by abuse or neglect perpetrated by a caregiver, including but not limited to, a parent, guardian, babysitter, or relative.

From 2017-2021, there were 20 CAN Homicides, all of whom were Sacramento County residents. Sixteen of the 20 (80%) CAN Homicides were in the Child Maltreatment category of Abuse, and four of the 20 (20%) were in the Neglect category.

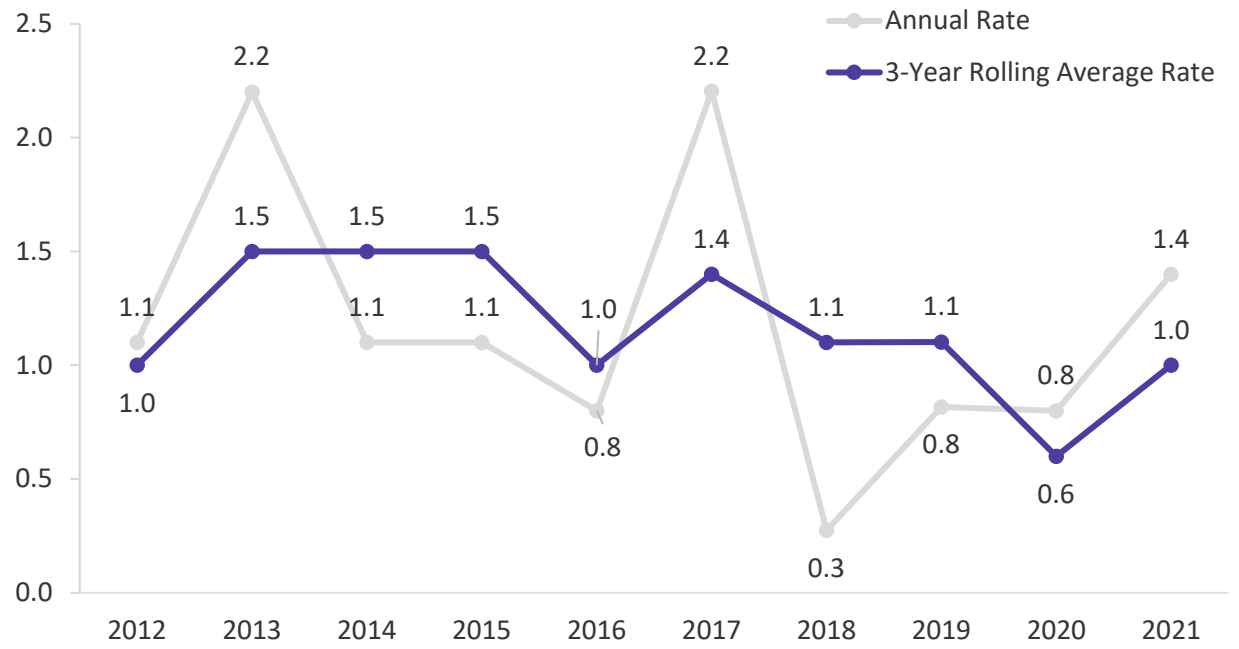
Characteristics of Child Abuse and Neglect Homicides

Demographics	• Age: 0-5 Years (70%), Infants (20%) • Race/Ethnicity: Multiracial/Other (35%), White (25%), Black/African American (20%), Hispanic/Latino (15%), Asian/ Pacific Islander (5%)
Systems Involvement	• CPS Involvement: 85% • Law Enforcement Involvement: 65% • Government Aid: 60%
Neighborhoods	• All Sacramento County Residents - Valley Hi/Meadowview/Florin: 30% - Elk Grove: 15% - North Highlands/Foothill Farms: 15%
Mechanism	• Involved Blunt Force Injuries*: 45% *Excludes injuries due to Motor Vehicle Collisions
Perpetrator	• Biological Parent(s): 55% • Males: 59%

Figure 4 displays the annual and three-year rolling average mortality rates (per 100,000 children) for CAN Homicide cases. The annual rates show fluctuations over the years, ranging from a 10-year low of 0.3 in 2018 to a high of 2.2 in 2013 and 2017.

The three-year rolling average provides a trend line by considering the average rates over a span of three years. This smooths out yearly fluctuations and highlights longer-term trends. The three-year rolling average rates show fluctuations, with a high of 1.5 from 2011-2013 through 2013-2015, and a low of 0.6 in 2018-2020.

Figure 4. CAN Homicide Child Mortality Annual & Three-Year Rolling Average Rates (per 100,000 children), Sacramento County Residents, 2012-2021



Note: Years listed along the X axis are the final year of the rolling averages. For example, the year marked 2012 encompasses a rolling average from 2010-2012.

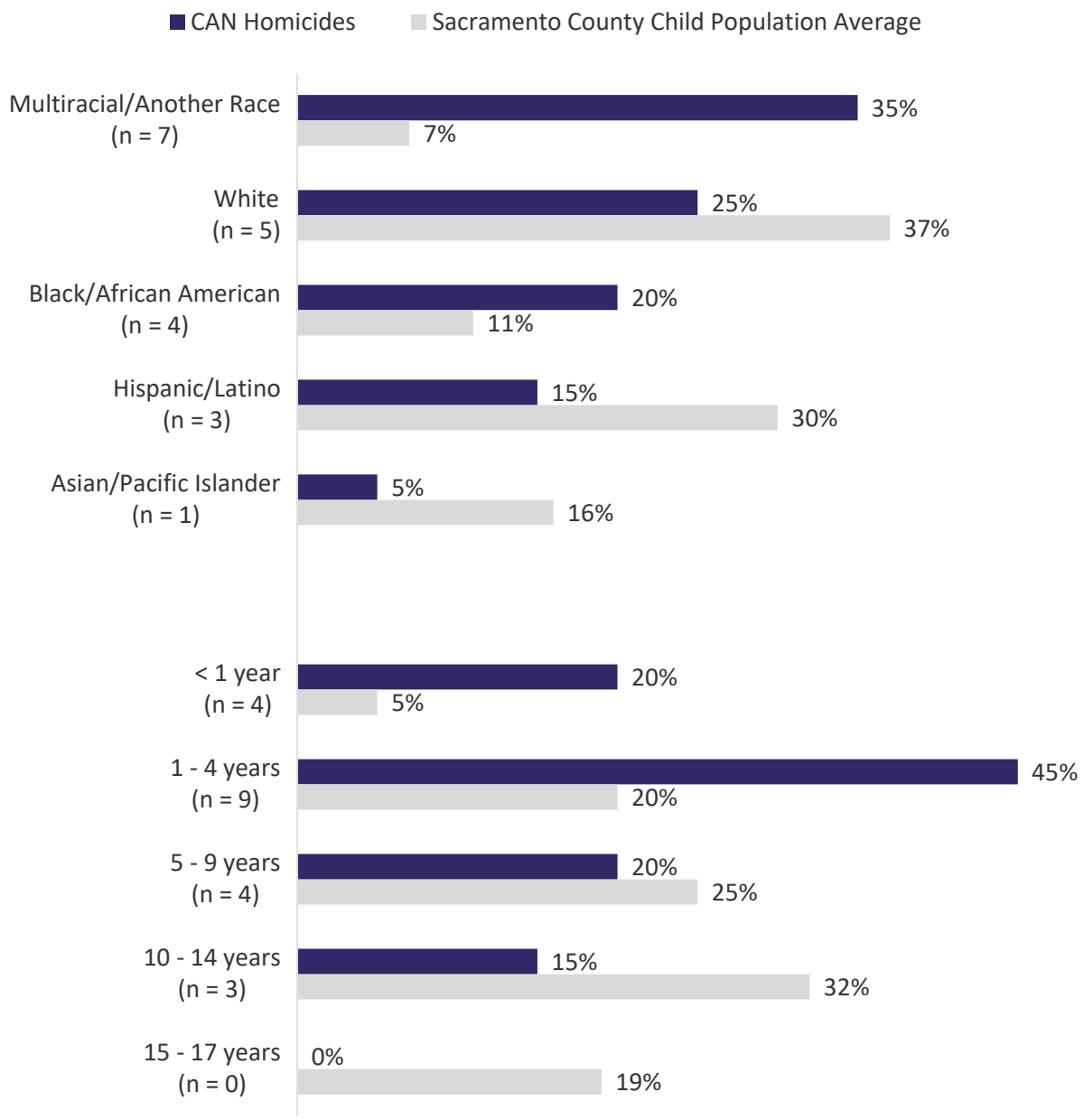
Victims of CAN Homicide and their families had varied histories of systems involvement over the years of 2017-2021. As can be seen in Table 3, the most common system was CPS involvement, known to be present in 85 percent (17 of 20) of CAN homicides from 2017-2021. The next most common systems were law enforcement involvement (65%) and government aid (60%).

See Table 41 in the Appendix for the specific nature of the CPS involvement, including person involved, outcome, and timing of involvement for the 85 percent with history of CPS involvement prior to the child's death in 2017-2021.

Victims of CAN Homicide

Figure 5 shows the percentages of CAN Homicide victims, from 2017-2021, within each race/ethnicity and age group, and the corresponding Sacramento County Child Population data for comparison.

Figure 5. CAN Homicides by Race/Ethnicity & Age Group, Sacramento County Residents, 2017-2021



Source: California Department of Finance Population Projections 2017-2021

Perpetrators of CAN Homicide

There were 22 total perpetrators of 20 CAN Homicides in Sacramento County in 2017-2021. Table 4 shows the perpetrator's relationship to the decedent, sex, and age (when known) for all 2017-2021 perpetrators. In 2017-2021, CAN Homicide perpetrators were most often biological parents (55%), especially fathers (27%), followed by the boyfriend of the parent/guardian (23%). Perpetrators were also most commonly male (59%) and between the ages of 31-39 years old (23%).

Table 4. CAN Homicides by Perpetrator Characteristics, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2021

Category	2017-2021	
Relationship		
Biological Parent(s)	12	55%
Father	*6*	
Mother	*4*	
Both Parents	*1*	
Sibling	1	5%
Stepparent	-	-
Boyfriend of Parent/Guardian	5	23%
Adoptive/Foster Parent	-	-
Grandparent	-	-
Other Family Member	-	-
Babysitter	1	5%
Relationship: Other	1	5%
Relationship: Undetermined	2	9%
Sex		
Male	13	59%
Female	7	32%
Unknown	2	9%
Age Group		
< 18 years	-	-
18-23 years	4	18%
24-30 years	3	14%
31-39 years	5	23%
40+ years	3	14%
Unknown	7	32%
Total CAN Homicide Perpetrators	**22**	**100%**
Total CAN Homicides	**20**	

Mechanism of Death

The mechanisms of death for the 20 CAN Homicides, from 2017-2021, were as follows:

- 9 of 20 (45%) Blunt force injury, of which: 4 of 9 (44%) Blunt force injury was in addition to neck compression, sharp injury, and/or the use of an identified object
- 3 of 20 (15%) Motor Vehicle Collisions where the driver was under the influence of alcohol, drugs, or both
- 3 of 20 (15%) Shaken Baby Syndrome or Abusive Head Trauma
- 5 of 20 (25%) Other, including gunshot wound, fall, hyperthermia, and asphyxia/neck compression

Chapter Three

All Child Deaths in Sacramento County **Rates & Categories**

Chapter Three — All Child Deaths in Sacramento County| Rates & Categories

This chapter provides an overview of child deaths from 2017-2021, by detailing categories and classifications of deaths and comparing these trends to previous years. Next, the locations of child deaths are mapped in relationship to the child population in Sacramento County (Figure 8). This chapter also includes demographic information, listing sex, age and race/ethnicity of decedents for each category of death, as well as demographic trends over time by classification of death. Finally, Infant Sleep-Related Deaths and racial disproportionality are highlighted.

CDRT reviews both Sacramento County resident deaths and deaths of out-of-county residents whose injuries leading to death were sustained in Sacramento County. Table 5 shows the number of deaths from 2012-2021 by residency.

Table 5. Child Deaths by County Residency, 2012-2021

	10-Year Trend										
County Residency	2012	2013	2014	2015	2016	**2017**	**2018**	**2019**	**2020**	**2021**	All
Sacramento	137	129	132	126	131	**114**	**120**	**119**	**113**	**134**	1255
Non-Resident	0	3	1	2	6	**3**	**2**	**2**	**3**	**1**	23
Total Child	137	132	133	128	137	**117**	**122**	**121**	**116**	**135**	1278

Note: Bolding indicates focal years of current report.

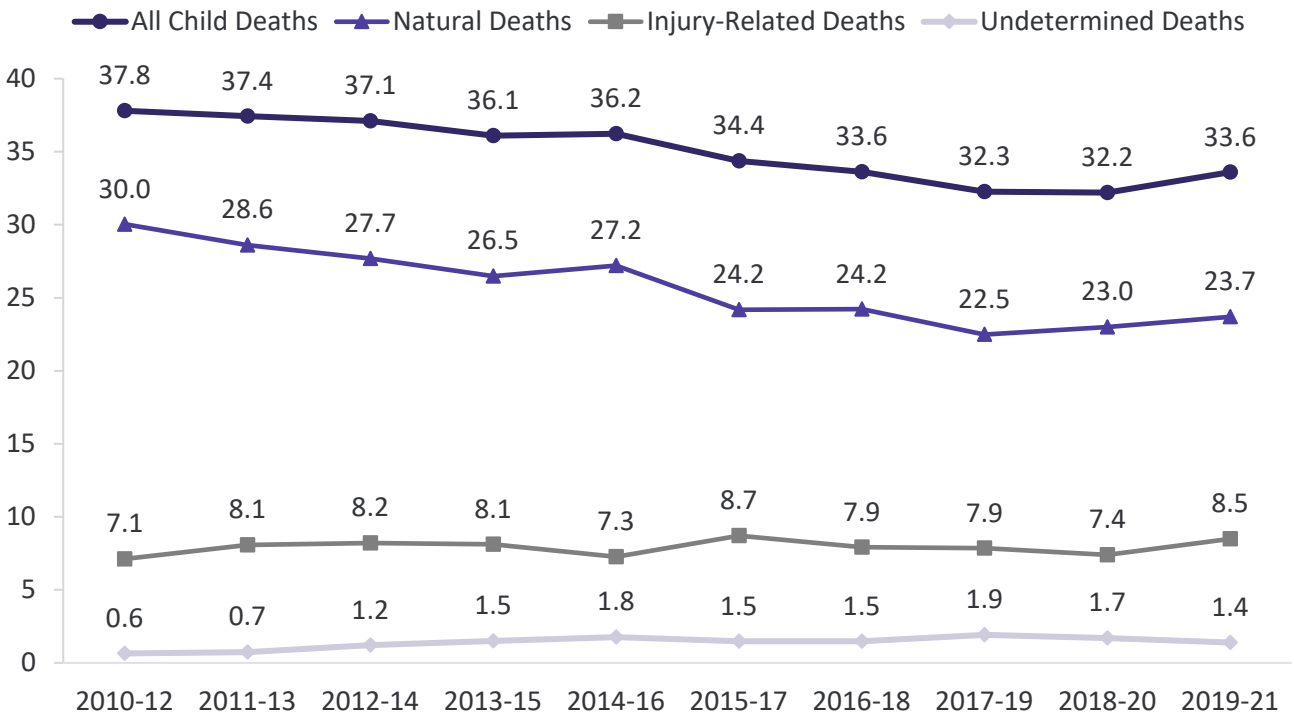
From 2017-2021, there were 600 deaths of children, birth through 17 years of age, who were Sacramento County residents, and 11 deaths of out-of-county residents whose injuries leading to death were sustained in Sacramento County. For comparisons to Sacramento County child population, data comparisons are limited to the 600 Sacramento County resident deaths.

Given the large number of children living in Sacramento County, and to account for the overall child population change, it is useful to look at the child death rate to see variations in the child death data. The child death rate represents the number of child deaths per 100,000 children living in Sacramento County. In Sacramento County, the child death rate between 2017-2021 was 33.0 deaths per 100,000 children, compared to 36.6 from 2012-2016.

Deaths can be classified as Natural, Injury-Related, or Undetermined. The Undetermined category is comprised of cases where the coroner determined there was insufficient evidence to identify the exact cause of death.

Figure 6 shows the child mortality rate for Sacramento County residents. Overall, the death rate has declined over the 10-year period.

Figure 6. Child Mortality Three-Year Rolling Average Rates (per 100,000 children), Sacramento County Residents, 2012-2021



From 2017-2021, 69 percent (419 of 611) of all child deaths were classified as Natural. Injury-Related Deaths accounted for 27 percent (166 of 611), and Undetermined Deaths made up the remaining 4 percent (26 of 611). Figure 7 shows a breakdown of all child deaths by category for each year, from 2012-2021. The average overall proportion of Injury-Related Deaths increased from 23 percent of all deaths from 2012-2016 to 26 percent of all deaths from 2017-2019, with a spike in 2017 (35% of all 2017 deaths). Natural Deaths have decreased over time, from 73 percent of all deaths from 2012-2016 to 68 percent from 2017-2019. Table 42 detailing all child deaths by classification and category from 2012-2021, can be found in the Appendix.

Figure 7. Percent of Child Deaths by Classification, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2012-2021

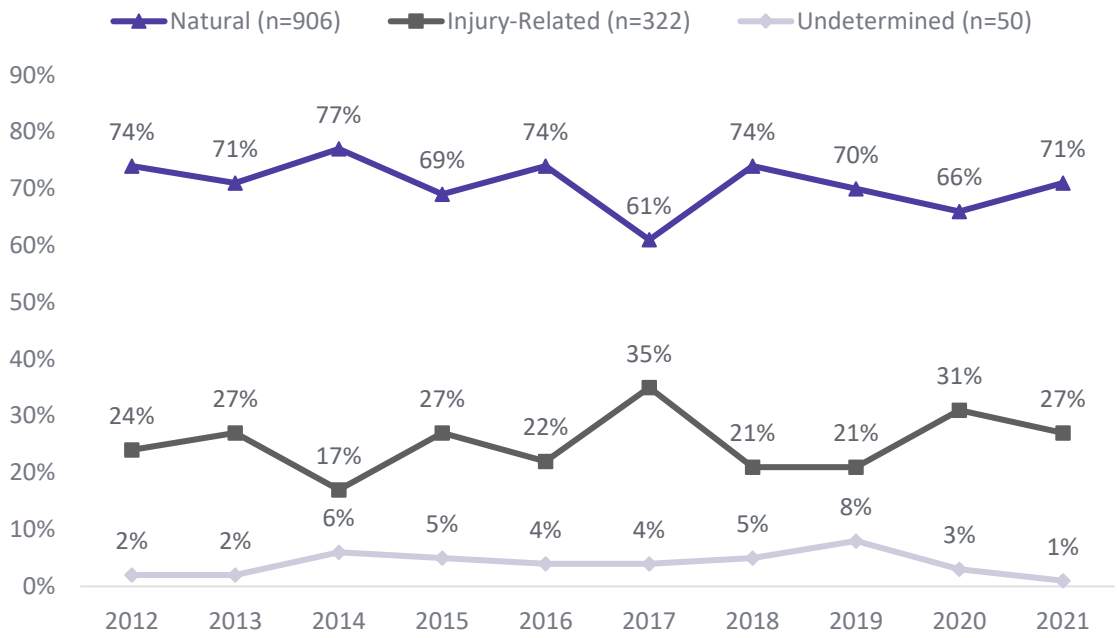
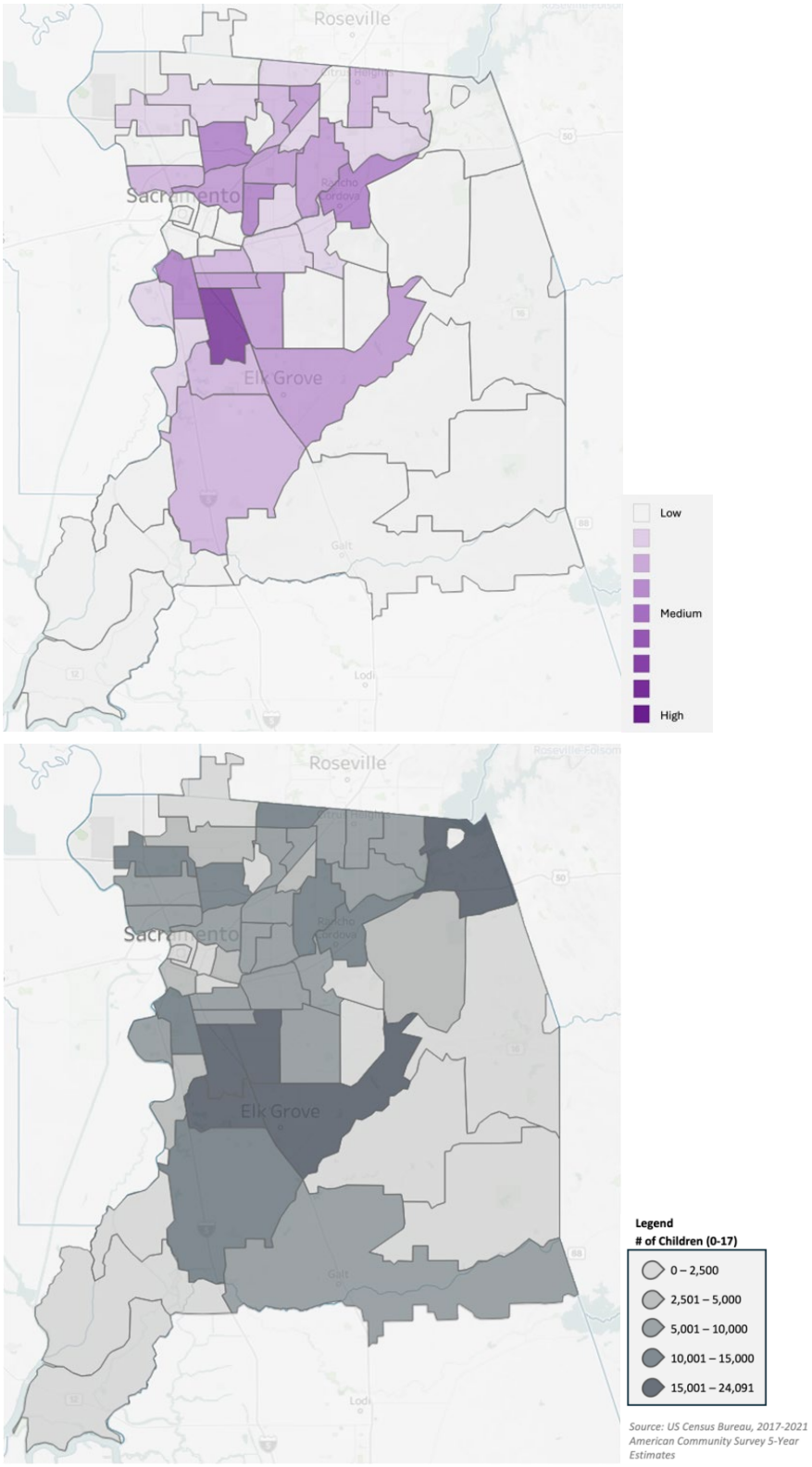


Figure 8. Density of All Child Deaths by ZIP Code, Sacramento County Residents (Top), 2017-2021; Child Population in Sacramento County by ZIP Code (Bottom), 2017-2021



DEMOGRAPHICS

Age and Race/Ethnicity for All Child Deaths

From 2017-2021, 60 percent (357 of 600) of Sacramento County resident child deaths occurred in infants under one year of age. Of the 598 deaths among Sacramento County resident children ages birth through 17 from 2017-2021 for whom we know race/ethnicity, the largest number occurred among White children, who comprised 26 percent (155 of 598) of all child deaths.

Table 6 shows the death rates by race/ethnicity of Sacramento County child residents from 2017-2021 and illustrates the disproportionality that exists between racial categories. The greatest discrepancy occurs among Multiracial/Other race/ethnicity children who died at a rate of 99.5 per 100,000, compared to the average across all races/ethnicities of 32.9 per 100,000. Black/African American children also died at a disproportionate rate compared to children of all races/ethnicities, with a rate of 65.6 per 100,000.

Table 6. Child Mortality Rate* by Race/Ethnicity & Age Group, Sacramento County Residents whose Death Occurred in Sacramento County, 2017-2021

Race/Ethnicity	Sacramento Child Population	Age in Years					Total*		
		<1*	1-4	5-9	10-14	15-17	#	Rate **	%
White	38%	87	20	11	18	19	155	23.7	26%
Black/African American	10%	76	9	10	11	20	126	65.6	21%
Hispanic	29%	75	8	6	9	10	108	19.3	18%
Asian/Pacific Islander	15%	40	9	5	5	11	70	25.6	12%
Multiracial/ Other	8%	77	16	9	13	24	139	99.5	23%
Total	100%	355	62	41	56	84	598	32.9	100%

*Race/Ethnicity was Unknown for two infants.

**Death rate is per 100,000.

Systems Involvement for All Child Deaths

To detect trends and form prevention strategies at a local level, the CDRT investigates the family environments of all children who die in Sacramento County. Through the years that Sacramento County's CDRT has met and reviewed child deaths, certain types of systems involvement (what were previously referred to as "risk factors") have been identified. Evidence of involvement is collected by CDRT members in preparation for each review. "Systems Involvement" is the broad term used to describe engagement in a variety of social, economic, and/or demographic services and with providers that may be associated with a higher risk of negative health outcomes for children. Systems involvement identified in this report represent only those factors known to an agency represented on the CDRT and reported to the CDRT.

The following two tables (Table 7 and Table 8) show history of systems involvement, by category of death, reflecting the pre-COVID-19 pandemic years of 2017-2019 separately from the COVID-19 pandemic years of 2020-2021. The percentages listed represent the number of deaths involved with a system, by total number of deaths per category.

From 2017-2021, 85 percent of all child deaths had one or more systems involvement. Systems involvement is more common in Injury-Related Deaths at 93 percent across all five years. All CAN Homicides, Drownings, and Poisoning/Overdose Deaths had families with at least one systems involvement.

Table 7. All Child Deaths by Category of Systems Involvement, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2019

2017-2019	Government Aid	Crime	Alcohol/ Drug Use	Domestic Violence	Gang History	Sacramento County CPS	All Child Deaths
Injury-Related Total	**58%**	**49%**	**48%**	**31%**	**14%**	**60%**	**100%**
Homicide	37%	67%	59%	48%	30%	67%	29%
CAN Homicide	*50%*	*42%*	*58%*	*42%*	*8%*	67%	*44%*
3rd Party Homicide	*27%*	*87%*	*60%*	*53%*	*47%*	67%	*56%*
Motor Vehicle Collision	74%	37%	42%	16%	11%	42%	20%
Occupant/Driver	*70%*	*30%*	*40%*	*10%*	-	50%	*53%*
Pedestrian	*50%*	*75%*	*50%*	*25%*	*50%*	-	*21%*
Bike	*100%*	*20%*	*40%*	*20%*	-	60%	*26%*
Drowning	79%	36%	36%	36%	7%	64%	15%
Suicide	61%	50%	56%	28%	11%	72%	19%
Suffocation	50%	13%	25%	13%	-	38%	9%
Poisoning/Overdose	50%	100%	100%	50%	-	100%	2%
Burn/Fire	-	-	-	-	-	100%	-
Legal Intervention	-	-	-	-	-	-	-
Injury | Other	67%	67%	33%	33%	-	67%	3%
Injury | Undetermined	100%	100%	-	-	-	-	1%
Natural Total	**61%**	**35%**	**23%**	**15%**	**5%**	**41%**	**100%**
Perinatal Conditions	54%	39%	25%	17%	5%	36%	39%
Congenital Anomalies	68%	27%	10%	10%	5%	37%	34%
SIDS	-	-	-	-	-	-	-
SUIDS	59%	55%	55%	23%	5%	73%	9%
Cancer	53%	21%	11%	11%	5%	32%	8%
Infections/Respiratory	75%	33%	42%	25%	8%	42%	5%
Natural | Other	75%	38%	50%	13%	-	50%	3%
Natural | Undetermined	80%	40%	20%	40%	-	80%	2%
Undetermined Total	**76%**	**71%**	**67%**	**48%**	**10%**	**71%**	**100%**
Total (All Manners)	**61%**	**41%**	**32%**	**21%**	**8%**	**48%**	**100%**

Table 8. All Child Deaths by Category of Systems Involvement, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2020-2021

2020-2021	Government Aid	Crime	Alcohol/ Drug Use	Domestic Violence	Gang History	Sacramento County CPS	All Child Deaths
Injury-Related Total	**52%**	**58%**	**59%**	**36%**	**7%**	**68%**	**100%**
Homicide	47%	79%	68%	47%	11%	79%	26%
CAN Homicide	63%	75%	50%	25%	13%	88%	42%
3rd Party Homicide	36%	82%	82%	64%	9%	73%	58%
Motor Vehicle Collision	43%	57%	57%	7%	14%	43%	19%
Occupant/Driver	33%	56%	44%	11%	11%	33%	64%
Pedestrian	75%	75%	100%	-	-	75%	29%
Bike	-	-	-	-	-	-	7%
Drowning	55%	9%	9%	9%	9%	55%	15%
Suicide	50%	38%	75%	38%	-	88%	11%
Suffocation	100%	33%	67%	50%	-	83%	8%
Poisoning/Overdose	40%	100%	90%	70%	-	80%	14%
Burn/Fire	-	-	-	-	-	-	-
Legal Intervention	-	-	-	-	-	-	-
Injury | Other	100%	-	-	-	-	-	1%
Injury | Undetermined	50%	75%	50%	50%	-	75%	5%
Natural Total	**66%**	**35%**	**28%**	**18%**	**3%**	**44%**	**100%**
Perinatal Conditions	55%	29%	26%	15%	2%	35%	36%
Congenital Anomalies	68%	36%	18%	14%	4%	41%	32%
SIDS	-	-	-	-	-	-	-
SUIDS	95%	57%	71%	29%	5%	67%	12%
Cancer	50%	17%	6%	6%	6%	28%	10%
Infections/Respiratory	90%	40%	40%	40%	-	70%	6%
Natural | Other	50%	75%	50%	25%	-	100%	2%
Natural | Undetermined	100%	-	-	-	-	40%	1%
Undetermined Total	**60%**	**40%**	**80%**	**40%**	**-**	**51%**	**100%**
Total (All Manners)	**62%**	**41%**	**38%**	**24%**	**4%**	**44%**	**100%**

INJURY-RELATED DEATHS

Injury-Related Deaths are deaths that are the direct result of an injury-related incident. This includes both intentional and unintentional injury deaths, including Burn/Fire, Drowning, Homicide, Motor Vehicle Collision, Other-Injury, Suffocation, Suicide, and Undetermined-Injury Deaths. Injury-Related Deaths can be analyzed in terms of three broad categories: Intentional, Unintentional, and Undetermined.

Intentional Injury-Related Death | Death as a result of an injury that is purposely inflicted, by either oneself or another person. Includes: Homicide and Suicide Deaths.

Unintentional Injury-Related Death | Death as a result of an injury that was unplanned, and unintended to happen. Includes: Burn/Fire, Drowning, Motor Vehicle Collision, Other-Injury, and Suffocation Deaths.

Undetermined Injury-Related Death | An Injury-Related Death in which the cause of death may not be medically identifiable, or an Injury-Related Death in which there was insufficient evidence to determine whether the fatal injuries were inflicted or accidental. An injury for which the intentionality is unclear. Example: a case in which the coroner could not distinguish between an accident and suicide.

The percentage of Injury-Related Deaths increased from 26 percent of all deaths (93 of 360) from 2017-2019, pre-COVID-19 pandemic, to 29 percent of all deaths (73 of 251) from 2020-2021, for Sacramento County residents and out-of-county residents whose injuries leading to death were sustained in Sacramento County. Much of the increase in Injury-Related Deaths occurred among Unintentional Injury-Related Deaths, which increased from 4.3 deaths per 100,000 child residents between 2017-2019, to 5.1 per 100,000 child residents between 2020-2021 (rolling average rates).

Table 9 shows the number of injury-related deaths by Intentional and Unintentional categories from 2017-2019 compared with those from 2020-2021.

Table 9. Injury-Related Deaths by Category of Death, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2019 and 2020-2021

Category of Death	2017-2019 Total		2020-2021 Total	
Intentional Total	**45**	**48%**	**27**	**37%**
Homicide	27	29%	19	26%
CAN Homicide	*12*	*13%*	8	*11%*
3rd-Party Homicide	*15*	*16%*	11	*15%*
Suicide	18	19%	8	11%
Unintentional Total	**47**	**51%**	**42**	**58%**
Motor Vehicle Collision	19	20%	14	19%
Occupant/Driver	*10*	*11%*	9	*12%*
Pedestrian	*4*	*4%*	4	*5%*
Bike	*5*	*5%*	1	*1%*
Drowning	14	15%	11	15%
Suffocation	8	9%	6	8%
Poisoning/Overdose	2	2%	10	14%
Burn/Fire	1	1%	-	-
Legal Intervention	-	-	-	-
Unintentional: Other	3	3%	1	1%
Undetermined Total	**1**	**1%**	**4**	**5%**
Injury-Related Total	**93**	**100%**	**73**	**100%**

Figure 9 shows the three-year rolling average rates of Injury-Related Deaths in Sacramento County from 2012-2021.

Figure 9. Injury-Related Child Mortality Three-Year Rolling Average Rates (per 100,000 children), Sacramento County Residents whose Death Occurred in Sacramento County, 2012-2021

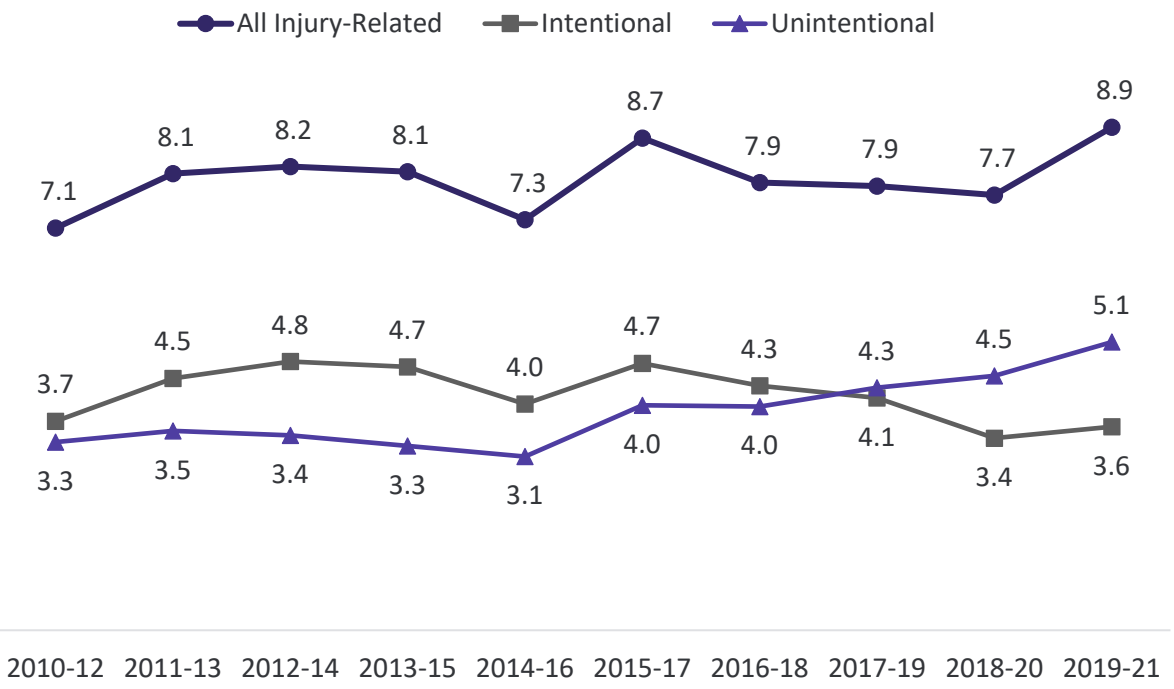


Table 10 shows Injury-Related Deaths by sex and category of death. Sixty-six percent of all Injury-Related Deaths were among male decedents, including 74 percent of Intentional Injury-Related Deaths and 62 percent of Unintentional Injury-Related Deaths.

Table 10. Injury-Related Deaths by Sex, 2017-2021, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County

		2017-2021					
	Category of Death	Male		Female		Total	
Intentional	**Total**	53	74%	19	26%	72	43%
	Homicide	33	72%	13	28%	46	28%
	CAN Homicide	*12*	*60%*	*8*	*40%*	*20*	*12%*
	3rd-Party Homicide	*21*	*81%*	*5*	*19%*	*26*	*16%*
	Suicide	20	77%	6	23%	26	16%
Unintentional	**Total**	55	62%	34	38%	89	54%
	Motor Vehicle Collision	19	58%	14	42%	33	20%
	Occupant/Driver	*11*	*58%*	*8*	*42%*	*19*	*11%*
	Pedestrian	*2*	*25%*	*6*	*75%*	*8*	*5%*
	Bike	*6*	*100%*	*-*	*-*	*6*	*4%*
	Drowning	16	64%	9	36%	25	15%
	Suffocation	9	64%	5	36%	14	8%
	Poisoning/Overdose	8	67%	4	33%	12	7%
	Burn/Fire	1	100%	-	-	1	1%
	Legal Intervention	-	-	-	-	-	-
	Other Unintentional	2	50%	2	50%	4	2%
Undetermined	**Total**	2	40%	3	60%	5	3%
Injury-Related	**Total**	110	66%	56	34%	166	100%

Table 11 shows Injury-Related Deaths from 2017-2021 by age. The most common age category for an Injury-Related Death was 15-17 years of age, encompassing 41 percent of Injury-Related Deaths. Youth between 15-17 years were also the most common age group for Intentional Injury-Related Deaths (51%) and Unintentional Injury-Related Deaths (33%).

Table 11. Injury-Related Deaths by Age Range, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2021

Injury-Related Manner	Category of Death	Age <1		1-4		5-9		10-14		15-17		Total	
Intentional	**Total**	**5**	**7%**	**10**	**14%**	**8**	**11%**	**12**	**17%**	**37**	**51%**	**72**	**100%**
	Homicide	5	11%	10	22%	8	17%	5	11%	18	39%	46	64%
	CAN Homicide	*4*	*20%*	*9*	*45%*	*4*	*20%*	*3*	*15%*	*-*	*-*	*20*	*28%*
	3rd-Party Homicide	*1*	*4%*	*1*	*4%*	*4*	*15%*	*2*	*8%*	*18*	*69%*	*26*	*36%*
	Suicide	-	-	-	-	-	-	7	27%	19	73%	26	36%
Unintentional	**Total**	**19**	**21%**	**21**	**24%**	**10**	**11%**	**10**	**11%**	**29**	**33%**	**89**	**100%**
	Motor Vehicle Collision	2	6%	4	12%	6	18%	7	21%	14	42%	33	37%
	Occupant/Driver	*1*	*5%*	*2*	*11%*	*6*	*32%*	*1*	*5%*	*9*	*47%*	*19*	*21%*
	Pedestrian	*1*	*13%*	*2*	*25%*	*-*	*-*	*2*	*25%*	*3*	*38%*	*8*	*9%*
	Bike	*-*	*-*	*-*	*-*	*-*	*-*	*4*	*67%*	*2*	*33%*	*6*	*7%*
	Drowning	5	20%	11	44%	4	16%	3	12%	2	8%	25	28%
	Suffocation	11	79%	2	14%	-	-	-	-	1	7%	14	16%
	Poisoning/Overdose	-	-	1	8%	-	-	-	-	11	92%	12	13%
	Burn/Fire	-	-	-	-	-	-	-	-	1	100%	1	1%
	Legal Intervention	-	-	-	-	-	-	-	-	-	-	-	-
	Other Unintentional	1	25%	3	75%	-	-	-	-	-	-	4	4%
Undetermined	**Total**	**2**	**40%**	**-**	**-**	**1**	**20%**	**-**	**-**	**2**	**40%**	**5**	**100%**
Injury-Related	**Total**	**26**	**16%**	**31**	**19%**	**19**	**11%**	**22**	**13%**	**68**	**41%**	**166**	**100%**

The distribution of injury-related deaths by race/ethnicity in 2017-2021 is presented in Table 12. Intentional Injury-Related Deaths are most common in children who are Multiracial/Other, representing 31 percent. Black/African American (28%) children had the highest representation of Unintentional Injury-Related Deaths, with Multiracial/Other children closely following (27%).

Table 12. Injury-Related Deaths by Race/Ethnicity, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2021

Category of Death	Race/Ethnicity											
	Black/African American		Asian/Pacific Islander		White		Hispanic		Multiracial/ Other		Total	
Intentional Total	**19**	**26%**	**6**	**8%**	**13**	**18%**	**12**	**17%**	**22**	**31%**	**72**	**100%**
Homicide	18	39%	1	2%	5	11%	7	15%	15	33%	46	64%
CAN Homicide	*4*	*20%*	*1*	*5%*	*5*	*25%*	*3*	*15%*	*7*	*35%*	*20*	*28%*
3rd-Party Homicide	*14*	*54%*	-	-	-	-	*4*	*15%*	*8*	*31%*	*26*	*36%*
Suicide	1	4%	5	19%	8	31%	5	19%	7	27%	26	36%
Unintentional Total	**25**	**28%**	**10**	**11%**	**20**	**22%**	**10**	**11%**	**24**	**27%**	**89**	**100%**
Motor Vehicle Collision	11	33%	4	12%	6	18%	2	6%	10	30%	33	37%
Occupant/Driver	*8*	*42%*	-	-	*5*	*26%*	*1*	*5%*	*5*	*26%*	*19*	*21%*
Pedestrian	*1*	*13%*	*2*	*25%*	-	-	*1*	*13%*	*4*	*50%*	*8*	*9%*
Bike	*2*	*33%*	*2*	*33%*	*1*	*17%*	-	-	*1*	*17%*	*6*	*7%*
Drowning	5	20%	5	20%	7	28%	2	8%	6	24%	25	28%
Suffocation	5	36%	-	-	3	21%	3	21%	3	21%	14	16%
Poisoning/Overdose	3	25%	1	8%	2	17%	2	17%	4	33%	12	13%
Burn/Fire	-	-	-	-	-	-	-	-	1	100%	1	1%
Legal Intervention	-	-	-	-	-	-	-	-	-	-	-	-
Other Unintentional	1	25%	-	-	2	50%	1	25%	-	-	4	4%
Undetermined Total	**1**	**20%**	**-**	**-**	**3**	**60%**	**1**	**20%**	**-**	**-**	**5**	**100%**
Injury-Related Total	**45**	**27%**	**16**	**10%**	**36**	**22%**	**23**	**14%**	**46**	**28%**	**166**	**100%**

Intentional Injury-Related Deaths

From 2017-2021, the most common Intentional Injury-Related Death was Homicide (64% of all Injury-Related Deaths), followed by Suicide (36% of all Injury-Related Deaths). All but two of the 72 Intentional Injury-Related Deaths were Sacramento County residents; two Third-Party Homicides were children who were out-of-county residents whose injuries leading to death were sustained in Sacramento County.

Homicides

Homicides are comprised of two categories: Child Abuse and Neglect (CAN) Homicides, in which the perpetrator is the caregiver or supervisor of the decedent, and Third-Party Homicides, in which the perpetrator is a third-party, such as a friend or stranger.

From 2017-2021, Homicides represented 28 percent (46 of 166) of all Intentional Injury-Related Deaths.

CAN Homicides | In 2017-2021, 20 of the 46 Homicides were CAN Homicides. More information on CAN Homicides can be found in Chapter 2.

Third-Party Homicides | In 2017-2021, 26 of the 46 Homicide deaths were classified as Third-Party Homicides. Twenty-four were Sacramento County residents, and two were residents of other counties whose injuries and deaths took place in Sacramento County. Firearms were used in 26 of the 46 cases.

More information on Third-Party Homicides of youth, ages 10-17, and the use of firearms can be found in Chapter 4.

Suicides

From 2017-2021, there were 26 Suicide deaths, all among Sacramento County residents.

Mechanism of Suicide | Twelve decedents died by hanging, 10 by gunshot wound, and four by other mechanisms including, but not limited to, vehicular trauma and intentional overdose.

Warning Signs | Twenty-one of the 26 decedents displayed known warning signs prior to the suicide.

More information on Suicides of youth, ages 10-17, can be found in Chapter 4.

Unintentional Injury-Related Deaths

From 2017-2021, there were 89 deaths resulting from Unintentional Injuries. Of these, 80 were Sacramento County residents, while nine were out-of-county residents whose injuries leading to death were sustained in Sacramento County. In 2017-2021, Unintentional Injury-Related Deaths comprised 54 percent (89 of 166) of all Injury-Related Deaths. The most common Unintentional Injury-Related Deaths were Motor Vehicle Collisions (20% of all Injury-Related Deaths), followed by Drownings (15% of all Injury-Related Deaths).

Drownings

In 2017-2021, Drownings accounted for 28 percent (25 of 89) of Unintentional Injury-Related Deaths.

Location | Twelve took place in a pool or hot-tub, Six of the deaths occurred in open water (Four in a river, two in a lake), five were in a bathtub and two were in other locations.

Activity Prior | Seven decedents were bathing, seven decedents were swimming, and four were playing near water. The seven remaining decedents were doing something other than those listed, or it is unknown what they were doing.

Conditions | Zero of the six decedents who drowned in open water were wearing a life jacket.

Motor Vehicle Collisions

In 2017-2021, Motor Vehicle Collision (MVC) Deaths accounted for 37 percent (33 of 89) of Unintentional Injury-Related Deaths.

Location of Decedent | Of the thirty-three MVC Deaths, 19 were occupants or drivers, eight were pedestrians, and six were bicyclists.

Location of Incident | Twelve incidents occurred on a city street, six on a highway, five on a residential street, and ten occurred in other areas, including but not limited to, intersections, parking areas, rural roads, and shoulders.

Contributing Factors | The CDRT records instances of unsafe conditions present in MVC Deaths. Such conditions include car passengers who were not properly using seatbelts and cyclists who were not wearing helmets. Nine of the nineteen occupants or drivers were wearing seatbelts, of which eight were using them appropriately. Zero of the bicyclists were wearing a helmet of any kind.

NATURAL DEATHS

Natural deaths are deaths that include complications of the natural disease process, or due immediately to natural causes. Examples of Natural Deaths include Cancer, Congenital Anomalies, Infection/ Respiratory, Perinatal Conditions, Sudden Infant Death Syndrome (SIDS), Sudden Unexpected Infant Death Syndrome (SUIDS), Other-Natural, and Undetermined-Natural Deaths.

From 2017-2021, 70 percent (419 of 600) of Sacramento County resident child deaths resulted from Natural Deaths. The two leading categories of Natural Death from 2017-2021 were Perinatal Conditions (38%) and Congenital Anomalies (33%). Deaths involving COVID-19 are captured in Infection/Respiratory Deaths. From 2020-2021 there were too few deaths (less than five) involving COVID-19 to identify them separately.

Table 13 shows the number of Natural Deaths for Sacramento County residents whose death occurred in Sacramento County.

Table 13. Natural Deaths by Category of Death, Sacramento County Residents whose Death Occurred in Sacramento County, 2017-2019 & 2020-2021

Natural Manner	2017-2019		2020-2021		Five-Year Total 2017-2021	
Perinatal Conditions	96	39%	62	36%	158	38%
Congenital Anomalies	84	34%	56	32%	140	33%
SIDS	-	-	-	-	-	-
SUIDS	22	9%	21	12%	43	10%
Cancer	19	8%	18	10%	37	9%
Infections/Respiratory	12	5%	10	6%	22	5%
Natural: Other	8	3%	4	2%	12	3%
Natural: Undetermined	5	2%	2	1%	7	2%
Total	**246**	**100%**	**173**	**100%**	**419**	**100%**

Table 14 shows Natural Deaths by sex from 2017-2021. Males accounted for a higher percentage of deaths overall (55%) and across most categories, particularly in Cancer (68%), SUIDS (58%), and Infections/Respiratory (55%).

Table 14. Natural Deaths by Sex, Sacramento County Residents, 2017-2021

Natural Manner	2017-2021 Male		Female		Total	
Perinatal Conditions	83	53%	75	47%	158	38%
Congenital Anomalies*	74	53%	66	47%	140	33%
SIDS	-	-	-	-	-	-
SUIDS	25	58%	18	42%	43	10%
Cancer	25	68%	12	32%	37	9%
Infections/Respiratory	12	55%	10	45%	22	5%
Natural: Other	7	58%	5	42%	12	3%
Natural: Undetermined	3	43%	4	57%	7	2%
Injury-Related Total	**229**	**55%**	**190**	**45%**	**419**	**100%**

*Sex was unknown/ambiguous for one decedent in this category.

Table 15 shows Natural Deaths by age range. Infants (< 1 year of age) made up 75 percent of Natural Deaths overall from 2017-2021.

Table 15. Natural Deaths by Age Range, Sacramento County Residents, 2017-2021

Natural Manner	Age										2017-2021 Total	
	<1		1-4		5-9		10-14		15-17			
Perinatal Conditions	154	97%	-	-	3	2%	1	1%	-	-	158	38%
Congenital Anomalies	101	72%	13	9%	10	7%	10	7%	6	4%	140	33%
SIDS	-	-	-	-	-	-	-	-	-	-	-	-
SUIDS	43	100%	-	-	-	-	-	-	-	-	43	10%
Cancer	2	5%	8	22%	7	19%	11	30%	9	24%	37	9%
Infections/Respiratory	10	45%	4	18%	4	18%	4	18%	-	-	22	5%
Natural: Other	1	8%	1	8%	1	8%	5	42%	4	33%	12	3%
Natural: Undetermined	3	43%	1	14%	-	-	2	29%	1	14%	7	2%
Total	**314**	**75%**	**27**	**6%**	**25**	**6%**	**33**	**8%**	**20**	**5%**	**419**	**100%**

Table 16 displays Natural Deaths by race/ethnicity. White children represented the largest percentage of Natural Deaths at 27 percent overall, and the most deaths from Cancer (41%) and Congenital Anomalies (37%). Children identified as Black/African American and Multiracial/Other represented the largest proportion of deaths from Perinatal Conditions (23% each) and SUIDS (28% each). Multiracial/Other children had the largest percentage of deaths from Infections/Respiratory (27%).

Table 16. Natural Deaths by Race/Ethnicity, Sacramento County Residents whose Death Occurred in Sacramento County, 2017-2021

Natural Manner	Race/Ethnicity											
	Black/African American		Asian/Pacific Islander		White		Hispanic		Multiracial/ Other		Total*	
Perinatal Conditions*	36	23%	23	15%	27	17%	33	21%	36	23%	157	38%
Congenital Anomalies*	13	9%	17	12%	51	37%	35	25%	22	16%	139	33%
SIDS	-	-	-	-	-	-	-	-	-	-	-	-
SUIDS	12	28%	2	5%	11	26%	6	14%	12	28%	43	10%
Cancer	5	14%	4	11%	15	41%	6	16%	6	16%	37	9%
Infections/Respiratory	4	18%	2	9%	5	23%	4	18%	6	27%	22	5%
Natural: Other	3	25%	3	25%	4	33%	-	-	2	17%	12	3%
Natural: Undetermined	2	29%	3	43%	1	14%	-	-	1	14%	7	2%
Total	**75**	**18%**	**54**	**13%**	**114**	**27%**	**84**	**20%**	**85**	**20%**	**417**	**100%**

*Race/ethnicity is unknown for one Perinatal Conditions death and one Congenital Anomalies death.

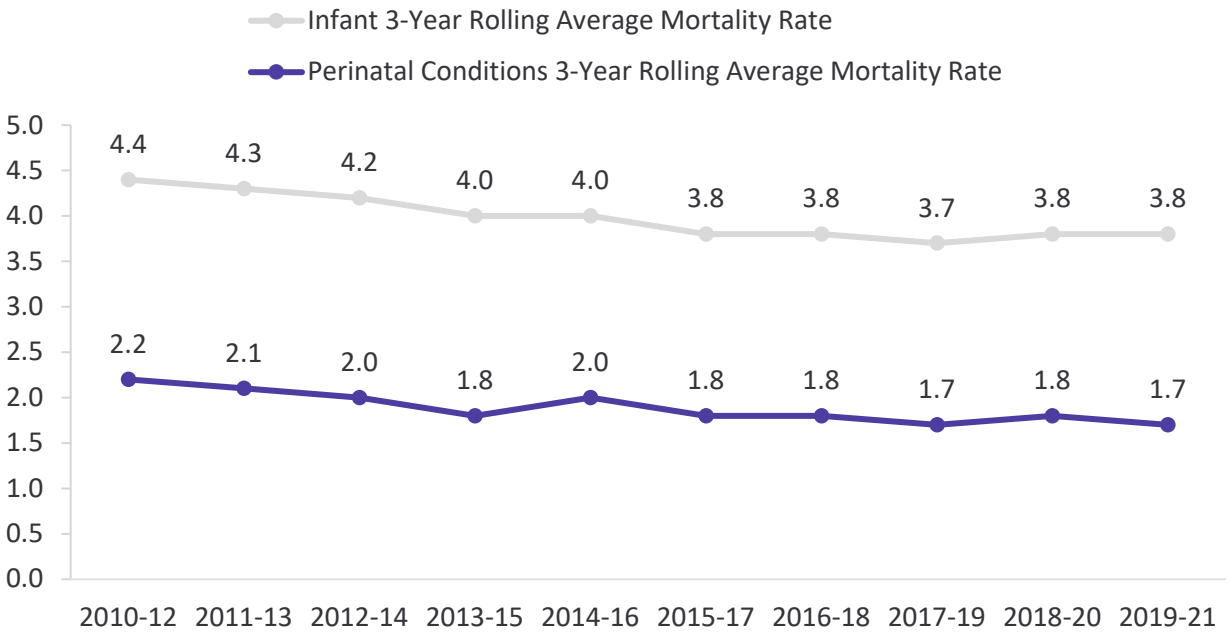
Perinatal Conditions

The CDRT classifies deaths at any age as being due to Perinatal Conditions, if death is caused by pregnancy/birth complications that occur in the second trimester (13-28 weeks of gestation) through one month after birth. Deaths due to Perinatal Conditions include, but are not limited to, prematurity, low birth weight, placental abruption, and congenital infections.

From 2017-2021, 38 percent (158 of 419) of all Natural Deaths in Sacramento County were due to Perinatal Conditions. Gestational age was known for 97 percent (153 of 158) of deaths due to Perinatal Conditions. Of those, prematurity (birth prior to 37-weeks of gestation) was a known contributing factor in 89 percent (137 of 153) of deaths due to Perinatal Conditions. The median gestational age of babies who died from prematurity and other Perinatal Conditions from 2017-2021 was 22-weeks of gestation, compared to 23-weeks of gestation in 2015 and 2016.

Figure 10 shows the Infant Mortality Rates in Sacramento County as well as the three-year rolling average rate of infant deaths from Perinatal Conditions between 2012-2021. Deaths from Perinatal Conditions have decreased from 2.2 per 1,000 live births in 2010-2012 to 1.7 per 1,000 live births in 2019-2021. There was a decrease in overall infant mortality in Sacramento County from 4.4 per 1,000 live births to 3.8 per 1,000 live births over the same period.

Figure 10. Infant Mortality & Perinatal Conditions Three-Year Rolling Average Rates (per 1,000 infants), Sacramento County Residents, 2012-2021



Congenital Anomalies

Congenital is a condition that exists at birth, and usually before birth, regardless of its causation.

Anomalies are marked deviations from the normal standard, especially because of congenital defects. These conditions are acquired during the development of the fetus and are generally attributed to heredity and/or genetics.

Congenital Anomalies are abnormal intrauterine development of an organ or structure; commonly referred to as "birth defects", such as: structural heart defects, neural tube defects, such as anencephaly, and chromosomal abnormalities, such as Trisomy 13 (Patau Syndrome). The underlying causes of death in this category are generally attributed to heredity and/or genetics.

From 2017-2021, 33 percent (140 of 419) of all Natural Deaths in Sacramento County were due to Congenital Anomalies.

Cancer, Infections/Respiratory, & Other Natural Deaths

The following are additional definitions used in the categorization of Natural Deaths, including Cancer, Infection/Respiratory, and Other Natural Deaths.

Cancer Death | A tumor disease, the natural course of which is fatal. Cancer cells, unlike benign tumor cells, exhibit the properties of invasion and metastasis and are highly anaplastic. Examples: Carcinoma, leukemia, and lymphoma.

Infection/Respiratory Death | Includes deaths due to infections of all kinds, including respiratory infections such as severe acute respiratory syndrome coronavirus 2 (COVID-19). This category also includes non-infection respiratory deaths from diseases, such as Asthma.

> *Infection Death: Death caused by the invasion and multiplication of microorganisms in body tissues. Examples: Meningitis and sepsis.*
>
> *Respiratory Death: Death that involves a disease or infection of the lungs or airway passages. Examples: Asthma, COVID-19, Pneumonia, Respiratory Syncytial Virus (RSV), Tuberculosis, etc.*

Other Natural Death | Deaths due to a natural cause not previously mentioned.

From 2017-2021, Cancer Deaths accounted for 9 percent (37 of 419) of child deaths, which is unchanged from the percentage of Cancer Deaths from 2014-2016 (9%, 26 of 292). In 2017-2021, 5 percent (22 of 419) of Natural Deaths were Infection/Respiratory Deaths. That includes deaths involving COVID-19 from 2020-2021, which were too few deaths (less than five) to identify separately. That also includes non-infection Respiratory Deaths due to Asthma.

UNDETERMINED DEATHS

Undetermined Deaths are defined as a manner/classification of death that includes deaths where the category of death and/or the circumstances of the death cannot be fully determined, in which case the classification remains undetermined. Example: If the coroner was unable to determine if the death occurred naturally or if death was the result of an accidental or intentional injury. From 2017-2021, there were 26 Undetermined Deaths (all Sacramento County residents).

INFANT SLEEP-RELATED DEATHS

According to the American Academy of Pediatrics, Infant Sleep-Related (ISR) Death is an umbrella term used to describe all infant deaths that occur in the sleep environment. The Sacramento County CDRT combines all ISR Deaths due to variation in the specific categorization of death by the coroner, and to better identify ISR risk factors to help prevent future Infant Sleep-Related Deaths. The following are the categories used in the definition of Infant Sleep-Related Deaths.

Sudden Infant Death Syndrome (SIDS) | The sudden death of an infant under one year of age, which remains unexplained following an investigation of the case, including the performance of a complete autopsy and review of the clinical history. A diagnosis of exclusion and unknown etiology. Section 27491.41 of the

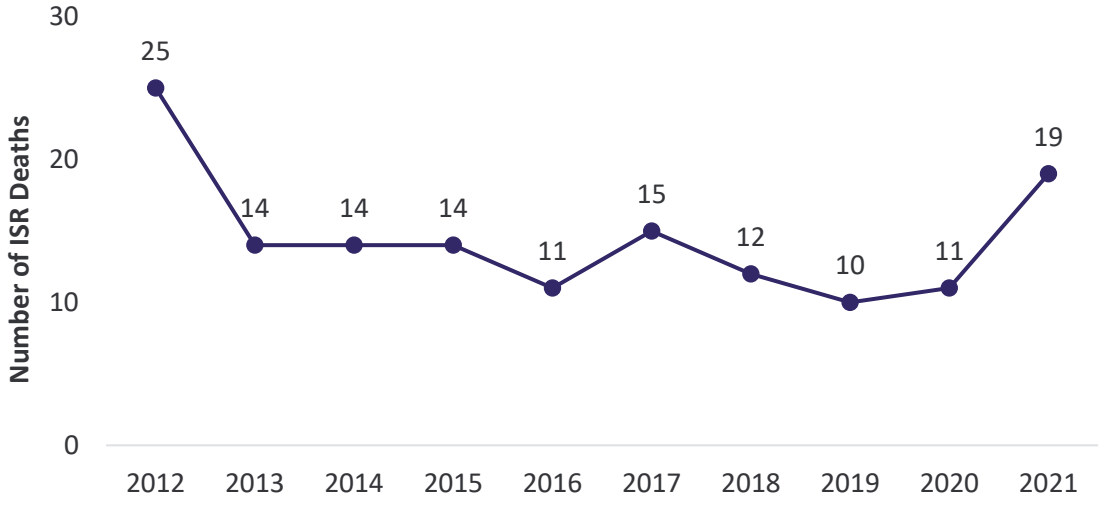
California Government Code defines SIDS as "the sudden death of any infant that is unexpected by the history of the infant and where a thorough postmortem examination fails to demonstrate an adequate cause of death."

Sudden Unexpected Infant Death Syndrome (SUIDS) | Applies to the death of an infant less than one year of age in which investigation, autopsy, medical history review, and appropriate laboratory testing fails to identify a specific cause of death. SUIDS includes cases that meet the definition of SIDS. If there are external or exogenous stressors or systems involvement that a medical examiner would like to incorporate on a death certificate, such as co-sleeping or bed sharing, they may be added to the category of death, such as in the following way: *Sudden Unexplained (or Unexpected) Infant Death while bed-sharing*.

Undetermined Natural Death | Natural death in which the cause of death may not be medically identifiable. These deaths occur when an infant, under the age of one, dies during sleep and the death cannot be classified using another category. These deaths occur in a variety of circumstances, such as: a mother laid her child to sleep with risk factors identified by the American Academy of Pediatrics, and nothing else suspicious at the scene.

From 2017-2021, there were 67 ISR deaths, representing 11 percent of all child deaths in Sacramento County. After declining for several years, ISR deaths reached their peak level in 2012, then fell again to 14 in each year of 2013-2015, before falling to 11 in 2016. After ISR deaths reached their lowest point in the past decade in 2019 (10 cases), they began to rise again, reaching 19 deaths during the COVID-19 pandemic in 2021 (see Figure 11).

Figure 11. Number of Infant Sleep-Related Deaths, 2012-2021



Unsafe Sleeping Locations and Conditions

The American Academy of Pediatrics (AAP) lists several factors related to the sleep environment as being associated with a higher risk of SIDS/SUIDS and other Infant Sleep-Related Deaths, such as being placed to sleep in a prone position (on their stomach), a soft sleep surface, co-sleeping, sleeping on an adult bed or mattress, and/or being put to sleep with items that could cover the infant's head or face.

Figure 12 shows unsafe sleep conditions associated with Infant Sleep-Related Deaths. Ninety-six percent of Infant Sleep-Related Deaths had one or more known unsafe sleep conditions present, 2017-2021. From 2017-2021, 82 percent of decedents were sleeping in an unsafe sleep location (any location other than a crib, playpen or bassinet). Co-sleeping was also evident in 57 percent (38 of 67) of ISR deaths from 2017-2021.

Figure 12. Infant Sleep-Related Deaths with Unsafe Sleep Conditions Present, Sacramento County Residents, 2017-2021

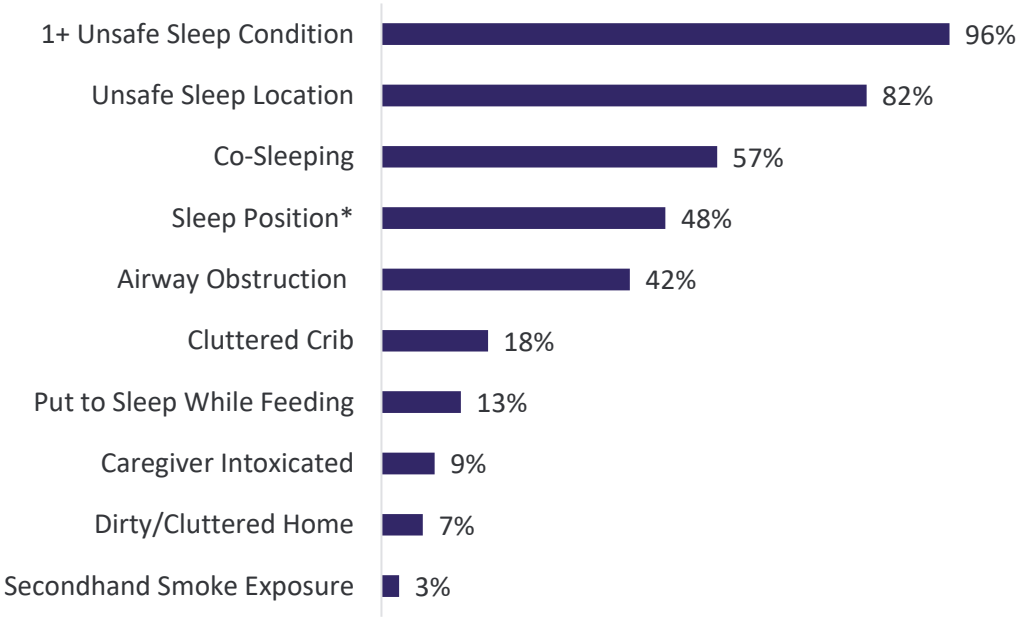


Table 17 shows the prevalence of unsafe sleeping conditions and sleeping locations. The most common unsafe sleeping location was in an adult bed (46%). Of those not sleeping in a safe sleeping location, 81 percent (34 of 42) had a crib/bassinet in the home. Nineteen percent (8 of 42) did not have a crib/bassinet. It is unknown if 13 families, practicing unsafe sleep, had a crib/bassinet in the home.

Table 17. ISR Deaths by Unsafe Sleeping Conditions, Sacramento County Residents, 2017-2021

	ISR Deaths											
Sleeping Conditions	**2017**		**2018**		**2019**		**2020**		**2021**		**2017-2021**	
1+ Unsafe Sleep Condition	15	100%	12	100%	9	90%	11	100%	17	89%	64	96%
Sleeping Location Known	15	100%	12	100%	10	100%	11	100%	19	100%	67	100%
Crib/Bassinet	*3*	*20%*	-	-	*2*	*20%*	*3*	*27%*	4	*21%*	12	18%
Adult Bed	*5*	*33%*	*6*	*50%*	*5*	*50%*	*5*	*45%*	*10*	*53%*	31	46%
Other	*7*	*47%*	*6*	*50%*	*3*	*30%*	*3*	*27%*	*5*	*26%*	24	36%
Co-Sleeping	6	40%	8	67%	6	60%	7	64%	11	58%	38	57%
With Adult(s)	*5*	*33%*	*8*	*67%*	*4*	*40%*	*7*	*64%*	*10*	*53%*	34	51%
With Child(ren)	*4*	*27%*	*1*	*8%*	*3*	*30%*	*3*	*27%*	*3*	*16%*	14	21%
Sleep Position	4	27%	5	42%	6	60%	6	67%	9	53%	30	48%
Airway Obstruction	4	27%	6	50%	5	50%	6	55%	7	37%	28	42%
Cluttered Crib	6	40%	1	8%	1	10%	2	18%	2	11%	12	18%
Sleep While Feeding	1	7%	2	17%	1	10%	1	9%	4	21%	9	13%
Caregiver Intoxicated	-	-	1	8%	1	10%	3	27%	1	5%	6	9%
Dirty/Cluttered Home	2	13%	1	8%	-	-	-	-	2	11%	5	7%
Secondhand Smoke Exposure	1	7%	-	-	-	-	-	-	1	5%	2	3%
Total ISR Deaths	**15**	**100%**	**12**	**100%**	**10**	**100%**	**11**	**100%**	**19**	**100%**	**67**	**100%**

Note: It is unknown if a crib/bassinet was present in the home for 13 of the 55 cases involving an unsafe sleeping location at time of death. Sleep position was unknown for four cases.

Systems Involvement

From 2017-2021, systems involvement was known to be present in 97 percent of ISR Deaths (65 of 67). See Table 18 for more detailed information. The top four systems in which families were involved are as follows:

- 78% of families received government aid
- 64% of families have one or more parent with a law enforcement involvement
- 64% of families had one or more parent with a history of alcohol and/or drug use
- 63% of families had a history of Sacramento County CPS involvement

Prior to COVID-19, 2017-2019, Sacramento County CPS involvement (70%) was the most common system of involvement, followed by government aid (65%). During COVID-19, 2020-2021, the most common system involvement was government aid (93%), with CPS involvement dropping to fourth (53%).

Table 18. ISR Deaths Systems Involvement Present, Sacramento County Residents, 2017-2021

Type of Systems Involvement	ISR Deaths 2017-2019		2020-2021		Total 2017-2021	
None	2	5%	0	0%	2	3%
CPS Involvement	26	70%	16	53%	42	63%
Decedent Victim	*12*	*32%*	*13*	*43%*	*25*	*37%*
Sibling Victim	*14*	*38%*	*12*	*40%*	*26*	*39%*
Parent Victim	*18*	*49%*	*15*	*50%*	*33*	*49%*
Government Aid	24	65%	28	93%	52	78%
Alcohol and/or Drug Use	22	59%	21	70%	43	64%
Law Enforcement	22	59%	21	70%	43	64%
Violent/Non-Violent Crime	*20*	*54%*	*15*	*50%*	*35*	*52%*
Domestic Violence	*11*	*30%*	*12*	*40%*	*23*	*34%*
Medical/Mental Health	17	46%	10	33%	27	40%
Mental Health	*7*	*19%*	*6*	*20%*	*13*	*19%*
Other: Mother < 21 Years Old	3	8%	6	20%	9	13%
Total ISR Deaths	37	100%	30	100%	67	100%

Description of Infant Decedents

In addition to the unsafe sleep conditions and systems involvement, additional demographic information was known about the 67 ISR Deaths in 2017-2021. Ninety percent (60 of 67) of decedents were six months of age or younger at the time of death.

Table 19 shows the number of ISR deaths by race/ethnicity for 2017-2021. This table also compares the race/ethnicity of decedents to the average Sacramento County child population from 2017-2021. Black/African Americans are disproportionately represented, comprising 11 percent of the child population in Sacramento County for 2017-2021 and 28 percent of ISR deaths. The same is true of Multiracial/Other children, who represent 7 percent of the child population in Sacramento County for 2017-2021 and 25 percent of ISR deaths.

When comparing the timeframe prior to COVID-19 (2017-2019) and during COVID-19 (2020-2021), the number of all race/ethnicity groups either remained the same or decreased, except for Black/African American ISR deaths, which are higher than the pre-pandemic years.

Table 19. ISR Deaths by Race/Ethnicity, Sacramento County Residents, 2017-2021

Race	ISR Deaths						Child Population 2017-2021
	2017-2019		2020-2021		Total 2017-2021		
White	11	30%	8	27%	19	28%	36%
Hispanic	6	16%	4	13%	10	15%	30%
Asian/Pacific Islander	1	3%	1	3%	2	3%	16%
Black/African American	9	24%	10	33%	19	28%	11%
Multiracial/Other	10	27%	7	23%	17	25%	7%
Total ISR Deaths	**37**	**100%**	**30**	100%	67	100%	100%

From 2017-2021, 55 percent of all ISR deaths in Sacramento County occurred in the neighborhoods within the primary area of service of the *Safe Sleep Baby Education Campaign* (see Table 20).

Table 20. ISR Deaths by Neighborhoods, Sacramento County Residents, 2017-2021

		ISR Deaths	
Sacramento County Neighborhood	**Zip Codes**	**Total 2017-2021**	
Target Neighborhood			
Arden-Arcade	95821, 95825	9	24%
Fruitridge/Stockton Blvd	95822, 95824, 95826	6	16%
Meadowview/Valley Hi	95823, 95828, 95832	7	19%
North Highlands/Foothill Farms	95660, 95842	7	19%
North Sacramento/Del Paso Heights	95815, 95838	7	19%
Oak Park	95820	1	3%
Total Target Neighborhoods		**37**	**55%**
All Other Neighborhoods			
Antelope	95843	3	10%
Carmichael	95608	2	7%
Citrus Heights	95610	4	13%
Elk Grove	95758	1	3%
Fair Oaks	95628	1	3%
Galt	95632	1	3%
Greenhaven-Pocket	95831	3	10%
Midtown	95814	1	3%
Natomas/Sacramento	95833, 95834, 95835	5	17%
Orangevale	95662	1	3%
Rancho Cordova	95670, 95827	7	23%
Rio Linda	95673	1	3%
Total All Other Neighborhoods		**30**	**45%**
Total ISR Deaths		**67**	**100%**

ISR Death and Child Protective Services History

In trying to prevent ISR Deaths, the CDRT examines points of contact occurring between the families of infants and various family services. By exploring these prior points of contact, the CDRT can determine where best to allocate additional services and interventions to further reduce the occurrence of ISR Deaths. With that in mind, the CDRT elected to analyze the statistical correlation between ISR Death and a prior history of CPS referrals involving the decedent.

Additionally, in 2013, *The Journal of Pediatrics* published a study[8] of California infants to determine such a link between prior CPS involvement by the decedent and increased risk of an ISR Death. The study concluded that there was a statistically significant correlation between CPS involvement and increased risk of ISR Death, and that this correlation persisted even when controlled for race/ethnicity and Government Aid. The findings of the Sacramento County CDRT are consistent with the results of this study.

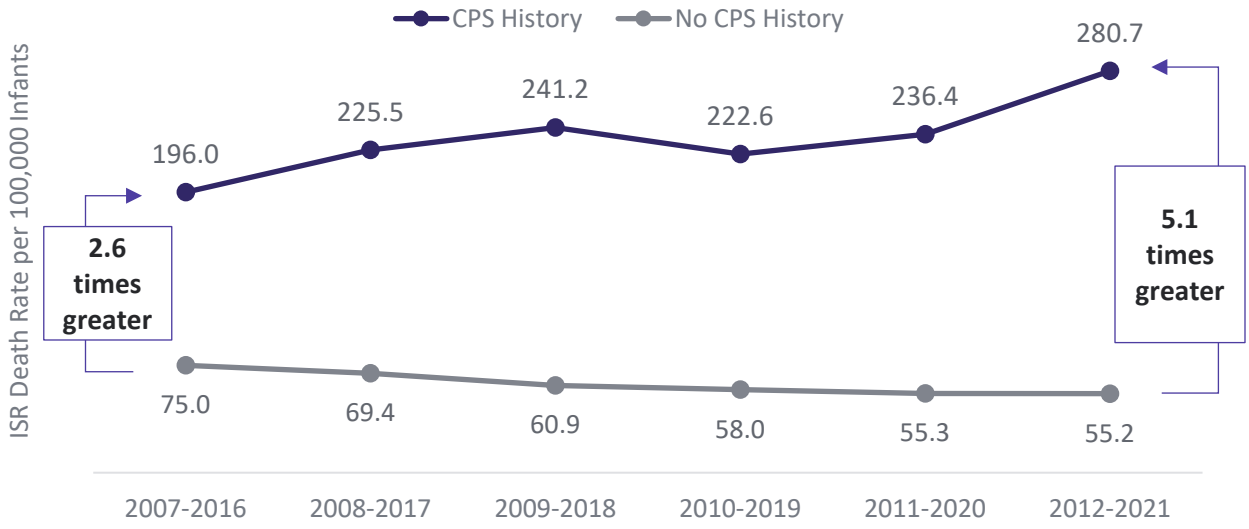
ISR Deaths and Sacramento County CPS Referral History

First, the overall ISR death rates were calculated for the county-wide population.[9] In Sacramento County, the total 2012-2021 infant sleep-related death rate was 76.0 per 100,000 infants. Among the infants with a CPS history (n = 17,811), the ISR death rate was 280.7 per 100,000 infants. On the other hand, infants with no CPS history (n = 175,579) had an ISR death rate of 55.2 per 100,000 infants. In 2012-2021, **the ISR death rate was five times greater for infants with CPS referrals compared with those who had no history with CPS.** The relationship between ISR deaths and CPS history was statistically significant ($p < .001$). The difference in the rate of ISR deaths between those with and without CPS history has expanded over time. The rate for those with CPS history was 2.6 times greater than those without in 2007-2016 and was 5.1 times greater in 2012-2021.

[8] Putnam-Hornstein, E., Schneiderman, J., Cleves, M., Magruder, J., and Krous, H., A Prospective Study of Sudden Unexpected Infant Death after Reported Maltreatment, Journal of Pediatrics, October 17, 2013, http://jpeds.com/article/S0022-3476(13)01346-2/abstract, (Feb. 24,2014)

[9] Calculated as [(Total number of deaths/total population)*100,000]. Total infant population = 193,390. Statistical significance tested using chi-square analysis.

Figure 13. ISR Death Rates and Disparity Gap, CPS History Compared with No CPS History



CDRT identified a statistically significant relationship between a history of CPS referral and ISR death at a 99.9 percent confidence level. Overall, infants with CPS history were 5.1 times more likely to suffer an ISR death, compared to infants with no CPS history.

ISR Deaths and CPS History, by Race/Ethnicity

When controlling for race/ethnicity, there was a statistically significant relationship between CPS referrals and ISR deaths ($p < .001$). **The overall likelihood of an infant with a CPS history suffering from an ISR death was 2.9 times greater than those without a CPS history, controlling for race/ethnicity**. The likelihood also varied across each race/ethnicity.

CPS history was significantly associated with ISR deaths among White infants, Black/African American infants, and those whose race/ethnicity was other or missing.[10] The odds of White infants suffering an ISR death were 3.4 times greater for infants with CPS history compared to White infants with no CPS history ($p < 0.01$). Black/African American infants with CPS history were 1.6 times more likely to suffer from an ISR death than Black/African American infants with no CPS history ($p < 0.001$). Among those whose race/ethnicity was listed as Other or Missing (includes multiracial infants), the odds of an ISR death were 2.3 times greater among infants with CPS history ($p < 0.01$).[11]

[10] This category includes multiracial infants due to differences between CDRT and CPS race/ethnicity categories

[11] The 2010-2019 categories not statistically significant: Hispanic (odds ratio 1.25, $p = 0.335$), Asian/PI (odds ratio 11.76, $p = 0.387$)

The correlation between a history of CPS referrals and ISR deaths was also significant when controlling for race/ethnicity (99.9% confidence level). Overall, the odds of an ISR death were more than two times greater for infants with CPS history regardless of race/ethnicity. For three out of the five racial groups examined, infants had significantly greater odds of suffering an ISR death when there was a history of CPS referrals. White infants, Black/African American infants, and infants whose race/ethnicity was missing or other had significantly greater odds of suffering an ISR death following CPS referral(s), compared with those who did not have prior CPS referrals. Differences in the likelihood of an ISR death among Hispanic and/or Asian/Pacific Islander infants were not statistically significant, likely due to small counts of ISR deaths.

RACIAL DISPROPORTIONALITY

Disproportionality of Child Deaths Among Black/African American Children

Based on an examination of cumulative child death trends over 20 years (1990-2009), the CDRT elevated awareness of the recurring disproportionality of deaths of Black/African American children when compared to all other racial and ethnic populations. This report[12] became the clarion call for action, under the leadership of Supervisor Phil Serna. In response, the Sacramento County Board of Supervisors appointed the Blue Ribbon Commission on African American Child Deaths in 2011. The Commission focused its recommendations on the four most prominent categories of African American child death: (1) Perinatal Conditions; (2) Infant Sleep-Related; (3) Child Abuse and Neglect Homicides; and (4) Third-Party Homicides.

As Black/African American children have historically experienced the greatest disproportionality among death rates in Sacramento County (see Table 21 below), the CDRT has determined the specific categories of death that exhibit the greatest disproportionality, as compared to other races/ethnicities.

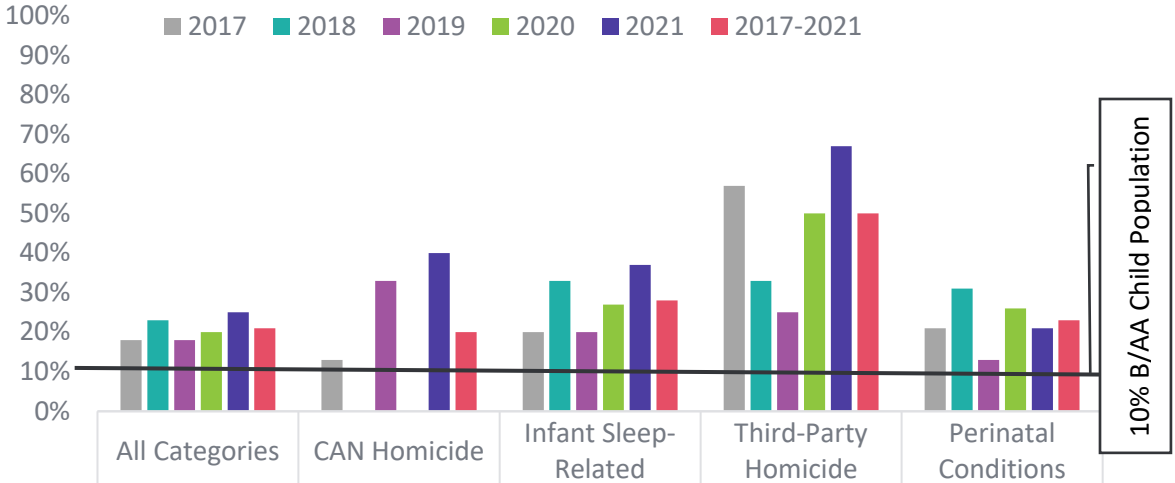
Table 21. Black/African American Disproportionality Data, Child Death Rates per 100,000 Children, 2012-2021, Sacramento County Residents Only

Child Mortality Rate	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
All Child Deaths	38.3	36.1	37	35.2	36.5	31.4	33	32.4	31.1	37.3
Black/African American	87.1	88.4	75.8	81.7	54.9	53.5	68.5	54.3	61.3	91.3
All Other Race/Ethnicity	32.5	30.0	32.5	29.9	34.4	28.7	28.7	29.8	27.6	31.1

During 2017-2021, Black/African American children continued to be disproportionately represented in all four of the most prominent categories of Black/African American child death. Figure 14 shows, for each of the four categories of death, the percentage of decedents who were Black/African American and compares them to the overall Black/African American Child Population in Sacramento County.

[12] Sacramento County Child Death Review Team. A Twenty-Year Analysis of Child Death Data, 1990-2009.

Figure 14. Leading Categories of Black/African American Child Death, Sacramento County Residents, Multi-Year Comparison (2017, 2018, 2019, 2020, 2021)



	All Categories	CAN Homicide	Infant Sleep-Related	Third-Party Homicide	Perinatal Conditions
2017	18%	13%	20%	57%	21%
2018	23%	0%	33%	33%	31%
2019	18%	33%	20%	25%	13%
2020	20%	0%	27%	50%	26%
2021	25%	40%	37%	67%	21%
2017-2021	21%	20%	28%	50%	23%

COVID-19 PANDEMIC

The increase in child deaths in 2021 can be linked to several social support challenges during the COVID-19 pandemic. Prolonged school closures left millions of children without access to essential services such as meals, social interaction, and mental health support. Many children were out of school for almost a year, and those in low-income families or marginalized communities faced the most severe learning losses and missed developmental milestones. The loss of in-person schooling also exacerbated risks of abuse, malnutrition, and mental health issues, with some children experiencing heightened anxiety and depression due to isolation and family stress.[13]

In addition to the disruption in education, parental stress soared as families struggled with income loss, illness, and difficulties in accessing basic needs. Many parents, particularly those already vulnerable, faced overwhelming pressures with diminished social and economic support systems. Services that normally help struggling families, like child welfare checks and community programs, were either shut down or moved

[13] https://www.unicef.org/press-releases/covid19-scale-education-loss-nearly-insurmountable-warns-unicef

online, which was inaccessible to families without stable internet access, equipment, or the digital illiteracy to navigate these services.[14]

Furthermore, the closure of healthcare and child protection services meant children were at greater risk of neglect and abuse going unnoticed, with fewer eyes on them due to reduced social support.[15]

This combination of factors, from school closures to systemic strain on families, compounded the risks for many children, leading to tragic increases in child mortality in 2021.

The striking increase in child deaths in 2021, compared to 2020, can likely be attributed to the compounding nature of several factors that built upon one another over time. Early in the pandemic, the immediate impacts of lockdowns—like school closures and economic strain—were felt, but the longer-term effects became more pronounced as these conditions persisted into 2021. By 2021, the cumulative effect of prolonged school closures had not only deprived children of education but also key services such as regular meals, social interaction, and mental health support.[16] This prolonged disruption increased vulnerabilities, particularly in marginalized communities where children faced deeper learning losses and developmental setbacks.

Because many of these factors—such as increased mental health issues, malnutrition, and healthcare delays—escalated gradually, their full impact wasn't immediately visible in 2020. However, by 2021, the effects had accumulated and began to reflect in significantly higher child death rates. The breakdown of social support systems over time, combined with sustained family hardships, likely explains why the increase in child deaths was more pronounced in 2021 than in the earlier phase of the pandemic.

[14] https://www.unicefusa.org/press/covid-19-scale-education-loss-nearly-insurmountable-warns-unicef

[15] https://jamanetwork.com/journals/jamapediatrics/fullarticle/2788069

[16] https://www.unicef.org/press-releases/covid19-scale-education-loss-nearly-insurmountable-warns-unicef

Chapter Four

Thematic Review

Injury-Related Youth Deaths

Chapter Four — Thematic Review: Injury-Related Youth Deaths

Youth Death Review Subcommittee (YDRS) Purpose Statement

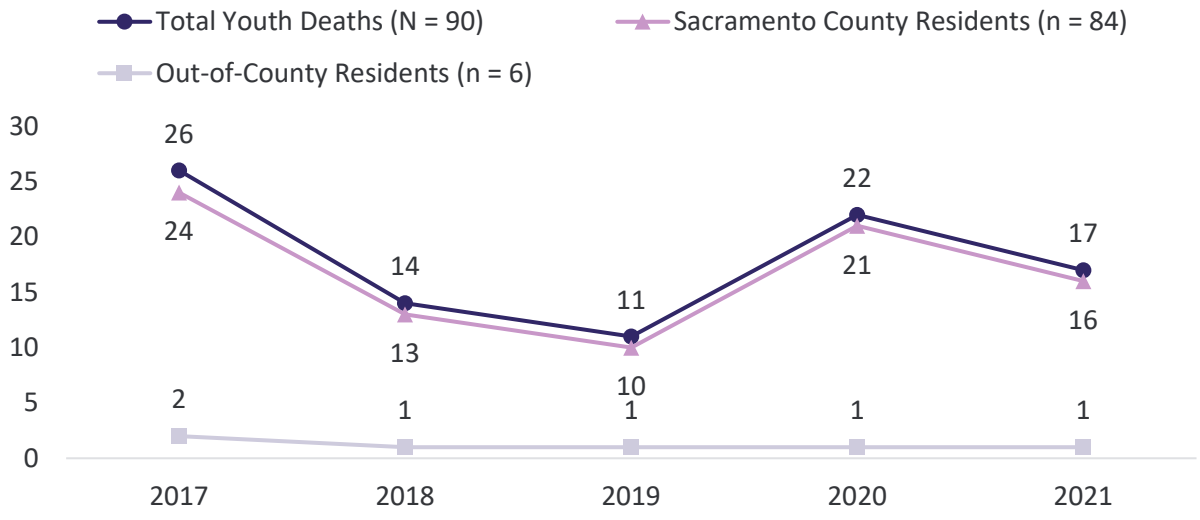
The purpose of the YDRS is to:

- Better understand the causes of youth deaths
- Identify trends and systems involvement
- Develop recommendations to reduce preventable youth deaths

The Youth Death Review Subcommittee (YDRS) of the Sacramento County Child Death Review Team (CDRT) conducts in-depth analysis of all deaths of youth **ages 10 through 17** who were **injured and died in Sacramento County**, regardless of their county of residence. This chapter of the report summarizes the findings by the YDRS.

A total of 84 Injury-Related Youth Deaths of Sacramento County Residents occurred in Sacramento County during the years 2017-2021. Additionally, there were six out-of-county residents whose injuries leading to death were sustained in Sacramento County, for a total of 90 cases over the five-year period (see Figure 15). The number of Injury-Related Youth Deaths of Sacramento County residents declined over the five years, except for an increase in 2020 (22 deaths).

Figure 15. Youth (Ages 10-17 Years) who were Injured and Died in Sacramento County, by County Residence Status, 2017-2021



From 2017-2021, males constituted the majority of Injury-Related Youth Deaths at 77 percent, with females at 23 percent. Additionally, there were varying percentages within different racial/ethnic groups. Multiracial youth or those of another racial category not listed accounted for 30 percent of Injury-Related Youth Deaths, followed by Black/African American youth (27%), and White youth (21%). The analysis by age group indicated that youth ages 15-17 years experienced a higher percentage of Injury-Related Deaths (76%) compared to the 10-14 years age group (24%). This information is presented in Table 22.

Table 22. Injury-Related Youth Deaths, by Sex, Race/Ethnicity, & Age Group, 2017-2021, Sacramento Resident Deaths and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County

Category		Total 2017-2021	
Sex	**Total**	**90**	**100%**
	Male	69	77%
	Female	21	23%
Race/Ethnicity	**Total**	**90**	**100%**
	Multiracial/Other	27	30%
	Black/African American	24	27%
	White	19	21%
	Hispanic	13	14%
	Asian/Pacific Islander	7	8%
Age Group	**Total**	**90**	**100%**
	10-14 years	22	24%
	15-17 years	68	76%

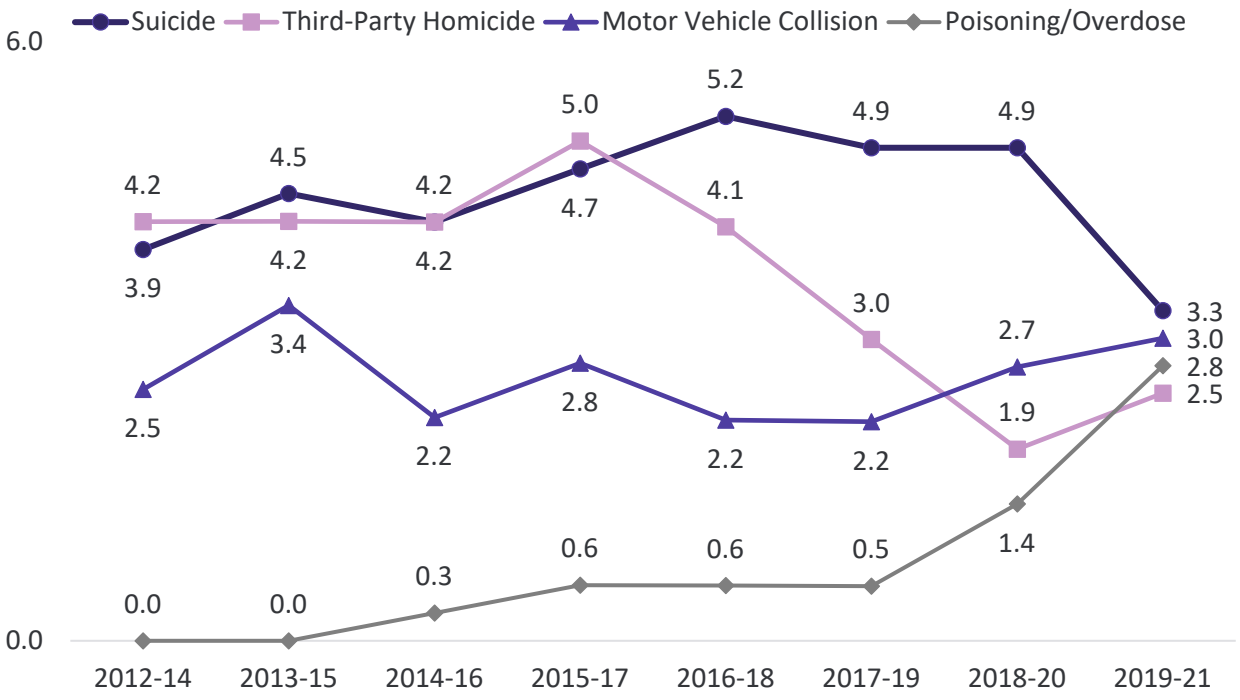
Table 23 shows the number and percentage for each category of death, further organized by Intentional and Unintentional Injury-Related Deaths. For Unintentional Injury-Related Youth Deaths, the total number of cases over the five-year period was 41, with Motor Vehicle Collisions being the predominant category, accounting for 51 percent of cases. Within this category, incidents involving decedents as occupants/drivers were most common (48%). Poison/Overdose Deaths increased from two from 2017-2019 to nine from 2020-2021. Additionally, zero Poison/Overdose Deaths from 2017-2019 involved Fentanyl, whereas 89% (8 of 9) involved Fentanyl from 2020-2021. For Intentional Injury-Related Youth Deaths, there were a total of 49 deaths, with Suicide accounting for the highest percentage (53%) followed by Third-Party Homicide (41%).

Table 23. Injury- Related Youth Deaths, 2017-2021, Sacramento Resident Deaths and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County

Category	2017-2019		2020-2021		2017-2021	
Unintentional Injury-Related	**18**	**100%**	23	100%	41	100%
Motor Vehicle Collision	10	56%	11	48%	21	51%
Occupant/Driver	*4*	*22%*	*6*	*26%*	*10*	*24%*
Pedestrian	*1*	*6%*	*4*	*17%*	*5*	*12%*
Bike	*5*	*28%*	*1*	*4%*	*6*	*15%*
Drowning	4	22%	1	4%	5	12%
Suffocation	1	6%	-	-	1	2%
Poisoning/Overdose	2	11%	9	39%	11	27%
Burn/Fire	1	6%	-	-	1	2%
Legal Intervention	-	-	-	-	-	-
Injury | Other	-	-	-	-	-	-
Injury | Undetermined	-	-	2	9%	2	5%
Intentional Injury-Related	**33**	**100%**	16	100%	49	100%
Homicide	15	45%	8	50%	23	47%
CAN Homicide	*3*	*9%*	*-*	*-*	*3*	*6%*
3rd Party Homicide	*12*	*36%*	*8*	*50%*	*20*	*41%*
Suicide	18	55%	8	50%	26	53%

Figure 16 shows the three-year rolling average rates per 100,000 youth residents in Sacramento County, for the leading categories of Intentional and Unintentional Injury-Related Youth Deaths (Suicide, Third-Party Homicide, Motor Vehicle Collisions, and Poisoning/Overdose). Rates fluctuated from 2012 to 2021. Suicide rates peaked in 2016-2018 at 5.2 deaths per 100,000 before declining to 3.3 in 2019-2021. Third-Party Homicide was 4.2 from 2012-2014 to 2014-2016 before increasing to a high of 5.0 in 2015-2017 and decreasing to a low of 1.9 in 2018-2020. Motor Vehicle Collision rates fluctuated, with rates ranging from 2.2 to 3.4. Poisoning/Overdose rates increased over time from 0.0 in 2012-2014 to 2.8 in 2019-2021.

Figure 16. Three-Year Rolling Average, Sacramento County Child Population, per 100,000, 2012-2021 for the Four Leading Categories of Injury-Related Youth Deaths of Sacramento County Residents



SYSTEMS INVOLVEMENT FOR INJURY-RELATED YOUTH DEATHS

The prevalence of family involvement with systems was examined among Suicides (26), Third-Party Homicides (20), Poisoning/Overdose (11), and Motor Vehicle Collisions (10), the four leading categories of Injury-Related Youth Deaths (see Table 24 below). In cases of youth Suicide, 96 percent of families had involvement with at least one system, with the highest being a history of Sacramento County Child Protective Services (CPS) involvement (77%), medical/mental health involvement (65%), and a history of alcohol and/or other drug use (65%). For Third-Party Homicides, 95 percent had at least one systems involvement, with law enforcement involvement (80%), Sacramento County CPS involvement (65%), and domestic violence involvement (60%). A total of 100 percent of Poisoning/Overdose deaths had involvement with at least one system, including law enforcement involvement (100%), a history of alcohol and/or other drug use (91%), and Sacramento County CPS involvement (82%). In Motor Vehicle Collisions, 81 percent had at least one system involvement, with the highest proportions with a history of alcohol and/or other drug use (57%), Sacramento County CPS involvement (52%), and government assistance (48%).

Table 24. Family Systems Involvement for the Four Leading Categories of Injury-Related Youth Deaths, 2017-2021, Sacramento and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County

	Suicides (n = 26)		Third-Party Homicides (n = 20)		Poisoning/ Overdose (n = 11)		Motor Vehicle Collisions (n = 10)	
At Least One System Involvement	96%	25	95%	19	100%	11	81%	17
Sac. County CPS Involvement	77%	20	65%	13	82%	9	52%	11
Alcohol and/or Other Drug History	65%	17	50%	10	91%	10	57%	12
Medical/Mental Health	65%	17	25%	5	73%	8	43%	9
Government Aid	54%	14	15%	3	18%	2	48%	10
Law Enforcement Involvement	46%	12	80%	16	100%	11	38%	8
Domestic Violence Involvement	31%	8	60%	12	64%	7	10%	2
Gang Involvement	8%	2	35%	7	0%	0	10%	2

Sacramento County School District YDRS participation and data sharing allow for the capture of valuable information that can be used to inform prevention recommendations. Detailed school information (academic and/or behavioral information) was available for 57 percent (49 of 86) of the 2017-2021 Injury-Related Youth Deaths overall. Behavioral challenges, including but not limited to fighting and suspension(s), were prevalent across all four leading categories of Injury-Related Youth Deaths, occurring in 50 percent of cases. Academic challenges were also present in all four and were most common at 54 percent of Third-Party Homicides from 2017-2021. An Individualized Education Program (IEP) was in place for 20 percent of Third-Party Homicide victims. Table 25 highlights the challenges in accessing school information, as indicated by the 43 percent of cases where information is "Unknown".

Table 25. School Information for All Injury-Related Youth Deaths and the Four Leading Categories of Injury-Related Youth Deaths, 2017-2021, Sacramento County Residents Only

2020-2021	All Injury-Related Youth Deaths n = 20 (19 Unknown)	Motor Vehicle Collisions n = 1 (5 Unknown)	Poisoning/ Overdose n = 2 (7 Unknown)	Suicide n = 7 (1 Unknown)	Third-Party Homicide n = 4 (4 Unknown)
1+ Challenge	61%	83%	75%	71%	20%
Behavioral Challenges	50%	83%	50%	43%	20%
Academic Challenges	33%	33%	33%	57%	-
IEP in Place	14%	-	33%	28%	-
Victim of Bullying	5%	-	-	14%	-
2017-2019	**All Injury-Related Youth Deaths n = 29 (18 Unknown)**	**Motor Vehicle Collisions n = 3 (5 Unknown)**	**Poisoning/ Overdose n = 2**	**Suicide n = 7 (11 Unknown)**	**Third-Party Homicide n = 9 (2 Unknown)**
1+ Challenge	62%	66%	50%	71%	78%
Behavioral Challenges	50%	66%	100%	57%	71%
Academic Challenges	45%	33%	-	29%	78%
IEP in Place	17%	-	-	-	33%
Victim of Bullying	5%	-	-	14%	-

Note: "Unknown" indicates that no school records were available for review by the Youth Death Review Subcommittee.

*Behavioral challenges include fighting, suspension, perpetrator of bullying, etc. Reasons for missing school information include that decedents: 1) attended school districts that have not actively participated or have declined participation in YDRS, 2) had several transfers, 3) "dropped out" of school, 4) were home-schooled.

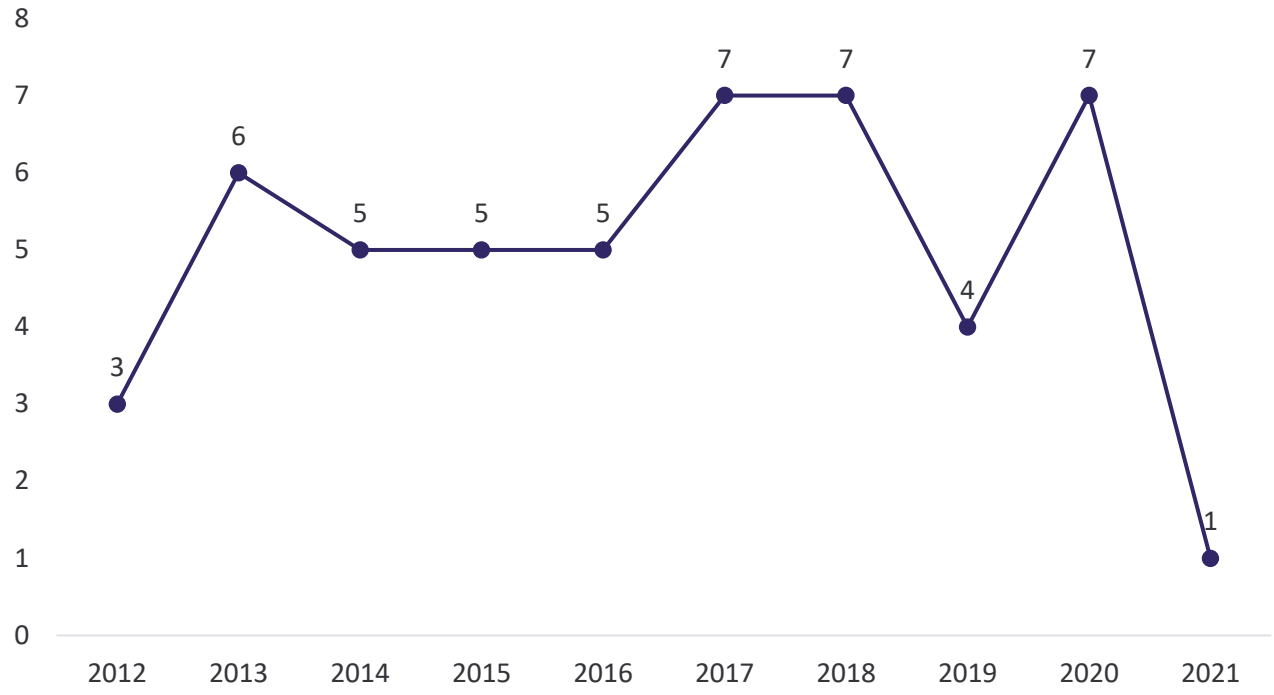
INJURY-RELATED YOUTH DEATHS: SUICIDE

The preceding data has illustrated a comprehensive view of Injury-Related Youth Deaths, highlighting fluctuations and patterns across various categories, demographics, and systems involvement. This section of the report shifts to a more in-depth examination of the specific category of Suicide Deaths of Youth and aims to provide insights into the prevalence, trends, and contributing factors associated with youth suicide.

Of the total 90 Injury-Related Deaths of youths between 10 and 17 years of age, in Sacramento County, from 2017-2021, 29 percent (26 of 90) of these deaths were from suicide.

Figure 17 shows the trend in the total number of Youth Suicides from 2012 through 2021. The numbers fluctuated annually, and there was an overall upward trend. The lowest number of youth suicides in a decade occurred in 2021, with one Suicide reported that year, while Suicides peaked in 2017, 2018, and 2020, with seven each year.

Figure 17. Number of Youth (Ages 10-17) Suicides, 2012-2021, Sacramento County Resident Deaths



Demographics of Youth Suicides

Figure 18 provides a breakdown of the racial/ethnic distribution of Youth Suicide deaths for each year from 2012 to 2021. The most prevalent racial/ethnic group among Youth Suicides was White, comprising 38 percent of the overall total from 2012 to 2021. This was followed by Multiracial youth and those of another racial/ethnic category not listed, who represented 22 percent of overall Youth Suicides from 2012-2021.

Figure 18. Youth Suicide Deaths by Race/Ethnicity, 2012-2021

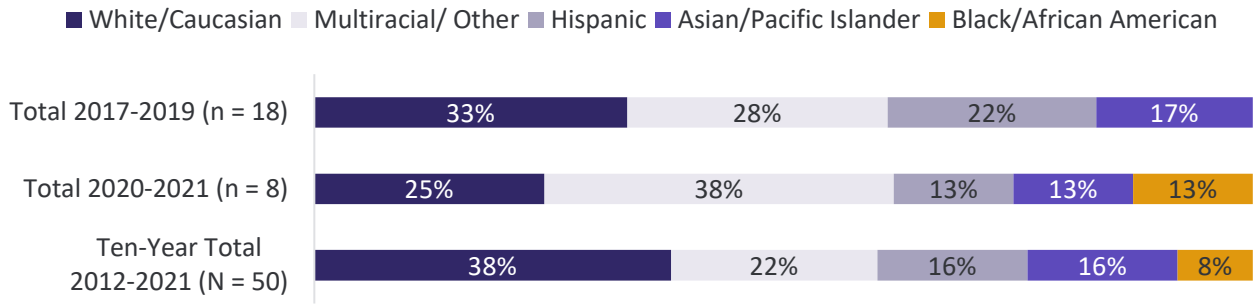


Table 26 presents the age and sex distribution of Youth Suicide deaths. Over the ten-year period, 2012-2021, a total of 50 Youth Suicide Deaths occurred, with the majority (76%) falling within the 15-17 age group. Males accounted for the majority (74%) of the total youth suicide cases, compared to females (26%).

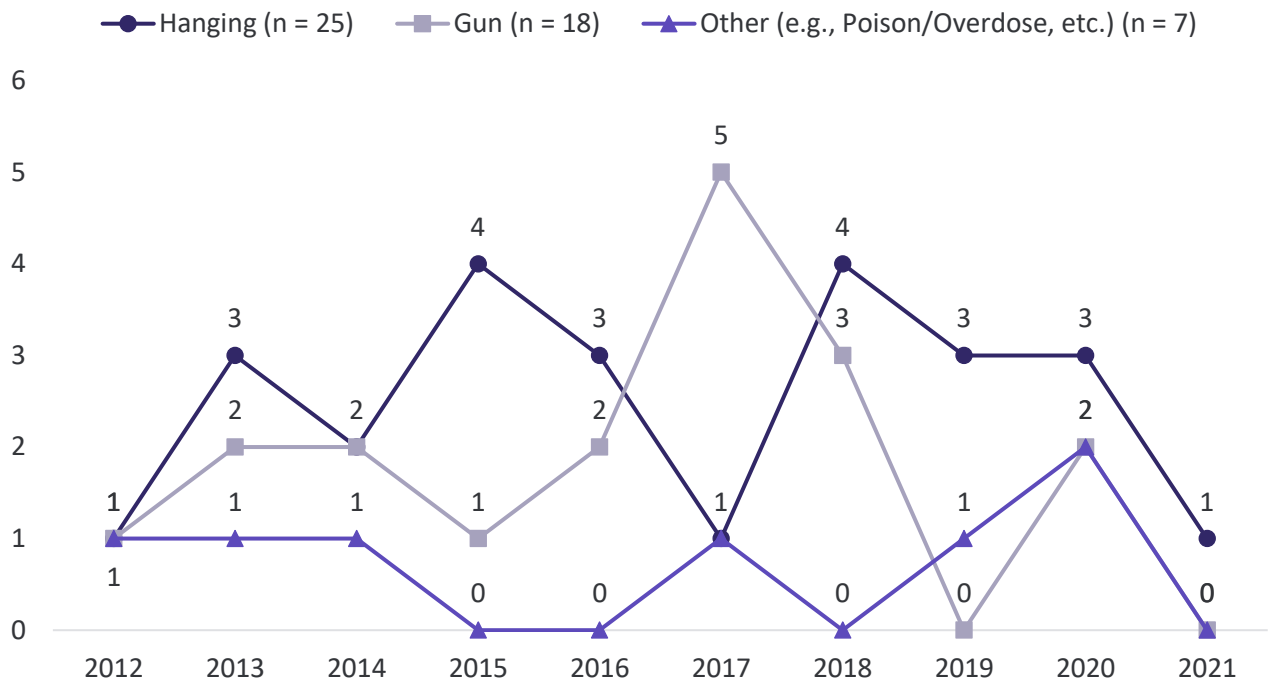
Table 26. Age and Sex Distribution of Youth Suicide Deaths, 2012-2021

	Age Group				Sex			
Year	10-14 years		15-17 years		Male		Female	
Total 2017-2019 (n = 18)	3	17%	15	83%	14	78%	4	22%
Total 2020-2021 (n = 8)	4	50%	4	50%	6	75%	2	25%
Ten-Year Total 2012-2021 (N = 50)	12	24%	38	76%	37	74%	13	26%

Mechanisms of Death in Youth Suicides

Figure 19 details the mechanisms of Youth Suicide deaths over the 10-year period, from 2012-2021. Hanging was the most prevalent mechanism of death in Youth Suicide, accounting for 50 percent of cases (25 of 50). Firearms followed as the second most common mechanism, representing 36 percent of the total cases (18 of 50), while other methods (e.g., poison/overdose) contributed to 14 percent of cases (7 of 50). There was an increase in suicides by gun in 2017, marking the first time in a decade that suicides by gun surpassed those by hanging. Additionally, in 2017, there was a decrease in hanging cases, reaching a low only matched in 2012 and 2021 (1).

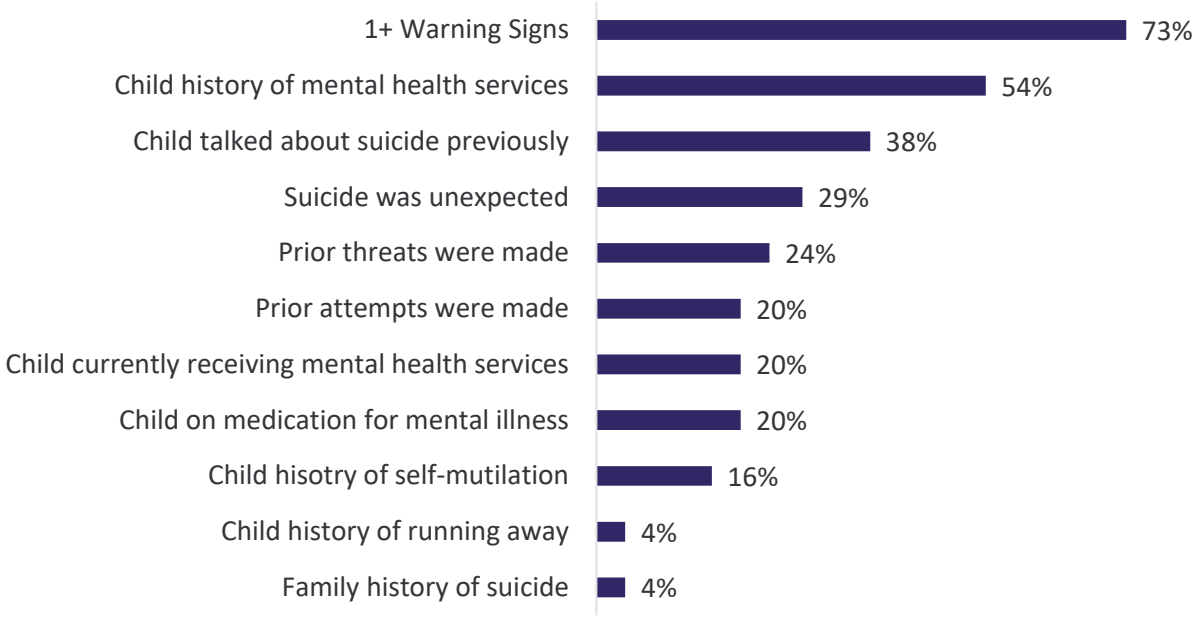
Figure 19. Mechanisms of Youth Suicide Deaths, 2012-2021



Warning Signs and Events Prior to Suicide

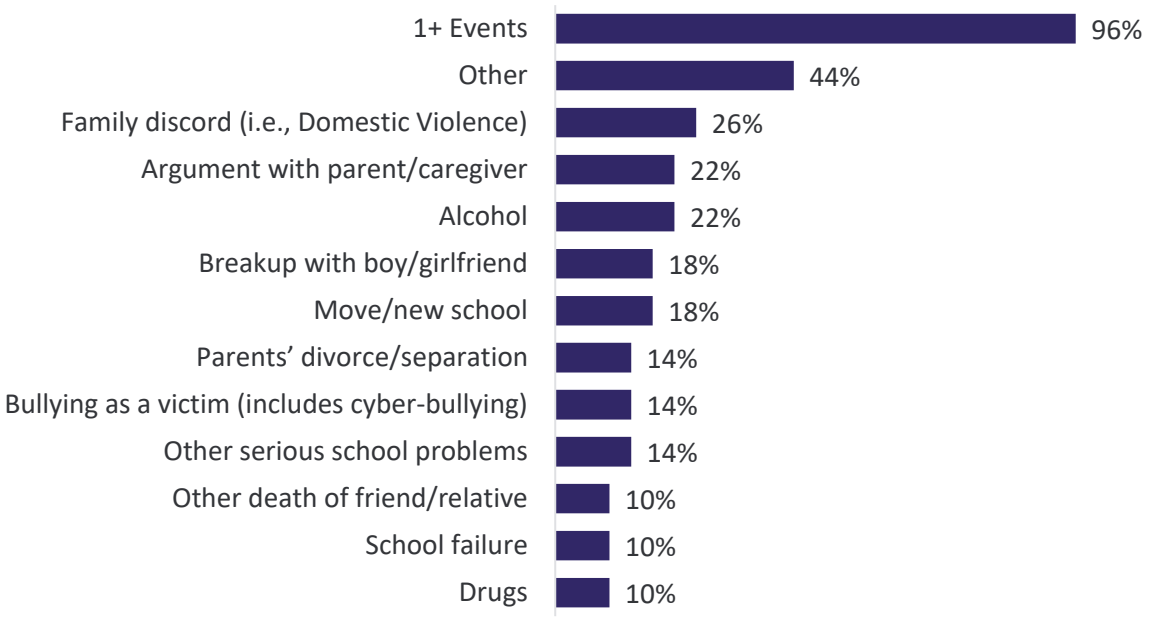
As can be seen in Figure 20, the most common warning sign over the decade (2012-2021) was a child history of mental health services, accounting for 54 percent of cases. However, 20 percent were receiving mental health services at the time of death. The second most common included instances where the child talked about suicide previously, which constituted 38 percent. Cases where suicide was unexpected (with no previous warning signs) represented 29 percent. In total, 73 percent of youth suicides from 2012 to 2021 exhibited one or more warning signs before the incident. There was an increase in 2018, where 100 percent of the seven cases that year displayed at least one warning sign.

Figure 20. Top Ten Warning Signs of Youth Suicide Deaths, 2012-2021



As presented in Figure 21, events prior to youth suicides varied, with family discord (i.e., domestic violence) being the most prevalent, accounting for 26 percent. Followed by an argument with a parent/caregiver, which constituted 22 percent of cases. Forty-four percent of cases identified an event "Other" than those identified in the chart, including, but not limited to, undiagnosed mental illness, social isolation/no friends, sex/gender transition, decedent's friend/partner expressing concern. Overall, 96 percent of youth suicides from 2012-2021 were associated with one or more events occurring before the suicide.

Figure 21. Top Twelve Events Prior to Youth Suicide Deaths, 2012-2021



Over the 10-year period, 35 percent (17 of 49) of cases involved a suicide note found at the time of death. As of 2019, Suicide notes found were inclusive of Social Media posts that were posted at the time of death. The frequency of leaving a note varied across years, with a high of 67 percent of Suicides in 2012 involving a note, while in 2018 and 2019, it was reported in 29 percent and 25 percent of cases, respectively.

Chapter Five

Thematic Review
Fetal Infant Mortality Review

Chapter Five — Thematic Review: Fetal Infant Mortality Review

ACKNOWLEDGEMENTS

Fetal infant mortality is a key indicator of a community's health and is often used to compare the relative health of different communities. It can also serve as a gauge for disparate outcomes among different groups within a given community. The death of an infant or loss of a pregnancy are tragic for the families involved and signal missed opportunities for individual and community level intervention. These losses are often the result of multiple contributing factors, and they require layered solutions involving numerous systems and agencies.

Sacramento County has invested heavily in programs to support maternal and child health and we are optimistic about the progress they are making. Yet, deaths among babies in our community continue to happen too frequently. This is especially true for Sacramento County's Black residents, who experience fetal and infant deaths at disproportionately high rates, underscoring the need for continued investment in our community.

The Fetal Infant Mortality Review (FIMR) project reviews the medical and social factors surrounding fetal and infant deaths in Sacramento County to form the recommendations outlined in this report. Our goal is to provide the community with data and actionable steps that will help guide strategies and interventions to improve outcomes.

Factors affecting birth outcomes extend far beyond individual circumstances and behaviors. Social determinants of health, such as housing status, neighborhood, education, racism, discrimination, violence, access to nutritious foods, and pollution can all impact a person's well-being, quality of life, and birth outcomes. The complexity of these factors requires a comprehensive and collaborative approach to addressing them—one that involves health care providers, social services organizations, community-based organization, and policymakers.

The collective work of the FIMR team and the Prevention Advisory Committee is the result of the individuals and agencies that have prioritized reducing fetal and infant deaths in our community. The synergy that results from all of us working together towards this common goal is what will ultimately improve outcomes in Sacramento County.

Olivia Kasirye, M.D., M.S.
County Health Officer
Maternal Child Adolescent Health Medical Director

INTRODUCTION: FETAL INFANT MORTALITY REVIEW

Fetal Infant Mortality Review Purpose Statement

The purpose of the Sacramento County Fetal Infant Mortality Review is to seek to reduce fetal and infant deaths, by:

- Reviewing selected cases
- Identifying factors associated with these deaths
- Determining if these factors represent social or system problems which require change
- Presenting recommendations for systems changes to improve outcomes

Fetal Infant Mortality Review (FIMR) reviews Sacramento County resident cases of deaths among infants born prior to 23-weeks of gestation and fetal demise cases. The FIMR case review process is similar to CDRT and involves women's health clinics that provide maternal health data. This includes information on family planning, risk factors for premature birth, prenatal care, social support, life changes, and stress.

Pursuant to California Health and Safety Code 102950, each fetal death in which the fetus has advanced to or beyond the 20th week of uterogestation must be registered with the local registrar of births and deaths. Fetal deaths that are less than 20-weeks of gestation may be registered but, generally, are not required by California law.

Sacramento County has agreed with the State of California to review at least 25 percent of cases. From 2017-2021, the team reviewed 53 percent (260 of 492) of cases, including 42 percent (172 of 404) of fetal deaths. Selection criteria for review is as follows: random sampling to select 25 percent of the collected death certificates (both live birth and fetal death certificates) for review. Additionally, all children born alive and all fetal deaths with at least one Black/African American parent (not previously selected) are reviewed. The rationale for this inclusion criteria is to continue CDRT's work of reviewing the death of every child born alive and to advance the goals of the Black Child Legacy Campaign.

Fetal Infant Mortality Review 2017-2021

From 2017-2021, there were 492 FIMR Deaths among Sacramento County residents, 260 of which were reviewed. Reviewed cases include 88 children who were born alive prior to 23-weeks of gestation and 172 fetal deaths that received fetal death certificates. The 88 children born alive also appear in the CDRT data in prior chapters of this report.

The data provided in this chapter comes from both fetal/live birth death certificates and case review. Although not all fetal deaths were reviewed by the team, information from all fetal death certificates was used in some of the data captured. Each indicator includes the number of cases for which the information is available along with the number and/or percent of cases (# or %) for which the indicator is true.

FIVE-YEAR TRENDS FOR FETAL INFANT MORTALITY REVIEW DEATHS

The following are some of the trends found among FIMR Deaths. Findings below are presented in greater detail throughout this chapter.

Demographics	• Black/African American infants: **13-26%** of FIMR Deaths, compared to 10% of all live births
Maternal Demographics and Health	• Mothers experienced a fetal death who were overweight/obese prior to pregnancy: **66%**, compared to 58% of Sacramento County mothers. • Mothers have a college or advanced degree: **26%**, compared to 33% of Sacramento County mothers. • Mothers with pre-pregnancy diabetes: **6%** • Mothers with pre-pregnancy hypertension: **5%**
Pregnancy	• Prenatal care during the first trimester: **60%-78%** compared to 87% of Sacramento County mothers. • Premature rupture of membranes: **18%** • Pregnancy-related infections: **18%** • Incompetent cervix: **12%**
Systems Involvement	• Government Aid: **65%** • Sacramento County CPS Involvement: **53%** • Parent with a CPS involvement as a child: **33%**, compared to 29% in 2016

Table 27. FIMR Deaths by Infant/Fetal, Sacramento County Residents, 2017-2021

FIMR Deaths	2017		2018		2019		2020		2021		2017-2021	
Fetal Deaths (not in CDRT data)	71	85%	94	80%	84	80%	69	81%	86	85%	404	82%
Infant Deaths (in CDRT data)	13	15%	23	20%	21	20%	16	19%	15	15%	88	18%
Total FIMR Deaths	84	100%	117	100%	105	100%	85	100%	101	100%	492	100%
Reviewed Cases	**47**	**56%**	**63**	**54%**	**60**	**57%**	**41**	**48%**	**49**	**49%**	**260**	**53%**

Knowledge of the geographic distribution of FIMR Deaths can help service providers better target interventions. See Figure 22 for a density map of FIMR Deaths; darker colors represent areas with a higher concentration of FIMR Deaths. The darkest spots appear in and around the ZIP code 95823, which primarily covers the southern parts of Sacramento, including neighborhoods like Meadowview and Valley Hi.

Figure 22. Density of FIMR Deaths by ZIP Code, Sacramento County Residents, 2017-2021

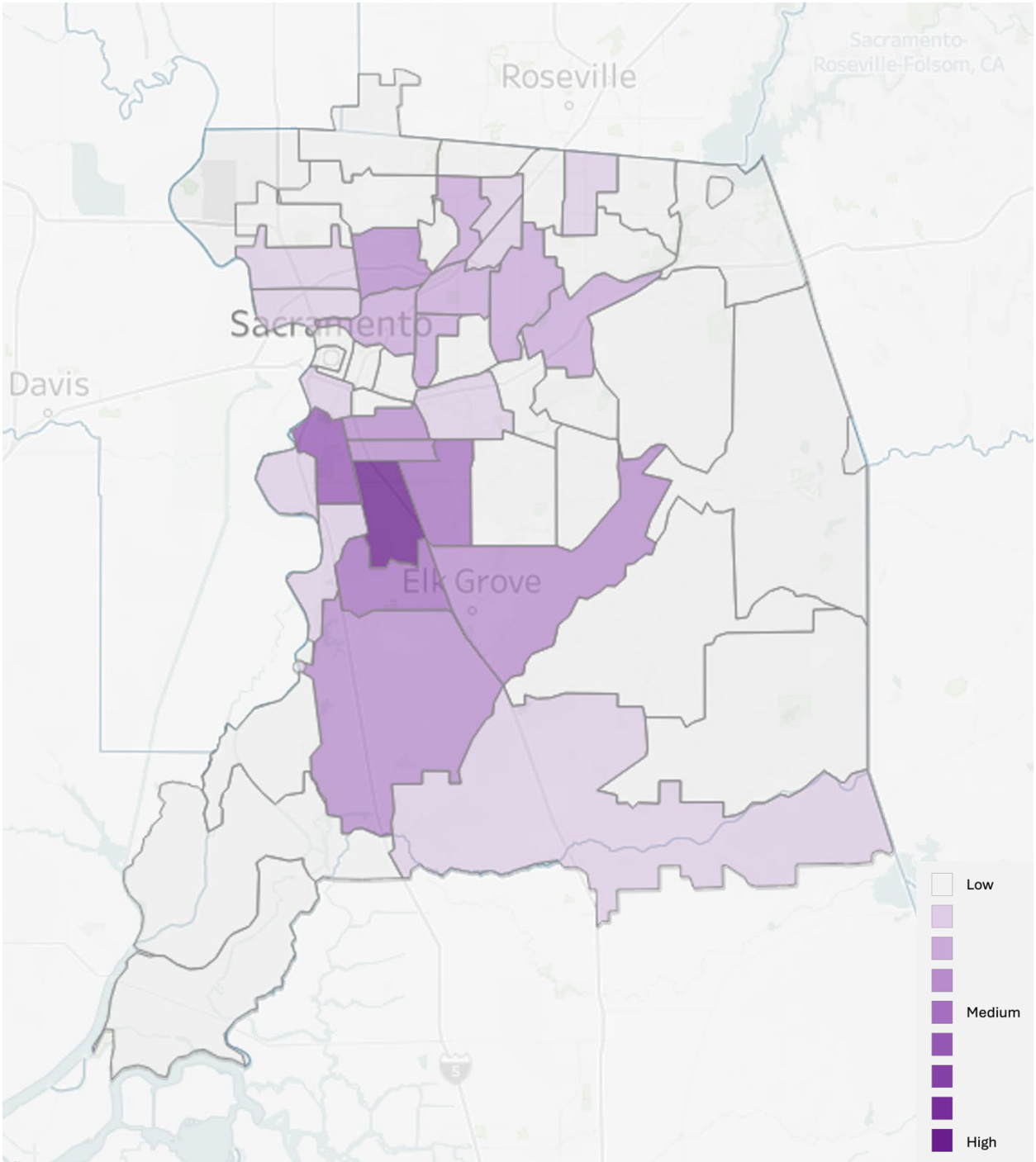


Figure 23 and Figure 24 show the sex and race/ethnicity information for all FIMR Deaths from 2017-2021, where the information is known. In terms of sex, the proportion of male live births in Sacramento County were 52 percent 2017-2021, whereas male FIMR Deaths constituted 51 percent. When examining race/ethnicity from 2017-2021, Black/African American infants represented 19 percent of FIMR Deaths, while representing 10 percent of live births. This indicates a higher mortality rate relative to their birth representation. This pattern was also seen for those who were Asian/Pacific Islander (21% FIMR Deaths versus 19% live births) and Multiracial or another race/ethnicity not listed (12% FIMR Deaths versus 8% live births). Conversely, from 2017-2021, White infants (27% FIMR Deaths versus 36% live births) and Hispanic/Latino infants (21% FIMR Deaths versus 28% live births) had FIMR Death percentages lower than their birth rates in the five-year period.

Figure 23. FIMR Deaths by Sex, Sacramento County Residents, 2017-2021

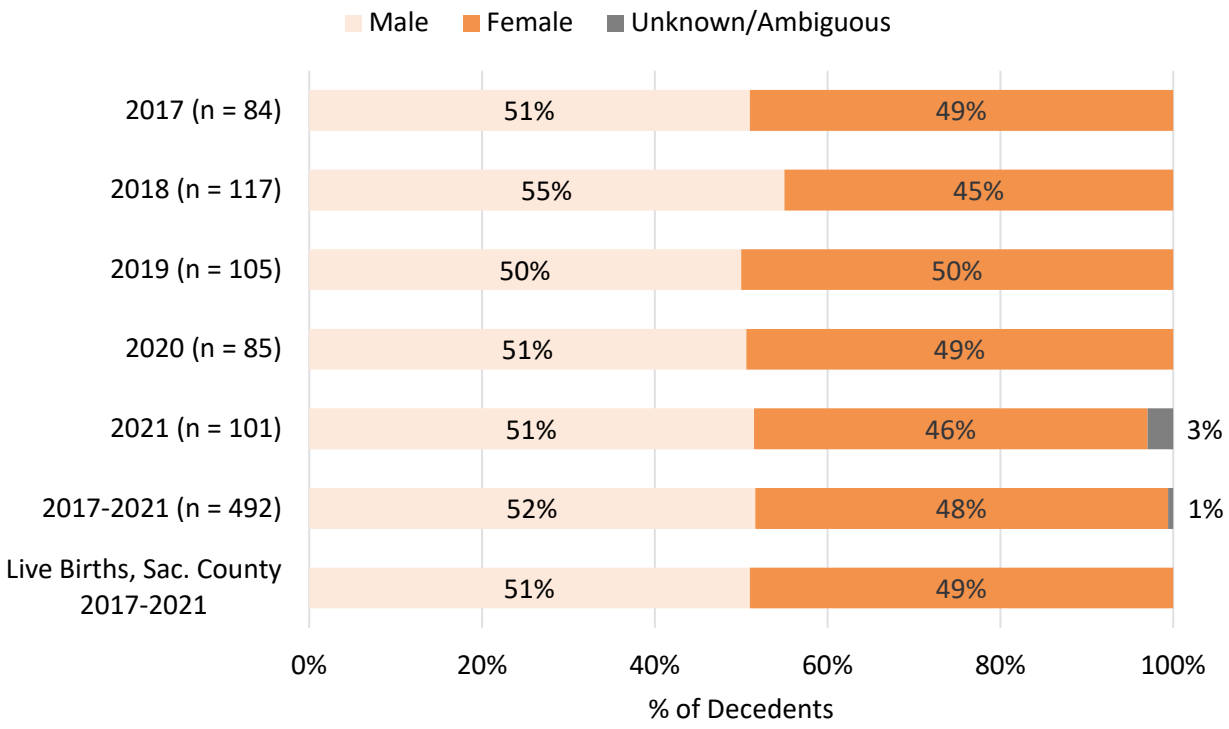
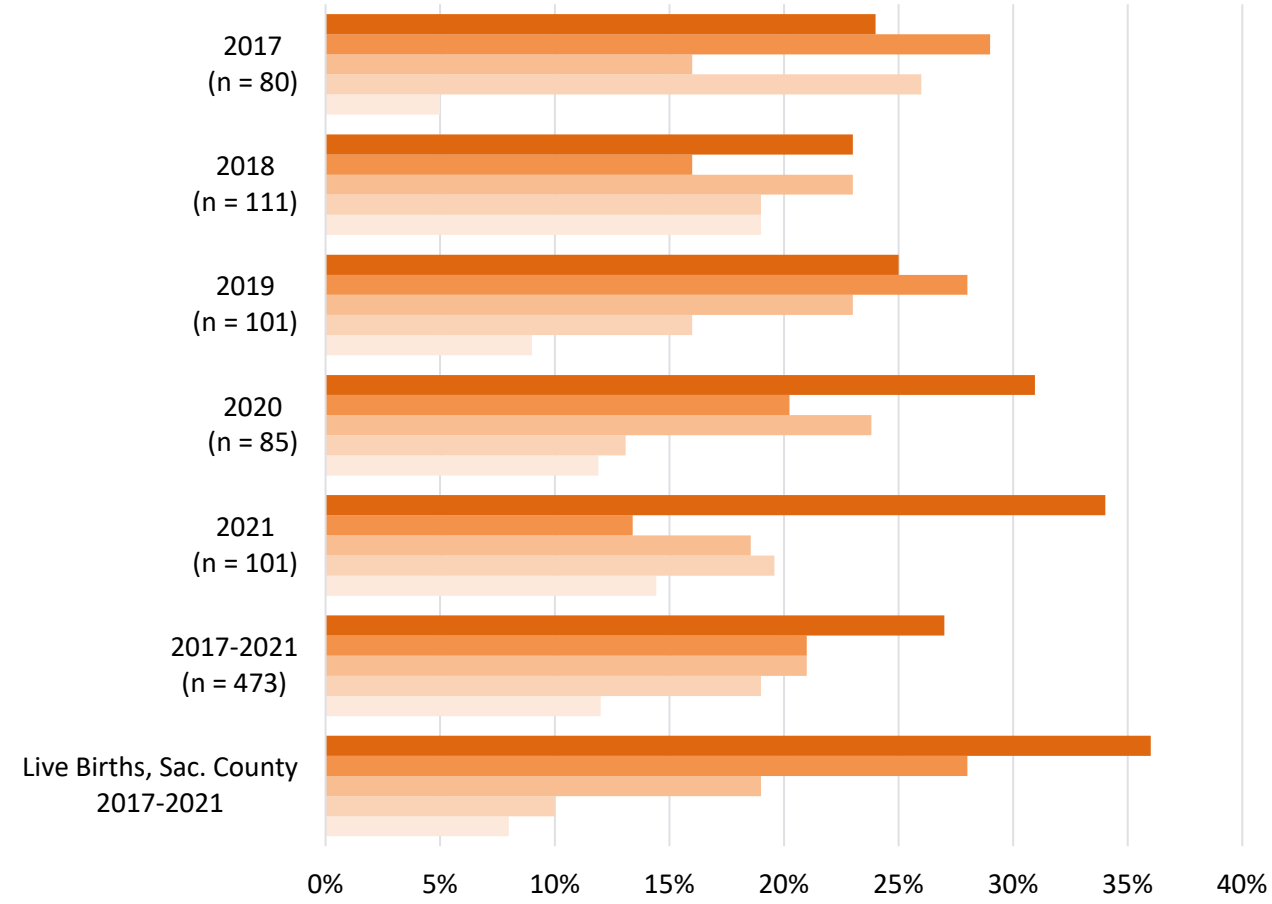


Figure 24. FIMR Deaths by Race/Ethnicity, Sacramento County Residents, 2017-2021



	Live Births, Sac. County 2017-2021	2017-2021 (n = 473)	2021 (n = 101)	2020 (n = 85)	2019 (n = 101)	2018 (n = 111)	2017 (n = 80)
White/Caucasian	36%	27%	34%	31%	25%	23%	24%
Hispanic	28%	21%	13%	20%	28%	16%	29%
Asian/Pacific Islander	19%	21%	19%	24%	23%	23%	16%
Black/African American	10%	19%	20%	13%	16%	19%	26%
Multiracial/Other	8%	12%	14%	12%	9%	19%	5%

% of Decedents

Note: Not shown here are 19 decedents where their race/ethnicity (or mother's race/ethnicity) was unknown. Sources: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database, 2017-2021; Birth Fact Sheet 2017, 2018, 2019, 2020, and 2021, for Sacramento County, Department of Health Services, Division of Public Health, Epidemiology Unit, Dr. Olivia Kasirye, County Health Officer.

MOTHER'S HEALTH

A mother's health prior to pregnancy, including her pregnancy history, includes factors that contribute to pregnancy outcomes. This section includes source information collected from hospitals, health clinics, and fetal death certificates.

While low, we continue to see that, on average, women with fetal and infant deaths have pre-pregnancy diabetes or hypertension at a higher percentage than that of new mothers in Sacramento County with the same pre-pregnancy conditions. See Table 28 for rates of diabetes, hypertension, and sexually transmitted infections in FIMR Deaths.

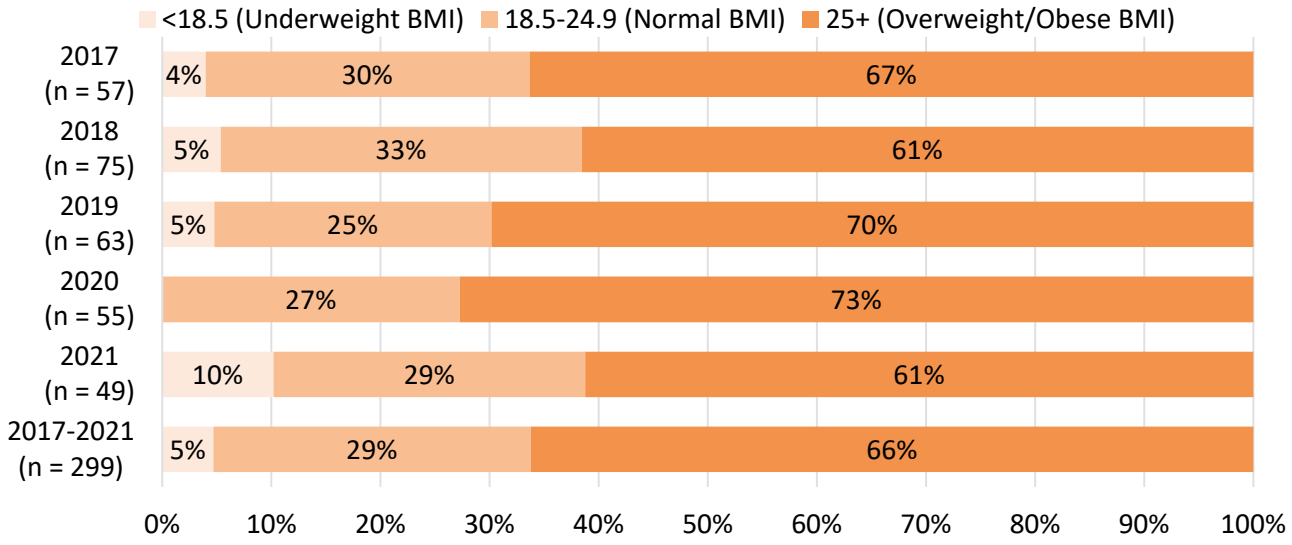
Table 28. FIMR Deaths by Mother's Pre-Pregnancy Health Status, Sacramento County Residents, 2017-2021

Pre-Pregnancy Health Status	Sacramento County Mothers*	2017 n = 78		2018 n = 105		2019 n = 96		2020 n = 73		2021 n = 85		2017-2021 n = 437	
		Yes		Yes		Yes		Yes		Yes		Yes	
Pre-Pregnancy Diabetes	<1%	0	0%	5	5%	9	5	6%	9%	4	5%	23	5%
Pre-Pregnancy Hypertension	3%	8	10%	7	7%	7	4	5%	7%	3	4%	29	7%
Sexually Transmitted Infection	2%	5	6%	4	4%	5	7	8%	5%	3	4%	24	5%

Figure 25 shows the mother's Body Mass Index (BMI), a measure of body fat based on weight and height, prior to pregnancy according to the fetal death certificate. According to the American College of Obstetricians and Gynecologists, obesity during pregnancy is a known risk factor for several health problems, including gestational diabetes and preeclampsia as well as pregnancy loss and birth defects.[17]

From 2017-2021, 66 percent of mothers who experienced a fetal death were overweight/obese prior to pregnancy, compared with 58 percent of Sacramento County mothers.

Figure 25. Fetal Deaths by Mother's Pre-Pregnancy BMI, Sacramento County Residents, 2017-2021

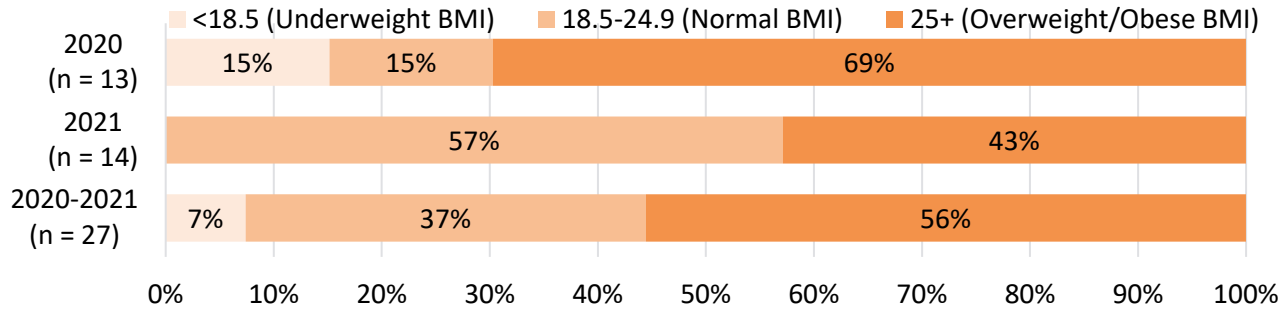


Note: This figure only includes Fetal Deaths.Total percentage values per year may not equal 100% due to rounding.

[17] "Women's Health Care Physicians." Obesity and Pregnancy - ACOG. N.p., 2017. "Women's Health Care Physicians." Obesity and Pregnancy - ACOG. N.p., 2017. Web. 14 July 2017.

The year 2020 was the first time that the FIMR Team collected a complete years' worth of BMI data for mothers who experienced the death of an infant born prior to 23-weeks of gestation. Fifty-four percent of mothers were overweight/obese prior to pregnancy from 2020-2021 (see Figure 26).

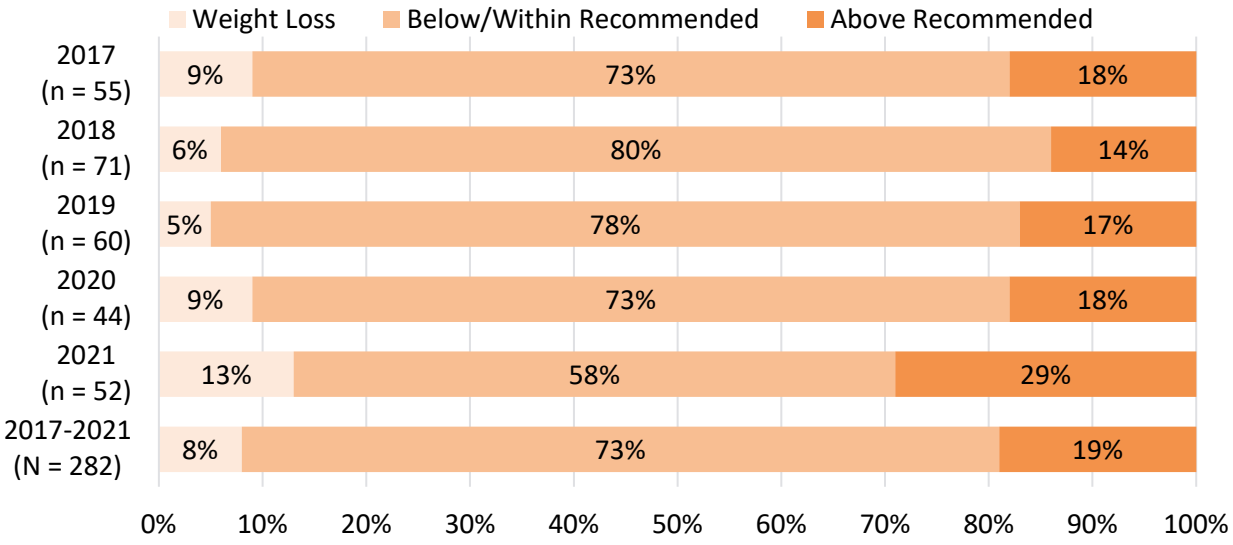
Figure 26. Deaths of Infants Born Prior to 23-Weeks of Gestation by Mother's Pre-Pregnancy BMI, Sacramento County Residents, 2020-2021



Note: Live Birth Death BMI Data was not captured until 2019. Total percentage values per year may not equal 100% due to rounding.

Figure 27 shows information on the mother's pregnancy weight change by fetal deaths in Sacramento County from 2017-2021. The largest portion of women in each year fell in the Below/Within Recommended category, with Above Recommended weight gain ranging from 14 percent to 29 percent across the years 2017-2021 (19% overall). The peak level of those with Above Recommended weight gain was in 2021 (29%).

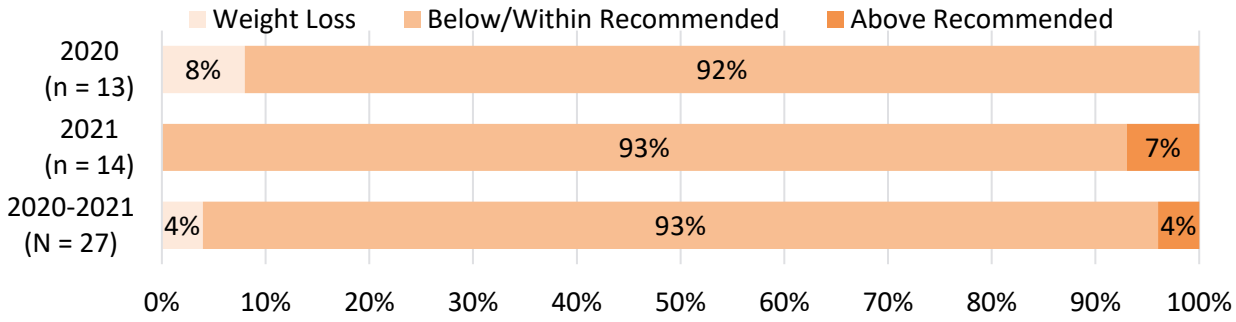
Figure 27. Fetal Deaths by Mother's Weight Change During Pregnancy, Sacramento County Residents, 2017-2021



Note: This only includes Fetal Deaths.

The year 2020 was the first that the FIMR Team collected a complete years' worth of data on the weight change for mothers who experienced the death of an infant born prior to 23-weeks of gestation. Ninety-three percent of mothers were below or within recommendations from 2020-2021, for up to their 22nd week of gestation.

Figure 28. Deaths of Infants Born Prior to 23-Weeks of Gestation by Mother's Weight Change During Pregnancy, Sacramento County Residents, 2020-2021



Note: Live Birth Death Weight Change for Mother Data was not captured until 2019. 2018 and 2019 each include one sibling case (Mother counted only once). Total percentage values per year may not equal 100% due to rounding.

Past pregnancy outcomes can indicate a risk of future pregnancy complications. Table 29 shows information on prior pregnancies for FIMR Deaths from 2017-2021. Prior fetal loss was the most common prior pregnancy experience, occurring in 26 percent of mothers who experienced FIMR Deaths from 2017-2021.

Table 29. FIMR Deaths by Mother's Prior Pregnancy/Birth History, Sacramento County Residents, 2017-2021

Pregnancy & Birth History	2017-2021 FIMR Deaths		Source (n)
Prior fetal loss	117	26%	450
Prior cesarean delivery	38	12%	317
Prior therapeutic or spontaneous abortion	36	14%	257
More than 4 births	24	5%	460
Prior pre-term delivery	20	5%	439
First pregnancy <18 years old	5	2%	257
Pregnancies < 1 year apart	2	1%	257
Prior low birthweight delivery	1	<1%	257

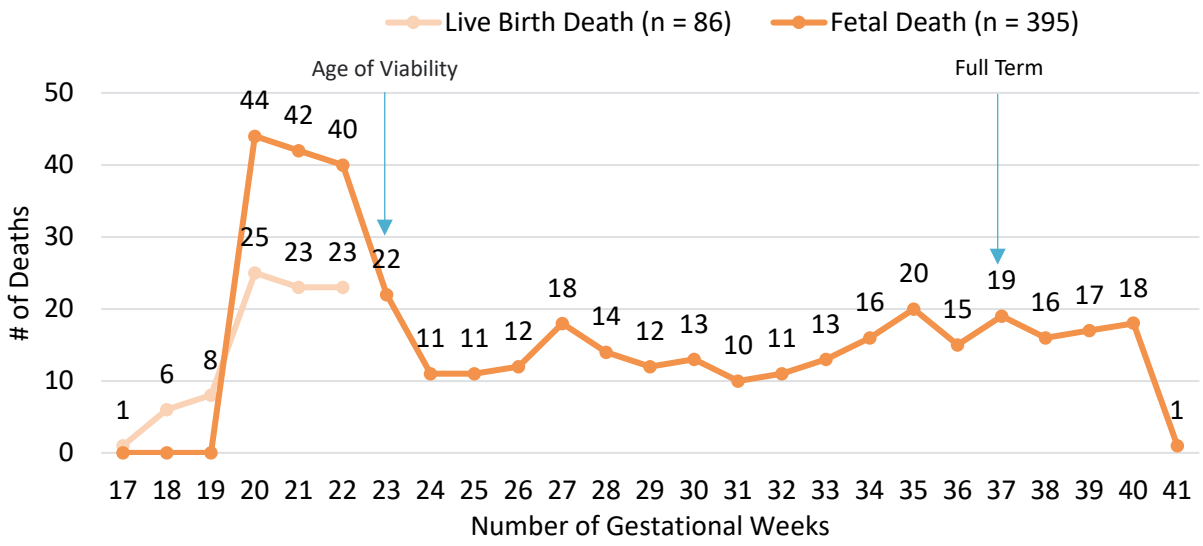
Note: This includes a mix of source data. For example, some data is only available for reviewed cases, and some is only available for Fetal Deaths (reviewed and not reviewed).

PREGNANCY/BIRTH

A mother's experiences during pregnancy can have a large impact on birth outcomes. The following information includes life stress, prenatal care, pregnancy complications, and pregnancy characteristics. This data is collected through a variety of sources, such as death certificates, hospitals, and health clinics.

Figure 29 shows the number of deaths that occurred by weeks of gestation. Fifty percent of fetal deaths (198 of 395) occurred from the age of viability (23-weeks of gestation) up to (not including) full term (37-weeks of gestation). Eighteen percent of fetal deaths (71 of 395) occurred after reaching full term (37-weeks of gestation or more).

Figure 29. Number of Gestational Weeks by Type of Death, 2017-2021 Fetal Deaths (n = 395)* and Live Birth Deaths (n = 86)**



* 9 Unknown Gestation for Fetal Deaths **2 Unknown Gestation of Live Birth Deaths

Table 30 shows that 29 percent of reviewed cases only, from 2017-2021, had at least one major life stressor during pregnancy. Major life stressors include lack of supportive friends or family, frequent moves or homelessness, job loss or unemployment, major illness, substandard housing or overcrowding, and cultural barriers to accessing care.

Table 30. FIMR Deaths by Major Life Stressors During Pregnancy, Sacramento County Residents, 2017-2021

	2017-2021
At Least One Major Life Stressor During Pregnancy	**29%** (76 of 260)

To screen for and manage risk factors for poor pregnancy outcomes, it is recommended that expectant mothers schedule a prenatal care appointment as soon as possible within the first 12 weeks of pregnancy.[18] Table 31 describes the prenatal care received by mothers with a FIMR Death, as well as specific problems associated with prenatal care.

Overall, since 2016, there has been an upward trend of first trimester (early) prenatal care among mothers who subsequently experienced a FIMR Death, from 69 percent in 2016 to 76 percent in 2021. There were dips to 67 percent in 2017 and 60 percent in 2020. These percentages consistently remain lower than the percentages of all Sacramento County mothers who begin prenatal care in the first trimester.

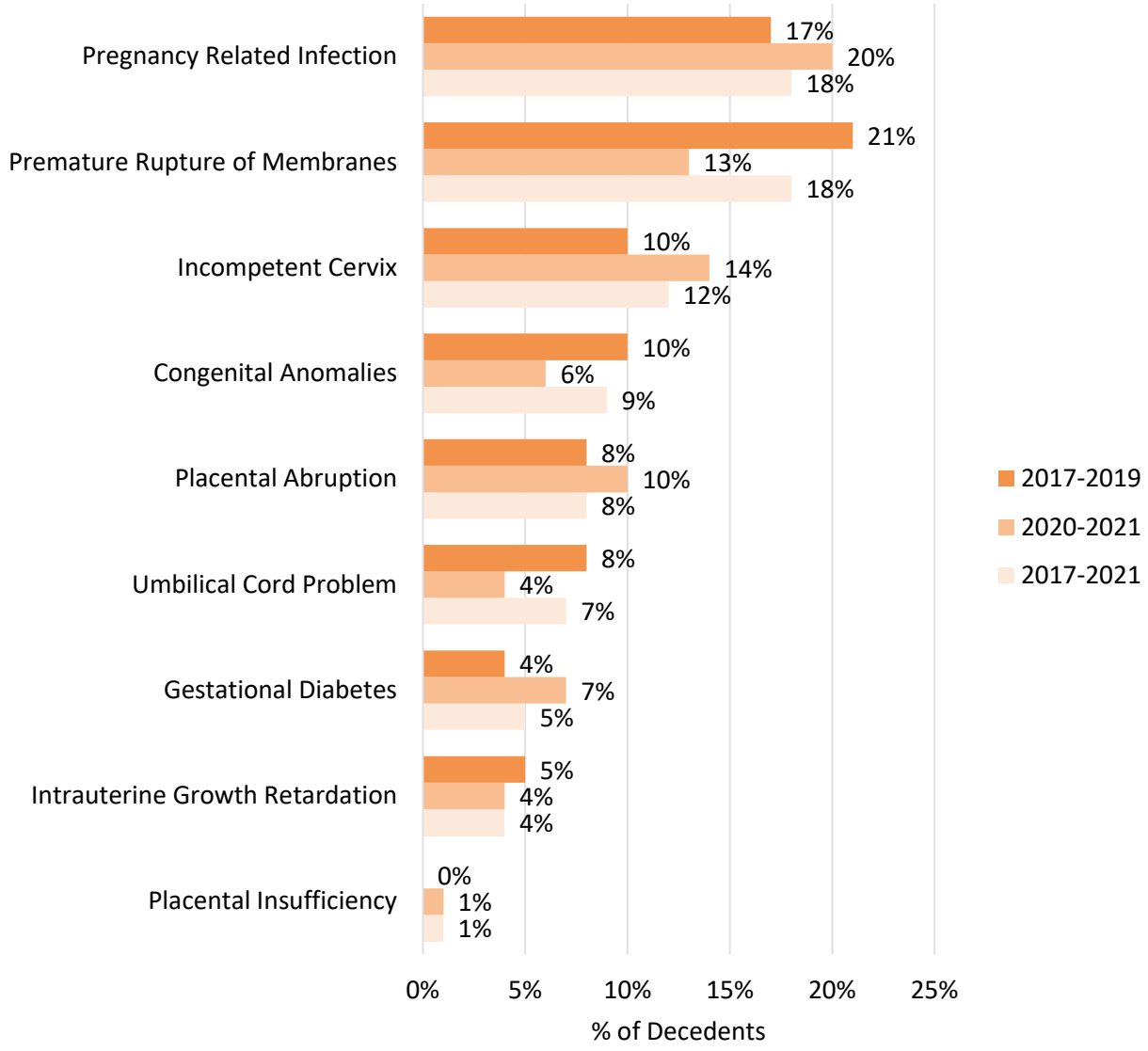
Table 31. FIMR Deaths by Prenatal Care Status, Sacramento County Residents, 2017-2021

	Sacramento County Mothers, 2017-2021	2017	2018	2019	2020	2021	2017-2021
First Trimester (Early) Prenatal Care	87%	67% (51 of 76)	70% (62 of 88)	78% (68 of 87)	60% (46 of 77)	76% (56 of 74)	70% (283 of 402)
No, late, or inadequate prenatal care	13%	25% (19 of 76)	31% (32 of 102)	15% (14 of 91)	21% (15 of 72)	28% (19 of 69)	24% (99 of 410)
No prenatal care	0.9%	*12% (9 of 76)*	*18% (16 of 87)*	*8% (7 of 87)*	*6% (4 of 64)*	*1% (1 of 69)*	*10% (37 of 383)*
Late prenatal care (5th month or later)	12%	*7% (5 of 76)*	*8% (8 of 96)*	*3% (2 of 78)*	*4% (3 of 72)*	*7% (5 of 74)*	*6% (23 of 396)*

[18] U.S. Department of Health Services, Health Resources and Services Administration, Maternal and Child Health Bureau. Child Health USA 2014.

Pregnancies can encounter a variety of complications that lead to fetal and infant death. Among the most common complications experienced in FIMR Deaths, for 2017-2021, are pregnancy-related infection (18%), premature rupture of membranes (18%), and incompetent cervix (12%) (See Figure 30). This has changed from 2016 when the most common complications in FIMR Deaths were placental abruption, gestational diabetes, and pregnancy-related infection.

Figure 30. FIMR Deaths by Pregnancy Complications, Sacramento County Residents, 2017-2021*



Note: * n value varies by each complication

Twins were more common among FIMR Deaths than all Sacramento County births. Table 32 gives more information on plurality among FIMR Deaths.

Table 32. FIMR Deaths by Plurality, Sacramento County Residents, 2017-2021

Plurality	Child Population	2016 Comparison	2017-2021	
Singleton	97%	89%	447	91%
Twins	3%	11%	40	8%
Triplet and Higher-Order	<1%	0%	5	1%
Total FIMR Deaths			**492**	**100%**

Source: National Center for Health Statistics, final natality data 2017-2021. Retrieved from www.marchofdimes.org/peristats. Note: Data presented when available. Pregnancy and birth characteristics collected from death certificates, which are not always complete.

MOTHER'S DEMOGRAPHICS

According to the American College of Obstetricians and Gynecologists, advanced maternal age can increase the risk of complications during pregnancy, including diabetes, problems with the placenta or fetal growth, and birth defects.[19] Table 33 shows maternal age as well as other parent demographics among FIMR Deaths. Mothers with FIMR Deaths were similar to new mothers in Sacramento County in terms of age and country of origin.

Table 33. FIMR Deaths by Mother's Demographics, Sacramento County Residents, 2017-2021

Mother's Demographics		Sacramento County 2017-2021 Average*	2016 Comparison	2017-2019		2020-2021		2017-2021	
Mother's Country of Origin	**Total**	**100%**	**100%**	**281**	**100%**	**182**	**100%**	**463**	**100%**
	United States	68%	60%	187	67%	132	73%	319	69%
	Abroad	32%	40%	94	33%	50	27%	144	31%
Mother's Age at Birth	**Total**	**100%**	**100%**	**297**	**100%**	**183**	**100%**	**480**	**100%**
	<18 years	1%	4%	4	1%	1	1%	5	1%
	18-34 years	78%	71%	227	77%	143	78%	370	77%
	35+ years	21%	25%	66	22%	39	21%	105	22%

*Average percent of Sacramento County mothers who gave birth from 2017-2021. Note: Data presented when available. Parent demographics are collected from death certificates, which are not always complete. Source: California Department of Public Health, Center for Family Health, Maternal, Child, and Adolescent Health Division, Births Dashboard, go.cdph.ca.gov/Births-Dashboard.

[19] "Women's Health Care Physicians." Having a Baby After Age 35 - ACOG. American College of Obstetricians and Gynecologists, Sept. 2015.

Studies have shown that higher educational attainment was associated with lower rates of fetal death.[20] Table 34 and Table 35 show the educational attainment for instances of fetal death from 2017-2021.

- Mothers who experienced FIMR Deaths are less likely to have a college or advanced degree compared to all Sacramento County women.
- Fathers who experienced FIMR Deaths are less likely to have any college education than are Sacramento County men.

Table 34. FIMR Deaths by Mother's Educational Attainment, Sacramento County Residents, 2017-2021

Mother's Educational Attainment	Sacramento County Women 2017-2021	2017-2021	
Less than high school	11%	40	11%
High school diploma/equivalency	21%	161	44%
Some college	35%	65	18%
College degree or higher	33%	99	27%
Total FIMR Deaths	**100%**	**365**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Table 35. FIMR Deaths by Father's Educational Attainment, Sacramento County Residents, 2017-2021

Father's Educational Attainment	Sacramento County Men 2017-2021	2017-2021	
Less than high school	13%	48	14%
High school diploma/equivalency	23%	146	43%
Some college	33%	53	16%
College degree or higher	31%	90	27%
Total FIMR Deaths	**100%**	**337**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

FAMILY SYSTEMS INVOLVEMENT

In addition to health and demographic information, FIMR collects the same family systems involvement data as CDRT. The following tables reflect only cases reviewed at the quarterly FIMR meetings. From 2017-2021, there were 492 FIMR Deaths among Sacramento County residents, 260 of which were reviewed. Reviewed cases include 88 children who were born alive prior to 23-weeks of gestation and 172 fetal deaths

[20] Fetal mortality by maternal education and prenatal care, 1990. National Center for Health Statistics. Vital Health Stat 20(30). 1996.; Sabol et al, "Intrauterine Fetal Demise and Postneonatal Death Stratified by Maternal Education Level and Gestational Age," Obstetrics and Gynecology, May 2015.

that received fetal death certificates. The 88 children born alive also appear in the CDRT data in prior chapters of this report.

Table 36 shows the family systems involvement associated with reviewed FIMR Deaths. Similar to 2016, Government Aid and Sacramento County CPS involvement continue to be the two most prevalent risk factors from 2017-2021.

Table 36. Reviewed FIMR Deaths by Type of Systems Involvement Present, Sacramento County Resident Children, 2017-2021

System Involvement	2016 Comparison	2017-2021	
At Least One System Involvement	81%	222	85%
Government Aid	62%	168	65%
Sac. County CPS Involvement	42%	139	53%
Law Enforcement Involvement	20%	91	35%
Alcohol and/or Other Drug History	27%	71	27%
Domestic Violence Involvement	4%	43	17%
Medical/Mental Health	7%	33	13%
Gang Involvement	5%	14	5%

Note: Percentages may not add to 100% as multiple risk factors may be present for each individual.

From 2017-2021, 53 percent of reviewed FIMR Deaths have a history of Sacramento County CPS involvement. Because the majority of FIMR Deaths occur either before or shortly after birth, CPS involvement primarily refers to siblings or parents as minors. From 2017-2021, 33 percent of Reviewed FIMR Deaths had a parent with CPS involvement (referral and/or case) as a child, which is an increase from 29 percent in 2016. Zero decedents had Sacramento County CPS History from 2017-2021. See Table 37 for details on CPS history.

Table 37. Reviewed FIMR Deaths by Risk Factor: CPS History, Sacramento County Residents, 2017-2021

System Involvement	2016 Comparison	2017-2021	
Sac. County CPS Involvement	42%	139	53%
Decedent History	*4%*	*0*	*0%*
Sibling History	*20%*	*55*	*21%*
Parent History	*29%*	*87*	*33%*
Total Reviewed FIMR Deaths	**100%**	**260**	**100%**

Note: Percentages may not add to 100% as multiple risk factors may be present for each individual.

Table 38 shows fetal alcohol and drug exposure known either by the hospital at time of birth or by CPS. Cases of drug and alcohol exposure that do not rise to this level do not appear in the table, so the 17 percent from 2017-2021 is a conservative estimate for the number of Reviewed FIMR Deaths with prenatal exposure. It is also important to note that fetal alcohol and drug exposure can be co-occurring.

Table 38. Reviewed FIMR Deaths by Risk Factor: Fetal AOD Exposure, Sacramento County Residents, 2017-2021

System Involvement	2016 Comparison	2017-2021	
Any Fetal AOD Exposure	20%	45	17%
Marijuana	*11%*	33	13%
Methamphetamines	*7%*	7	3%
Alcohol	*4%*	3	1%
Opioids	*4%*	5	2%
Ecstasy	*2%*	1	0%
IV Drug Use	*2%*	0	0%
Cocaine	*0%*	3	1%
Total Reviewed FIMR Deaths	**100%**	**260**	**100%**

Note: Percentages may not add to 100% as multiple risk factors may be present for each individual.

In addition to the government aid information that was provided during case review, Table 39 shows Women, Infants, and Children (WIC) assistance during pregnancy and type of payment for delivery as indicated on the fetal death certificate.

Table 39. FIMR Deaths by Risk Factor: Government Aid, Sacramento County Residents, 2017-2021

Government Aid		2016 Comparison	2017-2021	
Women, Infants, & Children (WIC)	Total	100%	289	100%
	None during pregnancy	60%	217	75%
	Assistance during pregnancy	40%	70	24%
Payment for Delivery	Total	100%	338	100%
	Medi-Cal paid delivery	64%	178	53%
	Private insurance paid delivery	36%	150	44%
	Other	0%	10	3%

Note: WIC and Medi-Cal data is collected for all fetal deaths, only. WIC information is unknown for 115 fetal deaths and Insurance information is unknown for 66 fetal deaths.

Pregnant women have long been advised against smoking. According to the Centers for Disease Control and Prevention, smoking increases the risk of problems with the placenta, pre-term delivery, and birth defects.[21] Table 40 shows the mothers' smoking history among fetal deaths. From 2017-2021, nine percent of mothers who experienced FIMR Deaths reported smoking prior to pregnancy and five percent used tobacco during pregnancy.

Table 40. FIMR Deaths by Risk Factor: Mother's Smoking History, Sacramento County Residents, 2017-2021

Mother's Smoking History	2016 Comparison	2017-2021	
Before Pregnancy	5%	38	9%
During Pregnancy	3%	22	5%

[21] "Women's Health Care Physicians." Obesity and Pregnancy - ACOG. N.p., 2017. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/tobaccousepregnancy/index.htm

Appendix A: Supplemental Tables

Table 1. CAN Homicides by CPS Involvement with Family, Sacramento County Residents and Out-of-County Residents whose Injuries Leading to Death were Sustained in Sacramento County, 2017-2021

CPS Involvement	2017-2021	
None	**3**	**15%**
Any CPS Involvement	**17**	**85%**
Out of County Only	**2**	**10%**
Decedent Involvement	**10**	**50%**
Referral Only	*9*	
Open at Time of Death	*1*	
Open Within 6 Months	*1*	
Substantiations	*4*	
Sibling Involvement	**8**	**40%**
Referral Only	*8*	
Open at Time of Death	*-*	
Substantiations	*3*	
Parent Involvement	**9**	**45%**
CPS Post-Involvement	**13**	**65%**
Unknown Involvement	**-**	**-**
Total CAN Homicides	**20**	

Table 42. All Child Deaths by Classification & Category, Sacramento County Residents whose Death Occurred in Sacramento County, 2012-2021

		10-Year Trend										
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	All Years
Injury-Related	**Total**	33	33	22	32	24	38	24	24	33	36	299
	Homicide	13	15	9	10	9	15	4	7	7	11	100
	CAN Homicide	*4*	*8*	*4*	*4*	*3*	*8*	*1*	*3*	*3*	*5*	*43*
	3rd-Party Homicide	*9*	*7*	*5*	*6*	*6*	*7*	*3*	*4*	*4*	*6*	*57*
	Motor Vehicle Collision	3	5	2	6	3	6	6	4	8	4	47
	Occupant/Driver	*-*	*3*	*-*	*5*	*-*	*2*	*4*	*2*	*5*	*2*	*23*
	Pedestrian	*1*	*2*	*2*	*1*	*3*	*2*	*-*	*1*	*2*	*2*	*16*
	Bike	*2*	*-*	*-*	*-*	*-*	*2*	*2*	*1*	*1*	*0*	*8*
	Drowning	8	2	5	4	3	4	3	6	2	8	45
	Suicide	3	6	5	5	5	7	7	4	7	1	50
	Suffocation	4	-	1	-	1	3	2	2	2	4	19
	Poisoning/Overdose	-	-	-	2	1	1	-	1	5	5	15
	Burn/Fire	-	-	-	2	-	1	-	-	0	0	3
	Legal Intervention	1	-	-	-	1	-	-	-	0	0	2
	Injury: Other	1	5	-	1	1	-	2	-	0	1	11
	Injury: Undetermined	-	-	-	2	-	1	-	-	2	2	7
Natural	**Total**	101	94	102	88	102	71	90	85	77	96	906
	Perinatal Conditions	42	33	44	35	44	28	36	32	34	28	356
	Congenital Anomalies	25	30	31	28	28	24	32	28	23	33	282
	SIDS	9	-	2	2	-	-	-	-	0	0	13
	SUIDS	12	13	8	8	8	10	8	4	7	14	92
	Cancer	8	7	9	4	13	1	6	12	8	10	78
	Infections/Respiratory	1	9	4	3	5	2	4	6	4	6	44
	Natural | Other	2	2	3	5	4	4	3	1	1	3	28
	Natural | Undetermined	2	-	1	3	-	2	1	2	0	2	13
Undetermined	**Total**	3	2	8	6	5	5	6	10	3	2	50
Total Child Deaths (All Classifications)		**137**	**129**	**132**	**126**	**131**	**114**	**120**	**119**	**113**	**134**	**1255**

Appendix B: Glossary

Abuse: Includes physical injury or death inflicted upon a child by another person by other than accidental means, sexual abuse as defined in Penal Code, Section 11165.1, unlawful corporal punishment or injury as defined in Penal Code, Section 11165.4, or the willful harming or injuring of a child or the endangering of the person or health of a child, as defined in Penal Code, Section 11165.3, where the person responsible for the child's welfare. (California Penal Code, Section 11165.6)

> *Emotional Abuse: When a person causes or permits a child to suffer unjustifiable or significant mental suffering. Emotional or psychological child abuse is a pattern of behavior that impairs a child's emotional development or sense of self-worth. This may include constant criticism, threats, or rejection, as well as withholding love, support, or guidance.*
>
> *Physical Abuse: Any physical injury inflicted on a child by other than accidental means. Any physical injury that is unexplainable by the child's medical history. Physical abuse also includes discipline or control by any means not authorized by law to manage persons who are mentally challenged or impaired. (California Penal Code, Section 11165.6)*
>
> *Sexual Abuse and Exploitation: Sexual assault on or sexual exploitation of a minor. Specifically, sexual abuse includes: rape, gang rape (or rape in concert), incest, sodomy, oral copulation, and lewd and lascivious acts. (California Penal Code, Section 11165.1)*

Abuse Death: *(See "Child Maltreatment Death")*

Abuse-Related Death: *(See "Child Maltreatment Death")*

Accident Death: A manner/classification of death that includes drowning, accidental overdose, falls, motor vehicle accidents, etc.[1] Sacramento County CDRT Accident Deaths include Drowning, Fire/Burn, Motor Vehicle Collisions, Poisoning/Overdose, Suffocation, Other-Injury-Related, and Undetermined-Injury-Related Deaths.

Aggregate: Formed or calculated by the combination of many separate cases, events, or units such as by time, geographic subdivision, or sociodemographic characteristic.[2]

Alcohol and Drug Use: A history of drug and/or alcohol use by the parent or decedent, drugs or alcohol involved in the deaths, smoking during pregnancy, secondhand smoke exposure, and/or a baby born with positive toxicology. This information can come from law enforcement, hospitals, or the coroner.

Anomalies: *(See "Congenital Anomalies")*

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[1] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

[2] Sacramento County Department of Health and Human Services, Division of Public Health

Breach: The unauthorized acquisition, access, use or disclosure of personal/confidential information in a manner which compromised the security, confidentiality, or integrity of the information; or the same definition of 'breach of the security of the system.'[2]

Burn/Fire: Death caused by fire through a rapid combustion or consumption in such a way as to cause detrimental harm to one's health.

Cancer Death: A tumor disease, the natural course of which is fatal. Cancer cells, unlike benign tumor cells, exhibit the properties of invasion and metastasis and are highly anaplastic. Examples: Carcinoma, leukemia, and lymphoma.

Category of Death: *(See "Cause of Death")*

Cause of Death: Listed on the death certificate, medical findings coded according to the International Classification of Diseases, tenth edition (ICD-10). While an infant or child death may be the result of multiple causes, the primary underlying cause of death is reported here.

> *Category of Death: Sacramento County CDRT uses "Category of Death" to indicate the root cause of the child's death, using the coroner's "Cause of Death" to inform the ruling. The Sacramento County CDRT Catagories of Death include: Burn/Fire, Cancer, Child Abuse and Neglect Homicide, Congenital Anomalies, Drowning, Infection/Respiratory, Perinatal Conditions, Motor Vehicle Collision (Bike, Driver/Occupant, or Pedestrian), Other-Injury, Other-Natural, SIDS/SUIDS, Suffocation, Suicide, Third-Party Homicide, Undetermined, Undetermined-Injury, and Undetermined-Natural.*

Certificate of Fetal Death: Each fetal death in which the fetus has advanced to or beyond the 20th week of uterogestation shall be registered with the local registrar of births and deaths of the district in which the fetal death was officially pronounced within eight calendar days following the event and prior to any disposition of the fetus. (Health and Safety Code, Section 10175)[3]

Child Abuse and Neglect (CAN): Includes: physical injury or death inflicted by other than accidental means upon a child by another person; sexual abuse (Section 11165.1); neglect (Section 11165.2), the willful harming or injuring of a child or the endangering of the person or health of a child (Section 11165.3), and unlawful corporal punishment or injury (Section 11165.4.). (California Penal Code, Section 11165.6)

Child Abuse and Neglect (CAN) Homicide: A death that is caused (directly or indirectly) by abuse or neglect (*See "Child Abuse and Neglect (CAN)" definition*) perpetrated by a caregiver, including but not limited to, a parent, guardian, babysitter, or relative.

Child Death: A death occurring in a child (born alive) from birth through 17 years of age.

Child Death Review Team: An interagency (multidisciplinary) team that identifies and reviews child abuse and neglect deaths of children birth through 17 years of age. The ability to establish confidential Child Death

[3] "State definitions and reporting requirements for live births, fetal deaths, and induced terminations of Pregnancy", From the Centers for Disease Control and Prevention/National Center for Health Statistics, 1997 Revision, https://www.cdc.gov/nchs/data/misc/itop97.pdf

Review Teams was provided in 1988 by revisions to the California Penal Codes 11166.4 and 11174.32-11174.35 and the State Welfare and Institution Codes 830 and 10850.1.

Sacramento County Child Death Review Team (CDRT): The purpose of the multidiciplinary Sacramento County Child Death Review Team is The purpose of the Multidisciplinary Child Death Review Team is to: 1) Ensure that all child abuse-related deaths are identified; 2) Enhance the investigations of all child deaths through multi-agency review; 3) Develop a statistical description of all child deaths as an overall indicator of the status of children; and 4) Develop recommendations for preventing and responding to child deaths based on said reviews and statistical information.

Child Maltreatment Death: Death involving some element of abuse or neglect. Maltreatment categories include Abuse, Abuse-Related, Neglect, Neglect-Related, Prenatal Substance Abuse, Prenatal Substance Abuse-Related, and Questionable Abuse/Neglect/Prenatal Substance Abuse. *(See each following definition)*

Abuse Death: Death clearly due to abuse, supported by the coroner's reports or police/criminal investigation. Includes deaths caused intentionally or unintentionally by abuse where the perpetrator was a parent or a caregiver. Examples: shaken baby syndrome; murder/suicide (a parent kills his/her child and then him or herself); Homicide.

Abuse-Related Death: Death secondary to documented abuse. Child abuse was present and contributed in a concrete way to the child's death. Example: Suicide of a previously abused child.

Neglect Death: Death clearly due to neglect, supported by the coroner's reports or police/criminal investigation. Neglect was the direct cause, or was in the direct chain of causes, of the child's death. Deaths categorized by the negligent failure of a parent/guardian or caregiver to provide adequate food, clothing, shelter, or medical care. Examples: An abandoned newborn that dies of exposure; a child who dies from an untreated life-threatening infection; a parent or caregiver driving recklessly with a suspended license when involved in a motor vehicle collision.

Neglect-Related Death: Death secondary to documented neglect, including instances of supervision and situational neglect. Deaths that involve critical moments in which the child, left without adequate supervision, food, shelter, or medical care is killed by a suddenly arising danger. This category would also include any case where poor caregiver skills and/or judgment endangered the life of a child. Examples: An unattended infant who drowns in a bathtub; unrestrained child killed in a motor vehicle collision; motor vehicle collisions or house fires where caretaker was under the influence of drugs and/or alcohol.

Prenatal Substance Abuse Death: Death clearly due to prenatal substance abuse, supported by the coroner's report. Prenatal substance abuse where there is a clear medical link to infant death or death is secondary or known to probable prenatal substance abuse. Examples: Maternal methamphetamine use, which causes a premature birth and subsequent death; an infant exposed prenatal to cocaine and alcohol that dies from multiple birth defects.

Prenatal Substance Abuse-Related Death: Death secondary to known or probable substance abuse. Example: SIDS/SUIDS with known perinatal exposure to drugs.

Questionable Abuse/Neglect/Prenatal Substance Abuse Death: *Death where there are no specific findings of abuse/neglect/substance use but there are such factors as: Substance use/abuse where substance exposure caused the caregiver to experience mental impairment; previously unaccountable for deaths in the same family; prior abuse/neglect of child or protective service referral.*

Child Protective Services (CPS): An agency within the Sacramento County's Department of Child, Family and Adult Services. CPS investigates child abuse and neglect and provides services to keep children safe while strengthening families. CPS also trains foster parents, acts as an adoption agency, and licenses family daycare homes.

Child Protective Services (CPS) Involvement: Records from Child Protective Services (CPS) are reviewed to determine the nature and extent of any contact with CPS, including history for the decedent, siblings, and the parents (as minors). Sacramento County CPS involvement can be further broken down by type of CPS involvement, including but not limited to, substantiations, open cases, and foster care. (*Formerly "History of Child Abuse and Neglect")*

Classifiction of Death: *(See "Manner of Death")*

Confidential Information: Information that does not meet the definition of 'public records' set forth in California Government Code section 6252(e), or is exempt from disclosure under any of the provisions of Section 6250, et seq. of the California Government Code or any other applicable state or federal laws; or is contained in documents, files, folders, books or records that are clearly labeled, marked or designated with the word 'confidential' by the County of Sacramento. [4]

Congenital: *(See "Congenital Anomalies")*

Congenital Anomalies: Abnormal intrauterine development of an organ or structure; commonly referred to as "birth defects", such as: structural heart defects; neural tube defects, such as anencephaly; and chromosomal abnormalities, such as Trisomy 13 (Patau Syndrome). The underlying causes of death in this category are generally attributed to heredity and/or genetics.

Anomalies: *Marked deviations from the normal standard, especially as a result of congenital defects. These conditions are acquired during the development of the fetus and are generally attributed to heredity/genetics.*

Congenital: *A condition that exists at birth, and usually before birth, regardless of its causation.*

Death Certificate: Certifies the occurrence of a death and provides the basis for the identification of cases to be reviewed by the CDRT.

Death Rate: The number of deaths within a population divided by the total number of members in that population. Death rates are used to make comparisons between groups of varying size and composition. In

[4] Sacramento County Department of Health and Human Services, Division of Public Health

this document, since we are working with small numbers, the death rates were multiplied by 100,000 so that subtle deviations could be more easily detected.

De-Identified: Any and all personal/confidential Information has been removed.[5]

Denominator: The total population from which the cases or events in the numerator arose.[6]

Disclosure: The release, transfer, provision of, access to, or divulging in any manner of information outside the entity holding the information.[7]

Disparity: Used to describe inequitable outcomes experienced by one group when compared to another group. Not to be confused with disproportionality which compares the proportion of one group to the same group in the general population.

Disproportionality: A population's representation exceeds expectations in a particular category. Example: The overrepresentation of a specific race or ethnicity identified in one or more categories, which differs from the overall population represented.

Domestic Violence: *(See "Law Enforcement Involvement")*

Drowning: The process of experiencing respiratory impairment from submersion/immersion in liquid. Examples: Open-water, pool, and bathtub drowning.

Early Neonatal Death: Early neonatal death (ENND) is defined as the death of a newborn, between zero and six days after birth.[8]

Early Prenatal Care: *(See "Prenatal Care")*

Emotional Abuse: *(See "Abuse")*

Epidemiology: The study of distribution and determinants of disease, disability, injury, and death.

Failure to Thrive: Children who fail to develop and grow normally, usually associated with failure to gain and/or loss of weight, resulting from conditions that interfere with nomal metabolism, appetite, and activity. Causes include illness, chromosomal abnormalities, major organ system defects, and malnutrition.

Family History: The risk factor history for the decedent, sibling(s), and/or parent(s)/guardian(s) combined.

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[5] Sacramento County Department of Health and Human Services, Division of Public Health

[6] Sacramento County Department of Health and Human Services, Division of Public Health

[7] Sacramento County Department of Health and Human Services, Division of Public Health

[8] American Academy of Pediatrics https://publications.aap.org/pediatrics/article/137/5/e20160551/52158/Standard-Terminology-for-Fetal-Infant-and?autologincheck=redirected

Fetal Alcohol Syndrome (FAS): A group of birth defects seen among infants whose mothers consumed alcohol during pregnancy, which include, but are not limited to, low body weight, hyperactive behavior, developmental disabilities, and physical deformities.

Fetal Death: Fetal death refers to the intrauterine death of a fetus prior to delivery. Further, death is prior to complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy); the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. (Centers for Disease Control and Prevention, National Center for Health Statistics)

Fetal and Infant Mortality Review: The Fetal and Infant Mortality Review process is used to identify and take action to prevent a wide range of local social, economic, public health, education, environmental, and safety factors that contribute to the tragedy of fetal and infant loss. (Health and Safety Code, Section 123660, added by Senate Bill 65)

> *Sacramento County Fetal Infant Mortality Review (FIMR) Case Review Team (CRT): The purpose of the multidisciplinary Fetal-Infant Mortality Review Case Review Team is to: 1) Ensure that fetal, neonatal, and post-neonatal fatalities are identified; 2) Examine contributing factors for at least 25% of all fetal, neonatal and post-neonatal deaths in a calendar year through multi-agency review; and 3) Develop recommendations for the prevention and response to aforementioned deaths based on said reviews and statistical information.*

Gang History: *(See "Law Enforcement Involvement")*

General Neglect: *(See "Neglect")*

Government Aid: Because CDRT does not have access to income information, Government Aid is used as a proxy measure for poverty. This includes a decedent's family's enrollment in Medi-Cal, CalWORKs, CalFresh, and other services such as Social Security Income. CPS representatives provide information regarding a decedent's family's enrollment. Additional information is received or confirmed by other representatives including, but not limited to, California Children's Services (CCS) and Vital Records via Fetal and Child Death Certificates. *(Formerly "Poverty History")*

Homicide Death: A manner/classification of death that includes when a person is killed by one or more persons.[9] Sacramento County CDRT Homicide Deaths include CAN Homicides and Third-Party Homicides.

Inadequate Prenatal Care: *(See "Prenatal Care")*

Infant Death: A death occurring during the first year (12 months) of life; includes both neonatal deaths and post-neonatal deaths.

Infant Sleep-Related Death: Infant Sleep-Related (ISR) Death is an umbrella term, used by the American Academy of Pediatrics, to describe all infant deaths that occur in the sleep environment. Sacramento

[9] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

County CDRT combines all ISR deaths, due to variation in the specific categorization of death by the coroner, to better identify ISR risk factors to help prevent future Infant Sleep-Related Deaths. The categories included in Infant Sleep-Related Deaths are SIDS, SUIDS, Undetermined Manner, and Undetermined Natural Deaths.

Infant Mortality Rate: The number of infants who die within the first year of life, per 1,000 live births.

Infection/Respiratory Death: Includes deaths due to infections of all kinds, including respiratory infections such as severe acute respiratory syndrome coronavirus 2 (COVID-19). This also includes non-infection respiratory deaths from diseases, such as Asthma.

> *Infection Death: Death caused by the invasion and multiplication of microorganisms in body tissues. Examples: Meningitis and sepsis.*
>
> *Respiratory Death: Death that involves a disease or infection of the lungs or airway passages. Examples: Asthma, COVID-19, Pneumonia, Respiratory Syncytial Virus (RSV), Tuberculosis, etc.*

Injury-Related Death: A death that is a direct result of an injury-related incident. Includes both intentional and unintentional injury deaths. Examples: Burn/Fire, Drowning, Homicide, Motor Vehicle Collision, Other-Injury, Suffocation, Suicide, and Undetermined-Injury Deaths.

> *Intentional Injury-Related Death: Death as a result of an injury that is purposely inflicted, by either oneself or another person. Includes: Homicide and Suicide Deaths.*
>
> *Unintentional Injury-Related Death: Death as a result of an injury that was unplanned, and unintended to happen. Includes: Burn/Fire, Drowning, Motor Vehicle Collision, Other-Injury, and Suffocation Deaths.*
>
> *Undetermined Injury-Related Death: An Injury-Related Death in which the cause of death may not be medically identifiable, or an Injury-Related Death in which there was insufficient evidence to determine whether the fatal injuries were inflicted or accidental. An injury for which the intentionality is unclear. Example: a case in which the coroner could not distinguish between an accident and suicide.*

Intentional Injury-Related Death: *(See "Injury-Related Death")*

International Classification of Diseases: A guide for the classification of morbidity and mortality information for statistical purposes published by the World Health Organization.

Late Neonatal Death: Late neonatal death (LNND) is defined as the death of an infant, between seven and 27 days after birth.[10]

Late Prenatal Care: *(See "Prenatal Care")*

[10] American Academy of Pediatrics https://publications.aap.org/pediatrics/article/137/5/e20160551/52158/Standard-Terminology-for-Fetal-Infant-and?autologincheck=redirected

Law Enforcement Involvement: Information on parent/caregiver and/or decedents' criminal records including domestic violence, gang history, as well as non-violent and violent crime, typically gathered from local law enforcement and/or probation. (*Formerly "Criminal History"*)

> *Domestic Violence: Also called domestic abuse, domestic violence is violence against a spouse, cohabitant, fiancée, or other person with whom the abuser has a dating relationship, or someone formerly in any of these relationships. Types of violence include sexual assault; placing a person in reasonable apprehension of being seriously injured (threats); intentionally or recklessly causing or attempting physical injury.*
>
> *Gang History: Indicates personal affiliation with a gang, by the decedent and/or the decedent's parent(s).*
>
> *Non-Violent Crime: A crime in which the offender does not use physical force or cause physical pain. Examples include, but are not limited to, drug sales/trafficking, theft, Driving Under the Influence (DUI), and prostitution. It does not include minor traffic arrests/tickets.*
>
> *Violent Crime: A crime in which the offender uses or threatens to use violent force upon the victim. This entails both crimes in which the violent act is the objective, such as a murder, as well as crimes which violence is the means to an end. Violent crimes include crimes committed with and without weapons. Violent crime includes, but is not limited to, robbery, assault, and homicide.*

Legal Intervention Death: Death due to injuries inflicted by the police or other law-enforcing agents in the course of their duty.

Live Birth: The complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy) which, after such separation, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. (California Code of Regulations, Section 915)

Low Birthweight: Birthweight below 2500 grams. (Centers for Disease Control and Prevention)

Mandated Reporter: A person, who (1) in their professional capacity or within the scope of their employment, has a special relationship or contact with children and (2) is legally required to report known or has "Reasonable Suspicion" (see definition) of child abuse and neglect, obtained in the scope of their employment. (California Penal Code, Sections 11164 - 11174.3)

Manner of Death: An additional finding listed on the death certificate, which includes the following five categories: Accident; Homicide; Natural; Suicide; and Could not be determined.[11]

> *Classification of Death: Sacramento County CDRT uses "Classification of Death" to indicate the type of child death, using the coroner's "Manner of Death" to inform the ruling. The Sacramento County CDRT Catagories of Death include: Accident, Homicide, Natural, Suicide, and Undetermined.*

[11] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

Mechanism of Death: The specific medical, biochemical, and/or physiological process or failure that causes death. Example: In a stabbing, blood loss can lead to shock. Shock would be the mechanism of death even though it was precipitated by the stab wound.[12]

Medically Fragile: A term used to describe children with medical conditions that require professional observation, assessment, and maintenance; with chronic conditions who require assistance with activities of daily living and need a caregiver present; with regular need for medications and/or regular vital sign readings that are unable to do so without professional assistance; and/or who requires the level of care beyond the basic first aid. [13]

Medical/Mental Health Involvement: Medical risks may include a history of mental illness for the parent or decedent, inadequate prenatal or other medical care, concealment of pregnancy, or refusal of vaccinations. This information is typically provided by the hospital, coroner, or county mental health agency. (*Formerly "Medical Risk History")*

Methamphetamine: A synthetic drug, which affects the central nervous system. Street methamphetamine is sometimes called "speed," "meth," "crank," "chalk," and "zip".

Motor Vehicle Collision (MVC): A motor vehicle collision (traffic collision, car accident, or car crash) is when a road vehicle collides with another vehicle, pedestrian, animal, road debris, or other geographical or architectural obstacle.[14]

Natural Death: A manner/classification of death that includes any natural disease.[15] Sacramento County CDRT Natural Deaths include Cancer, Congenital Anomalies, Infection/ Respiratory, Perinatal Conditions, SIDS, SUIDS, Other-Natural, and Undetermined-Natural Deaths.

> *Other Natural Death: Deaths due to a natural cause not previously mentioned.*

Neglect: The negligent treatment or maltreatment of a child by a caregiver, indicating harm or threatened harm to the child's health or welfare. The term includes both acts and omissions on the part of the caregiver. (California Penal Code, Section 11165.2)

> *General Neglect: The negligent failure of a child's caregiver to provide adequate food, clothing, shelter, medical care, or supervision where no physical injury to the child has occurred but the child is at substantial risk of suffering serious physical harm or illness. "General neglect" does not include a parent's economic disadvantage. (California Penal Code, Section 11165.2.b)*
>
> *Severe Neglect: The negligent failure of a caregiver to protect the child from severe malnutrition or medically diagnosed nonorganic failure to thrive. Includes a caregiver willfully causing or permitting the health of the child to be endangered, including the intentional failure to provide adequate food, clothing, shelter, or medical care. (California Penal Code, Section 11165.2.a)*

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[12] A Dictionary of Forensic Science by Suzanne Bell (https://www.oxfordreference.com/display/10.1093/acref/9780199594009.001.0001/acref-9780199594009;jsessionid=346E43BE20F92F4FAE806C288FDF63F9)

[13] https://sacoes.saccounty.gov/Documents/Med%20Frag%20Annex%20Final.pdf

[14] California Commission on Peace Officer Standards and Training

[15] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

Neglect Death: *(See "Child Maltreatment Death")*

Neglect-Related Death: *(See "Child Maltreatment Death")*

Neonatal Death: A death occurring during the first 27 days of life. This will include all cases of early and late neonatal death.[16]

Non-violent Criminal History: *(See "Law Enforcement Involvement")*

Numerator: The number of specific cases as identified by the variable from a given population, or the number of events in a specified time period; or the number above the line in a common fraction showing how many of the parts indicated by the denominator are taken.[17]

Pathology: The study of disease, its essential nature, cause, and development; and the structural and functional changes it produces.

Perinatal Conditions: Deaths due to Perinatal Conditions include, but are not limited to prematurity, low birthweight, placental abruption, and congenital infections.

Perinatal Conditions Death (CDRT)*: The Sacramento County Child Death Review Team (CDRT) classifies deaths at any age as being due to Perinatal Conditions, if death is caused by pregnancy/birth complications that occur in the second trimester (13-28 weeks of gestation) through one month after birth. Deaths due to Perinatal Conditions include, but are not limited to: prematurity, low birth weight, placental abruption and congenital infections.

> **Sacramento County CDRT focuses on the proximal cause of death as being due to Perinatal Conditions, while the Sacramento County Department of Public Health codes Perinatal Conditions Deaths as deaths occurring within a specific time period. The different definitions mean that the number of deaths due to Perinatal Conditions reported by CDRT is likely to be different from the number of Perinatal Conditions Deaths reported by the Department of Public Health.*

Perinatal Period: The period shortly before through shortly after birth, variously defined as beginning with the completion of 20 to 28 weeks of gestation and ending 7 to 28 days after birth. Sacramento County Division of Public Health defines the perinatal period as; from 22 weeks of gestation to four weeks after birth.

Personal Information: Information, in any medium (e.g., paper, electronic, oral) that: directly or indirectly collectively identities or uniquely describes an individual; could be used in combination with other information to indirectly identify or uniquely describe an individual, or link an individual to the other information; meets the definition of 'personal information' set forth in California Civil Code section 1793.3, subdivision (a); is one of the data elements set forth in California Civil Code section 1798.29, subdivision (g)(1) or (g)(2); meets the definition of 'medical information' set forth in either California Civil Code section 1798.29, subdivision (h)(2) or California Civil Code section 56.05, subdivision (j); meets the definition of

[16] American Academy of Pediatrics https://publications.aap.org/pediatrics/article/137/5/e20160551/52158/Standard-Terminology-for-Fetal-Infant-and?autologincheck=redirected

[17] Sacramento County Department of Health and Human Services, Division of Public Health

'health insurance information' set forth in California Civil Code section 1798.29, subdivision (h)(3); or is protected from disclosure under applicable state or federal law.[18]

Physical Abuse: *(See "Abuse")*

Poisoning/Overdose: Death caused by a substance with an inherent property that tends to destroy life or impair health with the possibility of death.

Post Neonatal Death: A death occurring between age 28 days up to, but not including, age one year.[19]

Postmortem: An examination of the body after death, usually with such dissection as will expose the vital organs for determining the cause of death or the character and extent of changes produced by disease; an autopsy.

Prematurity: Birth prior to 37 weeks of gestation.

Prenatal: The period beginning with conception and ending at birth.

Prenatal Care: Healthcare received while you are pregnant.

> *Early Prenatal Care: Prenatal care that begins within the first trimester (1-12 weeks of gestation).*
>
> *Inadequate Prenatal Care: Received less than 50% of expected visits, using the Kotelchuck Index, also called the Adequacy of Prenatal Care Utilization (APNCU) Index. The Kotelchuck Index uses two crucial elements to determine adequacy: 1) when prenatal care began, and 2) the number of prenatal visits completed.*
>
> *Late Prenatal Care: Prenatal care that begins at 17 weeks of gestation or later.*

Prenatal Substance Abuse Death: *(See "Child Maltreatment Death")*

Prenatal Substance Abuse-Related Death: *(See "Child Maltreatment Death")*

Preterm Labor: Onset of labor before 37 weeks of gestation.

Prevention Advisory Committee (PAC): An advisory committee to the CDRT consisting of public and private agency service providers that meet to review aggregate data and draft key findings and recommendations for CDRT consideration, pertaining to the annual CDRT report.

Positive Toxicology: For the purpose of this report, positive toxicology refers to a child with one or more ilicit drugs and/or alcohol (ethenol) in their system.

Public Health Nursing (PHN): A part of the Saramento County Department of Health Services. PHN provides a broad array of services to families with small children, from working with pregnant women to helping families with high-risk infants, to providing grief counseling.

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[18] Sacramento County Department of Health and Human Services, Division of Public Health

[19] American Academy of Pediatrics https://publications.aap.org/pediatrics/article/137/5/e20160551/52158/Standard-Terminology-for-Fetal-Infant-and?autologincheck=redirected

Questionable Abuse/Neglect/Prenatal Substance Abuse Death: *(See "Child Maltreatment Death")*

Respiratory Death: *(See "Infection/Respiratory Death")*

Reasonable Suspicion: When it is objectively reasonable for a person to entertain such a suspicion, when based upon the facts that could cause a reasonable person in a like position, drawing when appropriate on his or her training and experience, to suspect child abuse. (Penal Code, Section11166(a)(1))

Risk Factor: The broad term used to describe a variety of social, economic, and/or demographic circumstances or other elements that may be associated with a higher risk of negative health outcomes for children.

Sacramento County Child Death Review Team (CDRT): *(See " Child Death Review Team")*

Sacramento County Fetal Infant Mortality Review (FIMR) Case Review Team (CRT): *(See " Fetal and Infant Mortality Review")*

Safe Sleep Baby Education Campaign Model: The Safe Sleep Baby Education Campaign Model defines the dosage as parent(s) having received one-hour of safe sleep baby education.

Security Incident: An attempted breach; or the attempted or successful unauthorized access or disclosure, modification, or destruction of personal/confidential information, in violation of any state or federal law or in a manner not permitted under the contract between the Child Abuse Prevention Council of Sacramento (on behalf of the Sacramento County Child Death Review Team) and the County of Sacramento; or the attempted or successful modification or destruction of, or interference with, Applicant's system operations in an information technology system that negatively impacts the confidentiality, availability or integrity of personal/confidential information.[20]

Severe Neglect: *(See "Neglect")*

Sexual Abuse: *(See "Abuse")*

Sudden Infant Death Syndrome (SIDS): The sudden death of an infant under one year of age, which remains unexplained following an investigation of the case, including the performance of a complete autopsy and review of the clinical history. A diagnosis of exclusion and unknown etiology. Section 27491.41 of the California Government Code defines SIDS as "the sudden death of any infant that is unexpected by the history of the infant and where a thorough postmortem examination fails to demonstrate an adequate cause of death."

Sudden Unexpected Infant Death Syndrome (SUIDS): Applies to the death of an infant less than one year of age, in which investigation, autopsy, medical history review, and appropriate laboratory testing fails to idenify a specific cause of death. SUIDS includes cases that meet the definition of Sudden Infant Death Syndrome (SIDS). If there are external or exogenous stressors or systems involvement that a medical examiner would like to incorporate on a death certificate, such as co-sleeping or bed sharing, they may be

[20] Sacramento County Department of Health and Human Services, Division of Public Health

added to the cause of death, such as in the following way: *Sudden unexplained (or unexpected) infant death while bed-sharing.*

Suicide Death: A manner/classification of death that includes action taken by someone to end their own life.[21]

Suffocation/Choking: A death caused by the prevention of access of air to the blood through the lungs or analogous organs; to impede respiration.

Syndrome: A set of signs or symptoms that occur together often enough to constitute a specific condition or entity.

Third-Party Homicide: A homicide where the perpetrator was not the primary caregiver. Commonly referred to as "third-degree murder," Third-Party Homicide is a killing that resulted from indifference or negligence. Usually there must be a legal duty (parent - child) and can also include crimes like driving drunk and causing a fatal accident.

Toxicology Screening: For the purpose of this report, toxicology screening refers to blood, urine, and/or umbilical cord analysis used to detect drug and/or alcohol exposure.

Undetermined Death (Classification): A manner/classification of death that includes deaths where the cause of death and/or the circumstances of the death cannot be fully determined, in which case the classification remains undetermined.[22] Example: If the coroner was unable to determine if the death occurred naturally or if death was the result of an accidental or intentional injury.

Undetermined Injury-Related Death: An Injury-Related Death in which the cause of death may not be medically identifiable, or an Injury-Related Death in which there was insufficient evidence to determine whether the fatal injuries were inflicted or accidental. An injury for which the intentionality is unclear. Example: a case in which the coroner could not distinguish between an accident and suicide.

Undetermined Natural Death: Natural death in which the cause of death may not be medically identifiable. These deaths occur when an infant, under the age of one, dies during sleep and the death cannot be classified using another category. These deaths occur in a variety of circumstances, such as: a mother laid her child to sleep with risk factors identified by the American Academy of Pediatrics, and nothing else suspicious at the scene.

Unintentional Injury-Related Death: *(See "Injury-Related Death")*

Use: The sharing, employment, application, utilization, examination, or analysis of information.[23]

Violent Criminal History: *(See "Law Enforcement Involvement")*

Youth Death Review Subcommittee (YDRS): A subcommittee of the Sacramento County Child Death Review Team that conducts in-depth analysis of all Injury-Related Deaths of youth ages 10 through 17 years who

[21] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

[22] Sacramento County Coroner https://coroner.saccounty.gov/Pages/Statistics.aspx

[23] Sacramento County Department of Health and Human Services, Division of Public Health

were injured and died in Sacramento County, regardless of their county of residence, in order to understand the causes of youth deaths, identify trends and risk factors, and develop recommendations to reduce preventable youth deaths.

Appendix C: Sacramento County Committee Members

CHILD DEATH REVIEW TEAM

California Highway Patrol
Jeff Carlisle, Sergeant

Citrus Heights Police Department
Seth Dexter, Detective

Dignity Health
Mercy Medical Group
Jacqueline Johnsen, M.D.
Carolyn Robin Lanam, M.D. M.B.A.

Elk Grove Police Department
Derrick Metzger, Sergeant

Kaiser Permanente
Melissa Arca, M.D.
Michele Evans, M.D., CDRT
Rebekah Pearson

Law Enforcement Chaplaincy Sacramento
Norm Powers, Chaplin

Sacramento City Fire Department
Brian Pedro, Assistant Chief
Derek Parker, Chief

Sacramento County Coroner's Office
Jason Tovar, M.D., CDRT Chair

Sacramento County Department of Child, Family and Adult Services
Child Protective Services
Marlene Khang
Stephanie Sellers, M.S.
Jalu Xiong

Sacramento County Department of Health Services
California Children's Services
Hannah Awai, M.D., CDRT Vice Chair
Lyndsay Weyers, M.D.

Disease Control and Epidemiology
Sheila Villegas
Jamie White, M.P.H.

Maternal Child Adolescent Health
Jackie Washington-Ansley, P.H.N.

Sacramento County District Attorney's Office
Chris Ore, J.D.

Sacramento County Metropolitan Fire Department
Barbara Law, Assistant Chief
Brett Randle, Captain
Clayton Elledge, Captain
Joe Schmitt, Captain
Patrick Ferrill, Firefighter/Paramedic

Sacramento County Probation Department
Derek Casebeer,

Sacramento County Sheriff's Department
James Wilcox, Sergeant
John Sydow, Sergeant

Sacramento Police Department
Amanda Worm, Detective
Michael Lange, Sergeant

Sutter Health
Sutter Medical Foundation
Angela Vickers M.D.

University of California, Davis Medical Center
Julia Magana, M.D.
Jihey Yuk, M.D.

FETAL INFANT MORTALITY REVIEW

Dignity Health
Mercy Medical Group
Andrea Solbrig, MSN, CNS, RNC-OB, C-EFM, C-IAP
Kerri Burroughs, MSN, RN

Kaiser Permanente
Matthew Garbedian, M.D.

Peach Tree Health
Dee Strickland

River City Medical Group
Effie Ruggles, MPH

Sacramento County Coroner's Office
Jason Tovar, M.D.

Sacramento County Department of Child, Family and Adult Services
Child Protective Services
Marlene Khang
Stephanie Sellers, FIMR Chair
Jalu Xiong

Sacramento County Department of Health Services
Epidemiology and Disease Control
Jamie White, MPH

Maternal Child Adolescent Health
Jackie Washington-Ansley, PHN
Leesa Hooks, RN, BSN, PHN

Sacramento County Probation Department
Derek Casebeer

Sutter Health
Sutter Medical Foundation
Andrea Lamy, R.N.
Kristi Svee-Stranberg, RN, BAN, MHA, FIMR Vice Chair

University of California, Davis Medical Center
Julia Magana, M.D.
Jihey Yuk, M.D.

WellSpace Health
Melissa Hill

YOUTH DEATH REVIEW SUBCOMMITTEE

California Highway Patrol
Jeff Carlisle, Sergeant

Citrus Heights Police Department
Seth Dexter, Detective

Dignity Health
Mercy Medical Group
Jacqueline Johnsen, M.D.
Carolyn Robin Lanam, M.D. M.B.A.

Folsom Cordova Unified School District
Kerri Kaye

Galt Joint Union High School District
Kim Little

Kaiser Permanente
Michele Evans, M.D.
Rebekah Pearson

Law Enforcement Chaplaincy Sacramento
Norm Powers

Natomas Unified School District
Michele Hamilton, PhD

Options for Youth Public Charter School
Kellie Wuchter

Robla Unified School District
Laurie Butler

Sacramento City Fire Department
Brian Pedro
Derek Parker

Sacramento City Unified School District
Victoria Flores
Aliya Holmes

Sacramento County Behavioral Health
Sheri Green

Sacramento County Coroner's Office
Jason Tovar, M.D.

Sacramento County Department of Child, Family and Adult Services
Child Protective Services
Marlene Khang
Stephanie Sellers
Jalu Xiong

Sacramento County Department of Health Services
California Children's Services
Hannah Awai, M.D., YDRS Chair
Lyndsay Weyers, M.D.

Sacramento County District Attorney's Office
Chris Ore, JD

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Barbara Law, Assistant Chief
Brett Randle, Captain
Clayton Elledge, Captain
Joe Schmitt, Captain
Patrick Ferrill, Firefighter/Paramedic

Sacramento County Probation Department
Derek Casebeer

Sacramento County Sheriff's Department
James Wilcox, Sergeant
John Sydow, Sergeant

Sacramento Police Department
Amanda Worm, Detective
Michael Lange, Sergeant

San Juan Unified School District
Barry Turner
Kara McGuire
Shelley Snyder

Sutter Health
Sutter Medical Foundation
Angela Vickers, M.D.

Twin Rivers Unified School District
Ana Broadbent

University of California, Davis Medical Center
Julia Magana, M.D.
Jihey Yuk, M.D.

PREVENTION ADVISORY COMMITTEE

California State University, Sacramento
Carley Scarton, Ph.D., NCC

Child Abuse Prevention Center
Sheila Boxley, CEO, Co-Chair
Janay Eustace, CEO, Co-Chair

First 5 Sacramento
Linda Fong Somera
Julie Gallelo
Carmen Garcia-Gomez

Safe Kids Greater Sacramento
Jennifer Rubin

Sacramento County Behavioral Health
Substance Use Prevention and Treatment
Lori Miller
Pamela Hawkins

Sacramento County Coroner's Office
Jason Tovar, M.D., Co-Chair
Rosa Vega

Sacramento County Department of Child, Family and Adult Services
Child Protective Service
Melissa Llyod
Stephanie Sellers

Sacramento County Department of Human Assistance
Ethan Dye
Eduardo Ameneyro

Sacramento County Department of Public Health
Keirsha Davis

Sierra Health Foundation
Jedida Gomes
Shelley (Dyer) Jones

WEAVE
Beth Hassett

Appendix D: The Sacramento County Child Death Review Team

HISTORY & BACKGROUND

In November of 1988, a Sacramento County Board of Supervisors resolution directed the Child Abuse Prevention Council of Sacramento (CAPC) to develop and coordinate an interagency team that would investigate child abuse and neglect deaths. This action reflected a growing awareness that child abuse and neglect deaths are often difficult to identify and prosecute without a coordinated multi-agency investigation. Specific requests preceded the Board of Supervisors' resolution to CAPC from the offices of the District Attorney, the County Sheriff and the Coroner to establish such a team.

The ability to establish confidential Child Death Review Teams was provided in 1988 by revisions to the State Penal Code (Section 11166.7) and the State Welfare and Institution Codes (Sections 830 and 10850.1). These statutes afford the confidentiality necessary to review cases without bias from outside pressures and influences. Under the leadership of Dr. Michael Reinhart, then Medical Director of the Child Protection Center at the University of California Davis Medical Center, Formation Committee members worked to establish the precedents for the sharing of confidential information and the written justifications needed to appoint and staff a Sacramento County Child Death Review Team. Dr. Marcia C. Britton, then Director of the Child Health and Disability Prevention Program of Sacramento County, obtained all County approvals and authorizations necessary to implement the team. After a year of planning, the Sacramento County Child Death Review Team began functioning in November of 1989.

In designing Sacramento County's local team, the Formation Committee had the foresight to broadly define the team's mission, ensuring that all child deaths would be reviewed and investigated. This model differed from that used by most other teams in existence at the time. Typically, other large county teams focused exclusively on suspicious Child Abuse and Neglect Homicides or reviewed the deaths of a limited number of children in a narrow range of ages. The Sacramento team remains unique in that it is one of the only large-county models that reviews the deaths of all children from birth through 17 years of age.

Now, the Sacramento County CDRT serves as a model to replicate for other California counties and states. The Sacramento County CDRT has been included in national studies highlighting CDRT best practices. In 2009, the United States Government Accountability Office (GAO) conducted an analysis of national child abuse and neglect data, including the challenges states face in collecting and reporting information on child fatalities from maltreatment to the Department of Child, Family and Adult Services. As part of this process, the GAO conducted a visit to Sacramento County's CDRT and other state's child fatality review teams. In 2011, the Children's Bureau Office on Child Abuse and Neglect funded a study on Child Death

Review teams to examine recommendations, their implementation, and the impact on reducing child deaths. Sacramento County was visited to gain an understanding of the influence and impact of our CDRT.

MISSION STATEMENT

The mission of the Sacramento County Child Death Review Team is to:

- Ensure that all child abuse related deaths are identified;
- Enhance the investigations of all child deaths through multi-agency review;
- Develop a statistical description of all child deaths as an overall indicator of the status of children; and
- Develop recommendations for preventing and responding to child deaths based on the reviews and statistical information.

MEMBERSHIP

The Sacramento County Child Death Review Team had consistent representation from the following agencies:

California Highway Patrol

Child Abuse Prevention Council of Sacramento

Kaiser Permanente

Mercy San Juan Medical Center/Dignity Health

Sacramento County Metropolitan Fire Department

Sacramento City Fire Department

Sacramento City Police Department

Sacramento County Coroner's Office

Sacramento County Department of Child, Family and Adult Services

Child Protective Services

Sacramento County Department of Health Services

California Children's Services
Disease Control and Epidemiology
Public Health Nursing

Sacramento County District Attorney's Office

Sacramento County Probation Department

Sacramento County Sheriff's Department

Sutter Health – Sutter Medical Foundation

University of California Davis Medical Center

CDRT MEMORANDUM OF AGREEMENT

Purpose

The purpose of the Multidisciplinary Child Death Review Team is to:

1. Ensure that all child abuse-related deaths are identified;
2. Enhance the investigations of all child deaths through multi-agency review;
1. Develop a statistical description of all child deaths as an overall indicator of the status of children; and
2. Develop recommendations for preventing and responding to child deaths based on said reviews and statistical information.

Membership

The team will be comprised of representatives from the following agencies:

I. Sacramento County
    a. Sacramento County Coroner
        i. Investigations
        ii. Forensic Pathology
    b. Sacramento County Sheriff's Department
    c. Sacramento City Police Department
    d. Sacramento City Fire Department
    e. Sacramento County Probation Department
    f. Law Enforcement Chaplaincy of Sacramento
    g. California Highway Patrol
II. Department of Child, Family and Adult Services
    a. Child Protective Services
III. Department of Health Services
    a. Epidemiology and Disease Control/ Maternal, Child and Adolescent Health
    b. California Children's Services
    c. Public Health Nursing
IV. District Attorney's Office
V. Local Hospitals

a. Kaiser Permanente
b. Mercy Sacramento/San Juan Dignity Health
c. Sutter Health – Sutter Medical Foundation
d. University of California, Davis Medical Center
    i. CAARE Unit
    ii. Pathology

VI. Other Community Service Agencies
    a. Child Abuse Prevention Council of Sacramento

Said agencies will provide routine representation on an on-going basis. No agency shall withdraw from the Team or suspend their participation without the expressed approval of the appropriate regulatory body. Individual representatives will be expected to consistently attend all meetings for a period of no less than one year.

Each participating agency in the Child Death Review Team shall appoint a lead representative (A) and a single alternate (B) to participate in the death investigation review meetings. The lead person (A) shall provide case-specific information on child deaths under review. The agency shall designate a single back-up representative (B) to provide case-specific information in the event that person (A) cannot be present. No additional staff person from the agency may replace person A or B. If neither person A nor person B can attend a meeting, the agency will not have a representative at that meeting. The Chair may approve a representative other than A or B to provide case-specific information for an upcoming meeting. The request shall be made by the agency in advance to the Chair, if there are extenuating circumstances requiring a person other than A or B to present information from that agency.

New Team representatives will receive an orientation organized by the Child Abuse Prevention Council in conjunction with other experienced Team representatives. This orientation will include information regarding the Team purpose, established protocols and procedures, the role of each Team representative and their agency, current membership, meeting schedule, and data collection requirements.

In addition to the standing representatives, other agencies and individuals may be invited to attend meetings when, after initial review, the Team feels that they may have direct information about a case or that they may have particular subject expertise to contribute to the overall review.

All parties who participate in the child death review process will be required to sign and adhere to a confidentiality agreement.

Statutory Authorization

In 1987, Sections 830 and 10850.1 were added to the State Welfare and Institutions Code and provided specific authorization allowing multidisciplinary child abuse teams to receive information related to incidents of child abuse and information that could be relevant to the prevention, identification or treatment of child abuse. In 1988, Section 18961 of the Welfare and Institutions code was amended to allow qualified persons not serving as standing members of such teams to be deemed a part of the team as necessary, and to receive and disclose information relevant to cases as needed.

Also in 1988, Sections 11166.7 and 11166.8 of the State Penal Code authorized the Attorney General and the California Consortium of Child Abuse Providers to develop the protocols necessary for the development and implementation of interagency child death teams for review of suspicious child deaths. Amendments to this legislation in 1992 required that each county establish an interagency child death team and added Section 11166.9, which established the California Child Advisory Board to coordinate and integrate state and local efforts to address fatal abuse and neglect.

In 1999, SB 252 recast several of the provisions of Section 11166.7, including the requirement that local CDRT's participate in the statewide child abuse and neglect monitoring system by meeting minimum standard protocols and submitting information on child abuse and neglect deaths. It also provided training and technical assistance to CDRT's and professionals involved in case reviews. In 2004, Section 11166.7 was amended and renumbered as Section 11174.32.

Target Population

The target population for case review is all children up through 17 years of age that die in Sacramento County. The Team will consider cases for children who are not residents of the County if they die within County limits. The Team will also consider cases for children who die in another county but are residents of Sacramento County.

Meetings

Regular meetings of the Team will be held monthly on a set date to be determined annually by the Team representatives. The meetings will occur approximately mid-month and will include all cases from the previous month as well as any cases held over for further review or analysis.

Ground Rules

Members of the CDRT agree to:

- Practice timely and regular attendance.
- Share all relevant information.
- Stay focused and keep all comments on topic.
- Listen actively – respect others when they are talking.
- Be willing to explore others' basis for conclusions if you do not agree with them. However, question members in a respectful manner and refrain from personal attacks.
- Be prepared for case discussion.
- Discuss all cases objectively with respect for the deceased, their families, and all agencies involved.
- Respect all confidentiality requests the group has agreed to honor.

Officers

The officers of the CDRT shall be a Chair and a Vice Chair. Officers will be nominated by CDRT members and approved by consensus of the CDRT.

The duties of the Chair shall be to:

1. Lead the discussion, ensuring all critical case information is shared.
2. Facilitate the meeting, keeping the group in compliance with the established ground rules.
3. Present the annual report to the Board of Supervisors with the President/CEO of the Child Abuse Prevention Council, or appoint an alternate presenter.
4. Represent the CDRT at certain functions and events.
5. Approve visitors and emergency alternates on a case-by-case basis.

The duties of the Vice Chair shall be to:

1. Serve as co-facilitator, and reinforce the ground rules as necessary.
2. Provide support to the Chair as necessary.

Nominations will be made by team members at the meeting preceding the ballot. The ballot will be private. The Chair will serve a three-year term. At the conclusion of the three-year term, a person from another discipline shall be elected Chair. A person may serve more than one three-year term but not consecutively. A non-consecutive term will help ensure that the responsibilities of the Chair are rotated among the team's representative disciplines. A Vice-Chair will be appointed at the same time as the Chair. This individual will be eligible, but will not be assured the role of Chair at the end of the three-year term.

Procedures

The representative(s) from the Sacramento County Department of Health Services will acquire death certificates from the Vital Statistics Branch for all children under 18 who have died in the County during the preceding month. These will be collected by the Child Abuse Prevention Council within the first week of the month. Death certificates for children who are Sacramento County residents but who die in other counties will be obtained by the Child Abuse Prevention Council from the child death review teams functioning in the counties where such deaths occur.

The Child Abuse Prevention Council will label the death certificates with the appropriate agency jurisdiction, whether it is within the county or city limits based upon where in the county the fatal incident has occurred. The certificates will then be copied and mailed, along with a copy of the agency-specific data collection forms, to each Team representative in a sealed envelope marked "Confidential" no later than two weeks prior to the next Team meeting. Also included in this mailing will be the agenda for the coming meeting, minutes reflecting general Team process, information for the previous meeting, and any educational or informational items pertinent to the Team.

Each Team representative is then responsible for reviewing his/her internal agency records to determine what information is available on each child and/or family. Relevant information is documented on the

data collection forms for those cases where agency information is available. The forms will be completed and brought by the representative to the next meeting. If the standing Lead representative is not available to attend a meeting, the designated Alternate will bring the data forms to the meeting. In the event that both the Lead and Alternate representatives are not available, the data forms will be provided at the next meeting attended by either representative. In addition to data forms, a representative may elect to bring their agency files to the next meeting for reference, but agency files and records are not to be reproduced for central files or distributed to other representatives.

The Team may openly discuss all relevant case data during meetings. No confidential and/or case specific information will be recorded in the minutes. Follow-up cases will be recorded on future agendas by name, date of death, case history, and the CDRT agency responsible for follow-up. Team representatives will destroy all agendas, death certificates and other confidential materials related to case reviews following each meeting. The Child Abuse Prevention Council will complete a Case Summary form for each case reviewed. The Case Summary form will include case information agreed upon by the CDRT. No additional case specific information will be recorded. Case Summary forms will be kept in a locked file by the Child Abuse Prevention Council. Case Summary information will be entered into a secure database from which aggregate data can be generated.

In the event that a case has yet to progress sufficiently to provide a conclusion at any given meeting, it will be placed on successive agendas until resolved. Meeting agendas will reflect the order in which cases are to be reviewed, with the review of new cases preceding the review of follow-up cases. At any time, a Team representative may request that a particular case be given priority in the order of the reviews. Team representatives may bring up additional cases that have occurred but are not on the agenda and may request that a case be reconsidered at any time.

Child Abuse Prevention Council Responsibilities

As sponsor of the Sacramento County Child Death Review Team, the Child Abuse Prevention Council of Sacramento, Inc. (CAPC) is responsible for:

1. The identification and maintenance of resources and staff as needed for the continued implementation of the CDRT, including but not limited to:
    a. Coordination and staffing for all CDRT meetings
    b. Administrative and technical support necessary for multi-agency death review: timely collection and distribution of death certificates and agency-specific data collection forms; distribution of the agenda, prior meeting minutes reflecting general Team process information, and any educational or informational items pertinent to the Team
    c. Collection and maintenance of agency-specific data collection forms
    d. Management of all confidential CDRT data and case files
2. Participation in and implementation of the Fatal Child Abuse and Neglect Surveillance (FCANS) Program
3. Provision of technical and administrative support necessary for the development and distribution of the CDRT Annual Report

Evaluation

An annual report will be published each year and presented to the Sacramento County Board of Supervisors. The report will serve as one indicator of the status of children in Sacramento County and will be one base of information for a response to identified problems. The report will include data describing the causes of death to provide the information necessary for the development of a full range of prevention efforts.

Data described in the annual report will be based upon those elements collected in the Team's data collection forms. In addition to demographics, the report will include available socioeconomic data.

The annual report will also include recommendations made by the Team based on the data collected. In keeping with the goals of the Team, there may be additional reports or systems recommendations that emerge because of case reviews and data analysis. The Team reserves the option to issue separate reports and policy recommendations in addition to the annual report.

Indemnification & Insurance

Each party shall defend, indemnify and hold harmless the other, its officers, agents, employees and volunteers from and against all demands, claims, actions, liabilities, losses, damages, and costs, without limitation including payment of reasonable attorneys' fees, expert witness or consultant fees and expenses related to the response to, settlement of, or defense of any claims or liability arising out of, or in any way connected with the respective responsibilities and duties hereby undertaken, except that each party shall bear the proportionate cost of any damage attributable to the fault of that party, its officers, agents, employees and volunteers. It is the intention of the parties that, where fault is determined to have been contributory, principles of comparative fault will be followed.

Each party, at its sole cost and expense, shall carry insurance -or self-insure - its activities about this agreement, and obtain, keep in force and maintain, insurance or equivalent programs of self-insurance, for general liability, professional liability, workers' compensation, and business automobile liability adequate to cover its potential liabilities hereunder.

SACRAMENTO COUNTY CDRT CONFIDENTIALITY AGREEMENT

As a member of the Sacramento County Child Death Review Team (CDRT), I understand all cases discussed, information received, and all documents reviewed pertaining to cases presented to the CDRT, are strictly confidential. As an individual and/or a representative of my agency on the CDRT, I further understand and agree to abide by the current Memorandum of Agreement establishing and maintaining the CDRT.

I agree that I will not discuss, disseminate in any manner, nor otherwise cause dissemination of such information, to any non-member unless otherwise provided by law. I further understand, and agree, that my duty to preserve and protect the confidentiality of all information received as a team member, is a

continuing and permanent duty, and is not contingent upon my status as a team member, and is not terminated upon conclusion of my membership.

NAME: _____

SIGNATURE: _____

AGENCY/PROFESSIONAL DISCIPLINE REPRESENTED: _____

DATE: _____

Appendix E: Sacramento County Fetal Infant Mortality Review

FIMR MEMORANDUM OF AGREEMENT

Purpose

The purpose of the Multidisciplinary Fetal-Infant Mortality Review Case Review Team is to:

1. Ensure that fetal, neonatal and post neonatal fatalities are identified;
2. Examine contributing factors for at least 25% of all fetal, neonatal and post neonatal deaths in a calendar year through multi-agency review; and
3. Develop recommendations for the prevention and response to aforementioned deaths based on said reviews and statistical information.

Membership

The CRT will be comprised of representatives from the following agencies:

I. Sacramento County
   a. Sacramento County Coroner
      i. Investigations
      ii. Forensic Pathology
   b. Sacramento County Sheriff's Department
   c. Sacramento County Probation Department

II. Department of Child, Family and Adult Services
   a. Child Protective Services

III. Department of Health Services
   a. California Children's Services
   b. Comprehensive Perinatal Services Program
   c. Epidemiology and Disease Control
   d. Maternal and Child Adolescent Health

IV. Health Providers
   a. WellSpace Health
   b. Molina Healthcare
   c. River City Medical Group
   d. Peach Tree Health
   e. Hill Physicians
   f. Capitol ObGyn
   g. Camellia Women's Health
   h. EHS Medical Group

V. Local Hospitals
   a. Kaiser Permanente

b. Dignity Health
c. Sutter Health – Sutter Medical Foundation
d. University of California, Davis Medical Center

VI Other Community Service Agencies

a. Child Abuse Prevention Council of Sacramento

Said agencies will provide routine representation on an on-going basis. No agency shall withdraw from the CRT or suspend their participation without the expressed approval of the appropriate regulatory body. Individual representatives will be expected to consistently attend all meetings for a period of no less than one year.

Each participating agency in the FIMR CRT shall appoint a lead representative (A) and an alternate (B) to participate in the death investigation review meetings. The lead person (A) shall provide case specific information on fetal, neonatal or post neonatal deaths under review. The agency shall designate a back-up representative (B) to provide case specific information in the event that person (A) cannot be present. The Chair may approve a representative other than A or B to provide case specific information for an upcoming meeting. The request shall be made by the agency in advance to the Chair, if there are extenuating circumstances requiring a person other than A or B to present information from that agency.

New CRT representatives will receive an orientation organized by the Child Abuse Prevention Council in conjunction with other experienced CRT representatives. This orientation will include information regarding the CRT purpose, established protocols and procedures, the role of each CRT representative and their agency, current membership, meeting schedule, and data collection requirements.

In addition to the standing representatives, other agencies and individuals may be invited to attend meetings when, after initial review, the CRT feels that they may have direct information about a case or that they may have particular subject expertise to contribute to the overall review.

All parties who participate in the FIMR CRT process will be required to annually sign and adhere to a confidentially agreement. Confidentiality agreements to be maintained by the Child Abuse Prevention Council.

Statutory Authorization

California Health and Safety code sections 100325-100330 and 123650-123655 allow FIMR to obtain records and information for the purpose of conducting investigations of fetal and infant mortality, to identify causes of infant mortality and to study recommendations on the reduction of infant mortality.

Target Population

The target population for case review is at least 25% of all Sacramento County fetal deaths, all fetal deaths with one or more Black/African American parent, and all live born deaths born prior to 23-weeks of gestation. Cases are reviewed only among Sacramento County residents.

Meetings

Regular meetings of the CRT will be held quarterly on a set date to be determined annually by the CRT representatives. The meetings will occur approximately on the second Wednesday of every 3 months and will include a selection of new cases from the previous quarter as well as any cases held over for further review or analysis.

Ground Rules

Members of the FIMR CRT agree to:

1. Practice timely and regular attendance.
2. Share all relevant information.
3. Stay focused and keep all comments on topic.
4. Listen actively – respect others when they are talking.
5. Be willing to explore others' basis for conclusions if you do not agree with them. However, question members in a respectful manner and refrain from personal attacks.
6. Be prepared for case discussion.
7. Discuss all cases objectively with respect for deceased, their families, and all agencies involved.
8. Respect all confidentiality requests the group has agreed to honor.

Officers

The officers of the FIMR CRT shall be a Chair and a Vice Chair. Officers will be nominated by CRT members and approved by consensus of the CRT.

The duties of the Chair shall be to:

1. Lead the discussion, ensuring all critical case information is shared.
2. Facilitate the meeting, keeping the group in compliance with the established ground rules.
3. Attend the annual report to the Board of Supervisors.
4. Represent the FIMR CRT at certain functions and events.
5. Approve visitors and emergency alternates on a case-by-case basis.

The duties of the Vice Chair shall be to:

1. Serve as co-facilitator including reinforcing the ground rules as necessary.
2. Provide support to the Chair as necessary.

Nominations will be made by CRT members at the meeting preceding the ballot. The ballot will be private and one vote allotted per discipline/agency. Once elected, the Chair will serve a two-year term. At the conclusion of the two-year term, a person from another discipline shall be elected Chair. A person may serve more than one two-year term but not consecutively. A non-consecutive term will help ensure that the responsibilities of the Chair are rotated among the CRT's representative disciplines. A Vice-Chair will be appointed at the same time as the Chair. This individual will be eligible, but will not be assured the role of Chair at the end of the two-year term.

Procedures

The Administrative Services Officer from the Sacramento County Department of Health Services will acquire fetal and child death certificates from the Vital Statistics Branch for all fetal, neonatal, and post

neonatal deaths that occurred in the County during the preceding quarter. These will be collected by the Child Abuse Prevention Council on the tenth day of the month.

The Child Abuse Prevention Council will collect the death certificates and select cases for review. All Sacramento County resident fetal deaths and deaths of children who were born prior to 23-weeks of gestation will be included on the case selection list. A random number generator will be used to select 25% of cases for case review. Of the remaining cases, all decedents who received a birth and death certificate will be included on the case review list, as will all fetal deaths with at least one African American parent.

Child and Fetal Death Certificates will be emailed to CRT members in an encrypted PDF file no later than 2 weeks prior to the meeting. Also included in this email will be the agenda for the coming meeting, minutes reflecting the general CRT process, information from the previous meeting, and any educational or informational items pertinent to the CRT.

Each CRT representative is then responsible for reviewing his/her internal agency records to determine what information is available on each fetal death, infant, and/or family. Relevant information is documented on the data collection forms for those cases where agency information is available. The forms will be completed and brought by the representative to the next meeting. If the standing Lead representative is not available to attend a meeting, the designated Alternate will bring the data forms to the meeting. In the event that both the Lead and Alternate representatives are not available the data forms will be provided at the next meeting attended by either representative. In addition to data forms, a representative may elect to bring their agency files to the next meeting for reference, but agency files and records are not to be reproduced for central files or distributed to other representatives. The Child Abuse Prevention Council will provide a glossary of Obstetric and Perinatal terms to representatives without a medical background.

The CRT may openly discuss all relevant case data during meetings. This includes any psychological or other environmental factors that may have been involved in the deaths. No confidential and/or case specific information will be recorded in the minutes. Follow-up cases will be recorded on future agendas by name, date of death, and the FIMR agency responsible for follow-up. CRT representatives will destroy all agendas, death certificates and other confidential materials related to case reviews following each meeting. The Child Abuse Prevention Council will complete a Case Summary form for each case reviewed. The Case Summary form will include case information agreed upon by the CRT. No additional case specific information is recorded. Case Summary forms will be kept in a locked file by the Child Abuse Prevention Council. Case Summary information will be entered into a secure database form which aggregate data can be generated.

In the event that a case has yet to progress sufficiently to provide a conclusion at any given meeting, it will be placed on successive agendas until resolved. Meeting agendas will reflect the order in which cases are to be reviewed, with the review of new cases preceding the review of follow-up cases. At any time, a CRT representative may request that a particular case be given priority in the order of the reviews. CRT

representatives may bring up additional cases that have occurred but are not on the agenda and may request that a case be reconsidered at any time.

Child Abuse Prevention Council Responsibilities

As administrative support of the Sacramento County Fetal-Infant Mortality Review, the Child Abuse Prevention Council of Sacramento, is responsible for:

1. The identification and maintenance of resources and staff as needed for the continued implementation of the FIMR CRT including but not limited to:
    a. Coordination and staffing for all FIMR CRT meetings.
    b. Administrative and technical support necessary for multi-agency death review, including but not limited to, timely collection and distribution of death certificates and agency specific data collection forms, distribution of the agenda, prior meeting minutes reflecting general CRT process information, and any educational or informational items pertinent to the CRT.
    c. Collection and maintenance of CRT agency specific data collection forms.
    d. Management of all confidential FIMR CRT data and case files.
2. Working with Sacramento County Maternal Child and Adolescent Health Program staff on submission of FIMR Annual Report to the California Department of Human Services.
3. Assuring cooperation, coordination, and linkage between the FIMR Program and the Sacramento County Child Death Review Team and collaboration in the development of recommendations to respond to identified needs.
4. Provision of technical and administrative support necessary for the development and distribution of the FIMR section of the CDRT Annual Report.

Evaluation

A FIMR section, including findings and recommendations, will be included in annual and/or multi-year CDRT report(s) to be published each year and presented to the Sacramento County Board of Supervisors. The report will serve as one indicator of the status of children in Sacramento County and will be one base of information for a response to identified needs. The report(s) shall include data describing the causes of death to provide the information necessary for the development of a full range of prevention efforts.

Data described in the annual report will be based upon those elements collected in the CRT's data collection forms. In addition to demographics, the report will include available socioeconomic data.

The annual report will also include recommendations made by the CRT based on the data collected. In keeping with the goals of the CRT, there may be additional reports or systems recommendations, which emerge as a result of case reviews and data analysis. The CRT reserves the option to issue separate reports and policy recommendations in addition to the annual report.

Indemnification & Insurance

Each party shall defend, indemnify and hold harmless the other, its officers, agents, employees and volunteers from and against all demands, claims, actions, liabilities, losses, damages, and costs, without limitation including payment of reasonable attorneys' fees, expert witness or consultant fees and

expenses related to the response to, settlement of, or defense of any claims or liability arising out of, or in any way connected with the respective responsibilities and duties hereby undertaken, except that each party shall bear the proportionate cost of any damage attributable to the fault of that party, its officers, agents, employees and volunteers. It is the intention of the parties that, where fault is determined to have been contributory, principles of comparative fault will be followed.

Each party, at its sole cost and expense, shall carry insurance -or self-insure - its activities in connection with this Agreement, and obtain, keep in force and maintain, insurance or equivalent programs of self-insurance, for general liability, professional liability, worker's compensation, and business automobile liability adequate to cover its potential liabilities hereunder.

With a signature below, each party agrees to all terms listed above.

_____

Agency/Professional Discipline Represented

_____

Print Name

_____

Title

_____

Signature

_____

Date

Child Abuse Prevention Council of Sacramento
4700 Roseville Road
North Highlands, CA 95660

_____

Stephanie Biegler, Chief Program Officer

_____

Date

SACRAMENTO COUNTY FIMR CONFIDENTIALITY AGREEMENT

As a member of the Sacramento County Fetal Infant Mortality Review (FIMR), I understand all cases discussed, information received, and all documents reviewed pertaining to cases presented to the FIMR, are strictly confidential. As an individual and/or a representative of my agency on the FIMR, I further understand and agree to abide by the current Memorandum of Understanding establishing and maintaining the FIMR.

I agree that I will not discuss, disseminate in any manner, nor otherwise cause dissemination of such information, to any non-member unless otherwise provided by law. I further understand, and agree, that my duty to preserve and protect the confidentiality of all information received as a team member, is a continuing and permanent duty, and is not contingent upon my status as a team member, and is not terminated upon conclusion of my membership.

NAME:
_____

SIGNATURE: _____

AGENCY/PROFESSIONAL DISCIPLINE REPRESENTED: _____

DATE: _____

The production of this report was made possible through the Sacramento County Children's Trust Fund, administered by the Sacramento County Children's Coalition, and awarded to the Child Abuse Prevention Council of Sacramento.

Based upon the direction from the CDRT, FIMR, YDRS, and PAC, Jasmine Brosnan, Evaluation Program Manager, and Marissa Provost, Evaluation Project Specialist, were responsible for data analysis, demographic descriptions, and the production of the document as it is presented here. Applied Survey Research provided data visualization and technical assistance. Stephanie Biegler and Tali Palmrose of the Child Abuse Prevention Council of Sacramento provided overall staff supervision and report oversight.

Child Abuse Prevention Center

Child Abuse Prevention Center
4700 Roseville Road
North Highlands, CA 95660
Tel: (916) 244-1900 Fax: (916) 244-1905
www.thecapcenter.org