Describing the Problem of Suicide – A Guide to Accessing Suicide Data

As noted by the Mental Health Services Oversight and Accountability Commission (MHSOAC), suicide is "a complex public health challenge involving many biological, psychological, social, and cultural determinants." This guide was developed to assist county behavioral health agencies (and their partners) in understanding the large amount of data and data sources available to inform and develop a strategic plan for suicide prevention in alignment with *Striving for Zero: California's Strategic Plan for Suicide 2020-2025*. This document provides a description of available suicide data sources, their limitations and their caveats, along with links to useful resources, websites and reports. This guide is not a comprehensive or exhaustive list of data sources available; rather, the resources listed here serve as a starting point in collecting and analyzing suicide data.

I. Suicide Data Terms

As mentioned, suicide is a complex issue that is driven by a variety of diverse factors. The following are types of data commonly used to understand suicide:

- Mortality (suicide deaths)
- Morbidity (suicide attempts, self-injury)
- Suicidal ideation (self-reported thoughts of suicide)
- Comorbidities (risk factors)
- Protective factors (supports that help buffer suicide risk)

While these terms may be familiar to some, they may not be to others. The following definitions may be useful.

Mortality refers to deaths that were confirmed to be suicide. Occasionally, deaths that may have been suicide are not reported as such because the coroner or medical examiner is not able to establish suicidal intent. In many jurisdictions, the threshold or criteria to meet classification for a suicide is very high. The National Violent Death Reporting System (NVDRS) suggests some steps to address this in its comprehensive surveillance system on violent deaths. More about NVDRS appears later in this guide.

Morbidity refers to nonfatal, *intentional* self-injuries. It is important to note that there are many hurdles to overcome for intentional injuries and suicide attempts to be recorded correctly such as (1) disclosure by patient, (2) recording by medical team, and (3) accurate or appropriate injury classification code assigned in a data system by staff.

Suicidal ideation refers to thinking about or wanting to take one's own life. Some health care providers, clinics and agencies administer suicide risk assessments such as the Columbia Suicide Severity Rating Scale (CSSRS) or the Patient Health Questionnaire-9 (PHQ-9), which assess degree of depression severity. Another source of data on suicidal ideation is the California Health Interview Survey (CHIS), a national telephone survey that asks adults about several health topics including suicidal ideation. Some schools or districts also participate in the California Healthy Kids Survey (CHKS) that asks 7th , 9th , and 11th graders several questions relating to suicidal ideation. Tables 1-3 present more information about suicidal ideation datasets and information. These data sources are valuable for understanding the prevalence of suicidal ideation in a local community and/or over time.

Comorbidity refers to the simultaneous presence of two or more diseases or medical conditions in an individual. For suicide prevention, this term typically refers to the presence of co-occurring substance use or mental health conditions such as depression, anxiety or post-traumatic stress disorder (PTSD) and physical ailments such as terminal illnesses and chronic diseases. The Suicide Prevention Resource Center defines protective and risk factors as follows:

Risk factors are "any attribute, characteristic, or environmental exposure of an individual that increases the likelihood of developing a disease or injury (e.g., attempting or dying by suicide). Risk factors do not necessarily cause a disease or injury but can contribute to negative health outcomes like suicide or suicide attempts in combination with other risk factors. For example, depression, access to firearms, and substance use disorders (individually and in combination) increase the likelihood of attempting or dying by suicide, although most people with these risk factors do not attempt suicide. Risk factors should not be confused with warning signs."

Protective factors are "an attribute, characteristic, or environmental exposure that decreases the likelihood of a person developing a disease or injury (e.g., attempting or dying by suicide) given a specific level of risk. For example, depression elevates a person's risk of suicide, but a depressed person with good social connections and coping skills is less likely to attempt or die by suicide than a person with the same level of depression who lacks social connections and coping skills. Social connections and coping skills are protective factors, buffering the suicide risk associated with depression and thus helping to protect against suicide."

II. Overview of Data Sources

What comprises suicide data and what local, county, state and national data exist? The following section provides an overview of existing suicide data sources. First, this section outlines local, state and national data at a glance as displayed in table format. Then more information about the resources listed in the tables is provided, organized by data at the local, county/state and national levels.

A. Suicide Data Sources Summary Tables

The following include suicide data available at the local, state, and national levels. The three tables provide the name of the agency or database; indicate whether data is provided regarding suicide death, attempt, ideation, risk and protective factors; and give a brief description of the data including limitations. These tables are followed by more detailed descriptions of the data sources listed. As mentioned previously, these are not comprehensive or exhaustive lists but are intended as a starting point.

Table 1. Local Suicide Data Sources at a Glance

Data Source	Suicide Death	Suicide Attempts	Suicide Ideation	Risk Factors	Protective Factors	Description and Caveats
Office of the Corner or Medical Examiner	✓	Varies	Varies	✓	Varies	• Provides the most current information on all deaths in the county irrespective of county residence status • Can provide more details about the circumstances around the suicide and means used depending on risk and protective factors collected (varies by jurisdiction) • Storage of data and database complexity varies by office • May require a memorandum of understanding (MOU) to access data • Processing delays may occur due to staff capacity, jurisdiction volume and toxicology reporting lag times
County Epidemiologist	✓	✓				• Epidemiologists (often within local public health department) have or can request access to all suicide and attempt data available to the county (coroner, emergency department and hospitalization) • Formal data requests are often needed to access data
Emergency Departments/ Hospitals		✓				• Data are collected along with demographic information as part of the intake system • Data request is needed to access data • Datasets are managed by the Office of Statewide Health Planning and Development (OSHPD)
Local Death Review Teams	✓			✓	✓	• May or may not exist in your county; contact your coroner or medical examiner, health department, Department of Children and Family Services or probation department • Multidisciplinary teams that review deaths with a focus on examining risk and protective factors and to inform practices and policies to prevent future deaths • Child death review teams were mandated in the past; some continue to exist and include review of suicide deaths.
Lifelines and Crisis Centers			✓			• The National Suicide Prevention Lifeline provides call volume by veteran status, for Spanish calls and over time; contact your local crisis center for access to data; usually, reports will include demographic information, reason for call and level of response provided (e.g., referral to resources, stabilization or active rescue) that can inform your suicide prevention efforts

Table 2. Statewide Surveys, Dashboards and Data Sets on Suicide that Provide County Level Information at a Glance

Data Source	Suicide Death	Suicide Attempts	Suicide Ideation	Risk Factors	Protective Factors	Description and Caveats
California Department of Public Health, EpiCenter – California Injury Data Online (EpiCenter)	✓	✓				• Death data available from 1991-2019 • Nonfatal hospital and emergency department self-inflicted data is available from 1991-2015 • Crude suicide/self-inflicted injury rates are also available • Data can be analyzed at the state and county level by gender, age, ethnicity, veteran status and means, among other variables • Data can be viewed using excel, pdf or html • Coding change of nonfatal hospital and emergency department data occurred in late 2015; data from that year and earlier cannot be compared with data before 2016
The Mental Health Services Oversight and Accountability Commission (MHSOAC) Dashboard	✓			✓	✓	• State and county death data rates from 2010-2019 • Data can be analyzed by age, cause of injury, race/ethnicity and gender; results are displayed visually with a state map highlighting county rates or graphically • Data can be further analyzed under their "detailed view" tab *Coming soon!*
Kidsdata.org		✓	✓	✓	✓	• State and county-level data on the health and well-being of children, such as violence and safety, socioeconomic factors, education, and environmental health and suicide attempt and ideation from more than 35 resources • Suicide ideation is based on CHKS survey data (2011-2019) • Suicide attempt data is based on EpiCenter data (1991-2015) and death data is based on WONDER (1995-2017) • Query system allows analysis of data by gender, grade level, parent education, race/ethnicity and sexual orientation • Data can be viewed and downloaded in charts, graphs and tables
California Department of Education, the California Health Kids Survey (CHKS)			✓	✓	✓	• Data on suicidal ideation, school climate, social-emotional and physical health, substance abuse, other risk behaviors and demographic information such as gender, race/ethnicity, sexual identity, free or reduced-lunch status, afterschool participation and military status is available for 7th, 9th and 11th graders • Data is available from 2014-2020 and can be downloaded as an image, pdf or ppt
UCLA's California Health Interview Survey (CHIS)			✓	✓	✓	• Data on health status, health conditions, health-related behaviors, health care access, health insurance coverage information, suicide attempts and ideation, and detailed demographic information is available • Data is available from 2001-2020 and downloadable files available for analysis

Table 3. National Suicide Data Sources at a Glance

Data Source	Verified Suicide Death	Verified Suicide Attempts	Suicide Ideation	Risk Factors	Protective Factors	Description and Caveats
Web-Based Injury Statistics Query and Reporting System (WISQARS), CDC	✓					• Provides fatal injury information at the national, regional and state levels from 1981-2019 including suicide deaths or injury • Crude or age-adjusted rates and population estimates are available • Data is downloaded as text or cvs file
Wide-Ranging ONline Data for Epidemiologic Research (WONDER), CDC	✓			✓		• Provides information about births, deaths, cancer diagnoses, tuberculosis cases, vaccinations, environmental exposures and population estimates, among many other topics • Data available from 1999-2019 • Query system is available to create maps and tables and compare specific populations, locations and/or groups of people with custom measures, such as age-adjusted rates calculated with various standard populations to conduct trends, crosstabs and regressions
Behavioral Risk Factor Surveillance System (BRFSS), CDC				✓	✓	• Survey asks about 14 health topics and includes an additional 31 optional topics • National- and state-level data from 2008-2019 and seven metropolitan statistical areas in California is available • Surveys are administered in Spanish • Online query system available for creation of trend tables, cross tabs and logistic regression
National Survey on Drug Use and Health (NSDUH)		✓	✓	✓		• Provides self-reported information on illicit and/or drug misuse, substance use disorders and substance use treatment, depression and psychological distress, mental illness and mental health care including suicidal ideation, plans and self-reported suicide attempts • Data available from 2002-2019 • State-specific tables and estimates as well as *p*-value tables available for download; additional data can be requested for research purposes

B. Local Suicide Data

The most relevant suicide death, attempt and ideation data is local. State and national data often have a lag in time as data is received and cleaned from localities. Therefore, it is important to become familiar with local, timely suicide data. The following describes the six local resources you can reach out to as you begin your suicide prevention strategic planning efforts.

1. County coroner or medical examiner
2. County epidemiologist/public health department
3. Emergency departments
4. Hospitals
5. Lifeline or crisis line (help seeking) data sources
6. Death review teams (or child review teams)

1. **County coroner or medical examiner's** office provides the most recent and up-to-date information on suicide deaths, as they are charged with administering death certificates for any death (resident or not) in the county. All death certificates are provided to the state. If the county participates in the California Violent Death Reporting System (CalVDRS), these offices will also complete or upload data to fulfill reporting requirements. Read more about CalVDRS in Section D: National Suicide Data and Resources.

   Data collected by the coroner or medical examiner's office include gender, ethnicity/race, age, means, drug or alcohol presence, place and date of injury and death, and other significant conditions. Additional data collected during detailed investigations varies by county and may include interviews with family and friends. However, storage of investigation findings is left to individual counties, which may or may not choose to record the information in a readily accessible database. Reach out to your county coroner or medical examiner to start a conversation about accessing data.

2. **County epidemiologists** typically plan, design, conduct and/or manage epidemiologic studies, field investigations and complex surveillance systems and have access to county data regarding a variety of public health concerns. Reach out to your county epidemiologist/public health department, if your county has one, and work collaboratively with them to identify, assess and analyze suicide data available in your county.

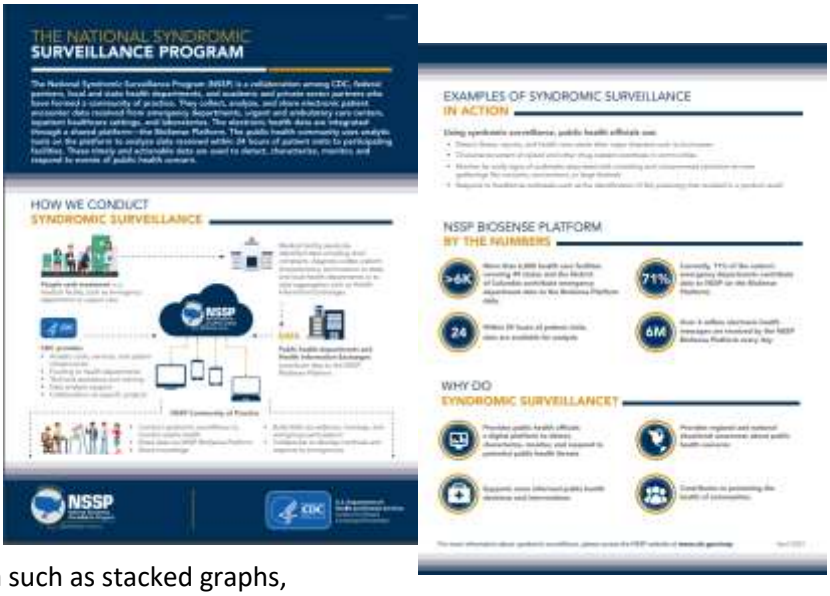
3. **Emergency departments** collect suicide attempt data from patients as part of their intake process. These data are reported to the state. Reach out to your local emergency department(s) to establish access to current suicide attempt data.

4. **Hospitals** collect suicide attempt data from patients who are treated in the hospital for a suicide attempt. Reach out to your local hospital or public health department to establish access to current suicide attempt data. Visit EpiCenter to access local hospital data online. Some hospitals are using ESSENCE to report suicide attempts.

Spotlight on the National Syndromic Surveillance Program (NSSP) and ESSENCE

The CDC developed the National Syndromic Surveillance Program (NSSP) to provide public health officials with a timely system for detecting, understanding and monitoring health events and this can serve as an early warning system for public health concerns including opioid overdoes, vaping product use-associated lung injury and natural disasters. NSSP collaborates with federal, local and state health departments as well as academic and private sector partners to form a community of practice. The **BioSense Platform** integrates the electronic health data through this shared platform. The public health community uses analytic tools on the platform to analyze data received as early as 24 hours after a patient's visit to a participating facility. Public health officials use these timely and actionable data to detect, characterize, monitor and respond to events of public health concern.

- More than 6,000 health care facilities covering 49 states and the District of Columbia contribute to the platform daily.
- Data are available for analysis within 24 hours of a patient's visit.
- 71% of the nation's emergency departments contribute data to the platform.
- 6 million electronic health messages are received by the platform daily.



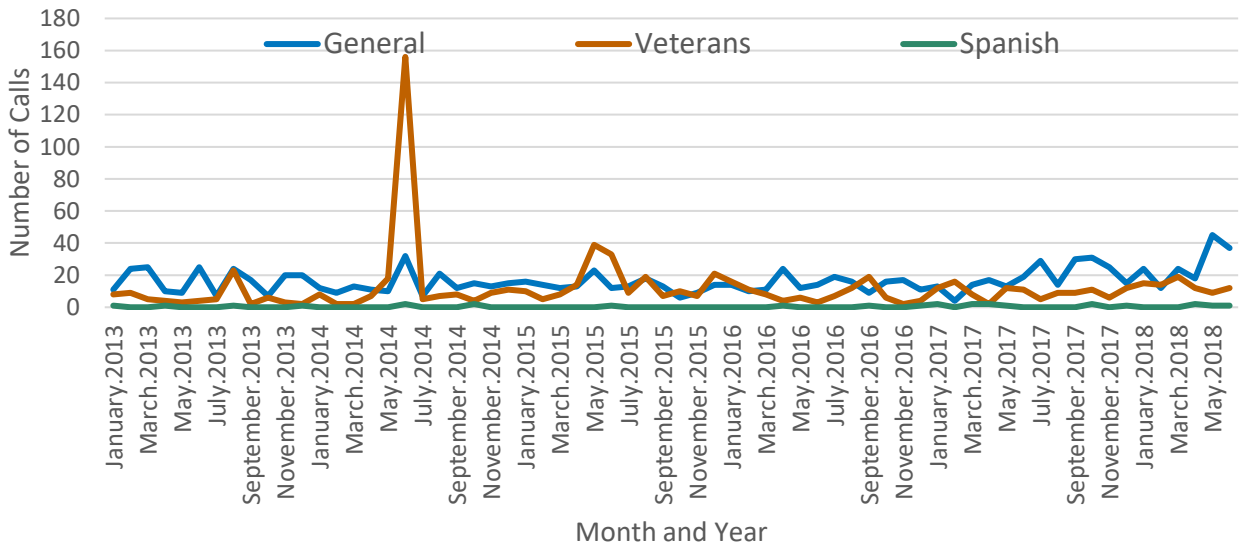
After the Boston bombings, the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) was adapted to look for noninfectious health events including the following: anxiety, depression, suicidal tendencies and hearing loss.

ESSENCE is the software used by NSSP and hosted by the BioSense Platform. It has query capabilities that include time series information such as stacked graphs, detector comparison, configuration options, stratification queries and overlay. It also has GIS map views and more.

To view the two-page overview of NSSP, click here. Visit NSSP to learn more about ESSENCE and its online training for those interested in using the software.

5. **Lifeline or Crisis Line (Help Seeking) Data Sources.** A crisis center operates crisis lines that serve as resources for individuals going through mental health crises. These centers also assist individuals seeking to help someone in crisis or who may be thinking of suicide. Crisis centers across California often collect call volume data. These data can be useful in suicide prevention strategic planning efforts as they can provide demographic information from callers including gender, race, ethnicity, age and veteran status. Many local crisis centers can also provide valuable information about the nature of the call and the intervention applied (e.g. listening, referral to resources, stabilization or active rescue). Data provided by the crisis lines are a useful tool as they can be shared with stakeholders to increase their awareness that community members from a specific county are indeed reaching out for help, used to identify trends overtime, or used as a tool to highlight the potential positive impact of outreach activities in a county that has promoted the Lifeline and which may have led to an increase in help seeking. The best way to obtain this data is to contact your local crisis center or to see if your county behavioral health department or public health department has a contract with your local agency and already receive regular reports. Figure X represents an example of data counties can receive from call centers that are part of the National Suicide Prevention Lifeline.

Figure X. Number of Calls to the National Suicide Prevention Lifeline – X County: January 2013-June 2018



Source: National Suicide Prevention Lifeline (NSPL) of calls to the three NSPL numbers (General, Veterans and Spanish line) originating from a county, regardless of where those calls were answered.
Note: Only answered calls are included.

Spotlight on the National Suicide Prevention Lifeline (NSPL)

Some centers are members of the National Suicide Prevention Lifeline Network, which has more than 180 centers nationwide. In California, 13 crisis centers are Lifeline members (as noted in Tables 4 and 5). Membership provides administrative benefits as well as innovative practices.

The California Mental Health Services Authority (CalMHSA), through its Suicide Prevention Technical Assistance Program, has been providing county behavioral health agencies with annual NSPL call volume data reports since 2013. These county-level data reports are provided annually in August. For more information about this, email info@suicideispreventable.org. These data only represent calls made directly from a county to the National Suicide Prevention Lifeline (NSPL). The NSPL (1-800-273-TALK/8255) is a network of local crisis centers that are united under one toll-free number. Calls are routed to the NSPL-member crisis center closest to the caller's area code and exchange. However, most crisis centers also receive calls through their own local numbers, and this data does not include those calls. Additionally, not all crisis centers are part of the NSPL network. Therefore, we recommend you request similar call volume data from your local crisis centers and hotlines if you are interested in compiling a more comprehensive review of crisis call data from your county. If you are already receiving regular reports from your local crisis line, those reports likely include calls routed from the NSPL.

The following are answers to commonly asked questions regarding the NSPL data and considerations when evaluating crisis line data locally and from NSPL.

1. *Why does NSPL data differ from what our local crisis center reports?*

*Y*our local crisis center may report on all calls received, even including hang-ups or calls that were disconnected for a variety of reasons outside the control of the crisis center. They also may promote a local telephone number that is not part of the NSPL network and calls to the local number are not captured in this data. Also, note that NSPL data represents calls originating from your county, not necessarily answered *in* your county or by your local crisis center. NSPL calls "roll over" to the nearest available crisis center that is part of the Lifeline network. If the call cannot be answered in a timely fashion, the call continues to be routed to the next available center. Each center has backups so that calls will be answered, even if a local center has all their lines busy. The system is designed so that callers will not receive a busy signal.

2. *Why only report* answered *calls? Are all calls answered?*

There are several reasons why a call might not be answered. Callers may hang up before reaching a person; they may grow tired of waiting, change their mind or lose their cell connection. The vast majority of calls *are* answered and NSPL tracks all calls, even if they are not answered. The data provided in the CalMHSA data report is specifically for *answered* calls only because this reflects the vast majority of calls and provides a more useful tool for evaluating help-seeking and help received than data that included unanswered calls.

3. *When will the current NSPL number be replaced by the three-digit hotline (988)?*

- Beginning in July 2022, 988 will become the national three-digit dialing code for the National Suicide Prevention Lifeline, replacing the current phone number of 1-800-273-TALK (8255).
- 988 will be an opportunity to shift from a law enforcement and justice system response to one of immediately connecting individuals in suicidal, mental health and substance use crises to care.
- Currently, states and territories are collaborating with a broad range of stakeholders to plan for implementation of 988, which will include 24/7 access to the Lifeline network through phone, chat and text.

American Association of Suicidology

Crisis centers can be accredited by the American Association of Suicidology to assure not only minimum standard of service delivery but that they also perform according to nationally recognized standards among a variety of other benefits. A list of American Association of Suicidology-accredited crisis centers in California and out of state, many of which are in the Lifeline network, is included in the following tables and can also be found here.

Table 4. National or Out-of-State Accredited Crisis Centers, 2021

City	Name of Center	Phone	website
West Hollywood, CA (National)	The Trevor Project	(310) 271-8845	www.thetrevorproject.org
Reno, NV (Lifeline member)	Crisis Call Center	(775) 784-8085	www.crisiscallcenter.org
Oakland, CA (National)	Trans Lifeline	(510) 771-1417	www.translifeline.org

Table 5. California Accredited Crisis Centers by City, 2021

City	Name of Center	Phone	website
Bakersfield	Kern Behavioral Health & Recovery Services Hotline (Lifeline member)	(800) 273.8255	www.kernbhrs.org
Camarillo	Casa Pacifica Centers for Children & Families	(805) 366-4302	www.casapacifica.org
Culver City	Suicide Prevention Center of Los Angeles (Lifeline member)	(310) 390-6612	www.didihirsch.org/spc
Davis	Suicide Prevention and Crisis Services of Yolo County (Lifeline member)	(530) 756-7542	www.suicidepreventionyolocounty.org
Fresno	Central Valley Suicide Prevention Hotline (Lifeline member)	(559) 256-0100 x5002	www.cvsph.org
Los Angeles	Teen Line	(310) 423-3401	www.teenlineonline.org
Oakland	Crisis Support Services of Alameda County (Lifeline member)	(510) 420-2460	www.crisissupport.org
Sacramento	WellSpace Health (Lifeline member)	(916) 469-4690	www.suicideprevention.wellspacehealth.org
San Carlos	StarVista (Lifeline member)	(650) 579-0359	www.star-vista.org
San Diego	Optum Health (Lifeline member)	(619) 641-6218	www.optumsandiego.com
San Francisco	San Francisco Suicide Prevention (Lifeline member)	(415) 984-1900	www.sfsuicide.org
San Jose	Santa Clara County Suicide & Crisis Service (Lifeline member)	(800) 704-0900	www.sccgov.org/sites/mhd/resources/sp/pages/suicideandcrisiscenter.aspx
San Luis Obispo	Transitions-Mental Health Association	(805) 540-6500	www.t-mha.org
Santa Cruz	Suicide Prevention Service of the Central Coast	(831)-459-9373	www.fsa-cc.org/suicide-prevention-service
Walnut Creek	Contra Costa Crisis Center (Lifeline member)	(925) 939-1916	www.crisis-center.org

Table 6. California CNSPL Member Crisis Centers by Counties, 2021

Counties Served	Name of Center	Phone	website
Lake Marin, Mendocino, Sonoma	Buckelew Programs	(415) 499-1100 for Marin residents; (855) 587-6373 all others	www.buckelew.org
Contra Costa	Contra Costa Crisis Center (Lifeline member)	(800) 833-2900	www.crisis-center.org
Alameda	Crisis Support Services of Alameda County	(800) 273-8255	www.crisissupport.org
Los Angeles	Didi Hirsch Suicide Prevention Center	(800) 273-8255	www.didihirsch.org/get-involved/suicide-prevention-center-capital-campaign
San Francisco and Greater Bay Area	Felton Institute (formerly San Francisco Suicide Prevention)	(415) 984-1900	www.sfsuicide.org
Kern County	Kern County Behavioral Health and Recovery Services Support	(800) 273-8255	www.kernbhrs.org/crisis-services
San Diego County	Optum Health	(888) 724-7240	www.optumsandiego.com
Placer, Sacramento	WellSpace Health | Suicide Prevention & Crisis Services	(916) 368-3111	www.wellspacehealth.org/services/behavioral-health-prevention/suicide-prevention
Santa Clara	Santa Clara County Suicide and Crisis Services	(855) 278-4204	https://bhsd.sccgov.org/programs-services/suicide-prevention-crisis/find-help-suicide-and-crisis-resources
Monterey, Santa Cruz, San Benito	Suicide Prevention Services of the Central Coast	(877) 663-5433	https://cbmc.galaxydigital.com/agency/detail/?agency_id=103234
San Mateo	Star Vista	(650) 591-9623	www.star-vista.org
Yolo	Suicide Prevention of Yolo County	(530) 756-5000	www.suicidepreventionyolocounty.org

6. **Child Death Review Teams (CDRT)** or child review teams (CRTs) are an asset to any county seeking to understand the factors that contribute to suicide deaths as they are able to investigate, usually through the coroner's office, the circumstance surrounding a suicide death. In California, there may be up to 37 local child death review teams. The National Center for Fatality Review and Prevention's website, as described below, provides the history and responsibility of CRT teams in California. Recent CDRT reports can be viewed in the "Key Studies and Reports" section.

Spotlight on the National Center for Fatality Review and Prevention (NCFRP) – California

The NCFRP's website contains information about the function and duties of local Child Death Review Teams (CDRT). The purpose of these teams is to help identify and investigate possible child maltreatment cases, protect siblings and other children from maltreatment, improve systems and agency, and to study the circumstances surrounding child death in order to prevent and create effective action against such deaths. The website also discusses the management of data, child death prevention initiatives that have been put in place, protocols for CDRT function and confidentiality, and team training funded by state departments. NCFRP does not track all CDRTs and CRTs. For the most accurate information, reach out to your health department, children and family services department or probation and ask if a CDRT or CRT is active.

Spotlight on Oregon's Suicide Fatality Review Team

Dr. Kimberly Repp is the chief epidemiologist of Washington County Public Health Department and has been recognized for developing and implementing an innovative suicide surveillance system that involves a unique collaboration between the county's medicolegal death investigators (MDIs, also known as deputy medical examiners) and epidemiologists. Dr. Repp created a checklist that includes basic questions about age, gender and cause of death and expands to an extensive list of questions about evidence of addiction, financial or job problems, relationship stress and others. Based on her work, Humboldt County Coroner's Office expanded the way it investigates suicides by using a consolidated risk assessment profile in hopes of learning how to prevent future deaths. The checklist tracks near real-time trends to determine who in the community is most at risk of suicide and what system changes can be made to prevent future suicides. The system has been proven to save lives and is influencing national practice. In early 2019, this model began to be implemented throughout California.

C. California Suicide Data Sources

Current state-level sources of suicide data include: 1) The California Department of Public Health (CDPH), 2) MHSOAC dashboard, 3) the California Health Kids Survey, 4) KidsData and 5) UCLA's California Health Interview Survey (CHIS).

1. **The California Department of Public Health (CDPH)** collects and analyzes suicide deaths from California counties through death certificates registered in California each year. Suicide attempt data or nonfatal injury is submitted to the state through the California Office of Statewide Health and Planning Development Patient Discharge Data (PDD) and Emergency Department Data.

   EpiCenter, California's Injury Data Online's website, developed by the Department of Public Health, is designed to query death and attempt data along with other fatal and nonfatal injuries. Suicide deaths are considered fatal injuries and data is available from 1991 to 2019. For nonfatal injuries or suicide attempts (classified as self-inflicted injuries), data is available from 1991 to 2015. The query system is designed to allow each county to review its data by selecting county of residence, then choosing "self-inflicted" injury, which is how suicide is classified in the database. The image illustrates the three data sources or "outcomes"; one for suicide deaths and two for suicide attempts. Data can be queried by race/ethnicity, gender, age and cause of injury. A "cause group" must be identified and "all self-inflicted injuries" is the term used for suicides in the database. If you are familiar with the ICD9 or 10 codes for injuries or means of suicide, you can select a specific injury by entering its corresponding ICD code. Data can be viewed in html, Excel or pdf format. To learn more about the data, visit [EpiCenter's website](#).

   ED/Hospitalization Notes:

   - **Coding changes:** As noted, on the website, due to coding changes, nonfatal injury data from 2015 (including suicide attempts or self-inflicted injuries) forward is not comparable to earlier years. Staff are working to update EpiCenter to include nonfatal injury data for years 2016 and onward.

- **Potential overlap in counts:** Note that there may be some overlap in the counts for suicide attempts between emergency departments (ED) and hospitals as some patients who are treated at an ED may then transfer and be admitted to a different hospital and will appear in both datasets.

The CDPH also has the following resources:

- Maternal and Infant Health (MIHA) – MIHA is an annual, statewide-representative survey of women with a recent live birth in California. MIHA collects self-reported information about maternal and infant experiences and about maternal attitudes and behaviors before, during and shortly after pregnancy.
- California Health and Human Services Open Data Portal – The California Health and Human Services Agency (CHHS) Open Data Portal increases public access to one of the state's most valuable assets: nonconfidential health and human services data. The portal offers access to standardized data that can be easily retrieved, combined, downloaded, sorted, searched, analyzed, redistributed and reused by individuals, business, researchers, journalists, developers and government to process, trend and innovate.
- California Healthy Places Index (HPI) – The HPI website includes an interactive map where data down to the census tract level is available on communities in California. These data provide diverse economic, social, political and environmental factors that influence physical and cognitive function, behavior and disease. These factors are often called social determinants of health and form the root causes of disadvantage, which can affect violence in communities
- Let's Get Healthy California – Let's Get Healthy California is a shared vision for the future health of Californians. It is a commitment to becoming a healthier state through joint efforts in six project goals, including Creating Healthy Communities, which includes an indicator on neighborhood safety.

2. **The Mental Health Services Oversight and Accountability Commission (MHSOAC)** is developing a data dashboard that highlights trends in demographic and other factors for the purpose of supporting the planning and development of state and local suicide prevention strategies. Suicide deaths can be viewed by demographic characteristics such as age, cause of injury, race and gender and results are displayed visually, through a state map highlighting county rates, or graphically. Data is available from 2010 to 2019 and can be download in pdf format. The dashboard also has query or metric options where data can be downloaded as an image, data, cross tab, pdf or PowerPoint. Data can be further analyzed under a "detailed view" option.

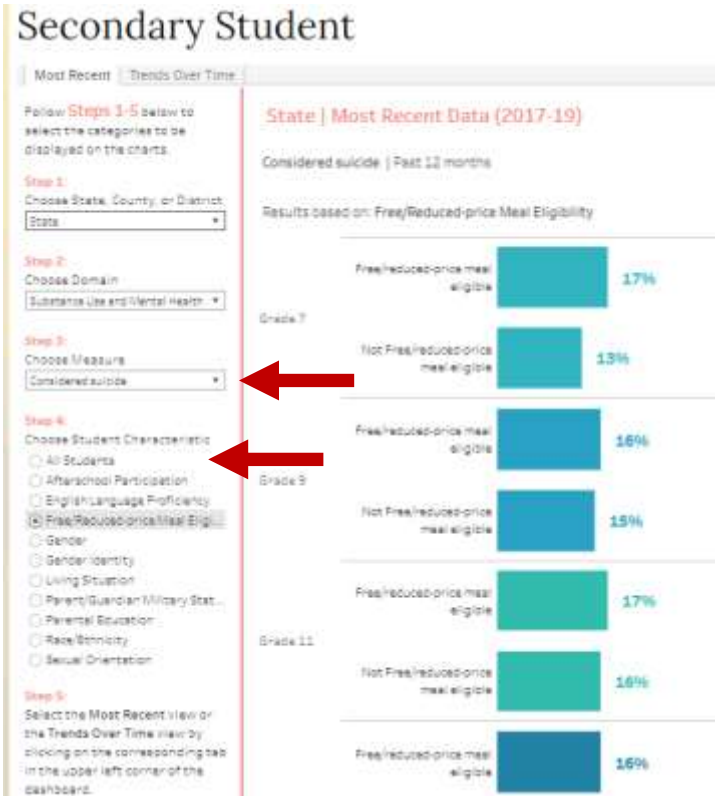
The dashboard includes data on the following, which can inform risk and protective factors:

- Full-service partnership discontinuation
- Full-service partnership partner engagement reporting
- Client services information system monthly clients served
- Statewide incompetent to stand trial dispositions

The dashboard is in beta testing now and will be available soon! Contact Rachel Heffley rachel.heffley@mhsoac.ca.gov for information.

3. **The California Healthy Kids Survey (CHKS)** is the largest statewide survey of resiliency, protective factors, risk behaviors and school climate in the nation. It is given to grades 7, 9 and 11 at participating schools throughout the state. A dashboard that displays data on contextual factors and risk factors includes experiencing teen dating violence, gang involvement, bullying/harassment, fighting at school and perceived safety. All data can be accessed online, including the following suicide attempt and ideation questions asked of students in the core module:

   - During the past 12 months, did you ever feel so sad or hopeless almost every day for **two weeks or more** that you stopped doing some usual activities?
   - During the past 12 months, did you ever seriously consider attempting suicide?



For every question, a wide range of demographic variables are available including gender identity, ethnicity, participation in after school programs, participation in free or reduced lunch program, military status of parents and more. In addition to these questions, supplementary modules with additional suicide-related questions, mental health and social emotional learning (SEL) questions might be available if the school/district participated. Visit CHKS to view the public dashboard, reports and resources.

4. **Lucile Packard Foundation for Children's Health, Kidsdata** is an online data tool that has county-level data on the health and well-being of children in California, such as violence and safety (including adverse childhood experiences), socioeconomic factors, education, environmental health, and suicide attempt and ideation from more than 35 resources. Suicide

data available is based on CHKS survey data. The online tools display data in charts, graphs and tables. It also generates reports (see example). Visit kidsdata.org to learn more.

5. **UCLA's California Health Interview Survey (CHIS)** is the largest state health survey in the nation. It is a web and telephone survey that asks questions on a wide range of health topics including suicidal ideation among adults and teens. The survey also collects demographic information such as age, gender, race/ethnicity, language spoken at home and marital status.

CHIS is conducted on a continuous basis allowing the survey to generate timely one-year estimates. CHIS provides representative data on all 58 counties in California and provides a detailed picture of the health and health care needs of California's large and diverse population. Suicide ideation and attempt questions asked in the 2021 survey are:

1. Have you ever seriously thought about committing suicide?
2. Have you seriously thought about committing suicide at any time in the past 12 months?
3. Have you ever attempted suicide?
4. Have you attempted suicide at any time in the past 12 months?

Those administering the telephone survey are advised to provide anyone who answers affirmatively to these questions, the National Suicide Prevention Lifeline number and website and ask the following question before proceeding.

- Would you like to discuss your thoughts with this person, or would you like to continue with the survey?

You can download public use files or create a login and conduct analysis through the online portal here. Data is available from 2001-2020.

D. National Suicide Data and Resources

The Centers for Disease Control and Prevention (CDC) and the Substance Abuse and Mental Health Services Administration (SAMHSA) provide suicide data at the national level. The following is a brief summary of the resources available.

Centers for Disease Control and Prevention (CDC) has several data sources for suicide prevention that provide a variety of information including 1) National Violent Death Reporting System (NVDRS), 2) Web-Based Injury Statistics Query and Reporting System (WISQARS), 3) Youth Risk Behavior Surveillance Systems (YRBSS), 4) CDC Wide-ranging ONline Data for Epidemiologic Research (CDC WONDER) and 5) the Behavioral Risk Factor Surveillance System (BRFSS). Each of the following five data sources provides unique information.

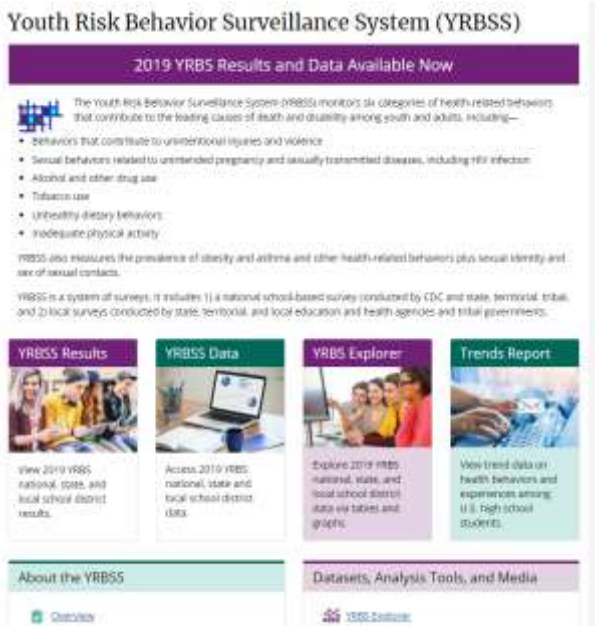
1. **National Violent Death Reporting System (NVDRS)** tracks and reports violent deaths, including suicide, from multiple sources such as law enforcement, medical examiners, toxicology reports and death certificates. Combining multiple data sources helps provide information on precipitating circumstances such as health conditions, relationships, mental health history, finances and other factors related to the decedent and death itself. As of June 2021, 30 California counties participate in the reporting system, including:

1. Amador	11. Lassen	21. San Mateo
2. Butte	12. Los Angeles	22. Santa Cruz
3. Colusa	13. Marin	23. Shasta
4. Fresno	14. Modoc	24. Siskiyou
5. Glenn	15. Mono	25. Solano
6. Humboldt	16. Orange	26. Sonoma
7. Imperial	17. Placer	27. Tehama
8. Kern	18. Sacramento	28. Trinity
9. Kings	19. San Benito	29. Ventura
10. Lake	20. San Francisco	30. Yolo

To watch the overview video or download the fact sheet and learn more click here.

2. **Web-Based Injury Statistics Query and Reporting System (WISQARS***)* is the online database for NVDRS that provides fatal injury information at the national, regional and state levels from 1981 to 2019, including suicide deaths or injury. Data can be searched by state and by specific variables such as race/ethnicity, age, gender and Hispanic origin. Number of deaths or fatal injuries by suicide are provided along with population estimates and crude- and age-adjusted rates. Users must agree to the terms of use for state level data from 1999-2019 to prevent inadvertent disclosure of a decedent's identity. Data is in text or table format only. Visit WISQARS for more information.

3. **Youth Risk Behavior Surveillance Systems (YRBSS)** was developed by the CDC to monitor six categories of health-related behaviors and experiences among students that contribute to leading causes of death and disability among youth and adults across the country. The surveillance system is a network of surveys that includes 1) national school-based survey conducted by the CDC and state, territorial, and tribal localities 2) local surveys conducted by state, territorial and local education and health agencies and tribal governments from 1991 to 2019. View the most recent YRBSS results, access data, explore data tables and view trend reports here.

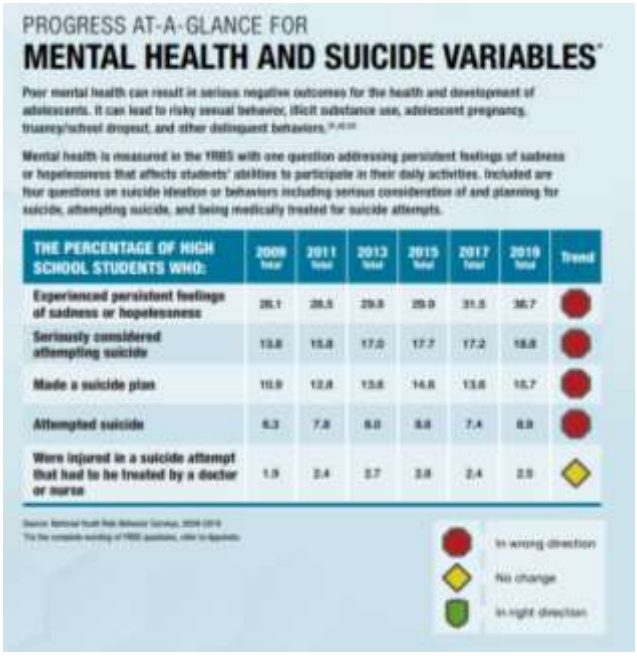


The most recent YRBSS report summarizes 10 years of data providing trends analysis on sexual behavior, high-risk substance use, experience with violence and mental health and suicide. The report also places a special focus on sexual minority youth or lesbian, gay or bisexual youth. Regarding suicide, the survey asks if youth during the past 12 months had:

- Experienced persistent feelings of sadness or hopelessness
- Seriously considered attempting suicide

- Made a suicide plan
- Attempted suicide
- Were injured in a suicide attempt that had to be treated by a doctor or nurse

The table to the right provides progress at a glance regarding these five questions and shows that progress in the wrong direction (as noted by red dots) has been made in the past 10 years for most of these questions. Download the Youth Risk Behavior Survey Data Summary & Trend Report 2009-2019 for more information.


PROGRESS AT-A-GLANCE FOR

MENTAL HEALTH AND SUICIDE VARIABLES*

Poor mental health can result in serious negative outcomes for the health and development of adolescents. It can lead to risky sexual behavior, illicit substance use, adolescent pregnancy, truancy/school dropout, and other delinquent behaviors.[4-6,10]

Mental health is measured in the YRBS with one question addressing persistent feelings of sadness or hopelessness that affects students' abilities to participate in their daily activities. Included are four questions on suicide ideation or behaviors including serious consideration of and planning for suicide, attempting suicide, and being medically treated for suicide attempts.

THE PERCENTAGE OF HIGH SCHOOL STUDENTS WHO:	2009	2011	2013	2015	2017	2019	Trend
Experienced persistent feelings of sadness or hopelessness	28.1	28.5	29.9	29.9	31.5	36.7	
Seriously considered attempting suicide	13.8	15.8	17.0	17.7	17.2	18.8	
Made a suicide plan	10.9	12.8	13.6	14.6	13.6	15.7	
Attempted suicide	6.3	7.8	8.0	8.8	7.4	8.9	
Were injured in a suicide attempt that had to be treated by a doctor or nurse	1.9	2.4	2.7	3.8	2.4	2.5	

Source: National Youth Risk Behavior Survey, 2009-2019
*For the complete wording of YRBS questions, refer to Appendix.

Red dot: In wrong direction
Yellow diamond: No change
Green dot: In right direction

4. **CDC Wide-ranging ONline Data for Epidemiologic Research (CDC WONDER)** is a public resource that makes many health-related data sets available to CDC staff, public health departments, researchers and others. The online data manages nearly 20 collections of public-use data including U.S. births, deaths, cancer diagnoses, tuberculosis cases, vaccinations, environmental exposures and population estimates, among many others.

To assist with public health research, decision making and program evaluation, the public has access to ad-hoc queries, summary statistics, maps, charts and data extracts from WONDER. Most of the data are updated annually; some collections are updated monthly or weekly. The online systems allow users to:

- Create tables, maps, charts and data exports with the ability to index data from any field or limit data by any field
- Produce ad-hoc summary statistics, such as frequency counts, rates, confidence intervals, standard errors and percentages
- Organize data results into categories
- Compare specific populations, locations and/or groups of people with custom measures, such as age-adjusted rates calculated with various standard populations

Visit WONDER to learn more. The CDC also has several other data sources including the following. For more information about these data sources visit CDC.

- National Electronic Injury Surveillance System-All Injury Program
- National Hospital Ambulatory Medical Care Survey
- The National Vital Statistics System

5. **The Behavioral Risk Factor Surveillance System (BRFSS**) is a national health-related telephone survey that collect state data about U.S. residents regarding their health-related risk behaviors, chronic health conditions and use of preventive services conducted by the CDC. BRFSS completes more than 400,000 interviews with adults each year asking about 14 health topics and an additional 31 optional topics. Surveys are also conducted in Spanish. National- and state-level data is available from 2008 to 2019.
   The website provides a variety of tools to access data.
   - The Prevalence and Trends Data tool allows queries of the data by geographic location (states and metropolitan areas including seven California areas).
   - The Web Enabled Analysis Tool (WEAT) permits users to create trend tables, cross tabs and logistic regression.
   - Published Morbidity and Mortality Weekly Reports for multiple indicators by state and some substate areas are available for download.
   - Selected Metropolitan/Micropolitan Area Risk Trends (SMART) tool produces some local estimates as well.

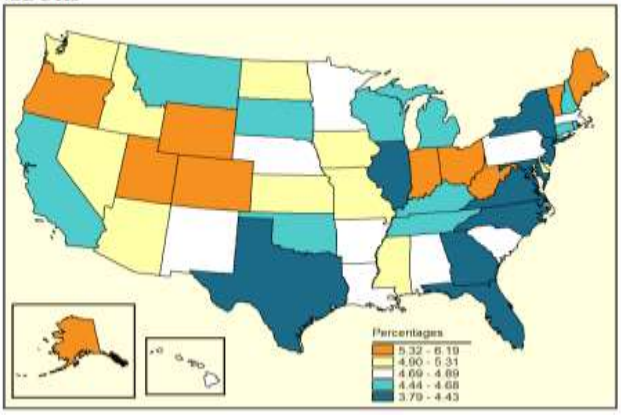
   For more information visit the CDC.

The Substance Abuse and Mental Health Services Administration (SAMHSA) is a division of the U.S. Department of Health & Human Services. SAMSHA administers the National Survey on Drug Use and Health to a sample of Americans representing thousands of people every year to provide a snapshot of mental health and substance abuse. The survey includes a series of questions regarding types of substance use and frequency. It covers substance use treatment history and perceived need for treatment. It also asks specifically about the use of mental health services and depression. With respect to suicide, the survey asks if participants had any of the following in the past year:

- Serious thoughts of suicide
- Made suicide plans
- Attempted suicide

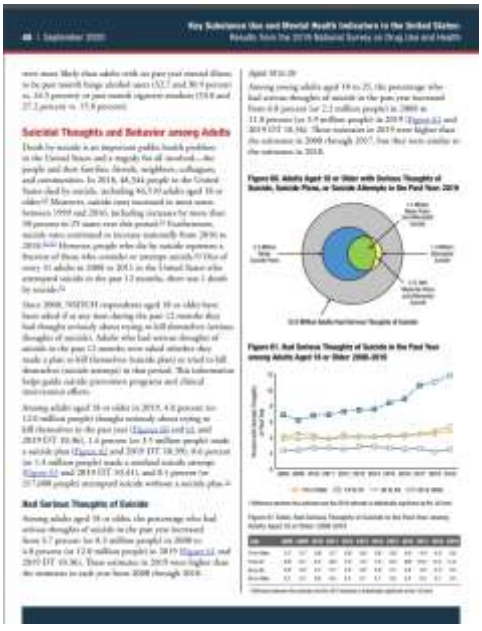
Respondents are asked about personal and family income, health care access and coverage, illegal activities and arrest records, problems resulting from the use of drugs and perceptions of risks. Demographic data include gender, race/ethnicity, age, educational level, employment status, income level, veteran status, household composition and population density.

Figure 31a ***Had Serious Thoughts of Suicide in the Past Year among Adults Aged 18 or Older*, by State: Percentages, Annual Averages Based on 2018 and 2019 NSDUHs**



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019.

[The 2018-19 National Survey on Drug Use and Health National Maps of Prevalence Estimates, by State Report], provides data for each question overall and by age category. Figure 31a from the report highlights states according to the percent of the state's total population indicating they had serious thoughts of suicide in the past year.



[The Key Substance Use and Mental Health Indicators in the Unites States: Results from the 2019 Survey on Drug Use and Health] report provides data for each question overall. Figure 61 indicates the number of adults who had serious thoughts of suicide, suicide plans or suicide attempts in the past year.

To listen to a recorded presentation about the results from the 2019 National Survey on Drug Use and Health National Survey and access *p*-value tables, state specific tables and estimated totals by state, visit SAMHSA. To access data files for research visit SAMHSA dataset page.

III. Key Recent Studies and Reports

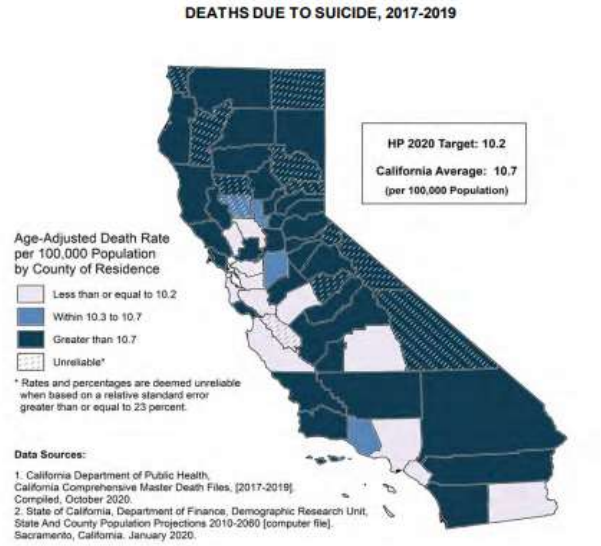
The Centers for Disease Control and Prevention (CDC), the California Department of Public Health (CDPH) and Mental Health America produce several reports that highlight suicide deaths and attempts across the nation and in California counties. The reports are summarized in the following and include links to the full report.

Two recent reports from the CDC highlight the rise in suicide rate across America and how rural communities are among the hardest hit. These two reports are summarized below.

Suicide rising across the US is a four-page report that reviews suicide data from 1999 to 2017. This report gives an overview of the factors of suicide and its increased rates in the U.S. since 1999. It also provides a list of preventative actions that can be taken by the federal government, states, health care systems, employers and general communities. To view an overview video of the report and to learn more, visit the CDC's vital signs website.

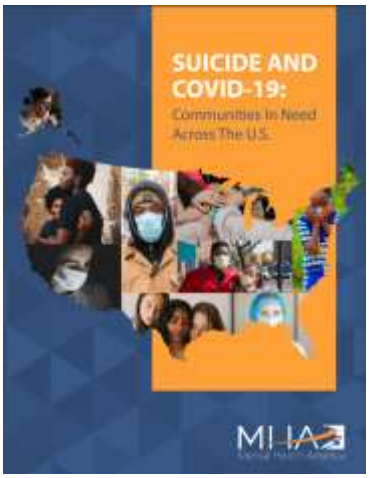
The CDC's webpage titled **Suicide in Rural America** provides information on the increase of suicide rates in rural America from 1999 to 2015 and the growing gap between the suicide rates between rural and urban areas. Data reveals higher rates of suicide among white non-Hispanics in urban areas while higher rates exist among non-Hispanic Native Americans and Alaskan Natives in rural areas. The webpage provides a link to a webinar on Rural Health in America.

CDPH County Health Status Profiles. As stated on the CDPH's website, the *County Health Status Profiles* reports data on selected public health indicators chosen in collaboration with local health officers and epidemiologists. The report provides California and county age-adjusted rates, crude rates or percentages for mortality, infant mortality, morbidity conditions and other public-health-related categories, including suicide. These three-year average rates and percentages are ranked and compared to the target rates established in the Healthy People 2020 (HP 2020) National Objectives. The report also provides a comparison of current period to previous period rates and percentages for California and its counties. The profiles publication typically occurs in conjunction with National Public Health Week.



Regarding suicide data, the report highlights the number of counties with age-adjusted death rates per 100,000 populations that are less than or equal to 10.2, within 10.3 to 10.7, or greater than 10.7, which is the state's three-year average suicide death rate. The map illustrates that the majority of counties are above the state's suicide death rate.

In 2019, **Mental Health America** collected data from 2.6 million users visiting the MHA screening. In addition, in 2021, MHA analyzed MHA screenings from more than 725,000 individuals who took a depression screen (PHQ-9). Suicide ideation questions analyzed include:



- Frequency of thoughts that you would be better off dead, or of hurting yourself (thinking about the previous two weeks thoughts have been: not at all, several days, more than half the days, nearly every day)
- Among those with frequent suicidal ideation (thinking about suicide more than half or nearly every day) they were asked:
    - Are you currently, or have you ever been, diagnosed with a mental health condition by a professional?
    - Have you ever received treatment/support for a mental health problem?

The analysis of these data resulted in the *Suicide and Covid-19: Communities in Need Across the U.S.* report. The report found that across the country about one third-of respondents were experiencing frequent suicide ideation and women more so than men. The report also examined these questions by

race/ethnicity and age. The report then ranked states and counties with the highest proportion of individuals reporting suicidal ideation. California, Texas and Florida were the top three states with suicidal ideation.

IV. Death Review Team Reports

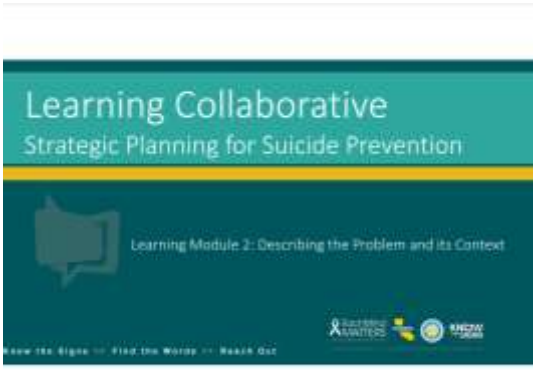
Both the Inter-Agency Council on Child Abuse and Neglect ICAN (Los Angeles County's Child Death Review Team) annual report and Montana Suicide Mortality Review Team's report demonstrate the benefits of these review teams as they 1) provide additional risk and protective factors not available elsewhere, 2) review coroner data and 3) have a team of stakeholders dedicating time to review and make recommendations. The reports are summarized as follows and include links to the full reports.

ICAN 2019 Child Death Review report describes overall child deaths (children and adolescents aged 17 years or younger) and details these deaths by homicides by parents, family members or caregivers; suicide; accidental deaths; and undetermined causes of death. The report details how cases were selected for team review and offer five years of data by demographic and regional characteristics. The report also provides sample case summaries of deaths by category and lists associated risk factors for each category of death reviewed. Link to report is https://www.ican4kids.org/reports

Montana Suicide Mortality Review Team report contains data, graphs and surveys that discuss U.S. suicide rates in 2014 and Montana suicide rates by gender, race and veteran status as well as age, region and education level. The report describes suicide deaths by type of means used and mental health issues or disorders among other variables. The report takes a deeper look at youth (11-17 years old), Native American and veteran suicide deaths. The report incorporates information from the Mountains' Youth Risk Behavior survey. Recommendations listed include depression screening and safety planning interventions, utilizing the Columbia Suicide Severity Rating Scale and convening a suicide prevention conference. A series of state and federal interventions are also described.

V. Additional Suicide Data Webinars and Tools

It may be helpful to view prior webinars and other training guides that review suicide data sources and explain why becoming familiar with all the factors that impact suicide can better inform county strategic planning efforts. Two resources are provided below, along with links to register or review the training.



In 2018, the **Learning Collaborative for Strategic Planning for Suicide Prevention**, funded by the California Mental Health Services Authority, presented five webinar modules to assist counties in their strategic planing effforts. The second module titled "Describing the Problem and Its Context" outlined the value of a data-driven planning process and explored different sources of data that could be used to describe the problem of suicide in a community. A common understanding of the problem of suicide was presented as the foundation for developing long-term goals for the strategic plan. To view the recording, click here. To view all modules produced by the Learning collaborative, visit the EMM Resource Center.

The Suicide Prevention Resource Center (SPRC) has several webinars on understanding and using data. For example, Dr. Crosby, in a 4-minute video titled Using Data to Prevent Suicide, reviews the importance of understanding data and talks about the National Violent Death Reporting System and how states are using this data to determine how to improve suicide prevention interventions and programs.

The SPRC also has online courses that include a certificate of completion. SPRC partnered with HealtheKnowledge to provide the following two self-paced, free, approximately 2-hour courses: 1) Locating and Understanding Data for Suicide Prevention and 2) A Strategic Planning Approach to Suicide Prevention. Click here to register for the courses.

In addition to these self-paced, free certification classes, SPRC also offers a variety of other resources including virtual learning labs, micro-learning, and SPARK talks. Visit SPRC.org/training for more information.