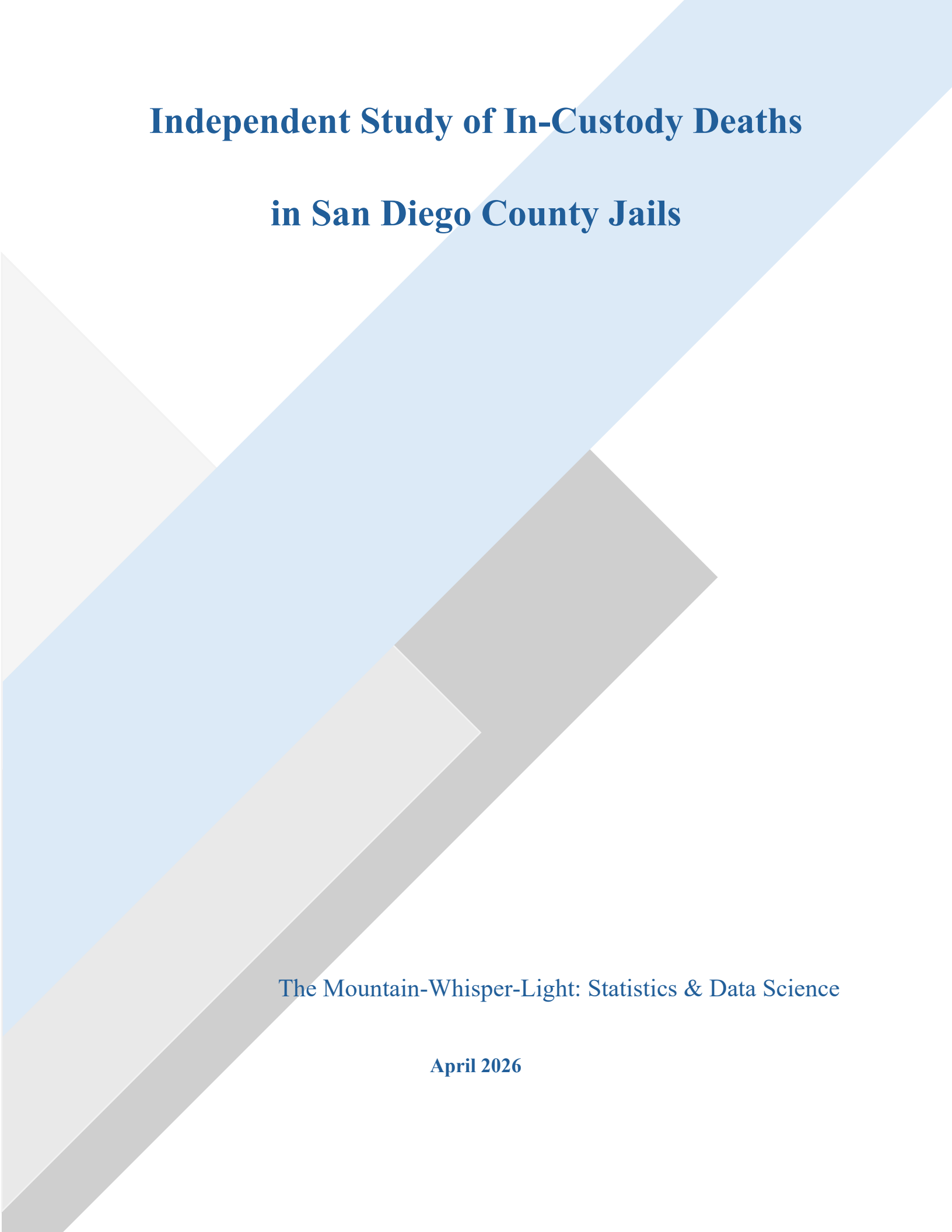




Independent Study of In-Custody Deaths in San Diego County Jails

The Mountain-Whisper-Light: Statistics & Data Science

April 2026

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Prepared for CLERB

By

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Key Findings

In-custody deaths in San Diego County are heavily concentrated in two booking facilities: San Diego Central Jail (SDCJ), and Vista Detention Facility (VDF).

The data indicate notable differences between these two facilities. SDCJ has a death rate nearly twice that of VDF, has the highest rate of assaults on staff by a significant margin, and is the location of nearly all recorded in-custody homicides. (see section [4.1.1](#), section [4.1.2](#) and [4.2.1](#) for details.) SDCJ is a universe of its own.

Descriptive analysis, involving only those individuals who died in custody (as opposed to the general population at these facilities), reveals some relevant facts:

Manner of Death:

- 54.8% of all deaths were not reported as natural (see section [4.2.1](#) for details);
- accidents were nearly synonymous with alcohol/drug overdoses (see section [4.2.1](#) for details);
- over the years, accident counts increased while suicide counts decreased (see section [4.2.1](#) and [4.3.3](#) for details)

Age:

- individuals under 30 died almost exclusively by accident (overdose) or suicide (see section [4.2.2.1](#) for details);
- nearly all homicides involved middle-aged individuals (ages 30-60) (see section [4.2.2.1](#) for details)

Race:

- over half the people who died were White, one-quarter were Hispanic, and one-eighth were Black individuals (see section [4.2.2.2](#) for details);
- Hispanic individuals who died were notably the youngest overall (see section [4.2.2.2](#) for details)

Gender:

- women who died were more often Black and more often, they died from what was marked as natural causes, compared to their male counterparts (see section [4.2.2.3](#) for details)

Length of Incarceration:

- after booking, deaths occurred the fastest in male booking facilities (SDCJ and VDF), then in the female booking facility (LCDF), then in non-booking facilities (GBDF)--with median length of incarceration in each of these categories at least three times shorter than in the next category (see section [4.2.3](#) for details);

- accidents and suicides occurred the fastest, with a quarter of accidents (mainly “under 30” age group) occurring on the booking day or the very next day (see section [4.2.3](#) for details)

Custody Status:

- 85% of individuals who died had not been sentenced; (see section [4.2.4](#) for details);
- Unsentenced individuals who died were usually under the age of 30 or over the age of 60. Most of these deaths took place in SDCJ (see section [4.2.4](#) for details).

For some issues, we had sufficient data allowing us to go deeper in our analysis and assess relationships among certain institutional factors:

Occupancy in SDCJ:

In SDCJ, occupancy and dying were historically connected. Simply by having more incarcerated people present, everyone’s chances of dying worsened (see section [4.3.1](#) for details)

A similar relationship could not be statistically elucidated in other facilities, at this time and with currently available data.

Security Enforcement Staffing Rates in SDCJ:

In SDCJ, the number of Sergeant-Detentions (and less so the number of Deputy Sheriff for Detentions/Court Services) historically mattered: having more staff in the facility coincided with fewer deaths, across the whole study period. A similar relationship could not be statistically elucidated in other facilities, at this time and with currently available data (see section [4.3.2](#) for details.)

Mental Health Staffing and Budgets:

Over the study period, the number of staff employed in mental health positions and the SDSO budget for mental health services increased. Simultaneously, suicides decreased but accidental overdoses increased.—the sum of both stayed constant, however (see section [4.3.3](#) for details).

Social Visits:

In the three booking facilities, historically, the lower was the Death Rate in a facility, the more frequently were those that died there receiving social visits relative to the general population of the facility (see section [4.3.4](#) for details.)

1 Introduction

This study came into being as a result of the relatively large number of in-custody deaths in the San Diego County jail system. In 2023, the Citizen’s Law Enforcement Review Board (CLERB), a county entity that investigates citizen complaints against the San Diego County Sheriff and San Diego County Probation as well as any incident of death or serious bodily injury connected to the actions of either department, promulgated an RFP (request for proposal) inviting vendors to apply to investigate the causes of in-custody deaths in the San Diego jail system.

The Mountain-Whisper-Light: Statistics & Data Science (TMWL) won the bid to conduct this study. TMWL is a statistical consulting firm based in Seattle, WA with a diverse history of technical projects, including studies on law enforcement and traffic stops. Our firm’s history provides ample evidence of the statistical capacity and other expertise needed for the present study. (See [Appendix A](#) for the research team biographies.)

TMWL was tasked with conducting an independent analysis of in-custody deaths in San Diego County detention facilities for the last ten (10) years, starting with the most current data available in 2023, identifying when incarcerated people are most vulnerable to death. It was to be guided by fifteen interest areas or study questions identified by CLERB (Appendix B), as per the “San Diego County In-Custody Death Study” completed by Analytica Consulting, LLC for CLERB in April 2022.¹

The San Diego Sheriff Office (SDSO)² has collected extensive data on incarcerated people from the time of intake forward. SDSO has posted various data dashboards online and has distributed reports about its facilities and the incarcerated populations within them, including data on in-custody deaths. From these dashboards, reports, and press releases, it is obvious that SDSO has per-person data on the people incarcerated in their detention facilities. This extensive data coverage of incarcerated people is quite important, because the analysis needed to detect risk factors for death (or factors for risk prevention) depends on comparing the data on in-custody deaths to the data on the complementary population: incarcerated people who have survived the in-custody experience. Upon the direction of SDSO in the fall of 2023, our research team pursued the relevant data for this study from SDSO through the California Public Records Act (CPRA) process.

What follows is first a brief review of the context of mounting public discourse and investigations into in-custody deaths in San Diego County that preceded the present study. The 2022 Analytica study was not the first attempt to understand the high number of in-custody deaths in the county; it came on the heels of more than a decade of journalistic coverage of the topic and investigation by other county entities aside from CLERB. In addition to the public exposure of the tragedy of the deaths, there has been a financial cost to San Diego County as well. Since 2012, when the study period for this project began, the County

¹ The full Analytica study can be viewed here: <https://analyticaconsulting.com/in-custody-death-study/>

² During this study, the name of the San Diego Sheriff’s Department (SDSD) changed to the San Diego Sheriff’s Office (SDSO). In this report, we use the new name and its acronym, except for the former being used in the title of a document (e.g., our CPRA requests).

has paid tens of millions of dollars to settle legal cases related to in-custody deaths, which we also address briefly in the literature review below.

With this context established, we then turn to the methods undertaken for this present study, inclusive of the questions we aimed to address, the challenges we faced in obtaining the necessary data, the support we received from CLERB to obtain it, and the statistical approaches used in our analyses. With the limited data that SDSO provided in response to our CPRA requests, we then offer two main categories of study findings on the 179 reported in-custody deaths from December 27, 2011 through April 2, 2024: (1) descriptive analyses that reflect patterns of in-custody deaths from a single dataset about those deaths (see section [4](#) for details); and (2) institutional factors that incorporate data beyond the in-custody deaths and therefore have a bit more explanatory power (see section [4.3](#) for details). In addition, we highlight some of the SDSO’s notable public efforts over the last decade to introduce new policies, procedures, and programs to reduce in-custody deaths and the need to assess their effectiveness (see section [5](#) for details.)

The study findings are followed by fifteen recommendations based on our findings, many of which call for further study or attention to certain patterns where interventions could potentially be made to reduce in-custody deaths (see section [6](#), section [6.4](#) and section [6.5.1.1](#) for details.)

During the course of this study, TMWL produced “mini-reports” for internal CLERB review that presented provisional analyses on the collected data and our attempts to address the study questions that we were contracted to address. In total, we produced five mini-reports that can be found in the Supplemental Material that accompanies this study.³ Some of the analyses in the Supplemental Material are not included in this report, largely those that showed no discernable or statistical relationship between the factor under review and in-custody deaths. Examples include the “flux” of movement in facilities from bookings, transfers, and releases or the type of crime charged for each incarcerated person who died that had no observable bearing on in-custody death. The Supplemental Material also includes areas that we attempted to investigate, such as the impact of homelessness or use of public housing, realignment, readmissions, and compassionate release, but we were unable to complete these analyses, since SDSO denied requests for the relevant data. Readers are directed to the Supplemental Material for these and other analyses.

The opinions and findings in this report are those of the TMWL team and do not necessarily reflect the opinion of CLERB or SDSO. In this report, TMWL does not express an opinion on other law enforcement activities that do not directly impact the risk of in-custody deaths.

³ The Supplemental Material for this study was delivered electronically to CLERB along with this report on April 15, 2026.

2 Literature Review

Public concern about in-custody deaths in the San Diego County jails began as early as 2013, with an investigative series in the *San Diego CityBeat* by Kelly Davis and Dave Maass. This series was followed by more than a decade of continued attention to this matter, including a 2017 National Commission on Correctional Health Care (NCCHC) Technical Assistance report for SDCJ (then SDCS), a 2018 report on jail suicides and suicide prevention policies by Disability Rights California, a related 2018 “Report on Suicide Prevention Practices within the San Diego County Jail System” by jail suicide prevention expert Lindsay Hayes, six months of investigative reporting by the *San Diego Union-Tribune* in 2019, a California State Audit Report in 2022, and a San Diegans for Justice report on CLERB in 2022, and other media coverage as well as public SDCS responses to some of these various inquiries.⁴ Very costly wrongful death settlements were awarded to families on behalf of victims during this time as well, noted in more detail below.

The California State Audit Report (February 3, 2022) noted that between 2006 and 2020, there were 185 deaths in San Diego County jails. The average daily population in the jails in that period was 5,162. The Audit Report also noted that the San Diego Central Jail (SDCJ) had the second highest number of jail deaths in the state. This high number of jail deaths raised concerns that there may be systemic issues related to its policies and practices, and the audit identified deficiencies in how SDCS provides care for and protects incarcerated individuals.

Unfortunately, the patterns identified in San Diego had echoes in other jails around the country as well. According to BJS, jails are locally operated short-term facilities that hold people awaiting trial or sentencing or both, and people sentenced to a term of incarceration of 1 year or less; they are generally operated by local law enforcement authorities such as a sheriff, a police chief, or a county or city administrator.⁵ According to the Bureau of Justice Statistics (BJS) Mortality in Local Jails 2000-2019 Statistical Tables, 1,200 persons died in local jails across the United States in 2019. The BJS report showed a slight increase in jail deaths nationwide between 2012 and 2015, with a slight decrease in 2016, followed by a continued increase from 2017 - 2021.⁶

BJS also found that around half of all jail deaths from 2008-2019 were due to illnesses such as heart disease, liver disease, and cancer. Notably, the data indicated that deaths due to drug or alcohol intoxication more than quadrupled during this period and, in 2018, females held in local jails had a higher

⁴ These reports (or information about them) can be found at the following links, listed in the order presented above: <https://voiceofsandiego.org/2018/02/23/county-lets-reporter-off-hook-but-still-challenges-her-60-dead-inmates-series/> (*San Diego City Beat* itself ceased publication in September 2019); <https://www.sdsheriff.gov/home/showpublisheddocument/48/637309633674230000>; <https://www.disabilityrightscalifornia.org/public-reports/san-diego-jail-suicides-report>;); chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.sdsheriff.gov/home/showpublisheddocument/44/637309633668600000 (this link also provide SDCS updates to the Hayes’ recommendations); <https://www.sandiegouniontribune.com/2019/09/20/dying-behind-bars-how-we-wrote-the-series/>; <https://www.auditor.ca.gov/reports/2021-109/index.html>; <https://www.sandiegansforjustice.com/sdj-clerb-report>.

⁵ BJS, Correctional Institutions, bjs.ojp.gov

⁶ Mortality in Local Jails, 2000-2019 – Statistical Tables 2021, www.ojp.gov.

rate of mortality (162 deaths per 100,000 incarcerated females) than males (152 deaths per 100,000 incarcerated males).⁷

Of the 1,200 deaths in local jails across the United States in 2019, 335 or about 30% were suicides, 290 were due to heart disease, and 172 were due to drug and alcohol. Homicides accounted for approximately 2% of all deaths in local jails. Of the 2,805 jurisdictions that reported mortality data in 2018, 605 (22%) reported, at least, one death. California was included in the list of states that reported deaths of people incarcerated in local jails.⁸

2.1 Jail Death Law Settlement Agreements

The 2022 California State Audit focused on four counties: San Diego, Alameda, Orange and Riverside. It found that between 2006 - 2020, 22 lawsuits filed were related to deaths in custody at SDSO detention facilities, and half (11) of these lawsuits were settled for a total cost of \$9.2 million. Two years later, an article in the *San Diego Union-Tribune* reported that “County records show that the Sheriff Department has now racked up more than \$75 million in jury awards and settlements since 2019, including at least \$60 million paid out over the five years ending Dec. 31, 2023.”⁹ In short, San Diego County taxpayers have expended and continue to expend a considerable amount of money for lawsuits involving incarcerated persons who died while in custody, and the settlement awards seem to be increasing.

Such increased settlements align with the fact that SDSO’s payment of approximately \$203M into the county public liability fund that covers legal payouts has also been increasing. SDSO’s 2015-16 contribution to the fund was \$8.3M, while its 2024-2025 payment to the fund was \$41.1M.¹⁰

In fact, in 2024 San Diego County settled a record \$15 million for the wrongful death of Elisa Serna, who died in custody at Las Colinas Detention Facility in 2019. Serna was a 24-year-old pregnant woman in the Las Colinas facility who died after a Sheriff’s Deputy and medical worker “watched her collapse on the floor in her cell and left her to die alone.”¹¹ There were other signs of Serna being in distress, because she had been placed in an observation cell. Delayed or absent medical care was an issue in the lawsuit, and

⁷ Ibid.

⁸ Ibid.

⁹ McDonald, Jeff, “San Diego County settles jail death lawsuit for \$15M; judge to monitor federal oversight compliance,” July 2, 2024, <https://www.corrections1.com/jail-management/san-diego-county-settles-jail-death-lawsuit-for-15m-judge-to-monitor-federal-oversight-compliance>

¹⁰ [San Diego County taxpayers paying 5 times more for sheriff’s legal payouts than a decade ago – San Diego Union-Tribune](#)

¹¹ McDonald, Jeff, “San Diego County settles jail death lawsuit for \$15M; judge to monitor federal oversight compliance,” July 2, 2024, <https://www.corrections1.com/jail-management/san-diego-county-settles-jail-death-lawsuit-for-15m-judge-to-monitor-federal-oversight-compliance>

the settlement widened responsibility to include the private healthcare contractor, Coast Medical Group, who would pay \$1 million of the total, leaving San Diego County to pay \$14 million.¹²

As part of this Las Colinas settlement, the court decided that in addition to the funds paid, the judge would monitor federal oversight compliance. This required the Sheriff to do the following: update the policy of checking vital signs of people incarcerated in the medical observation unit; meet personally with the victim’s parents; and conduct new training for deputies and medical staff, some of which would focus on “training on compassion.”¹³ The judge’s oversight would continue for 12 months after the settlement date. This ruling marked the first time that Sheriff Martinez’s jail operations were placed under formal court oversight.

It should be noted that San Diego County is not alone in facing wrongful death lawsuits and paying costly settlements; this is tragically occurring in jurisdictions across the country. Nor are lawsuits an optimal means of determining that the problem of in-custody deaths in our nation’s jails exists or how to strategize solutions. Simply the number and circumstances of jail deaths can tell us what we need to know, and readers can turn to the Rueter’s 2020 investigation “Dying Inside” to learn more about the national scale of this issue.¹⁴ We raise these concerns here to highlight that, in addition to the emotional and moral toll that such wrongful deaths exact on the people of San Diego County, and especially the loved ones of those who have died, there is also a substantial financial toll on taxpayers that must also be considered.

Concerns about in-custody deaths and their impacts on the people of San Diego County led CLERB, the county agency tasked with investigating such deaths, to enlist Analytica Consulting, LLC to conduct its study in April 2022. Analytica’s report reflected the collection and analysis of an extensive amount of data to examine the complex relationships between in-custody deaths and county mortality rates in 12 of California’s most populous counties. Seven critical findings were presented that resulted in or supported CLERB policy recommendations to SDSO. The focus of Analytica’s study, however, had certain limitations that warranted additional research. This is where TMWL enters the conversation with the present study; rather than an analysis comparing different California counties, this study focuses solely on San Diego County detention facilities.

¹² Ibid.

¹³ Ibid.

¹⁴ [Dying Inside: The Hidden Crisis in America’s Jails](#)

3 Methodology

The study period for this report covers just over 12 years of in-custody deaths, from December 27, 2011, through April 2, 2024, in San Diego County’s seven detention facilities: East Mesa Detention Facility (EMDF), George Bailey Detention Facility (GBDF), Las Colinas Detention Facility (LCDF), Rock Mountain Detention Facility (RMDF/FAC8), San Diego Central Jail (SDCJ), South Bay Detention Facility (SBDF), and Vista Detention Facility (VDF).¹⁵ More details about these facilities are provided in the section [4.1](#) below.

An in-custody death is defined as an event where a person has died in the custody or under the supervision of a San Diego County Adult Detention Facility or where a person who was previously in custody or under supervision of a San Diego County Adult Detention Facility died after being compassionately released.¹⁶

The study was undertaken to ascertain when incarcerated people in SDSO detention facilities are most vulnerable to in-custody death, guided by fifteen interest areas (Appendix B) identified by CLERB, as per the 2022 Analytica “San Diego County In-Custody Death Study.” Notably, this present study has a somewhat different character of analyzing data from the 2022 study in that it abstains from data approximations and modeling. To illustrate, the previous study used arrest data to indirectly model the racial composition of a jail population. In this study, we use the data provided without estimating race: either we have the data that shows the exact racial composition, or we do not have it, and the composition remains unknown.

Broadly, we aimed to detect risk factors for dying in the San Diego County jails (or factors for risk prevention) by comparing the data on the people who died in custody to the data on incarcerated people who survived the in-custody experience. By asking what factors might make some incarcerated people more vulnerable to in-custody death than others, we sought to collect data on a variety of potentially relevant factors for all incarcerated people during the study period. These factors included but were not limited to incarcerated population demographics, custody status, housing unit, sentencing status, medical and mental health diagnoses and treatment, prior use of county social services, length of incarceration, and number of social visits.

For those who died in custody, we sought to understand who they were and how and when they died. We therefore asked for information about the deaths that took place during the study period, including the

¹⁵ Some of these facilities now have different names. For example, East Mesa Detention Facility (EMDF) is now East Mesa Reentry Facility; Las Colinas Detention Facility (LCDF) is now Las Colinas Detention and Reentry Facility. We use the name and acronyms above as per their use in the datasets that SDSO provided. See SDSO’s website for current information on these facilities: <https://www.sdsheriff.gov/bureaus/detention-services-bureau/detention-facilities>

¹⁶ This definition is taken from this study’s contract between CLERB and TMWL and revised here to be inclusive of any youth held in these adult facilities and exclusive of the supervisory systems of probation and parole.

social demographics of those who died, the date, location, manner and cause of death, and other contributing factors.

We also asked whether any institutional factors may have played a role in the risks (or prevention) of in-custody deaths and sought information, such as facility occupancy levels, numbers of bookings and releases, presence of violence within facilities, staffing levels and types, budgetary data, and relevant SDSO policies and programming. A list of our CPRA requests can be found below in Section [3.1.1](#) and copies of them in full are in the Supplemental Material.

Our efforts to identify risk factors for dying in jail, which requires a comparison between the population of those who died in custody during the study period with those who survived, were severely curtailed by the limited data we received from the Sheriff's Department. Below is an account of our efforts to procure the data for these inquiries, including our attempts to obtain SDSO cooperation to share data, followed by discussion of our methods of analysis on the limited data to which we were given access.

3.1 Methods for Obtaining Data

3.1.1 CPRA Requests

Upon SDSO's direction, TMWL initially pursued data for this study through the California Public Records Act (CPRA). We began by conducting thorough reviews of prior studies and reports on the past decade of in-custody deaths in the San Diego County detention facilities to produce comprehensive CPRA requests. Based on this research and our focus on 12 of the 15 interest areas¹⁷, we generated and submitted to SDSO's online Public Records Center a total of six detailed CPRA requests over the span of nine months:

- SDSD In Custody Death PRA (Reference No. S000257-012224),
- SDSD Population PRA (Reference No. S000257-012224),
- SDSD Mental Health PRA (Reference No. S000894-031324),
- SDSD Staffing PRA (Reference No. S002147-061824),
- SDSO Policies and Programs CPRA (Reference No. S003984-102424),
- SDSO Consolidated CPRA (Reference No. S003985-102424).¹⁸

See the Supplemental Material for complete copies of all six CPRA submissions.

Using the message tool within SDSO's Public Records Center, as per SDSO's preferred method of correspondence, TMWL also submitted multiple follow-up questions and requests for larger data sets than

¹⁷ Given the excessive amount of time it took to obtain data, CLERB and TMWL renegotiated the workload and removed three of the stipulated fifteen study questions. Appendix B identifies those that were removed.

¹⁸ This list of CPRA requests is formatted with the title of the document that TMWL submitted first followed by the SDSD Reference No. in parenthesis. We use CPRA and PRA interchangeably; in the beginning of the study TMWL used PRA most often but shifted to using CPRA after working with CLERB counsel in August 2024.

SDSO initially provided in response to the formal CPRA submissions. We also submitted follow-up questions through CLERB's liaison to the Sheriff's Office.

TMWL also submitted CPRA requests via the countywide portal, NextRequest, on July 26, 2024, to the following county agencies:

- Behavioral Health Services,
- Medical Care Services,
- Homeless Solutions and Equitable Communities,
- Housing and Community Development Services, and
- Office of Financial Planning (or Auditor and Controller or Clerk of Board of Supervisors.)

(See Supplemental Material for these requests.)

Each of these county requests was closed without provision of data, except Behavioral Health Services through the Health & Human Services Agency (HHSA). CLERB's Contracting Officer Representative (CLERB COR) and HHSA worked diligently to obtain the requested data, and, after amending the study contract to protect the confidentiality of the data in question, CLERB shared the HHSA data with TMWL in late April 2025 via [Box.com](#). The data reported the last fiscal year in which the incarcerated people who died within the study period received county mental health services from HHSA, if at all. The analysis of these data can be found in the Supplemental Material.

We also used the Board of State and Community Corrections/Corrections Standard Authority (BSCC/CSA) database to supplement data received from SDSO.

3.1.2 Attempts to Obtain SDSO Cooperation and Data

In response to SDSO's initial delays and denials of our CPRA requests, TMWL also drafted and sent a letter directly to Sheriff Kelly Martinez on March 30, 2024, introducing the TMWL team and asking for SDSO's cooperation in obtaining the necessary data to conduct this study. TMWL drafted and sent a similar letter to CLERB on April 29, 2024, to be shared with their SDSO liaison.

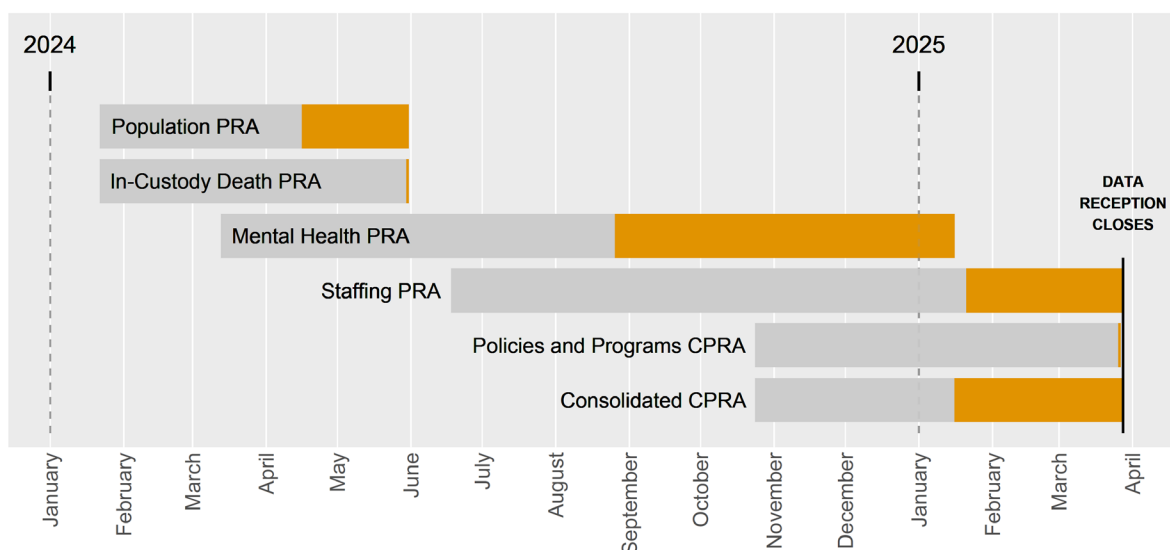
These efforts, with the support of CLERB COR, resulted in a virtual meeting between TMWL team and SDSO's data team on May 22, 2024, with CLERB's COR attending, for the same purpose: to obtain SDSO's cooperation in providing the necessary information and data to conduct this study. SDSO later denied our request for a non-disclosure agreement for TMWL to obtain redacted confidential individual-level data to adequately conduct this study.

CLERB later entered into agreement with specialized CPRA counsel to assist TMWL in obtaining SDSO data and to verify government codes listed in SDSO denials. This collaboration began with a virtual

meeting between CLERB's CPRA counsel and TMWL team, with COR attending, on August 21, 2024, to discuss all SDO responses to the CPRA requests to date. As per this meeting, the retained CPRA counsel drafted a rebuttal letter to SDO, seeking data that had been denied. TMWL submitted a copy of counsel's letter to the Sheriff within each of its open CPRA requests on SDO's Public Record Center and subsequently shared with counsel all SDO's piecemeal responses and SDO's final response letter. CLERB's CPRA counsel also assisted TMWL team to formulate the last two of its six CPRA requests, fine-tuning the documents to optimize SDO cooperation.

Taken together, these many efforts required TMWL, CLERB COR, and CLERB's CPRA counsel to invest a great deal of time to merely procure limited data for analysis. Figure 1 below presents a timeline of our CPRA submissions and substantive SDO response dates.

Figure 1. Timeline of CPRA Requests and SDO Responses.



Gray rectangles show wait times between submission date and the first substantive data response. Orange rectangles show wait times between the first and the last substantive response dates. For example, Population PRA was submitted on January 22, 2024; we received the first substantive response to our request on April 16, 2024, and the last substantive response on May 31, 2024. The data collection portion of this study ended on March 28, 2025.

Over the course of the fourteen (14) months—January 22, 2024 through March 28, 2025—that the extended team sought information and data through SDO's Public Records Center, SDO's responses ranged from statutory denials to repeated delays, with some provision of requested data in various formats, some of which proved substantial for limited but relevant statistical analysis. SDO provided no

necessary private information nor individual level information for all incarcerated people during the study period.

3.2 Methods of Statistical Analysis

3.2.1 *On Data Contrasts*

A statistical analysis requires contrasts in the data: one thing compared to another, A vs B. Once a choice is made as to what is “A” and what is “B,” these can be compared as to how similar they are, which one is larger or smaller and by how much, and can their difference in the available data be explained as simply a play of chance or is it more likely that they are indeed different.

Early in this study, CLERB representatives and TMWL team agreed that San Diego County and its jail facilities will not be compared to other counties and their jails, which was the focus of the previous study. This limits the possible contrasts to be made to the following analyses: differences between San Diego detention facilities; differences made by the passage of time; and differences between incarcerated individuals who died and those who did not die in jail.

This last contrast should likely carry the most weight because it is the most direct one: a person who died compared to a person who did not. For an (intentionally complicated) example: to determine if a young Hispanic individual was more likely to die than a young White individual by natural causes and across different facilities and with “Assault” as their common offense, knowing their death counts is not enough. What is also needed is sizes of these very particular groups—numbers of their members that did not die in-jail. And they are the great majority; comparably, only a tiny minority of incarcerated individuals died in custody during the study period.

Unfortunately, very little was obtained on individuals who did not die, no more than their total daily numbers per facility and the dates of their social visits. No information was obtained on anything further: their race, age, length of stay, etc.

For this reason, a large portion of the following analyses consists solely of descriptive results, partitioning in-custody deaths into various categories and subcategories, and then observing and comparing their counts and percentages.

3.2.2 *Rates*

We received data from the SDSO which includes the number of certain events that occurred in each facility. Here, an event might be an instance of in-custody death or an instance of receiving a social visit or an instance of assaulting a staff member. Because facilities have different sizes, a single event in a smaller facility is mathematically not the same as a single event in a larger facility. If a single death occurs in a group of 10 people, this is very different from a single death occurring in a group of 10,000 people. In other words, to compare groups fairly, we need to somehow account for their different sizes.

This is why in this report we often use rates instead of counts. Counts say: “this many times an event happened.” Rates say: “out of all the opportunities for an event to happen, this many times it did happen.” Mathematically, a rate is a ratio: 0.2 (the event happened 2 times out of 10 opportunities for it to happen).

Defining a rate requires carefully choosing its denominator, that is, defining what the “opportunities” are.

3.2.3 Person-Years

Each incarcerated person may experience an event each day anew. For example, each day presents another opportunity for a person to receive a social visit or, in the most extreme example, to die. Thus, each person’s each day is a brand new “opportunity” for an event to happen. Following standard statistical practice, we call this a “Person-Day”—a unit of opportunity. Starting with the booking day and until an individual is released from jail or dies, he/she contributes person days to their group.

Going from an individual to a group, we sum all their person days (all the opportunities) over some selected period of time, to form the denominator for a Rate. To illustrate: a group consisting of 100 individuals on each day of one particular week received a total of 10 social visits. They accrued 700 person days, and their visit rate was $10/700 = 0.014$ visits per Person-Day, over the course of that week.

The number of Person-Days tends to be a large number, so we often multiply such a ratio by 365 to express a Rate in units of Person-Years (shortened to PY). We can further multiply by 1,000 to express a Rate in units of 1,000 PY. For example, a Rate of 0.00001369863 in Person-Days equals 5 in 1,000 PY, a much more convenient number for showing in Figures and Tables.

So, a Death Rate is the ratio of the number of deaths and the number of Person-Days accrued over a selected period of time by a selected group of individuals. For example, a Death Rate of 5 in 1,000 PY means: for every 1,000 individuals present in a group every day for 365 days straight, 5 in-custody deaths on average occurred.

3.2.4 Ratios

We use rate ratios to learn if two rates are similar. Ratios are like fractions. When a fraction is close to 1, the top and the bottom number are similar. If the ratio is larger than 1, then the rate on top is larger than the rate on bottom. We use ratios in the section 4.3.4 on Social Visits.

3.2.5 Using the Median versus the Average as a Statistical Measure

Occasionally we compare various categories of death cases by choosing a single number to represent the whole category, to compare (to measure) one category against another. There are different mathematical ways to find the middle of a data set.

One common way is to use the average. To find the average, we add all of the numbers together, then divide by the count of how many numbers we added. Another way to find the middle of the group is to use the median, which is the half-way point in the data. Often, the average and median are close together. However, the average can change depending on the minimum and maximum numbers. The median focuses on the middle of the data set, which changes less quickly.

Therefore, in this work, we typically use medians and not averages. This is because some particular death cases may be very unusual statistical outliers, and these may affect the average so much as to render it misleading.

For example, in comparing two age groups A and B, let's assume that everyone in group A is younger than anyone in Group B. Clearly group A is "younger": both median and average age in group A are smaller than in B. If a single extremely old person joins group A, its average may become higher than average of group B, although nearly everyone in group A is still younger than anyone in B, so A is still typically "younger" group. The addition of one extremely old person will affect the median of A very little or not at all. So, median is clearly a better way to compare the two groups by age.

Another example from our data that illustrates where median is the better choice is when comparing groups of death cases by the length of incarceration before death occurred. Typical lengths in the data are 2-3 days, weeks, or even months. But if a group contains a single death that occurred 10 years after booking, that single case will make the average length of incarceration of the group misleadingly large, while median length of incarceration will be barely affected by the outlier.

Where outliers do not matter, we prefer to compare averages as they are more intuitive. For example, we use the average (not the median) number of social visits to compare facilities.

3.2.6 Regression Analysis of Occupancy and In-Custody Death

In this work, we performed a statistical regression analysis when we investigated whether the Death Rate in a facility can be associated with its occupancy. We analyzed the death rate across the study period, as well as in smaller time intervals. Details of this process are below.

For this we used Poisson regression, where daily occupancy provides an offset to turn daily death counts into daily death rates. Then, the same occupancy was used as a predictor variable to see if higher occupancy means higher rate of dying. It is not typical to use the same feature in the data both as offset and as the predictor, but in this case this is exactly what we were aiming at: just the fact that occupancy was higher on a single day, might have caused the daily death rate—not the daily death count¹⁹—to increase.

The result is reported as the value of the ratio of the daily rate of death between two occupancies that differ by 100 people. However, since the daily count of deaths never surpassed 1 in SDCJ, the rate of death on a particular day (death count per person present) practically equaled the probability of dying per

¹⁹ Daily death count is affected by the daily occupancy of the facility (more people present—more deaths), while daily death rate is not as it is calculated per person.

person present. The result is thus interpreted as % change of probability of dying per person present in the facility.

3.2.7 Statistical Significance and Confidence Intervals

Throughout this report, p-value less than 0.05 was considered statistically significant. We also reported the 95% confidence interval (shortened to CI) for the % change of probability of dying per person. This is the estimated range of values where the reported % change is expected to be found 95% of the time if this study was repeated many times with everything being the same except that the play of chance would each time produce a somewhat different result.

4 Study Findings

There were 179 reported in-custody deaths in the seven San Diego County Detention Facilities under review in the study period, spanning just over 12 years, from December 27, 2011, through April 2, 2024. After a brief look at the facilities and their essential differences regarding in-jail deaths, our findings are then presented in two main categories of analysis: descriptive analyses of in-custody deaths and comparative analyses of institutional factors correlating with in-custody deaths.

The descriptive analyses involve a close examination of those individuals who died in custody, but do not offer any comparative information with people who did not die while incarcerated. The analyses contrast counts and percentages among various categories of deaths across manners of death, social demographics, lengths of incarceration, and custody status.

The main limitation of these results is that potential causes of the observed differences must remain very unclear. When comparing two groups of incarcerated individuals, A and B, we may observe more deaths in group A than in group B. What could be the reason for this excess? The first thing to then check is if perhaps group A was larger. If so, our observation may be vacuous as it is only natural that those that come in larger numbers also have higher death counts. Only by comparing not raw counts but the proportion of deaths within groups A and B may we conclude that the higher death count marks a true excess and then proceed to search for a cause.

As we discussed above, we received limited data with which to conduct this analysis. With descriptive data only for the individuals who died in custody, we do not have the information about the larger incarcerated population that is needed to perform this check. We may intuitively and implicitly assume that sizes of A and B are similar enough, but we could be wrong. Our interpretation is thus cut short and must remain an open point.

Still, descriptive analysis is far from useless. It reveals some true differences and imbalances among the death counts and poses questions about why these differences are in the data. Should these categories not be more equal? Trying to come up with answers is then a matter for further discussion and examination.

Institutional factor analyses leverage the information we do have that goes beyond just in-custody deaths. This analysis takes account of information we obtained about facility population numbers, staffing, mental health related staff and budgets, and social visits to all individuals in custody during the study period. These factors have somewhat greater explanatory power than the purely descriptive results and are limited mainly by the little we know about individuals who did not die in custody.

4.1 Facilities

The seven detention facilities under review differ in gender population, security level, function, and rated capacity.²⁰ These differences are presented in the table below for reference while reading this report.

Three facilities serve as intake or booking facilities: SDCJ, VDF, and LCDF. LCDF is the primary booking site for females and is the only women’s facility in the county. VDF books and houses a relatively small number of females (about 5% of the total VDF population) awaiting proceedings for North County cases.²¹

Figure 2. Descriptions of Facilities

<i>Facility</i>	<i>Gender Population</i>	<i>Security Level</i>	<i>Function</i>	<i>Rated Capacity</i>
EMDF (East Mesa Detention Facility)	Males	Type II Medium	Non-booking	760
GBDF (George Bailey Detention Facility)	Males	Maximum	Non-booking	1,380 (largest)
LCDF (Las Colinas Detention Facility)	Females	Minimum- Maximum range	Booking	1,280
FAC8/RMDF (Rock Mountain Detention Facility)	Males	Maximum	Non-booking	200 (smallest)
SDCJ (San Diego Central Jail)	Males	Maximum	Booking	1260
SBDF (South Bay Detention Facility)	Males	Medium	Non-booking	386
VDF (Vista Detention Facility)	mostly Males; some Females	Type II (high- security intake)	Booking	825

Figure 3 below shows occupancies and BSCC/CSA caps averaged throughout the study period. During COVID all facilities abruptly reduced occupancies without them returning to their pre-COVID values before the end of the study period. Figure 3 is therefore partitioned into two parts, before and after April 1, 2020, the approximate date of the sudden occupancy reductions. Facilities are ordered from GBDF, the

²⁰ The information in the table is taken largely from the following SDSO website:

<https://www.sdsosheriff.gov/bureaus/detention-services-bureau/detention-facilities>. Some of the facility names above differ from current SDSO webpages because they have changed during or after the study period. Here we use the names of the facilities as they appear in the datasets that SDSO provided for this study for ease of reference in the analyses below. Note that the information in the table is current and may also have been different during the study period.

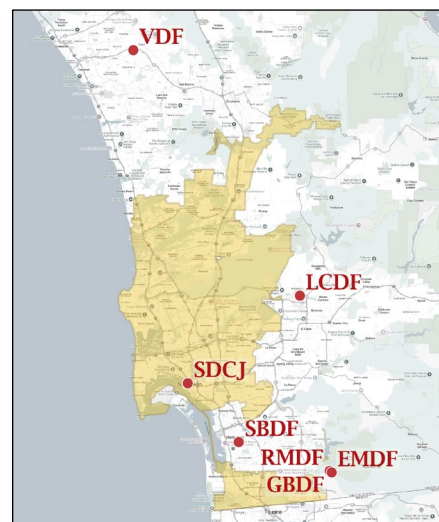
²¹ SDSO provides only two “Gender” (or biological sex) categories in its reported data: males and females. TMWL research team uses only these terms to reflect SDSO data.

largest in terms of occupancy and rated capacity, to the smallest FAC8/RMDF. Average daily occupancy in GBDF, EMDF, and SBDF exceeded their rated capacity during the pre-COVID years.

Figure 3. Average daily occupancy and BSCC/CSA rated cap of SD jail facilities.

This data is from SDSO’s Hudler (Armstrong) Letters,²² separated here into pre-COVID period (before April 1, 2020), and COVID period (after April 1, 2020). Right: Map denoting the seven SDSO Detention Facilities with San Diego city limits (yellow area).

Facility	Pre-COVID		COVID	
	Occupancy	Cap	Occupancy	Cap
GBDF	1617	1380	1323	1380
SDCJ	944	945	789	946
VDF	796	818	619	807
LCDF	794	859	491	1216
EMDF	659	640	319	760
SBDF	421	386	345	386
FAC8/RMDF	200	200	58	200



The three booking facilities (SDCJ, VDF, LCDF) are the largest after GBDF. VDF and LCDF had essentially the same occupancy pre-COVID. The table in Figure 3 is accompanied by a map showing the geographic and relative locations of each facility. SDCJ is the only facility located within San Diego city limits. Three facilities (GBDF, EMDF, FAC8/RMDF) are collocated at only 2.6 miles from the border with Mexico.

Most importantly, the facilities vastly differ regarding in-custody deaths. Figure 4 shows the death counts within each facility with their percentage of the total 179 reported deaths during the study period.

Figure 4. In-custody death counts and percentages by facility, 2011-2024.

²² SDSO used the title “Hudler (Armstrong) Letters” to refer to the datasets that contained the “Daily Inmate Population Reports” from January 2012 through April 2024. They consisted of many digital images of documents, a sample of which can be found in our “Mini-Report for Item 2A” in the Supplemental Material. SDSO did not provide an explanation for the use of this title.

The study period is from December 27, 2011 through April 2, 2024. Note that there were five death cases in which the facility where the person died is unknown. Also, due to rounding, the sum of given percentages may not be exactly 100%.

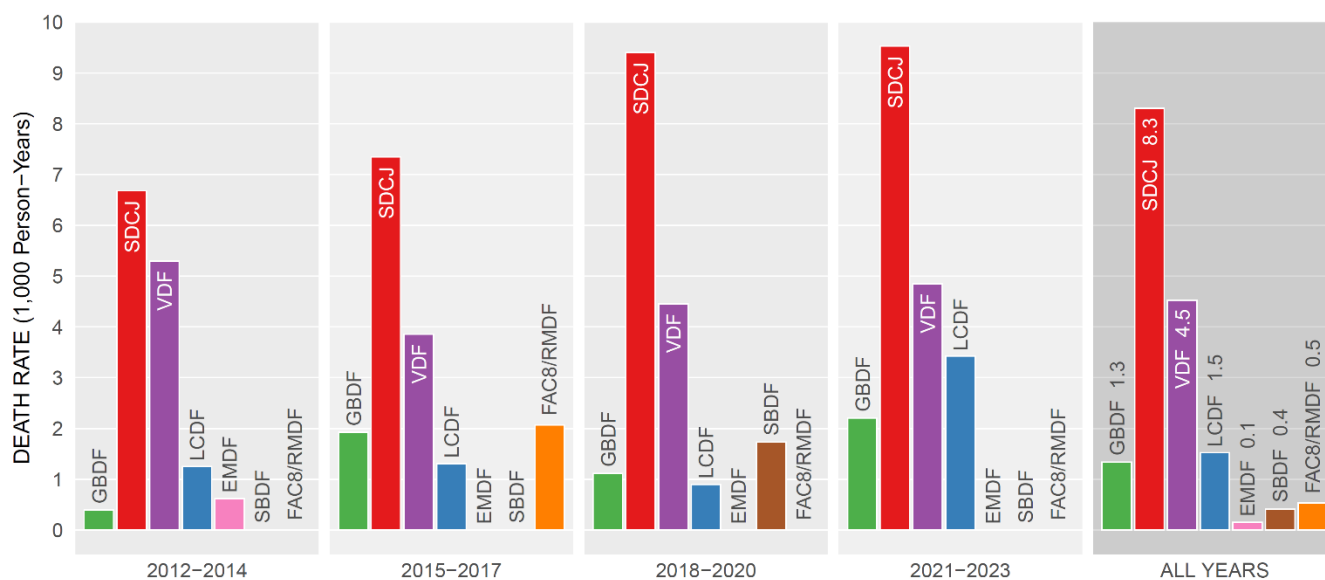
<i>GBDF</i>	<i>SDCJ</i>	<i>VDF</i>	<i>LCDF</i>	<i>EMDF</i>	<i>SBDF</i>	<i>FAC8/RMDF</i>	<i>unknown</i>	<i>TOTAL</i>
25	91	41	13	1	2	1	5	179
(14%)	(50.8%)	(22.9%)	(7.3%)	(0.6%)	(1.1%)	(0.6%)	(2.8%)	(100%)

SDCJ clearly stands out, accounting for slightly more than half of all deaths. In comparison, GBDF, with nearly twice the average occupancy, accounts for only 14% (nearly four times less) of all deaths. In facilities other than the four largest ones (GBDF through LCDF above) deaths were very sporadic, with 1 or 2 deaths per facility in 12 years of data.

Since facilities house notably different numbers of people, we calculate a Death Rate for each facility, expressed in units of 1,000 PY (see section [3.3](#) on the Methods of Statistical Analysis).

Figure 5. Death rates across facilities and calendar years, 2011-2024.

The unit is 1,000 Person-Years. The rightmost panel shows the cumulative results for the whole study period.



The value of expressing deaths as rates can be seen in GBDF having lower death rate (1.4) than LCDF (1.5), despite GBDF having nearly twice the total death count (25 versus 13). Since GBDF is sufficiently larger than LCDF, it actually had fewer deaths per incarcerated person. That is, the average person in GBDF had lower chance of dying than the average person in LCDF.

4.1.1 In-Custody Deaths at SDCJ and VDF

The problem of in-custody deaths in San Diego County is clearly a problem posed by two specific detention facilities: SDCJ and VDF, the facilities that process the intake of predominantly males. Moreover, SDCJ stands out dramatically even between these two facilities, with a death rate nearly twice that of VDF.

4.1.2 Rates of Offenses Against Staff Per Facility

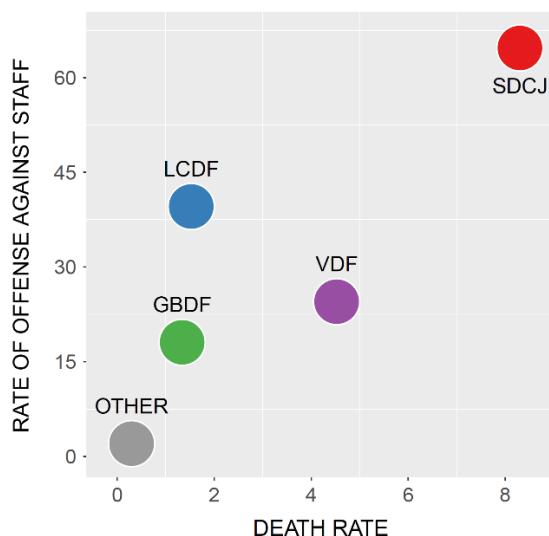
Another aspect in which SDCJ stands out from other facilities is the rate of offenses (assaults) on staff by people who are incarcerated there. Figure 6 shows the rates of reported offenses against staff (mainly: Attack on Officer, Battery, Gassing²³) versus in-custody death rates across facilities.²⁴

²³ SDSO did not provide a definition for gassing, but CA Penal Code sections 243.9 (b) and 4501.1 (b) defines it as: Intentionally placing or throwing or causing to be placed or thrown any human excrement or other bodily fluids or bodily substances or any mixture containing human excrement or other bodily fluids or bodily substances that results in actual contact with the skin or membranes of a correctional officer or employee of the institution, by a person confined in that institution.

²⁴ It should be noted that TMWL also asked SDSO for data about reported assaults on incarcerated people by staff and reported assaults of incarcerated people by other incarcerated people. These requests were denied.

Figure 6. Rate of Offenses Against Staff versus Death Rate, per facility.

The dot marked as “Other” represents the three smallest facilities cumulatively. The unit for the death rate and rate of offense against staff is 1,000 Person-Years. (See section [3.3.3](#) on Person-Years for more details.)



SDCJ has by far the highest rate of assaults on staff, 63% higher than the next facility (LCDF) and 160% higher than the rate in VDF. SDCJ is clearly unique among the detention facilities.

Interestingly, VDF has a relatively low rate of reported assaults compared to SDCJ. The VDF rate of assaults was comparable to GBDF, although VDF’s death rate is three times as high as either GBDF or LCDF. Comparing these 2 aspects of VDF and LCDF are opposites: VDF is high on deaths but low on reported assaults, and the LCDF shows the opposite trends.

We note that LCDF is the facility for females and this may be associated with how offending behaviors are treated. However, we did not receive the data we requested from SDSO about the populations within each facility, so statistical analysis of how gender or age demographics affect the rates of offenses against staff is not possible.

We note that the number of offenses against staff at each facility was provided by SDSO. We assume that actions against staff are treated equally across facilities. If the actions are treated different at some facilities, this would be a limitation of this study data.

4.2 Descriptive Analyses of In-Custody Death

4.2.1 Manner of Death

SDSO identifies in-custody deaths by using four different “Manner of Death” categories: Accident, Homicide, Natural, and Suicide. The Figure 7 shows the death counts and percentages of these different manners of in-custody death during the study period.

Figure 7. In-custody death counts and percentages by manner of death, 2011-2024.

In five death cases, the manner of death was undetermined, and in two cases, the manner of death was still pending classification during the data collection process that ended in March 2025. Due to rounding, the sum of given percentages may not be exactly 100%.

<i>Accident</i>	<i>Homicide</i>	<i>Natural</i>	<i>Suicide</i>	<i>Pending</i>	<i>undetermined</i>	<i>TOTAL</i>
44 (24.6%)	15 (8.4%)	74 (41.3%)	39 (21.8%)	5 (2.8%)	2 (1.1%)	179 (100%)

Deaths marked as Natural were the most numerous at 74 but still represented fewer than half of all deaths: 4.1 out of every 10 in-custody deaths were categorized as Natural. According to the National Association of Medical Examiners (NAME)’s guide on the classification of manner of death, natural deaths are those which are due “solely or nearly totally to disease and/or the aging process.”²⁵ In contrast, 54.8% of all in-custody deaths were not reported as Natural (in other words, they were reported as Accidents, Homicides, or Suicides).

SDSO further characterizes the nature of in-custody deaths with a “Means of Death” description. Figure 8 tallies the Means of Death within each Manner of Death category.

²⁵ Randy Hanzlick, et al., “A Guide for Manner of Death Classification,” *National Association of Medical Examiners*. (2002): 5. Accessed on November 22, 2024 at: <https://name.memberclicks.net/assets/docs/MANNEROFDEATH.pdf> .

Figure 8. Relationship between Manners and Means of Death in the SDSO dataset with their respective counts, 2011-2024.

<i>Manner of Death</i>	<i>Count</i>	<i>Means of Death</i>
<i>Natural</i>	74	Not Applicable 73, Medical 1
<i>Accident</i>	44	Alcohol/Drug Overdose 37, Accident 1, Other 5, I/C Drug Related 1
<i>Suicide</i>	39	Hanging/Strangulation 29, Other 8, Club/Blunt Instrument 2
<i>Homicide</i>	15	Hands-Feet-Fists 7, Hanging/Strangulation 3, Other 2, Homicide 1, Handgun 1, Poss Restraint/Drug Toxicity 1
<i>Pending</i>	5	TBD 4, Pending 1
<i>Undetermined</i>	2	Undetermined 2

A great majority of Accidents were identified as Alcohol/Drug Overdose: 37 out of 44 (84%). Fewer than one in every six Accidents was something other than an overdose.

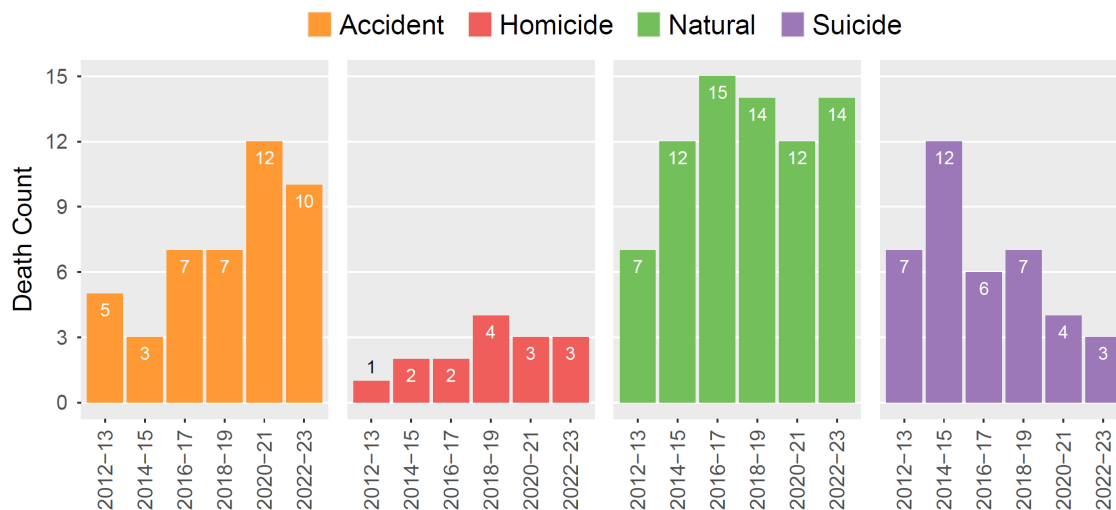
Note that the Means of Death for all Natural deaths was reported as “Not Applicable” with the exception of one death described as “Medical.”²⁶

Throughout the years, as shown in Figure 9, Accidents (largely overdoses) increased and Suicides decreased. Natural deaths and Homicides were mostly constant after 2013.

²⁶ SDSO also reports in-custody deaths with the category “Cause of Death,” with more information on deaths reported as “Natural.” Many of these list diabetes, heart disease, and cancer as the cause, though not exclusively. These data were not analyzed for this study, and we make note of them in the Recommendations section below.

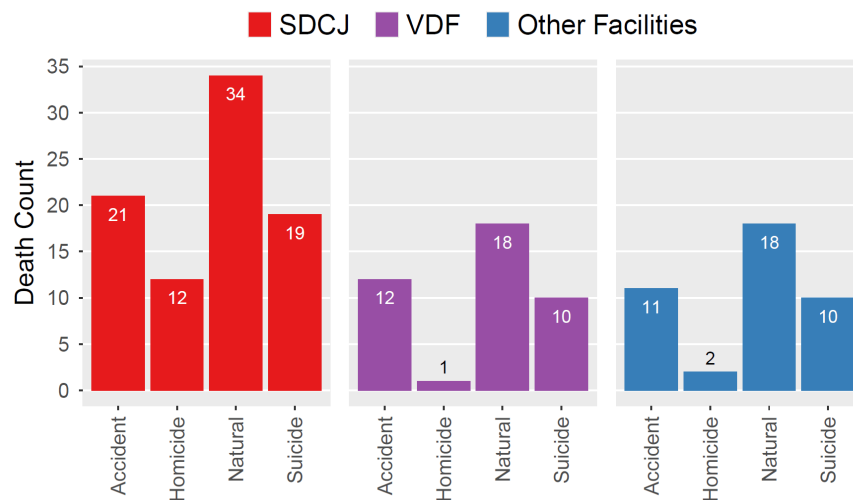
Figure 9. Counts of deaths by different manner of death, across calendar years, 2011-2024.

Each bar represents two-year aggregates, a timespan selected to best show trends in the data.



Across facilities, the different manners of death had similar proportions except for Homicides. Homicides happened almost exclusively in SDCJ, see Figure 10.

Figure 10. Counts of deaths by facility, across different manners of death, 2011-2024.



To compare, in SDCJ alone, the count of Homicides is nearly one-third of the count of Natural deaths (12 vs. 34), while in all other facilities together the Homicide count is about one-twelfth the count of Natural deaths (3 vs. 36). Again, we see that data from SDCJ shows counts far above the other facilities.

4.2.2 Social Demographics

There were also differences among in-custody deaths in terms of the social demographics of reported age, race, and gender and the manners in which individuals in these various demographic categories died.

4.2.2.1 Age

Figure 11 shows the counts and percentages of in-custody deaths by four different age categories, selected to reflect very general stages in life: young (under 30), early middle-age (30-45 years), late middle-age (46-60 years), and senior (over 60) and to produce groups of similar size.

Figure 11. In-custody death counts and percentages by age categories, 2011-2024.

In two death cases, the age was unknown.

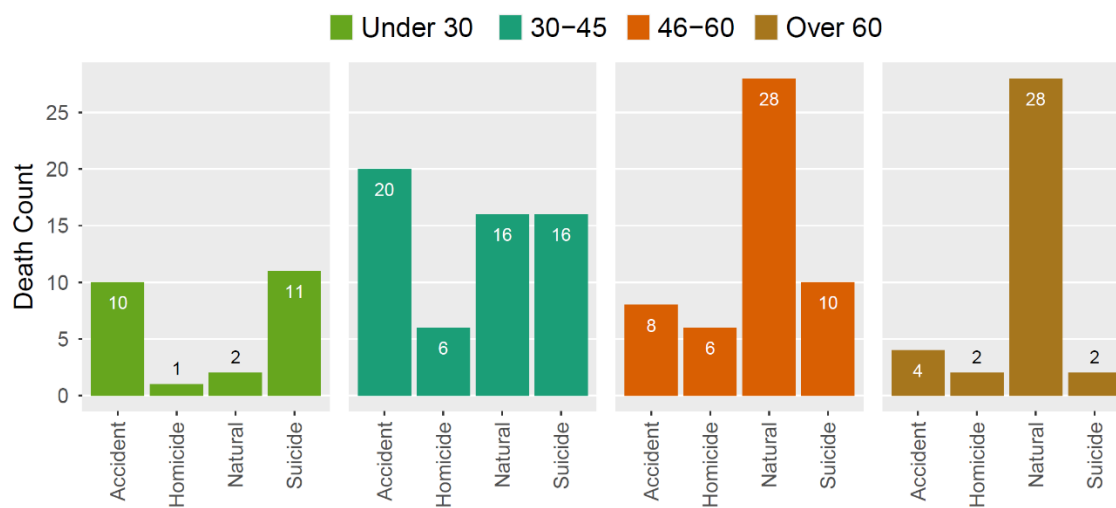
<i>Under 30</i>	<i>30-45 yrs</i>	<i>46-60 yrs</i>	<i>Over 60</i>	<i>unknown</i>	<i>TOTAL</i>
26	59	54	38	2	179
(14.5%)	(33.0%)	(30.2%)	(21.2%)	(1.1%)	(100%)

With this categorization, middle aged individuals (the two groups combined) account for nearly two-thirds of all deaths (63%).

As illustrated in Figure 12, members of the youngest group died almost exclusively from Accidents and Suicides (88% of all their deaths), while in the early middle-aged group Accidents were the most frequent category. Natural deaths prevailed in both the late middle-aged group (54% of all their deaths) and particularly in the senior group (78% of all their deaths).

A great majority of Homicides happened in the two middle-aged groups, and occurred mainly in SDCJ (see Figure 10).

Figure 12. Counts of deaths by age category, across different manners of death, 2011-2024.



4.2.2.2 Race

Figure 13 gives the number and percentage of in-custody deaths during the study period by four different race categories reported by SDSO.²⁷

Figure 13. In-custody death counts and percentages by race categories, 2011-2024.

<i>White</i>	<i>Hispanic</i>	<i>Black</i>	<i>Other</i>	<i>unknown</i>	<i>TOTAL</i>
93	52	25	8	1	179
(52%)	(29%)	(14%)	(4.5%)	(0.6%)	(100%)

Over half of all deaths were of White individuals—about twice as many as of Hispanic individuals and about four times as many as of Black individuals. (Note that in one case, the person’s race was unknown.) Unfortunately, the racial breakdown of all people incarcerated during the study period remains unknown, making the rate of dying for each race (death count divided by the group size) undeterminable. Only the death rate (as opposed to raw numbers) can reveal the share of in-custody deaths experienced by each racial group.

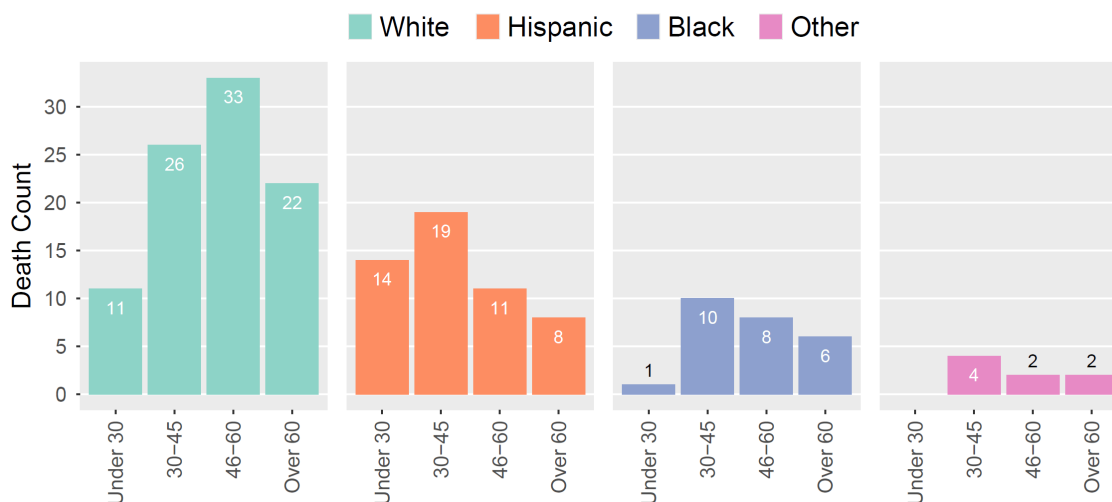
Throughout the years, death counts were mainly constant for White and Hispanic individuals; Black individuals had some short-term increase in deaths in years 2018-19, just before COVID (not shown

²⁷ SDSO data reported only four race categories: White, Black, Hispanic, and Other. TMWL research team acknowledges that many other and different race (or racialized) categories exist.

here). Distributions of deaths across different manners of death were nearly identical for each race (also not shown here).

In-custody deaths among racial groups have somewhat different age profiles, illustrated in Figure 14.

Figure 14. Counts of deaths by race, across different age categories, 2011-2024.



The Hispanic group clearly stands out as dying in custody at the youngest ages, with median age of 39. White and Black groups are overall equal in age—with median ages of 50.5 and 51 respectively, which is notably older than the Hispanic group. In the Black and Other groups, there are almost no deaths under age 30.

4.2.2.3 Gender

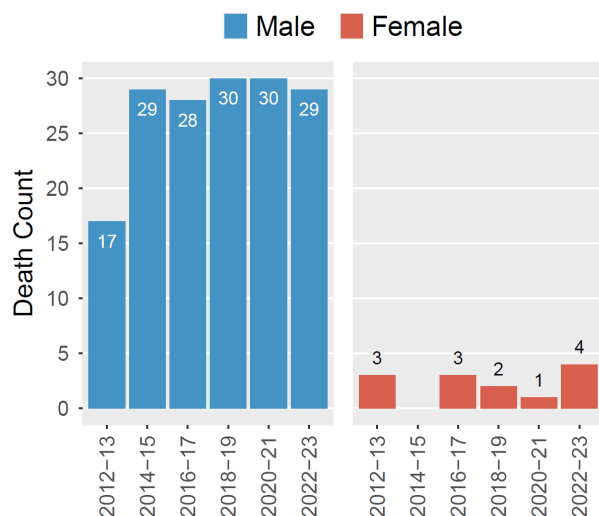
Although VDF books and houses a limited number of females, there were no in-custody deaths of any female outside LCDF. Therefore, the gender (Male-Female) breakdown of death data is identical to the breakdown of deaths in LCDF versus deaths in all other facilities. Also, the Death Rate in LCDF, as given in Figure 5, is the all-year Female Death Rate of 1.5 per 1,000 PY (when females housed in VDF are included in the female death rate, they fall within the rounding error of this number).

Figure 15 shows the reported death counts over calendar time, given in two-year increments, and broken down by gender. There were 13 female deaths reported during the study period, comprising 7% of all deaths, and these female deaths were distributed fairly evenly throughout the study period.

The small table to the right shows total (Male+Female) death counts by the same two-year increments.

Figure 15. Counts of deaths by gender, across calendar time, 2011-2024.

A small table to the right shows counts of all (Male+Female) deaths.

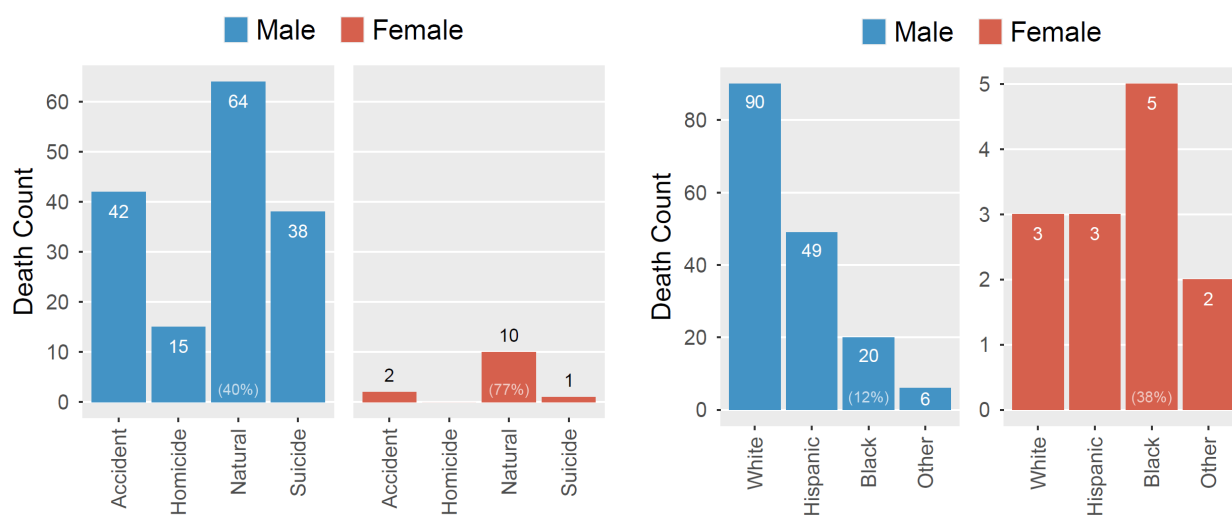


Two-year period	Total Deaths
2012-13	20
2014-15	31
2016-17	31
2018-19	32
2020-21	31
2022-23	33

The table reveals that after 2013 there was a remarkable consistency, even constancy, of total death counts during the ten years 2014-2023. This was so even during the COVID-affected period. This suggests that the increase in Death Rate due to COVID was nearly perfectly offset by the reduction of total occupancy so that the total death count remained practically constant. That is, a smaller number of incarcerated individuals suffered the same total number of deaths. See section [4.3.1](#) for more details of occupancy during COVID-affected period.

Deaths are distributed differently among Males and among Females by manner of death and by race (see Figure 16).

Figure 16. Counts of deaths by gender, across manners of death (left panel) and race categories (right panel).



In Figure 16, selected bars have percentage marks. These show the percentage of those particular deaths among all deaths among the same gender. For example: 64 Natural male deaths are 40% of 159 male deaths, five Black female deaths are 38% of 13 female deaths, etc. Among female deaths, Natural deaths were more frequent (77%) than among male deaths (40%). Also among female deaths, the Black racial category was encountered more often (38%) than among male deaths (12%).

These proportions, shown in the selected bars, are statistically significant, that is, they are not likely to be a play of chance but show real differences in how race and manner were distributed between male deaths and female deaths.

As a reminder, these findings should not be misinterpreted to say, for example, that Black females died more frequently than Black males. To make such a claim, counts of Black females and males who did not die in custody would be necessary. It is quite possible that females who died in custody were so often Black because there were more Black females in jail to begin with—or there could have been fewer, which would make this finding more outstanding.

4.2.3 Length of Incarceration

We observed the number of days from booking to death for all reported individuals who died in custody during the study period. It is meaningful to partition this time span into the following categories, as the frequency of deaths was approximately constant within each category:

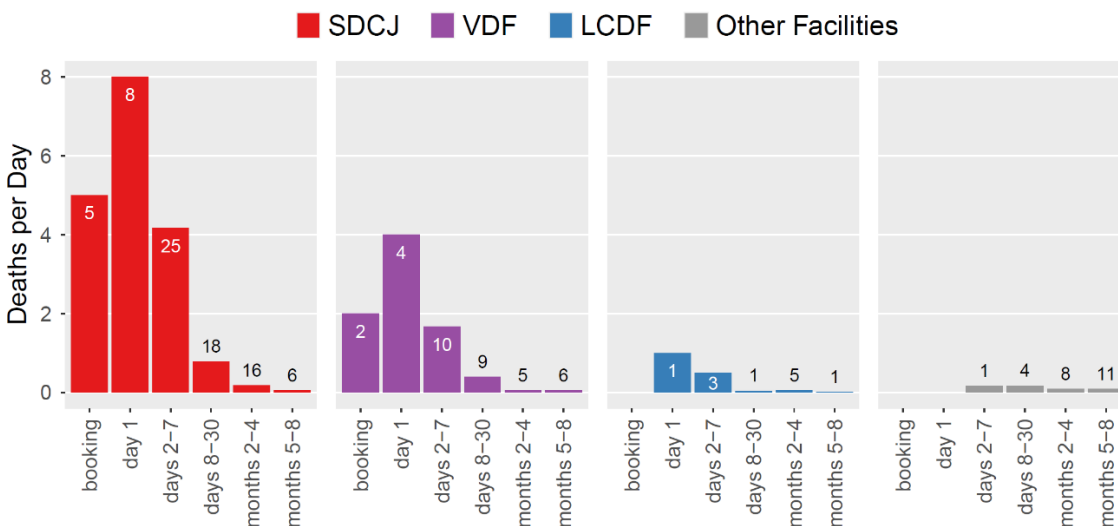
1. The booking day,
2. The following day (“day 1”),
3. Remaining days of the first week in jail (“days 2-7”),
4. Days until the first month in jail (“days 8-30”),
5. The following three months (“months 2-4”),
6. The following four months (“months 5-8”).

Out of the 179 reported deaths, this analysis includes 173 deaths, as 6 were missing a booking date. Also, 21 deaths occurred later than 8 months in jail, so these are not shown in the following figures but are included in the analysis.

In the following figures starting with Figure 17, for each category, the y-axis shows deaths per day (total death counts divided by the number of days involved) while the number inside the bar shows total death counts. For example, in SDCJ there were 25 deaths on days 2-7, which is 4.2 deaths per each day in that category (the bar height). Booking day and day 1 are single-day categories, so numbers inside those bars coincide with bar heights.

Figure 17. Deaths per day across categories of the length of incarceration, in selected facilities, 2011-2024.

Numbers inside/above bars are counts of all deaths in that category.



Additionally, Figure 18 gives median lengths of incarceration for in-custody deaths in various facilities. Both the table and the figure reveal a consistent picture: two booking facilities, SDCJ and VDF, are nearly identical in terms of length of incarceration prior to death: in both facilities, the median time a person spends in the facility prior to death is less than two weeks, by far the quickest time prior to death throughout the San Diego jail system. In the female booking facility, LCDF, the median length is over a month, and in the remaining facilities, it is as long as 4-6 months.

The booking day and day 1 are particularly important in SDCJ (accounting for 15% of all its deaths) and VDF (18% of all its deaths). Only a single death in that time frame occurred in any of other detention facilities in this study period.

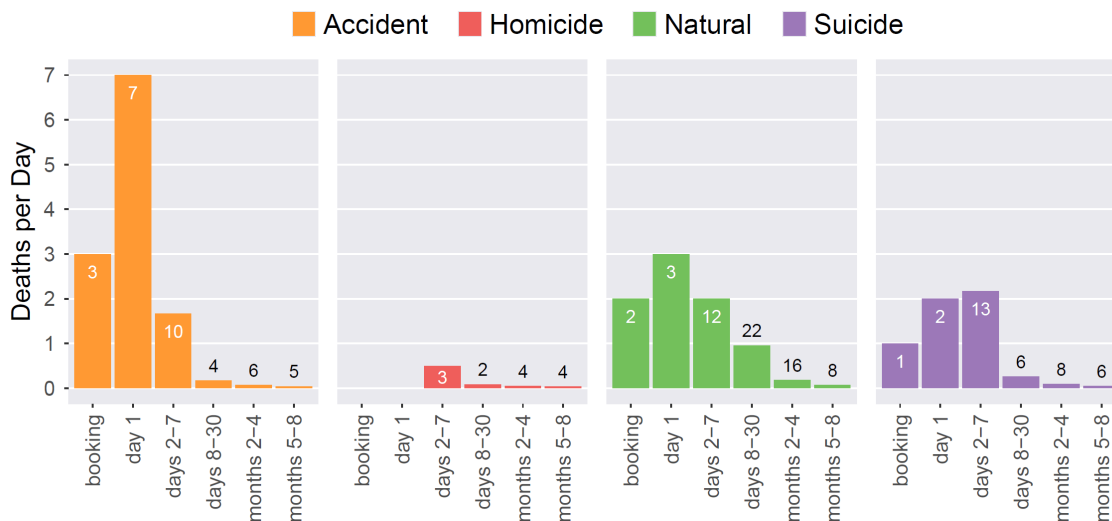
Figure 18. Median length of incarceration prior to death in selected facilities, 2011-2024.

<i>SDCJ</i>	<i>VDF</i>	<i>LCDF</i>	<i>GBDF</i>	<i>Other Fac.</i>
13	13	39	123	170

Figure 19 and Figure 20 continue this analysis for various Manners of Death. Median length of incarceration reveals the time frame during which one-half of all the deaths happen. According to this analysis, half of Accidents (overdoses) and Suicides happened within about two weeks in jail, half of Natural deaths happened within a month, and half of Homicides within two months. Thus, accidents and suicides happen the soonest after incarceration begins.

Figure 19. Deaths per day across categories of the length of incarceration, for various Manners of Death, 2011-2024.

Numbers inside/above bars are counts of all deaths in that category across all facilities.



Regarding booking day and day 1 deaths, more than half of these deaths were accidents (overdoses). Also, these “quick deaths” accounted for 23% of all accidents, 7% of all natural deaths, and 8% of all suicides. Mostly for this reason, we conclude that accidents (overdoses) occur somewhat faster than suicides.

Figure 20. Median length of incarceration prior to death in days for various Manners of Death, across all facilities, 2011-2024.

<i>Accident</i>	<i>Homicide</i>	<i>Natural</i>	<i>Suicide</i>
14.5	71	28	17

Figure 21 and Figure 22 continue this analysis for various age groups across all facilities. The “Under 30” group clearly stands out: 62% (nearly two-thirds) of their deaths occurred within the first week in jail. This is consistent with the fact that nearly all of their deaths were Accidents and Suicides (see Figure 12), the two earliest manners of dying in custody.

Figure 21. Deaths per day across categories of the length of incarceration, for various age groups, 2011-2024.

Numbers inside/above bars are counts of all deaths in that category across all facilities.

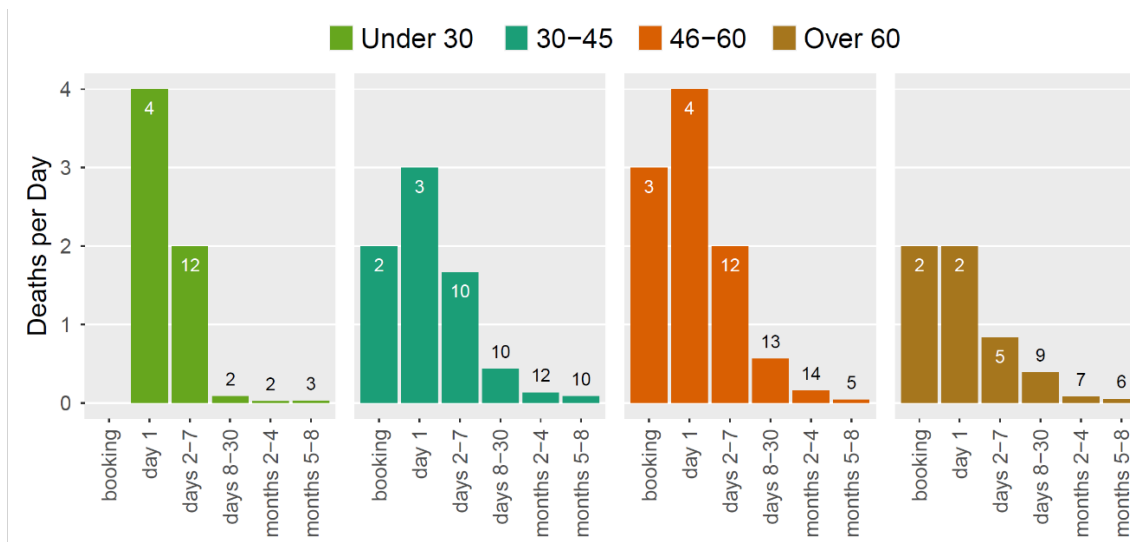


Figure 22. Median length of incarceration in days for various age groups, 2011-2024.

<i>Under 30</i>	<i>30-45 yrs</i>	<i>46-60 yrs</i>	<i>Over 60</i>
5.5	45.5	21	35

Other age groups in this data had fairly similar length of incarceration profiles. It is interesting to note, though, that early middle-age group deaths occurred the latest, with their median more than twice larger than the late middle-age group median. In this data, the group with the shortest and the group with longest median time for days in custody prior to death are in consecutive age groups.

Regarding gender, overall, the 13 women who died had a length of incarceration that was somewhat longer than their male counterparts who died. Median lengths of incarceration were 39 days for females and 24.5 days for males. This difference is mostly explained by the prevalence of female deaths in the “months 2-4” category. During this particular time interval, 38% of all female deaths occurred and only 19% of all male deaths; the figure is not shown here. No female died on booking day.

4.2.4 Custody Status

We examined Custody Status at the time of death. SDO reported four main categories of Custody Status for those who died in custody: Awaiting Booking, Booked – Awaiting Trial, Booked – No Charges Filed, and Sentenced, see Figure 23. Six deaths with their status missing in the SDO data are excluded from this analysis.

Figure 23. Custody Status categories. Counts and percentages of the total 179 deaths, 2011-2024.

Percentages may not sum to 100 due to rounding.

<i>Custody Status</i>	<i>Count</i>	<i>Percentage</i>
<i>Awaiting Booking</i>	3	1.7%
<i>Booked - No Charges Filed</i>	3	1.7%
<i>Booked - Awaiting Trial</i>	141	78.8%
<i>Sentenced</i>	25	14%
<i>Other</i>	1	0.6%
<i>(status missing)</i>	6	3.4%

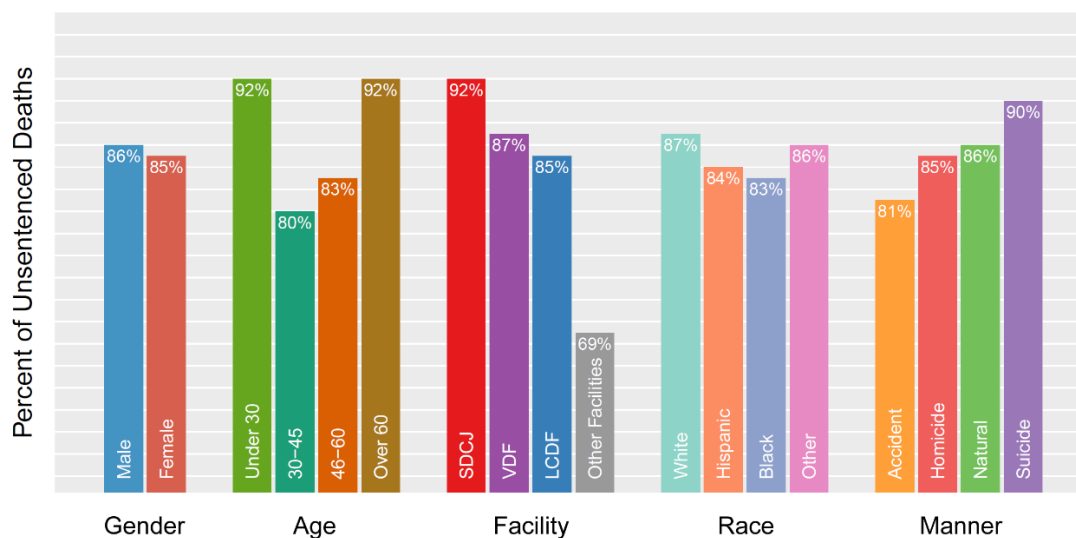
Of 173 deaths with their Custody Status known, 25 have reached status “Sentenced.” The remaining 147 (85%) deaths were of individuals who have not yet gone to trial and were thus “unsentenced” when they died, a shorthand designation that we use for analytical purposes below.²⁸

Figure 24 shows breakdowns of in-custody deaths by category of various characteristics examined in this descriptive analysis: gender, age, facility, race, and manner of death. Inside each particular category, the percent of those who were unsentenced when they died is given. For example: among the 160 males who died in custody, 137 (86%) were unsentenced when they died; among the 13 females who died, 11 (85%) were unsentenced.

²⁸ It should be noted that someone who is awaiting a criminal-legal proceeding may be found not guilty, thus our “unsentenced” designation has somewhat limited utility.

Figure 24. Percent of Unsented Deaths across categories of the characteristics examined in the descriptive analysis, 2011-2024.

Left to right: gender, age, facility, race, and manner of death.



Within each particular category, the percentage of unsentenced deaths (shown) and the percentage of sentenced deaths (not shown) add to 100%.

Within all the categories, a large majority of those who died in custody were unsentenced, awaiting either trial or criminal-legal proceedings of some sort. In Figure 24, the y-axis does not start from zero value and only tips of the high bars are shown so that their differences are more visible. Beyond this basic similarity, some notable observations can be made.

Within the Age category, people in the Under 30 and Over 60 categories were more frequently unsentenced when they died than those in the two middle-age categories. This is easy to understand because the youngest group died mainly by accidents (overdoses) and suicides that often happened quickly after booking. It is more difficult to understand why the senior group, who experienced mainly natural deaths, had the same high percent of unsentenced deaths.

Also, the three booking facilities--SDCJ, VDF, and LDCF--have notably higher percentages of unsentenced deaths than other facilities combined. This "Other Facilities" category, here mainly consisting of GBDF deaths, is the category with the least deaths among those who were awaiting criminal proceedings—only 69%, or just above two-thirds. We note that GBDF is a non-booking facility and this may be associated with have a lower percentage of individuals who have been awaiting criminal proceedings. However, we did not receive the data we requested from SDSO about the populations within each facility, so statistical analysis of how this factor might affect the in-custody deaths was not possible.

Lastly, the manner of death category shows that those who died by Suicide had the highest (90%) percentage of people dying who were unsentenced, while Accidents (overdoses) had the lowest (81%) such percentage. This difference is not negligible. This observation, and the fact that senior group had so many unsentenced deaths, stand as a strong indicator that the percent of unsentenced deaths cannot be explained simply by how quickly deaths occurred after incarceration.

4.3 Institutional Factors Correlating with In-Custody Deaths

This section of the report identifies those findings that arose when we were able to compare data about deaths in the jail to data we had about other issues affecting the jail or individuals housed there. Specifically, we were able to assess whether there were any relationships between jail deaths and the occupancy levels of the jail facilities, staffing levels, the budget for mental health services, and the occurrence of social visits for the people who died. We discuss our findings in each of these areas in turn.

4.3.1 *Occupancy Levels*

- (1) **The occupancy level of the SDCJ is directly related to the death rate in that facility and puts everyone incarcerated in the facility at greater risk of dying.**

Using data provided by SDSO about daily occupancy levels in each jail facility over a substantial period of the study time frame, we were able to assess whether a relationship existed between how crowded a facility was and the prevalence of deaths in that facility. We discovered a significant relationship between occupancy levels and death rates in the SDCJ, but not in any of the other jail facilities. Notably, this relationship was not observed at VDF, the facility that has the second highest rate of in-custody deaths. Perhaps this was due to having too few deaths in VDF for the play of chance to be excluded.

As noted above, SDSO provided Hudler (Armstrong) Letters covering December 27, 2011, through April 2, 2024, which contain a “Daily Inmate Population Report” with daily numbers in each facility. These letters delineated the period of this study. Out of the 4,481 days, 142 days were missing and it was possible to interpolate their counts from their neighboring days. We used the following entries in this dataset: Total in Custody, BSCC/CSA Rated Cap, Females in Custody.

Knowing the daily occupancy in each facility and the dates of deaths in each facility, allows for the calculation of death rates (death count expressed in PY) for any selected period of time.

Figure 25 provides a 12+ years vista of daily events in SDCJ regarding occupancy and in-custody deaths. Each tiny red dot shows the occupation on a particular day. These daily values fluctuate by approximately ± 100 individuals around their longer trend shown by a thick red line. We did not produce charts for the other jail facilities since no pattern was identified.

Those days when one of the 91 SDCJ deaths occurred are visually enhanced by a circle and colored by manner of death. The legend shows the percentage of deaths by each manner among all deaths. Five death cases with their manner pending or unknown are marked with dark grey circles and not included in the

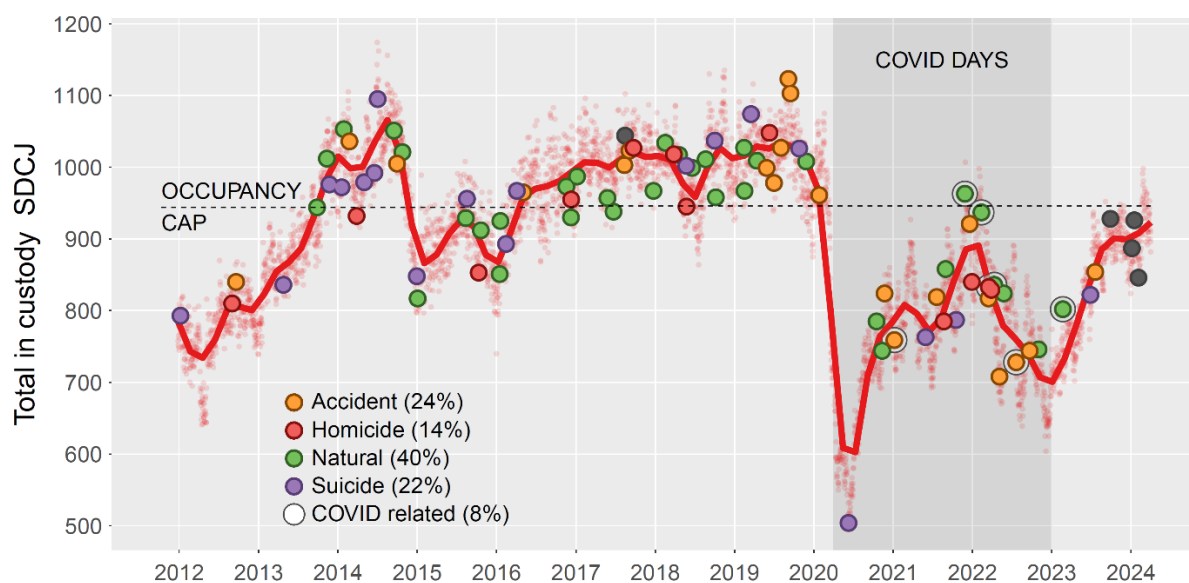
given percentages. The dashed line shows the BSCC/CSA rated cap, which change little during the study period.

The gray rectangle marks the days affected by COVID, from the abrupt reduction of occupancy in early April 2020 until 2023 when the occupancy began to return to its pre-COVID level. This was a unique period and had to be excluded from the statistical analysis. The 7 death cases where COVID was mentioned in the complementary notes are additionally marked by a white halo.

One thing to observe in Figure 25 is that deaths do not occur more often when daily occupancy is above the current trend or when it is below the current trend: colored circles are scattered both above and below the thick red line. This suggests that the relation between deaths and occupancy is not about sudden spikes or drops in occupancy that last but a few days, but due to something more slowly changing with time.

Figure 25. Daily occupancy and instances of in-custody deaths across the study period, SDCJ.

See text for the full description.



The regression analysis of this data²⁹ found that on average, the probability of death of each incarcerated individual increased by 34% (p-value 0.037, CI: 3%-79%) each time the occupancy increased by 100 individuals.

A few technical things need to be clarified about this formal result. First, the finding is that there is an increased probability of death per individual; this is not the same thing as saying that “more people equals more deaths.” Indeed, our finding is even more troubling. If occupancy and death rate were independent of each other, having 10% more people would indeed on average mean 10% more deaths—no one’s

²⁹For more details, see the [Methodology section](#) of this report.

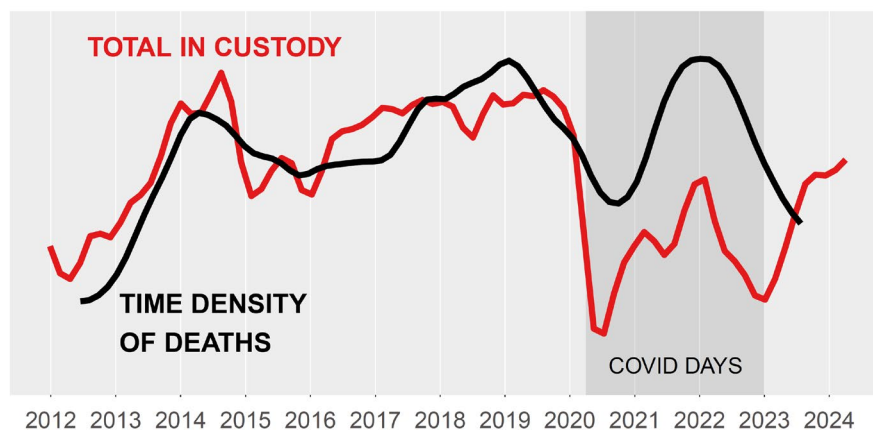
likelihood of dying would be affected by simply having more people present in the jail. However, our finding is that 10% more people would result in more than 10% more deaths. Simply by having more people simultaneously present in SDCJ, everyone's chances of dying worsened.

Second, although tempting, we cannot state with certainty that higher occupancy brought about more deaths. Occupancy might not have been the cause but a complement or an indicator. It is possible that something else drove both occupancy and the death rate to move in tandem. For example, higher occupancy levels may have stretched the capacity of staff to conduct routine supervision or wellness checks, which in turn contributed to the increased death rate.

And third, a reader should keep in mind that the actual value of increased probability per person (34% per 100 more individuals) is not essential here. It is enough that the association is statistically established, that is, not likely to be a play of chance. Since the vast majority of incarcerated individuals did not die in custody, the daily probability of dying per individual was very small, and, after increasing 34%, it was still a very small number.

It is challenging to visualize how occupancy and individual chances of dying indeed rise and fall together, that being a subtle effect. Instead, Figure 26 illustrates to what extent changing trends in occupancy (the red line from Figure 25) and time density of deaths, move together. On the y-axis, the two lines are scaled and shifted as a whole as to maximize their overlap. During the COVID period, the density of deaths separated out into higher values, then returned at the end of that period.

Figure 26. Changing trends in occupancy (red) and time density of deaths (black) across the study period, in SDCJ.



We repeated this analysis for VDF but a similar association was not found. Even visually, the two curves shown in Figure 26 but calculated for VDF by analogy, did not follow each other that closely (not shown here). It is possible that VDF and SDCJ substantially internally differ, or simply that with too few deaths in VDF the play of chance obscured the underlying trends.

4.3.2 Security Enforcement Staffing Levels

(2) The number of Sergeant-Detentions and Deputy Sheriffs for Detentions/Court Services staff directly correlates with the death rate at the SDCJ.

In this section, we analyze the association between annual security staffing levels and the death rate at each facility. At SDCJ during non-COVID years, when the number of employees designated as “Sergeant – Detentions” and “Deputy Sheriff for Detentions/Court Services” was higher, we observed the death rate was lower. This association at SDCJ was statistically significant. However, we did not observe a significant association among these factors at other facilities, perhaps because of the different types of facilities. We found more correlation between security staffing and death rates when we compared pairs of only non-booking facilities or pairs of booking facilities. Full details of the analysis and the interpretation of these observations follow.

SDSO provided employee rosters that list those employees present at the end of each calendar year 2012-2023, with information about department/facility, job title, starting date, etc. Employment ending dates were not included, so individuals are seen entering but not leaving the work force. The precise number of employees in any position is known only at the exact moment at end of the year when a yearly roster is taken. This allows for only a single datapoint per year, with variations within the year unknown.

TMWL identified seven job titles related to security enforcement, out of which three had substantial presence inside the seven facilities where incarcerated people were located, see Figure 27. Four other related job titles (Detention Processing Supervisor, Retiree Non-Exempt Classified-Safety, Sheriff's Lieutenant, Sheriff's Sergeant) were almost exclusively located at three administrative facilities marked "Other1", "Other 2", and "Other 3" in the data.

Figure 27. Staff positions related to security enforcement, counts and percentages, 2012-2024.

<i>Position</i>	<i>Count</i>	<i>Percentage</i>
<i>Deputy Sheriff</i>	77	7.7%
<i>Deputy Sheriff for Detentions/Court Services</i>	847	84.8%
<i>Sheriff's Sergeant - Detentions</i>	75	7.5%
<i>TOTAL</i>	999	100%

These three positions had substantial presence in facilities housing incarcerated people. The counts are averaged over 12 yearly rosters, rounded to the nearest integer.

To express staff counts per individual present in a facility, we calculate Staff Rate as the staff count divided by the total daily occupancy summed over days of the period of interest, expressed in 1,000 PY. This is the same way we calculated Death Rates, as described in the Methods of Statistical Analysis section above, where counts are numbers of in-custody deaths within the period of interest.

4.3.2.1 SDCJ Staffing

Figure 28, left panel, shows yearly Death Rates plotted against Sergeant-Detentions Rates in SDCJ. Each dot represents one whole year; nine non-COVID years (2012-2019 and 2023) are colored red, and three COVID years (2020-2022) are colored white.

A trend at SDCJ during the non-COVID years is very clear: the higher the staff rate, the lower the death rate. A regression analysis using exponential decline as the model for this trend shows that for every 10% increase in the Sergeant-Detentions rate, there was 24% decrease of the Death Rate. The p-value was 0.0002 so this result is not due to play of chance but rather due to a solid association. This trend is shown in Figure 28 as a darker grey line. Note that the Death Rate varied substantially over the years, from close to 12 to below 4 (per 1,000 PY), three times as low.

We repeated the same analysis for the position "Deputy Sheriff for Detentions/Court Services" and a similar trend was observed (not shown here). The datapoints are more scattered but the result is still

statistically significant with p value 0.031, that is, unlikely due to play of chance. For the position “Deputy Sheriff” the trend could not be established. We also repeated the analysis for the data in VDF, and although some likeness of the similar trend (“more staff, less deaths”) is present, the data is too noisy to rule out play of chance.

Regarding COVID years, the lighter-gray thick line that connects three COVID years (Figure 28, left panel) is the same exponential trend below (darker gray) multiplied approximately by a factor of 2. From this we can tentatively estimate that with a same Sergeant-Detentions Rate, the Death Rate was approximately doubled during those years.

In conclusion, although Sergeant-Detentions comprise only 7.5% of the security enforcement staff in facilities housing incarcerated individuals, their numbers are tightly related with frequency of in-custody dying. It is now tempting to conclude that increasing their numbers would matter the most for lowering deaths. Yet it should be kept in mind that, in principle, all staff members work synergistically, and it is not certain that increasing only the numbers of these particular employees would be most beneficial without considering changes in other staff levels—or other types of changes, such as policy, programming, or population. This study observes historical data and numbers as they actually occurred, and any future, different, staff levels could be a new territory to observe again and then reconfirm or update these earlier findings.

As to why this association might exist, one possibility is that having more supervisory staff increases line staff compliance with various safety measures that help to prevent deaths.

Figure 28. Left: Death Rate versus Sergeant-Detentions Rate in SDCJ.

For each calendar year in study period one dot shows the 2 rates, the x-axis shows the Sergeant-Detention Rate and the y-axis shows the Death rate. All rates are expressed in 1,000 PY. Red dots are nine non-COVID years and white dots are three COVID years (2020-2022). Grey lines show exponential decline trends (more staff, less deaths).

Figure 28. Right: Death Rate versus Sergeant-Detentions Rate across facilities.

Here each rate (colored circle) represents the non-COVID years, expressed in PY. Dashed lines suggest some facility pairings, see text.



4.3.2.2 All Facilities

The right panel in Figure 28 suggests that the presence of Sergeant-Detentions did not have a universal effect on in-custody dying across facilities, in isolation from other factors specific to a facility. Here each rate (colored circle) is calculated for the period of nine non-COVID years. Compared to SDCJ, VDF had a 17% lower Sergeant-Detentions rate yet a 46% lower death rate; GBDF had a 39% lower Sergeant-Detentions rate yet a 86% lower death rate.

The general correlation observed in SDCJ (more Sergeant-Detention staff, less deaths) can be applied across facilities only if we group the facilities as such: the not-booking facilities GBDF vs Others, the booking-facilities VDF vs LCDF, and SDCJ standing apart. Such pairings are marked by dashed lines. Then, inside both of these pairs, the relationship between the factors indeed holds: more Sergeant-Detentions, fewer deaths (in terms of their rates).

Interestingly, LCDF had the highest Sergeant-Detentions rate among facilities, perhaps to address the surprisingly high rate of assaults against staff (see Figure 6).

4.3.3 Mental Health Staffing and Budgets

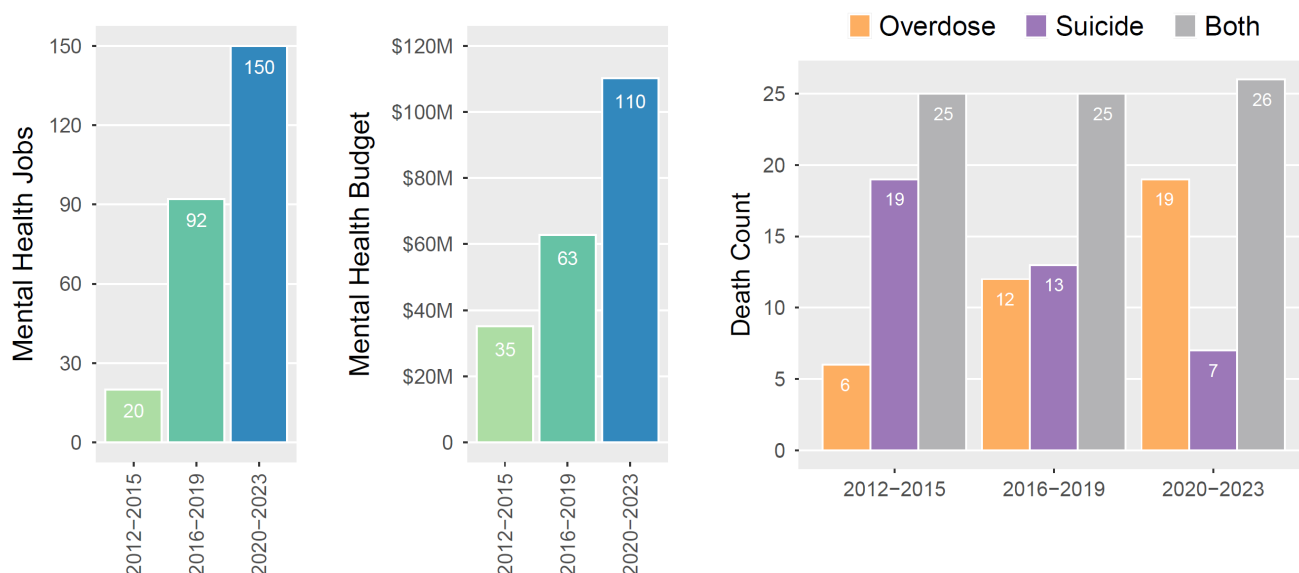
- (3) Over time, the number of Mental Health job positions and the mental health budgets increased; while the combined number of deaths from suicides and overdoses (those mostly likely related to mental health issues) remained the same during this period, the number of suicides decreased and the number of overdoses increased.**

The employee rosters include three job titles related to mental health: “Sheriff’s Det, Mental Health Clinician”, “Sheriff’s Det, Chief Mental Health Clinician”, and “Sheriff’s Det, Mental Health Case Management Clinician.” Some mental health provider positions were contracted and would not be included in the rosters.

Noting that “there is no designated budget specific to just mental health,” SDSO provided a document with Medical Services Division budgets, under which mental health services are included, for each year within this study. The document shows total yearly expenditures for Mental Health services.

No data was acquired about the mental health history or treatment of specific individuals while in detention. Among manners and means of death there was no category or designation for deaths related to a history of mental illness. While dying by suicide or from alcohol/drug overdose is not necessarily indicative of a history of mental illness, we cautiously use these as proxies of mental illness-related deaths.

Figure 29. Left: Mental Health (MH) Job counts and Mental Health Budget across the study period. Right: Mental Health related death counts across the study period.



The calendar time is grouped in three-year intervals to best reveal the underlying trends.

According to Figure 29, with passing years, there were more and more Mental Health (MH) jobs and the budget was increasing. At the same time, suicides were reducing and overdoses increasing. The sum of suicides and overdoses stayed remarkably constant across the whole study period, however.

Since accidents (overdoses) and suicides were occurring about equally quickly after incarceration, MH services had about equal time to help both groups. Also, half of all deaths (with their means of death known) that happened on booking day and day 1 were overdoses, perhaps too soon to receive effective mental health help (though not too soon to receive appropriate medical care). And yet, again, rising accidents may also be a simple consequence of the increasing influx of people with addictions to drug/alcohol coming into the jail over time, most of whom did not die in custody. It may also be an indication of an increasing number of people being admitted to the jail while severely intoxicated and in need of medically supervised withdrawal. Another possibility is that people are not being adequately searched during the booking process and are arriving in the facility with concealed drugs, or that there are increasing levels of contraband substances being brought into the facility after the intake process.

It is encouraging to see suicides decreasing over time, though the specific explanation for the drop in suicides cannot be determined from this analysis.

4.3.4 *Social Visits*

- (4) In the booking facilities, the more visits that people who died had, relative to the general population, the lower the death rate was in those facilities.**

SDSO provided the dates of social visits received by all incarcerated people during the study period, both individuals who died in custody and those who did not die in custody, per facility.³⁰ This analysis starts with an assumption that incarcerated individuals were not in a position to receive visits for the first 24 hours of incarceration, since SDSO policy requires that visits be requested 24 hours in advance.³¹ Thus, counting the booking day as day 0, the first day an individual was eligible to receive a social visit was day 1. We also assume that on the very day of death it was possible to receive a visit, as nine such visits are reported in the data. Also, calendar days before January 1, 2012, and after April 2, 2024, and the social visits that occurred then, were excluded from the analysis because they lay outside of the study period.

To account for the policy that effectively disallows visits on day 0, we had to exclude from our analysis the seven death cases that occurred on the booking day, since these individuals were “unvisitable” and not in a position to receive a visit before they died. Figure 30 below shows the number of deaths excluded from our analysis at each facility, what percentage they represent of all deaths, and the average number of social visits held by each of the “visitable” people who died. For example, in SDCJ, out of 87 people who died, 5 (5.7%) were unvisitable. Six death cases were missing their booking dates and had to be excluded from the analysis. The analysis includes 711 social visits received by the total of 52 unique individuals who died in custody.

³⁰ From the description of social visits, we assume these are in-person social visits.

³¹ See SDSO website, “Visiting,” <https://www.sdsheriff.gov/bureaus/detention-services-bureau/visiting>.

Figure 30. Death counts and average number of social visits, by facility, 2011-2024.

Also, average number of visits that each visitable case received. “OTHER” facility stands for EMDF, FAC8/RMDF, SBDF collectively.

<i>Facility</i>	<i>All Death Cases*</i>	<i>Unvisitable Death Cases</i>	<i>Unvisitable, Percentage</i>	<i>Visits per Death Case**</i>
<i>SDCJ</i>	87	5	5.7%	2.7
<i>VDF</i>	39	2	5.1%	4.6
<i>LCDF</i>	13	0	0%	5.3
<i>GBDF</i>	25	0	0%	4.7
<i>OTHER</i>	4	0	0%	31.2

**Six cases were missing their booking date and are excluded.*

***Per visitable death case.*

Figure 30 shows some distinction between the two booking facilities that had 5-6% unvisitable deaths, and the rest who had none. The rightmost column in Figure 30 gives the average number of social visits received by a person that died in a particular facility. This average includes many individuals who never received a visit. In SDCJ, individuals who died received on average 2.6 visits before they died. This is only about a half of the 4.6-5.3 average visits received by individuals in VDF, LCDF, and GBDF who were similar in this aspect of in-custody experience. In the “Other” category, a single individual received 112 visits, making the average visits per person over just four individuals in this category misleadingly high (over 31).

Figure 31. Visit Rates of people who died across manners of death

The rates are in given in Eligible PY, see text.

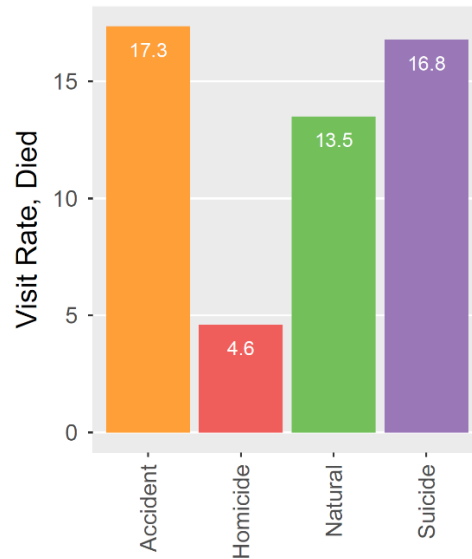
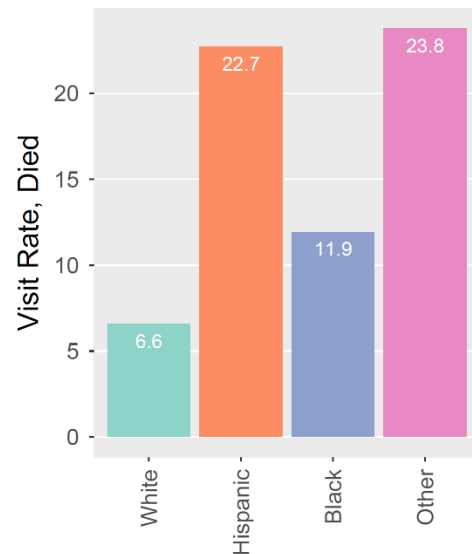


Figure 32. Visit Rates of people who died across racial groups.

The rates are in given in Eligible PY, see text.



In each category in Figure 31 and 32, “Visit Rate” is the total number of visits received by the individuals in that category who died, divided by the number of Eligible Person-Years of all individuals in that category. Here, “Eligible PY” is the sum across individuals from that category of the number of days these individuals were eligible to receive a visit. For example, a person who died on day 3 had three eligible days: 1, 2 and 3.

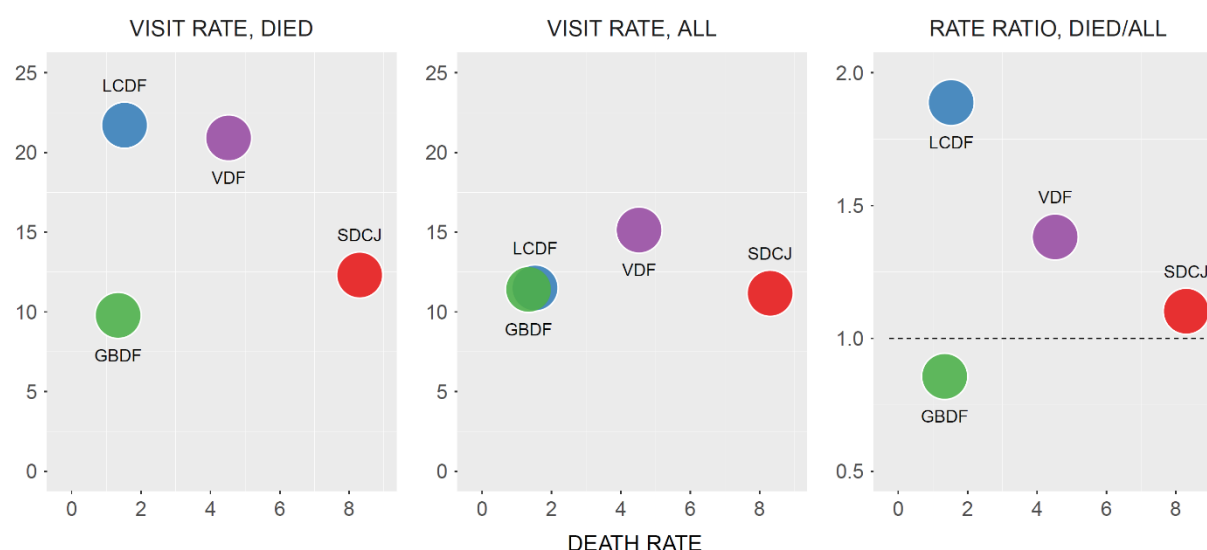
Regarding the manner of death, individuals who died by Homicide stand out as having by far the lowest visit rate, while individuals who died by suicides and accidents (overdoses) received the highest visit rates. This is interesting since the homicide group had the longest median length of incarceration prior to death while the latter two groups had the shortest median lengths of incarceration, see Figure 20. Despite having nearly 5 times longer median lengths of incarceration, the homicide group received a nearly 4 times lower rate of social visits. In this particular sense, the individuals who died by homicide seem to have been profoundly distanced from outside connections.

Social visits also had a very strong racial signature among the death cases, with the White group receiving the fewest visits. In comparison, the Black group had a visit rate nearly twice that of the White group, and the Hispanic and “Other” group had nearly or exactly twice the visit rate of the Black group.

The average total number of visits per individual is not a perfect metric for comparing social visits across facilities. First, it cannot be calculated for individuals who did not die (due to lack of data) and second, it does not take into account the timing or frequency of the visits: two visits a week apart are not the same as two visits a year apart. Thus, for the category of incarcerated individuals we need to calculate the Visit Rate: total number of visits received divided by the total number of person-days in that category.

Figure 33. Rates of social visits against Death Rate, across selected facilities. Left: Visit Rate of people who died in custody. Middle: Visit Rate of all incarcerated people. Right: Visits Rate Ratio.

The visit rates are expressed in PY and calculated over the whole study period, with COVID days not treated differently. Death Rate is in 1,000 PY.



In Figure 33, the left panel shows the Visit Rates calculated only for the individuals who died in custody, using their visits and their Eligible PY. In the middle panel, Visit Rates are calculated using visits to all incarcerated individuals and their total accumulated PY. For individuals who did not die in custody the booking dates are unknown, so all their days spent in jail had to be considered eligible for visiting. Death Rates in each facility are the same ones given in the rightmost panel of Figure 5. Facilities other than the four selected here were excluded due to a single outlier having too large an effect, as mentioned earlier in this section.

It is interesting to note that on the whole, regarding all incarcerated individuals, the facilities had very similar visit rates. SDCJ, LDCF and GBDF had visit rates in the narrow range 11.2-11.5 (visits per 1,00 PY). Only in VDF was the visit rate somewhat larger at 15.1.

In comparison, visit rates of individuals who died varied much more across facilities, from 9.9 in GBDF to 21.7 in LDCF, a 120% difference.

As discussed in section 3.3.4, ratios are useful in comparing rates. It may be instructive, then, to form a ratio of these measures in each facility, a “Visits Rate Ratio”:

$$\text{Visits Rate Ratio} = \frac{\text{Visits Rate, Died}}{\text{Visits Rate, All}}$$

This ratio reflects something internal inside each facility: frequency of visits to those who died there relative to the frequency of visits to those who were simply incarcerated there.

The visit rate ratios versus the death rates are shown in the right panel of Figure 33. When visit rate ratio is larger than 1 (one), the colored dot positioned above the dashed line, individuals that died were collectively “more social” than the general population of their facility. Here, “more social” simply means receiving more social visits (it does not mean socializing with other incarcerated individuals, the staff, etc.) By analogy, a rate ratio smaller than 1 (one), the colored dot positioned below the dashed line, means that those who died there were collectively “less social” than their peers in these facilities.

The three booking facilities (SDCJ, VDF, LCDF) seem to follow a clear trend: the smaller the death rate, the “more social” were those who died there relative to the general population in that facility. Starting with SDCJ where those who died received visits with 25% higher frequency than their total population, then continuing with VDF where those that died received visit with 53% higher frequency, and finally with LCDF where those who died received visits with 74% higher frequency than their total population, the death rate was being lower and lower.

It is not straightforward to understand why the individuals who later died received social visits more frequently, as a group, than their facility’s average rate. Perhaps they were in a more critical/vulnerable state as they entered jail and their social circles (families, friends, collaborators) recognized that need. Here, the reader should be warned not to misconstrue that more visits meant more deaths. It is important to point out that we cannot observe an individual who entered the jail in a more vulnerable state and did not die—only by dying such an individual becomes visible. Thus, we must reflect on these findings indirectly, by taking into account not only what we see but also what we do not see. Therefore, more study of these factors is warranted.

The data suggests, but cannot prove, that there might have been something preventive about these visits: in booking facilities where the conditions were such that vulnerable individuals received more visits, the more of these individuals managed to remain alive. Those vulnerable individuals who, despite the protective nature of visits, still unfortunately died, are thus observable and we notice in retrospect their enhanced visit rate.

It is also interesting that this trend is less about just the visits to the vulnerable people who died, but more about the visits they received above what the rest of their populations did. Importantly, since in this work there are only three booking facilities to compare and that formed the observed trend, these findings mainly have a historic value. Opinions based on them must for now remain speculative and simply call for further investigation.

Also, the one exception to the observed trend is the non-booking facility GBDF. Here, those who died received visits less frequently than their total population (the green dot is below the dashed line in Figure 33). Yet this is a facility where the death rate was relatively low. This may simply reflect structural differences between booking and non-booking facilities.

This exception cannot be explained by the fact that in GBDF those who died remained in jail longer. Additional analysis (not shown here) suggests that individuals who died after a longer time in jail had similar visit rates to those who died after a shorter time in jail.

5 Actions Taken to Date by SDSO

The SDSO has made concerted efforts to reduce in-custody deaths and increase overall transparency of its operations. TMWL dedicated an entire CPRA request (SDSO Policies and Programs CPRA, Reference No. S003984-102424) to obtain data about specific actions that SDSO has taken, results of those actions, personnel involved, new and updated policies and procedures, and other attempts to address in-custody deaths (see [Supplemental](#) Material).

Rather than providing TMWL with analyzable data, SDSO responded to our requests with 40 of their website links and digital copies of press releases. Nevertheless, based on the press releases, news articles, and SDSO's responses to the California State Jail Deaths Audit and other public reports on in-custody deaths in San Diego County (noted above in Section 2), we were able to piece together some of the actions that SDSO has taken to decrease and/or prevent jail deaths. They include but are not limited to the following:

- Deployment of drug-sniffing dogs;
- Implementation of a new drug-screening process;
- Hiring more medical staff;
- Contracting with medical services providers;
- 24/7 medical health staffing;
- Opening Rocky Mountain Detention Facility;
- Adding a Certified Nurse Assistant position;
- Providing access to StatCare telemedic provider when a provider is not onsite and a medical consultation is needed;
- Implementation of Medication-Assisted Treatment Program - medication-based detoxification program for opioid and alcohol withdrawal;
- Implementation of voluntary urine screenings during the booking process and counseling;
- Implementation of in-depth mental health screening for every individual during the booking process;
- Centralization of the mail delivery process
- Placement of Naloxone inside all detention facilities and on individual staff members.
- Deployment of body cameras

SDSO did not share with TMWL the exact dates the programs were implemented, the status of the programs, results obtained, programs discontinued, or outcomes other than what is listed above and provided in the website links. Therefore, it was not possible to perform any analysis of the impact of SDSO's actions to decrease or prevent in-custody deaths.

6 Discussion and Recommendations

6.1 Recommendations for Access to Data

The California Public Records Act mandates that all requested information that can legally be shared with a requestor be shared publicly. Therefore, confidential or private information cannot be obtained through this method. To optimize the study of potential causes of in-custody deaths in the San Diego County Detention Facilities, at least some private information about all people incarcerated during the study period was needed, even if identifying data were to be redacted. Examples of such necessary data include: age, race, gender, medical diagnoses and treatment, mental health diagnoses and treatment, use of public housing and other county services, and readmission data for every incarcerated person during the 12-year period in question.

Having access to this information is crucial to being able to contrast those who did and did not die in custody during the study period. It would also have made other files that TMWL did receive from SDO much more useful.

SDSO did provide one such dataset from their Jail Information Management System (JIMS) that included the names, age, ethnicity, gender, arrest information, booking date, facility, housing location, release (or projected release) date, charge information (including severity), and bail information for all incarcerated people and all their instances of incarceration. However, it covered only the month contemporaneous with the CPRA request date. SDO met their minimum legal requirement for this request and refused to provide the fuller dataset covering the entire study period.

As a result of our lack of access to this critical data, our ability to draw conclusions from this study is severely limited. This has been a missed opportunity to use the data analysis to pinpoint potential preventive measures to reduce the number of in-custody deaths in San Diego.

6.1.1.1 Recommendations

- (1) Given the inability to access needed data through the CPRA method, we recommend that any future study not begin until such data has been provided by the SDO in advance of the project.**
- (2) As the county's independent jail oversight body, CLERB should be given the necessary legislative, jurisdictional, and/or administrative approval to obtain all individual-level, facility-specific data records that SDO maintains on all incarcerated people in their detention facilities, contemporarily and historically.**
- (3) Any and all (de-identified) JIMS data should be made available for analysis (in whatever manner, or with whatever system of approval, data sharing agreement, and/or expansion of jurisdiction may be needed to obtain it).**

6.2 Recommendations for Facilities

The data revealed that the highest number of deaths and the highest death rates occur in the two booking facilities that predominantly book men—SDCJ and VDF—and that SDCJ’s death rate is nearly twice the death rate in VDF. Moreover, SDCJ had the highest rate of assaults on staff by incarcerated people and by far the highest number of homicides. These findings suggest that the problems of deaths in custody and violence are not systemwide issues, but rather problems concentrated in two specific facilities. The implication is that the SDSO should focus its prevention efforts most urgently in SDCJ and secondarily in VDF.

6.2.1.1 Recommendation

- (4) SDSO should prioritize and concentrate its efforts to prevent deaths and violence in SDCJ and VDF.**

6.3 Recommendations for Descriptive Analyses of In-Custody Deaths

Due to the limited explanatory nature of descriptive results alone, TWML cannot recommend specific actions based on the descriptive analysis but can offer suggestions on what needs to be investigated further.

6.3.1 *Manner of Death*

The highest number of deaths were reported as Natural, but it is important to remember that natural deaths may still be preventable. There is a tendency to assume that natural deaths should not be a basis for concern, but that is not the case. While many natural deaths are due to medical causes that would have led to death even if the person were not incarcerated, some other natural deaths may be due to a lack of access to medical care or to poor medical treatment while the person was in jail. Despite our requests, we were denied access to data that would have allowed us to examine this issue.

We note that Suicides decreased during the study period, a very positive development, while Accidents (largely alcohol and drug overdoses) increased. Further study is needed to determine what factors may have brought down the suicide rate, as this would help provide validation and guidance to the SDSO about effective prevention measures it is employing. In contrast, it would be important to know what factors may be contributing to the increased number of Accidents. Given the fact that a number of Accidents occurred within the first two days following booking, it would not be an unreasonable assumption that many of these deaths are due to intoxication withdrawal following arrest. This suggests a need to look further into whether and under what conditions a person should be denied clearance into the jail (and taken to a medical facility) if they are severely intoxicated and experiencing concerning behaviors or an altered mental state.

6.3.1.1 Recommendation

- (5) We recommend further exploration of the identified Cause of Death for those deaths reported as Natural, and analysis of data such as the number of sick calls, time between sick call and treatment, time between diagnosis and treatment, and types of treatment rendered for those individuals whose deaths were reported as Natural.**
- (6) We recommend further study of the specific measures that the SDSO implemented to prevent Suicides, including the timing of implementation, to see if there is a causal relationship between these strategies and the decrease in suicides during the study period.**
- (7) In collaboration with medical professionals and CLERB, SDSO should consider developing a screening measure during the booking process, such as a blood toxicity test, for identifying “high risk” individuals who may be in need of immediate medical attention and who should be denied clearance to enter the jail. This screening measure can be used to assess people who appear to be under the influence of alcohol or drugs, who are exhibiting concerning behaviors or an altered mental state, or who are undergoing withdrawal or physical (medical) or mental complications due to an overdose. These “high risk” individuals should be brought instead to a medical or detox facility until such time as they are cleared for admission to the jail.**

6.3.2 *Demographics*

While there were interesting findings in our descriptive data related to age, gender, and race, we are limited in our ability to draw any useful guidance from this information. With access to the full JIMS data, we could have compared death rates in various demographic categories against those who did not die in custody, which may have revealed the significance of these findings. For example, this type of analysis would help us understand why females who are Black died of Natural causes more often than males did.

6.3.2.1 Recommendation

- (8) We recommend comparative study of data related to demographic features of people who died in custody versus those who did not die as a way to assess the relevance of age, race, and gender.**

6.3.3 *Length of Incarceration*

Nearly a quarter of all Accidents (which were mainly overdoses) happened on booking day or day 1 in SDCJ and VDF. This time frame should be a clear focus of the SDSO’s death prevention efforts. It is unclear from the data to which we had access whether people are dying from overdoses because they came into the jail while intoxicated and overdosing, or whether they somehow obtained drugs while in the jail.

6.3.3.1 Recommendations

(9) In addition to Recommendation (7) above, efforts to reduce in-custody deaths should concentrate on the mental health and substance use needs of people at booking and shortly thereafter.

(10) If additional data reveals that these deaths occurred due to the individuals' access to controlled substances while in the jail, the SDSO needs to re-assess its security measures that are allowing contraband to enter the jail.

6.4 Recommendations for Institutional Factors

6.4.1 *Occupancy Levels*

A relationship between occupancy and death rate was found only in SDCJ: for currently unknown reasons, having more individuals incarcerated at the same time increases everyone's chance of dying in this facility. This could be because a larger incarcerated population strains the ability of staff to conduct supervision and wellness checks, to observe security breaches or the presence of contraband, to de-escalate violence, and/or to obtain needed health care for incarcerated people who are unwell. Whatever the specific reason, the finding suggests a need to reduce the population in SDCJ.

6.4.1.1 Recommendation

(11) The SDSO, in collaboration with other county stakeholders, should make efforts to significantly decrease the population of SDCJ.

6.4.2 *Security Enforcement Staffing Levels*

Although the Sergeant-Detentions staff position comprises only 7.5% of the security enforcement staff in the detention facilities during the study period, their staff numbers likely have the most sensitive role regarding in-custody deaths. Historically in SDCJ, with more Sergeant-Detentions on the job, fewer deaths occurred. It is possible that the same holds for VDF as well, though we did not accrue enough statistical evidence for that conclusion at this time. With additional data, further study would be warranted of the role that staffing plays in preventing deaths at VDF.

6.4.2.1 Recommendation

(12) The SDSO should consider increasing the number of supervisory staff in SDCJ, given that their presence seems to have a preventive effect when it comes to in-custody deaths.

6.4.3 *Mental Health Staffing and Budgets*

We did not have the specific data we needed to make meaningful assessments about the role that incarcerated people's mental health challenges play in contributing to in-custody deaths. As a result, we relied on using Accidents and Suicides as proxies for mental health-related deaths, which is a crude but

plausible alternative data source. Far more helpful conclusions could have been reached if we had access to information about the mental health histories and treatment of incarcerated people.

The data we did have about mental health jobs in the jails and SDSO's mental health budgets showed that there was an increase in both the number of positions and in the available funding over the years of the study period. Nevertheless, overdose deaths continued to rise, and there was a particular concentration of overdose deaths in booking day and Day 1.

6.4.3.1 Recommendation

(13) Further study should examine why increases in mental health funding and staffing are not contributing to a reduction of deaths, especially overdose deaths, in the jails. The study should also assess whether the drop in suicides is attributable to the increase in mental health services or to other factors.

6.4.4 *Social Visits*

Across the three booking facilities, the lower the Death Rate was in a facility, the more “socially active” were those who died there relative to those facilities’ general population.

6.4.4.1 Recommendation

(14) Social visits provide some level of protection against deaths, therefore we encourage the SDSO to offer social visits as early and as frequently as possible, including within the first week of confinement.

6.5 Recommendations for Actions Taken to Date by SDSO

As noted above, the SDSO has made concerted efforts to reduce in-custody deaths and increase transparency about such efforts, especially since Sheriff Martinez took office in 2023. In the SDSO's update to the California State Jails Audit on January 25, 2023, Sheriff Martinez stated that the agency is committed to improving and that, “Accountability, transparency, and the genuine commitment to doing better are the drivers creating a new level of care to individuals in custody while supporting the needs of our detentions team.”³² Considering this, we make one final recommendation.

6.5.1.1 Recommendation

(15) SDSO should provide complete data concerning all of the programs and policies implemented to prevent jail deaths so a follow-up study can perform a conclusive assessment of which measures are working effectively and which are not.

³² San Diego County Sheriff's Department, Progress Report Update on State Jail Audit, January 25, 2023 at p.2 , <https://www.sheriff.gov/home/showpublisheddocument/4717/6377947973541300000>.

7 Conclusion

This report joins the many preceding attempts that journalists, scholars, San Diego County agencies, courts, consultants, and citizens have made for more than a decade to better understand and address the tragedy of in-custody deaths in the San Diego County detention facilities. Informed by those earlier efforts and employing our own investigative methods for the 12+ years under our review (December 27, 2011, through April 2, 2024), we set out to detect risk factors for dying in the San Diego County jails, as well as factors that might reduce risks; to assess demographically who died, when, and how; and to identify possible institutional factors related to in-custody deaths, so that related improvements could be implemented. Through our descriptive analyses on in-custody deaths and institutional factor analyses that we completed with the limited data that we were able to obtain, we have identified the 15 important yet provisional recommendations above.

We believe that this Final Report provides guidance for some actions that can be taken with the goal of decreasing in-custody deaths in the San Diego County detention facilities. We have also identified important areas for future study, emphasizing that full SDSO cooperation and access to critical data is imperative to effectively and comprehensively identify risk factors for dying in jail. We wish CLERB success as it continues its important work of investigating in-custody deaths and working with SDSO to one day eliminate them all together. We hope that any future studies will be assisted by the TMWL study findings and recommendations.

8 Appendix A

8.1 TMWL Team Biographies

Nayak L Polissar, M.S., PhD is a senior statistician, President of TMWL, principal investigator of this project and a member of the Biostatistics affiliate faculty at the University of Washington. His 30+ years directing medical, social, legal and environmental studies cover the broad range of methods used in this work. Dr. Polissar received his PhD in statistics from Princeton University under the direction of Dr. John Tukey, a statistician famous in the history of statistics.

Cheryl Brown Hill, J.D. is an attorney with over 20 years of experience litigating high-profile class action cases such as Three Mile Island, Exxon Valdez Oil Spill and Swiss Banks. Her Operations experience includes serving as Deputy Administrator for a state transportation agency with responsibility for all administrative areas. As a consultant, she has served on disparity study committees for state and local governments as well as private companies. She is a certified mediator and serves as an arbitrator for the Court of Common Pleas in Philadelphia.

Nirnaya Ljubomir Miljadic, PhD, M.S. is a specialist in advanced statistical computing techniques and analysis. With a PhD in Physics from Northwestern and M.S. in Biostatistics from University of Washington, he has the combined experience of a researcher in the natural sciences and a statistician.

Patricia A. Way, Ph.D. has taught in prisons and higher education institutions for over two decades and currently teaches critical criminal justice, restorative justice, and wrongful convictions at Chestnut Hill College. She is co-founder of Way Moore Justice Support, a nonprofit supporting wrongfully convicted PCRA petitioners, their supporters, and their legal team. She also owns and operates *UnderWriting Justice*, offering grant writing, developmental editing, and curriculum development to people and organizations working in justice related fields.

Michele Deitch, J.D., M.Sc., is a Distinguished Senior Lecturer in Public Policy and Law at the University of Texas at Austin and Director of UT's Prison and Jail Innovation Lab. She has almost 40 years of experience working on issues related to prison and jail safety and correctional oversight, and is considered one of the country's leading experts on deaths in custody.

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9 Appendix B

9.1 The 15 “Identified Areas” or Study Questions that CLERB contracted TMWL to investigate for this study

5.5. The Contractor shall provide the final approved report to the COR, which shall address the following (15) questions:³³

5.5.1. When are inmates most vulnerable to the risk of death? Is it after they are first admitted to jail after they are found guilty of the crime, or based on another important event?

5.5.2. What are the IN-CUSTODY DEATH rates among inmates with a history of mental illness?

5.5.3. What is the underlying relationship between mental health services in jails and IN-CUSTODY DEATHS? Does having more available mental health services and related staff reduce IN-CUSTODY DEATHS?

5.5.4. What role do law enforcement staffing levels play in the number of IN-CUSTODY DEATHS?

5.5.5. What institutional stresses are associated with in-custody deaths, including:

5.5.5.1. Overcapacity of a jail facility

5.5.5.2. Processing of new admissions and releases

5.5.5.3. Frequency of assaults on staff

5.5.5.4. Extraordinary events such as the COVID-19 pandemic

5.5.6. Is there a relationship between re-admissions and IN-CUSTODY DEATHS at both an individual and facility level?

5.5.7. Are IN-CUSTODY DEATHS more prevalent among those charged with a certain type of crime?

5.5.8. Does the race, gender, or age of an inmate play a role in the circumstances surrounding IN-CUSTODY DEATHS and subsequent investigations?

³³ This statement and the accompanying numbering (5.5, 5.5.1 through 5.5.15) are taken directly from the contract for this study between CLERB and TMWL. For ease of reference, it is the same numbering that was used in the mini-reports found in the Supplemental Material. During the course of the study, due to time constraints, CLERB and TMWL renegotiated the original contract to remove three study questions from the study, marked as **REMOVED** in this list. Except for question 5.5.15, on the impact of realignment, no data was even requested for these topics removed from the study (SDSO denied requests for realignment data).

5.5.9. What has been the impact of programs enacted by the San Diego Sheriff's Department ON IN-CUSTODY DEATHS over time?

5.5.10. Why is there a lag in reporting the manner of an IN-CUSTODY DEATH in other counties, given the reporting requirement by the California Department of Justice? **REMOVED**

5.5.11. What is the role of county mental health services and other public services, such as public housing, on jail deaths?

5.5.12. How does the fact that San Diego County's proximity to the US-Mexico border impact IN-CUSTODY DEATHS? Are these issues present in other jurisdictions with international borders? **REMOVED**

5.5.13. What are the IN-CUSTODY DEATH rates among inmates with a history of homelessness?

5.5.14. What is the impact of compassionate releases on the nature and number OF IN-CUSTODY DEATHS?

5.5.15. How has realignment in California in 2011 shaped IN-CUSTODY DEATHS in county jails? **REMOVED**