The Need for Data

Beginning in 1999, the California Department of Corrections and Rehabilitation (CDCR) set out to improve its systemwide surveillance of suicide deaths to inform prevention activities. CDCR is a large state prison system with 35 facilities, housing more than 120,000 male and female inmates. At that time, CDCR began placing suicide prevention coordinators (SPCs) in each facility to collect suicide death and self-harm data and organize suicide prevention trainings. CDCR also employs a central SPC and a suicide review coordinator to oversee the work of the SPCs.

CDCR's size, complexity, and decentralized structure have posed challenges for consistent and reliable tracking of suicide deaths and self-harm, including suicide attempts and non-suicidal self-injury. To create a more uniform process for coding suicide deaths, CDCR adopted definitions of suicide deaths from the Centers for Disease Control and Prevention’s National Violent Death Reporting System (CDC NVDRS) in 2005. CDCR uses these standard definitions to make initial determinations of deaths by suicide, which are then investigated and confirmed by the coroner's office.

In 2010, CDCR began looking at their self-harm data collection processes by conducting a survey to determine how each facility was collecting this information. The survey found a high degree of inconsistency in the collection and reporting of self-harm incidents. Only some facilities used systematic methods to track these incidents, and CDCR staff were using different definitions of self-harm when collecting this data. Based on the findings of this survey, the central SPC developed trainings and educational videos to ensure that staff in each facility are using the same definitions of self-harm when collecting data.

Getting the Data

In 2014, the central SPC set up a centralized tracking system to record incidents of self-harm and suicide, which is managed through Microsoft SharePoint software. Each facility's SPC is required to enter self-harm data from their facility into the SharePoint site monthly, as well as data they've collected from in-depth reviews of any suicide deaths that have occurred. This pool of data is then transferred into the CDCR's centralized database.

Analyzing the Data

CDCR's centralized database includes data from a variety of sources, including the self-harm tracking system, electronic health records, pharmacy records, and quality management systems. The database can generate reports on suicide deaths and self-harm using up to 50 different parameters, including location, time frame, and mental health-related variables, such as diagnoses and treatment histories.

These reports enable suicide prevention staff to examine which facilities have the highest numbers of suicide deaths, the security levels of the prisons in which most suicide deaths occur, and the mental health treatment history of inmates who engage in self-harm or die by suicide. They then seek to identify shared risk factors among those who were suicidal to inform prevention efforts. Mental health staff in each facility can also access management reports that track their site's performance.

Data Resources

Locating and Understanding Data for Suicide Prevention (online course): [http://training.sprc.org](http://training.sprc.org)


Self-Directed Violence Surveillance: Uniform Definitions and Recommended Data Elements: [https://go.edc.org/CDCSDVS](https://go.edc.org/CDCSDVS)
What CDCR Learned

Data analyzed from the centralized database revealed the following:

- The rate of suicide deaths decreased from 25.5/100,000 in 2006 to 21/100,000 in 2016.
- In 2016, 19% of suicide deaths occurred among inmates who were not receiving mental health treatment at the time of their deaths.
- From 2014 to 2016, 41% of suicide deaths took place when inmates were in housing that was segregated from the general prison population.
- The average age of those who died by suicide between 2014 and 2016 was 41. Only 25% of suicide deaths were among inmates ages 18 to 25, and 50% of suicide deaths were among inmates above 40 years of age.
- Between 2014 and 2016, the majority of self-harm incidents took place among male inmates without an intent to die.
- Among female inmates, 63% of self-harm incidents resulted in minor injuries, and 3% of incidents resulted in severe injuries.

We've used this data over time to create new programs and implement new screenings to help us look at different aspects of the mental health care we provide.

— Robert Canning, Senior Psychologist Specialist, California Correctional Health Care Services

What Comes Next

CDCR has used the results of its analyses to:

- Create suicide prevention programs and awareness materials that target inmates who are not receiving mental health treatment.
- Improve suicide and mental health screening, assessment, and training protocols, with a particular focus on inmates entering housing that is segregated from the general prison population and those who are not currently receiving mental health treatment.
- Begin planning for an “early warning system” to identify inmates who are at risk of self-harm in the next 30 days. The system will use computer algorithms similar to those currently being developed by the Army STARRS project.
- Integrate self-harm data collection into CDCR’s newly-implemented electronic health record system, to facilitate data sharing within the prison system and with outside institutions, such as hospitals.
- Develop a formalized handbook for SPCs in all facilities, to ensure the standardization of data surveillance and reduce reporting inconsistencies across facilities.

In addition, since documenting incidents of suicide deaths and self-harm at each facility can be difficult and time-consuming, CDCR hopes to provide more training and support to SPCs and clerical assistants who are responsible for data entry. CDCR also plans to dedicate additional resources for more in-depth analysis of self-harm behaviors in facilities.

If you have questions or would like to learn more about how CDCR created their surveillance networks, contact:
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