***SUPPORTING STATEMENT:*** *PART B*

**August 18, 2022**

**State Unintentional Drug Overdose Reporting System (SUDORS)**

OMB# 0920-1128

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**B.** **Collection of Information Employing Statistical Methods**

**1. Respondent Universe and Sampling Methods**

A complete census of fatal unintentional or undetermined drug overdose (UUDO) deaths within each of the 51 participating health departments (i.e., all US states, District of Columbia) is sought, so no sampling methods will be employed. A few states may choose to start SUDORS by collecting all fatal UUDO deaths occurring in a subset of their counties that account for greater than 75% of UUDO deaths in their state or over 1,500 UUDO deaths in 2017 (i.e., collect a census of all UUDO drug overdose deaths in a subset of counties instead of the full state).[[1]](#endnote-2) This subset option was created based on feedback from large states such as California that argued multiple years were needed to establish SUDORS in large states due to complexity of their medical examiner/coroner (ME/C) systems and large numbers of UUDO deaths. CDC will work with these states over time to collect all drug overdose deaths occurring in their state.

Because this data collection effort is a census or a nearly complete census with no sampling methodology, the data system will provide a full characterization of UUDO deaths in participating jurisdictions as well as the United States.

**2. Procedures for the Collection of Information**

SUDORS will be coordinated and funded by CDC, but is dependent on separate data collection efforts in each jurisdiction managed by the 51 participating health departments or their bona fide agents (i.e., all US states and the District of Columbia). To fully characterize each UUDO death, the 51 participating health departments will complete the following key data collection tasks:

* Identify UUDO deaths using ME/C reports and death certificates. Most states find it easiest to first identify an UUDO death with death certificates because the local health department itself collects death certificates. States with centralized medical examiner offices (i.e., only a single office serving the whole state), however, may be able to identify UUDO deaths more rapidly with ME/C records than the death certificate. Irrespective of whether the local health department identifies UUDO deaths using the death certificate or ME/C records, the local health department must have a procedure to identify cases using both the death certificates and ME/C records (e.g., a state using ICD-10 codes on the death certificate to rapidly identify UUDO deaths may also ask county ME/C agencies to submit any record involving an UDDO death to validate data).
* Request death certificates and medical examiner/coroner records (ME/C) for all deaths identified as UUDO deaths and investigated in their jurisdiction. Records can be accessed electronically or by manual review of physical copies depending on the format of ME/C reports and death certificates in their jurisdiction. Manual record review will be required in a substantial number of states and deaths because a recent survey of 898 of 2,128 eligible ME/C agencies found only 32% of ME/C agencies reported having a computerized information management system, with another 30% having record-keeping systems that used both manual hardcopies and computerized systems.[[2]](#endnote-3) Finally, 31% of ME/C agencies reported only having a manual record-keeping system.
* Abstract from the ME/C record and the death certificate for each UUDO death required data elements (Attachment D) using CDC guidance into the National Violent Death Reporting System (NVDRS) web-based system which is maintained by CDC. Not all data elements will be completed for each death as use of a data element depends on information and evidence specific to each death record (i.e., built in skip-patterns).

The goal of SUDORS is to have the 51 local health departments complete the above data collection steps and CDC validate the data (i.e., systematically detect and correct data quality problems) with a 6-month time lag (e.g., complete data collection on drug overdose deaths occurring from January to June 2022 by December, 2022). This aligns with an HHS prioritized goal of accelerating CDC’s reporting of drug overdose data.[[3]](#endnote-4) Differences in ME/C agencies across the US (e.g., decentralized at the county level versus state) coupled with the fact that 16 jurisdictions received SUDORS funding for the first time in September 2019 resulted in a substantial number of participating health departments reporting data to CDC with an 8-month lag. Over time, CDC will work with these health departments to reduce the time lag to 6-months and secure the participation of the 3 states currently not in SUDORS.

Only de-identified information is entered into the NVDRS web-based data collection tool and the 51 participating health departments are responsible for linking ME/C and death certificate information at the local level.

**Estimation Procedures**

No estimation procedures will be employed.

**Degree of Accuracy**

The following procedures will be used to check accuracy:

1. Numbers of UUDO deaths will be compared against counts published by the National Center for Health Statistics on CDC Wonder (See <http://wonder.cdc.gov/mcd-icd10.html>)
2. The web-based platform contains numerous built-in validity checks that prevent abstractors from entering invalid data or conflicting data (e.g., the date of death is earlier than the date of injury or a male decedent is pregnant).
3. Additional validity check programs are being added on an ongoing basis based on feedback from local health departments entering data as part of SUDORS and observations of CDC staff. These validity checks are updated approximately once a year.
4. If sufficient resources are available, CDC will review a randomly selected sample of a least 25 cases per state on a yearly basis in order to ensure CDC coding guidelines are being used. Feedback will be provided to the state or the District of Columbia, who will be required to resolve specific and systematic errors.
5. CDC will work with staff from all 51 participating health departments through monthly workgroup meetings to develop standard protocols for analyzing complex variables such as toxicology results.

**Unusual Problems**

There are more legal issues associated with collecting data on UUDO deaths, especially if there is any suspicion of a suicide or homicide, than with deaths from natural causes. Medical examiners and coroners may be reluctant to release files for abstraction while a death investigation is in process. This may cause delays in receiving and entering data. The program can address and minimize this issue by building strong relationships between public health departments and ME/C offices at the local and national levels.

An additional barrier is that many states have decentralized ME/C systems (e.g., a separate coroner and/or medical examiner office for each county) and consequently records on UUDO deaths are non-centralized and not recorded in a standard manner. Only 16 states and the District of Columbia have statewide medical examiner systems with centralized records; the remainder have county medical examiners and/or coroners[[4]](#endnote-5). Collecting data in states with large numbers of ME/C offices can be challenging as state health departments must build individual relationships with each office to share data. Working with state or regional associations of ME/C and targeting the highest burden counties for participation are approaches that will be encouraged to minimize this problem.

Moreover, ME/C information is not standardized and is often not computerized. A recent survey of 898 of 2,128 eligible ME/C agencies found only 32% of ME/C agencies reported having a computerized information management system, with another 30% having record-keeping systems that used both manual hardcopies and computerized systems.[[5]](#endnote-6) Finally, 31% of ME/C agencies reported only having a manual record-keeping system. Consequently, time consuming abstraction from primary sources by trained abstractors will be required. Eventually efforts to develop an electronic death certificate and ME/C’s greater use of electronic data collection may reduce the need for manual data abstraction.

**3. Methods to Maximize Response Rates and Deal with Non-response**

This issue is not relevant with this methodology.

**4. Tests of Procedures or Methods to be Undertaken**

SUDORS will continue to leverage the National Violent Death Reporting System (NVDRS) data collection platform as part of this revision. Since September 2017, SUDORS has tested and enhanced the quality and comprehensiveness of data collected by NVDRS on unintentional and undetermined intent drug overdose deaths based on lessons learned from the 48 health departments entering drug overdose death data into the SUDORS/NVDRS web platform. SUDORS takes advantage of the streamlined coding system of the NVDRS web data system to facilitate data abstraction efficiency (see Attachment E for screenshots of variables to be collected by SUDORS). During this revision, SUDORS will continue to implement and improve a feasible and well-tested system.

**5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data**

There are no statistical aspects related to this surveillance system.

The data will be collected by staff from the 51 participating health departments or contract staff hired by the health department. Data will be transmitted via the web to CDC-based servers.

1. Data from CDC WONDER were used to determine if a subset of counties accounted for 75% or more of unintentional and undetermined drug overdose deaths in 2017. The calculation methods is detailed at: CE191904 Appendix 5 SUDORS\_UUDOsubset.docx. [↑](#endnote-ref-2)
2. U.S. Drug Enforcement Administration, Diversion Control Division. (2018). *2017 Medical Examiner/Coroner Office Survey Report*. Springfield, VA: U.S. Drug Enforcement Administration. [↑](#endnote-ref-3)
3. Additional information on the 5-point HHS strategy is available at: <https://www.hhs.gov/opioids/about-the-epidemic/hhs-response/index.html>. [↑](#endnote-ref-4)
4. Frontline (2011). "Map Death in America." Retrieved February 5, 2016, from http://www.pbs.org/wgbh/pages/frontline/post-mortem/map-death-in-america/ . [↑](#endnote-ref-5)
5. U.S. Drug Enforcement Administration, Diversion Control Division. (2018). *2017 Medical Examiner/Coroner Office Survey Report*. Springfield, VA: U.S. Drug Enforcement Administration. [↑](#endnote-ref-6)