What this work tells us

• The number of people experiencing homelessness who died in San Francisco from 2016 to 2018 based on extensive case review of medical examiner reports.
• Who these people were, and what interactions they had with health and social services prior to their deaths.
• The most common causes and locations of death among people experiencing homelessness in San Francisco.

What this work does not tell us

• What proportion of these deaths are attributable to homelessness itself
• The rate of deaths among people experiencing homelessness relative to the general population of San Francisco
• The number of homeless deaths in San Francisco that were not medical examiner cases
Opportunities

• Inform clinical practice and ongoing SFDPH initiatives

• Generate ideas for system-level efforts to prevent homeless deaths

• Respond to deaths in real time and monitor trends over time

• In conjunction with other SFDPH data holdings, use this information to develop interagency prioritization process for individuals experiencing homelessness.
Key Findings

- Homeless deaths steady during time period 2016-2018 and likely unchanged compared to 1990s.

- High prevalence of alcohol use and overlap with high service utilizer population.

- High prevalence of methamphetamine use and overlap with criminal justice-involved population, high users of medical and psychiatric emergency services.

- High prevalence of opioid overdose but less than would be expected considering national trends over same time period.

- High prevalence of violence and other trauma.

- Role of shelter: annual deaths relative to other cities
Response

- Continue and enhance SFDPH response to opioid overdose epidemic
- Methamphetamine task force and other clinical and population health responses to methamphetamine use
- Evaluation and improvement of system of care for individuals with severe alcohol use disorder
- Incorporate homelessness as risk that may need specific preventive strategies into SFDPH efforts in violence and injury prevention
- Support intensive efforts to reduce unsheltered homeless
Methodology
Methodology
HOW THIS WORK DIFFERS FROM PREVIOUS COUNTS OF HOMELESS DEATHS

• Annuals counts of homeless deaths in San Francisco typically limited to “No Fixed Address” cases

• This study also includes cases where homelessness can be confirmed through other data sources

• Inclusion of additional cases provides a more complete picture of deaths among individuals experiencing homelessness in San Francisco.

• Does not indicate that there has been an increase in homeless deaths.
Methodology

DATA SOURCES

OFFICE OF THE CHIEF MEDICAL EXAMINER (OCME)

The OCME’s responsibilities include deaths from:

- Accident or injury
- Potential homicides or suicides
- Solitary deaths (body found)
- Physician unsure of cause of death
- Poisoning (including drugs)
- Deaths related to suspected criminal activity
- Deaths of unidentified individuals
- Indigent (unclaimed) cases

Cases forwarded to Street Medicine include: No Fixed Address, Indigent, or other suspected homeless based on circumstances

COORDINATED CARE MANAGEMENT SYSTEM (CCMS)

San Francisco Department of Public Health data set

CCMS is made up of citywide health and social service data for homeless individuals cared for by the DPH and the Department of Homelessness and Supportive Housing.
Methodology

INCLUSION CRITERIA

Record received from OCME...

CCMS living situation listed as homeless?

No Fixed Address or other non-residential address on report?

Recent medical records mention homelessness?

HOMELESS

YES

NO

YES

YES

NO

NO

HOMELESS

NO
**Methodology**

**CASE REVIEW PROCESS**

1. **Initial report from OCME**
   - Identifiers, date and location of death
   - Jan 1 2016 – Dec 31 2018
   - n=390

2. **Final report from OCME**
   - Cause and manner of death, autopsy and toxicology reports
   - Jan 1 2016 – ~Dec 1 2017
   - n=215 (final reports)
   - n=168 (toxicology reports)

3. **Linked to CCMS**
   - Demographics, diagnostic codes and service utilization
   - Jan 1 2016 – July 31 2018
   - n=340
Demographics
Demographics
SAN FRANCISCO HOMELESS DEATHS 2016 – 2018

ANNUAL TOTALS

2016: 128
2017: 128
2018: 135*

*Deaths in the final days of 2018 may not be reported until early 2019

CCMS DATA

11% of cases had no CCMS records (had not used SF health or social services prior to death)
Demographics
GENDER, RACE/ETHNICITY, AND AGE

GENDER
82% of cases were male, 17% female, <1% transgender

RACE AND ETHNICITY

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>52%</td>
</tr>
<tr>
<td>African American / Black</td>
<td>26%</td>
</tr>
<tr>
<td>Latino/a</td>
<td>12%</td>
</tr>
<tr>
<td>Asian / Pacific Islander</td>
<td>3%</td>
</tr>
<tr>
<td>Mixed / Other</td>
<td>3%</td>
</tr>
<tr>
<td>Native American</td>
<td>1%</td>
</tr>
<tr>
<td>Declined / Not Stated</td>
<td>3%</td>
</tr>
</tbody>
</table>

AGE
Average age of 51 (min=21, max=86)

AGE AT TIME OF DEATH

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 to 30</td>
<td>8%</td>
</tr>
<tr>
<td>&gt;30 to 40</td>
<td>15%</td>
</tr>
<tr>
<td>&gt;40 to 50</td>
<td>21%</td>
</tr>
<tr>
<td>&gt;50 to 60</td>
<td>29%</td>
</tr>
<tr>
<td>&gt;60 to 70</td>
<td>21%</td>
</tr>
<tr>
<td>&gt;70</td>
<td>6%</td>
</tr>
</tbody>
</table>
### Demographics

**LIVING SITUATION**

#### HOUSING STATUS—YEARS HOMELESS IN SF*

<table>
<thead>
<tr>
<th>Years Homeless</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year homeless</td>
<td>14%</td>
</tr>
<tr>
<td>1 to 5 years homeless</td>
<td>24%</td>
</tr>
<tr>
<td>5 to 10 years homeless</td>
<td>20%</td>
</tr>
<tr>
<td>More than 10 years homeless</td>
<td>42%</td>
</tr>
</tbody>
</table>

*Excludes individuals with no CCMS living situation records  
Span of time includes continuous or intermittent homeless experience

#### LAST SHELTER OR NAVIGATION CENTER STAY PRIOR TO DEATH

<table>
<thead>
<tr>
<th>Time Before Death</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day–10 days before</td>
<td>10%</td>
</tr>
<tr>
<td>10–30 days before</td>
<td>5%</td>
</tr>
<tr>
<td>30–180 days before</td>
<td>11%</td>
</tr>
<tr>
<td>180 days–12 months before</td>
<td>6%</td>
</tr>
<tr>
<td>No stays in last 12 months</td>
<td>68%</td>
</tr>
</tbody>
</table>
Utilization History
## Utilization History

**URGENT/EMERGENT SERVICES AND HIGH USERS OF MULTIPLE SYSTEMS**

<table>
<thead>
<tr>
<th>HUMS SCORE* (TOTAL URGENT/EMERGENT UTILIZATION) IN FISCAL YEAR BEFORE DEATH</th>
<th>U/E UTILIZATION IN FISCAL YEAR BEFORE DEATH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero urgent/emergent utilization or not in CCMS</td>
<td>Top 1% 7%</td>
</tr>
<tr>
<td>1–5 visits/stays</td>
<td>2–5% 11%</td>
</tr>
<tr>
<td>6–10 visits/stays</td>
<td>6–100% 71%</td>
</tr>
<tr>
<td>11–30 visits/stays</td>
<td>No record in CCMS 11%</td>
</tr>
<tr>
<td>More than 30 visits/stays (max=109)</td>
<td>U/E UTILIZATION IN THREE FISCAL YEARS BEFORE DEATH (ANY YEAR)</td>
</tr>
<tr>
<td></td>
<td>Top 1% 8%</td>
</tr>
<tr>
<td></td>
<td>2–5% 18%</td>
</tr>
<tr>
<td></td>
<td>6–100% 63%</td>
</tr>
<tr>
<td></td>
<td>No record in CCMS 11%</td>
</tr>
</tbody>
</table>

*Sum of ED visits, inpatient stays, urgent care visits, PES visits, psych inpatient stays, Dore Urgent Care Psych visits, sobering center visits, medical detox stays, social detox stays
<table>
<thead>
<tr>
<th>Service Type</th>
<th>Utilization Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical services (non-outpatient)</td>
<td>69%</td>
<td>Includes emergency department, inpatient stays, sobering center, EMS ambulance, jail health or medical respite</td>
</tr>
<tr>
<td>Mental health services</td>
<td>28%</td>
<td>Includes SFGH Psychiatric Emergency Services, inpatient psychiatric stays, outpatient appointments, urgent care/day crisis, residential treatment, case management</td>
</tr>
<tr>
<td>Substance use disorder services</td>
<td>19%</td>
<td>Includes residential detox, residential treatment, methadone maintenance, outpatient counseling</td>
</tr>
</tbody>
</table>
32% had a jail health day in the year prior to death

<table>
<thead>
<tr>
<th>Last Jail Health Day Prior to Death</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day–10 days before</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>10–30 days before</td>
<td>4%</td>
</tr>
<tr>
<td>30–180 days before</td>
<td>17%</td>
</tr>
<tr>
<td>180 days–12 months before</td>
<td>11%</td>
</tr>
<tr>
<td>No stays in last 12 months</td>
<td>68%</td>
</tr>
</tbody>
</table>
Circumstances of death
Circumstances of death

LOCATION OF INCIDENT (MAY DIFFER FROM LOCATION OF DEATH)

Location of incident available for 308 cases
Circumstances of death
LOCATION OF INCIDENT (MAY DIFFER FROM LOCATION OF DEATH)

Tenderloin / Civic Center / SOMA

Mission
Circumstances of death
LOCATION OF INCIDENT (MAY DIFFER FROM LOCATION OF DEATH)

South East

North West
Circumstances of death
MANNER OF DEATH — CATEGORIES FROM THE OFFICE OF THE CHIEF MEDICAL EXAMINER

53% Accidents
Unintentional overdose, fall, drowning, pedestrian vs vehicle, inhalation, exposure, vehicle driver

11% Homicide
Firearm, sharp injury (i.e. stabbing), blunt injury, officer-involved shooting

30% Natural
Cancer, COPD, cardiovascular disease

4% Suicide
Hanging, asphyxia, jump from building

2% Undetermined
### Circumstances of death

**MOST COMMON CAUSES OF DEATH BASED ON AUTOPSY REPORTS**

1. Acute Drug Toxicity (unintended overdose)  
   - 35%

2. Cardiovascular Disease  
   - 16%

3. Chronic alcohol use and associated conditions (e.g., liver failure)  
   - 5.6%

4. Gunshot wound  
   - 5.2%

5. Acute alcohol toxicity  
   - 4.9%

6. Sharp force injury (i.e., stabbing)  
   - 4.1%

7. Blunt force injury (e.g., pedestrian vs. vehicle)  
   - 3.7%

8. Cancer, Falls  
   - 3.4%
Circumstances of death
UNDERLYING CONDITIONS - HIV

In cases where medical history was available in CCMS, 8% had a HIV/AIDS listed as an Elixhauser Comorbidity
Circumstances of death
CONTRIBUTING FACTORS — LISTED AS CAUSE OF DEATH, CONTRIBUTING CONDITION OR IN TOXICOLOGY

52% Drugs
32% Alcohol
29% Natural history of chronic disease
27% Violence or traumatic injury

Percentages do not add up to 100, as there are often multiple contributing factors e.g., fall (violent or traumatic injury) while intoxicated (alcohol-related)
Circumstances of death

TOXICOLOGY RESULTS — SUBSTANCES PRESENT IN REPORTS
N = CASES WITH TOXICOLOGY REPORTS AVAILABLE

47% Methamphetamine

45% Opioids

Fentanyl present in 4% of reports; Buprenorphine present in 0 cases

36% Cocaine

30% Alcohol

27% Sedatives
Thank you!

San Francisco Whole Person Care
UCSF Evaluation of Whole Person Care
San Francisco Department of Public Health
Special thanks to Amber Reed for her design work

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Whole Person Care (www.sfdph.org/WPC)