Opioid Deaths in South Carolina

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Vital Statistics
# Death Certificates

**CAUSE OF DEATH** (See instructions and examples)

32. **PART I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.

**IMMEDIATE CAUSE (Final disease or condition resulting in death)**

a. __________________________ Due to (or as a consequence of):

b. __________________________ Due to (or as a consequence of):

c. __________________________ Due to (or as a consequence of):

d. __________________________ Due to (or as a consequence of):

**PART II.** Enter other significant conditions contributing to death but not resulting in the underlying cause given in **PART I.**

33. **WAS AN AUTOPSY PERFORMED?**
   - Yes
   - No

34. **WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH?**
   - Yes
   - No

35. **DID TOBACCO USE CONTRIBUTE TO DEATH?**
   - Yes
   - Probably
   - No
   - Unknown

36. **IF FEMALE:**
   - Not pregnant within past year
   - Pregnant at time of death
   - Not pregnant, but pregnant within 42 days of death
   - Not pregnant, but pregnant 43 days to one year before death
   - Unknown if pregnant within the past year

37. **MANNER OF DEATH**
   - Natural
   - Homicide
   - Accident
   - Pending investigation
   - Suicide
   - Could not be determined

38. **DATE OF INJURY (Spell Month)**
39. **TIME OF INJURY**
40. **PLACE OF INJURY** (e.g., Decedent’s home, construction site, restaurant, wooded area)
41. **INJURY AT WORK?**
   - Yes
   - No

42. **LOCATION OF INJURY:** State: ______ City or Town: ______ County: ______
   - Street & Number: ________ Apartment Number: ________ Zip Code: ______

43. **DESCRIBE HOW INJURY OCCURRED:**
44. **IF TRANSPORTATION INJURY, SPECIFY:**
   - Driver/Operator
   - Pedestrian
   - Passenger
   - Other (Specify)
ICD-10 Codes

• Literal text for cause of death is sent to the National Center for Health Statistics (NCHS)

• NCHS codes cause of death according to ICD-10 rules

• NCHS returns codes to the state

• ICD-10 codes are used to calculate statistics
Drug Overdose Deaths by Intent, SC, 2007-2016
Occurrence Data
Drug Overdose Deaths by Intent, SC, 2007-2016
Occurrence Data

[Graph showing the age-adjusted rate per 100,000 standard population for various types of drug overdose deaths in South Carolina from 2007 to 2016.]
Opioid Deaths, 2016

- 876 drug overdose deaths occurred in SC, up from 789 deaths in 2015 (11% increase)
- 616 deaths involved opioids, up from 565 in 2015 (9% increase)
- 70.3% of all drug overdose deaths involved opioids
Opioid Deaths by Intent, 2016

- Unintentional: 92%
- Suicide: 6%
- Undetermined: 2%
- Homicide: 0%
Multiple drugs

- Often deaths involve more than one drug; such deaths are included in more than one category.

- Therefore, categories of drugs are not mutually exclusive and the numbers do not add up to the total.
## Opioid Deaths, 2015-2016

<table>
<thead>
<tr>
<th>Drug/Category</th>
<th>2015</th>
<th>2016</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total opioids</td>
<td>565</td>
<td>616</td>
<td>9%</td>
</tr>
<tr>
<td>Prescription opioids</td>
<td>512 (90.6%)</td>
<td>550 (89.3%)</td>
<td>7%</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>130 (23.0%)</td>
<td>190 (30.8%)</td>
<td>46%</td>
</tr>
<tr>
<td>Heroin</td>
<td>95 (16.8%)</td>
<td>108 (17.5%)</td>
<td>17%</td>
</tr>
</tbody>
</table>
Opioid Deaths by Age, South Carolina, 2014-2016, Occurrence data

<table>
<thead>
<tr>
<th>Age</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 17</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>18 - 24</td>
<td>31</td>
<td>36</td>
<td>50</td>
</tr>
<tr>
<td>25 - 34</td>
<td>83</td>
<td>136</td>
<td>136</td>
</tr>
<tr>
<td>35 - 44</td>
<td>116</td>
<td>117</td>
<td>153</td>
</tr>
<tr>
<td>45 - 54</td>
<td>107</td>
<td>108</td>
<td>145</td>
</tr>
<tr>
<td>55 - 64</td>
<td>152</td>
<td>142</td>
<td>152</td>
</tr>
<tr>
<td>65 +</td>
<td>27</td>
<td>21</td>
<td>19</td>
</tr>
</tbody>
</table>
Opioid Mortality Rate by Age, SC, 2014-2016
Occurrence Data
Opioid Deaths by Race/Sex, South Carolina, 2016,
Occurrence data

- White Male: 58%
- White Female: 35%
- Black and Other Male: 4%
- Black and Other Female: 3%
Age-adjusted mortality rates due to opioid overdose in SC by county, 2014 - 2016

Age-adjusted\(^1\) mortality rate due to opioid overdose, 2014-2016

- 0 - 4.0
- 4.1 - 7.5
- 7.6 - 12.3
- 12.4 - 30.4

Bold number: Age-adjusted mortality rate due to opioid overdose, 2014 - 2016.

State rate: 11.7

\(^1\)Age-adjusted rates use the 2000 Standard Population. Rate per 100,000 population.

Breaks on map are by quartile.

Source: Division of Biostatistics, DHEC.

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Stay Connected
SC Overdose Prevention Project: Sharing Data-Saving Lives

Linda Brown, MPH
Overdose Prevention Coordinator
The SC Overdose Prevention Project

- **Funding amount:** $3,192,772
- **Project Period:** Five years

**Partner Agencies:**

- **SC Department of Health and Environmental Control, (SC DHEC):**
  - Bureau of Emergency Medical Services (EMS)
  - Office of Public Health Statistics (PHS)
- **The Fifth Judicial Circuit Solicitor’s Office**
Two Distinct Trainings

First responder trainings: The Law Enforcement Officers Narcan® Training Program (LEON)

• Conducted by lead SC DHEC staff within the Bureau of Emergency Medical Services, (EMS) and staff from DAODAS (formerly with the Fifth Circuit Solicitor's Office in Columbia).

• Once trained, police officers can possess and administer naloxone. They are provided a kit with two doses at end of training course.
Substance Use Disorder Treatment Center Trainings

Trainer of trainer (TOT) courses:

• Staff at state-funded 301 substance use disorder treatment sites

• 301 staff in turn provide overdose education and Naloxone distribution training for their at-risk patients and/or their caregivers

• Once trained, patients and/or their caregivers are provided a package of Narcan® containing two 4mg nasal spray devices, regardless of ability to pay
Sources of Local Data Utilized for SC Overdose Prevention Grant

- State Epidemiological Outcomes Workgroup
  - Needs assessment (high burden counties)
- Office of Revenue and Fiscal Affairs (RFA)
  - Hospital discharge data corresponding to opioid overdose and/or use
- DHEC:
  - Office of Public Health Statistics: GIS mapping, lead grant evaluation
  - Division of Biostatistics: mortality data
  - Bureau of EMS: Narcan deployment
  - Drug Control: prescription drug monitoring program data
State Epidemiological Outcomes Workgroup (SEOW)

The SEOW is a group of data experts responsible for bringing data on substance misuse and related behavioral health problems to the forefront of the strategic planning process.

Four core tasks:

1) Identifying, analyzing, profiling, and sharing data from existing state and local sources
2) Creating data-guided products that inform behavioral health planning and policies
3) Training communities in understanding, using, and presenting data in an effective manner
4) Building state and local-level monitoring and surveillance systems
Examples of Data Sharing

• **GIS maps:**
  Created for the Narcan® grant to assess counties with highest opioid burden (*includes opioid mortality, naloxone deployment/rescue attempts, and hospital discharge indicators*)

• **Mortality Data by substance type:**
  In an effort to better inform ongoing state prevention and treatment efforts, DAODAS attempts to study mortality data and its association to:
  • DEA/SLED (*arrest data*), PDMP (prescribing patterns)
  • service utilization data of patients within the state-funded 301 provider network
  • LEON project (*Narcan rescue attempts*) to better understand drug trends.
Examples of Data-Guided Products

• Naloxone Grant:
  • Needs Assessment, Disparity Impact Statement, Evaluation Plan, portions of the state Strategic Plan, presentations to the Board of Pharmacy to obtain Narcan distribution guidance/approval, education materials (i.e. fact sheets, brochures)

• Legislative updates:
  • Accountability reports, legislative briefs, presentations at the legislative opioid commission hearings

• Grant applications:
  • States’ Response to the Opioid Epidemic (STR), awarded to DAODAS in May, 2017 for $6,500 x 2 years.

• State Plan to Prevent and Treat Prescription Drug Abuse
  • Implementation of recommended action steps
Future Direction

- Move beyond assessments toward monitoring Narcan distribution penetration rates to increase access to naloxone and decrease mortality associated with opioids.
Contacts for Overdose Prevention Grant

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South Carolina Bureau of EMS:
Addressing the Opioid Crisis
EMS and Narcan

- Narcan has been a mainstay for EMS since 1970’s
- Narcan is solely used in the reversal of opioids
- EMS in South Carolina began mandatory electronic reporting of patient care reports in 2009 (average of 1.2 million ePCRs a year)
- The rate of EMS Narcan administration began to increase in 2011 but a significant rise since 2016
- Follow the EMS Narcan data to find state’s areas of high opioid overdoses and traffic
2015 Narcan Usage by EMS in S.C

4,610 administrations

Per 100,000 people:
- Pickens: 200
- Horry: 165
- Greenville: 144
- Spartanburg: 105
- Anderson: 97
- Charleston: 67
- Richland: 36
2016 Narcan Usage by EMS in S.C

Per 100,000 people

- Horry: 342
- Pickens: 274
- Greenville: 160
- Spartanburg: 160
- Anderson: 142
- Charleston: 119
- Richland: 62

111 and Above
81 to 110
51 to 80
Less than 50

6,427 administrations

39% Increase Over 2015

LEON
S.C. EMS Usage of Narcan in 2017

To date 10% increase over 2016
LEON Program

- The program was created pursuant to the 2015 passing of the South Carolina Overdose Prevention Act (S.C. Code Section 44-130-60).
- The Act seeks to grant immunity from both civil and criminal prosecution, to doctors, pharmacists, caregivers, and first responders, who are engaged in the prescription, dispensation and administration of Naloxone (Narcan) in an opioid-overdose suspected case.
LEON Program Development

- Pilot program in Columbia-Richland
- Expanded pilot to Greenville & Charleston in June 2016
- Using historical EMS Narcan data we focused on Top 15 counties with most Narcan given by EMS
- Partnership with DAODAS secured SAMHSA grant to purchase Narcan directly from Adapt Pharma
- Centralized Narcan distribution – partnership with DHEC Regional Pharmacies
- Expansion of program beyond the pilot and Top 15
- Collected data on officer deployments up to date
LEON To Date Administrations

- To date 3,364 officers trained in 96 agencies in 33 counties
- 120 deployments of Narcan by LEON officers
- 72% Males; 28% Females; 98% White
- Median age 32, Most frequent age 24 (Range 14-65)
- At least a second dose of Narcan administered to revive them 45% of the time
- 26% of the people required full CPR (95% successful)
Future Opioid Crisis Initiatives

- Development of **ROLL** – Reducing Opioid Loss of Life for Firefighters
  - In 2016, SC fire departments responded to 216,504 Medical/Rescue calls (57.92% of all FD calls)

- New Bureau of EMS FTE: Narcan Coordinator begins October 17, 2017
- Community Paramedic Out-REACH
  - Go out 2 by 2 to visit recent OD discharges
  - Regional Resources for Recovery and Rehab
  - Bureau of EMS to pay flat fee per visit

*2016 SC State Fire Report

Colerain Township, OH Community Paramedic model: **Recovery Project**
Questions?