BUILDING EPIDEMIOLOGICAL CAPACITY FOR DRUG OVERDOSE SURVEILLANCE IN THE U.S. HEALTH DEPARTMENTS

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Council of State and Territorial Epidemiologists (CSTE) Overdose Subcommittee, USA

Safety 2016 World Conference
21 September 2016
Tampere, Finland
CSTE Overdose Subcommittee

Formed in 2012 in response to the growing prescription drug overdose epidemic in the U.S., to raise CSTE membership awareness, and test and validate proposed drug overdose indicators before they were widely adopted as surveillance tools at national, state, and local levels.
Accomplishments

- CSTE Overdose Subcommittee has 195 members representing more than 60 state, tribal, and local health authorities and partner organizations.
- The monthly calls are attended by representatives of several federal agencies (e.g., the CDC, NCHS, SAMHSA)
- Several major projects were completed with voluntary participation from CSTE Overdose Subcommittee members, resulting in surveillance recommendations, conference presentations, new epidemiological tools for analysis of overdose data, papers, and peer-reviewed publications.
Project: Evaluation of the state-to-state variability in drug overdose death indicators.


Figure. Drug overdose death rates\(^a\), by jurisdiction: United States and selected states, 2010\(^b\)

- KY – opioid rate lower than OK but one third of the overdose deaths did not list any specific drug contributing to the overdose.
- OK – highest opioid rate but less than 4% of the overdose deaths were not associated with at least one specific drug/drug class.

\(^a\)Per the National Center for Health Statistics reporting rules, the following rates were suppressed (based on fewer than 10 deaths): the New York City overdose death rate associated with "other and unspecified drugs" and the Kansas and Oklahoma overdose death rates associated with "other and unspecified narcotics". The North Carolina overdose death rate associated with "other and unspecified narcotics" was unreliable (based on fewer than 20 deaths). Both the suppressed and unreliable rates were omitted from the figure.

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EPI TOOL TO ANALYZE OVERDOSE DEATH DATA

Posted by James Davis (NM), Jennifer Sobel (WA), Dagan Wright (OR), and Svetla Slavova (KY), Friday, March 13, 2015
Updated: Friday, March 13, 2015

Did you know that drug overdoses are the leading cause of injury death in the nation? While we know that they are a leading cause of injury death, the ICD codes often only tell us the broad class of drugs involved and not the specific drugs. However, there is often more information about the specific drugs on the death certificate.
Current multi-jurisdictional project:
Fentanyl Overdose Deaths, 2012-2015

Difficulty comparing synthetic opioid increases by states due to differences among states in testing and reporting.
Study goals

• Compile timely results on fentanyl and other synthetic opioid-related deaths

• Collect information on the post-mortem toxicology testing for fentanyl and fentanyl analogs

• Promote common definitions, methods, peer mentoring
14 Jurisdictions in the study

Arizona (Jennifer Dudek)
Iowa (Toby Yak)
Kentucky (Svetla Slavova, Sarah LaMantia, Huong Luu, Terry Bunn)
Massachusetts (Malena Hood, Hermik Babakhanlou-Chase)
Minnesota (Nate Wright)
New York City (Ellenie Tuazon, Denise Paone, Michelle Nolan)
North Carolina (Mary Beth Cox, Scott Proescholdbell)
New Mexico (Jim Davis)
Oklahoma (Claire Nguyen)
Utah (Anna Fondario, Elizabeth Brutsch)
Washington (Jennifer Sabel)
Maricopa County, AZ (Kyle Garner) – survey results only
Marin County, CA (Haylea Hannah, Karina Arambula)
Saint Louis County, MO (Lara Dalidowitz, Jennifer Kret)
<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Death Investigation System</th>
<th>Centralized Toxicology Lab</th>
<th>Fentanyl Screening / Year</th>
<th>Routine Confirmatory Testing / Years /Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZ</td>
<td>County-level ME</td>
<td>Yes</td>
<td>Yes /2010-2015</td>
<td>Yes /2010 to 2015 /Fentanyl, Norfentanyl</td>
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<tr>
<td>Maricopa-AZ</td>
<td>County-level ME</td>
<td>Yes</td>
<td>Yes /2010-2015</td>
<td>Yes /2010 to 2015 /Fentanyl, Norfen.</td>
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<tr>
<td>KY</td>
<td>ME/Coroner hybrid</td>
<td>Yes</td>
<td>Yes /2010-2015</td>
<td>Yes /2010 to 2015 /Fentanyl, Norfen.</td>
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<tr>
<td>Marin-CA</td>
<td>County-level coroner</td>
<td>No</td>
<td>Yes /2015</td>
<td>Yes /2010 to 2015 /Fentanyl, Nor- &amp; Acetyl fen., Al- &amp; Sufentanil</td>
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<tr>
<td>MN</td>
<td>County-level ME</td>
<td>No</td>
<td>Variation</td>
<td>Unknown</td>
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<td>NC</td>
<td>State-wide ME</td>
<td>Yes</td>
<td>No /add-on test</td>
<td>Yes /2010 to 2015 /Fentanyl, Nor-, Acetyl-, Butyryl- &amp; Furanyl fen.</td>
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<tr>
<td>NM</td>
<td>State-wide ME</td>
<td>Yes</td>
<td>No /add-on test</td>
<td>Yes /2010 to 2015 /Fentanyl, Norfentanyl, Alfentanil, Sufentanil</td>
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<tr>
<td>NYC</td>
<td>County-level ME</td>
<td>Yes</td>
<td>No /add-on test</td>
<td>Yes /2010 to 2011 /Fentanyl, Norfentanyl</td>
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<tr>
<td>OK</td>
<td>State-wide ME</td>
<td>Yes</td>
<td>Yes /2010-2015</td>
<td>Yes /2010-2015 /Fentanyl, Acetyl fen., Butyryl fen., Isobutyryl, 4-methoxybutyryl, Despropionyl</td>
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<td>St. Louis-MO</td>
<td>County-level ME</td>
<td>Yes</td>
<td>Yes /2010 - 2015</td>
<td>Yes /2010 to 2015 /Fentanyl</td>
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<tr>
<td>UT</td>
<td>State-wide ME</td>
<td>Yes</td>
<td>Yes /2010-2015</td>
<td>Yes /2010-2015 /Fentanyl, Norfentanyl</td>
</tr>
<tr>
<td>WA</td>
<td>ME/Coroner hybrid</td>
<td>Yes</td>
<td>Yes /2010-2015</td>
<td>Yes /2010-2015 /Fentanyl</td>
</tr>
</tbody>
</table>
Percent of drug overdose deaths with a multiple cause of death code of T40.4 out of all drug overdose deaths, by jurisdiction from 2012 - 2015

Note: Data are provisional and subject to change.

Note: Missing data for NM, NYC, St. Louis, and WA in 2015, and for NM in 2012
Number of drug overdose deaths involving fentanyl vs. number of drug overdose deaths T40.4, by jurisdiction from 2012 - 2015

Note: Missing data for NM in 2012 and 2015, and for NYC in 2015
Next steps

• Finish analysis
  – Re-confirm analyzed results with jurisdictions
  – Add information from any additional jurisdictions

• Write and submit a collaborative journal article
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http://www.cste.org/group/OverdoseWorkgroup