

Maternal Mortality and Morbidity: The Role of Drug Overdoses

**Presentation to the House Select
Committee on Opioids & Substance Abuse**

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Presentation Overview



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- Recent Developments
- Overview: Maternal Death Calculations
- Drug Overdose Maternal Deaths
- Intervention: AIM Opioid Maternal Safety Bundle

Recent Developments

Original Research

Identifying Maternal Deaths in Texas Using an Enhanced Method, 2012

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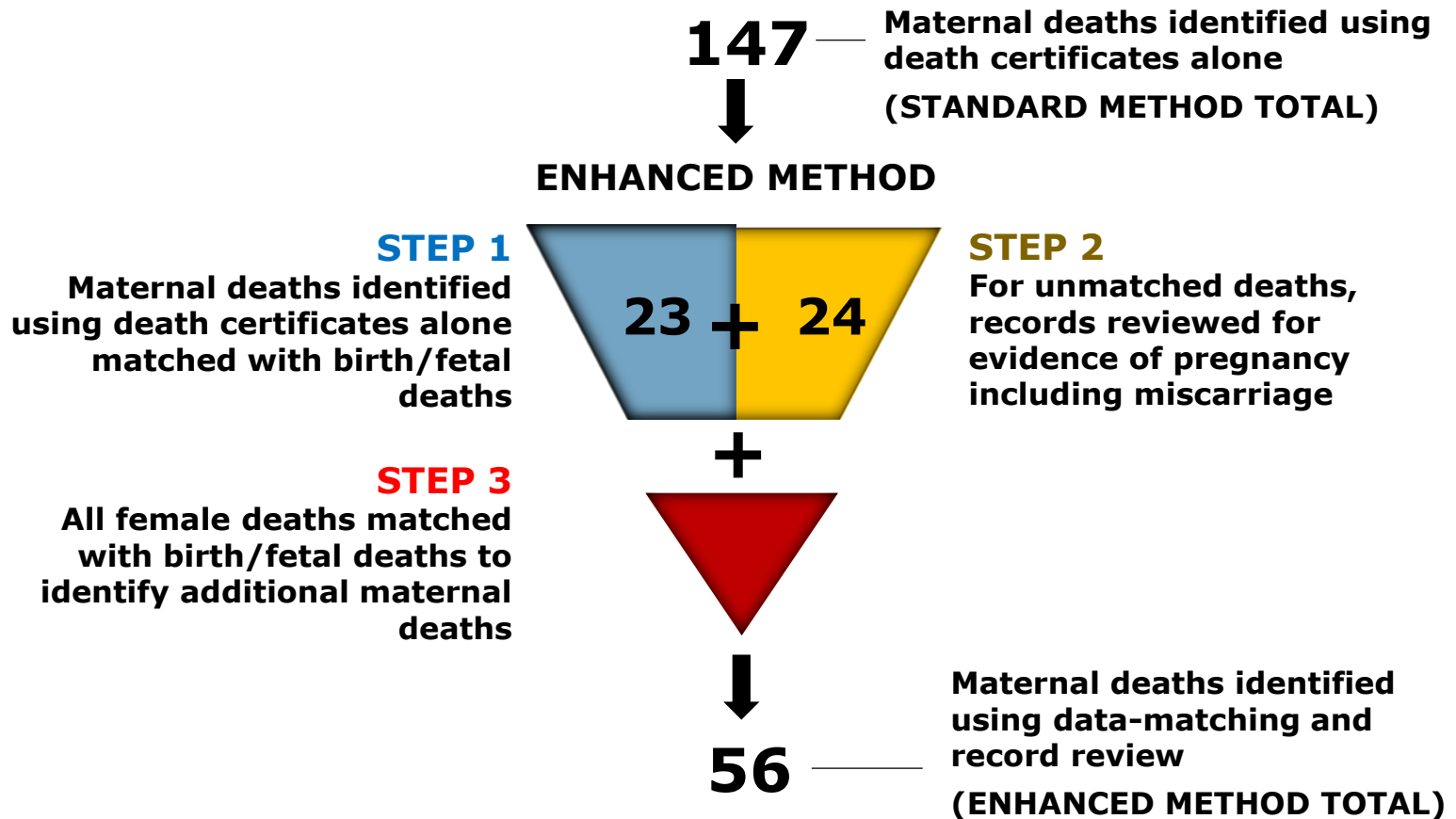


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Recent Developments

Number of Maternal Deaths in 42 Days Following End of Pregnancy, Texas, 2012



Recent Developments: Effect on Current and Future Research

- What do these recent developments in research mean for Maternal Mortality and Morbidity in Texas?
 - While the numbers changed, the 2016 recommendations and related legislative changes remain relevant
- Why does the analysis of maternal mortality still matter?
 - 1 maternal death should not be viewed in isolation
 - 1 maternal death represents 50-100 women suffering from severe maternal morbidity in Texas



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Recent Developments: Next Steps

- The DSHS Enhanced Method will be used in all future analyses, beginning with 2013 data
- This will result in greater certainty about the numbers reported by Texas
 - The Enhanced Method further assures current/future interventions address major drivers in maternal mortality and severe maternal morbidity



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Overview: Maternal Death Calculations

- **Maternal Mortality Rate (42 Days):** *per* 100,000 live births
 - Rate is used by the Centers for Disease Control in establishing a Maternal Mortality Rate (MMR) for each state
- **365 Day Count:** number of deaths occurring within 365 days after pregnancy
 - 365 Days is used by the Task Force for their review of maternal deaths for determining pregnancy relatedness and preventability.



Drug Overdose Maternal Deaths



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Drug Overdose Analysis Using Confirmed Maternal Death Data

Confirmed Deaths: Using Steps from Enhanced Method

STEP 1

Maternal deaths identified using death certificates alone matched with birth/fetal deaths

STEP 2 (Not Used in Drug Overdose Analysis)

For unmatched deaths, records reviewed for evidence of pregnancy including miscarriage

STEP 3

All female deaths matched with birth/fetal deaths to identify additional maternal deaths

	Count	Rate
2012	89	23.3
2013	98	25.3
2014	102	25.5
2015	93	23.1



Maternal Death Timeline Analysis

Confirmed Maternal Deaths by Timing and Cause of Death, Texas, 2012-2015

<i>Cause of Death</i>	<i>While Pregnant</i>	<i>0 7 Days Post partum</i>	<i>8 42 Days Post partum</i>	<i>43 60 Days Post partum</i>	<i>61+ Days Post partum</i>	<i>Total</i>
<i>Amniotic Embolism</i>	1	9	0	0	0	10
<i>Cardiac Event</i>	2	12	9	5	27	55
<i>Cerebrovascular Event</i>	0	8	9	1	9	27
<i>Drug Overdose</i>	0	3	7	5	49	64
<i>Hemorrhage</i>	3	12	2	0	3	20
<i>Homicide</i>	2	1	5	2	32	42
<i>Hypertension/Eclampsia</i>	0	7	4	0	7	18
<i>Infection/Sepsis</i>	1	3	14	3	11	32
<i>Pulmonary Embolism</i>	2	3	4	2	2	13
<i>Substance Use Sequelae (e.g., liver cirrhosis)</i>	0	0	2	0	3	5
<i>Suicide</i>	0	1	2	2	28	33
<i>Other</i>	5	5	6	3	44	63
Total	16	64	64	23	215	382



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Maternal Drug Overdose Death Investigation

Identify where greatest opportunities exist for prevention by determining:

- Specific drugs involved
- Demographics of those more at risk
- Geographic region
- Timing of death



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Maternal Drug Overdose Death Investigation

Significant Findings, 2012-2015

- 382 Maternal Deaths
- 64 Maternal Drug Overdose Deaths
 - 42 (66%) involved a combination of drugs
 - 32 occurred 61+ days postpartum
 - 37 (58%) involved opioids
 - 28 occurred 61+ days postpartum
 - Benzodiazepines were involved in at least 13 opioid-involved maternal drug overdose deaths



Maternal Drug Overdose Death Investigation

Specific Drugs Identified from Death Certificate Narratives for Drug Overdose Confirmed Maternal Deaths, 2012-2015

<i>Specific Drugs</i>	<i>Count</i>
OPIOIDS	
<i>Opioid</i>	23
<i>Heroin</i>	18
<i>Fentanyl</i>	1
NON-OPIOIDS	
<i>Sedative</i>	22
<i>Cocaine</i>	12
<i>Methamphetamine</i>	9
<i>Alcohol</i>	3
<i>Acetaminophen</i>	2
<i>Antidepressant</i>	1
<i>Anticonvulsant</i>	1
<i>Inhalant</i>	1
<i>Caffeine</i>	1
UNKNOWN	1

Note: These numbers should not be tallied, as multiple drugs often appear on a single death certificate



Maternal Drug Overdose Death Investigation

Demographic Risk Profiles

Drug Overdose Maternal Deaths

- White women
- Aged 40+
- Living in urban counties and/or:
 - Region 2/3 (Dallas/Ft. Worth)
 - Region 1 (Panhandle)
- Medicaid at delivery

All Maternal Deaths

- Black women
- Aged 40+
- Living in urban counties and/or:
 - Region 1 (Panhandle)
 - Region 8 (includes San Antonio)
- Medicaid at delivery



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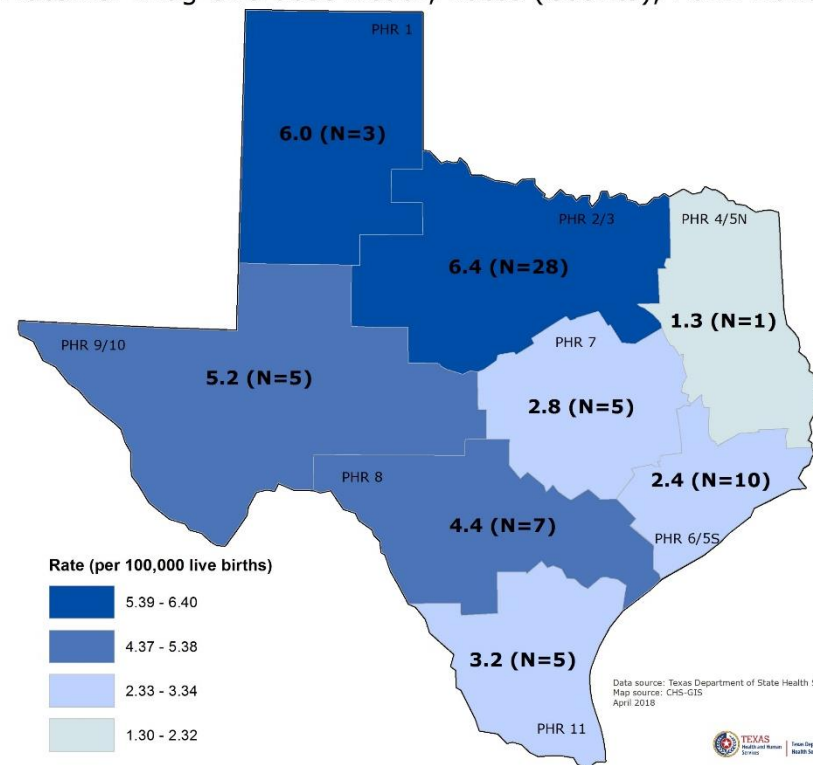
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Maternal Drug Overdose Death Investigation

Number of Drug Overdose Maternal Deaths by Region and Timing of Death, Texas, 2012-2015

<i>Region of Residence</i>	<i>Total Deaths</i>	<i>Rate (per 100,000 live births)</i>
Region 1 (Panhandle)	3	6.0
Region 2/3 (includes DFW)	28	6.4
Region 4/5N (East Texas)	1	1.3
Region 6/5S (includes Houston)	10	2.4
Region 7 (Central Texas)	5	2.8
Region 8 (includes San Antonio)	7	4.4
Region 9/10 (West Texas)	5	5.2
Region 11 (South Texas)	5	3.2
Total	64	-

Maternal Drug Overdose Death, Rates (Counts), 2012-2015





AIM Opioid Maternal Safety Bundle



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TexasAIM Initiative

- To reduce severe maternal morbidity using evidence-based systems to enhance maternal care
- Implementing AIM bundles for:
 - Obstetric hemorrhage
 - Severe hypertension in pregnancy
 - Obstetric care for women with opioid use disorder
- Next steps:
 - Enrolling hospitals on a voluntary basis
 - *TexasAIM* Leadership Summit and Orientation (June 4, 2018)
 - Maternal Safety Needs Assessment Survey
- For more information, visit www.dshs.texas.gov/mch/TexasAIM.aspx

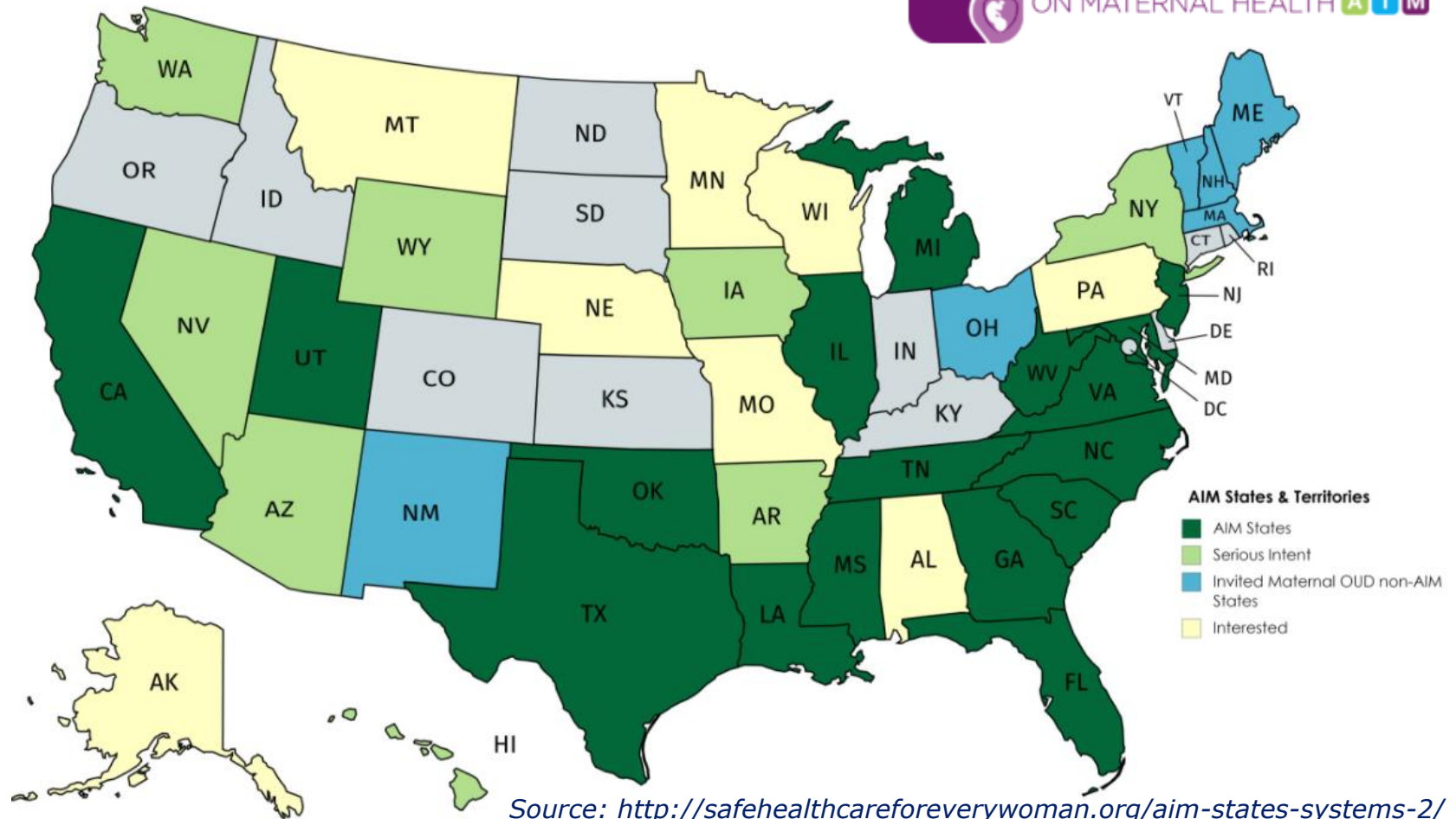


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National AIM Participation



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Senate Bill 17

85th Legislature, 2017, 1st Called Session



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Sec. 34.0156. MATERNAL HEALTH AND SAFETY INITIATIVE.

(a) Using existing resources, the department, in collaboration with the task force, shall promote and facilitate the use among health care providers in this state of maternal health and safety informational materials, including tools and procedures related to best practices in maternal health and safety.



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Opioid Maternal Safety Bundle

Overview

Consists of

- Instructions
- Checklists
- Supplies

Goals

- Assess and treat opioid use disorder, and
- Prevent opioid-related drug overdose among pregnant and postpartum women

Settings

- Inpatient and outpatient facilities to improve clinical care



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Opioid Maternal Safety Bundle

Bundle Development

Workgroups

- Provider Education
- Clinical Pathways & Quality Improvement
- Metrics
- Community Outreach & Engagement

Status

- Workgroups to complete their tasks this month (April)
- AIM will then prepare bundle for formal release (July)
- Training and other activities already underway

TexasAIM Partners

- Texas Hospital Association
- HHSC and DFPS
- Many other statewide champions



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Opioid Maternal Safety Bundle

Texas Timeline

July 2018

- Launch pilot project in Mommies hospitals

Summer 2019

- Statewide implementation



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Thank You
