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# **DSHS Leadership Update**

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***Manda Hall, MD***

**Associate Commissioner, Community Health Improvement  
Texas Department of State Health Services**

***Karen Ruggiero, PhD***

**Director, Maternal & Child Health Epidemiology**

**December 15, 2017**

# Outline

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- 1. Healthy Texas Babies Data Book**
- 2. Maternal Mortality & Morbidity Internet Landing Page**
- 3. Healthy Texas Mothers & Babies**
  - a. HTMB mission
  - b. HTMB program
    - i. Individual and Public Awareness and Knowledge
    - ii. Professional Education
    - iii. Community Empowerment
    - iv. Community Improvement
    - v. Perinatal Quality Improvement Network
  - c. Implementation of AIM maternal safety bundles
- 4. Investigating Drug Overdose Maternal Deaths in Texas**



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# 2017 Healthy Texas Babies Data Book



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- Provides overview of infant health in Texas, as well as maternal health before and during pregnancy, which directly impacts infant health
- Geared toward researchers, epidemiologists, programs, and policy makers, to make data-driven decisions for improving health outcomes in Texas
- To access Data Book and download a copy, visit:  
<http://www.dshs.texas.gov/healthytexasbabies/data.aspx>

# Maternal Mortality & Morbidity Internet Landing Page



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- Background for understanding maternal mortality and severe maternal morbidity in Texas, with current public health prevention efforts described
- Methods for calculating maternal mortality rates are explained
- Topical publications and presentations also available
- Visit: <http://www.dshs.texas.gov/mch/Maternal-Mortality-and-Morbidity-in-Texas/.aspx>



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# **Healthy Texas Mothers & Babies: A PUBLIC HEALTH COMMITMENT**

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# HTMB Mission

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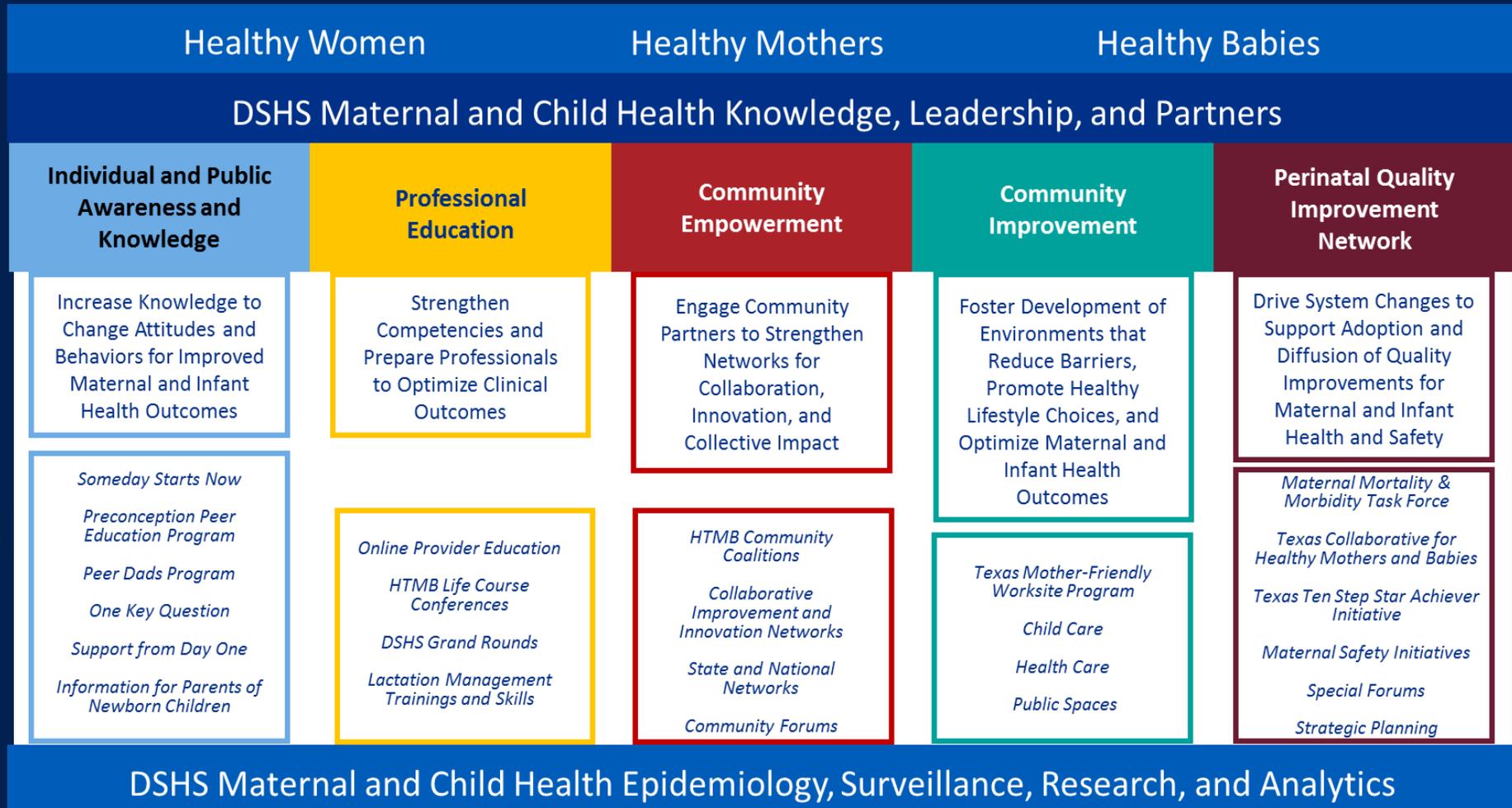
- Improve maternal and infant health by advancing quality and evidence-based prevention for all Texas mothers and babies



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# HTMB Program



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# DSHS Perinatal Quality Improvement Network (PQIN)

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- Drive system changes to support adoption and diffusion of quality improvements for maternal and infant health and safety
  - Maternal Mortality & Morbidity Task Force
  - Texas Collaborative for Healthy Mothers & Babies
  - Stakeholder Forums
  - Implementation of AIM Maternal Safety Bundles



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# Maternal Mortality and Morbidity Forum

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- **Public Health Workgroup**

- Enhance mental health and substance use disorder treatment
- Improve health of women before and after pregnancy
- Increase health care professional education and engagement

- **Data Workgroup**

- Conduct environmental scan of how death certificate completed
- Perform analysis of needed educational materials and improvements to new Texas Electronic Vital Events Registrar (launching January 1, 2019)
- Explore potential legislative and policy changes to enhance death data quality

- **Systems Workgroup**

- Promote Alliance for Innovation on Maternal Health program (AIM) maternal safety bundles in all hospitals providing maternity services
- Assess feasibility of hospital and health care professional recognition for high maternal safety care standards



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# **AIM Maternal Safety Bundles**

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# Senate Bill 17

## 85<sup>th</sup> Legislature 1<sup>st</sup> Special Session



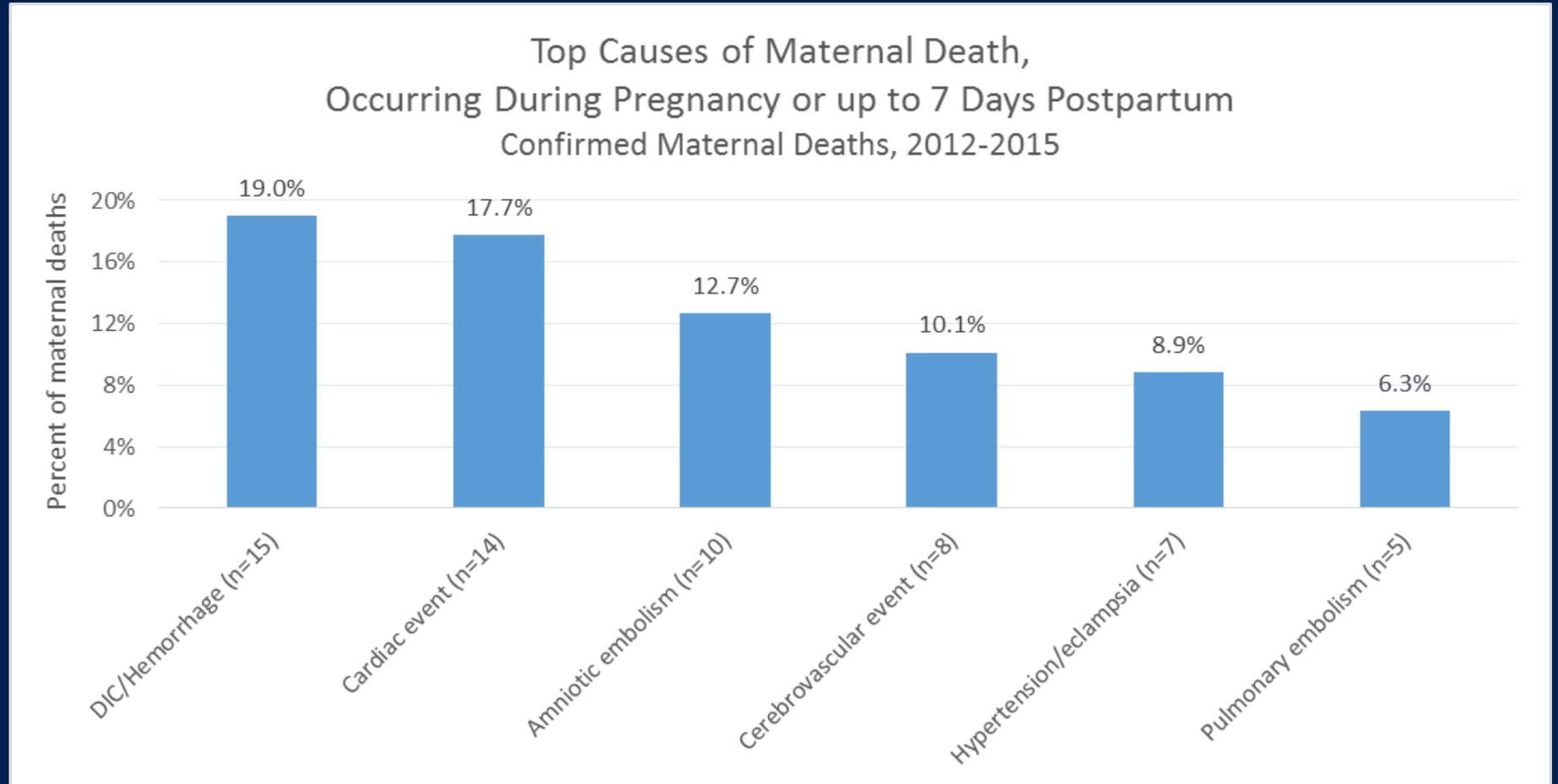
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### Sec. 34.0156. MATERNAL HEALTH AND SAFETY INITIATIVE.

(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.

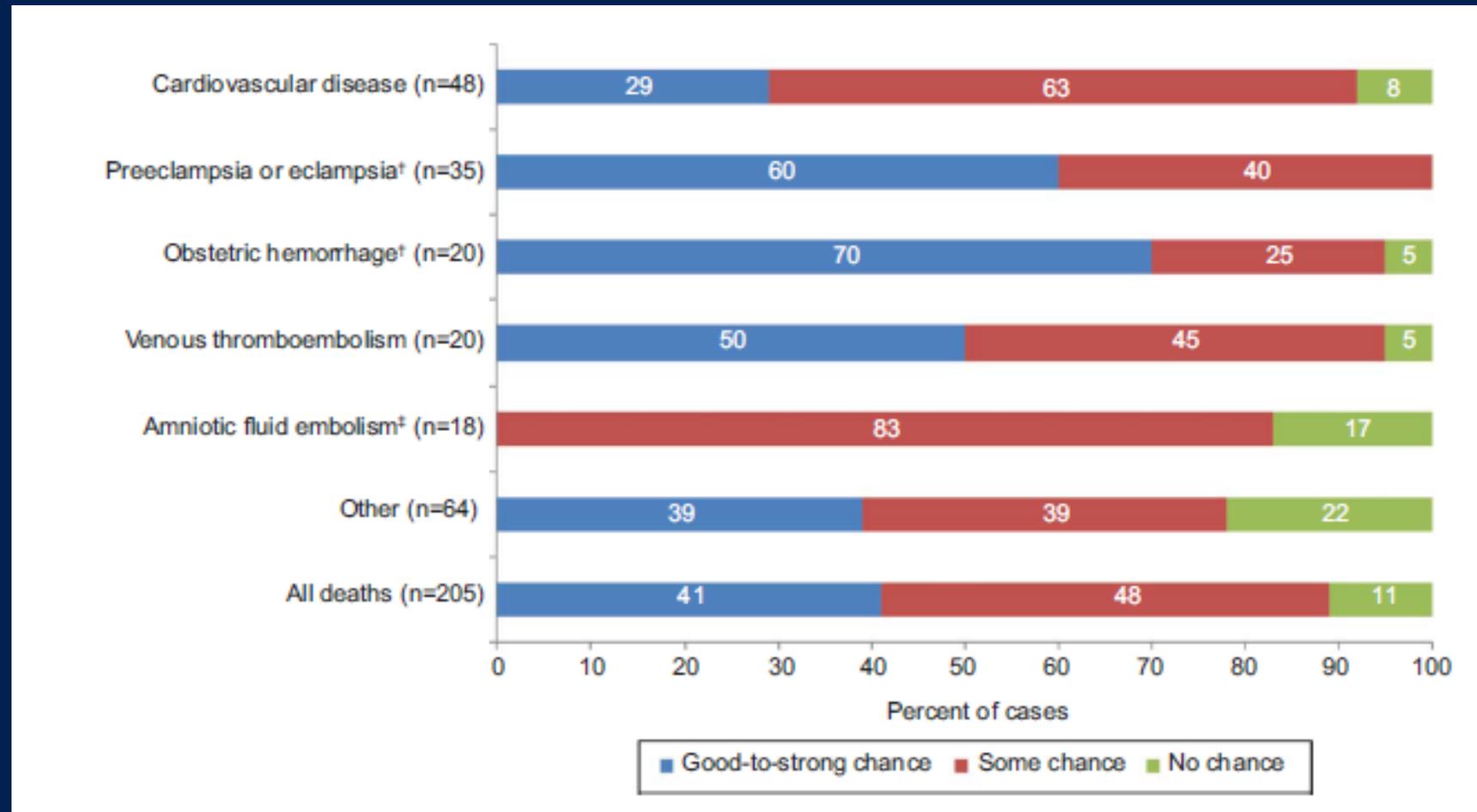
# Top Causes of Maternal Death: During Pregnancy & Within 7 Days Postpartum



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# Maternal Morbidity and Mortality are Preventable



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# Role of Opioid Overdoses in Maternal Deaths

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- Need for maternal opioid use prevention since drug overdose, mainly involving opioids, was leading cause of maternal death between 2012 and 2015
- DSHS partnering with AIM to develop and implement bundle on obstetric care for women with opioid use disorder



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# AIM Maternal Safety Bundles

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- Instructions, checklists, and supplies for health care staff to effectively prepare, identify, and prevent maternal mortality and morbidity due to specific causes
- Evidence-based best-practices for maternity care endorsed by many national organizations, including ACOG



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# AIM Bundle Implementation

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- AIM Enrollment
- Obstetric Care for Women with Opioid Use Disorder
  - Kick-off meeting: November 14, 2017
  - ACOG workgroups
  - Next steps
- Obstetric Hemorrhage & Severe Hypertension in Pregnancy
  - Implementation plan development
  - AIM Advisory Workgroup to improve maternal health and safety



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# Conclusion

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- DSHS remains committed to improving maternal and infant health outcomes
- DSHS HTMB enhances the ability to implement evidence-based prevention activities
- Texas AIM Maternal Safety Bundle implementation through DSHS PQIN to prevent maternal mortality and severe maternal morbidity



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# Investigating Drug Overdose Maternal Deaths in Texas

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December 15, 2017

# Acknowledgments

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- Thanks to **Debra Saxton and Dr. Natalie Archer**, Maternal & Child Health Epidemiology



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# Confirmed Maternal Deaths by Timing and Cause of Death, Texas, Over Four-Year Period, 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
<i>Total</i>	16	64	64	23	215	382



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# Investigation Purpose

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- Identify where greatest opportunities exist for prevention by determining:
  - Specific drugs involved
  - Demographics of those more at risk
  - Geographic region and timing of death



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# Investigation Methods

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1. Maternal deaths in 2012-2015 confirmed by ensuring woman's death certificate matched with live birth or fetal death certificate within 365 days
2. Drug overdose maternal deaths identified from underlying cause-of-death codes
3. Specific drugs determined from detailed search of death certificate narratives for any drug terminology
4. Timing of death calculated using pregnancy checkbox on death certificate and days elapsed between delivery and death



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# Combination of Drugs & Role of Opioids

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- 49 (77%) involved a combination of drugs
- Opioids were detected in 37 (58%) drug overdose maternal deaths (Table 1)



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

**Table 2**

<i>Specific Drugs</i>	<i>Count</i>
<b>OPIOIDS</b>	
<i>Opioid</i>	23
<i>Heroin</i>	18
<i>Fentanyl</i>	1
<b>NON-OPIOIDS</b>	
<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
<b>UNKNOWN</b>	<b>1</b>



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# Drug Overdose Maternal Death Demographic Risk Profile

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*Table 3*

- White women
- Aged 40+
- Living in urban counties
  - Region 2/3 (includes Dallas-Forth Worth)
  - Region 1 (Panhandle)
- Medicaid at delivery



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

**Table 4**

<i>Region of Residence</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>	<b>TOTAL</b>
<i>Region 1 (Panhandle)</i>	0	0	1	0	2	3
<i>Region 2/3 (includes DFW)</i>	0	2	1	4	21	28
<i>Region 4/5N (East Texas)</i>	0	0	0	0	1	1
<i>Region 6/5S (includes Houston)</i>	0	0	2	1	7	10
<i>Region 7 (Central Texas)</i>	0	1	1	0	3	5
<i>Region 8 (includes San Antonio)</i>	0	0	1	0	6	7
<i>Region 9/10 (West Texas)</i>	0	0	1	0	4	5
<i>Region 11 (South Texas)</i>	0	0	0	0	5	5
<b>TOTAL</b>	<b>0</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>49</b>	<b>64</b>



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# Maternal Opioid Use Prevention

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- DSHS Maternal Opioid Safety Initiative
- HHSC Behavioral Health Services
- HHSC Medicaid Services



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# Conclusion

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- Further insights into drug overdose maternal deaths, 2012-2015
- Overdose maternal deaths mainly involved opioids, with vast majority occurring after 60 days postpartum
- DSHS will continue to work collaboratively with HHSC Behavioral Health and Medicaid Services to use these findings to effectively implement maternal opioid use prevention in Texas



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