Texas Maternal Morbidity and Mortality: Past, Present & Future

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Financial Disclosure

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Acknowledgements

- Texas Department of State Health Services
  - Maternal and Child Health Epidemiology
  - Community Health Improvement

- Members of the Texas Maternal Mortality and Morbidity Task Force

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Learning Objectives

At the completion of this session, the participants will be able to:

1. Discuss trends in maternal mortality and severe morbidity in Texas.
2. Compare strategies for reduction of mortality and morbidity
3. Outline gaps and understand new programs to reduce disparities in perinatal outcomes

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Hard

COMPLICATED

Complicated

Expensive

Difficult

Implementation is:

Complex

Annoying

Someone else's problem

Hard work

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Texas Maternal Mortality

- Vital statistics data using pregnancy check box coding both under- and over-reported maternal death
  - Over reporting was significantly more common and accounted for approximately half the the reported deaths
- Based on evidence, DSHS transitioned to enhanced case identification system
  - Death certificate information
  - Matching live birth and fetal death certificates to deaths among all women

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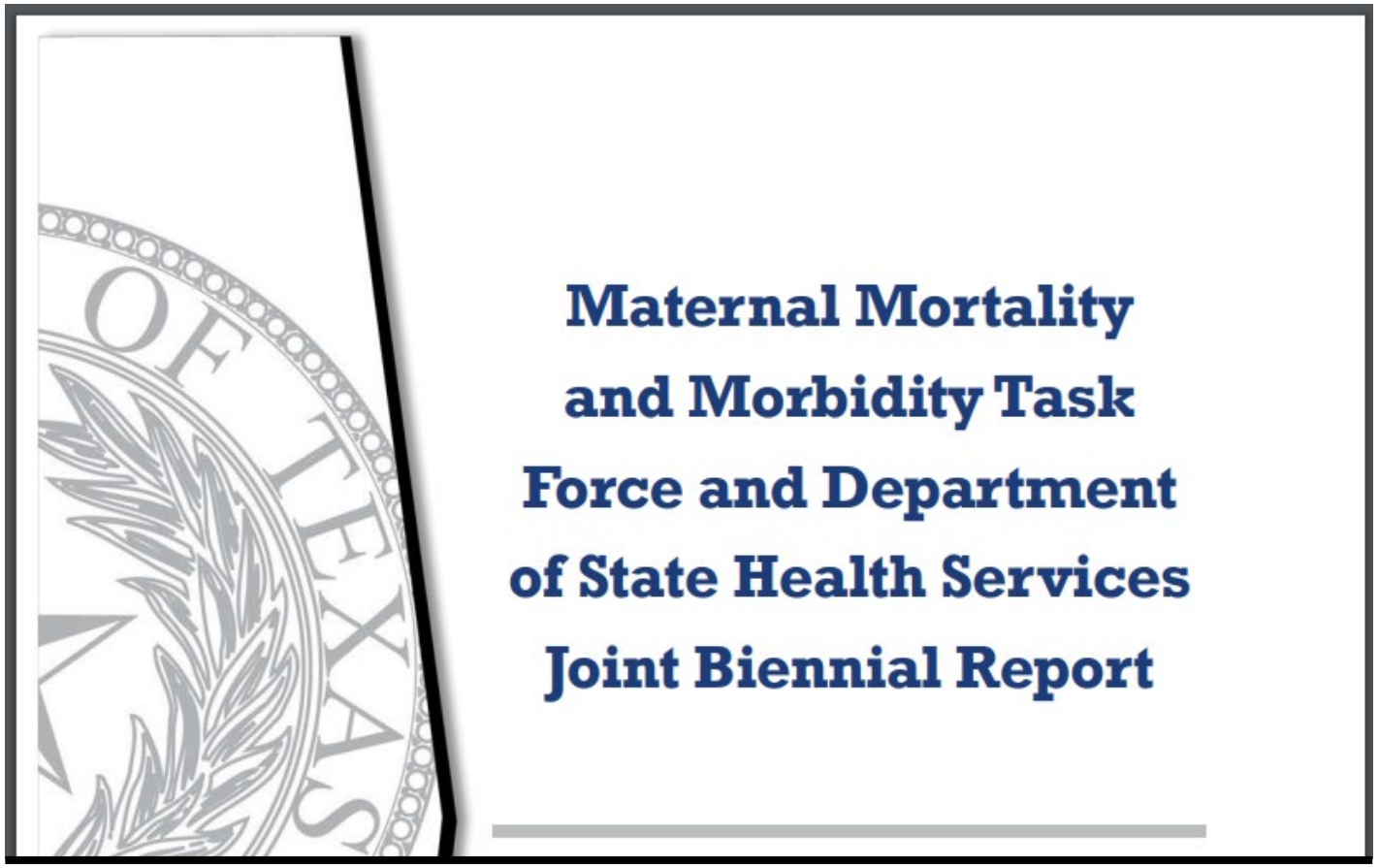
MMMTF Biennial Report 2018



https://www.dshs.texas.gov/mch/maternal_mortality_and_morbidity.shtm

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Texas Maternal Mortality

- 2012 Maternal Deaths Reviewed by MMMTF
- 89 deaths were identified
  - 34 cases (38%) were categorized as pregnancy-related
  - 50 cases (56%) were categorized as pregnancy-associated, but not pregnancy-related
  - 5 cases (6%) pregnancy-relatedness could not be determined

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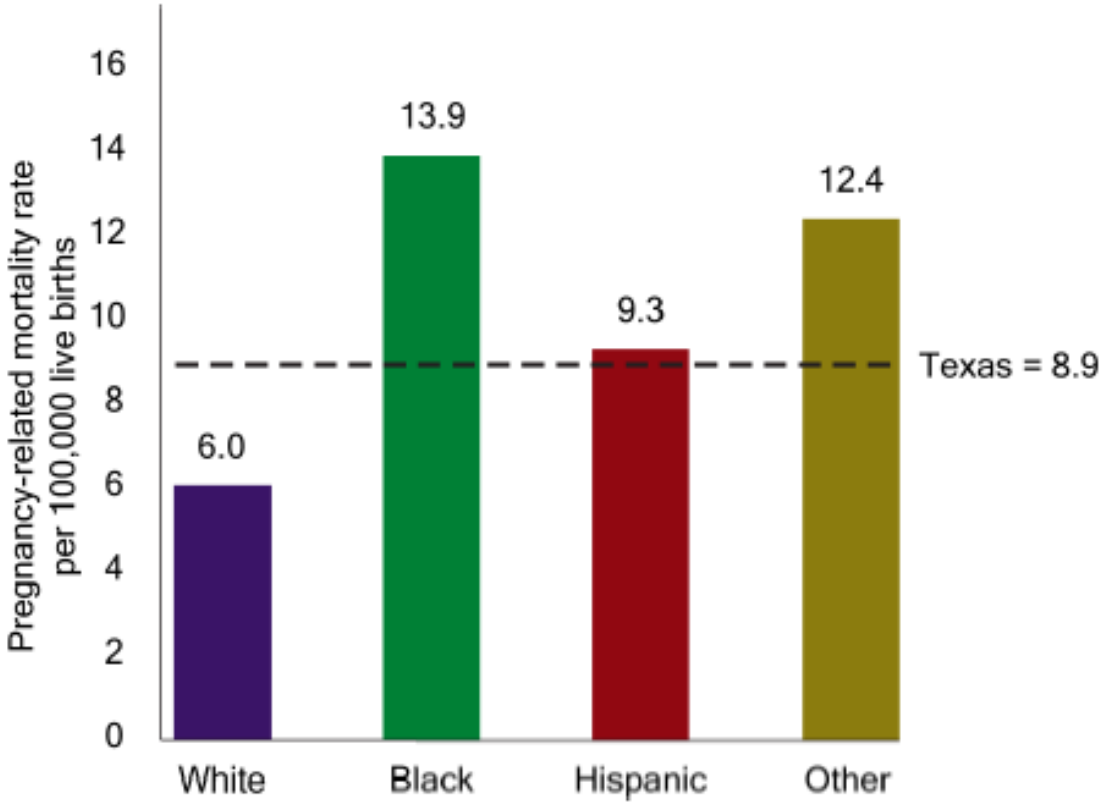
Texas Pregnancy-related Mortality

- Leading underlying causes of pregnancy-related death in 2012 identified by the Task Force were:
  1. cardiovascular and coronary conditions
  2. obstetric hemorrhage
  3. infection/sepsis
  4. cardiomyopathy
  5. preeclampsia/eclampsia, mental health conditions, and amniotic fluid embolus

Maternal Mortality by Race/Ethnicity



PREPARED BY: Maternal & Child Health Epidemiology, Division for Community Health Improvement, DSHS.

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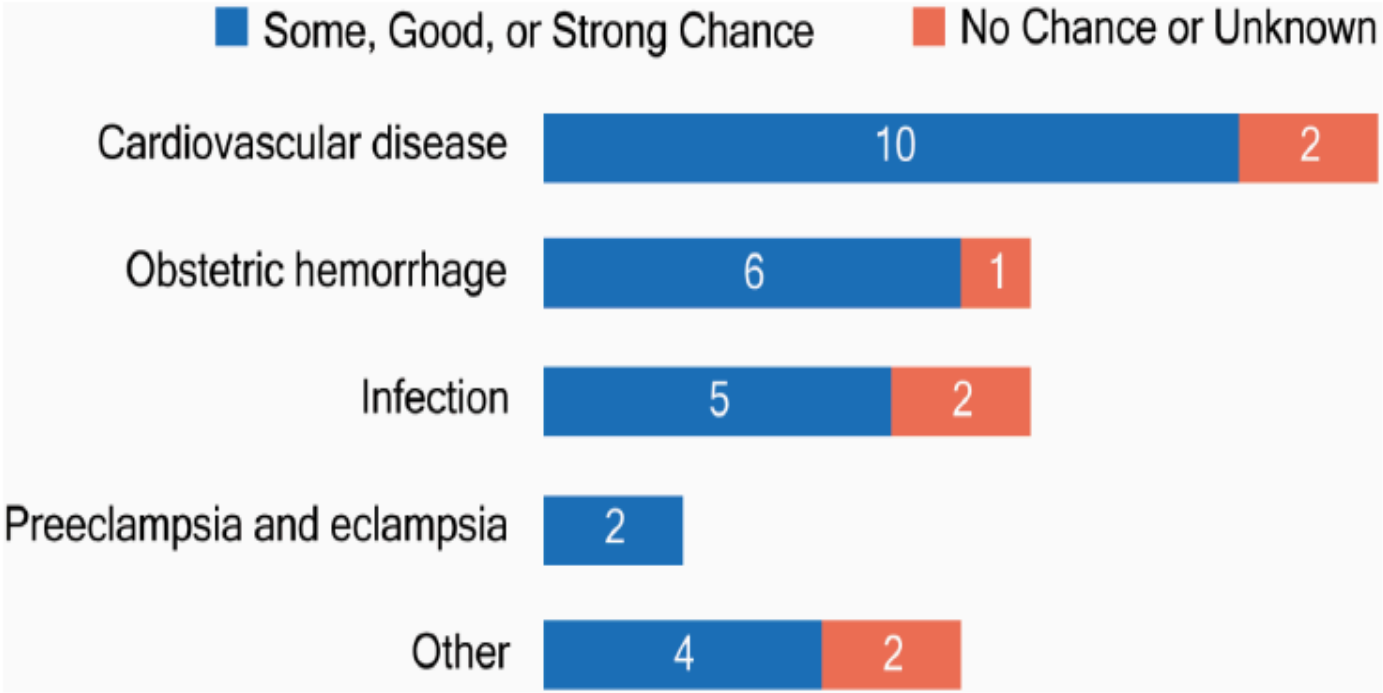
Preventability of PRM



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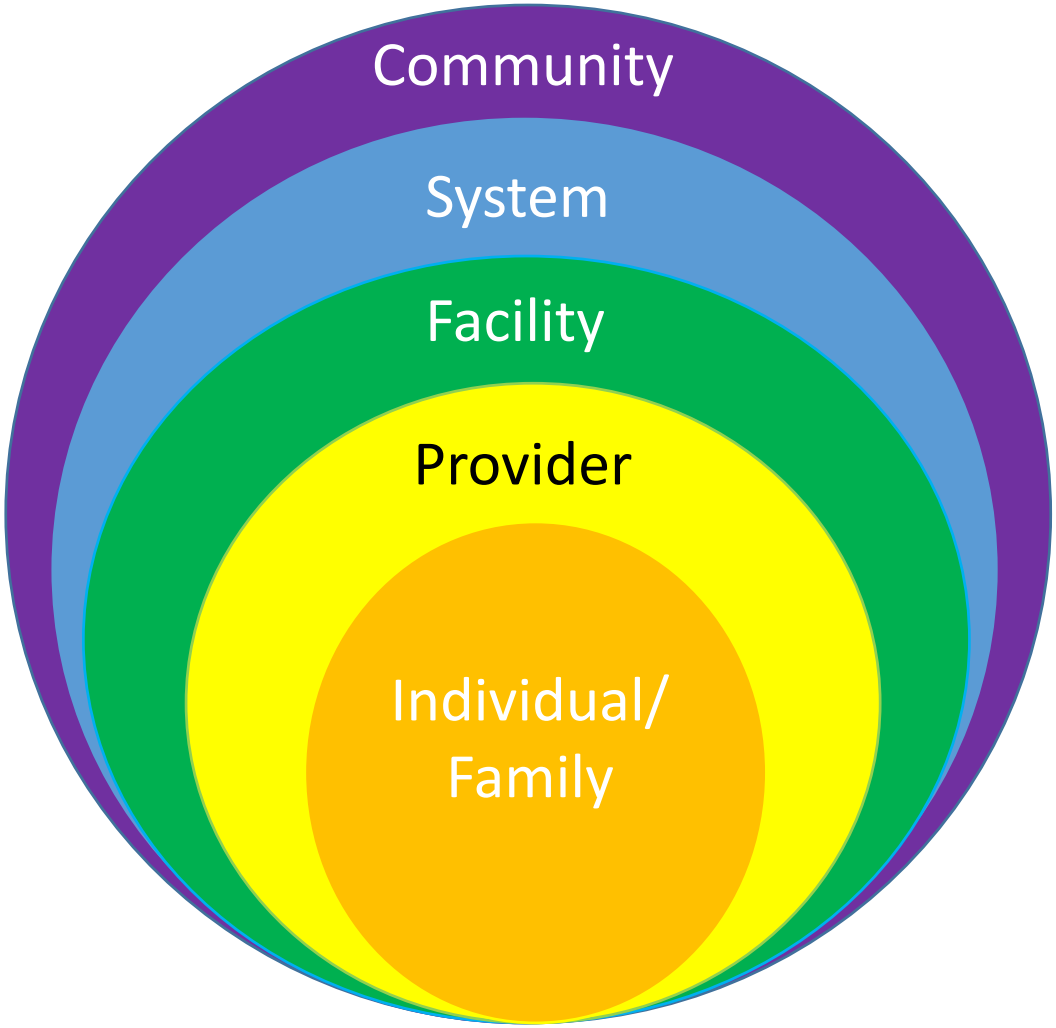
A Framework



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Contributing Factors

Top *individual and family level factors* contributing to death:

- Underlying medical conditions
  - Cardiovascular conditions, including chronic hypertension
  - Obesity
  - Depression
- Delay in or failure to seek care or treatment
  - lack of patient recognition of early warning signs of worsening condition

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https://www.dshs.texas.gov/mch/maternal_mortality_and_morbidity.shtm

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Contributing Factors

Top *Provider level* factors contributing to death:

- Failure to recognize high risk maternal health status
  - failure to refer high risk patients to appropriate care specialties
- Failure to recognize and respond to maternal early warning signs
  - delay in or lack of bedside clinician presence
- Delays in diagnosis
- Delays in initiation of treatment
- Inadequate or ineffective treatment
- Lack of effective communication

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Contributing Factors

Top *facility level* factors included:

- Failure to recognize high risk status
- Delayed and inadequate response to clinical warning signs
- Lack of continuity of care
  - lack of appropriate hand-off of patients between hospital staff and outpatient providers
  - impacted by the inability to secure appropriate outpatient care and.

Top *systems and community level factors* included*:*

- Poor care coordination from the inpatient to outpatient setting
- Lack of access to interconception care services and transitional care services.

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Maternal Deaths 2012-2015

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

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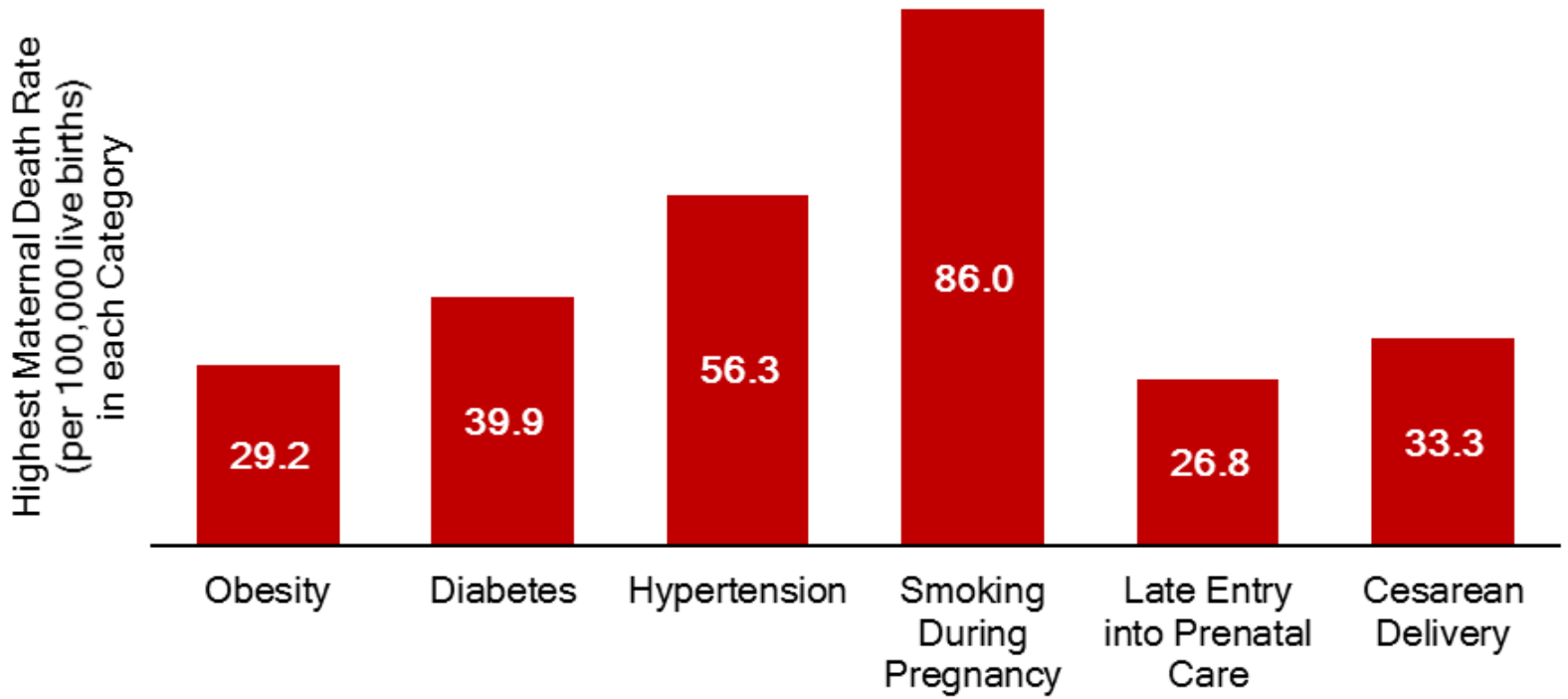
Health Risk Factors for Maternal Death, 2012-2015



Source: 2012-2015 Death Files, 2011-2015 Live Birth and Fetal Death Files, Center for Health Statistics, DSHS

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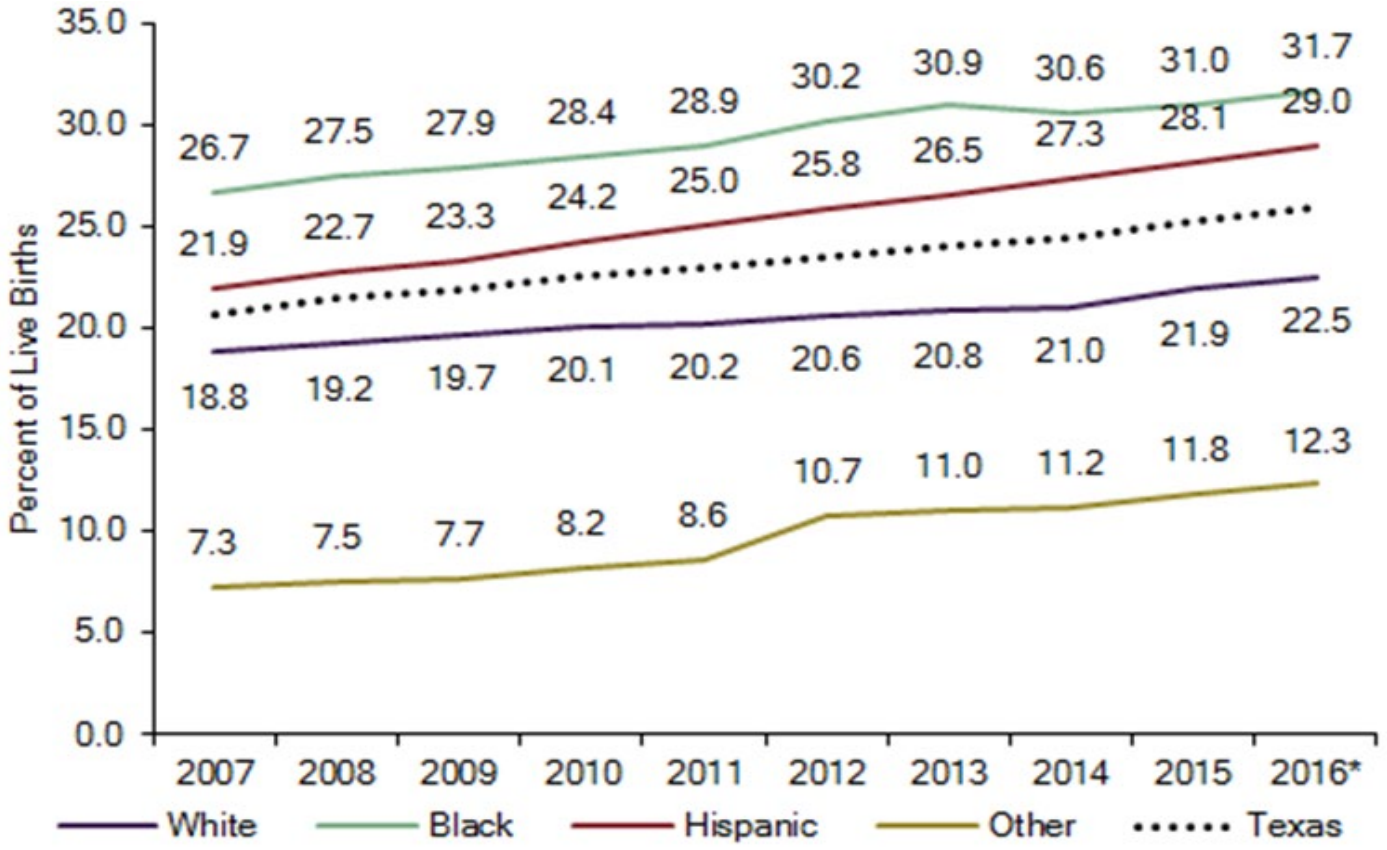
Pre-pregnancy Obesity 2007-2016



*2016 Texas data are preliminary
Source: 2007-2016 Birth Files
Prepared by: Maternal & Child Health Epidemiology Unit
Oct 2017

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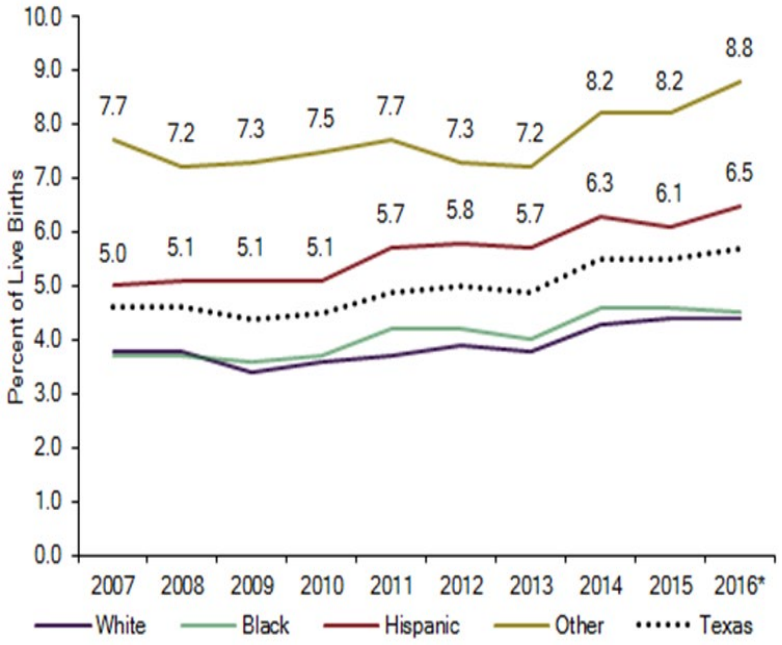
Maternal Diabetes and Hypertension, 2007-2016

MATERNAL DIABETES



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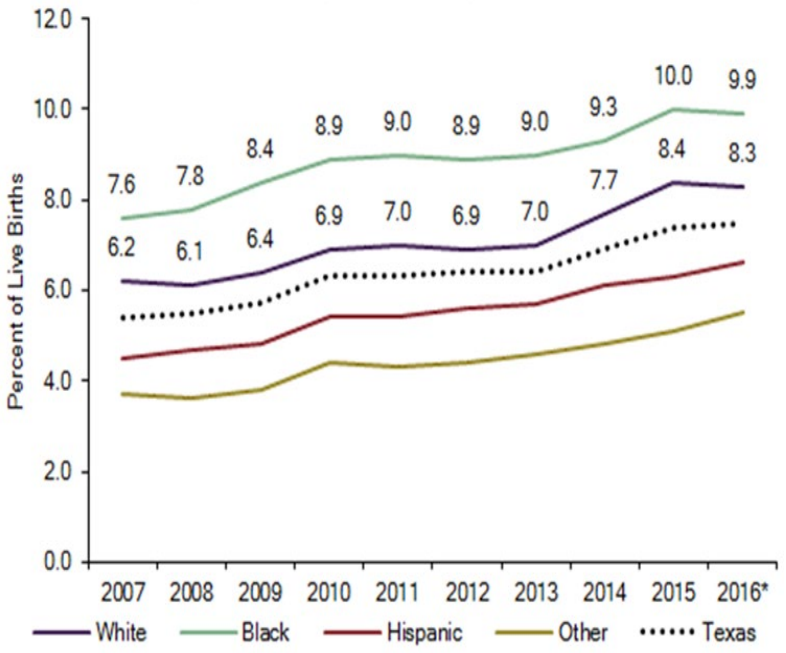
MATERNAL HYPERTENSION



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Oct 2017

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MMMTF Recommendations

1. Increase access to health services during the year after pregnancy and throughout the interconception period to improve the health of women, facilitate continuity of care, enable effective care transitions, and promote safe birth spacing.

2. Enhance screening and appropriate referral for maternal risk conditions.

3. Prioritize care coordination and management for pregnant and postpartum women.

MMMTF Recommendations

4. Promote a culture of safety and high reliability through implementation of best practices in birthing facilities.

5. Identify or develop and implement programs to reduce maternal mortality from cardiovascular and coronary conditions, cardiomyopathy and infection.

6. Improve postpartum care management and discharge education for patients and families.

MMMTF Recommendations

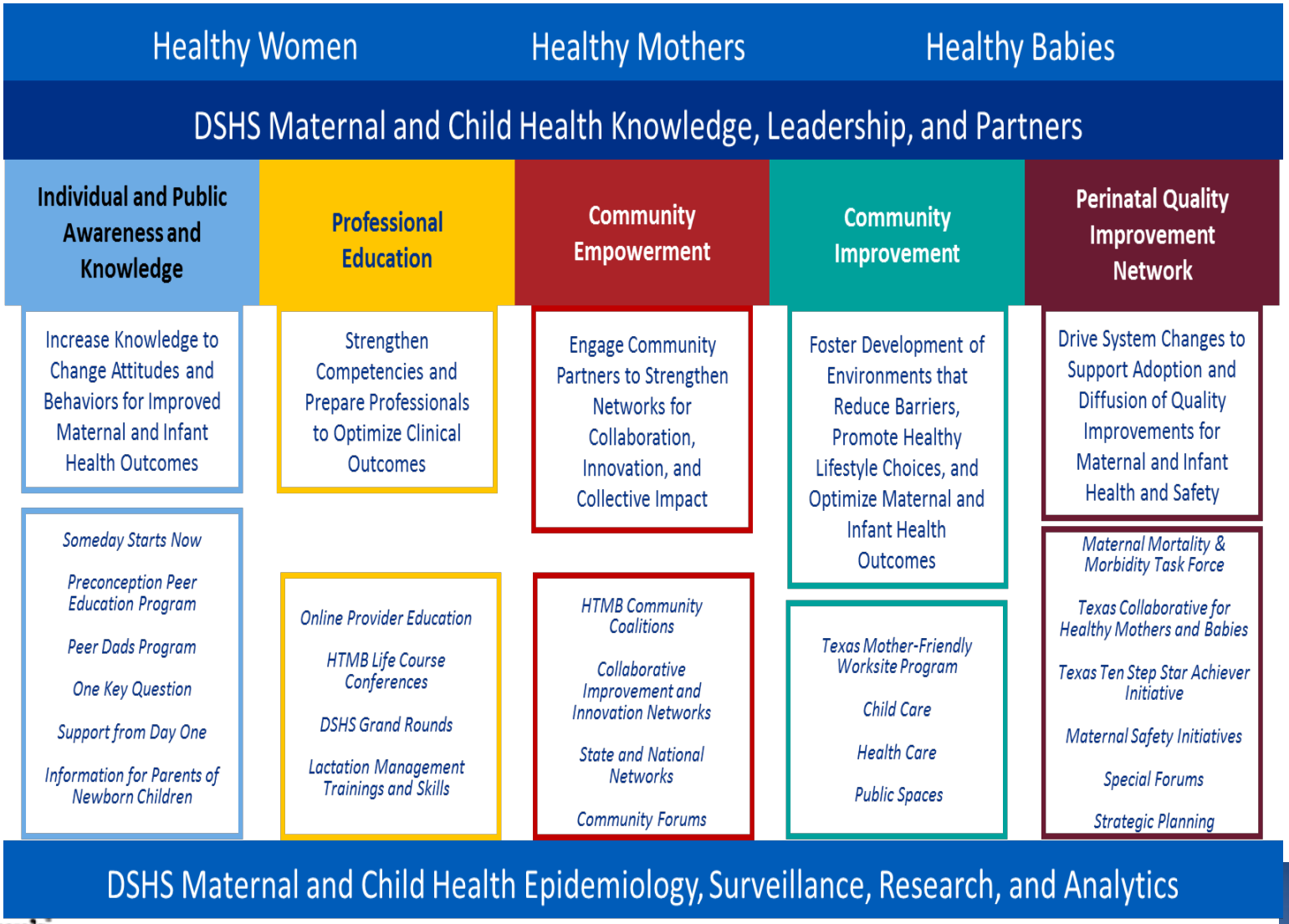
7. Increase maternal health programming to target high-risk populations, especially Black women.

8. Initiate public awareness campaigns to promote health enhancing behaviors.

9. Champion integrated care models combining physical and behavioral health services for women and families.

10. Support strategies to improve the maternal death review process.

Healthy Texas Mothers and Babies



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Perinatal Quality Improvement Network

- To drive adoption and diffusion of quality improvements for maternal and infant health and safety

- Key initiatives:
  - Maternal Morbidity and Mortality Task Force
  - Texas Collaborative for Healthy Mothers and Babies
  - Risk appropriate maternal care
  - Maternal safety bundles

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MMMTF Subcommittee Maternal Health Disparities

Identify key drivers and root causes of racial disparities in maternal mortality and morbidity in Texas with the goal of reducing or eliminating disparities in maternal health outcomes.

- determine if there are cause-specific diseases driving maternal mortality and morbidity based on race
- determine if racial differences exist in preventability
- determine if there are racial differences in adequacy and application of care

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MMMTF Subcommittee Maternal Health Disparities

Understanding Why to Make a Change

- Evaluate areas with less disparate maternal health outcomes, assess their strategies and determine what makes them different
- Optimizing patient/provider communication, including assessment of current resources for cultural competence, discrimination/implicit bias training
- Understand and address inequities in prenatal care access

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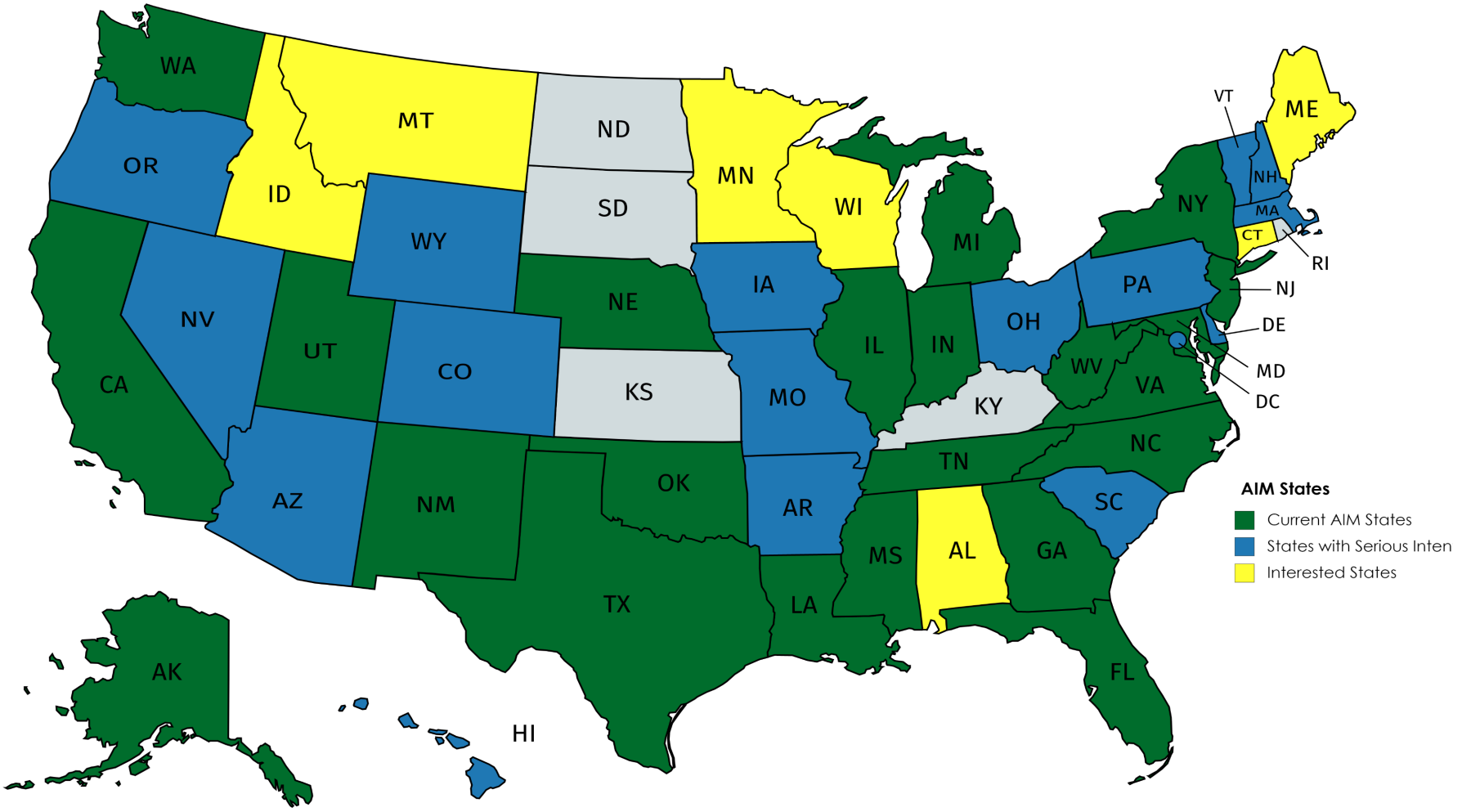
AIM Program January 2019



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https://safehealthcareforeverywoman.org/aim-program/

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

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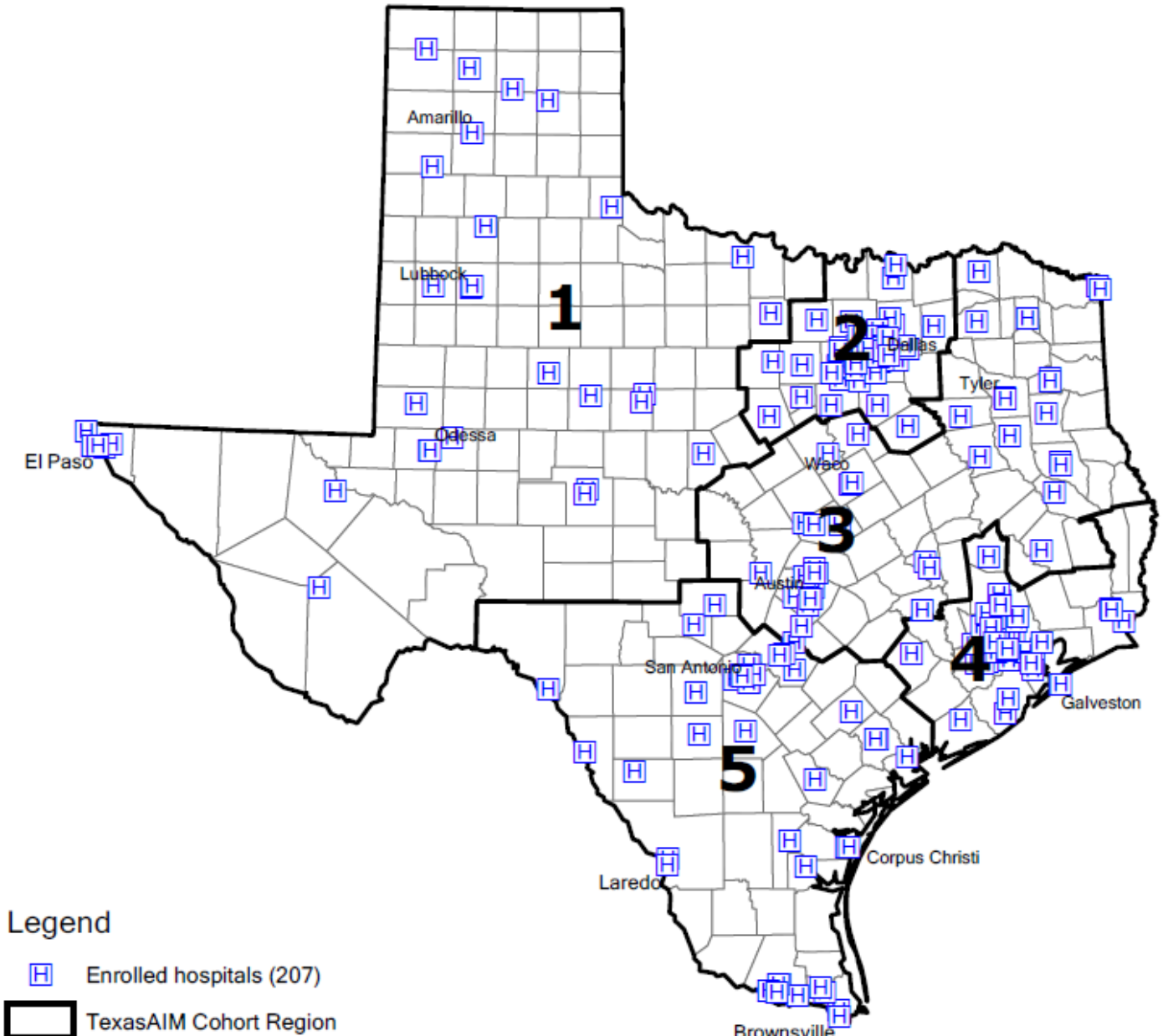
Implement AIM Maternal Safety Bundles

- **Goal:**
  - 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

TexasAIM Current Hospitals as of January 23, 2019
By TexasAIM Cohort Region



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Exceptional Item Request

- Department of State Health Services requested an exceptional item to address maternal mortality
  - Implement maternal safety initiatives statewide
  - Implement care coordination pilot
  - Develop and train providers on use of risk assessment tools
  - Increase public awareness and prevention activities

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TexasAIM – Next Steps

- Opioid maternal safety bundle now being piloted. Exceptional item funding could enable full roll out in 2020
- Implementation of AIM hypertension bundle
- Additional safety bundle implementation based on data
- With implementation of safety bundles, staff efforts will shift to identification of new interventions

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Moving Beyond AIM

- MMMTF found that an average of 5.2 factors contributed to deaths of Texas mothers
- Factors that increase risk for mothers include:
  - Individual and family: underlying medical conditions, obesity, and chronic disease
  - Provider: delays in diagnosis, treatment and appropriate referral
  - Facility: continuity of care from inpatient to outpatient settings
  - System and community: lack of coordinated care

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New Interventions

- Care coordination pilot and new public awareness efforts
  - Increased attention to the health needs of high-risk populations, especially black women
  - Enhanced screening and referral for maternal risk conditions
  - Prioritization of care coordination for pregnant and postpartum women, for both physical and behavioral health
  - Public awareness campaigns to promote health-enhancing behaviors
  - Education for patients and families around postpartum care management

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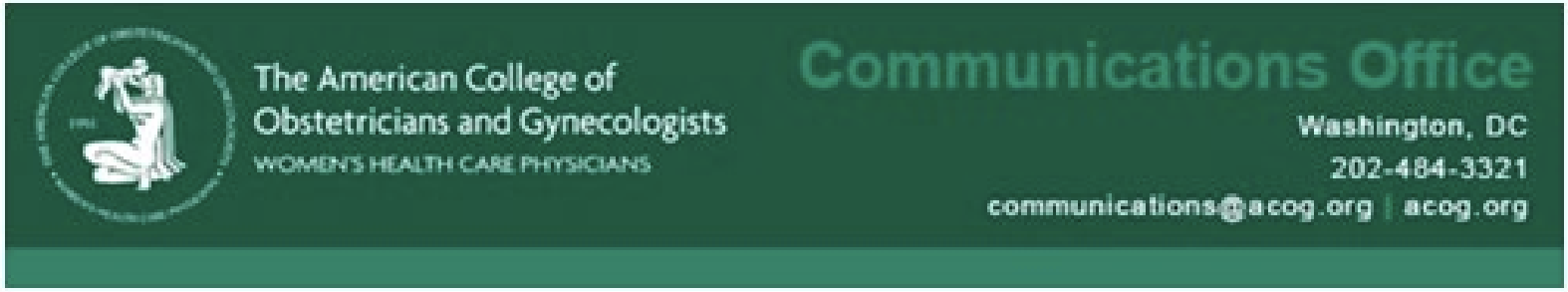
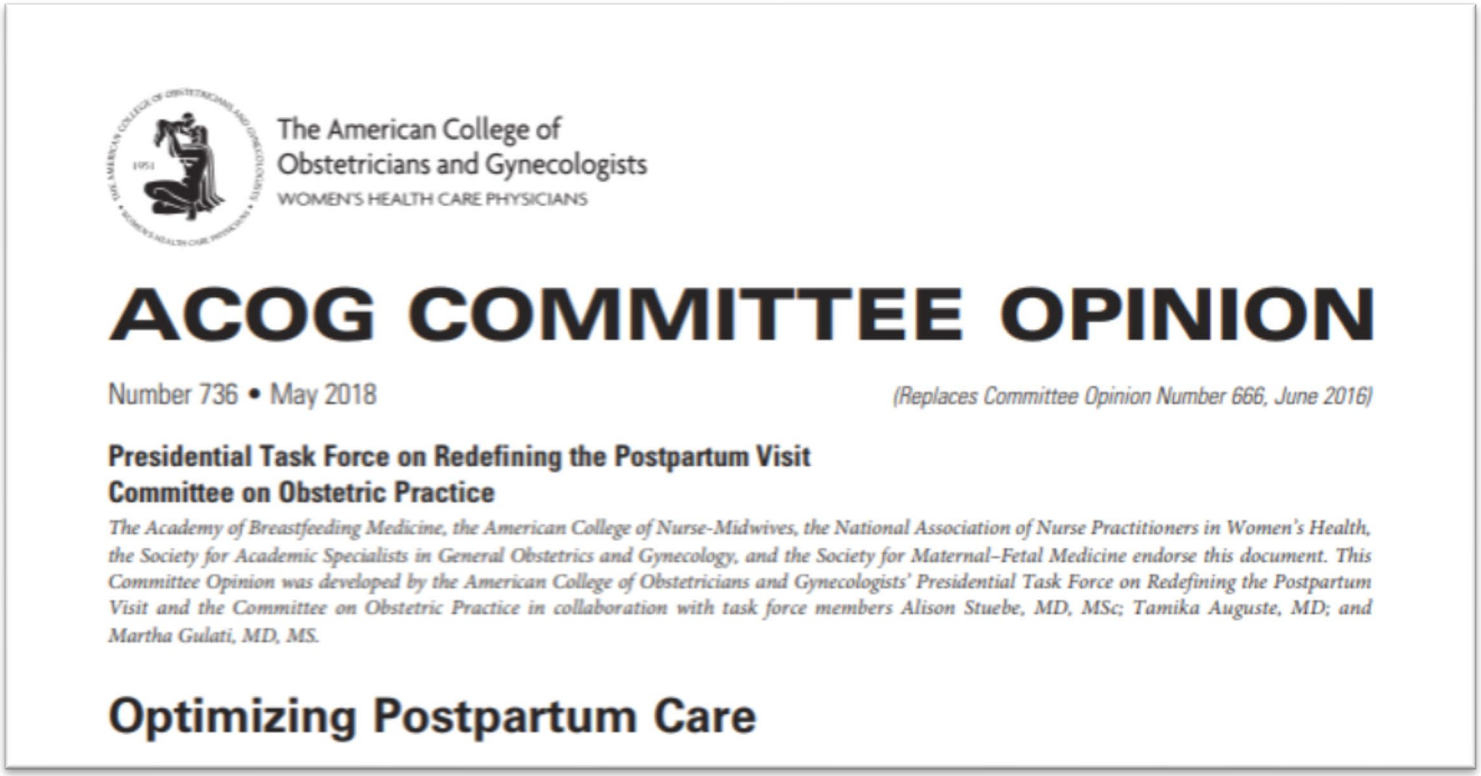


H.R. 1318 Preventing Maternal Deaths Act of 2017

S. 1112 Maternal Health Accountability Act of 2017

- *Strengthen state efforts to prevent maternal deaths*
- *Support states in establishing or expanding maternal mortality review committees*
- *Promote national information sharing*

New Clinical Guidance



The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

ACOG COMMITTEE OPINION

Number 736 • May 2018

(Replaces Committee Opinion Number 666, June 2016)

Presidential Task Force on Redefining the Postpartum Visit
Committee on Obstetric Practice

The Academy of Breastfeeding Medicine, the American College of Nurse-Midwives, the National Association of Nurse Practitioners in Women's Health, the Society for Academic Specialists in General Obstetrics and Gynecology, and the Society for Maternal–Fetal Medicine endorse this document. This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Presidential Task Force on Redefining the Postpartum Visit and the Committee on Obstetric Practice in collaboration with task force members Alison Stuebe, MD, MSc; Tamika Auguste, MD; and Martha Gulati, MD, MS.

Optimizing Postpartum Care

Developing Clinical Guidance

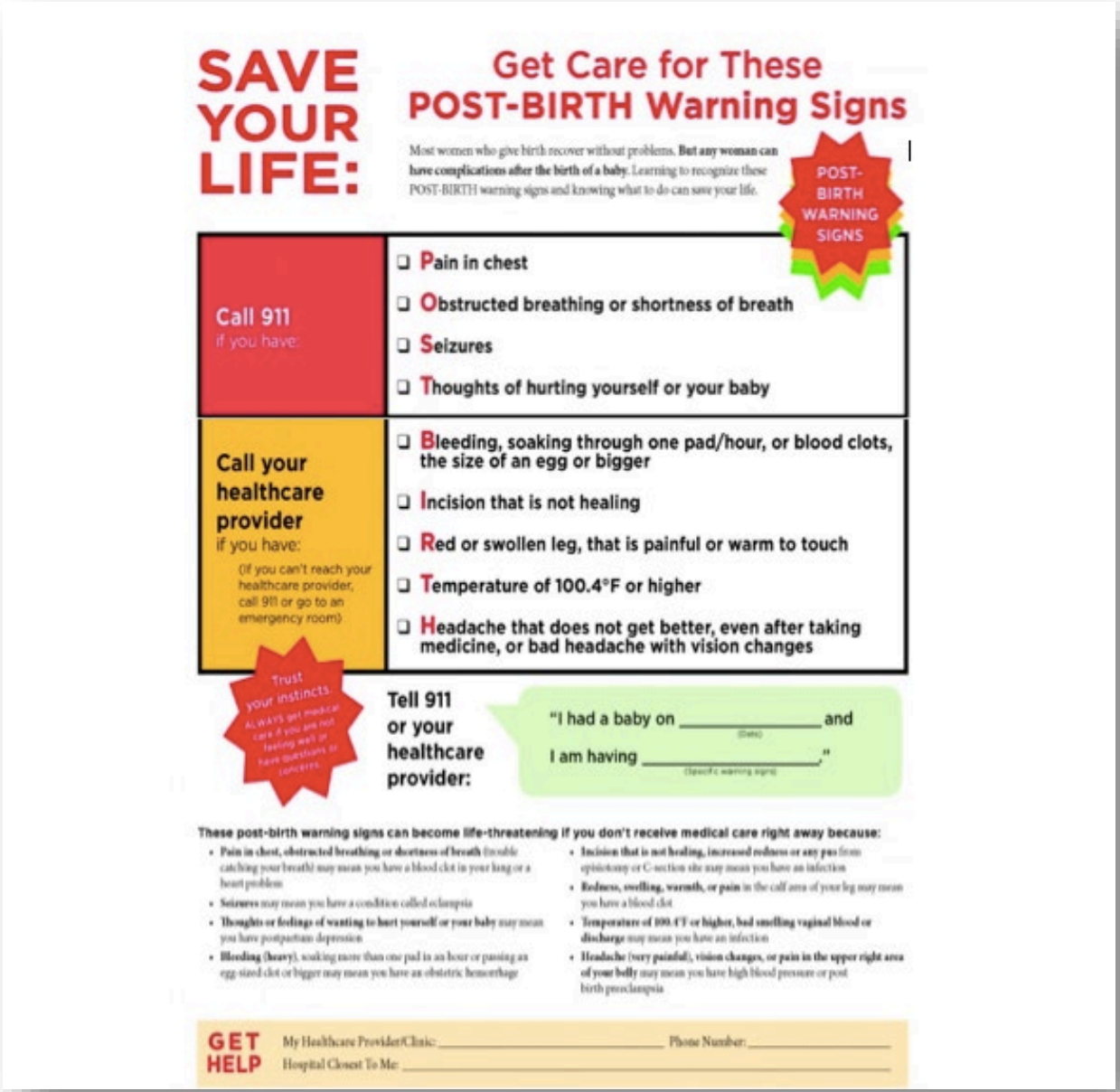
- Pregnancy and Heart Disease Task Force
- Detection, evaluation, diagnosis and management of heart disease during pregnancy and postpartum period
- Management of women with obstetric complications associated with longterm CV disease

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Developing Clinical Guidance

- Maternal Mental Health Expert Work Group
  - Goal: Understand the resources needed by obstetric practices to conduct screening, assessment, intervention, referral, and follow-up for women with perinatal depression.
- Maternal Mental Health Summit in mid December

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS



SAVE YOUR LIFE:

Get Care for These POST-BIRTH Warning Signs

Most women who give birth recover without problems. **But any woman can have complications after the birth of a baby.** Learning to recognize these POST-BIRTH warning signs and knowing what to do can save your life.

POST-BIRTH WARNING SIGNS

Call 911 if you have:

- ❑ **P**ain in chest
- ❑ **O**bstructed breathing or shortness of breath
- ❑ **S**eizures
- ❑ **T**houghts of hurting yourself or your baby

Call your healthcare provider if you have:

(If you can't reach your healthcare provider, call 911 or go to an emergency room)

- ❑ **B**leeding, soaking through one pad/hour, or blood clots, the size of an egg or bigger
- ❑ **I**ncision that is not healing
- ❑ **R**ed or swollen leg, that is painful or warm to touch
- ❑ **T**emperature of 100.4°F or higher
- ❑ **H**eadache that does not get better, even after taking medicine, or bad headache with vision changes

Trust your instincts. ALWAYS get medical care if you are not feeling well or have questions or concerns.

Tell 911 or your healthcare provider:

"I had a baby on _____ (Date) and I am having _____ (Specific warning signs)."

These post-birth warning signs can become life-threatening if you don't receive medical care right away because:

- **Pain in chest, obstructed breathing or shortness of breath** (trouble catching your breath) may mean you have a blood clot in your lung or a heart problem
- **Seizures** may mean you have a condition called eclampsia
- **Thoughts or feelings of wanting to hurt yourself or your baby** may mean you have postpartum depression
- **Bleeding (heavy)**, soaking more than one pad in an hour or passing an egg-sized clot or bigger may mean you have an obstetric hemorrhage
- **Incision that is not healing, increased redness or any pus** from episiotomy or C-section site may mean you have an infection
- **Redness, swelling, warmth, or pain** in the calf area of your leg may mean you have a blood clot
- **Temperature of 100.4°F or higher, bad smelling vaginal blood or discharge** may mean you have an infection
- **Headache (very painful), vision changes, or pain in the upper right area of your belly** may mean you have high blood pressure or post birth preeclampsia

GET HELP

My Healthcare Provider/Clinic: _____ Phone Number: _____

Hospital Closest To Me: _____

https://www.awhonn.org/page/POSTBIRTH