



# ***AIM High: Reducing Harm with Safety Bundles***

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**WHO definition of health:**

**“Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”**



# Health Outcomes



This model reflects that determinants of health directly influence health outcomes.

# FACT!



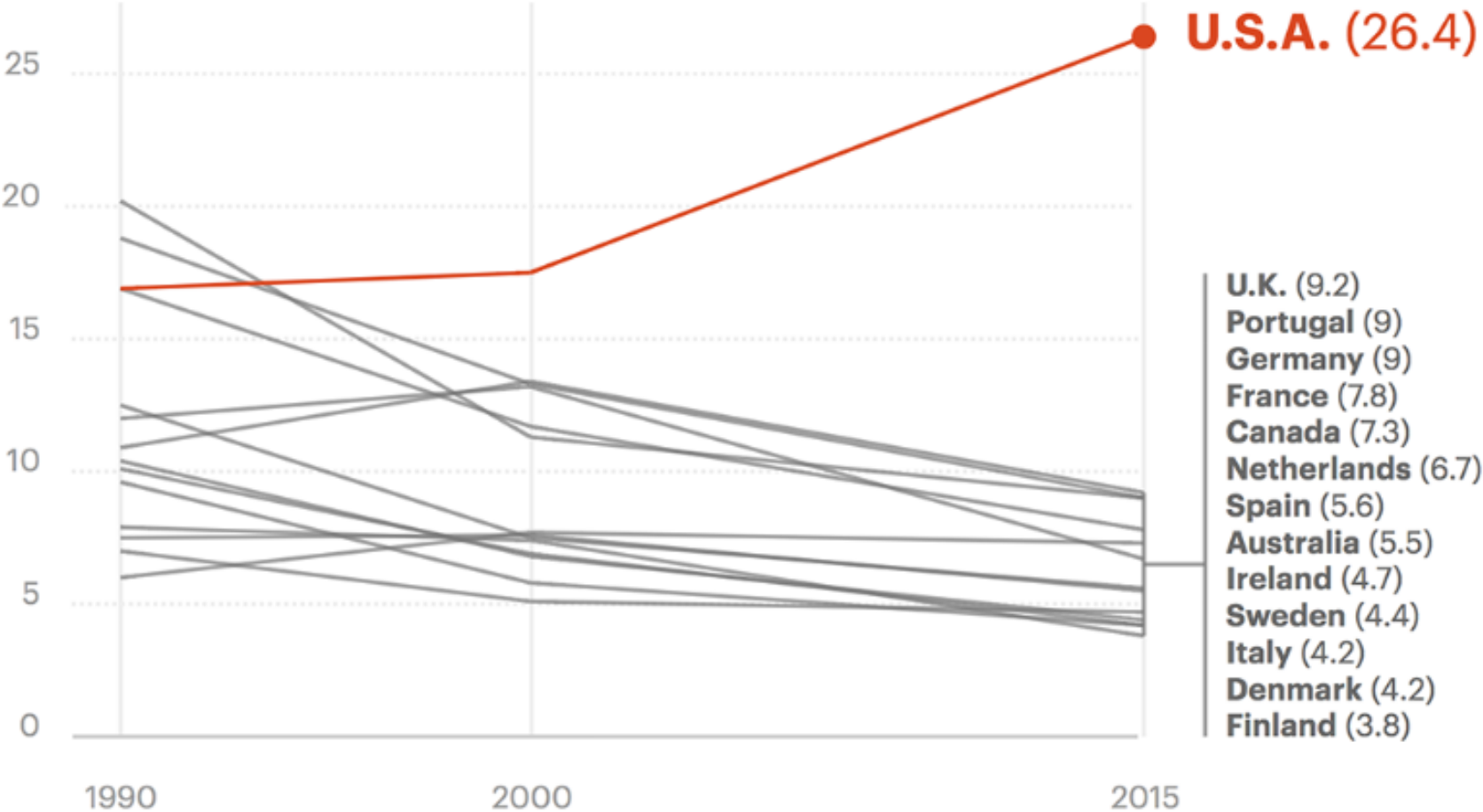
**More American women are dying of pregnancy-related complications than any other developed country. Only in the U.S. has the rate of women who die been rising.**



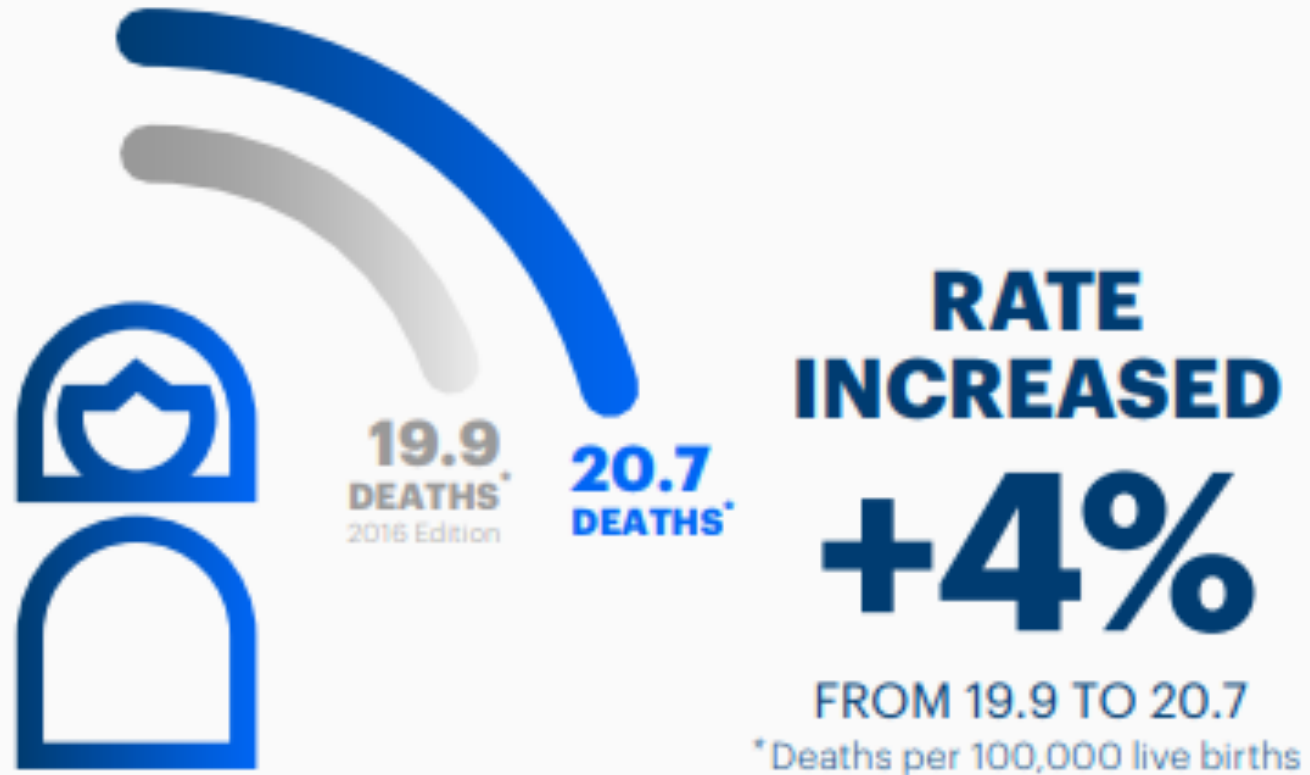
# Maternal Mortality Is Rising in the U.S. As It Declines Elsewhere



Deaths per 100,000 live births



# MATERNAL MORTALITY



- Rate increased since the 2016 Health of Women and Children Report. (\*This is the most recent time that the report was created.)

# More Facts



- **The lifetime risk of maternal death is greater in the U.S. than in 40 other countries, including almost all other industrialized nations.**
- **Black women face a disproportionately high risk of dying from pregnancy-related conditions when compared to white women.**



# Yet Another Fact!

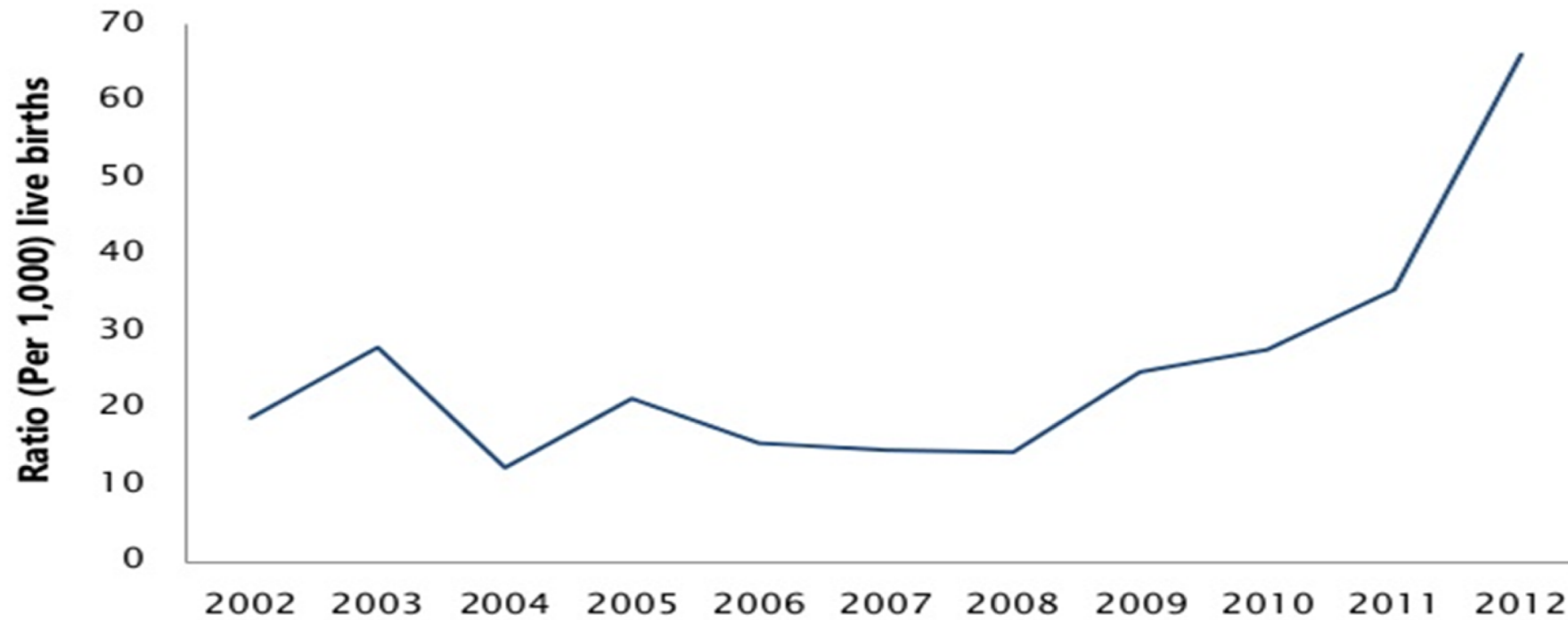


**Georgia has one of the highest maternal mortality ratios in the nation.**





## Georgia Maternal Mortality Rate 2002-2012



Source: Georgia Vital Statistics

*We Protect Lives.*



# Georgia's Pregnancy-Related Maternal Mortality Ratio

<b>2001 – 2006</b>	<b>20.2 deaths/100,000 live births</b>
<b>2010</b>	<b>23.2 deaths/100,000 live births</b>
<b>2011</b>	<b>28.7 deaths/100,000 live births</b>
<b>2012</b>	<b>19.2 deaths/100,000 live births</b>

# Startling Facts!



- **In Georgia, 58 hospitals do not operate labor and delivery units and half of Georgia counties do not have obstetric services**
- **Rural hospitals on the brink of closure will close labor and delivery units first**
- **Since 2012, 10 labor and delivery units have closed in Georgia**

# Alliance for Innovation on Maternal Health (AIM) Initiative



## Purpose:

To reduce maternal deaths and severe maternal morbidity by engaging provider organizations, state-based public health systems, consumer groups, and other stakeholders within a national partnership to assist state-based teams in implementing evidence-based maternal safety bundles.



# Alliance for Innovation on Maternal Health (AIM) Initiative



## Goal

- To eliminate *preventable* Maternal Mortality and Severe Morbidity in EVERY U.S. Birth facility



# The Impact of Safety Bundles in Georgia



- The maternal death rate is growing nationally, but GA is more than three times the national rate
- Maternal deaths in Georgia increased from **35** per 100,000 live births in 2013 to **46.2** per 100,000 live births in 2015

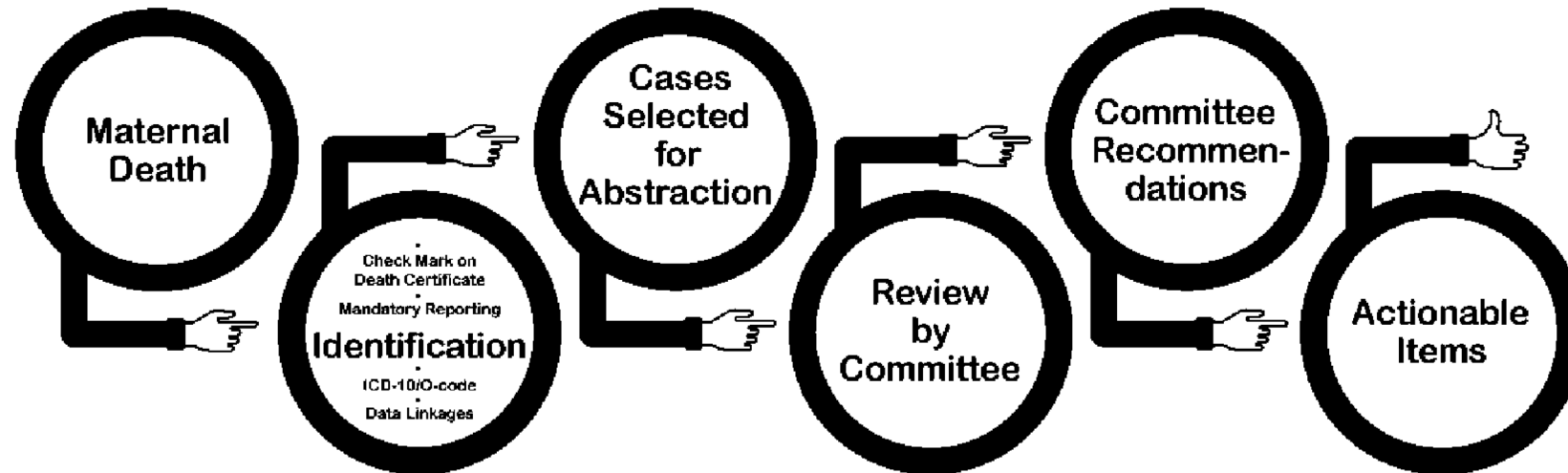
# Maternal Mortality



- Defined as all deaths occurring to women while pregnant or within one year of giving birth.
- All maternal deaths are reviewed to determine whether they are pregnancy associated or pregnancy related.
- Pregnancy associated deaths are those occurring within the specified time frame but are not related to the current or recent pregnancy (car accident).
- Pregnancy related deaths are from any cause related to or aggravated by pregnancy or its management.

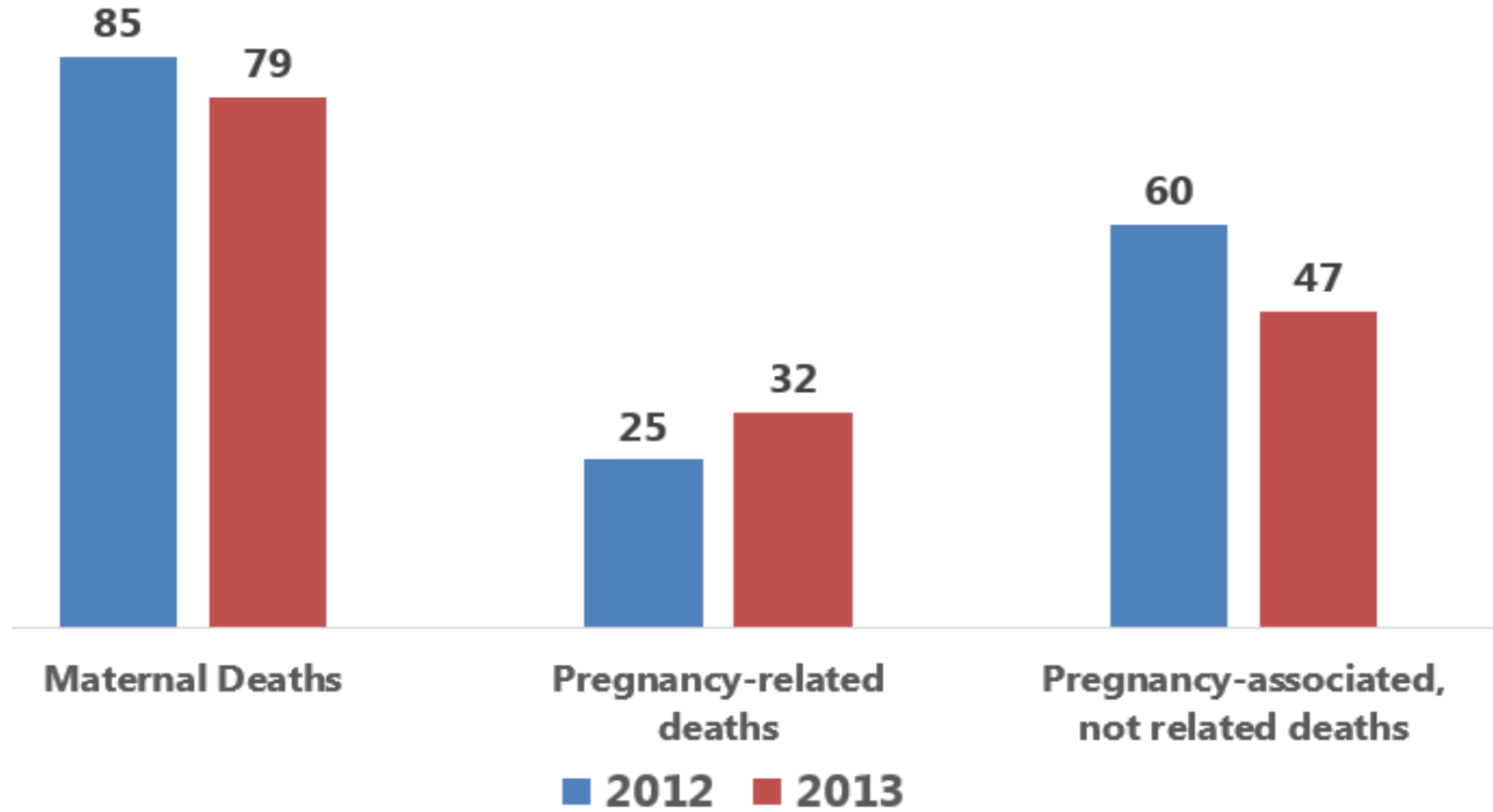
Source: World Health Organization, 2018

# Maternal Mortality Review Process





# Georgia MMRC Findings



# Georgia MMRC Findings



<b>Demographic Factors</b>	<b>2012</b>	<b>2013</b>
Percent black race	68%	66%
Percent < 30 years old	64%	50%
Percent with high school education or less	76%	84%
Percent covered by Medicaid	N/A	50% (25% unknown)
Percent of deaths that occurred during pregnancy or within 42 days of delivery	80%	69%

# Georgia MMRC Findings



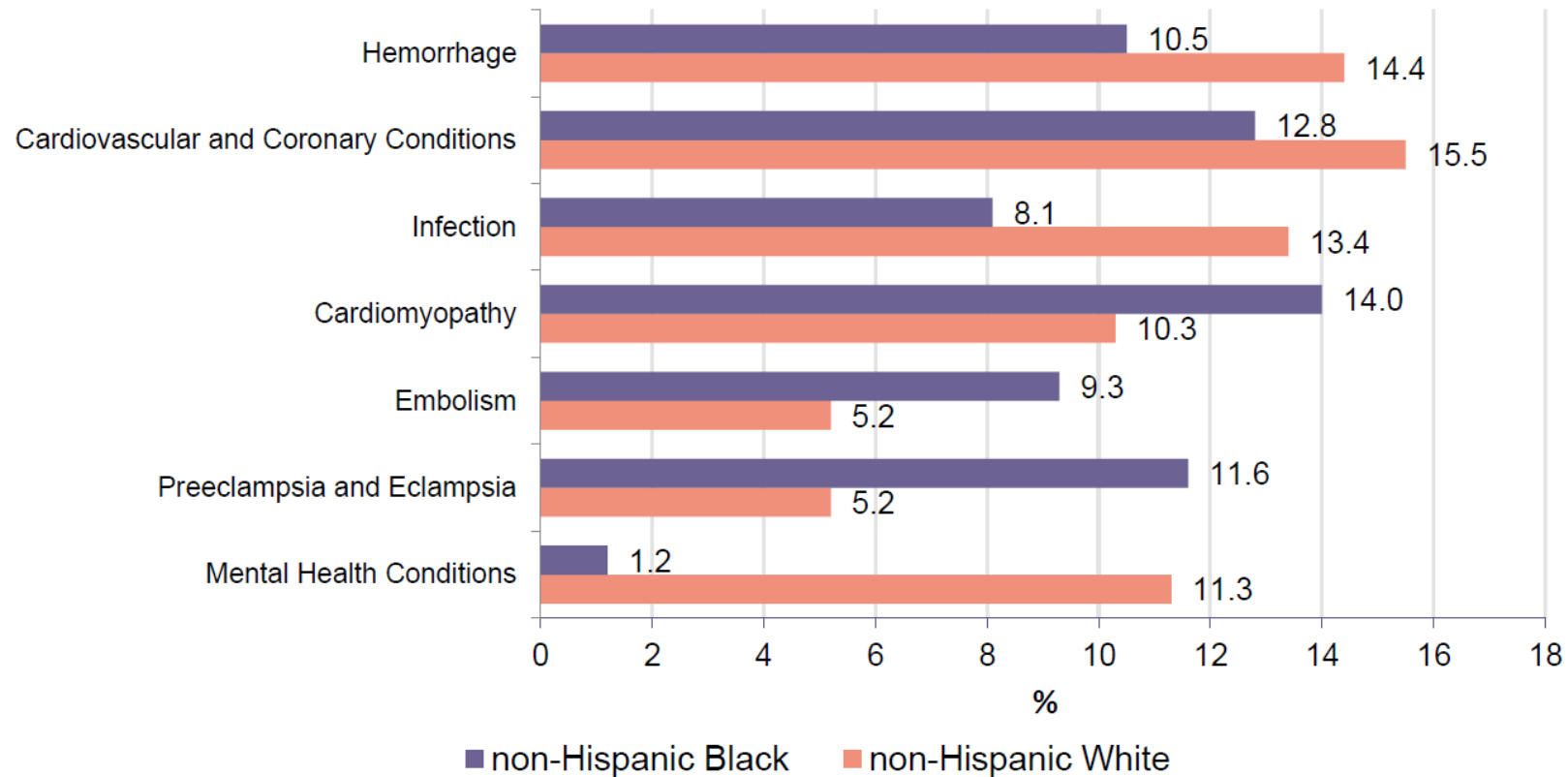
## Leading Causes of Pregnancy Related Deaths

2012	2013
Hemorrhage 28%	Cardiomyopathy 25%
Hypertension 16%	Hemorrhage 16%
Cardiomyopathy 16%	Embolism 16%
Embolism 16%	Cardiovascular and Coronary Conditions 6%

# Maternal Deaths: A Closer Look



Figure 5. Leading Underlying Causes of Pregnancy-Related Deaths, by Race-Ethnicity



# Racial Disparities



Between 2001-2011 the Georgia pregnancy-related maternal mortality ratio was 4 x higher in Black, non-Hispanic women than in White, non-Hispanic women

- **39.1 deaths/100,000 live births for Black, non-Hispanic women**
- **9.6 deaths/100,000 live births for White, non-Hispanic women**

# Is This Really A Concern?



- According to the 2016 U.S Census, the “White” population makes up 77% of the U.S population

**However.....**

- Racial and ethnic minorities are expected to comprise more than one-half of the US population by 2050
- Women of color were overrepresented among deliveries involving severe maternal morbidity, as compared with white women

# Drivers of Health Disparities



**Occurs at 3 levels:**

- **Patient**
- **Provider**
- **System**



# Recommendations



- Make reducing racial and ethnic disparities a priority
- Recognize and acknowledging racial bias and stereotypes
- Harvard Race Implicit Association (IAT) Test  
<https://implicit.harvard.edu/implicit/user/agg/blindspot/indexrk.htm>



# Recommendations



- Raising awareness of the prevalence and effects of racial and ethnic disparities
- Recognition of provider bias
- A “zero tolerance” policy for racial bias and disparate care
- Culturally sensitive education



# Recommendations



- **Collaboration with local public health authorities to address disparities**
- **Advocate for local, state, and national policies to improve women's health care and reduce disparities.**

Source: <http://www.astho.org/Policy-and-Position-Statements/Position-Statement-on-Maternal-Mortality-and-Morbidity/>

# Medical Providers



- **Equitable health care requires a multidisciplinary approach.**
- **Standardization of obstetric care is proven to lower maternal mortality rates.**
- **Avoiding delays,**
- **Consistent approach to managing complications and emergencies**
- **Appropriate care and reduce severe morbidities**

# Medical Providers (cont'd)



- An understanding of culturally derived mistrust of the health care system
- Be aware of the existence of and contributors to health disparities and be willing to work toward their elimination.



# Nursing Staff



## Code of Ethics - Principles

- **Nonmaleficence**
  - Do no harm
  
- **Beneficence**
  - preventing harm
  - removing harm
  - promoting good

# Nursing Staff (cont'd)



- **Self awareness of personal bias, unconscious or implicit bias**
- **Education on diversity, healthcare disparities, and cultural competence**
- **Work toward a goal of respectful and consistent care**

Source: Many Nurses Lack Knowledge Of Health Risks To Mothers After Childbirth

# Perinatal Quality Collaboratives



- **Perinatal Quality Collaboratives (PQCs), are state or multi-state networks of teams working to improve the quality of care for mothers and babies through evidence based quality improvement initiatives**
- **The CDC's Division of Reproductive Health is currently providing support for state-based PQCs in Colorado, Delaware, Florida, Georgia, Illinois, Louisiana, Massachusetts, Minnesota, Mississippi, New Jersey, New York, Oregon, and Wisconsin.**



# GaPQC: Background

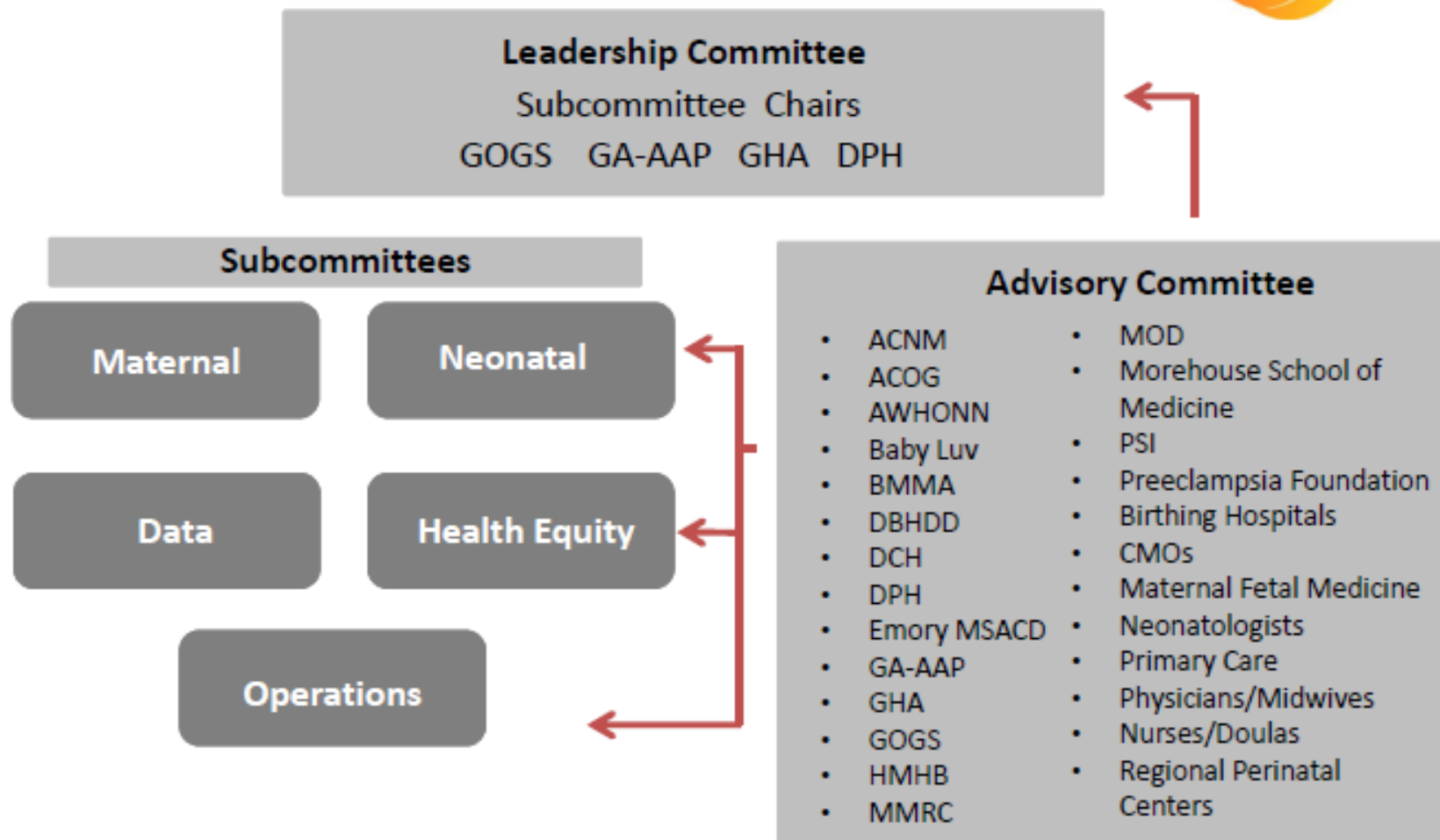


- Launched in November 2012 by a group of neonatologists, obstetricians, midwives, public health professionals and other stakeholders.
- The purpose of the GaPQC is to identify and implement quality improvement (QI) strategies to improve maternal and neonatal care and outcomes in Georgia.
- Past initiatives include screening for Critical Congenital Heart Disease (CCHD) and increasing post-partum long acting reversible contraception (LARC) insertions.





# GaPQC Structure



# Alliance for Innovation on Maternal Health (AIM)

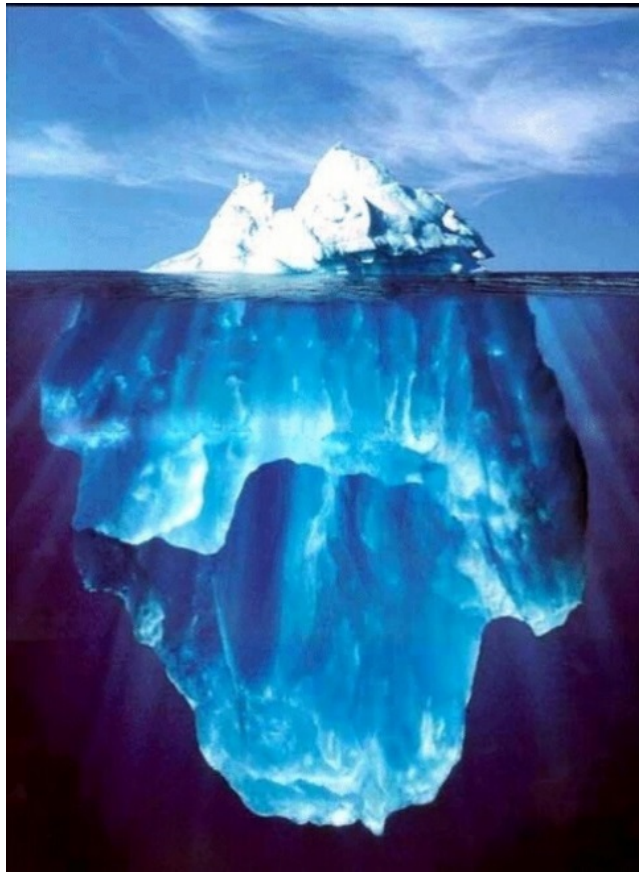


- AIM is a national data-driven maternal safety and quality improvement initiative based on proven implementation approaches to improving maternal safety and outcomes in the U.S.
- National partnership of organizations with the mission to reduce severe maternal morbidity by 100,000 events and maternal mortality by 1000 deaths by 2018.
- Data submitted from four states that implemented the hemorrhage and hypertension bundles in 2015 showed a decrease ranging from 8.3 to 22 percent in maternal morbidity.

# Maternal Safety Bundles



## Why Safety Bundles?

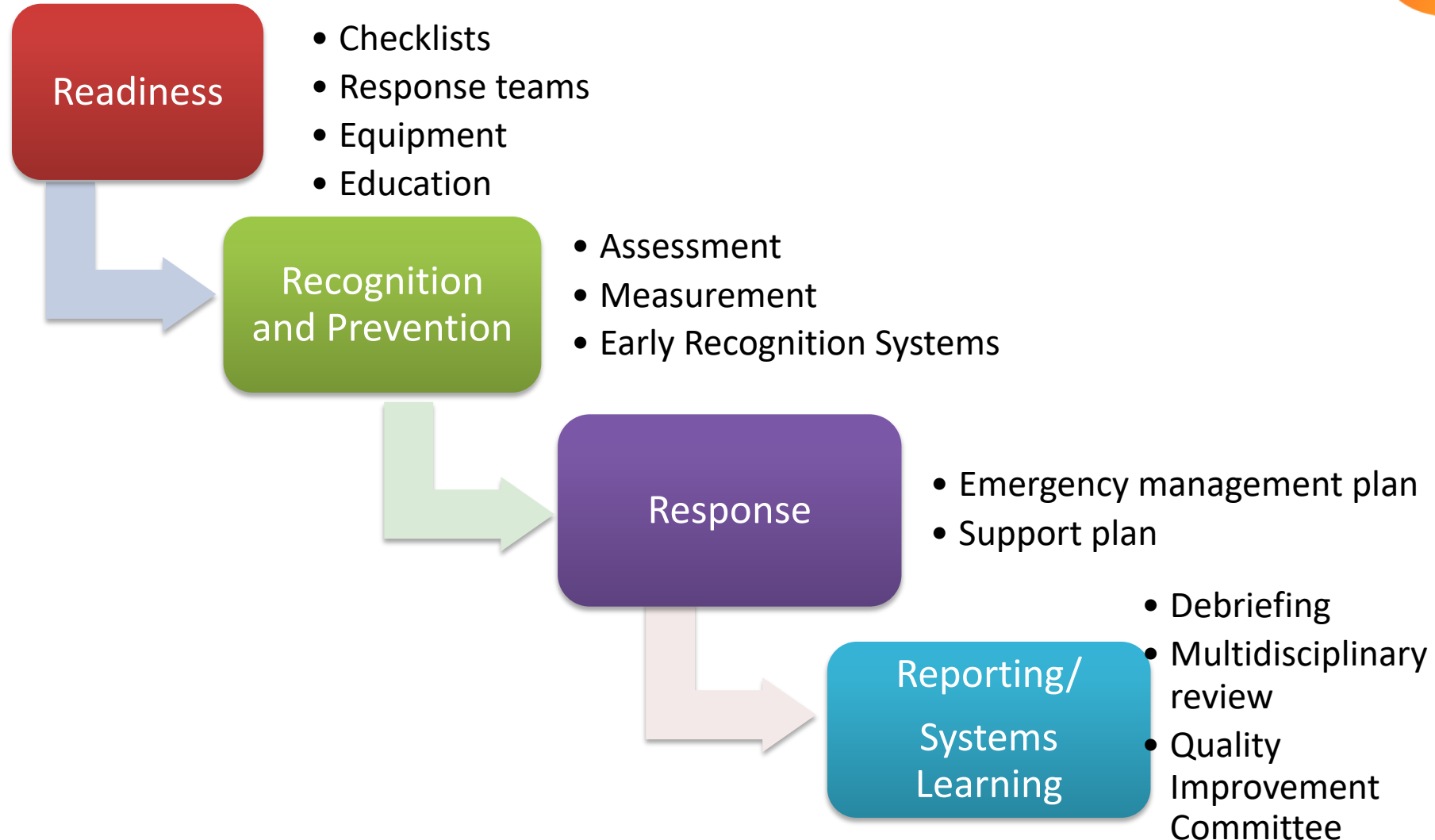


## What are Safety Bundles?

- Hospital-based quality improvement
- Tools to improve outcomes of hemorrhage or severe hypertension
- **Set of hospital-based protocols, policies, practice changes, drills, and system of data tracking**
- **Represent national consensus**

Source: Council on Patient Safety in Women's Health Care

# AIM Bundle Components



# GaPQC – AIM Safety Bundles Participation



- Initial goal to enroll **10** hospitals per year to the AIM bundles
- Staff will be provided with technical assistance, quality improvement tools, and educational resources.
- Outcome data will be analyzed and shared with partnering hospitals to measure the impact of bundle implementation.
- Facilities are not charged a fee to participate!



# Hospital Participation Update



**As of September 1, 2018**

- **48 participating hospitals**
  - 42 AIM hospitals
  - 12 VON hospitals
- **% of GA births covered – 64% (84K births)**
- **Total # of birthing hospitals in GA – 75**

# Current Initiatives - Neonatal



**25%**  
reduction in antibiotics use.  
Can your newborn care team say that?

LET'S CHANGE THE PARADIGM AND FIGHT THE RESISTANCE TOGETHER!

- As a team— Implement evidence-based care practices
- As a center— Become a VON Center of Excellence in Antibiotic Stewardship
- As a state— Strive to achieve the VON State of Excellence in Antibiotic Stewardship

**169** teams  
**39** states  
**7** countries

**ALREADY DEEPLY ENGAGED!**  
Statewide collaboratives in TN, OR, WA, CO, and MI fighting the resistance in partnership with VON and the CDC.

**VON** Vermont Oxford NETWORK

- **2017- Joined VON as a statewide collaborative with 8 participating hospitals**
  - **2018 - Continued work with 12 participating hospitals**
  - **2019 - Sustain mode**
- **NAS Needs Assessment Survey deployed May 2018**

# Current Initiatives - Maternal



**COUNCIL ON PATIENT SAFETY  
IN WOMEN'S HEALTH CARE**  
ask health care for every woman

**PATIENT SAFETY BUNDLE**

**Obstetric Hemorrhage**

**READINESS**

Every unit

- Have a hemorrhage cart with supplies, checklist, and instruction cards for intrauterine balloons and compression sutures
- Immediate access to hemorrhage medications (if or equinoxif)
- Establish a response team - who to call when help is needed (blood bank, advanced gynecologic surgery, other support and tertiary services)
- Establish massive and emergency release transfusion protocols (type O negative/uncrossmatched)
- Unit education on protocols, unit-based drills (with post-drill debrief)

**RECOGNITION & PREVENTION**

Every patient

- Assessment of hemorrhage risk (gestational, on admission, and at other appropriate times)
- Measurement of cumulative blood loss (formal, as quantitative as possible)
- Active management of the 2nd stage of labor (department-wide protocol)

**RESPONSE**

Every hemorrhage

- Unit standard, stage-based, obstetric hemorrhage emergency management plan with checklists
- Support program for patients, families, and staff for all significant hemorrhages

**REPORTING/SYSTEMS LEARNING**

Every unit

- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multidisciplinary review of serious hemorrhages for system issues
- Monitor outcomes and process metrics in perinatal quality improvement (QI) committee

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Standardization of health care processes and cultural activities has been shown to improve outcomes and quality of care. The Council on Patient Safety in Women's Health Care encourages patient safety leaders to help to share the standardizing process. This bundle reflects emerging clinical, scientific, and patient safety information and the information is subject to change. The information should not be construed as directing or controlling the treatment of a patient or a procedure to be followed. Although the components of a particular bundle may be adapted to local resources, standardization within an institution is strongly encouraged. The Council on Patient Safety in Women's Health Care is a broad-based coalition of organizations across the spectrum of women's health for the promotion of safe health care for every woman.

For more information visit the Council's website at [www.aafp.org/afsp/psac/women](http://www.aafp.org/afsp/psac/women)

May 2018

CY – 2018

- AIM OB HMG Cohort #1
- AIM OB HMG Cohort #2



# MOVING FROM HERE... TO THERE



- **Start small - with the most important first**
  - crash cart
  - hemorrhage cart
  - protocols
  - staff education
- **Risk Assessments**
- **MEWS**
- **QBL, CBL practices**
- **Massive transfusion protocols**
- **EHR Integration**



## But we've done this before...



- **Implementing initiatives is common place in hospital, but do you know the effectiveness?**
- **The data collection and analysis process utilized in the AIM bundles facilitates an understanding of the effectiveness of initiatives and provides factual data**



# Implementing the Bundles



- Should not be managed as a task list
- Requires planning, strategies and buy-in by stakeholders
  - RN's, MD's, other disciplines (anesthesia, pharmacy, blood bank, materials management)
- A change of culture



# CHALLENGES



- Staff buy in
- Change processes
- Understanding what, why, how and who
- QI/Data collection
- Resources to implement
  - Human
  - Time
  - Knowledge/expertise



# Support Systems



- Many facilities are already implementing several of these standards
- Standardization of processes
- Sharing/shamelessly stealing best practice
- Staff involvement
- Patient education



# GaPQC Ongoing Support



- **Hospital staff are provided with technical assistance, quality improvement tools, and educational resources.**
  - Monthly learning webinars
  - Monthly technical calls to champions in individual hospitals
- **Outcome data is analyzed and shared with partnering hospitals to measure the impact of bundle implementation.**
- **AIM National Team Support**
- **AIM Partner States**

# Data Analysis



# Baseline Survey



## Process Measures

- Unit Drills
- Provider Education
- Nurse Education
- Risk Assessment
- Quantified Blood Loss

## Structure Measures


- Patient, Family and Staff Support
- Debriefs
- Multi-disciplinary Case Review
- Hemorrhage Cart
- Unit Policy and Procedure
- EHR Integration





# Future Initiatives



**COUNCIL ON PATIENT SAFETY  
IN WOMEN'S HEALTH CARE**  
safe health care for every woman

**RESPONSE**

*Every case of severe hypertension/preeclampsia*

- Facility-wide standard protocols with checklists and escalation policies for management and treatment of:
  - Severe hypertension
  - Eclampsia, seizure prophylaxis, and magnesium over-dosage
  - Postpartum presentation of severe hypertension/preeclampsia
- Minimum requirements for protocol:
  - Notification of physician or primary care provider if systolic BP  $\geq$  160 or diastolic BP  $\geq$  110 for two measurements within 15 minutes
  - After the second elevated reading, treatment should be initiated ASAP (preferably within 60 minutes of verification)
  - Includes onset and duration of magnesium sulfate therapy
  - Includes escalation measures for those unresponsive to standard treatment
  - Describes manner and verification of follow-up within 7 to 14 days postpartum
  - Describe postpartum patient education for women with preeclampsia
- Support plan for patients, families, and staff for ICU admissions and serious complications of severe hypertension

**REPORTING/SYSTEMS LEARNING**

*Every unit*

- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multidisciplinary review of all severe hypertension/eclampsia cases admitted to ICU for systems issues
- Monitor outcomes and process metrics

**PATIENT SAFETY BUNDLE**

**Hypertension**

## CY - 2019

- AIM OB HMG Cohort #3
- AIM HTN in Pregnancy Cohort #1

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