Alliance for Innovation on Maternal Health (AIM) in Alaska

FROM THE ALASKA PERINATAL QUALITY COLLABORATIVE

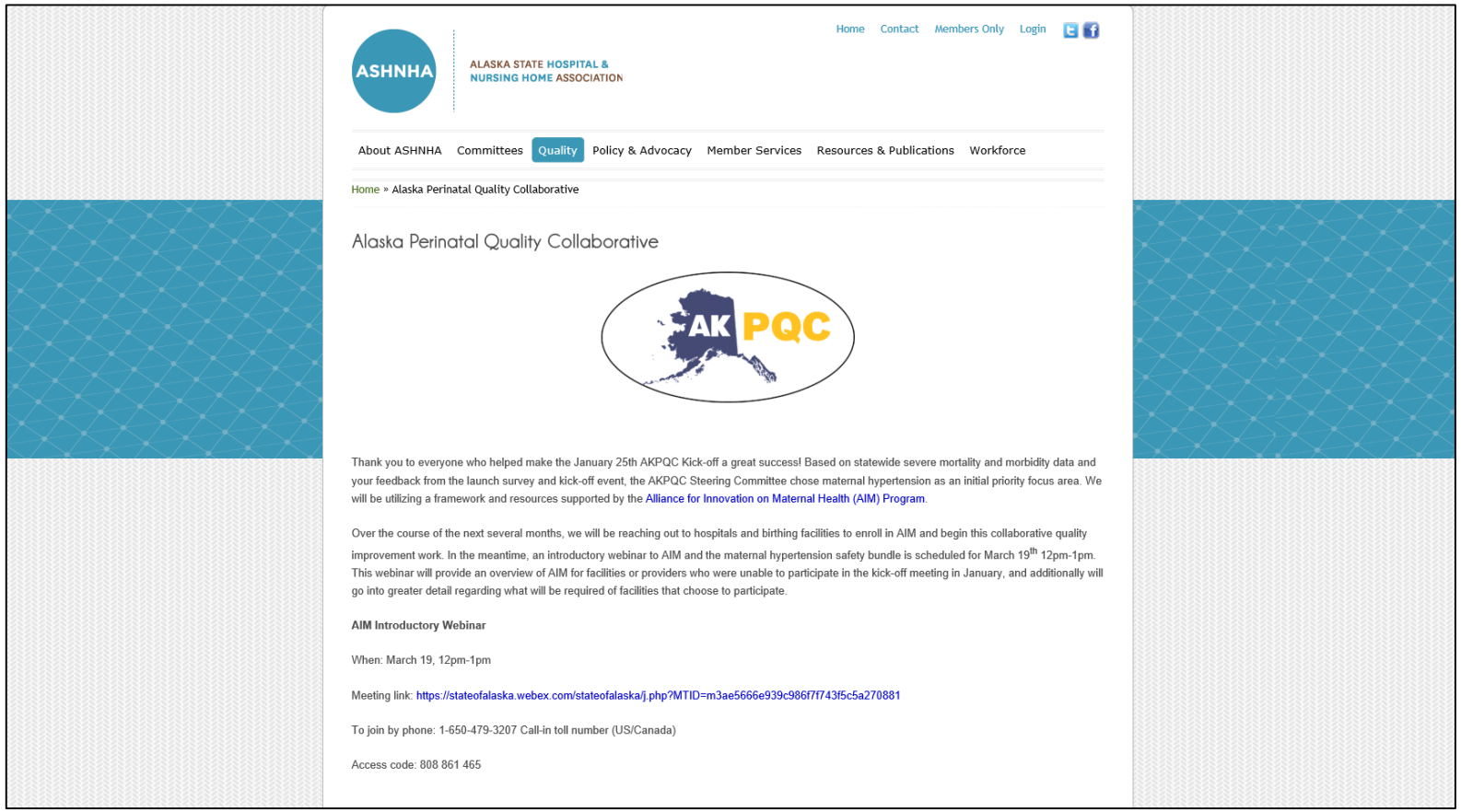
MARCH 19, 2019

Presenters

- **Chrissy Rodriguez, MD, FACOG—**Maternal Fetal Medicine Physician, Alaska Native Medical Center
- **Margaret Young, MPH**—Unit Manager, Maternal Child Health Epidemiology
- **Katy Krings, MPH, RN**—Perinatal/Reproductive Health Nurse Consultant, Women's, Children's, Family Health

Agenda

- Overview of AKPQC and AIM Program
- AIM Hypertension Safety Bundle
- Hypertension Data
- Data Reporting Requirements
- AIM and QI Resources
- AIM Enrollment/Next Steps



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ALASKA STATE HOSPITAL & NURSING HOME ASSOCIATION

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Alaska Perinatal Quality Collaborative

AK PQC

Thank you to everyone who helped make the January 25th AKPQC Kick-off a great success! Based on statewide severe mortality and morbidity data and your feedback from the launch survey and kick-off event, the AKPQC Steering Committee chose maternal hypertension as an initial priority focus area. We will be utilizing a framework and resources supported by the Alliance for Innovation on Maternal Health (AIM) Program.

Over the course of the next several months, we will be reaching out to hospitals and birthing facilities to enroll in AIM and begin this collaborative quality improvement work. In the meantime, an introductory webinar to AIM and the maternal hypertension safety bundle is scheduled for March 19th 12pm-1pm. This webinar will provide an overview of AIM for facilities or providers who were unable to participate in the kick-off meeting in January, and additionally will go into greater detail regarding what will be required of facilities that choose to participate.

AIM Introductory Webinar

When: March 19, 12pm-1pm

Meeting link: https://stateofalaska.webex.com/stateofalaska/j.php?MTID=m3ae5666e939c986f7f743f5c5a270881

To join by phone: 1-650-479-3207 Call-in toll number (US/Canada)

Access code: 808 861 465

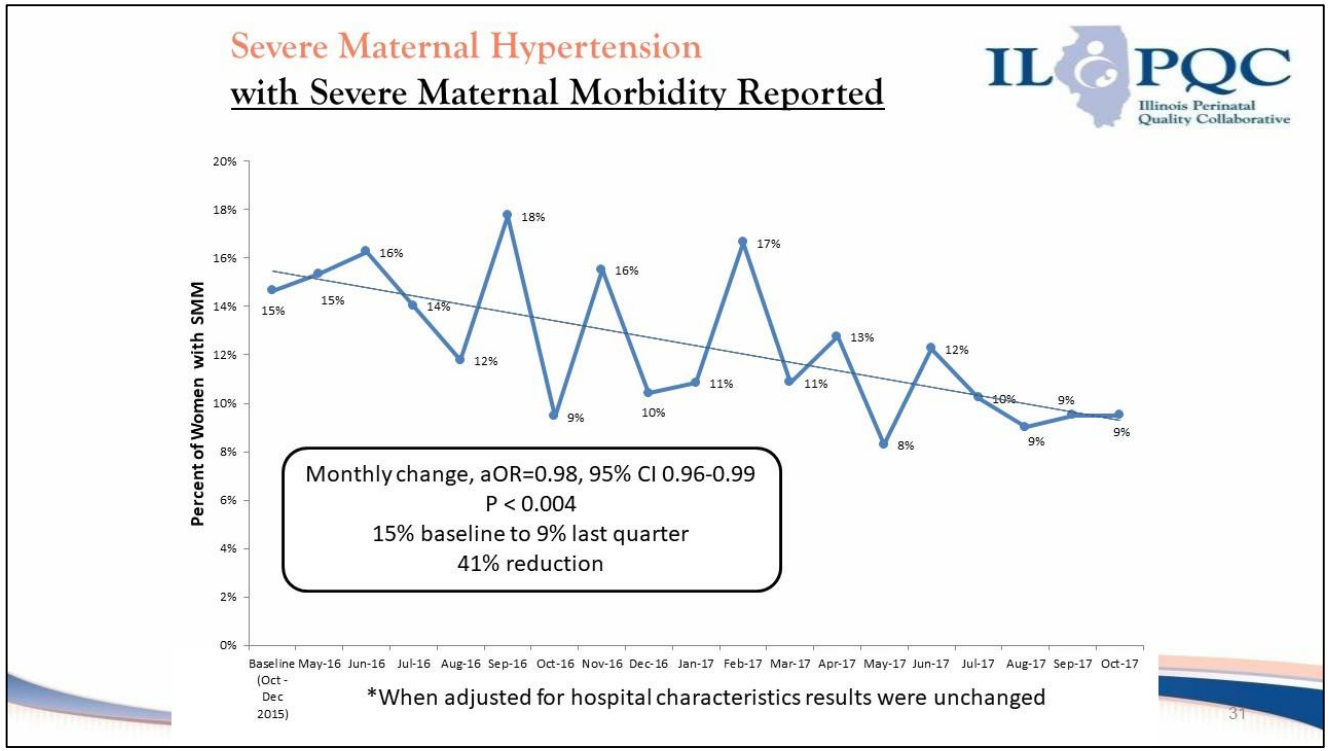
www.ashnha.com/alaska-perinatal-quality-collaborative/

Steering Committee

- Alaska Chapter of AAP
- Alaska Chapter of ACOG
- Alaska Section of AWHONN
- Alaska Division of Public Health – Title V MCH and CYSHCN
- Alaska Division of Public Health – Maternal Child Health Epidemiology
- Alaska Division of Public Health – Maternal Child Death Review
- Alaska State Hospital & Nursing Home Association
- Alaska Native Medical Center
- Alaska Native Tribal Health Consortium – Maternal Fetal Medicine
- Alaska Neonatology Associates
- Alaska Regional Hospital
- Fairbanks Memorial Hospital
- Parent Representative
- The Children's Hospital at Providence
- Yukon-Kuskokwim Health Corporation

Why Maternal Hypertension?

- Success in other states
- Highly preventable
- Opportunities to improve
- Affects most facilities

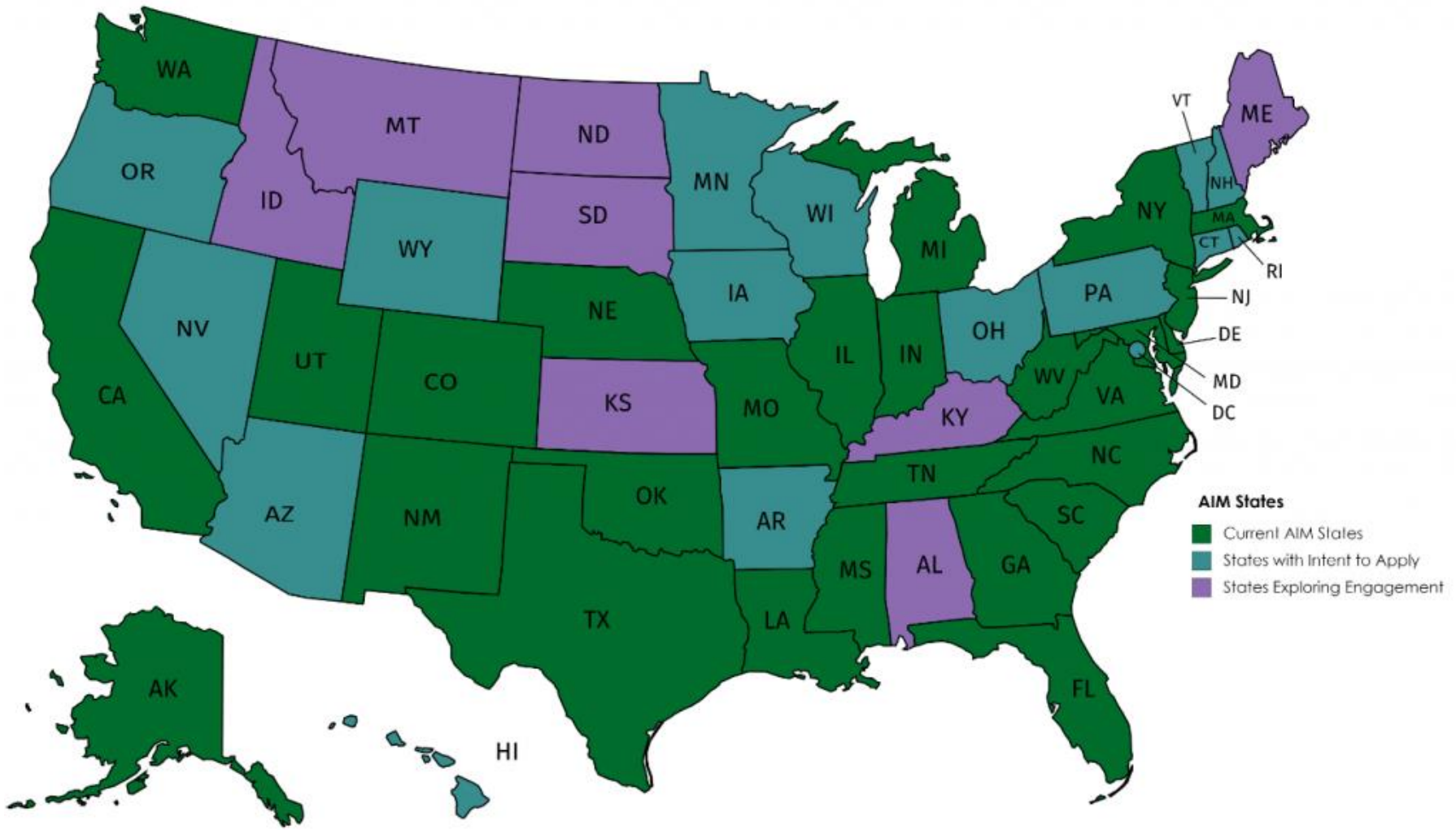


ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

- National data-driven maternal safety and quality improvement initiative
- Works through state teams to align national, state, and hospital-level quality improvement
- Goal to eliminate preventable severe maternal morbidity and mortality

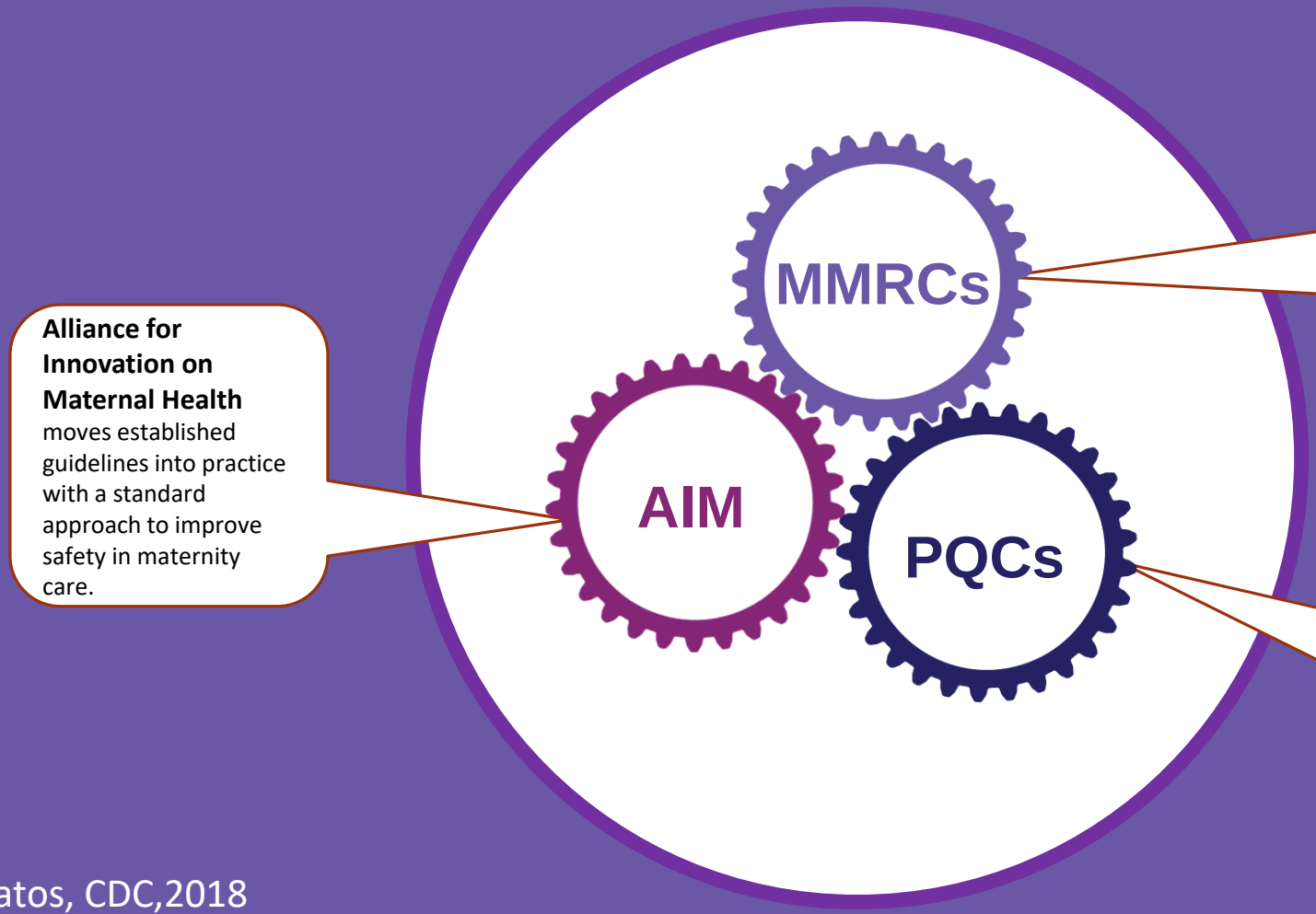
www.safehealthcareforeverywoman.org

Current AIM States



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

IMPROVING POPULATION HEALTH OF WOMEN



Maternal Mortality Review Committees conduct detailed reviews to get complete and comprehensive data on maternal deaths to prioritize prevention efforts.

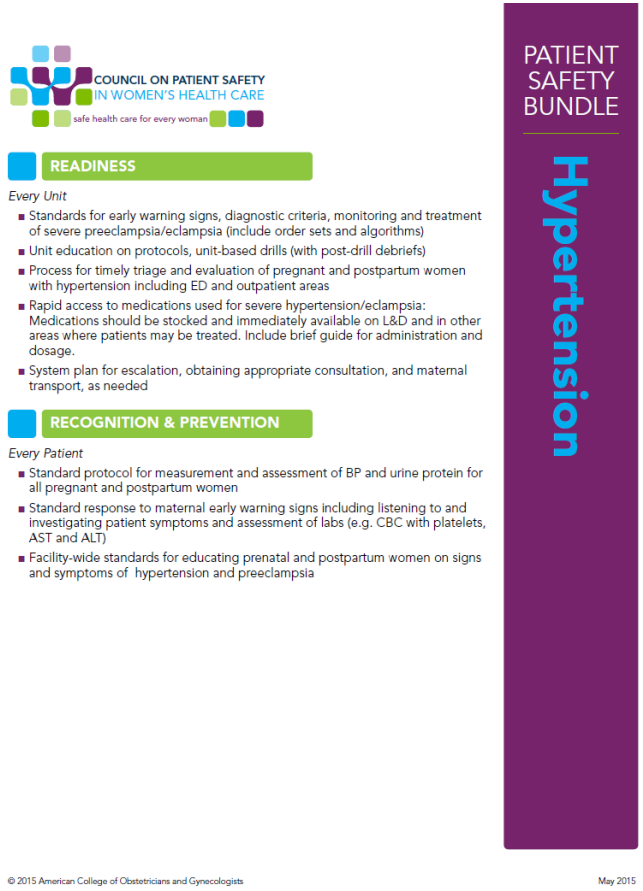
Alliance for Innovation on Maternal Health moves established guidelines into practice with a standard approach to improve safety in maternity care.

Perinatal Quality Collaboratives mobilize state or multi-state networks to implement quality improvement efforts and improve care for mothers and babies.

Zaharatos, CDC,2018

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

Hypertension Safety Bundle



COUNCIL ON PATIENT SAFETY IN WOMEN'S HEALTH CARE

safe health care for every woman

PATIENT SAFETY BUNDLE

Hypertension

READINESS

Every Unit

- Standards for early warning signs, diagnostic criteria, monitoring and treatment of severe preeclampsia/eclampsia (include order sets and algorithms)
- Unit education on protocols, unit-based drills (with post-drill debriefs)
- Process for timely triage and evaluation of pregnant and postpartum women with hypertension including ED and outpatient areas
- Rapid access to medications used for severe hypertension/eclampsia: Medications should be stocked and immediately available on L&D and in other areas where patients may be treated. Include brief guide for administration and dosage.
- System plan for escalation, obtaining appropriate consultation, and maternal transport, as needed

RECOGNITION & PREVENTION

Every Patient

- Standard protocol for measurement and assessment of BP and urine protein for all pregnant and postpartum women
- Standard response to maternal early warning signs including listening to and investigating patient symptoms and assessment of labs (e.g. CBC with platelets, AST and ALT)
- Facility-wide standards for educating prenatal and postpartum women on signs and symptoms of hypertension and preeclampsia

May 2015

- Checklist of evidence-based practices
- Content modified based on local resources and needs
  - Readiness
  - Recognition and Prevention
  - Response
  - Reporting/Systems Learning

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

Readiness

- Standards for early warning signs, diagnostic criteria, monitoring and treatment
- Unit education on protocols, unit-based drills
- Process for timely triage and evaluation of pregnant and postpartum women

Readiness

- Rapid access to medications used for severe hypertension/eclampsia

- System plan for escalation, obtaining appropriate consultation, and maternal transport

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

Recognition and Prevention

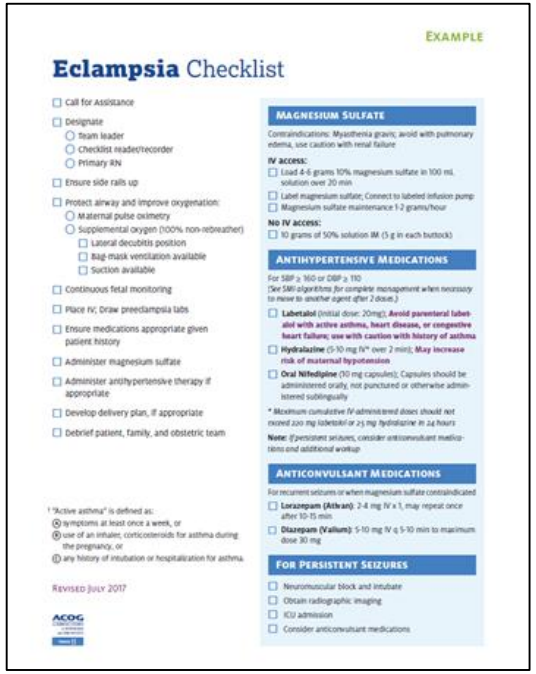
- Standard protocol for measurement and assessment of BP and urine protein
- Standard response to maternal early warning signs
- Facility-wide standards for patient/family education

Preeclampsia.org

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

Response

- Facility-wide standard protocols with checklists and escalation policies for:
  - Severe hypertension
  - Eclampsia, seizure prophylaxis, and magnesium over-dosage
  - Postpartum presentation of severe hypertension and preeclampsia



EXAMPLE

Eclampsia Checklist

- ☐ Call for Assistance
- ☐ Designate
  - ○ Team leader
  - ○ Checklist reader/recorder
  - ○ Primary RN
- ☐ Ensure side rails up
- ☐ Protect airway and improve oxygenation:
  - ○ Maternal pulse oximetry
  - ○ Supplemental oxygen (100% non-rebreather)
    - ☐ Lateral decubitis position
    - ☐ Bag-mask ventilation available
    - ☐ Suction available
- ☐ Continuous fetal monitoring
- ☐ Place IV; Draw preeclampsia labs
- ☐ Ensure medications appropriate given patient history
- ☐ Administer magnesium sulfate
- ☐ Administer antihypertensive therapy if appropriate
- ☐ Develop delivery plan, if appropriate
- ☐ Debrief patient, family, and obstetric team

† "Active asthma" is defined as:
- ⓐ symptoms at least once a week, or
- ⓑ use of an inhaler, corticosteroids for asthma during the pregnancy, or
- ⓒ any history of intubation or hospitalization for asthma.

REVISED JULY 2017

ACOG

MAGNESIUM SULFATE

Contraindications: Myasthenia gravis; avoid with pulmonary edema, use caution with renal failure

IV access:
- ☐ Load 4-6 grams 10% magnesium sulfate in 100 mL solution over 20 min
- ☐ Label magnesium sulfate; Connect to labeled infusion pump
- ☐ Magnesium sulfate maintenance 1-2 grams/hour

No IV access:
- ☐ 10 grams of 50% solution IM (5 g in each buttock)

ANTIHYPERTENSIVE MEDICATIONS

For SBP ≥ 160 or DBP ≥ 110
(See SMI algorithms for complete management when necessary to move to another agent after 2 doses.)
- ☐ **Labetalol** (Initial dose: 20mg); **Avoid parenteral labetalol with active asthma, heart disease, or congestive heart failure; use with caution with history of asthma**
- ☐ **Hydralazine** (5-10 mg IV* over 2 min); **May increase risk of maternal hypotension**
- ☐ **Oral Nifedipine** (10 mg capsules); Capsules should be administered orally, not punctured or otherwise administered sublingually

** Maximum cumulative IV-administered doses should not exceed 220 mg labetalol or 25 mg hydralazine in 24 hours*

Note: *If persistent seizures, consider anticonvulsant medications and additional workup*

ANTICONVULSANT MEDICATIONS

For recurrent seizures or when magnesium sulfate contraindicated
- ☐ **Lorazepam (Ativan)**: 2-4 mg IV x 1, may repeat once after 10-15 min
- ☐ **Diazepam (Valium)**: 5-10 mg IV q 5-10 min to maximum dose 30 mg

FOR PERSISTENT SEIZURES
- ☐ Neuromuscular block and intubate
- ☐ Obtain radiographic imaging
- ☐ ICU admission
- ☐ Consider anticonvulsant medications

Response

- Notify provider if systolic BP ≥160 OR diastolic BP ≥110
- If severe BP persists for 15 mins or more, begin treatment ASAP (or within 60 minutes)

Reporting/Systems Learning

- Culture of huddles and post-event debriefs
- Multidisciplinary review of all cases admitted to ICU
- Monitor outcomes and process measures

Alaska Health Facilities Data Reporting System (HFDR)

Inpatient discharge data from Alaska health care facilities

- 8162 Alaskan deliveries in 2017 (~81% of all in state deliveries)

Data include diagnosis and procedure codes, patient characteristics (age, sex) for each hospital discharge

Regulations to mandate reporting became effective December 2014

WCFH has a current Data Use Agreement with the Section of Health Analytics and Vital Records to receive quarterly datasets

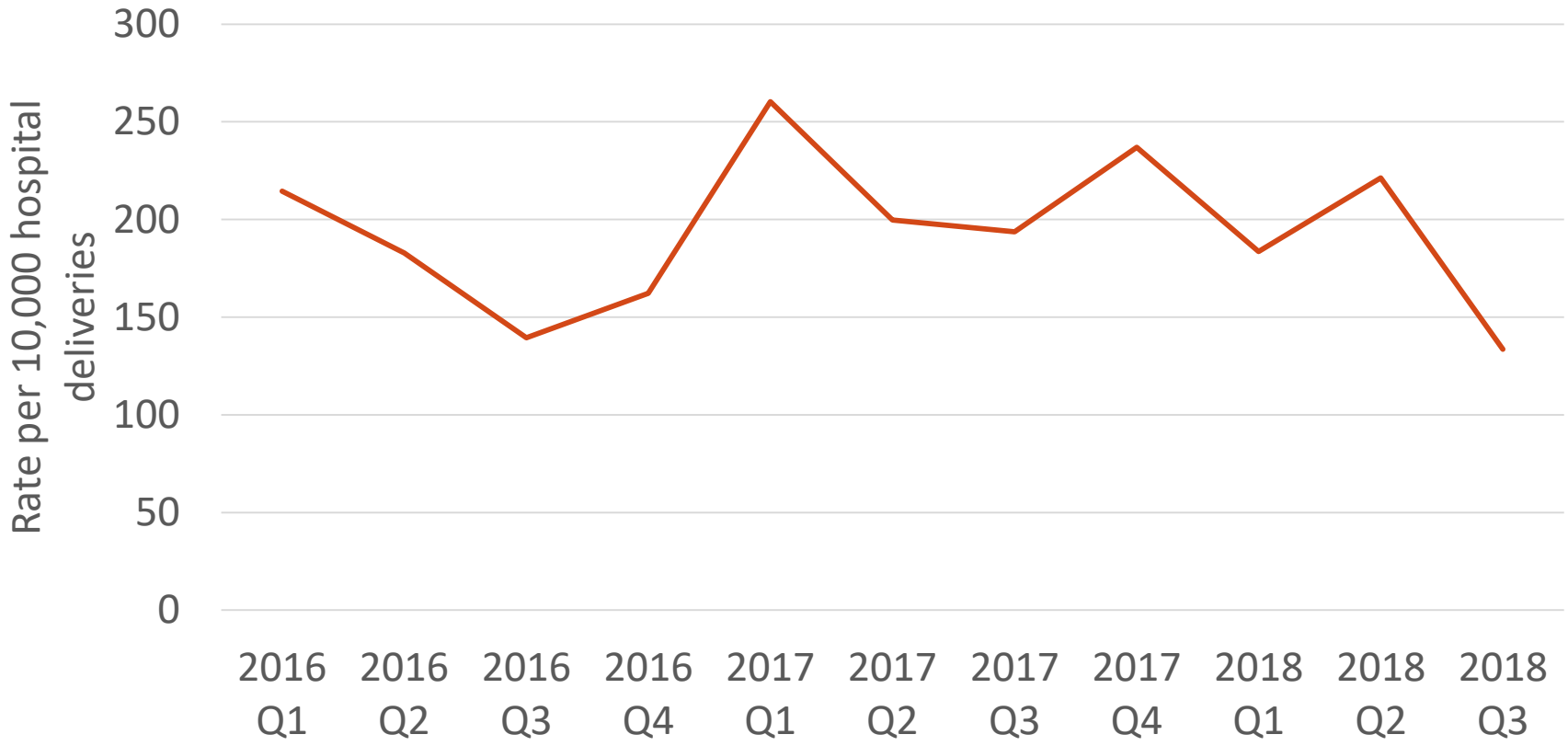
AIM Severe Maternal Morbidity (SMM) 21 components

181 cases statewide in 2017

- 115 related to transfusion
- 10-20 cases each with DIC, eclampsia, shock, and hysterectomy
- <10 cases each with all other components

Acute Myocardial Infarction	Puerperal Cerebrovascular Disorders
Aneurysm	Thrombotic Embolism
Temporary Tracheostomy	Ventilation
Amniotic Fluid Embolism	Pulmonary Edema
Sickle Cell Anemia with Crisis	Adult Respiratory Distress Syndrome
Cardiac Arrest / V. Fib / General Heart Failure	Septicemia and Sepsis
Severe Anesthesia Complications	Heart Failure during Procedure or Surgery
Conversion of Cardiac Rhythm	Acute Renal Failure

Statewide Severe Maternal Morbidity (SMM) Trend by Quarter



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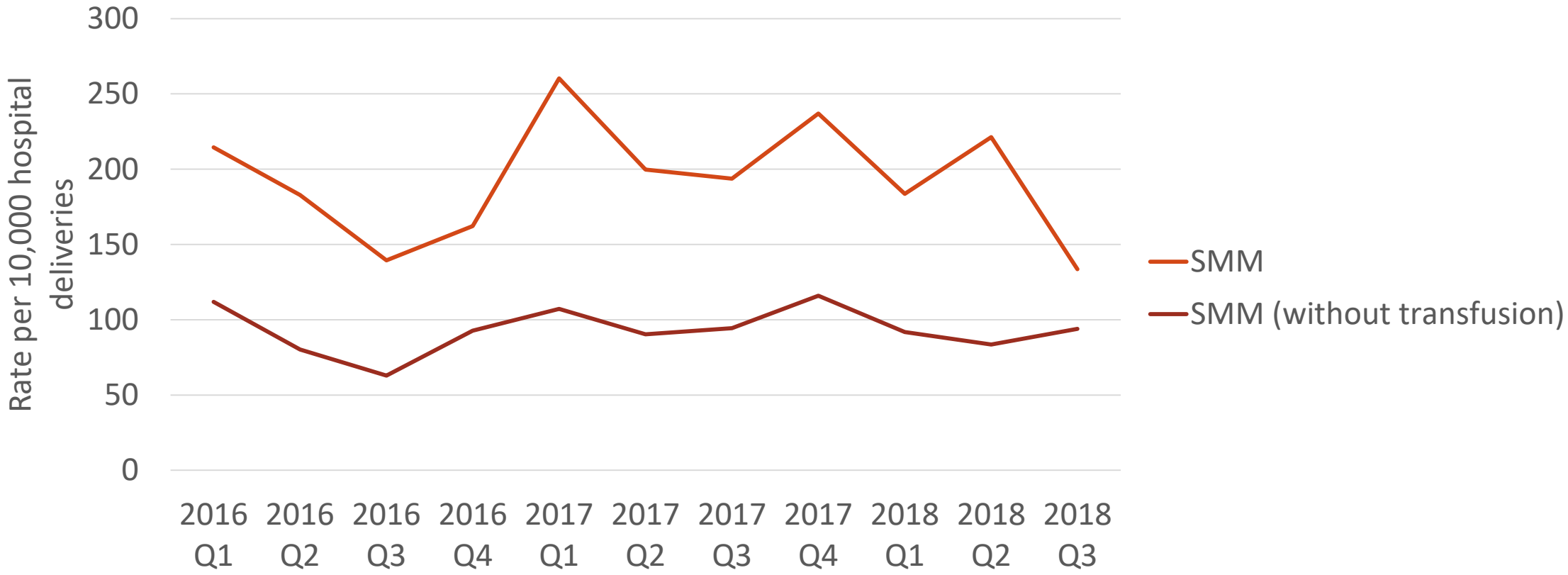
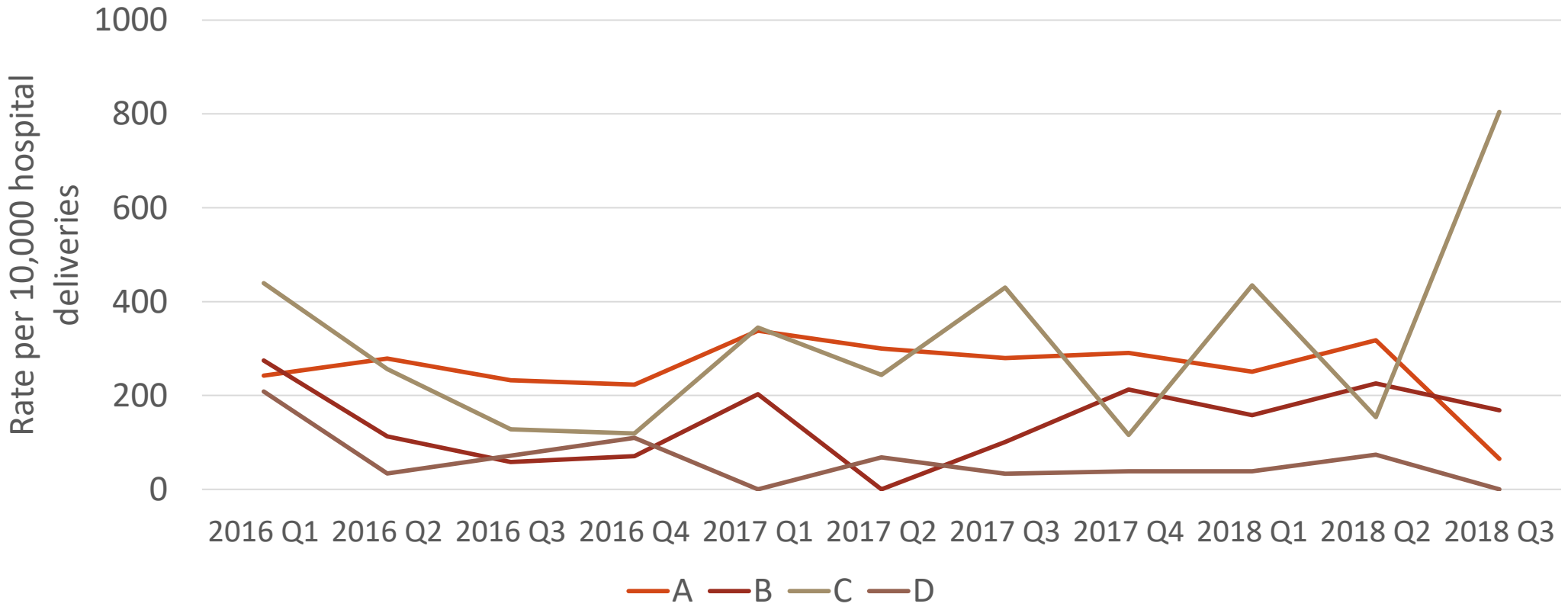
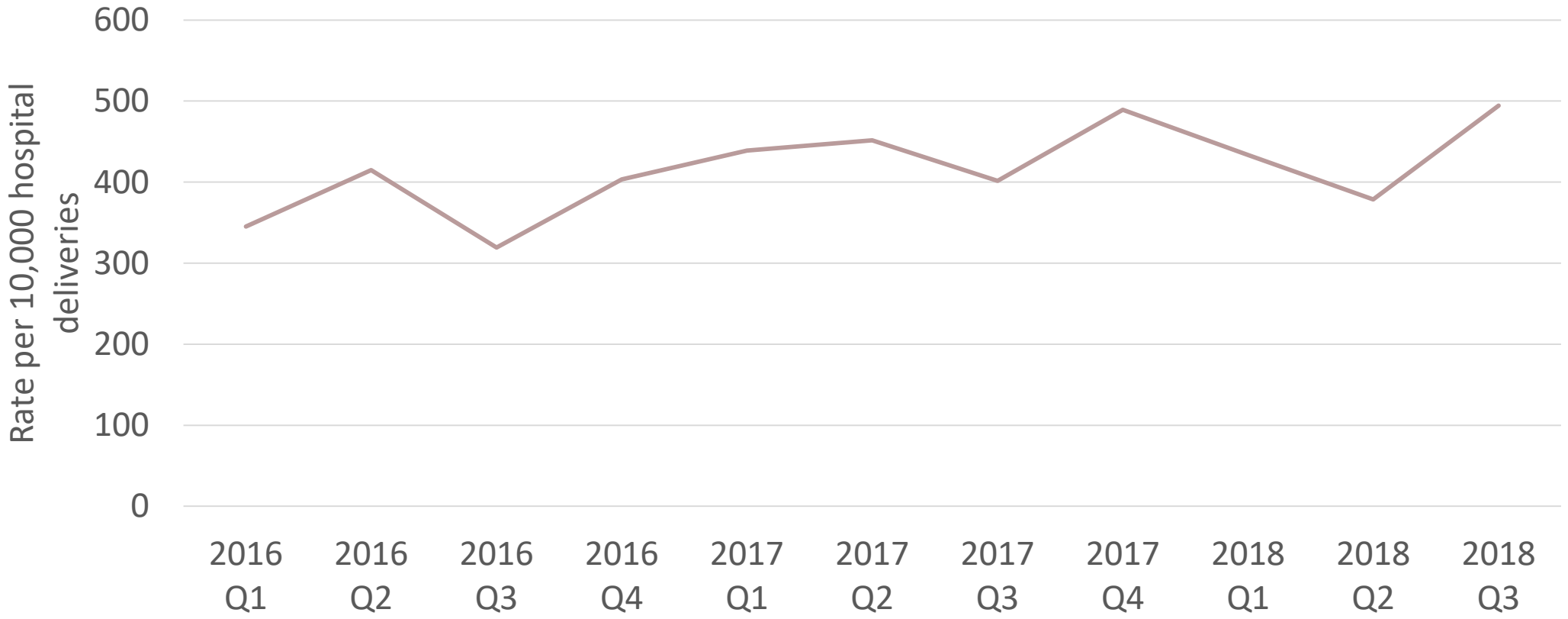


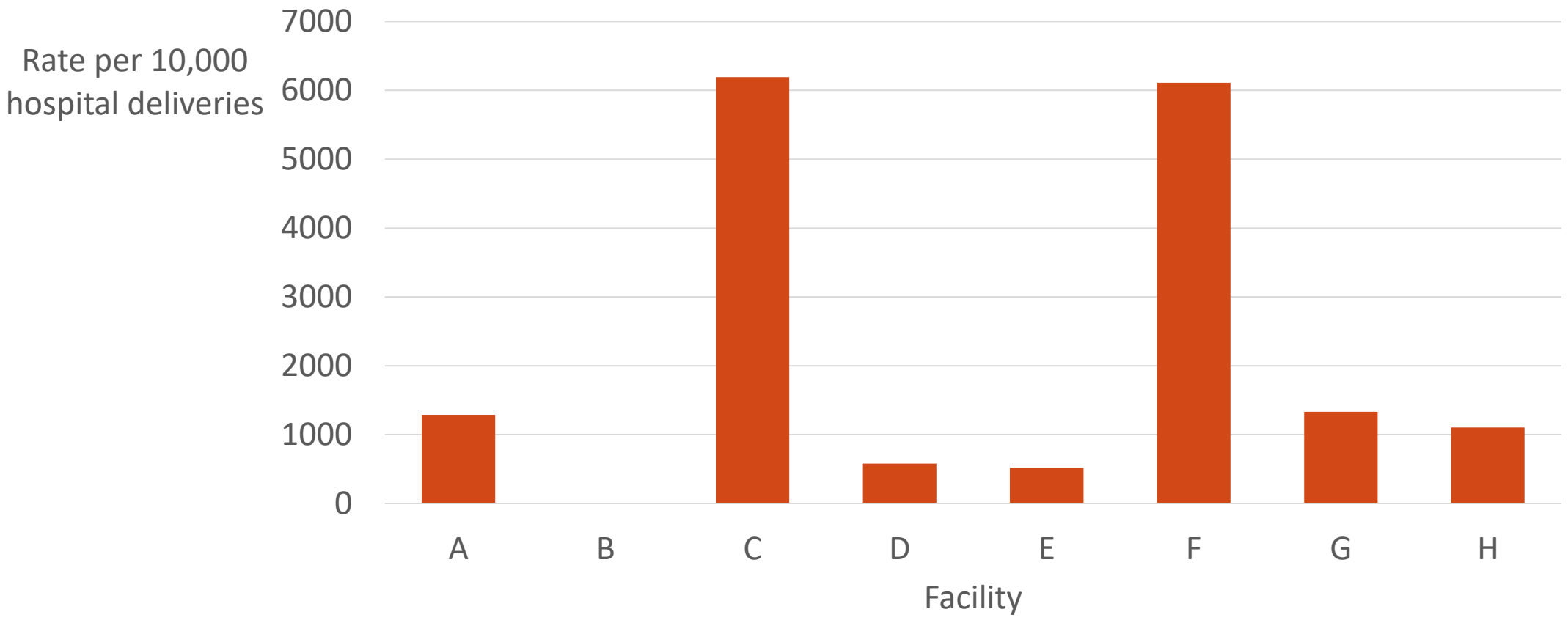
Severe Maternal Morbidity Trend by Quarter, by Facility



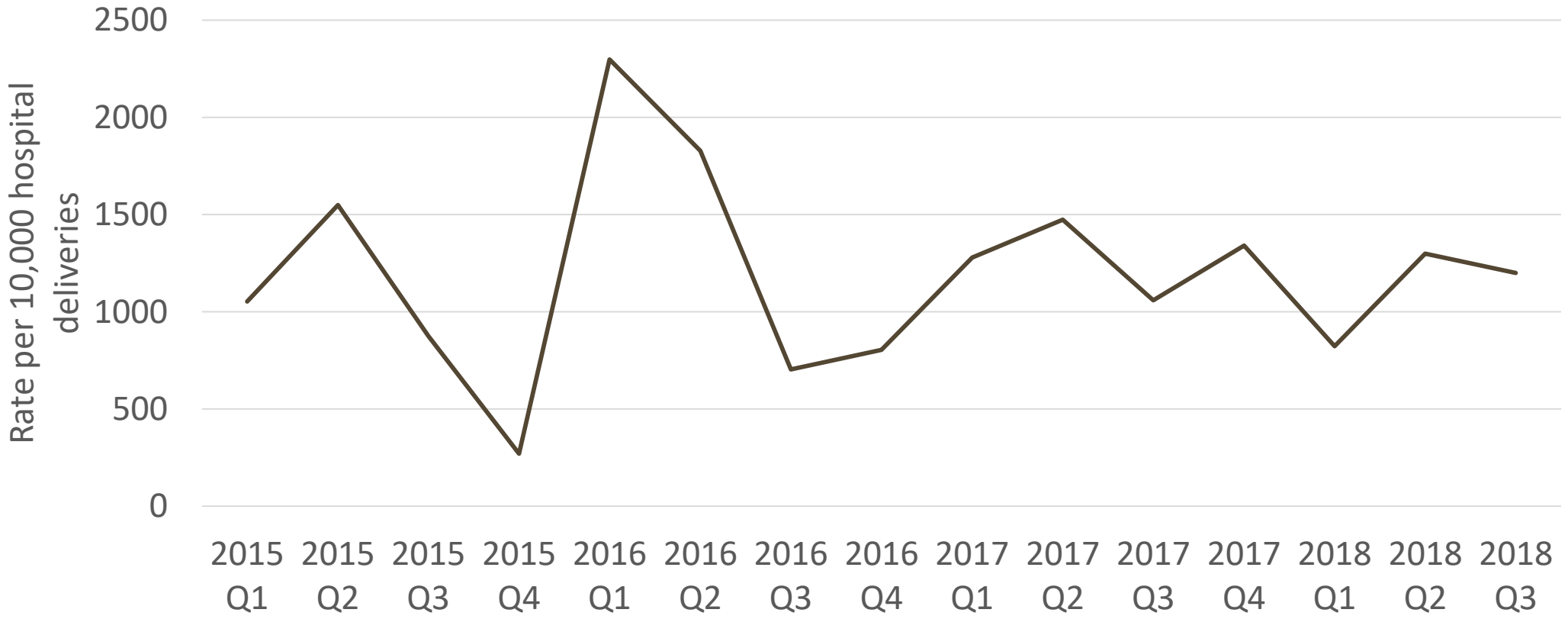
Hospital Deliveries with Hypertension

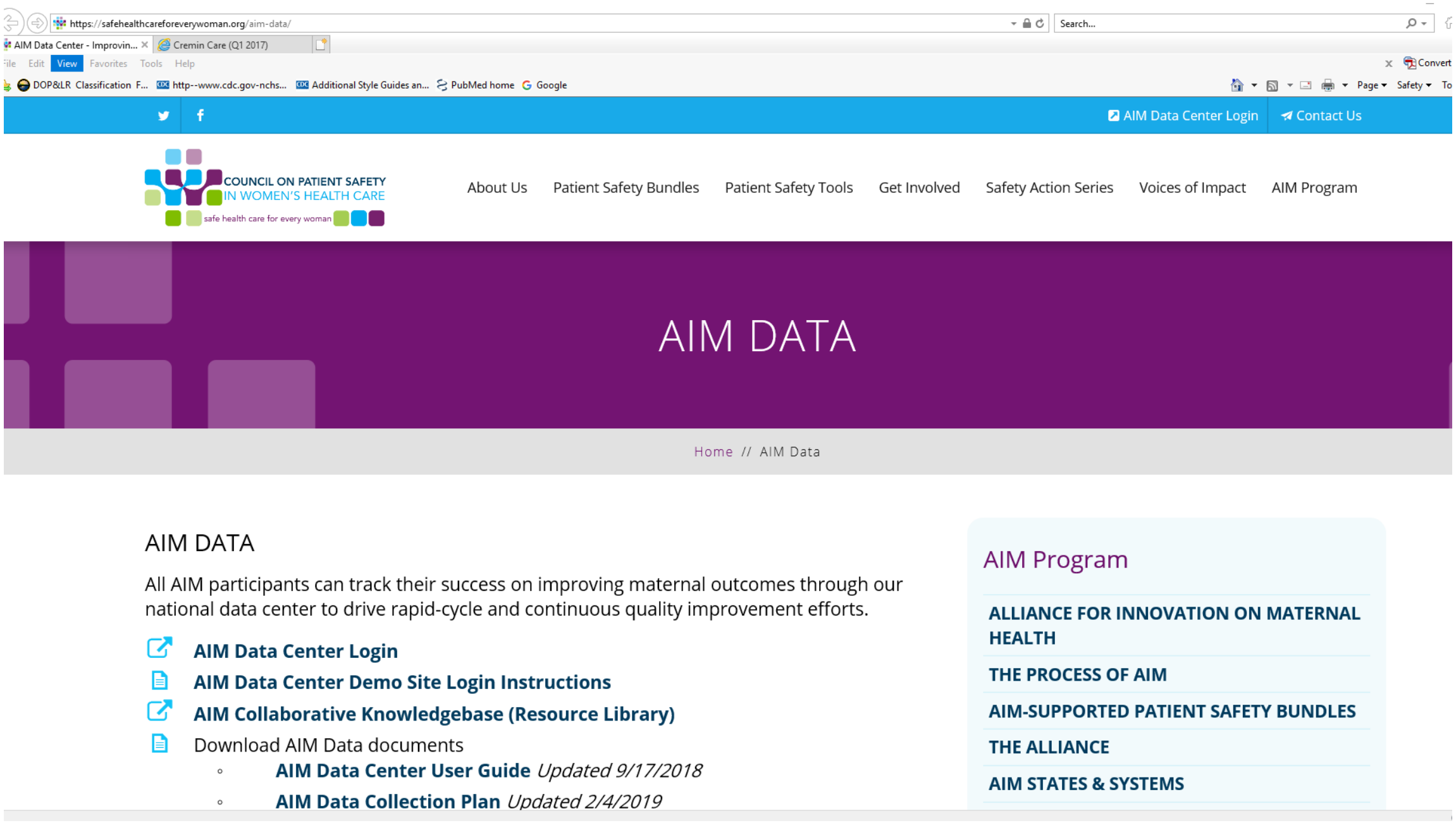


Rate of Severe Maternal Morbidity Among Patients with Hypertension, by Facility, 2016-2018 Q3



Severe Maternal Morbidity (SMM) Trend by Quarter, Among Patients with Hypertension

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AIM Data Center - Improvin...
Cremin Care (Q1 2017)
File Edit View Favorites Tools Help
DOP&LR Classification F...
http--www.cdc.gov-nchs...
Additional Style Guides an...
PubMed home
Google
Convert
Page
Safety
AIM Data Center Login
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safe health care for every woman
About Us
Patient Safety Bundles
Patient Safety Tools
Get Involved
Safety Action Series
Voices of Impact
AIM Program
AIM DATA
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AIM DATA
All AIM participants can track their success on improving maternal outcomes through our national data center to drive rapid-cycle and continuous quality improvement efforts.
AIM Data Center Login
AIM Data Center Demo Site Login Instructions
AIM Collaborative Knowledgebase (Resource Library)
Download AIM Data documents
AIM Data Center User Guide Updated 9/17/2018
AIM Data Collection Plan Updated 2/4/2019
AIM Program
ALLIANCE FOR INNOVATION ON MATERNAL HEALTH
THE PROCESS OF AIM
AIM-SUPPORTED PATIENT SAFETY BUNDLES
THE ALLIANCE
AIM STATES & SYSTEMS

Process Measures for AIM Severe Hypertension Bundle

Process Measures	Description
Unit Drills	# drills performed and drill topics
Provider Education	Cumulative proportion of OB physicians and midwives who have completed (w/in last 2 years) education on severe hypertension/preeclampsia
Nursing Education	Cumulative proportion of OB nurses who have completed education (w/in last 2 years) on severe hypertension/preeclampsia
Treatment of Severe Hypertension	Percent of cases treated within 1 hour with IV Labetalol, IV Hydralazine, or PO Nifedipine

Structure Measures for AIM Severe Hypertension Bundle

Structure Measures	Description
Patient, Family & Staff Support	Completion date for OB specific resources and protocols developed to support patients, family and staff through major OB complications
Debriefs	Start date for establishment of a hospital system to perform regular formal debriefs after cases with major complications
Multidisciplinary Case Reviews	Start date for establishment of a hospital process to perform multidisciplinary systems-level reviews on all cases of SMM
Unit Policy and Procedure	Completion date for a Severe HTN/Preeclampsia policy and procedure that provides a unit-standard approach to measuring blood pressure, treatment of Severe HTN/Preeclampsia, administration of Magnesium Sulfate, and treatment of Magnesium Sulfate overdose
EHR Integration	Completion date for integration of recommended Severe HTN/Preeclampsia bundle processes into hospital EHR system

Cremin Care (Q4 2016)

The process measure responses below are for Cremin Care.

Save

P1A. **In this quarter, how many OB drills (In Situ and/or Sim Lab) were performed on your unit for any maternal safety topic?**

7

P1B. **In this quarter, what topics were covered in the OB drills?**

Topic	Yes	No
Hemorrhage	○	◉
Severe Hypertension	○	◉
Other	○	◉

P2A. **At the end of this quarter, what cumulative proportion of OB physicians and midwives has completed (within the last 2 years) an education program on Severe HTN/Preeclampsia?**

50-59%

P2B. **At the end of this quarter, what cumulative proportion of OB physicians and midwives has completed (within the last 2 years) an education program on the Severe HTN/Preeclampsia bundle elements and the unit-standard protocol?**

10-19%

Cremin Care

Structure Measures Data Entry (7 of 13) ⚠ | Process Measures Data Entry | **Measure Results**

No data entry required. Data obtained through hospital discharge data already submitted to JSDH.

Outcome Measures	2011	2012	2013
Severe Maternal Morbidity among All Delivering Women	3.9%	4.4%	3.5%
Severe Maternal Morbidity (excluding transfusion codes) among All Delivering Women	1.7%	1.7%	1.9%
Severe Maternal Morbidity among Preeclampsia Cases	9.2%	10.2%	8.5%
Severe Maternal Morbidity (excluding transfusion codes) among Preeclampsia Cases	6.5%	6.9%	6.7%
Severe Maternal Morbidity among Hemorrhage Cases	17.2%	18.8%	19.9%
Severe Maternal Morbidity (excluding transfusion codes) among Hemorrhage Cases	5.4%	5.5%	4.1%
VTE During Pregnancy	No Data	No Data	No Data
VTE During Postpartum	No Data	No Data	No Data
Pregnancy Associated Opioid Deaths	No Data	No Data	No Data
Average length of stay for newborns with Neonatal Abstinence Syndrome (NAS)	No Data	No Data	No Data

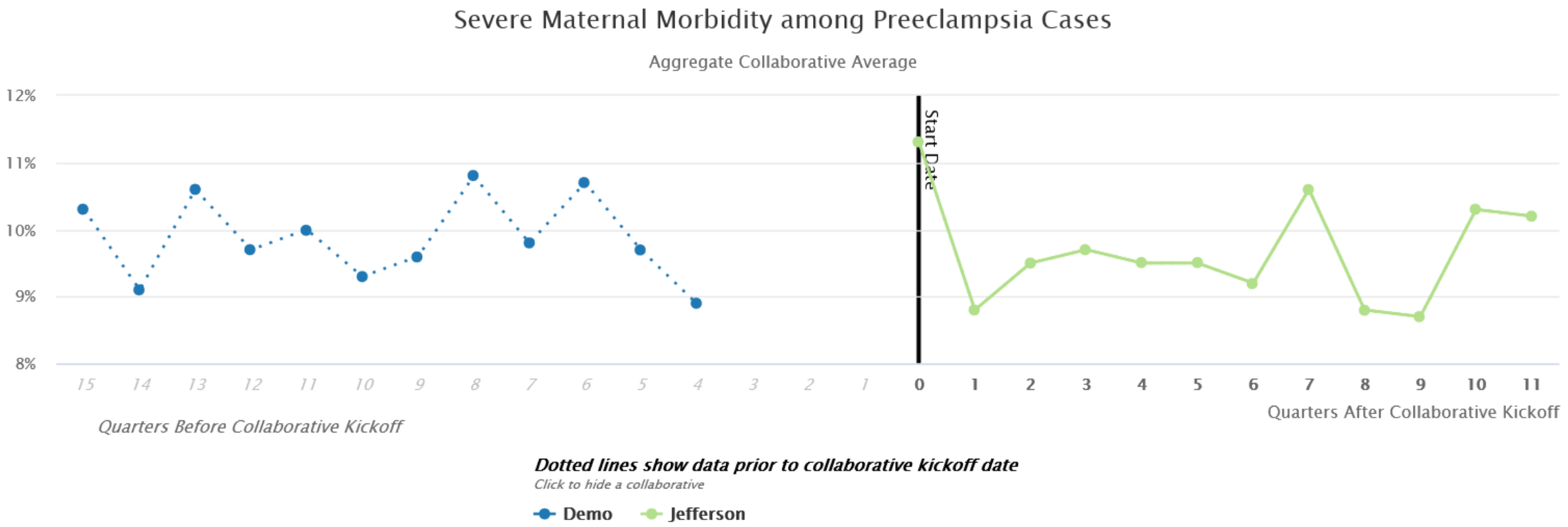
AIM Data Center | Compare | Dashboards | Admin | Support | Hi, Jefferson State | Sign Out

Cross-Collaborative Comparison

Graph CSV

The graph and data below are in draft form and should not be shared.

Target Threshold: None | Time Scale: Collaborative Time | Quarterly



Home

TERMS AND CONDITIONS OF DATA SUBMISSION

ACOG owns and operates the Alliance for Innovation on Maternal Health, Improving Maternal Health and Safety ("AIM"), which includes a hosted collaborative data repository of de-identified information pertaining to participating facility processes and outcomes (the "Database") and offers content created by ACOG aimed at providing facilities guidance to standardize and improve clinical processes to achieve desired outcomes ("Safety Bundles").

1. Provision of Data.

(a) Outcome Data. Participant acknowledges and agrees that it is authorized to submit Outcome Data to ACOG.

(b) Process Data. Hospital participants in AIM acknowledge and agree that they are authorized to submit Process Data to ACOG and will be responsible for entering all Process Data into the Database through ACOG's central web-accessible transmission tool (the "Portal") facilitated or operated by a third-party ("Vendor").

(c) Data Storage. All data submitted to AIM will reside on a secure data server operated by a firm established in medical data analysis.

(d) Data display. Data entered into the AIM data portal will be coded with a unique identifier. Only users your institution adds to the portal registration and a designee within your state health agency or specified hospital contractor will have access to the data associated with your institution

2. HIPAA. Participant acknowledges and agrees that all Outcome Data and Process Data shall be "de-identified" as defined under the Health Insurance Portability and Accountability Act and all regulations promulgated thereunder (as may be amended or supplemented from time to time hereto, collectively, "HIPAA") and the guidance for de-identification issued by the Secretary (as defined under HIPAA) from time to time.

3. Participant Representations and Obligations.

(a) Participant represents and warrants that at all times during the term of this Agreement it will comply with all applicable federal, state and local rules and guidelines including, but not limited to, the requirements of HIPAA.

(b) Participant represents and warrants to ACOG that it will not submit to the Database "protected health information" as such term is defined under HIPAA or "personally identifiable information" as defined under applicable state law.

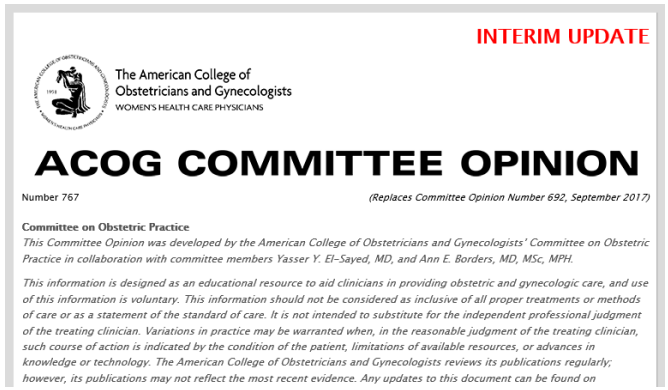
(c) Participant agrees to protect and safeguard its Participant Identifier against unauthorized publication or disclosure, such protection to be achieved using procedures no less stringent than those utilized by Participant in protecting its own confidential information from disclosure to third parties, but in no event less than reasonable care.

4. Ownership of Data. Participant acknowledges and agrees that ACOG is the owner of the entire right, title and interest in and to all Aggregate Data and the Safety Bundles. Any data that can be attributed directly to Participant would not be published without the express permission of the Participant.

AIM DATA USE AGREEMENT

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

Bundle Resources


INTERIM UPDATE

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

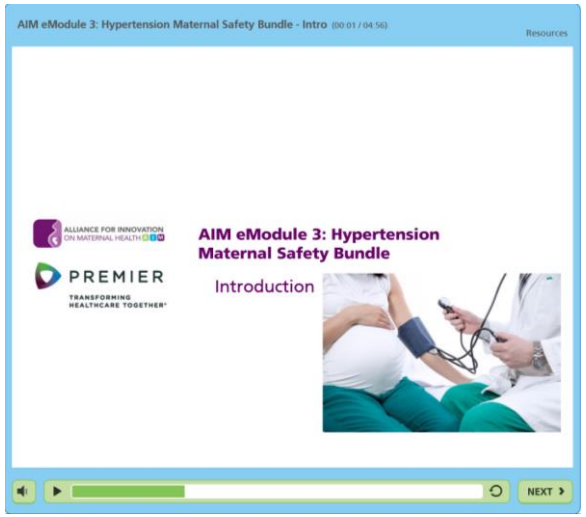
ACOG COMMITTEE OPINION

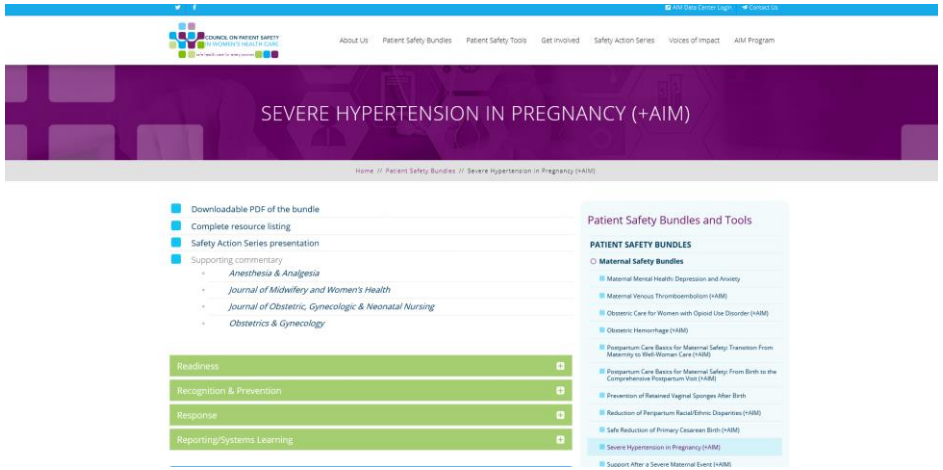
Number 767 (Replaces Committee Opinion Number 692, September 2017)

Committee on Obstetric Practice

This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Committee on Obstetric Practice in collaboration with committee members Yasser Y. El-Sayed, MD, and Ann E. Borders, MD, MSc, MPH.

This information is designed as an educational resource to aid clinicians in providing obstetric and gynecologic care, and use of this information is voluntary. This information should not be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. It is not intended to substitute for the independent professional judgment of the treating clinician. Variations in practice may be warranted when, in the reasonable judgment of the treating clinician, such course of action is indicated by the condition of the patient, limitations of available resources, or advances in knowledge or technology. The American College of Obstetricians and Gynecologists reviews its publications regularly; however, its publications may not reflect the most recent evidence. Any updates to this document can be found on





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EXAMPLE

Eclampsia Checklist

MAGNESIUM SULFATE

ANTIHYPERTENSIVE MEDICATIONS

ANTICONVULSANT MEDICATIONS

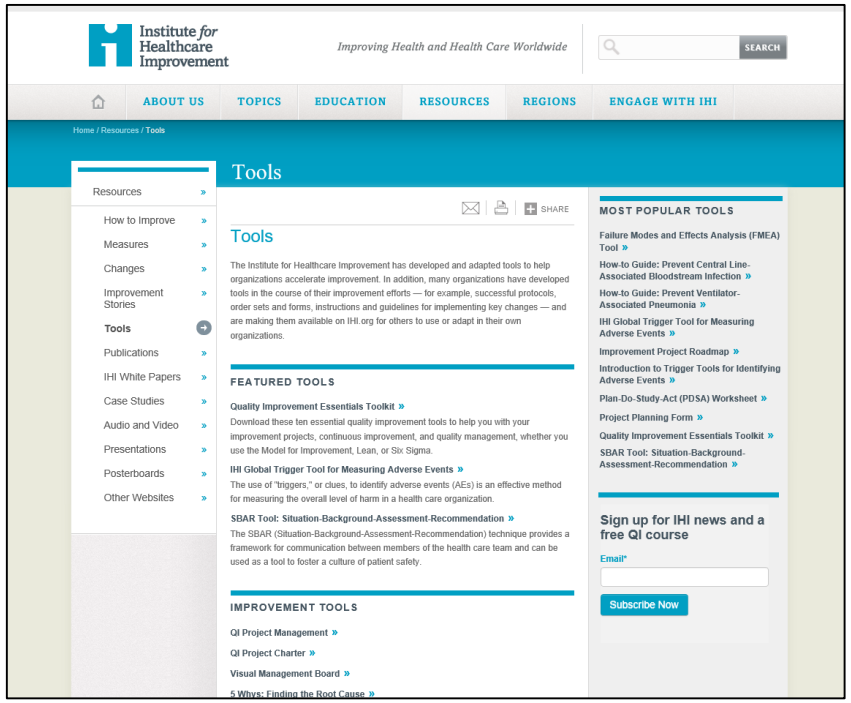
FOR PERSISTENT SEIZURES

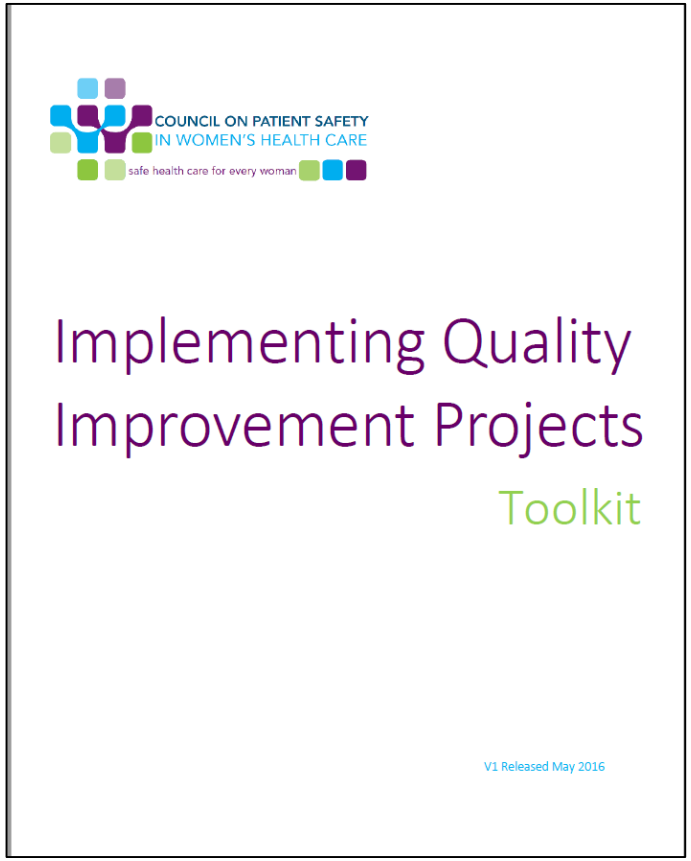
Labetalol Algorithm

EXAMPLE

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH AIM

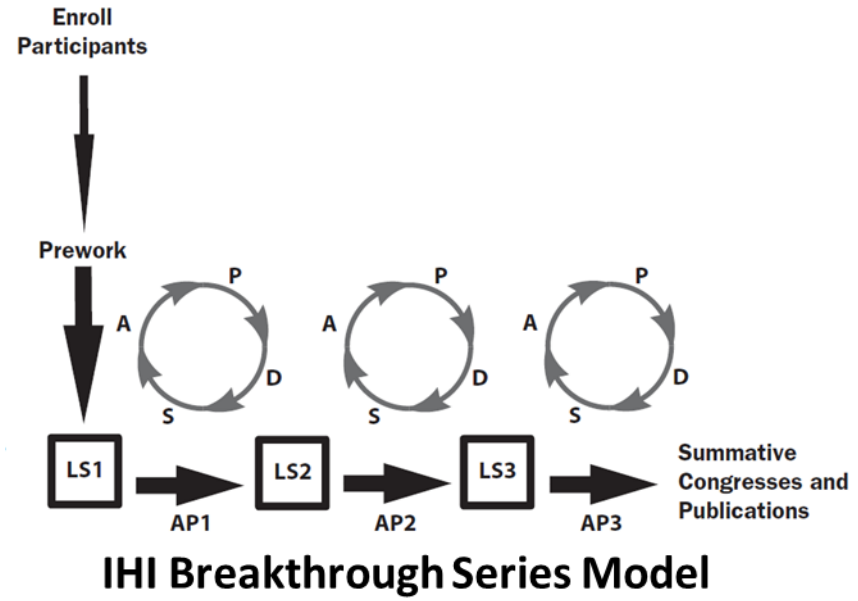
QI Resources





Next Steps

- Memorandum of Understanding
- AIM Data Agreement
- Form QI team—designate data lead
- Review, adapt, implement bundle
- Data reporting
- Learning sessions



IHI Breakthrough Series Model

Questions?

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