COUNCIL ON PATIENT SAFETY IN WOMEN'S HEALTH CARE

safe health care for every woman

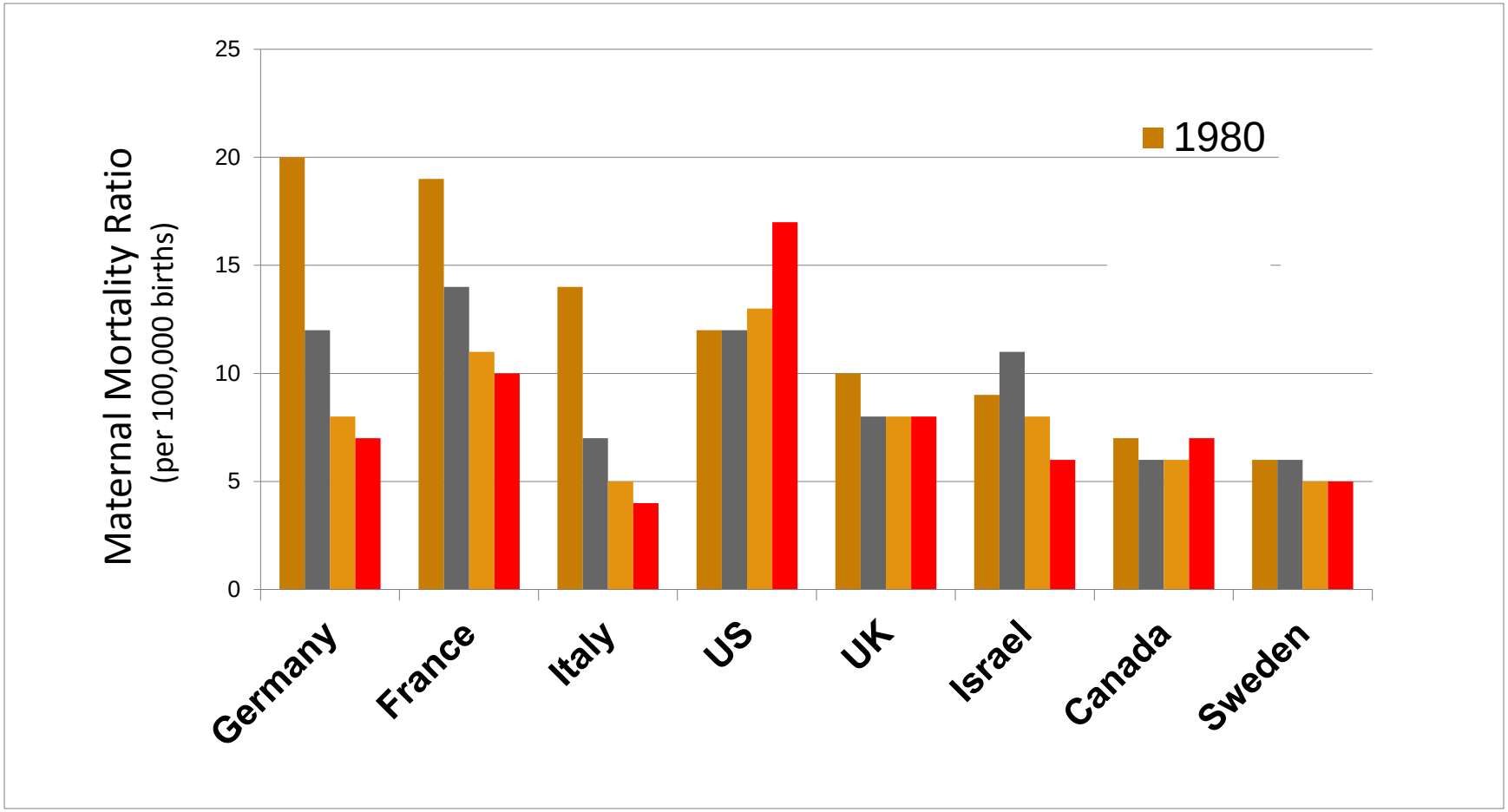
National Partnership for Maternal Safety

National Maternal Mortality and Morbidity Initiatives

Kate Menard MD MPH

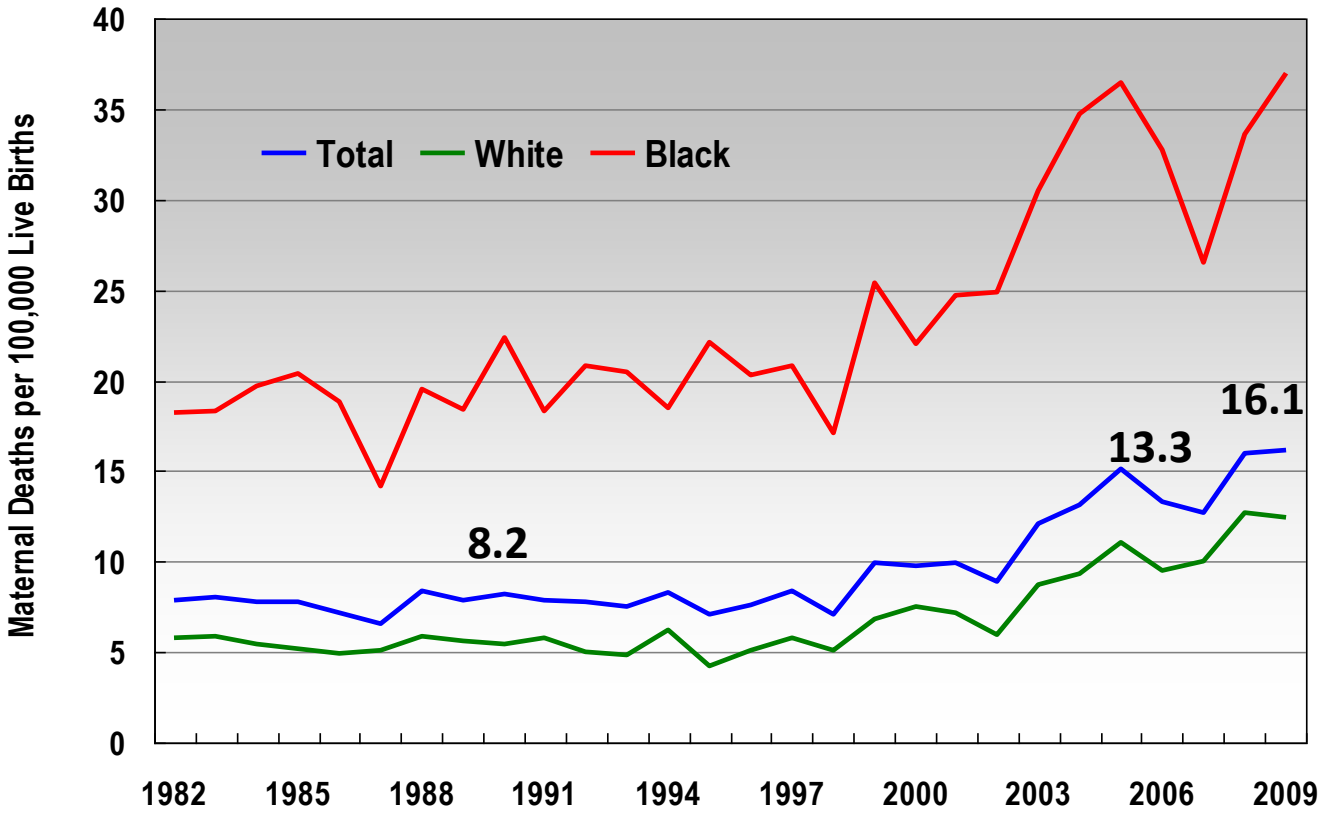
March 16, 2015

Maternal Mortality Ratios in Selected Countries over the Past 30 Years



Hogan et al, Lancet 2010; 375: 1609–23

U.S. Maternal Mortality



A Call to Action

OBSTETRICS & GYNECOLOGY

Current Commentary

Where Is the "M" in Maternal–Fetal Medicine?

Mary E. D'Alton, MD

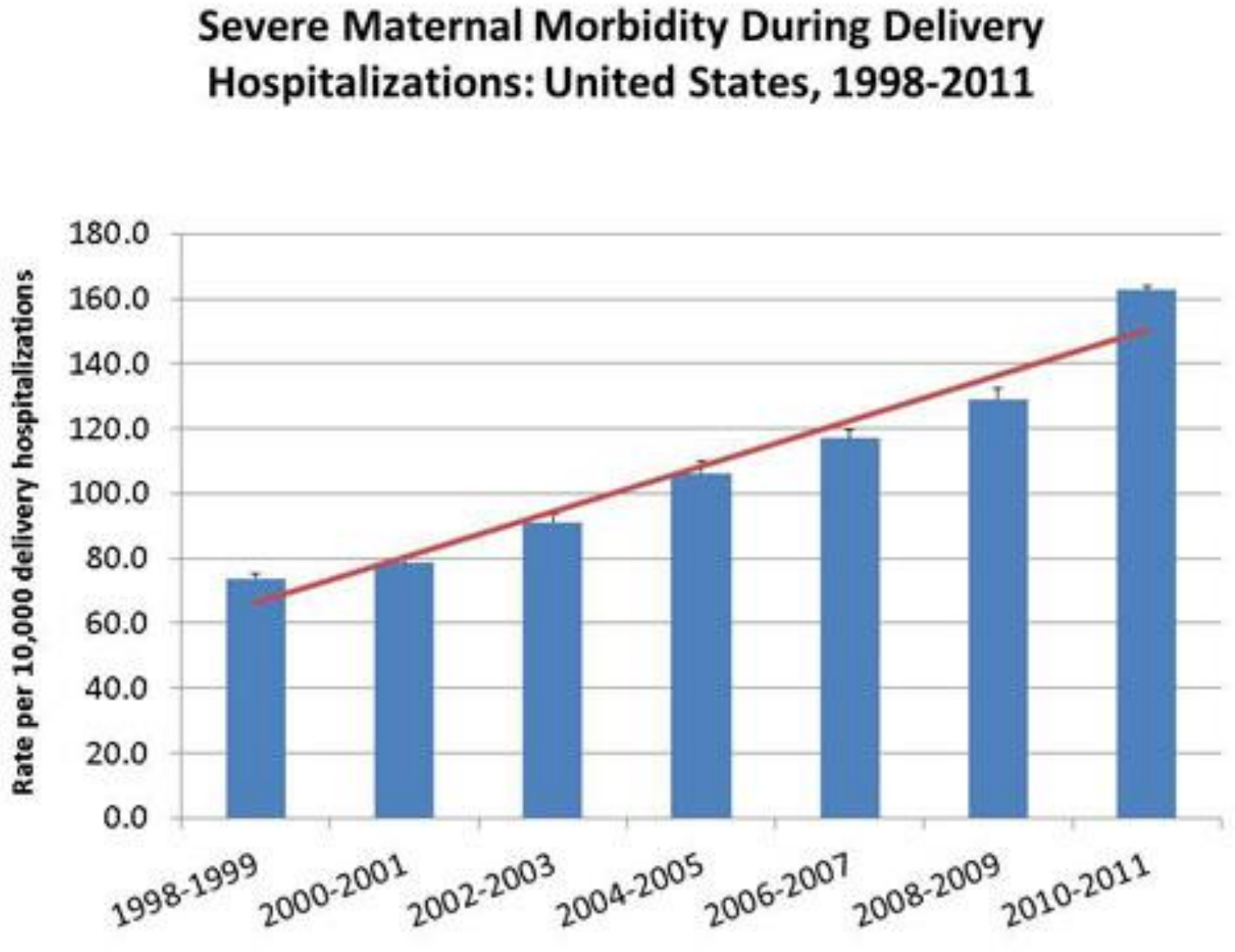
In contrast to the generally encouraging trend regarding global maternal mortality, there has been an apparent increase in the maternal mortality ratio in the United States. Although maternal death remains a relatively rare adverse event in this country, programs to reduce maternal mortality also will result in a reduction in maternal morbidity, which is a far more prevalent problem. Progress in the field of maternal–fetal medicine over the past several decades has been largely attributable to improvements in fetal and neonatal medicine. We need to develop an organized, national approach focused on reducing maternal mortality and morbidity. The goal will be to outline a specific plan for clinical, educational, and research initiatives to put the "M" back in maternal–fetal medicine.

(Obstet Gynecol 2010;116:1401–4)

decreasing maternal mortality. More recently, reduction in maternal mortality became one of the eight Millennium Development Goals of the United Nations.[2]

There has been good news this year in the progress toward the Millennium Development Goals of the United Nations, which targets a reduction in the maternal mortality ratio by 75% from 1990 to 2015. In a comprehensive analysis funded by the Bill and Melinda Gates Foundation, estimates of global maternal deaths have declined from 526,300 in 1980 to 342,900 in 2008.[3] Maternal mortality is difficult to measure, particularly in developing countries; thus, there are wide uncertainty intervals around these numbers. Nevertheless, these new estimates provide hope that interventions to reduce fertility rates, increase income and education, and expand access to skilled birthing attendants,

Trends in Severe Maternal Morbidity in the



CDC.gov

MCHB

- New leadership
- Broad Vision
- Maternal Health Initiative
- The M in MCHB
- Emphasis on Life Course Perspective

Professional Societies

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

Society for Maternal-Fetal Medicine

Putting the "M" back in MFM

CDC
Division of Reproductive Health

Maternal Mortality Review

AWHONN
PROMOTING THE HEALTH OF WOMEN AND NEWBORNS

Postpartum Hemorrhage Project

Implementation: Merck for Mothers

- Partners in the US: **(BOLD=large scale implementation)**
  - **American Congress of Obstetricians and Gynecologists, District II**
  - Association of Maternal and Child Health Programs
  - **Association of Women's Health, Obstetric and Neonatal Nurses**
  - Baltimore Healthy Start
  - **California Maternal Quality Care Collaborative**
  - Camden Coalition of Healthcare Providers
  - Maternity Care Coalition
  - Northern Manhattan Perinatal Partnership
- Has made an initial commitment of $6 million to programs working to improve maternal health
- Focused on regions where rates of maternal death and severe complications are disproportionately high

Public Health Initiatives

Division of Reproductive Health

CDC: Maternal Mortality Initiative for strengthening existing or guiding new MM Review committees

Maternal Child Health Bureau

COIIN (Collaborative Improvement and Innovation Network) to Reduce Infant Mortality
Emphasis on Life Course Perspective

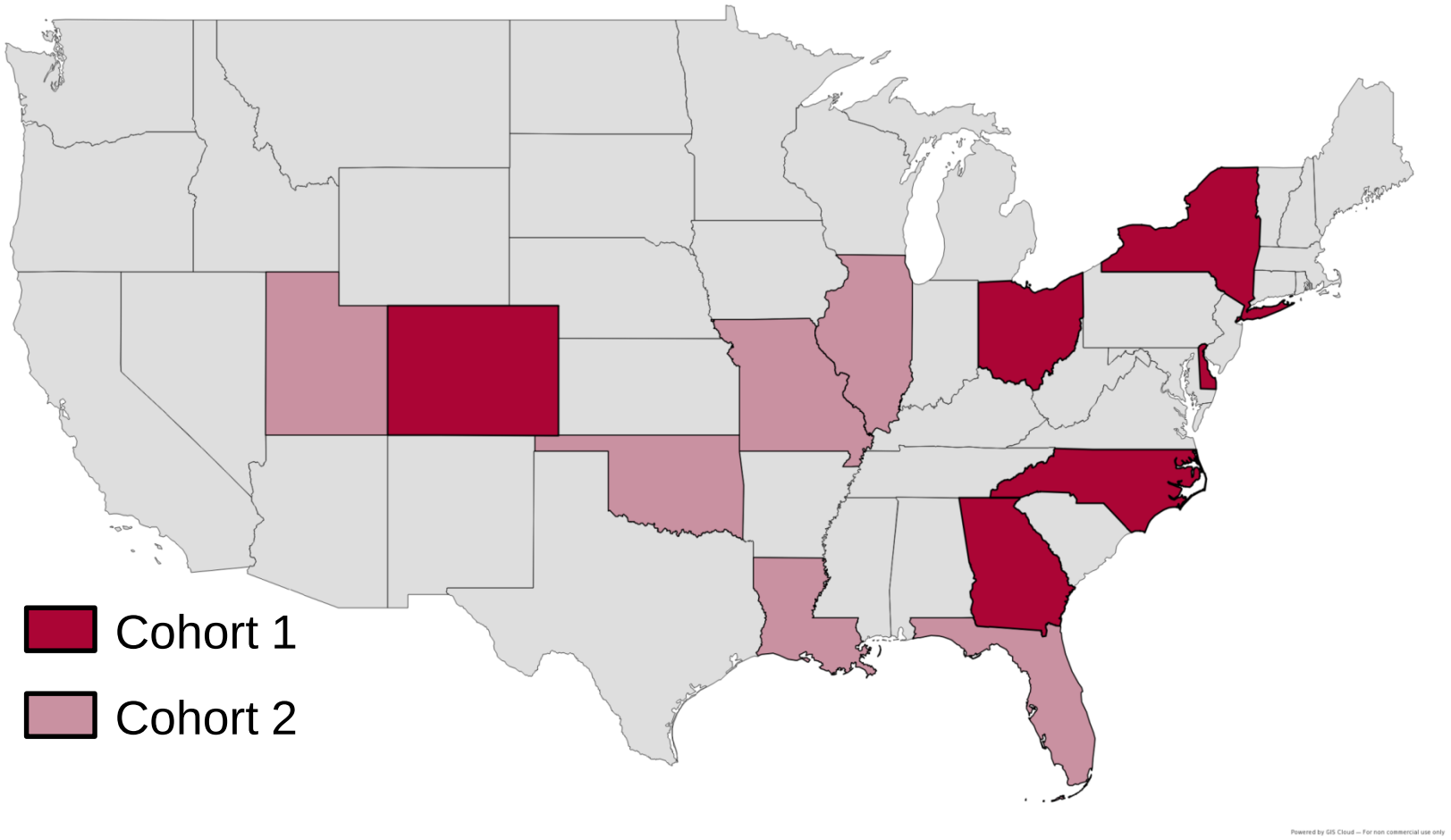
AMCHP Every Mother Initiative

Merck for Mothers MMR Action Learning Collaborative

Enabling and enhancing state MM and SMM reviews

AMCHP's Every Mother Initiative

MERCK
Merck for mothers



AMCHP

State Quality Collaboratives

Perinatal Quality Collaboratives

The "M" on Perinatal

Society for Maternal•Fetal Medicine

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

Society for Maternal-Fetal Medicine (SMFM)

CDC

Division of Reproductive Health

HRSA

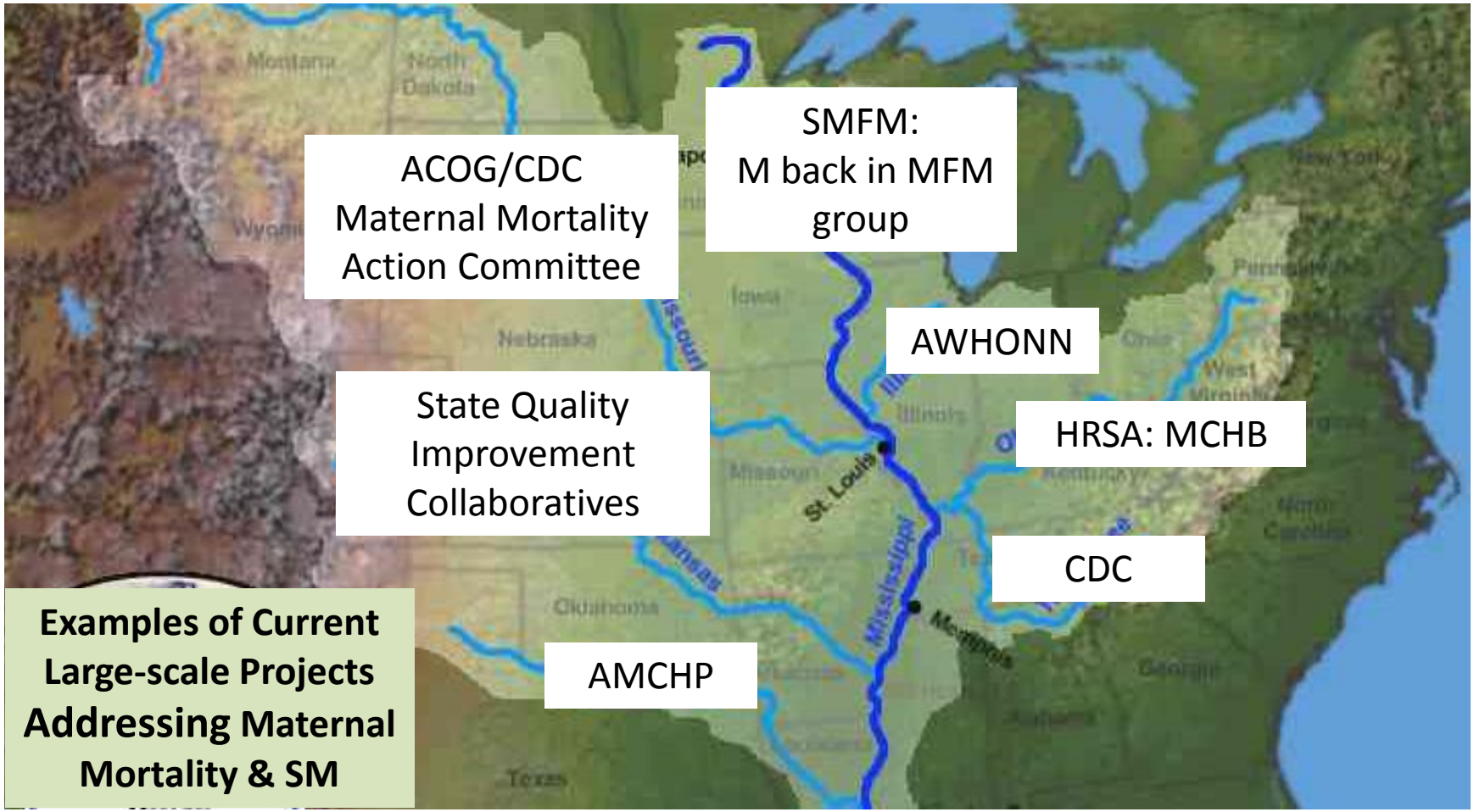
Maternal Child Health Branch (MCH-B)

National Maternal Health Initiative: Strategies to Improve Maternal Health And Safety

May 5th 2013

New Orleans, LA

Great Confluence of Maternal Safety Activity Coming Together in New Orleans



What is the National Partnership for Maternal Safety?

A **converging of initiatives** and leadership toward one goal:
Decrease maternal morbidity and mortality in the United States

Current Commentary

The National Partnership for Maternal Safety

Mary E. D'Alton, MD, Elliott K. Main, MD, M. Kathryn Menard, MD, and Barbara S. Levy, MD

Recognition of the need to reduce maternal mortality and morbidity in the United States has led to the creation of the National Partnership for Maternal Safety. This collaborative, broad-based initiative will begin with three priority bundles for the most common preventable causes of maternal death and severe morbidity: obstetric hemorrhage, severe hypertension in pregnancy, and peripartum venous thromboembolism. In addition, three unit-improvement bundles for obstetric services were identified: a structured approach for the recognition of early warning signs and symptoms, structured internal case reviews to identify systems improvement opportunities, and support tools for patients, families, and staff that experience an adverse outcome. This article details the formation of the National Partnership for Maternal Safety and introduces the initial priorities.

(Obstet Gynecol 2014;123:973–7)

DOI: 10.1097/AOG.0000000000000219

The problem of maternal mortality and morbidity in the United States has been highlighted in many reports over the past 5 years. Despite a decline in global maternal mortality, there has been an apparent increase in the maternal mortality ratio and the rate of severe maternal morbidity in the United States.[1] This increase has initiated multiple recent calls to action for an organized national approach to decrease maternal morbidity and mortality.[1] In 2010, the Joint Commission issued a Sentinel Alert entitled "Preventing Maternal Death"[2] and proposed various initiatives to decrease maternal mortality including case reporting and review, health care provider education, team training and drills, and thromboembolism prophylaxis.

During the past 2 years, several organizations–including the American College of Obstetricians and Gynecologists (the College), the Centers for Disease Control and Prevention, the Society for Maternal–Fetal Medicine, the Health Resources and Services Administration, the Association of Women's Health, Obstetric, and Neonatal Nurses, and the American College of Nurse-Midwives–have collaborated to identify priorities for maternal safety. Universal recognition of the need for action to reduce U.S. maternal mortality and morbidity led to the creation of the National Partnership for Maternal Safety. This report outlines a national initiative for every birthing facility in the United States to have a safety program in place for the most common preventable causes of maternal death and severe morbidity.

MATERNAL MORTALITY SURVEILLANCE IN THE UNITED STATES

Over the past 20 years, the U.S. pregnancy-associated mortality ratio has doubled to 14.5 per 100,000.[3] Although it is unclear whether the U.S. numbers reflect an actual increase or better ascertainment of maternal deaths, we can state with confidence that maternal mortality has not decreased in this country for more than three decades.[1] Furthermore, the U.S. rate is nearly twice that of the United Kingdom where an extensive system for case ascertainment exists. Moreover, severe maternal morbidity is a much more prevalent problem than maternal death affecting more than 50,000 women every year; this number has increased substantially over the past decade.[4] Over the past two decades, deaths from hemorrhage have declined significantly primarily as a result of a decline in deaths from ectopic pregnancy.[3] There has been a modest decline in deaths from hypertension but no decline in deaths from pulmonary embolus. Most striking is the increase in the numbers of deaths resulting from cardiomyopathies

From the Departments of Obstetrics and Gynecology, Columbia University Medical Center, New York, New York, California Pacific Medical Center, San Francisco, California, and University of North Carolina School of Medicine, Chapel Hill, North Carolina; and the American College of Obstetricians and Gynecologists, Washington, DC.

Dr. D'Alton and Dr. Menard represent the Society for Maternal-Fetal Medicine and Dr. Levy and Dr. Main represent the American College of Obstetricians and Gynecologists in the National Partnership for Maternal Safety.

Corresponding author: Mary E. D'Alton, MD, Chair, Department of Obstetrics and Gynecology, Columbia University Medical Center, 622 W 168th Street, PH16-28, New York, NY 10032-3725; e-mail: md511@columbia.edu.

Financial Disclosure
The authors did not report any potential conflicts of interest.

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ACOG-CDC Work Group

- ACOG-CDC Maternal Mortality/Severe Morbidity Action Meeting occurred in Atlanta, November 2012
- Participants identified key priorities

Core Patient Safety Bundles
Obstetric Hemorrhage
Severe Hypertension in Pregnancy
Venous Thromboembolism Prevention in Pregnancy

Supplemental Patient Safety Bundles
Maternal Early Warning Criteria
Facility Review
Family and Staff Support

- 6 multidisciplinary working groups were formed
- Prelim products presented in New Orleans 2013

D'Alton ME, et al. Obstet Gynecol 2014 May;123(5):973-977.

Maternal Mortality and Severe Morbidity

Approximate distributions, compiled from multiple studies

Cause	Mortality (1-2 per 10,000)	ICU Admit (1-2 per 1,000)	Severe Morbid (1-2 per 100)
VTE and AFE	15%	5%	2%
Infection	10%	5%	5%
Hemorrhage	15%	35%	55%
Preeclampsia	15%	25%	25%
Cardiac Disease	25%	15%	5%

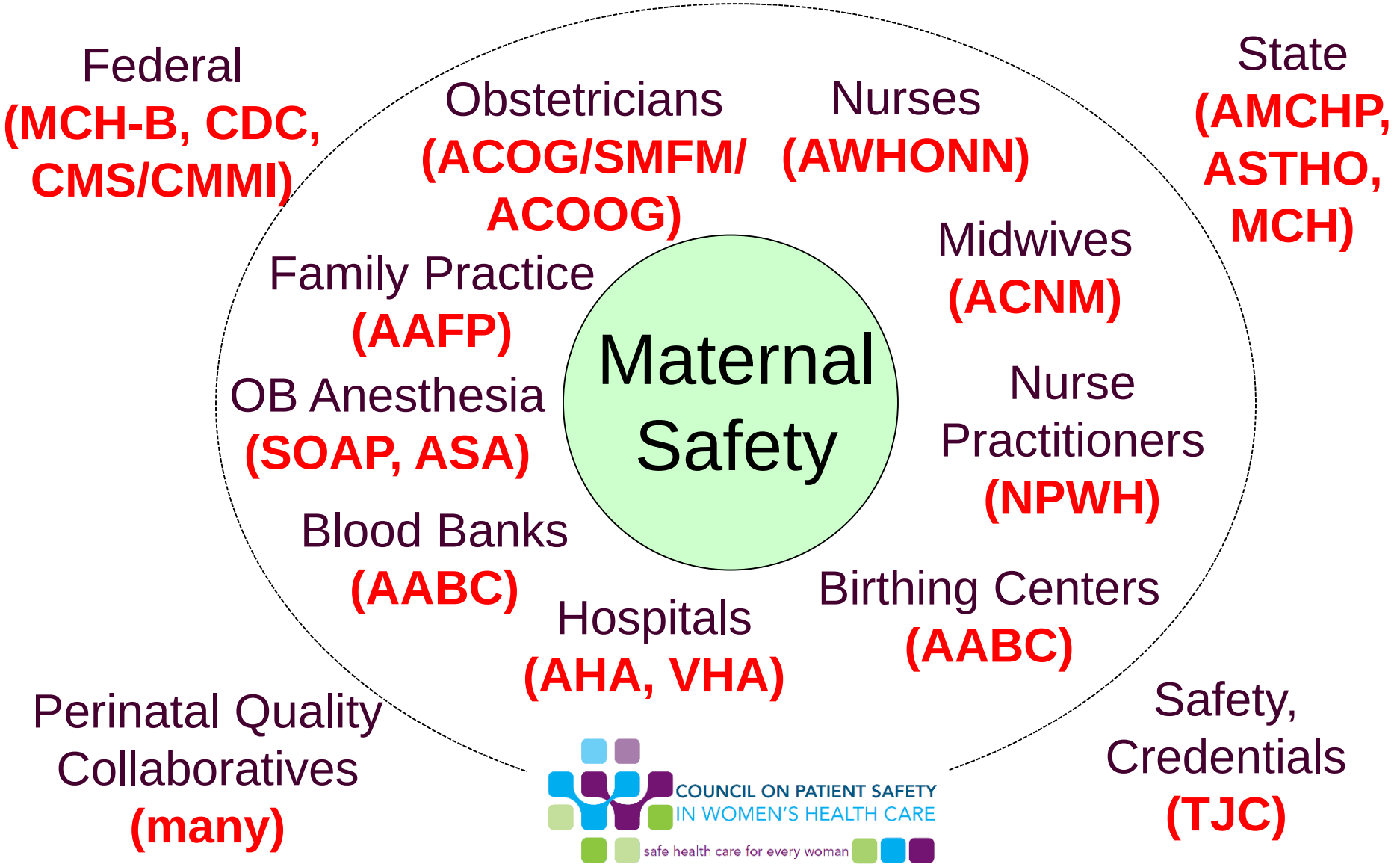
National Partnership for Maternal Safety: 3 Maternal Safety Bundles in 3 Years

"What every birthing facility in the US should have…"

- Obstetric Hemorrhage
- Preeclampsia/ Hypertension
- Prevention of VTE in Pregnancy

*Note: The bundles represent outlines of highly recommended protocols and materials important to safe care **BUT** the specific contents and protocols should be individualized to meet local capabilities. Example materials are available from perinatal collabortives and other organizations.*

Creating the Collaborative for Change



Obstetric Hemorrhage Patient Safety Bundle

Approved by Council on Patient Safety and posted on website: July 2014

Awaiting final editorial approval for co-publishing:
Obstet Gynecol (ACOG)
JOGN (AWHONN)
Anes Analg (SOAP)
J Midwifery (ACNM)
Am Fam Phys (AAFP)

Current Status of Bundles

- Status as of Feb 2015

Core Patient Safety Bundles	Council	Published
Obstetric Hemorrhage	July 2014	Final Submitted
Severe Hypertension in Pregnancy	Feb 2015	TBS Apr 2015
Venous Thromboembolism Prevention in Pregnancy	Feb 2015	TBS Apr 2015

Supplemental Patient Safety Bundles	Status	Published
Maternal Early Warning Criteria	Complete	Oct 2014
Facility Review	Complete	May 2014
Family and Staff Support	In progress	TBS Apr 2015

National Partnership Publications

Title	Journal/Date
Putting the "M" back in maternal-fetal medicine	Am J Obstet Gynecol. 2013 Jun
The National Partnership for Maternal Safety	Obstet Gynecol. 2014 May
Facility-based identification of women with severe maternal morbidity: it is time to start	Obstet Gynecol. 2014 May
Standardized severe maternal morbidity review: rationale and process	Obstet Gynecol/J Obstet Gynecol Neonatal Nurs. 2014 Jul-Aug
The maternal early warning criteria: a proposal from the national partnership for maternal safety.	Obstet Gynecol. 2014 Oct
Obstetric Care Consensus: Levels of Maternal Care	Obstet Gynecol /Am J Obstet Gynecol. 2015 Feb

Revision of Sentinel Event Definition for Obstetrics: Jan 2015

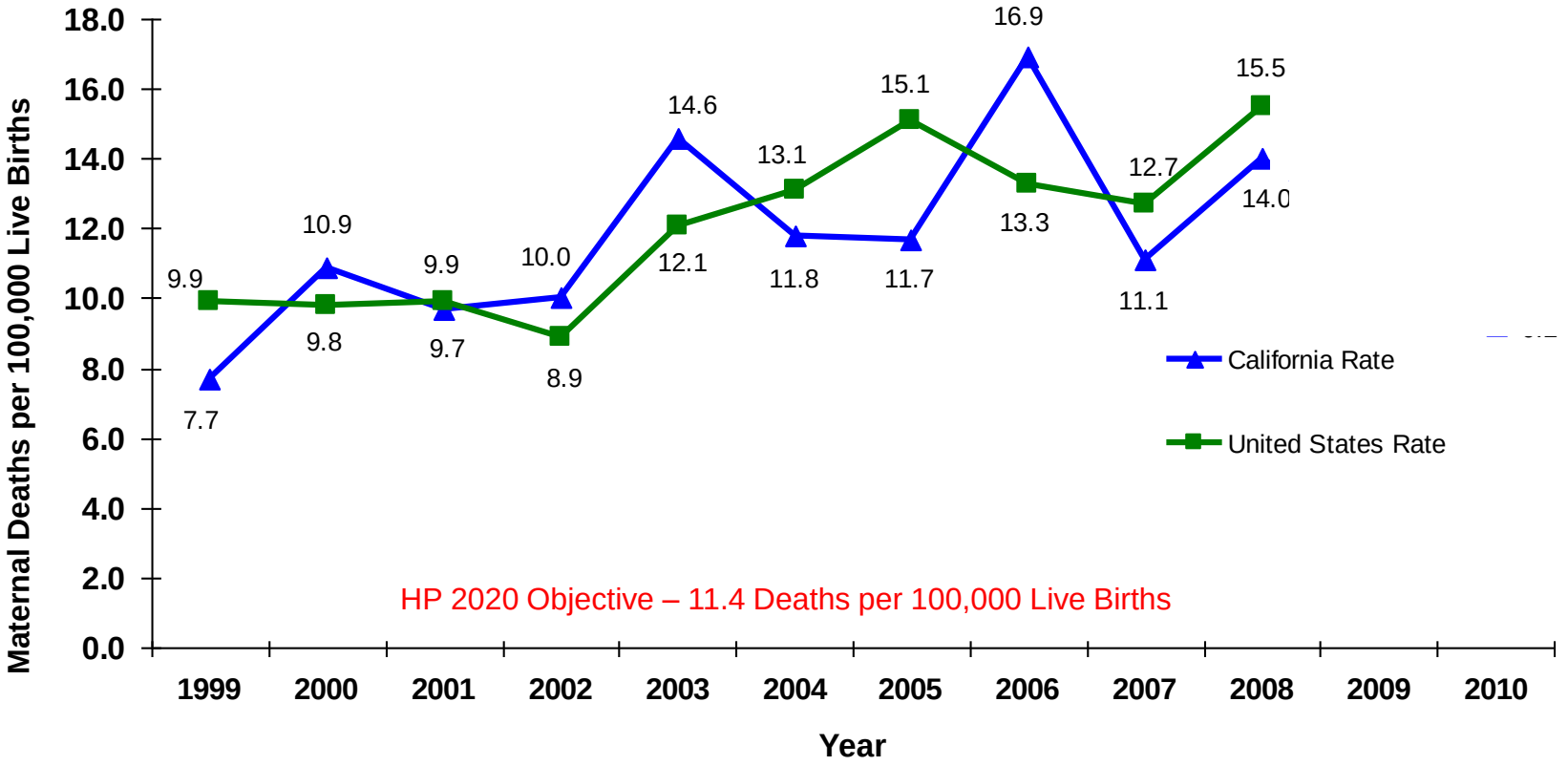
Added cases of severe temporary harm and for OB defined as Severe Maternal Morbidity….

1. Transfusion of ≥4 units of packed red cells
2. Admission of the mother to an ICU

- BUT: excluded cases as the result of the natural course of the underlying condition (eg transfusions for previas)
- ALL cases should go to a multidisclipinary systems review committee (not peer review) for initial assessment

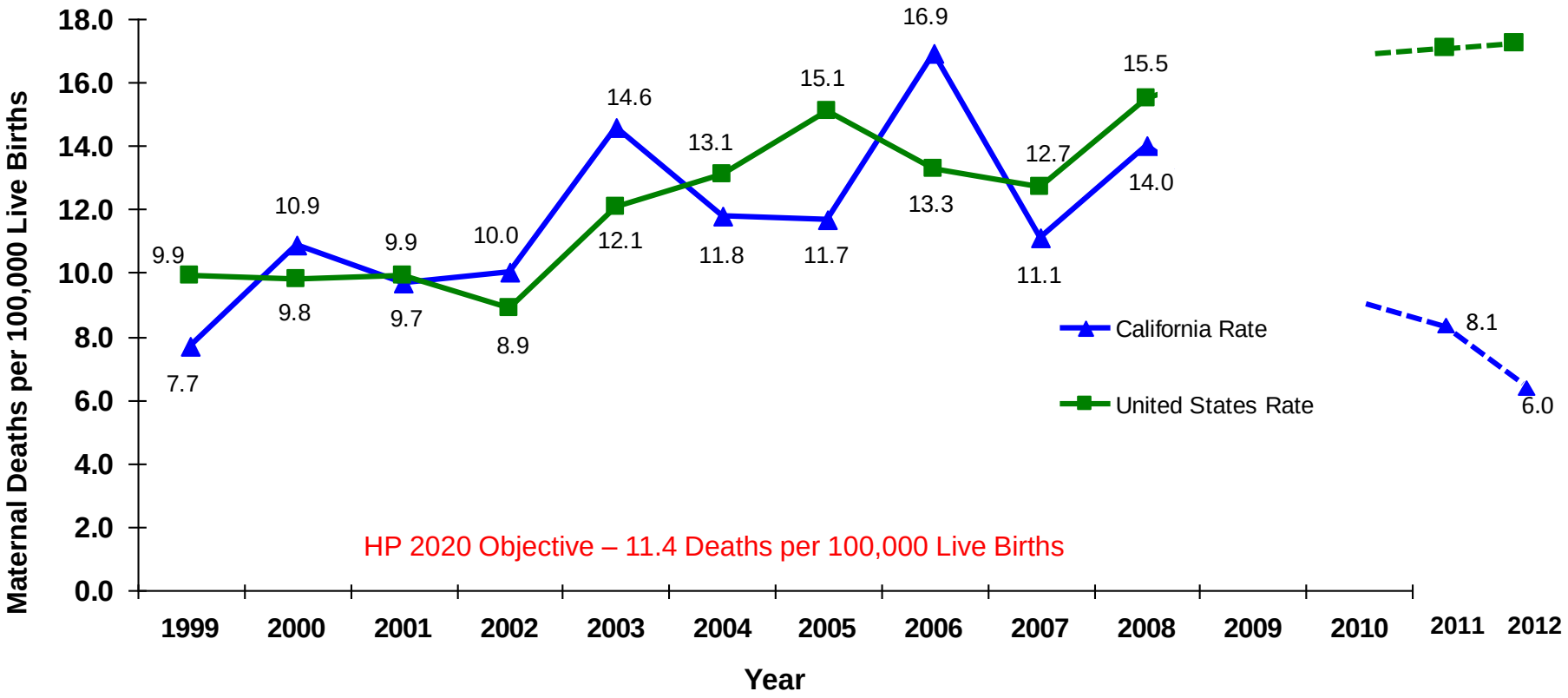
The Joint Commission. Comprehensive Accreditation Manual for Hospitals, Update 2, January 2015: Sentinel Events: SE-1. Also see the ACOG/TJC clarification. Available at: http://www.jointcommission.org/assets/1/6/CAMH_24_SE_all_CURRENT.pdf

Maternal Mortality Rate, California and United States; 1999-2010



SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2010. Maternal mortality for California (deaths ≤ 42 days postpartum) was calculated using ICD-10 cause of death classification (codes A34, O00-O95,O98-O99) for 1999-2010. United States data and HP2020 Objective were calculated using the same methods. U.S. maternal mortality rates are published by the National Center for Health Statistics (NCHS) through 2007 only. Rates for 2008-2010 were calculated using NCHS Final Birth Data (denominator) and CDC Wonder Online Database for maternal deaths (numerator). Accessed at http://wonder.cdc.gov/ucd-icd10.html on Apr 17, 2013 8:00:39 PM. Produced by California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, April, 2013.

Maternal Mortality Rate, California and United States; 1999-2010



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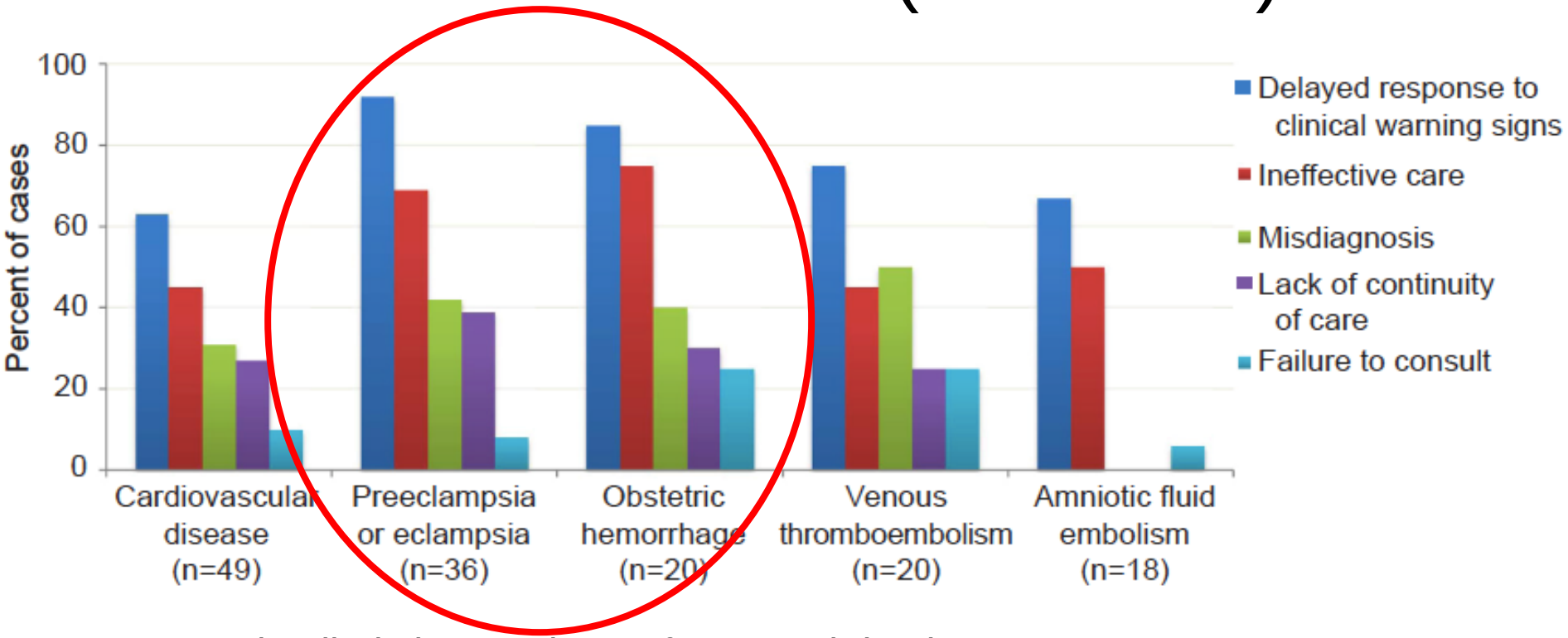
Provider Contributing Factors in Maternal Deaths (California)



From detailed chart reviews of maternal deaths
(CA-Pregnancy Associated Mortality Review Committee; CDPH-MCAH)

Main EK, McClain CL, Morton CH, Holtby S, Lawton ES. Pregnancy-related mortality in California: Causes, characteristics and improvement opportunities. Obstet Gynecol 2015

Comprehensive Maternal Hemorrhage Protocols Reduce the Use of Blood Products

	BEFORE Intro. (2 mos)	5 mos AFTER Intro. (2 mos)	10 mos AFTER Intro. (2 mos)	Difference (BEFORE vs. 10mos AFTER)
Total Deliveries	10,433	10,457	11,169	+7%
Stage II Hemorrhage (per 1,000 births)	7.0	9.5	9.6	+37%
Stage III Hemorrhage (per 1,000 births)	2.7	3.1	4.8	+77%
PRBC (N)	232	189	197	-15% (p=0.02)
Total Blood Prod (includes coags) (N)	375	354	297	-25% (p<0.01)
TBP per 1,000 births	35.9	33.9	26.6	-27% (p<0.01)

Shields et al AJOG 2014 (29 hospitals, Dignity Health)

Consensus Guidelines

Urgent development of national management guidelines:

- Hypertensive disorders in pregnancy
- Postpartum hemorrhage
- Prevention of venous thromboembolism
- Diagnosis and management of placenta accreta
- Management of the obese obstetrical patient
- Management of cardiac disease in pregnancy

Putting the "M" back in maternal-fetal medicine. Am J Obstet Gynecol. 2013 Jun;208(6):442-8

Number 1, March 2014

Safe Prevention of the Primary Cesarean Delivery

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

Society for Maternal-Fetal Medicine

OBSTETRIC CARE CONSENSUS

ACOG / SMFM / AWHONN/ ACNM

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

Society for Maternal-Fetal Medicine

OBSTETRIC CARE CONSENSUS

Number 2 • February 2015

Levels of Maternal Care

This document was developed jointly by the American College of Obstetricians and Gynecologists and the Society for Maternal-Fetal Medicine with the assistance of M. Kathryn Menard, MD, MPH; Sarah Kilpatrick, MD, PhD; George Saade, MD; Lisa M. Hollier, MD, MPH; Gerald F. Joseph Jr, MD; Wanda Barfield, MD; William Callaghan, MD; John Jennings,

Abstract: In the 1970s, studies demonstrated that timely access to risk-appropriate neonatal and obstetric care could reduce perinatal mortality. Since the publication of the *Toward Improving the Outcome of Pregnancy* report, more than three decades ago, the conceptual framework of regionalization of care of the woman and the newborn has been gradually separated with recent focus almost entirely on the newborn. In this current document, maternal care refers to all aspects of antepartum, intrapartum, and postpartum care of the pregnant woman. The proposed classification system for levels of maternal care pertains to birth centers, basic care (level I), specialty care (level II), subspecialty care (level III), and regional perinatal health care centers (level IV). The goal of regionalized maternal care is for pregnant women at high risk to receive care in facilities that are prepared to provide the required level of specialized care, thereby reducing maternal morbidity and mortality in the United States.

Levels of Maternal Care (LOMC)

Uniform designations of LOMC that are complimentary but distinct from levels of neonatal care

First ever ACOG/SMFM guidance that establishes levels of care specific for the pregnant woman

Additional endorsement and support from AABC, ACNM, AWHONN, Commission for the Accreditation of Birth Centers, AAP, ASA, SOAP

Emphasizes role of Level III/IV (Regional) Centers to support education and quality improvement among their referring facilities