

Expanding Maternal Morbidity & Mortality Research Within & Beyond our Hospital Walls

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## **A Call to Action**

**OBSTETRICS AND** 

**GYNECOLOGY** 

COLUMBIA

#### Current Commentary Where Is the "M" in Maternal–Fetal Medicine? Mary E. D'Alton, MD decreasing mater In contrast to the generally encouraging trend regarding in maternal mort global maternal mortality, there has been an apparent nium Developme increase in the maternal mortality ratio in the United There has be States. Although maternal death remains a relatively rare toward the Mille adverse event in this country, programs to reduce maternal United Nations, mortality also will result in a reduction in maternal morbidity, which is a far more prevalent problem. Progress in the nal mortality rat field of maternal-fetal medicine over the past several decomprehensive an cades has been largely attributable to improvements in fetal **Gates** Foundation and neonatal medicine. We need to develop an organized, have declined fro national approach focused on reducing maternal mortality Maternal mortalit and morbidity. The goal will be to outline a specific plan for developing count clinical, educational, and research initiatives to put the "M" intervals around back in maternal-fetal medicine. new estimates (Obstet Gynecol 2010:116:1401-4) reduce fertility r and expand ac among other eff wenty-five years ago, in a seminal article published in the Lancet, Allen Rosenfield and Deboresults. Because ah Maine alerted the public to the tremendous rently on track to Fight Frag Weak Sold of a wave proof.

"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."

D'Alton ME. Obstet Gynecol. 2010 Dec;116(6):1401-4.

- NewYork-Presbyterian

## SMFM 2012: Making a Plan 2018: Reviewing Progress

#### **OBSTETRICS**

### Putting the "M" back in maternal-fetal medicine

Mary E. D'Alton, MD; Clarissa A. Bonanno, MD; Richard L. Berkowitz, MD; Haywood L. Brown, MD; Joshua A. Copel, MD; F. Gary Cunningham, MD; Thomas J. Garite, MD; Larry C. Gilstrap III, MD; William A. Grobman, MD, MBA; Gary D. V. Hankins, MD; John C. Hauth, MD; Brian K. Iriye, MD; George A. Macones, MD, MSCE; James N. Martin Jr, MD; Stephanie R. Martin, DO; M. Kathryn Menard, MD, MPH; Daniel F. O'Keefe, MD; Luis D. Pacheco, MD; Laura E. Riley, MD; George R. Saade, MD; Catherine Y. Spong, MD



Society for

Medicine

Maternal Fetal

#### Clinical Opinion

Putting the "M" back in maternal-fetal medicine: A 5-year report card on a collaborative effort to address maternal morbidity and mortality in the United States

Mary E. D'Alton, MD; Alexander M. Friedman, MD, MPH; Peter S. Bernstein, MD, MPH; Haywood L. Brown, MD; William M. Callaghan, MD, MPH; Steven L. Clark, MD; William A. Grobman, MD, MBA; Sarah J. Kilpatrick, MD, PhD; Daniel F. O'Keeffe, MD; Douglas M. Montgomery, MD; Sindhu K. Srinivas, MD, MSCE; George D. Wendel, MD; Katharine D. Wenstrom, MD; Michael R. Foley, MD



CENTERS FOR DISEASE CONTROL AND PREVENTION ACOG THE AMERICAN CONGRESS OF OBSTETRICIANS AND GYNECOLOGISTS



## **Recommendations to Close Critical Research Gaps**

#### TABLE 3

#### Critical research gaps

- Developing standardized methods for national surveillance of maternal mortality and morbidity
- Defining significant maternal morbidity and "near misses"
- Prediction of patient's risk of maternal mortality and severe morbidity
- Determining optimal timing of delivery to balance maternal, fetal, and neonatal risks
- Economic analyses to show benefit of maternal care, including interpregnancy and postdelivery care, as well as improvements in neonatal outcome
- Effectiveness of various approaches to improve training in maternal medicine
- Research on impact of adverse pregnancy outcomes on long-term maternal health

D'Alton. Putting the "M" back in MFM. Am J Obstet Gynecol 2013.

- 1. Developing standardized methods for national surveillance of maternal mortality and morbidity
- 2. Defining significant maternal morbidity and "near misses"

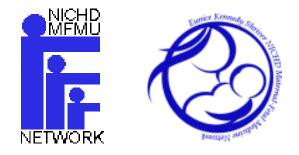
7. Research on impact of adverse pregnancy outcomes on long-term maternal health

In Progress

In Progress

## **Research: NICHD MFM Units Network**





12 U.S. university-based clinical centers focus on clinical questions in MFM and obstetrics, in particular the continuing problem of preterm birth.

The Maternal Health category was added in 2017, and a Maternal Morbidity and Mortality category was added in 2019.

# Research: Impact of Adverse Pregnancy Outcomes on Long-Term Maternal Health

## NICHD Strategic Plan 2020

Healthy pregnancies. Healthy children. Healthy and optimal lives.

#### Theme 3: Setting the Foundation for Healthy Pregnancies and Lifelong Wellness

Characterize pre-pregnancy and pregnancy factors that can raise the risk of adverse maternal conditions. Use emerging technologies and big data analytic methods, such as artificial intelligence, to integrate genomic, nutritional, social and behavioral, and exposure data to inform prevention efforts and address health disparities. Develop targeted strategies to improve the prevention of and response to labor and delivery complications that lead to maternal morbidity and mortality. Extend studies of key adverse events to the postpartum period ("the fourth trimester") to include hemorrhage, mental health conditions, and cardiovascular events, emphasizing populations affected by health disparities.

## Expanding Maternal Mortality & Morbidity Research WITHIN Our Hospital Walls

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D'Alton. Putting the "M" back in MFM. Am J Obstet Gynecol 2013.

Improved Data Collection & Sharing

**Optimal Timing of Delivery** 

Cost Effectiveness

#### The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

AUGUST 9, 2018

#### Labor Induction versus Expectant Management in Low-Risk Nulliparous Women

 William A. Grobman, M.D., Madeline M. Rice, Ph.D., Uma M. Reddy, M.D., M.P.H., Alan T.N. Tita, M.D., Ph.D., Robert M. Silver, M.D., Gail Mallett, R.N., M.S., C.C.R.C., Kim Hill, R.N., B.S.N., Elizabeth A. Thom, Ph.D., Yasser Y. El-Sayed, M.D., Annette Perez-Delboy, M.D., Dwight J. Rouse, M.D., George R. Saade, M.D.,
Kim A. Boggess, M.D., Suneet P. Chauhan, M.D., Jay D. Iams, M.D., Edward K. Chien, M.D., Brian M. Casey, M.D., Ronald S. Gibbs, M.D., Sindhu K. Srinivas, M.D., M.S.C.E., Geeta K. Swamy, M.D., Hyagriv N. Simhan, M.D., and George A. Macones, M.D., M.S.C.E., for the Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal–Fetal Medicine Units Network\*

> The Cost of Elective Labor Induction in The MFMU ARRIVE Trial [19OP]

VOL. 379 NO. 6

Brett D. Einerson, MD, MPH

University of Utah Health, on behalf of the NICHD MFMU, Salt Lake City, UT

## Expanding Maternal Mortality & Morbidity Research WITHIN Our Hospital Walls

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#### Critical research gaps

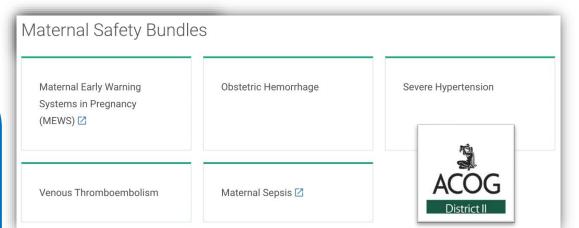
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D'Alton. Putting the "M" back in MFM. Am J Obstet Gynecol 2013. Safety Bundle Implementation

Simulation

Intrapartum Innovations







## Expanding Maternal Mortality & Morbidity Research BEYOND Our Hospital Walls

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D'Alton. Putting the "M" back in MFM. Am J Obstet Gynecol 2013. Determining optimal timing of referral

Prediction of MM and SMM risk 1-2 years before pregnancy, looking at medical and social determinants of health factors

A population-based, observational cohort study

The American College of Observicions and Operatory of Marternal-Ferbal Medicine		
1.10	OBSTETRIC CARE	
	CONSENSUS	
Nombor 0	Levels of Maternal Care	
Number 9 (Replaces Observice Care Concurse Number 2, Performery 2017) The American Association of Bref Concurse An Anatoxia Colling of Anatoxia Nature And Commission for the Associations of Bref Notanti Nature And Commission for the Associations of Bref Notanti Nature And Commission for the Associations of Bref Notanti Nature And Commission for the Association of Bref Otherite, Academic and Bretotaking realism this Association and Association and the American Statistica and Other Associations and Association and Association and declared Justice by the Association Comments and Science for Mannet-Ireal Modeline in Science for Mannet-Irea Internet in Science for Mannet Academic and a Generation S	Brithroot: It know in exception of the strength methods, its choice is a strength method. The strength methods will be strength of the strength methods will be strength will be st	
a). Jamie, mo, into the Convention's representative William M. Gallaghan, MD, MPH. The findings, conclusions, and views in this Obstetric Care Consensus do not necessarily represent the efficiency of the Construction of the Constru- tion of the Construction of the Construction of the efficiency of the Construction of the Construction of the Construction of the Construction of the	morbidity and mortality, inu growth and maturation of sy specific to maternal health r collaborative relationships b	
not necessarily represent the official position of the Centers for Disease Control and Prevention or the U.S. government.	care in proximate regions, w the personnel and resources that risk assessment is judicis are readily available when enhance the ability of women	
VOL. 134, NO. 2, AUGUST 20	providing support for circ needed.	Societal Infrastructure
		Local Community Infrastructure
		Prenatal Care
		Hospital/ Labor & Delivery

## **Key Concepts for Moving Forward**

- The continued relevance of the 2013 recommendations is both positive and negative
- Much more to do with improved data resources and new innovations
- Need to focus on effectiveness and implementation science
- Need to continue to expand the circles of relevant research and multidisciplinary collaboration



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