EnRICH Webinar: Potential Avenues and Opportunities for U.S. Maternal Morbidity and Mortality Research

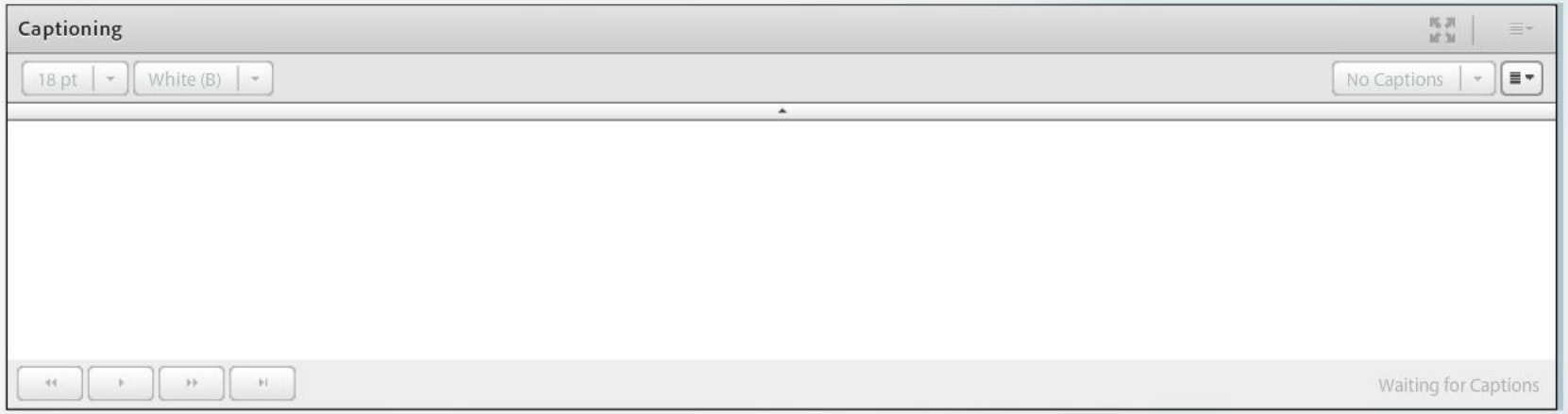
February 7, 2019

Potential Avenues and Opportunities for U.S. Maternal Morbidity and Mortality Research

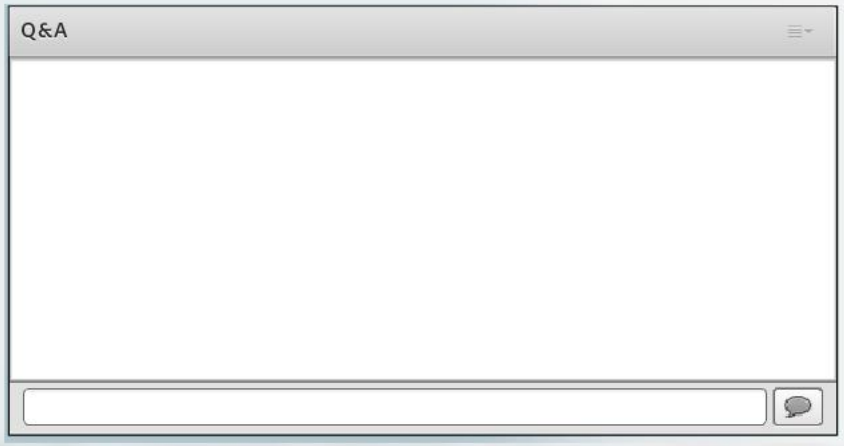
Eugene Declercq, PhD- Professor and Assistant Dean at the Boston University School of Public Health

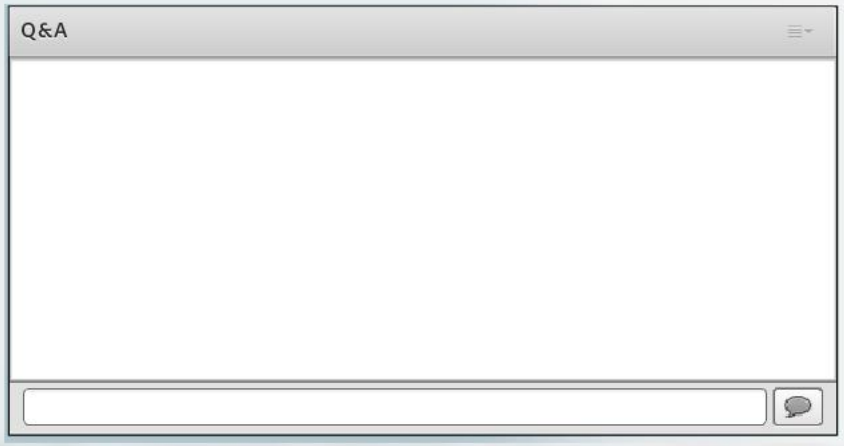
Louise E. Wilkins-Haug, MD, PhD- Division Director of Maternal Fetal Medicine and Reproductive Genetics at Brigham and Women's Hospital and a Professor at Harvard Medical School.

Today’s webinar will be closed captioned for the hearing impaired.

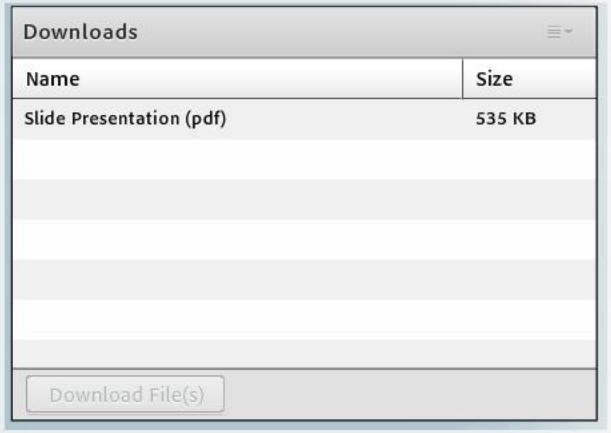


Questions can be submitted
to the moderator at any time.

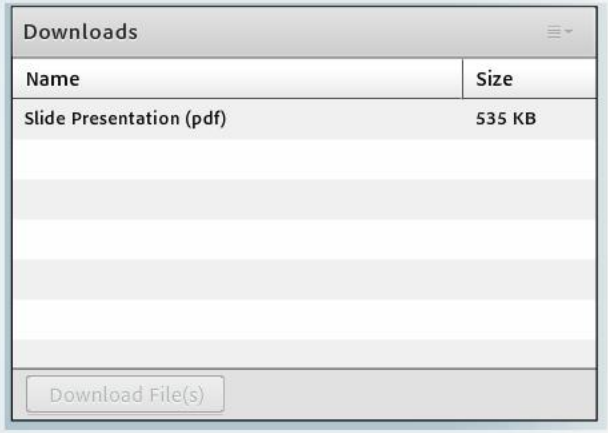




Enter your question in the field at the bottom of the Q&A pod.

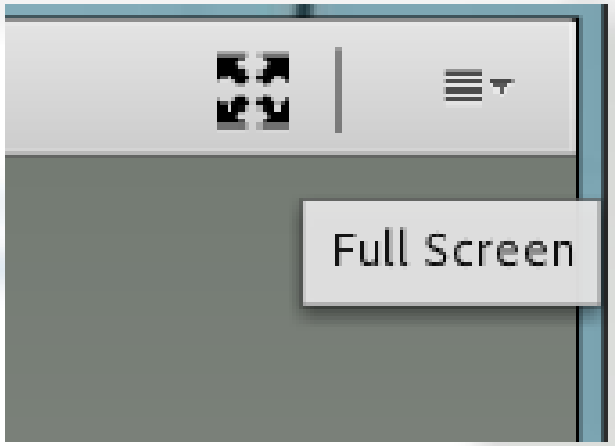


Download a copy of today's presentation.



Click on the file you want and press the DOWNLOAD FILE button.

You can expand your view of the presenter's slides by pressing the ***Full Screen*** button in the upper right corner of the slide presentation.



Please rate your current knowledge of the topic.

Potential Research Avenues for US Maternal Morbidity and Mortality Research

Gene Declercq, PhD

Community Health Sciences Dept.,

Boston University SPH

www.birthbythenumbers.org

Engaging Research Innovation and Challenges Webinar

HRSA/MCHB February 7, 2019

Four keys to understanding the current challenges in maternal mortality and morbidity

1. *The U.S. has a problem, but isn't sure how bad it is.*

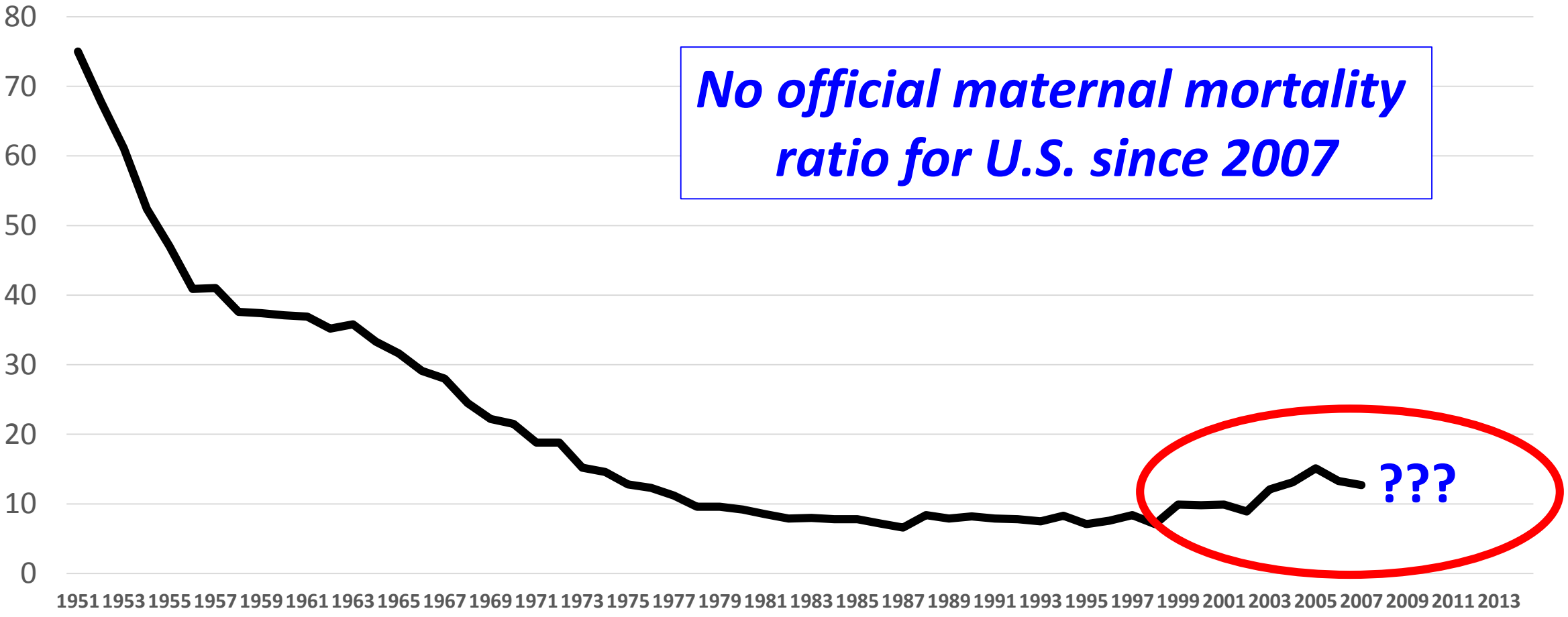
2. *The problem is bigger than maternal mortality*

3. *Re-conceptualizing maternal mortality and morbidity*

4. *The clinical challenges are real and being addressed and we now have to broaden our efforts to focus on the public health challenges*

1. The dual problem: substance & measurement

U.S. Maternal Mortality Ratio , 1951-2007



Three Sources of U.S. Maternal Death Data

- **National Vital Statistics System (NVSS).** This is the source of the official maternal mortality ratio for the United States and is based on "…information from death certificates filed in the 50 states and the District of Columbia that are subsequently compiled into national data….. Physicians, medical examiners, and coroners are responsible for completing the medical portion of the death certificate." These state data are compiled by NCHS into a national data system.

- **Pregnancy Mortality Surveillance System (PMSS)**. This system was established by CDC. It is based on reports from 52 areas (50 states, Washington, D.C. and New York city) which submits to CDC "… deidentified copies of death certificates for females 12–55 years who died during or within 1 year of pregnancy from any cause; when available, linked birth or fetal death certificates are also sent. Additional sources include computerized searches of Lexis Nexis, reports by public health agencies, including state-based maternal mortality review committees, professional organizations, and individual health care providers." The records are reviewed by specially trained clinicians to determine whether or not a death was pregnancy related.

- **Maternal Mortality Review Information Application (MMRIA).** State interdisciplinary committees do case reviews of maternal deaths. CDC building a data system to compile data from MMRCs. Project got a major boost in recent federal legislation.

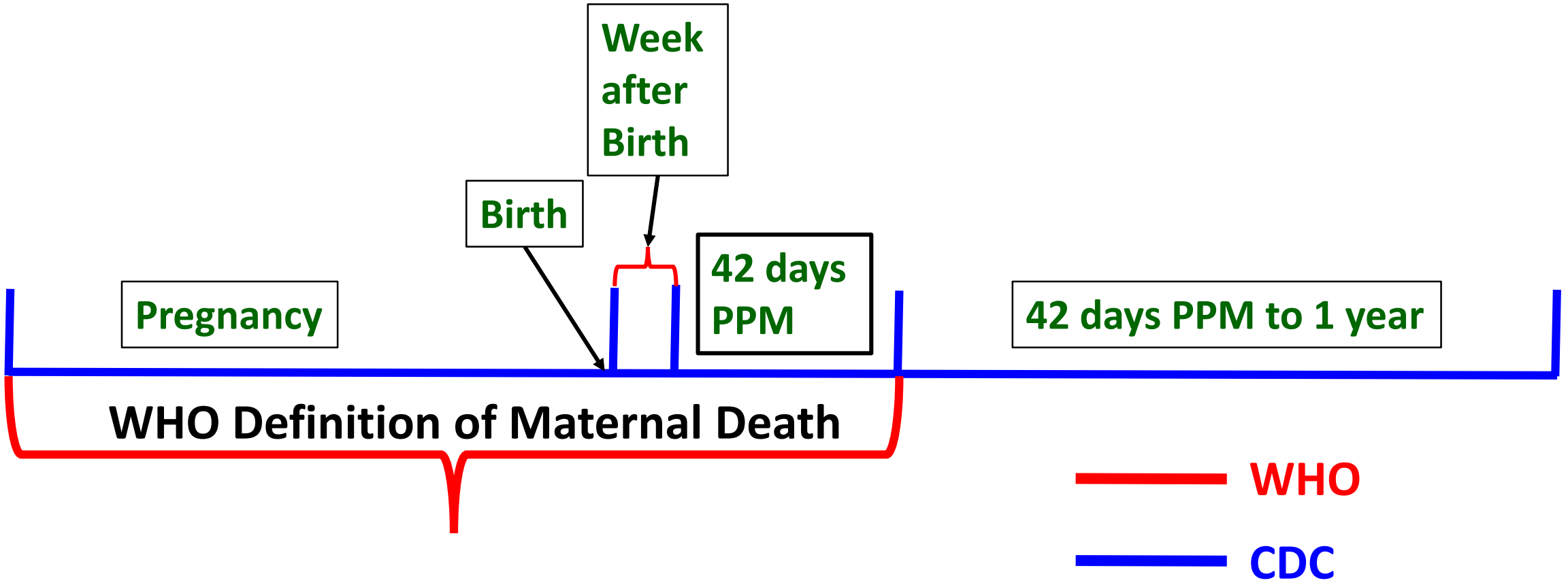
Three Definitions (in the U.S.)

- **Maternal Mortality Ratio** – the death of a woman ***while pregnant or within 42 days of termination of pregnancy***, irrespective of the duration and site of the pregnancy, from any cause ***related to or aggravated by the pregnancy*** or its management but not from accidental or incidental causes. Typically reported as a ratio per 100,000 births.

- **Pregnancy Related Death** – the death of a woman during pregnancy or ***within one year*** of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.

- **Pregnancy Associated Death** – The death of a women while pregnant or ***within one year*** of termination of pregnancy, ***irrespective of cause. (WHO calls these "pregnancy related")***

Timeline of Maternal Mortality Definitions



PPM – postpartum –period after the birth

Our best existing measure

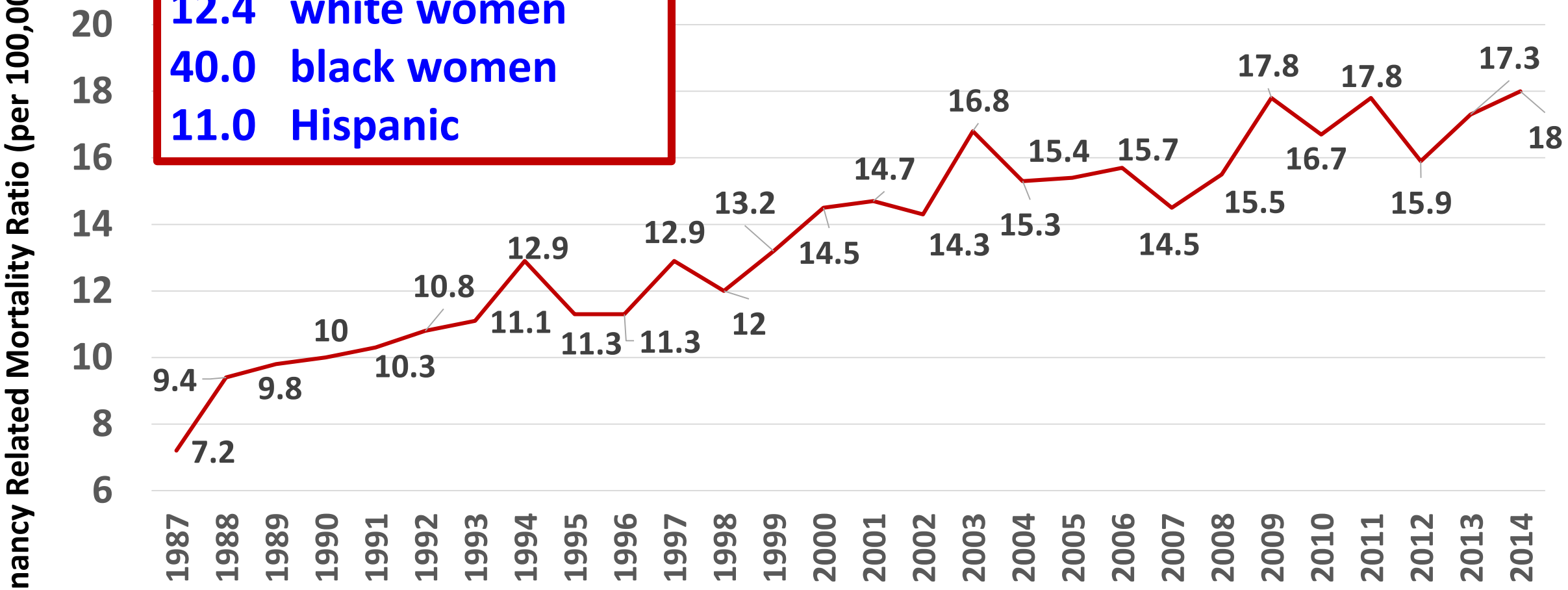
Pregnancy Related Mortality, U.S., 1987-2014

Racial Disparities (2011-14):

12.4 white women

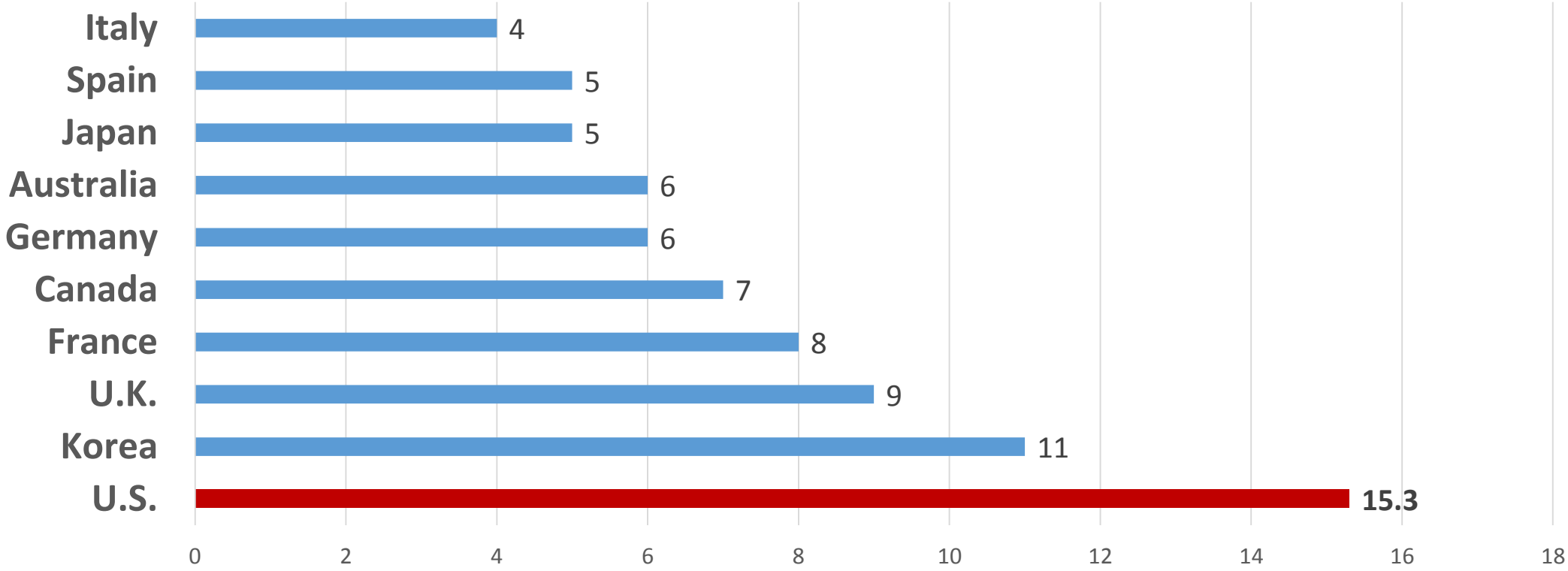
40.0 black women

11.0 Hispanic



Source: CDC. Creanga. Pregnancy-Related Mortality in the United States. *Obstet Gynecol 2017*.

U.S. MMR* Compared to Countries with 300,000+ births, 2013-14

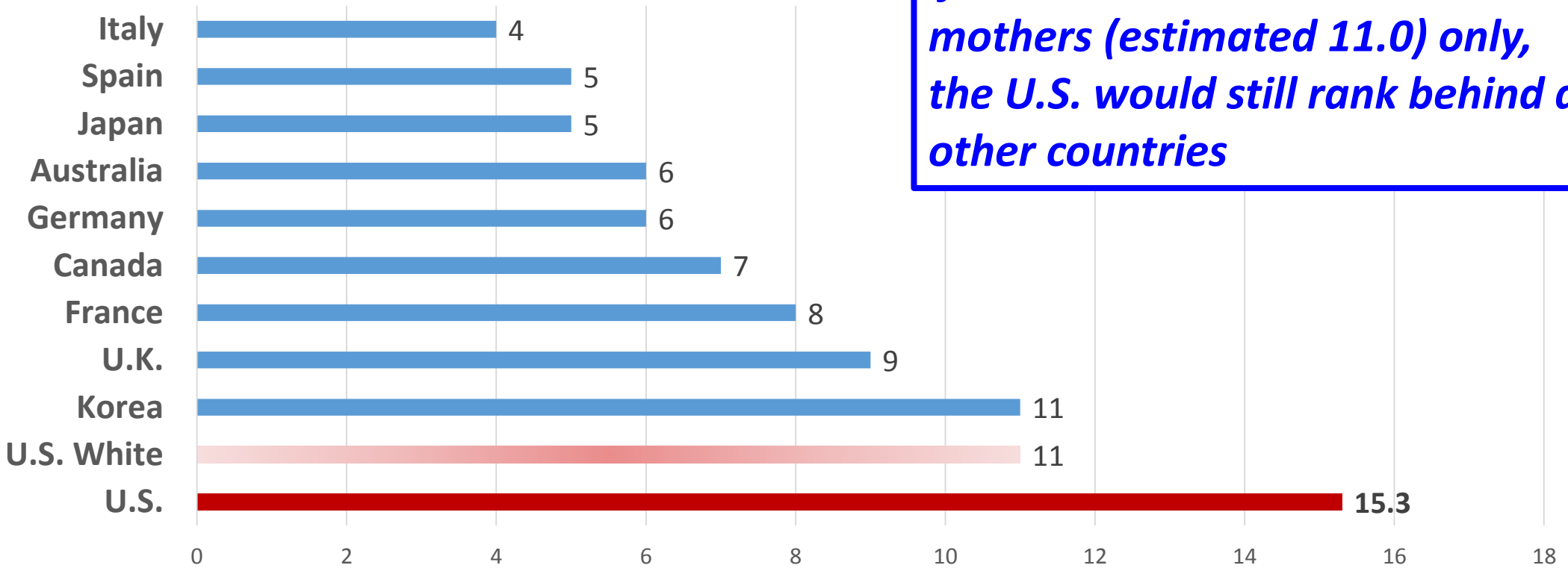


* Maternal Mortality per 100,000 births

Source: *Maternal Mortality: 1990 to 2015* Estimates by WHO, UNICEF, UNFPA, World Bank Group & UN Population Division. Geneva: 2015.

U.S. MMR* Compared to Countries with 300,000+ births, 2013-14

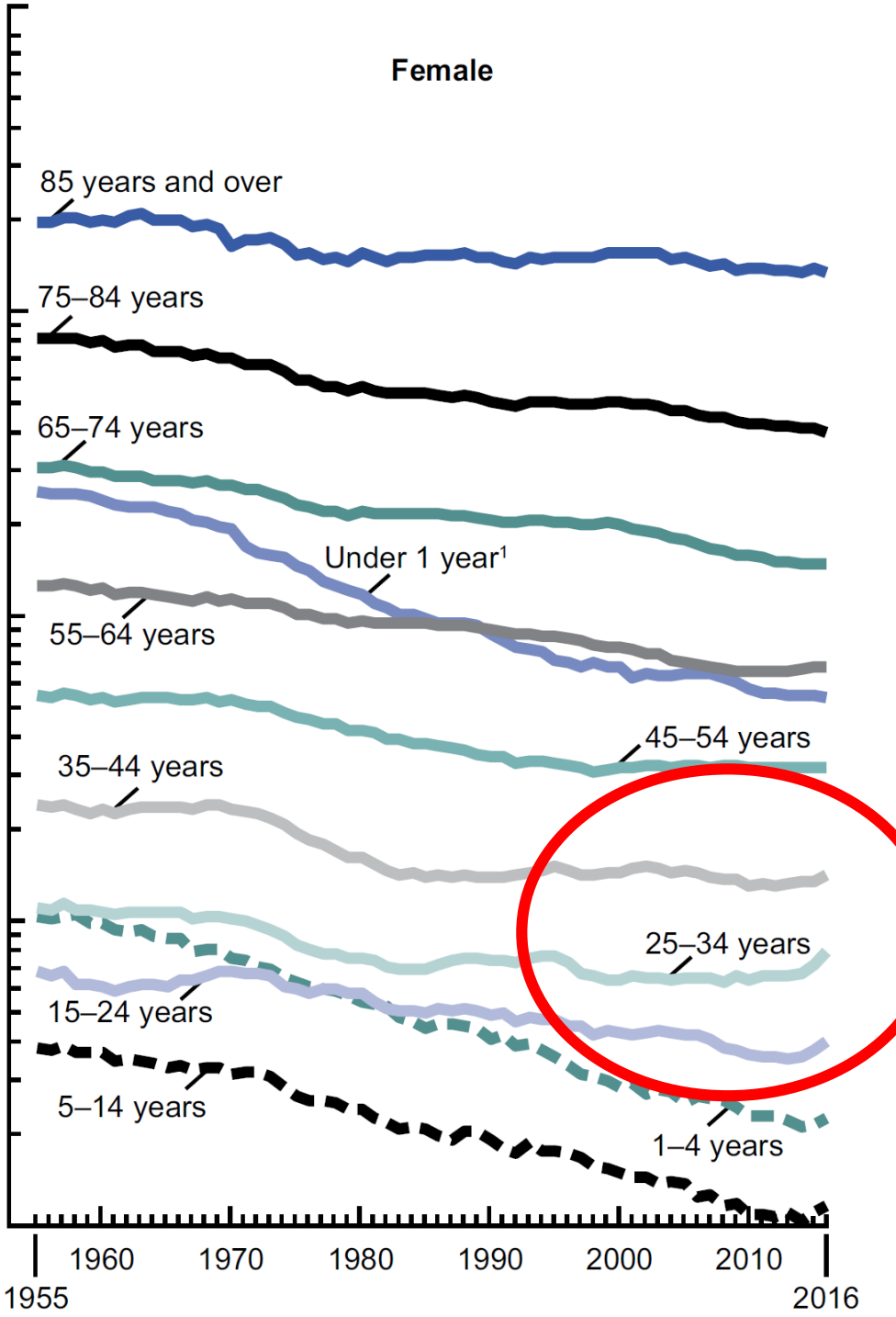
If we limited the US ratio to white mothers (estimated 11.0) only, the U.S. would still rank behind all other countries



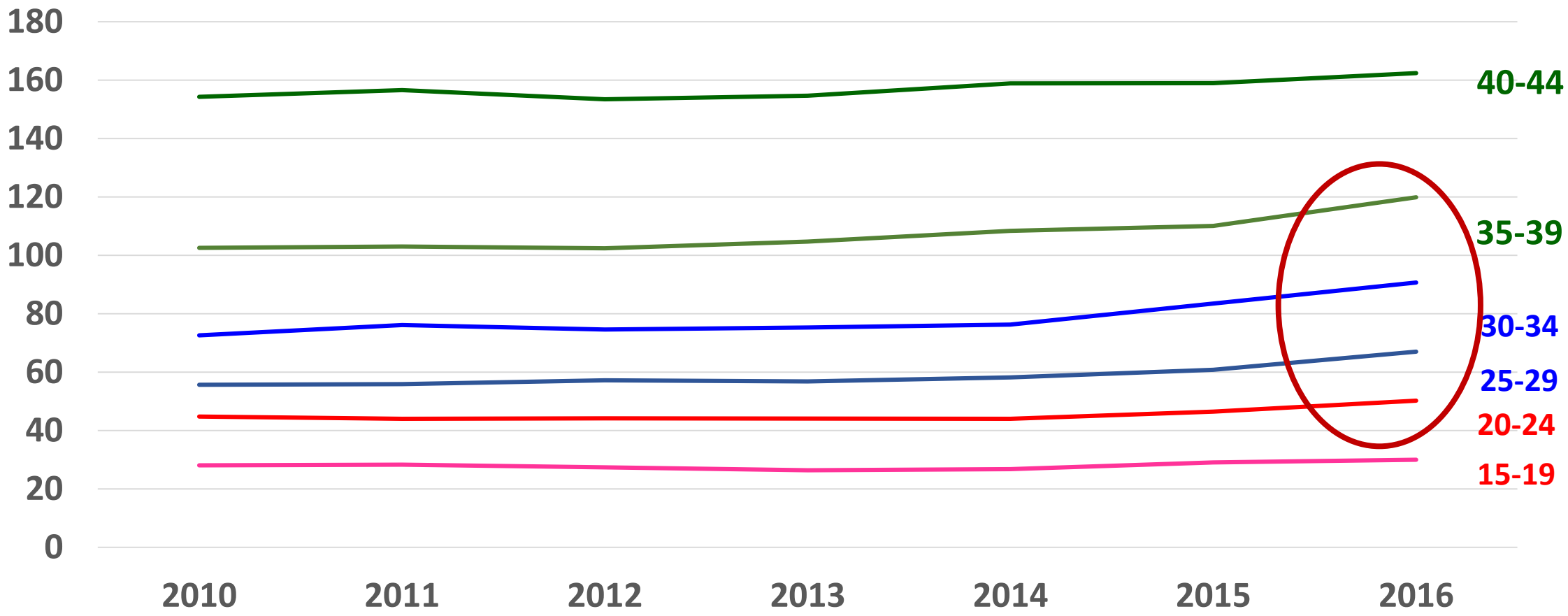
* Maternal Mortality per 100,000 births

Source: *Maternal Mortality: 1990 to 2015* Estimates by WHO, UNICEF, UNFPA, World Bank Group & UN Population Division. Geneva: 2015.

2. It's not just about maternal mortality



Female Death Rates (per 100,000) by Age, 2010-2016



Source: Annual Reports of *Deaths: Final data. (for respective years).* National Vital Statistics Reports; Hyattsville, MD: National Center for Health Statistics

Female Death Rates by Age (per 100,000 in age group), U.S., 2010-2016

Year	15-19	20-24	25-29	30-34	35-39	40-44
2010	28.1	44.8	55.7	72.6	102.6	154.3
2011	28.3	44.0	55.9	76.1	103.0	156.6
2012	27.4	44.2	57.2	74.6	102.4	153.5
2013	26.4	44.1	56.8	75.3	104.7	154.7
2014	26.8	44.0	58.2	76.3	108.4	158.9
2015	29.1	46.5	60.8	83.5	110.1	159.0
2016	30.0	50.2	67.0	90.7	119.9	162.4
2010-2016 Change	**6.8%**	**12.1%**	**20.3%**	**24.9%**	**16.9%**	**5.2%**

Source: Annual Reports of *Deaths: Final data. (for respective years).* National Vital Statistics Reports; Hyattsville, MD: National Center for Health Statistics

Top 10 Causes of Death for Women 25-34 in 2010 & 2016

Childbirth related deaths grew at a slower than average rate. Accidents had biggest impact on increase.

		2010					2016			
Rank		Total Deaths	% of total	Rate per 100 K	Rank		Total Deaths	% of total	Rate per 100 K	% Change in rate 2010-2016
	All causes	13067	100	64.0		All causes	17,359	100.0	78.6	**22.8%**
1	Accidents (unintentional injuries)	3770	28.9	18.5	1	Accidents (unintentional injuries)	6,247	36.0	28.3	**53.0%**
2	Malignant neoplasms	1,835	14.0	9.0	2	Malignant neoplasms	1,966	11.3	8.9	-1.1%
3	Intentional self-harm (suicide) .	1,092	8.4	5.3	3	Intentional self-harm (suicide) .	1,479	8.5	6.7	26.4%
4	Diseases of heart	1,010	7.7	4.9	4	Diseases of heart	1,141	6.6	5.2	6.1%
5	Assault (homicide)	684	5.2	3.3	5	Assault (homicide)	836	4.8	3.8	15.2%
6	Pregnancy, childbirth & puerperium	367	2.8	1.8	6	Pregnancy, childbirth & puerperium	472	2.7	2.1	**16.7%**
7	Diabetes mellitus	262	2.0	1.3	7	Chronic liver disease and cirrhosis	360	2.1	1.6	77.8%
8	Human immunodeficiency virus (HIV) disease	259	2.0	1.3	8	Diabetes mellitus	336	1.9	1.5	15.4%
9	Cerebrovascular diseases	253	1.9	1.2	9	Cerebrovascular diseases	244	1.4	1.1	-8.3%
10	Chronic liver disease and cirrhosis	180	1.4	0.9	10	Septicemia	210	1.2	1.0	NA
	All other causes (residual)	3,355	25.7	16.4		All other causes (residual)	4,068	23.4	18.4	12.2%

Sources: Heron M. *Deaths: Leading causes for 2010*. National vital statistics reports; vol62 no 6. Hyattsville,MD: National Center for Health Statistics. 2013 & Heron M. *Deaths: Leading causes for 2016*. National Vital Statistics Reports; vol 67 no 6. Hyattsville, MD: National Center for Health Statistics. 2018.

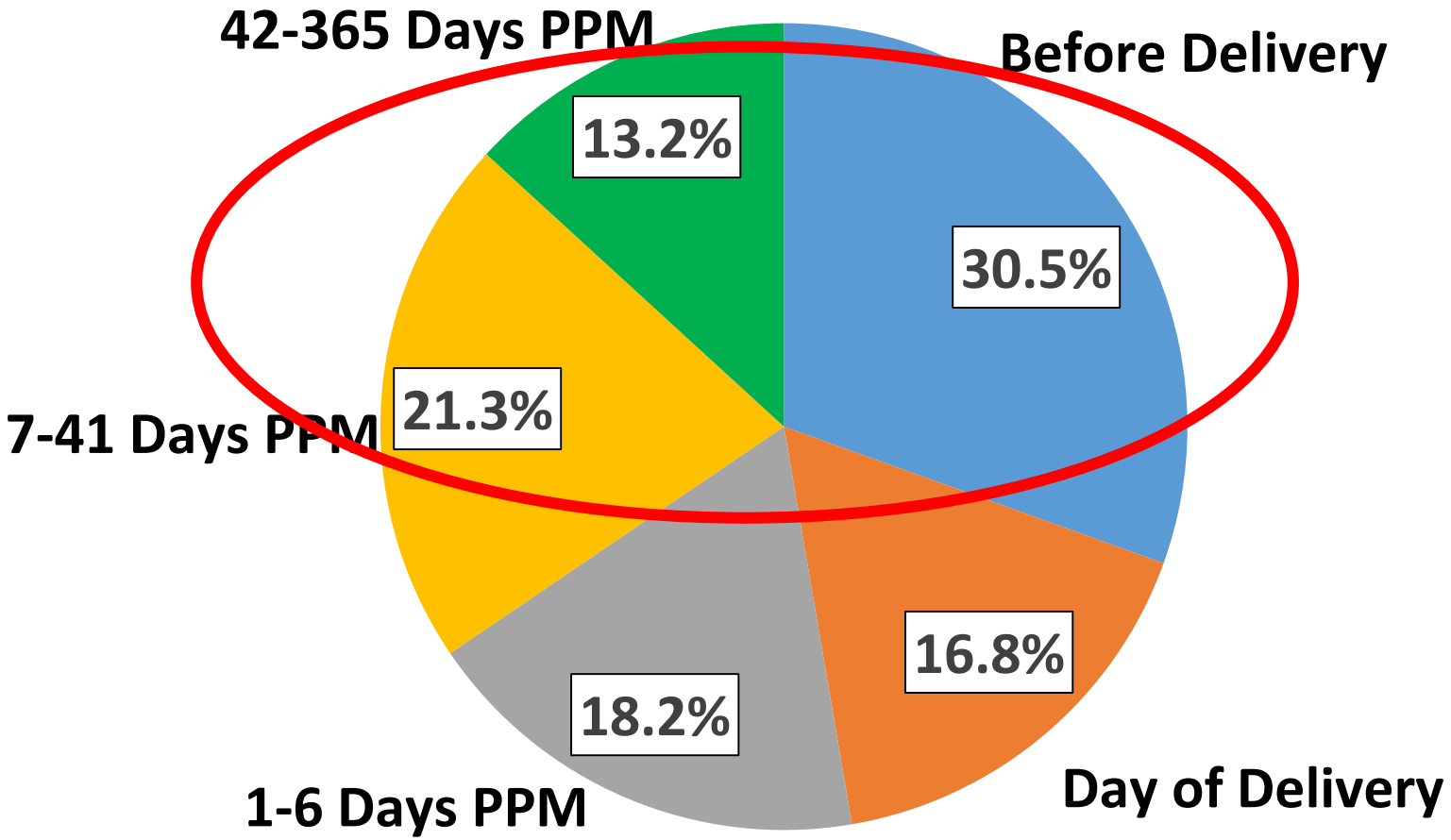
3. Re-conceptualizing maternal mortality & morbidity

Maybe we have to rethink how we measure maternal mortality and morbidity to fully address the problem.

- **Maternal Mortality** – we need to focus more attention on pregnancy related *and* pregnancy associated deaths

- **Maternal Morbidity** – we should expand the measure beyond birth hospital stay and discharge codes

Timing of Maternal Deaths

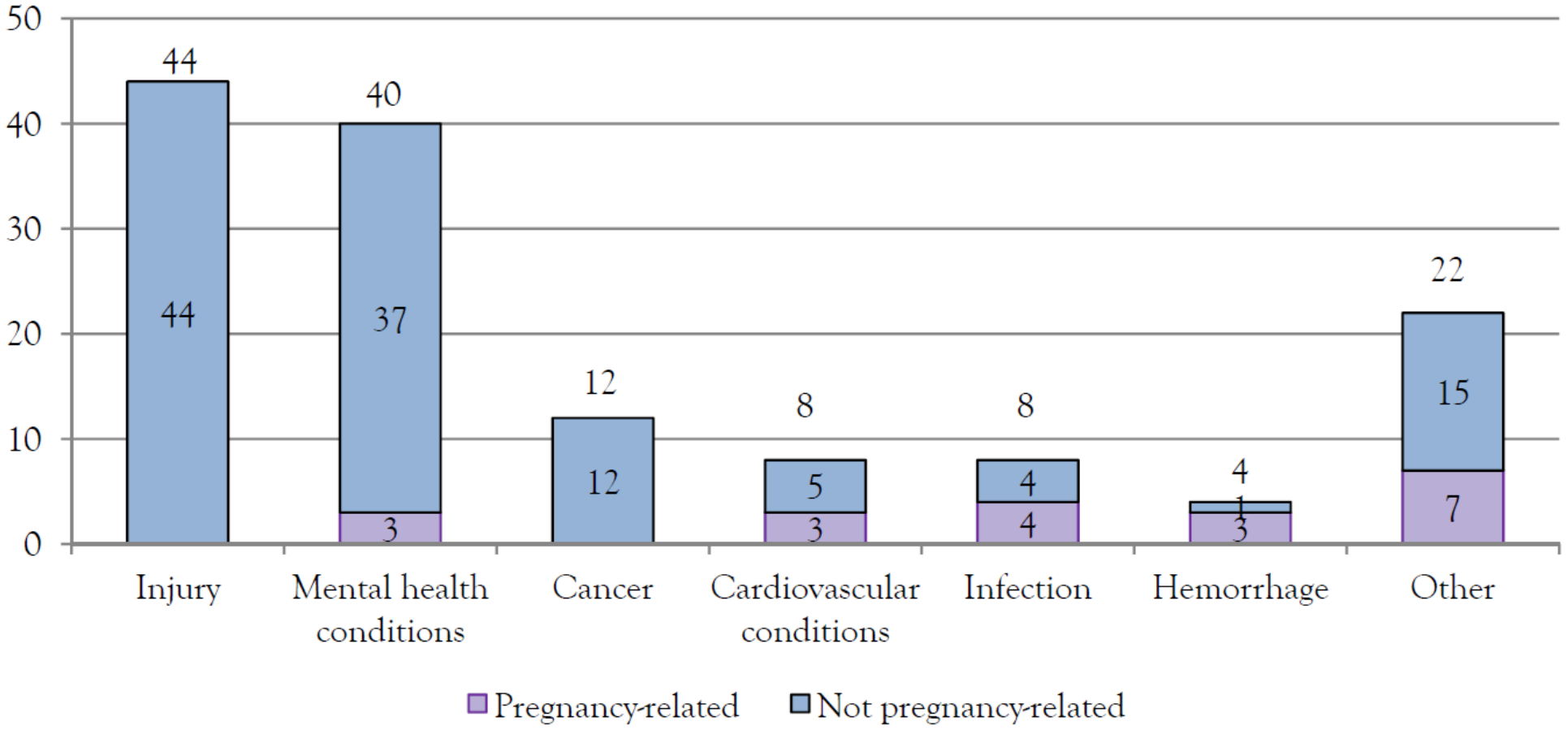


Source: Creanga A et al. Pregnancy Related Mortality in the U.S., 2011-2013. *Obstet & Gynec* 2017 & *MMRIA* (2017).

The importance of studying pregnancy associated deaths

- The deaths of women of reproductive age

Figure 4. Leading Causes of Pregnancy-Associated Death by Type of Association, Colorado, 2008-2013



Source UNDERSTANDING MATERNAL DEATHS IN COLORADO: AN ANALYSIS OF MORTALITY FROM 2008 - 2013

OBSTETRICS

Severe maternal morbidity and comorbid risk in hospitals performing <1000 deliveries per year

Mark P. Hehir, MD, MBA, MRCPI; Cande V. Ananth, PhD, MPH; Jason D. Wright, MD; Zainab Siddiq, MS; Mary E. D'Alton, MD; Alexander M. Friedman, MD, MPH

Evaluating Iowa Severe Maternal Morbidity Trends and Maternal Risk Factors: 2009–2014

Brittni N. Frederiksen[1,2,7] · Catherine J. Lillehoj[3] · Debra J. Kane[1,4] · Dave Goodman[5] · Kristin Rankin[6]

The impact of socioeconomic position on severe maternal morbidity outcomes among women in Australia: a national case–control study

A Lindquist,[a,b,*] N Noor,[a,*] E Sullivan,[c] M Knight[a]

Severe Maternal Morbidity Associated With Maternal Birthplace: A Population-Based Register Study

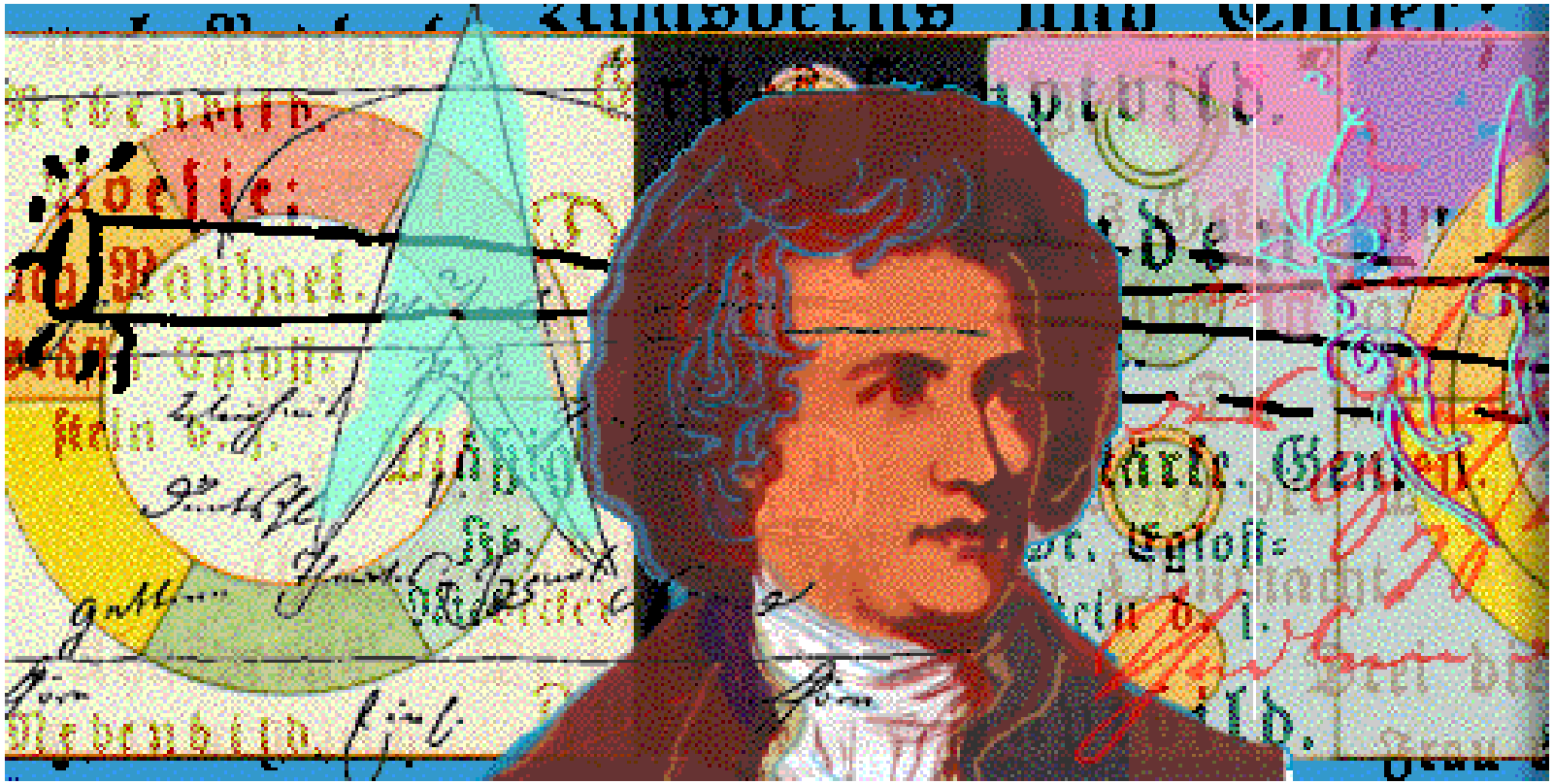
Marcelo L. Urquia, PhD;[1,2,3] Susitha Wanigaratne, PhD;[2,3] Joel G. Ray, MD, MSc;[3,4] K. S. Joseph, MD, PhD[5,6]

Severe Maternal Morbidity and the Use of Assisted Reproductive Technology in Massachusetts

Candice Belanoff, ScD, MPH, Eugene R. Declercq, PhD, Hafsatou Diop, MD, MPH, Daksha Gopal, MPH, Milton Kotelchuck, PhD, MPH, Barbara Luke, ScD, MPH, Thien Nguyen, MPH, and Judy E. Stern, PhD

Contemporary Studies of Maternal Morbidity

“Looking where there’s light”



“One searches where there is light”

Goethe 1749–1832

Source: Barry. *The Great Influenza*. 2004 p. 71

Missing two key aspects of maternal morbidity

- **Longer term outcomes** – requires linked data to track women longitudinally.

TABLE 3. RELATIVE RISK OF POSTPARTUM ENCOUNTERS, DELIVERIES TO MASSACHUSETTS WOMEN WITHOUT CHRONIC MEDICAL CONDITIONS, 2002–2011

	<42 days postpartum admission		*42 to <364 days postpartum admission*		*<365 days postpartum admission*	
	RR HD (95% CI)	*RR OS (95% CI)*	*RR HD (95% CI)*	*RR OS (95% CI)*	*RR HD (95% CI)*	*RR OS (95% CI)*
Multivariate[a]						
SMM (without transfusion)	**2.27 (1.91–2.70)**	**2.10 (1.46–3.03)**	**1.66 (1.35–2.03)**	1.25 (0.87–1.81)	**2.01 (1.77–2.28)**	**1.57 (1.21–2.03)**
SMM (with transfusion)	**2.48 (2.20–2.80)**	**2.47 (1.94–3.14)**	**1.65 (1.44–1.89)**	1.26 (0.99–1.61)	**2.04 (1.87–2.23)**	**1.69 (1.43–2.01)**

[a]Adjusted for: age, race/ethnicity, pregnancy-related conditions (preeclampsia, gestational hypertension, gestational diabetes), education, method of delivery, insurance status, parity, plurality, length of stay at delivery hospitalization, year, hospital level, marital status, and smoking status.
Bold indicates $p < 0.05$.
CI, confidence interval; HD, hospital discharge; RR, relative risk.

Source: Harvey E., et al. Severe Maternal Morbidity at Delivery & Risk of Hospital Encounters Within 6 Weeks & 1 Year PPM. J Women's Health. 2018 27:140-147

Missing two key aspects of maternal morbidity

- **Mothers' voices** – what are the problems they face from *their perspective*? (may not involve hospitalizations)

Table 4. Mothers' experience of selected new-onset health problems in first two months and at six months or more after birth

Base: all mothers eligible for question (see notes)	In first two months			Problem persisted to six months or more
	Major new problem	Minor new problem	Major/minor new problem	
Vaginal only*				
Painful perineum *n=1656*	11%	30%	41%	7%
Infection from cut or torn perineum *n=1656*	5%	13%	18%	4%
Cesarean only (base varies)				
Pain at site of cesarean incision *n=744**	19%	39%	58%	16%
Infection at site of cesarean incision *n=744**	8%	16%	24%	5%

Source: Declercq E et al. *Listening to Mothers III: New Mothers Speak Out*. 2013

Learning from Listening to Mothers

How much did pain interfere with your routine activities?

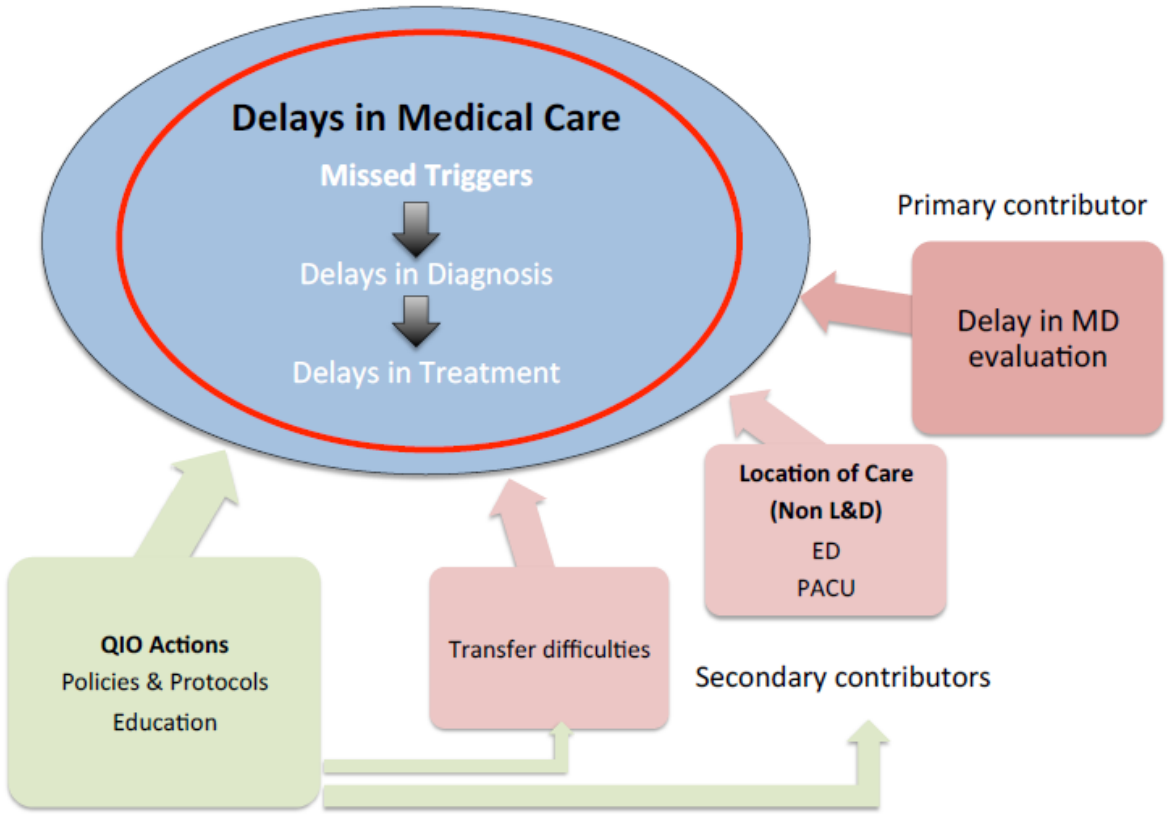
	In two months after birth Base: all initial *LTM III* mothers		
	Vaginal *n=1656*	Cesarean *n=744*	All *n=2400*
Extremely	3%	10%	4%
Quite a bit	6%	16%	7%
Moderately	21%	25%	22%
A little bit	43%	36%	42%
Not at all	27%	14%	24%

Source: Declercq E et al. *Listening to Mothers III: New Mothers Speak Out*. 2013

4. Moving from Clinical to Public Health Challenges in Maternal Health

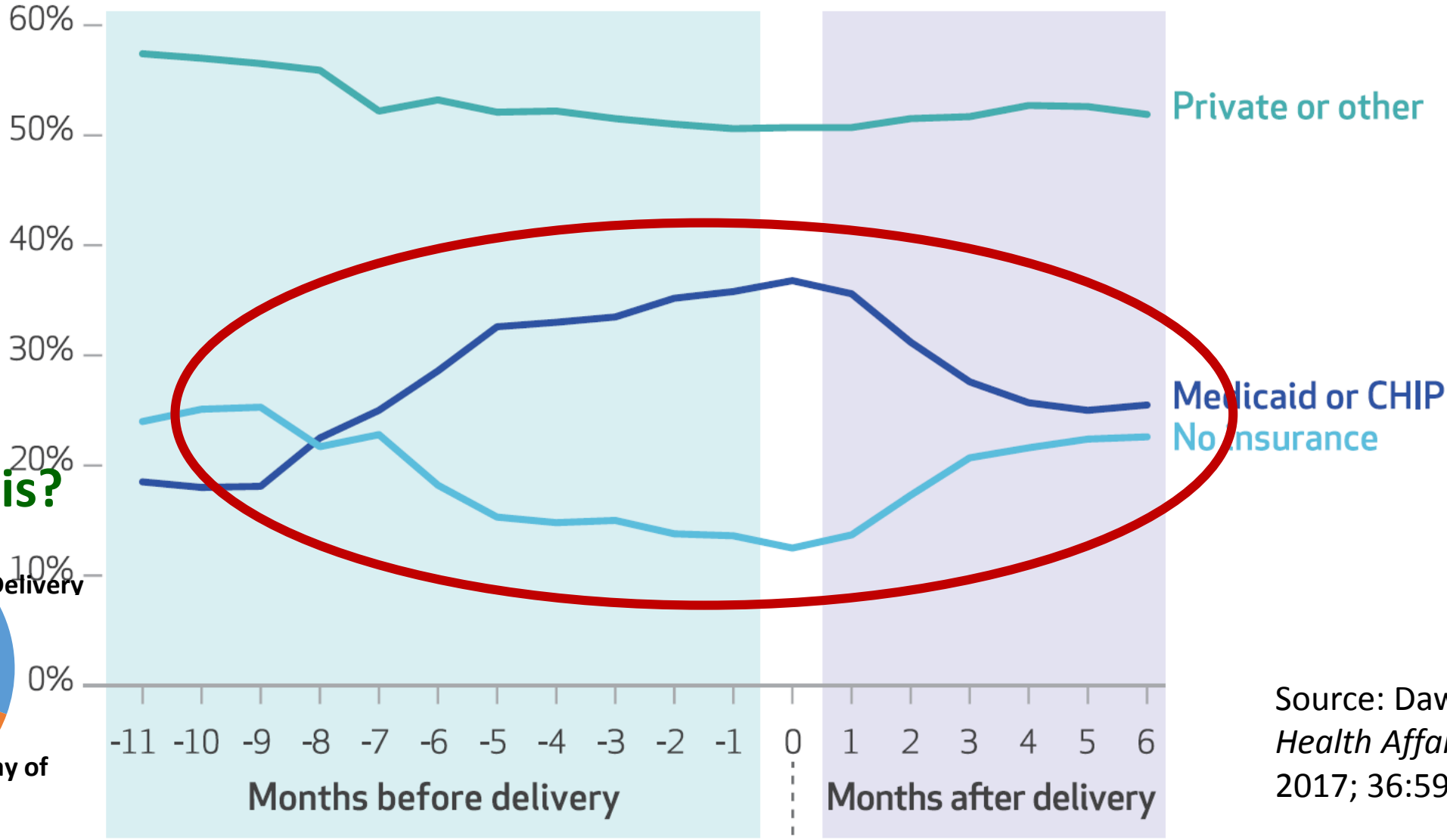
- Been notable efforts, primarily from the California Quality Maternity Care Collaborative to improve clinical care in maternal health with toolkits addressing hemorrhage, cardiac disease, pre-eclampsia, maternal venous thrombosis.

READINESS
Every unit ✓ Hemorrhage cart with supplies, checklist, instruction cards and posters ✓ Immediate access to hemorrhage medications (kit or equivalent) ✓ Establish a response team – who to call when help is needed ✓ Establish massive and emergency release transfusion protocols/policies (type O negative/uncrossmatched) ✓ Unit education on processes, unit-based drills (with post-drill debriefs)
RECOGNITION & PREVENTION
Every patient ✓ Assessment of hemorrhage risk (prenatal, on admission, prior to delivery and post birth) ✓ Measurement of cumulative blood loss (formal, as quantitative as possible) ✓ Active management of 3rd stage of labor
RESPONSE
Every hemorrhage ✓ Unit-standard, stage-based on QBL, 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 significant hemorrhages for systems issues ✓ Monitor outcomes and process metrics in perinatal quality improvement committee

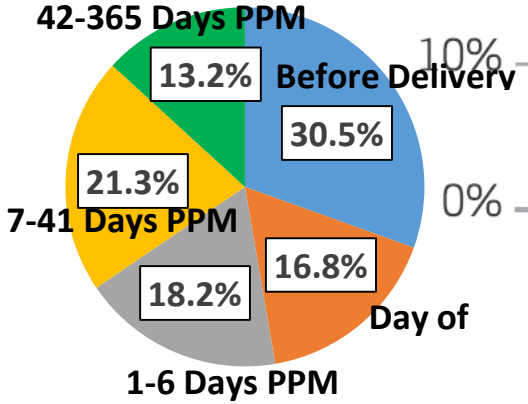


The Public Health Challenge

Percentages of women who gave birth in the period 2005–13, by health insurance type and month before or after delivery



Remember this?



Source: Daw J. *Health Affairs* 2017; 36:598-606

Role of U.S. policies in preventing maternal death

State Eligibility for Medicaid Coverage

*States with toughest eligibility for non-pregnant adult women. Percent of poverty level you must be **below** to qualify for Medicaid*

As of January, 2018	% of poverty level not pregnant	$ Amount (family of 3)	% poverty level when pregnant
Alabama	18%	$3,740	146%
Texas	18%	$3,740	203%
Missouri	22%	$4,571	201%
Idaho	26%	$5,402	138%
Mississippi	27%	$5,610	199%
Florida	33%	$6,857	196%
Georgia	36%	$7,480	225%
Kansas	38%	$7,896	171%
Virginia	38%	$7,896	148%
N. Carolina	43%	$8,935	201%
Massachusetts	138%	$28,676	205%

Source: Kaiser Family Foundation

Summarizing four points

1. *The problem is both poor measurement & poor outcomes*

2. *Maternal mortality is the canary in the coal mine*

3. *Broaden measurement options on both mortality and morbidity*

4. *Continue clinical improvements, but expand focus to women's health in general.*

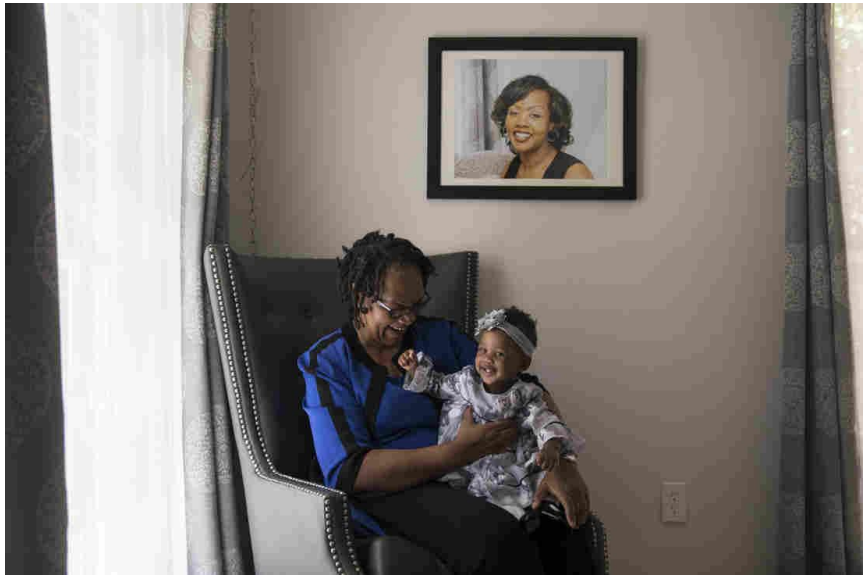
WHERE TO FROM HERE?

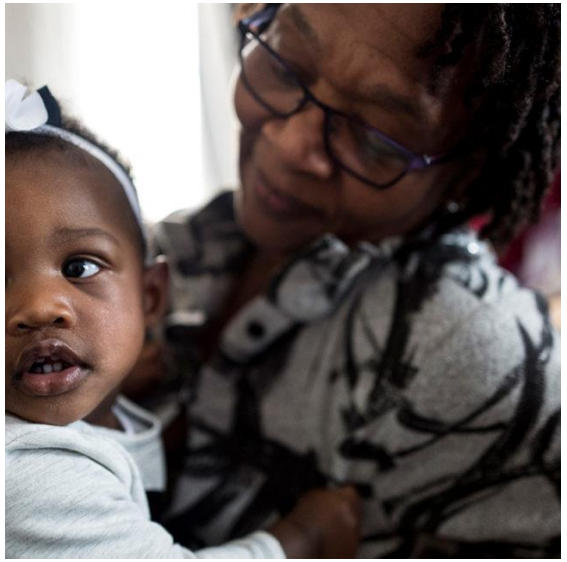
POLITICAL WILL & MEDIA COVERAGE

PROPUBLICA'S LOST MOTHERS SERIES

Nothing Protects Black Women From Dying in Pregnancy & Childbirth

Not education. Not income. Not even being an expert on racial disparities in health care.





The Public and Policymakers want answers.

It's our responsibility to develop research that helps craft sustainable solutions to these problems.

What kind?

Since you asked

1. Use MMRCs to explore pregnancy associated deaths for causes and possible bases for prevention;

2. Use linked datasets to examine women's health through the lifecourse and identify critical moments (e.g. pregnancy?) where intervention might matter; and

3. Listen to women tell us about their lives and experiences in pregnancy and beyond to craft sustainable solutions that are meaningful to them.

www.birthbythenumbers.org




Birth by the Numbers Team

8 doulas








Twitter: @BirthNumbers

Email: birthbynumbers@gmail.com **FACEBOOK: www.facebook.com/BirthByTheNumbers**

Healthy Habits Screening, the Postpartum Transition and Maternal Mortality

LOUISE WILKINS-HAUG, MD, PHD

BRIGHAM AND WOMEN'S HOSPITAL

BOSTON, MA

Time Frames of Maternal Morbidity and Mortality

- Intrapartum and immediate postdelivery morbidity / mortality
  - Hemorrhage, infection, preeclampsia
- 6 weeks to 1 year - Gap in knowledge
- Lifetime risks following preeclampsia of a 2-3 fold increase in cardiovascular death
  - Similar morbidity seen with gestational diabetes

Expand Maternal Care Concepts

Refocus obstetric and postpartum care on "healthy mother / infant and lifelong well-being"

Key areas :

- Weight gain and high BMI
- Prevention of cardiovascular/metabolic disease
- Mental health and substances of abuse

Current Missed Opportunities for Improvements

1) Women's motivation during pregnancy
2) Postpartum care often is an "after thought"
3) Transition to ongoing primary care challenging

Healthy Habits Screening and Expanded Maternal Care to Decrease Mortality

Is there a need?

How could it work ?

- Provider engagement
- Patient engagement
- Pediatrician and primary care involvement

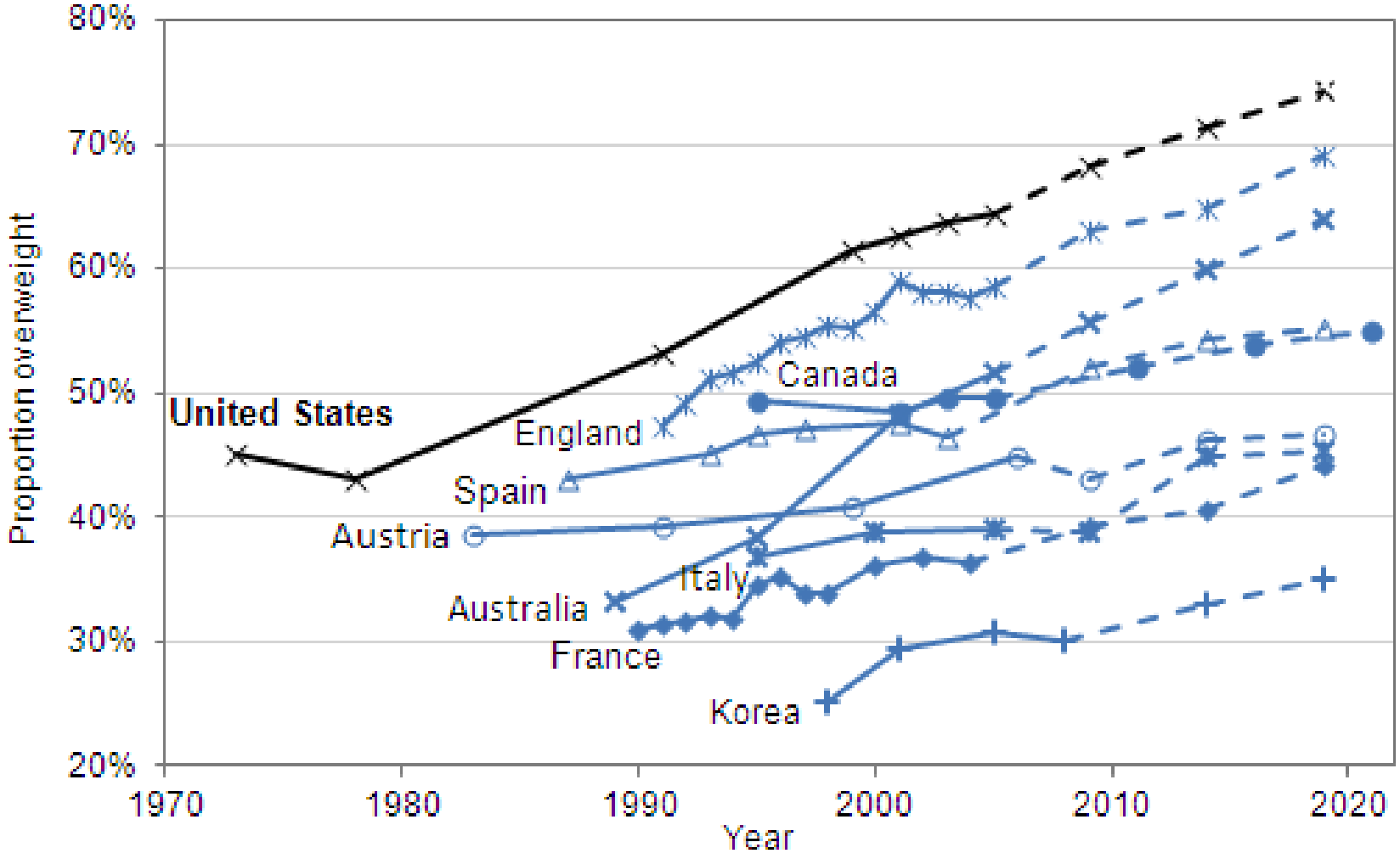
Will it impact maternal morbidity and mortality ?

Decreasing Maternal Mortality Through *Healthy Habits Screening*

Healthy habits screening

- Weight gain
- Diet
- Exercise
- Depression
- Alcohol use and abuse
- Drugs of abuse (prescription and nonprescription)

Overweight/Obese Adults Worldwide



Center for Disease Control, 2012

Maternal Morbidity and Mortality in Singleton Hospital Births in Washington State, 2004-2013

Composite maternal M/M*	Underweight	Normal	Overweight	Obesity Class 1	Obesity class 2	Obesity Class 3
Percentage	1.71%	1.43%	1.60%	1.68%	1.78%	2.02%
ORs	1.2 (CI, 1.0-1.3)	1.0	1.1 (CI, 1.1-1.2)	1.1 (CI, 1.1-1.2)	1.2 (CI, 1.1.-1.3)	1.4 (CI, 1.3-1.5)
% of women in BMI category	**3.2%**	**47.5%**	**25.8%**	**13.1%**	**6.2%**	**4.2%**

23.5 %

* Composite severe maternal morbidity/mortality : life-threatening and leading to serious sequelae (eg, amniotic fluid embolism, hysterectomy), intensive care unit admission, and maternal death.

Lisonkova, 2017

4th Trimester – Redesigned Postpartum Care (ACOG, 2018), A Stuebe

Postpartum – 40% do not attend

Redesign with multiproviders

- Nutrition counseling
- Exercise program
- Referral to weight loss specialist
- 75 g GTT ≥ 6 weeks if GDM present

Decreasing Maternal Mortality Through Healthy Habits Screening

Healthy habits screening

- Weight gain
- Diet
- Exercise
- Depression
- Alcohol use and abuse
- Drugs of abuse (prescription and nonprescription)

Overview

How common are these issues

Screening recommendations

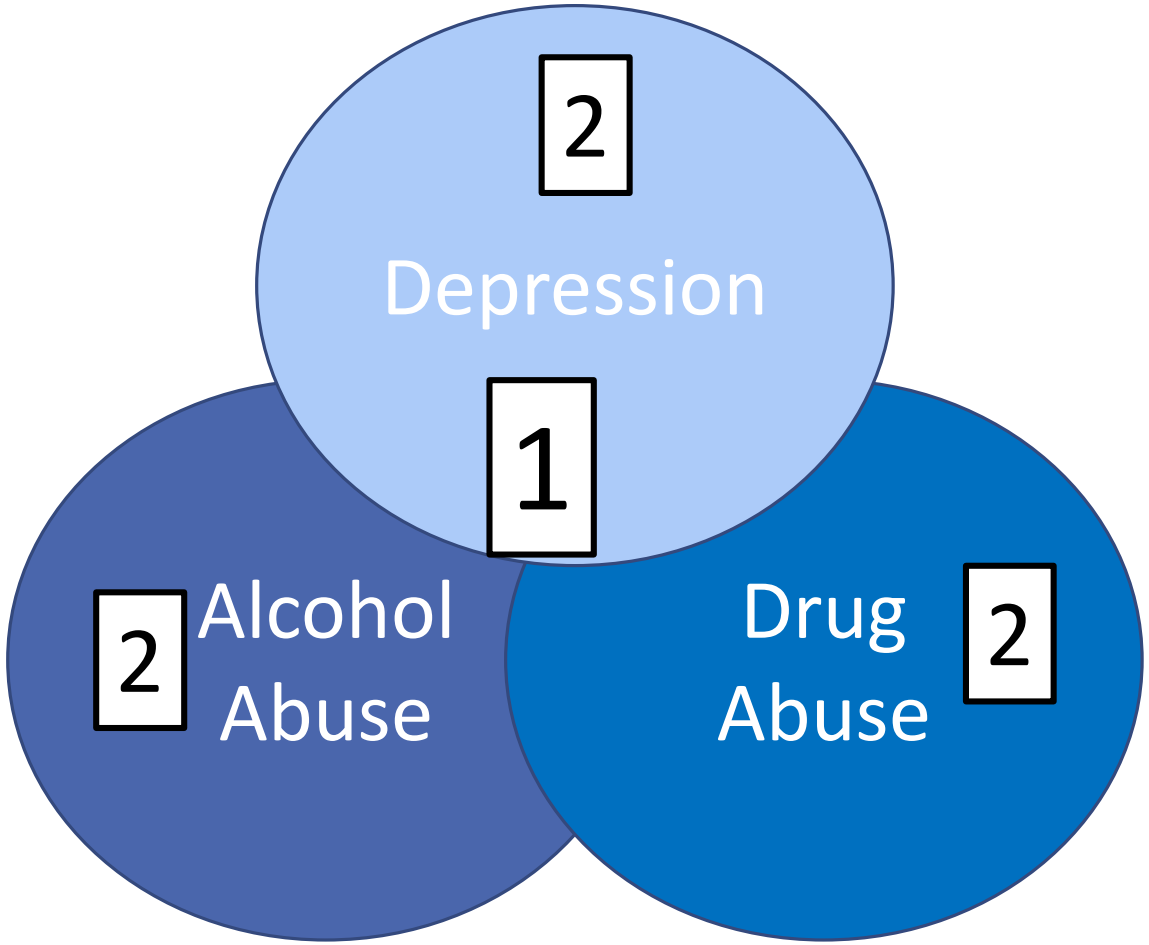
Resources

What are the approachable issues ?

How common are these issues ?

	Reproductive age	Pregnancy
Depression	9%	10-20%
Alcohol use	10%	9% current 3% binge 0.4% heavy
Illicit drugs (Opioids)	13%	6% 21% (15-17 yo) 18% (18-25 yo) 3.4% (26 -44 yo)

National Survey of Drug Use and Health (Substance Abuse and Mental Health Services Administration, 2012)


2
Depression
1
2
Alcohol
Abuse
Drug
Abuse
2

Depression and Treatment

Women of reproductive age (9%)	20-33% treated
Depression in pregnancy (10-20%)	2 – 10% treated

(N Gao, 2018)

Pregnancy as "Protective Against Psychiatric Disorder"

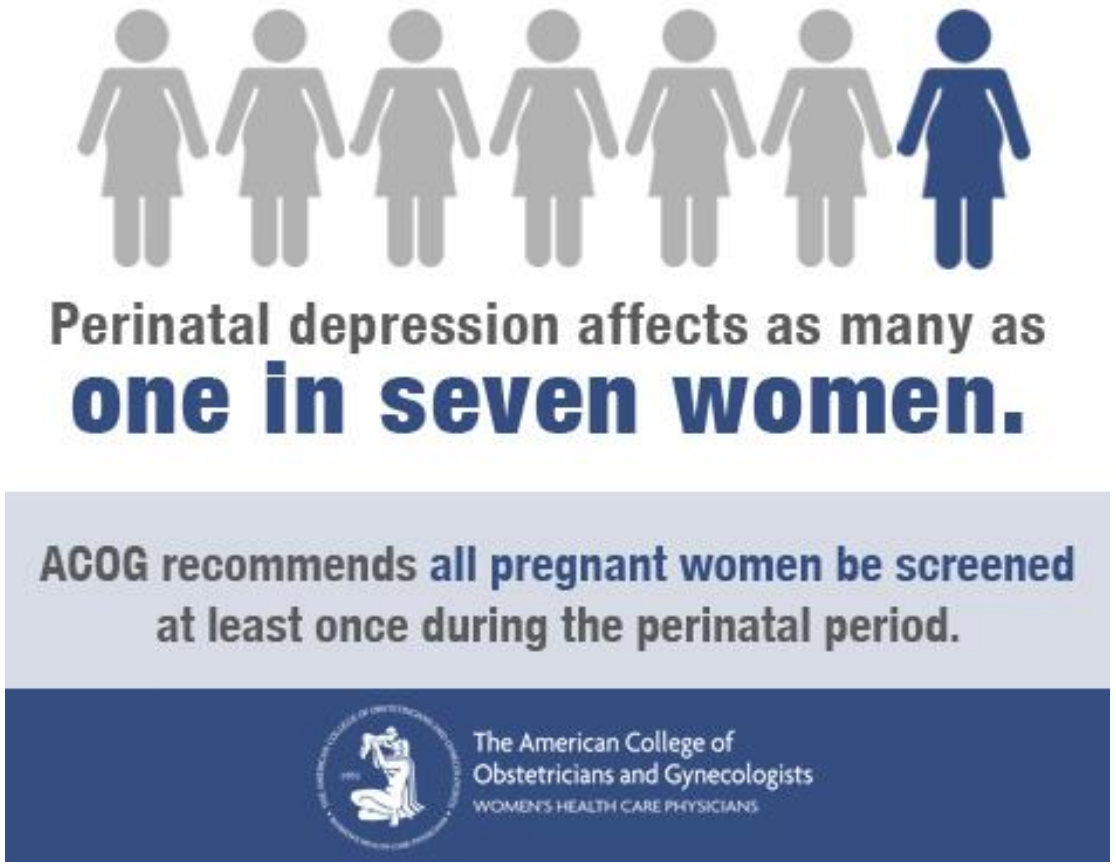
Depression is as common and perhaps more common in pregnancy

Medication discontinuation should be avoided

- 2/3 of women relapse off medications
- Safe choices – risks are low especially after first trimester

Lee Cohen,2006

ACOG 2015



Less than 20% of women with depression self report their symptoms

Depression Screening ACOG 2015

Screen once in pregnancy with a validated tool

- Edinburgh Postnatal
  - 10 questions, 5 minutes, 12 languages

Coupled with resources for intervention, referral, and follow-up

80% of women are comfortable with screening for depression, especially postpartum

Broader initiatives

Pediatricians

- Half feel responsible for recognizing PP depression
  - Majority unfamiliar with tool available

Increasing resources

- The Bringing Postpartum Depression Out of the Shadows Act (Passed Nov 2016)
  - increase states' resources for routine screening and treatment

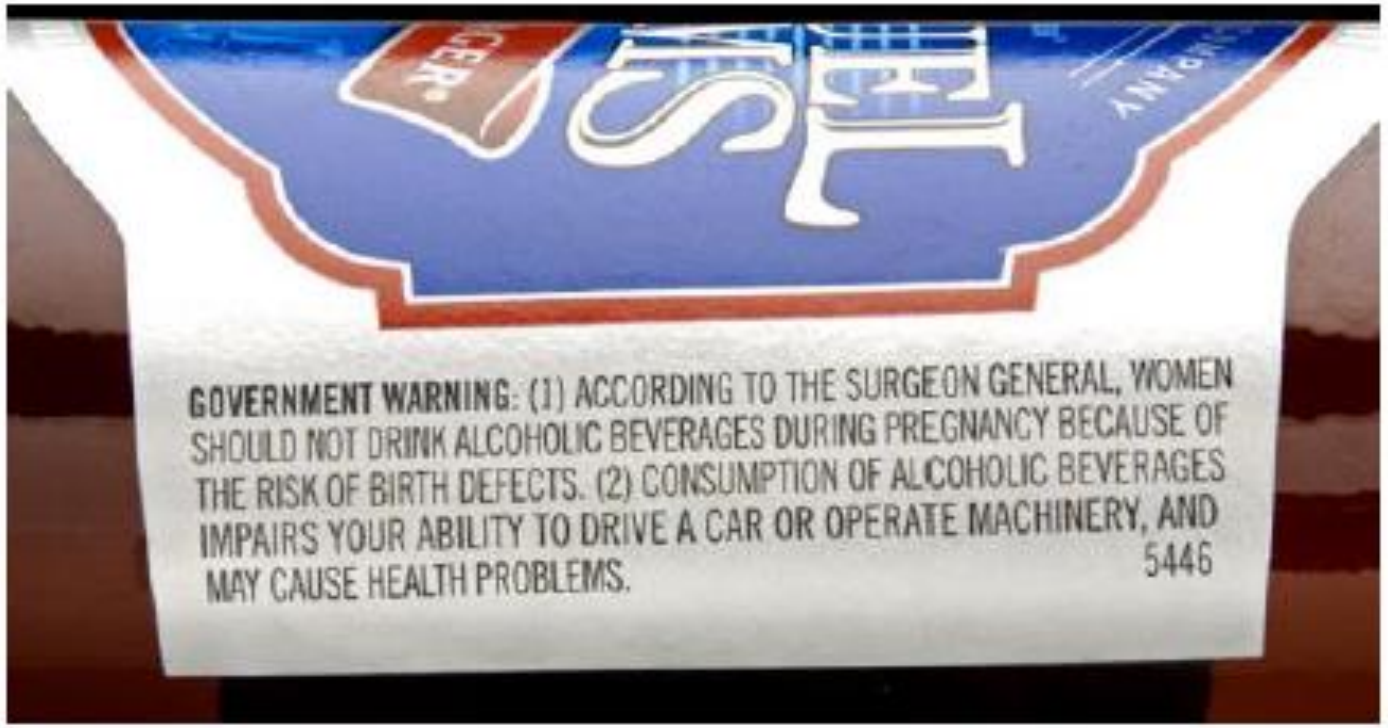
Alcohol Use-Fetal alcohol spectrum disorder (FASD)

Fetal Alcohol Spectrum Disorder

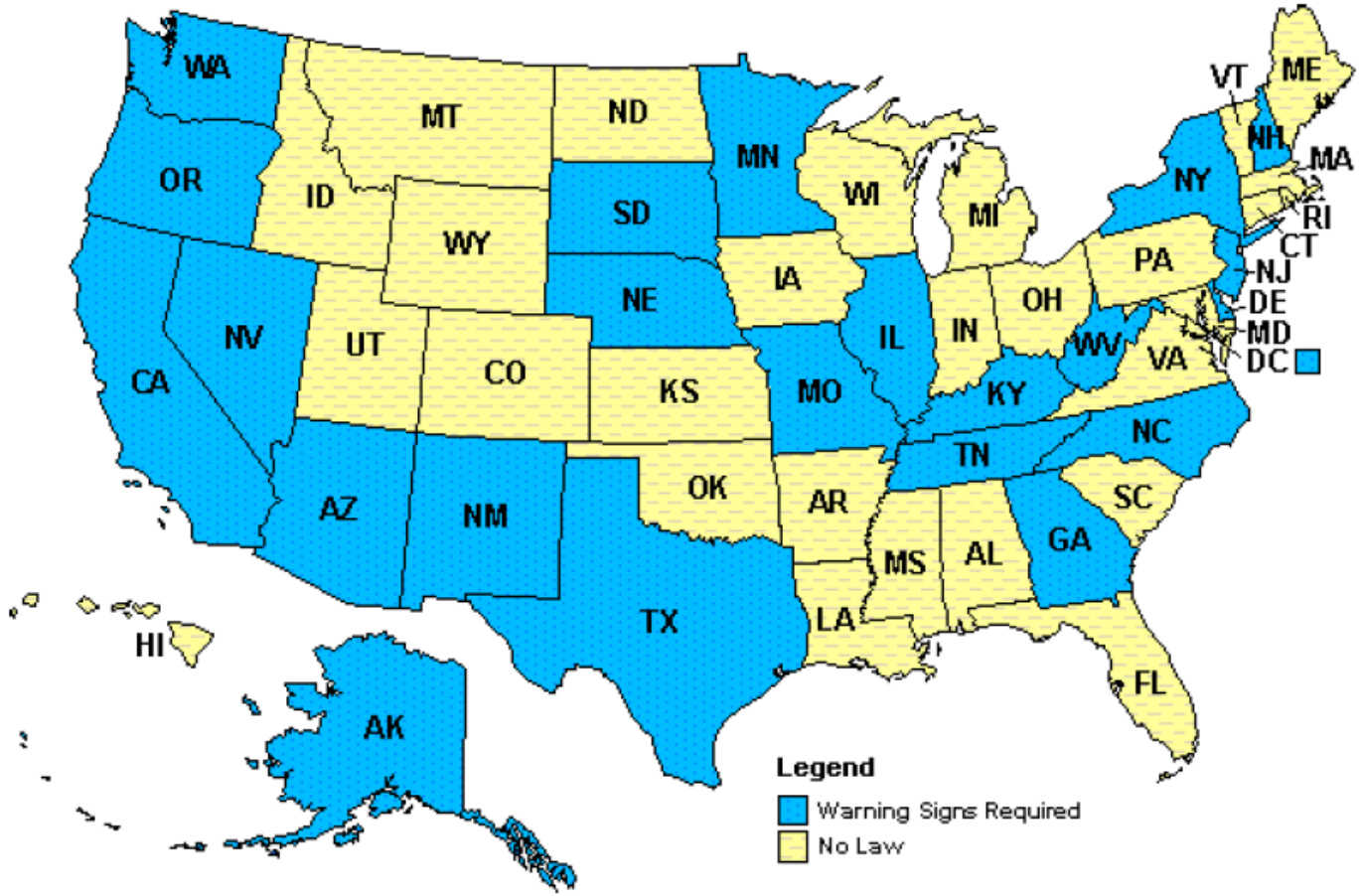
- Present in 1% (2-4%) of newborns
- Leading cause of mental retardation in the United States
- 1 in 30 pregnant women drink at a level that can result in FASD

May, 2014; Chang 1994

Alcoholic Beverage Labeling Act of 1988



Mandatory warning signs 2009



Impact of warning signs

Increased awareness

Did not decrease alcohol consumption

- Warnings at college reading level
- Minimal penalties for not complying

ACOG 2015

Screen all women at first prenatal visit

Use a validated form

Process in place for patient brief intervention, referral

Screening for alcohol use in pregnancy

Brief interventions (motivational interviewing) more effective than “advice”

- 70% effective in decreasing use

Provider engagement more effective than patient materials

Misperceptions continued

"Some types of alcohol are OK"

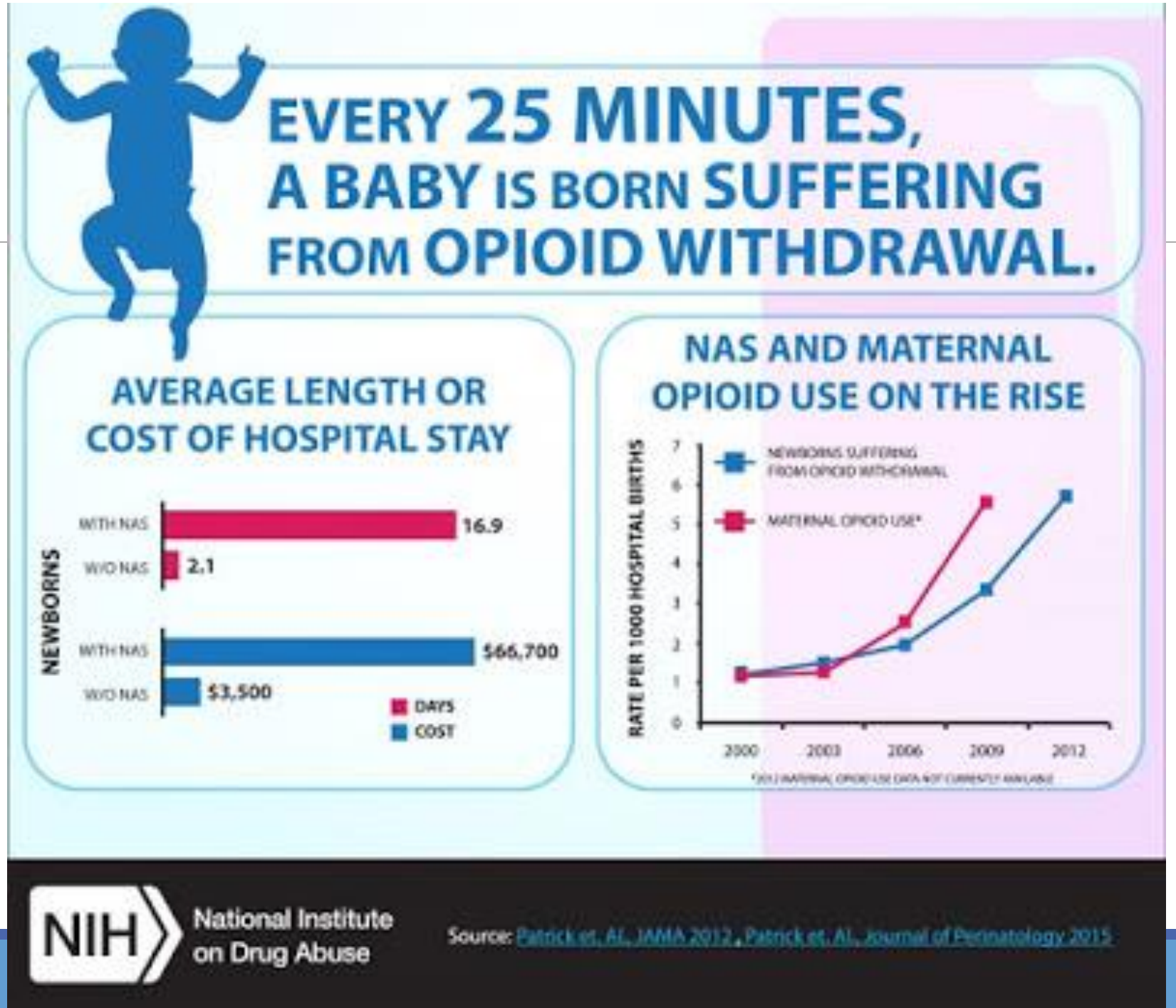
"Drinking in the third trimester is fine"

"My doctor said a small amount is OK"

"I can drink until the pregnancy is confirmed without risk"

Elek, 2012

ACOG /CDC 2018 – Fetal alcohol prevention website


EVERY 25 MINUTES,
A BABY IS BORN SUFFERING
FROM OPIOID WITHDRAWAL.
AVERAGE LENGTH OR
COST OF HOSPITAL STAY
NEWBORNS
WITH NAS
16.9
W/O NAS
2.1
WITH NAS
$66,700
W/O NAS
$3,500
DAYS
COST
NAS AND MATERNAL
OPIOID USE ON THE RISE
RATE PER 1000 HOSPITAL BIRTHS
NEWBORNS SUFFERING
FROM OPIOID WITHDRAWAL
MATERNAL OPIOID USE*
0
1
2
3
4
5
6
7
2000
2003
2006
2009
2012
NIH
National Institute
on Drug Abuse
Source: Patrick et. AL, JAMA 2012, Patrick et. AL, Journal of Perinatology 2015

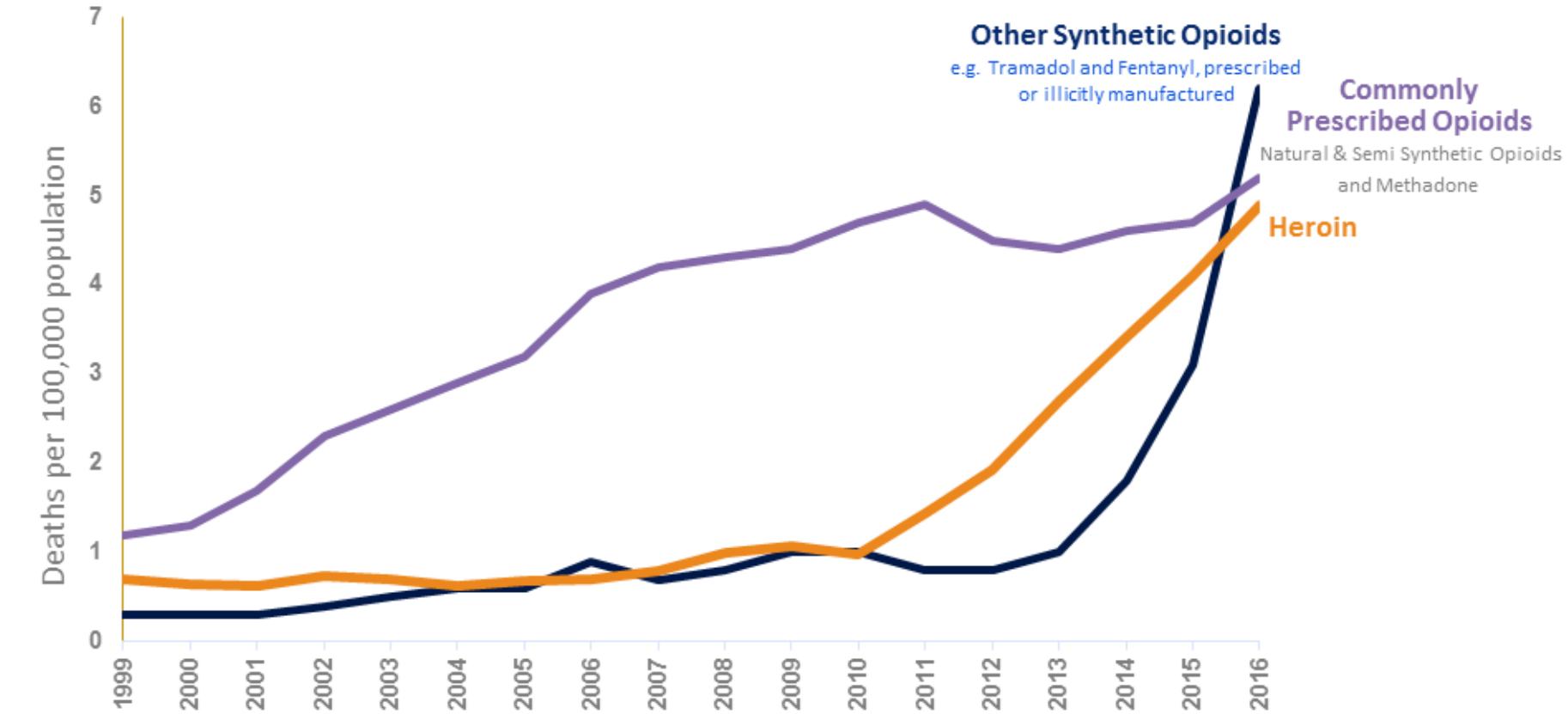
Prescription opioids

1/3 of reproductive age women prescribed an opioid medication past year

- Compared to men, more likely to be prescribed opioid meds, take for longer time
- Post surgical, infections, chronic disease and injury

Limit prescribing, decrease amounts, monitoring board

3 Waves of the Rise in Opioid Overdose Deaths

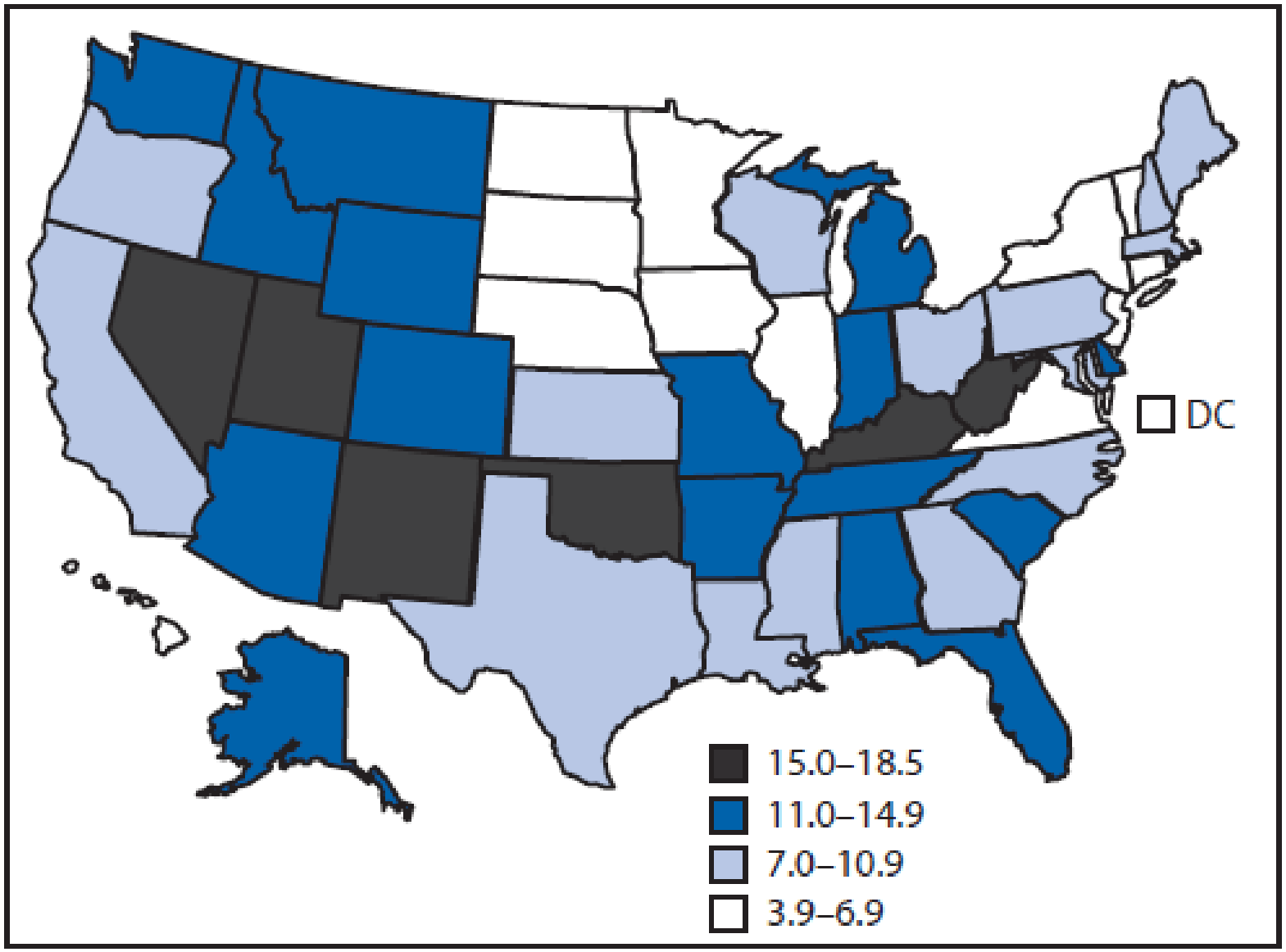


Wave 1: Rise in Prescription Opioid Overdose Deaths

Wave 2: Rise in Heroin Overdose Deaths

Wave 3: Rise in Synthetic Opioid Overdose Deaths

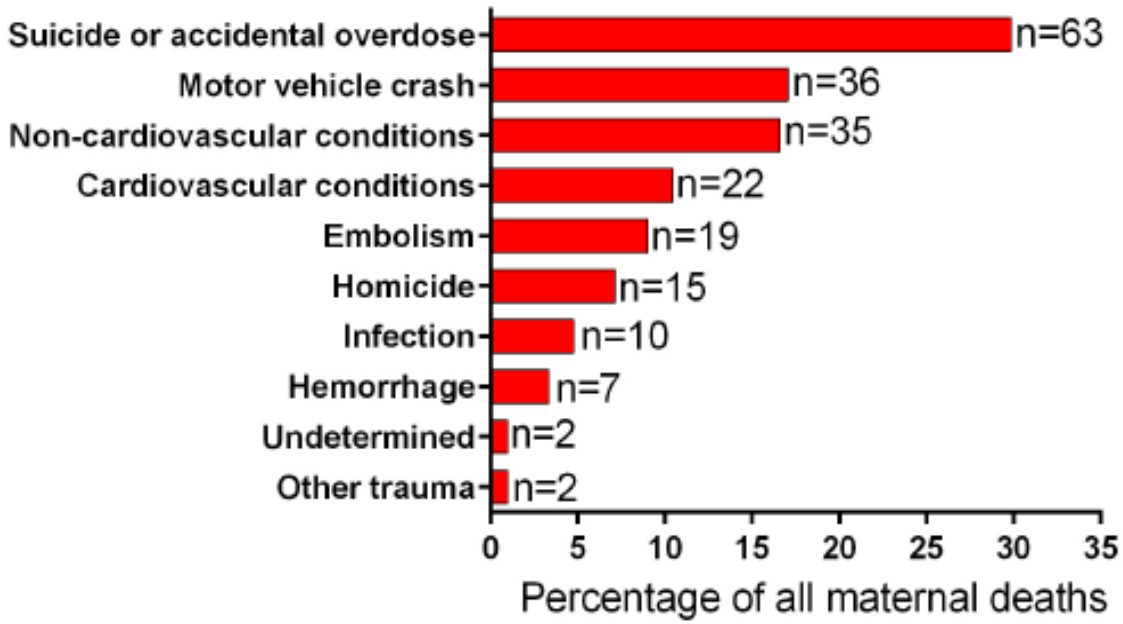
SOURCE: National Vital Statistics System Mortality File.



Age-adjusted death rates for drug overdose deaths among women 2010.

CDC 2013

Maternal mortality at 1 year postpartum in Colorado (2004-2012)



1/3 of PP deaths

(Metz, 2016)

Maternal mortality at one year postpartum

Opioids, followed by alcohol

Depression common

- Half on medication at conception
- Half discontinued medications and did not restart
- Half did not attend postpartum visit

A quarter had no risk factors – neither depression or drug use

MA 2011 -2015 DPH Data Brief Aug 2017

More than a third (38.3%) of maternal deaths up to 1 year were opioid overdoses.

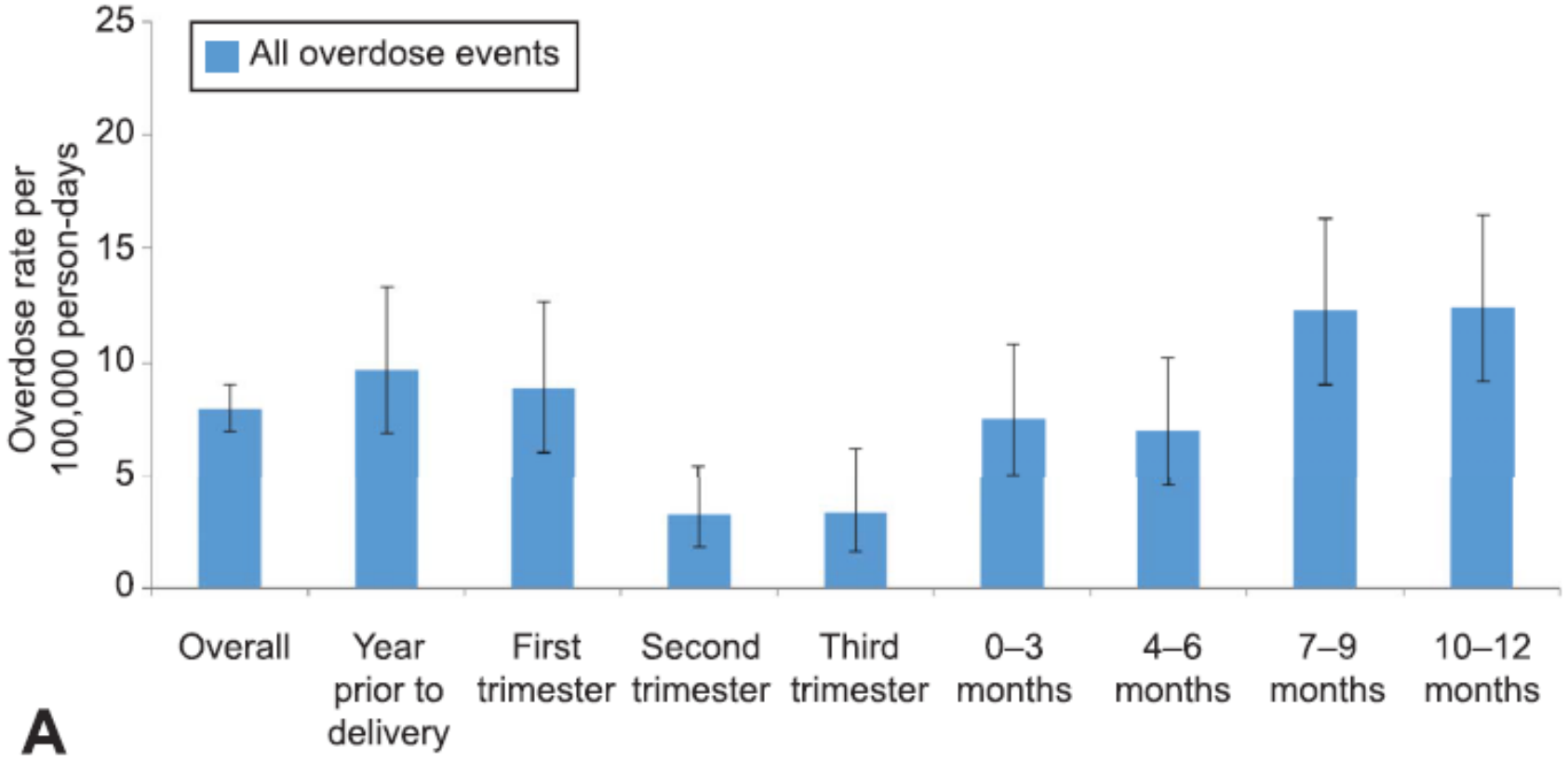
Among a comparable non pregnant age group, a fifth (19.9%) were opioid-related overdoses

MGH, 2018 (2011-2014)
Opioids in pregnancy

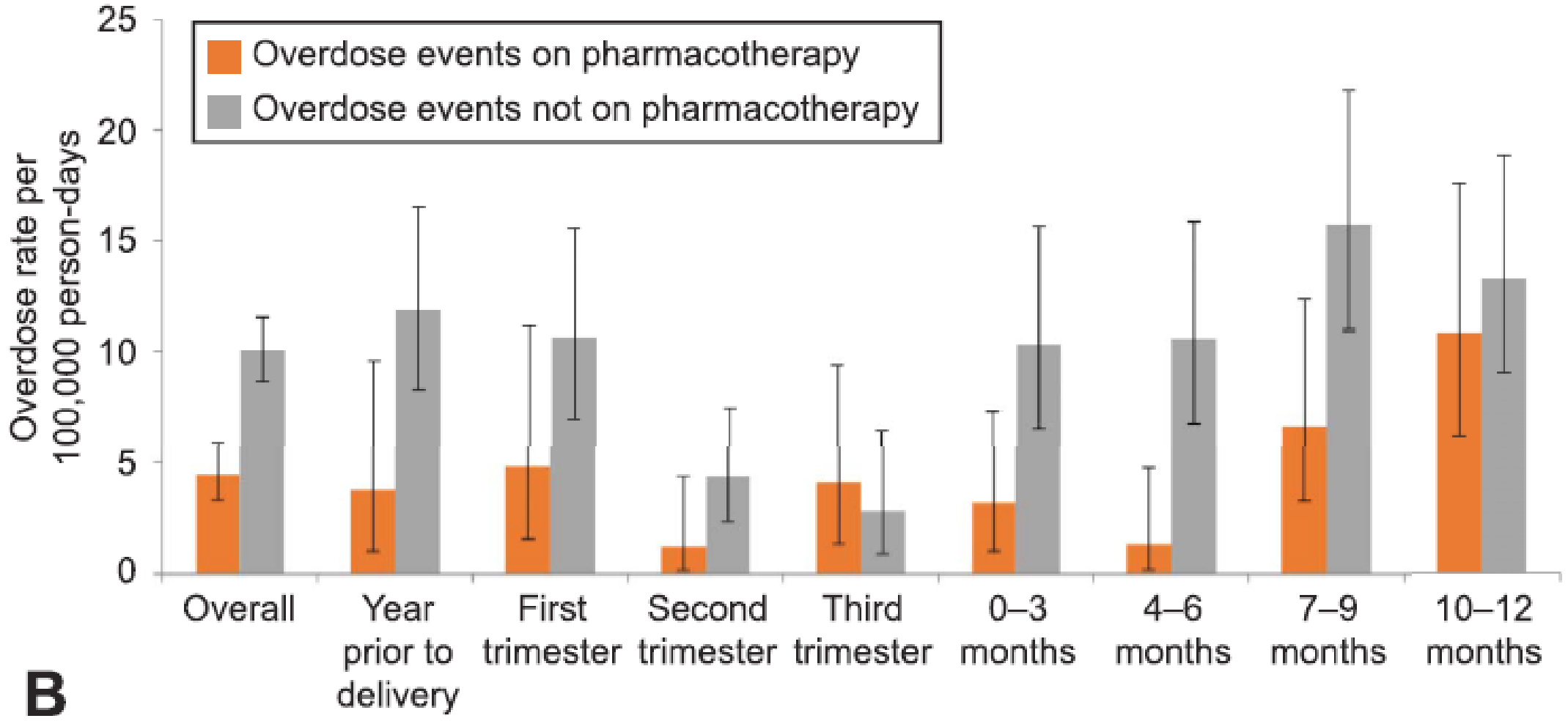
Opioid use rate	2.3%
Overdose rate (among users)	4.5%
Overdoses in women with no recognition of opioid use	42.3%

Schiff, 2018

Massachusetts General Hospital
(2011-2014)



Schiff, 2018


Overdose events on pharmacotherapy
Overdose events not on pharmacotherapy
Overdose rate per 100,000 person-days
25
20
15
10
5
0
Overall
Year prior to delivery
First trimester
Second trimester
Third trimester
0–3 months
4–6 months
7–9 months
10–12 months
B

Cross-over with Depression

MA DPH Data Brief Aug 2017

	Depression
Opioid overdose	85%
Opioid use	61%
No use	19%

ACOG Screening for drugs of abuse (8/2017)

- Routine, consented screening for all at first visit
- Validated questionnaires
- Brief intervention, referral

Resources for pregnant/postpartum

Outpatient only	13%
Residential	13%
Hospital inpatient pregnant/postpartum	7 %

National Survey of Substance Abuse Treatment Services, 2012

Pregnancy-Related Care Research Network and Healthy Habits

Depression (1999, 2011)

- Diagnosed, SSRIs
- ¾ screened for postpartum depression

Alcohol (2000, 2010)

- Little change-majority asked, advised, no tools/intervention

Drug use (2000)

- Majority asked, advised abstinence, 1/3 drug tested

Moving the needle

- Approach obstetric care as a time for healthy habits screening and life-style adjustments
- Reconsider number of visits in 6 week postpartum period
- Engage pediatricians, primary care, home health, community programs
- Develop transition plans for 6 weeks – 1 year as opposed to referrals

A Stuebe, 4th trimester, ACOG 2018

Much to do, but much to gain

Thank you for your attention

lwilkinshaug@partners.org

Questions?
Comments?

Technical Instructions

- To ask a question on the Web, please enter your question in the field at the bottom of the “Q&A” field on your screen and press your Enter key. Your question will be sent directly to the moderator.
- A copy of the slides are available for download in the “Downloads” field on your screen. Highlight the title of the document, then select “Save to My Computer.” A separate browser window will open offering further instruction.

Connect with HRSA

To learn more about our agency, visit

www.HRSA.gov

Sign up for the HRSA *eNews*

FOLLOW US: