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Cedars-Sinai

**Overcoming Disparities in African American
Infant and Maternal Mortality:
Preterm Birth—Maternal Considerations**

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Disclosures

Relationship	Company(ies)
Speakers Bureau	March of Dimes (MOD) Preterm Birth Prevention
Advisory Committee	California Technology Assessment Forum (CTAF); Office Research Women's Health Advisory Board
Consultancy	N/A
Review Panel	AHRQ EPC Achieving Health Equity in Preventive Services; NQF Reproductive Health Measures; CDC Prevention Network
Board Membership	Essential Access Health
Honorarium	CTAF, CDC, ACOG, MOD
Ownership Interests	N/A

No off label use of medications

Objectives

- By the completion of this lecture, participants will be able to
 1. Describe healthcare disparities in medicine and as it relates to maternal mortality and preterm birth
 2. Describe risk factors for preterm birth
 3. Develop action items to improve access to evidence-based treatment that can decrease risk of preterm birth
 4. Describe evidence-based obstetrical practices of what to do if preterm birth is anticipated



Healthcare Disparities in Medicine



KD Gregory ABWP AIM Sept 2020



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Seminal Papers/Resources

- IOM Unequal treatment, Report of IOM on racial and ethnic disparities in healthcare
- Brookings Institution Time for Justice: Tackling Race Inequalities in Health and Housing
- Healthy People 2020
- AHRQ Annual National Healthcare Quality Report; National Disparity Report
- CDC Disparity Report
- NIH Office of Minority Health (Women's Health)



What do we know about healthcare disparities?

- compared with whites, black patients are referred to **see specialists** less often, receive less appropriate **preventive care**, have fewer **kidney and bone marrow transplants**, receive fewer **anti-retroviral drugs for HIV** and get fewer **prescriptions of antidepressants** for diagnosed depression. They are also **admitted** less often than whites for similar complaints of **chest pain**.

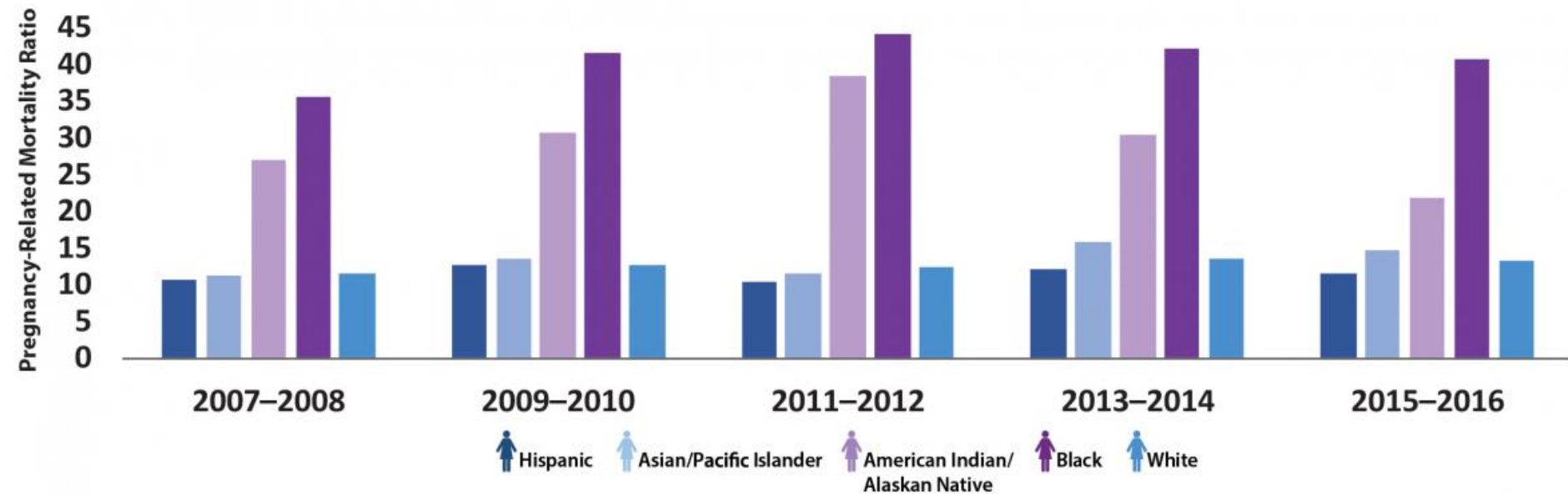
<https://www.hhnmag.com/articles/7962-why-ending-disparities-in-health-care-must-start-at-the-top>



Reproductive and Perinatal Health Disparities

- Women of color (Black, and indigenous people) have higher rates of maternal mortality and severe maternal morbidity
- Increased rates of diabetes, hypertension, obesity, cesarean delivery
- Increased rates of ob complications gestational diabetes, preeclampsia, cardiac disease
- Increased rates of preterm birth
 - Spontaneous preterm birth
 - Spontaneous rupture of membranes
 - Preeclampsia (indicated preterm birth)

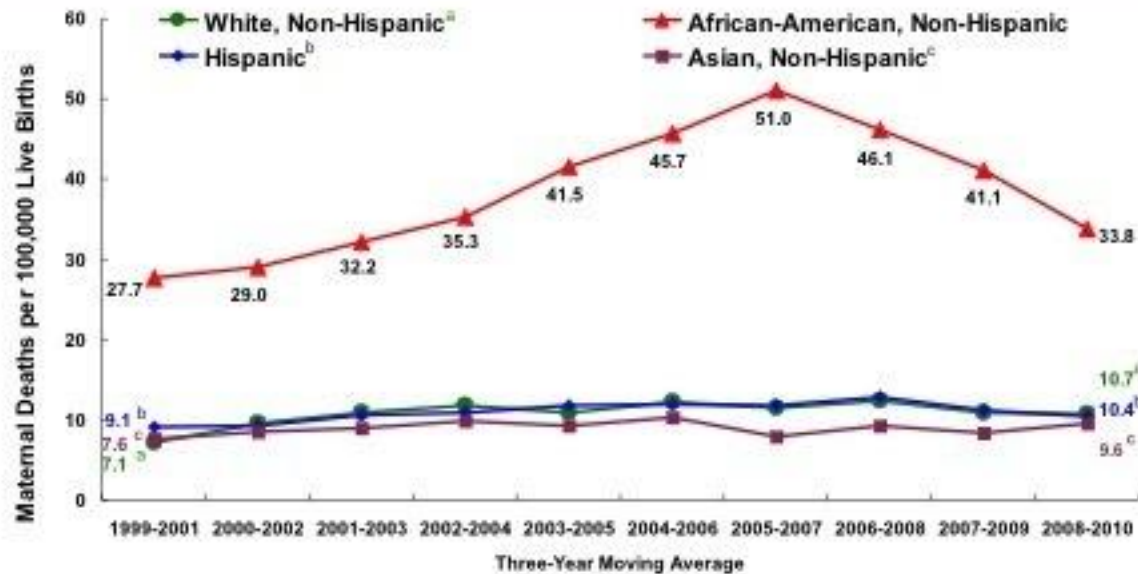




What do we know about disparities in maternal mortality?



Maternal Mortality Rates by Race/Ethnicity, California Residents; 1999-2010



- AA 4x increased risk of death
- Hispanics comparable to White
- Asians have lowest MMR
- **HP 2020 11.4/100,000**
- Poor international rank related to health disparities

SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2010. Maternal mortality rates for California (deaths ≤ 42 days postpartum) were calculated using the ICD-10 codes for 1999 to 2010. Produced by California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, December, 2012.

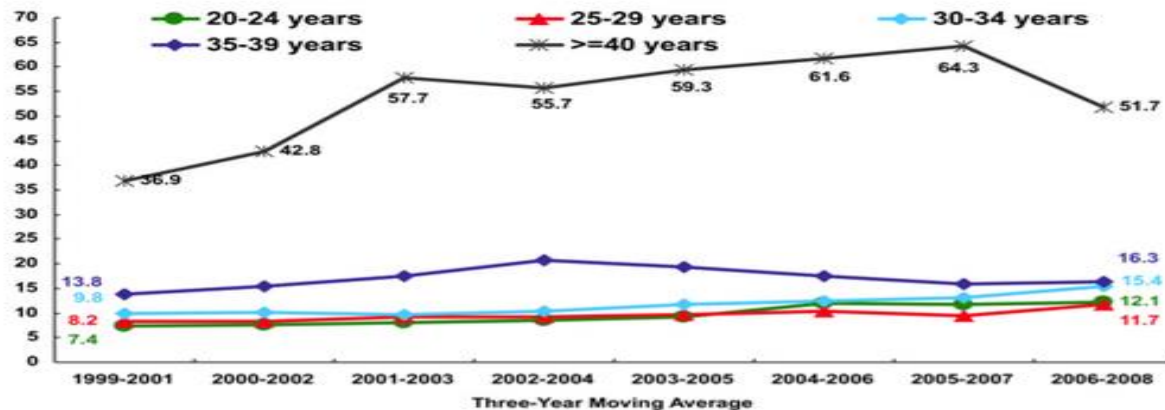
cmqcc.org/maternalmortality, accessed 9/3/2013

Why is maternal mortality increasing?

How does this relate to disparities?

- Increased case ascertainment—expanded case definition to include 1 yr; added variable on death certificate; looked at linked files—active case finding
- Delayed childbearing (older women at increased risk)
 - Average age of women giving birth is gradually increasing

Maternal Mortality Rates by Age Group, California Residents; 1999-2008



SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2008. Beginning in 1999, maternal mortality for California (deaths \leq 42 days postpartum) was calculated using ICD-10 cause of death codes A34, O00-O95, O98-O99. Produced by California Department of Public Health; Maternal, Child and Adolescent Health Division, December, 2010.

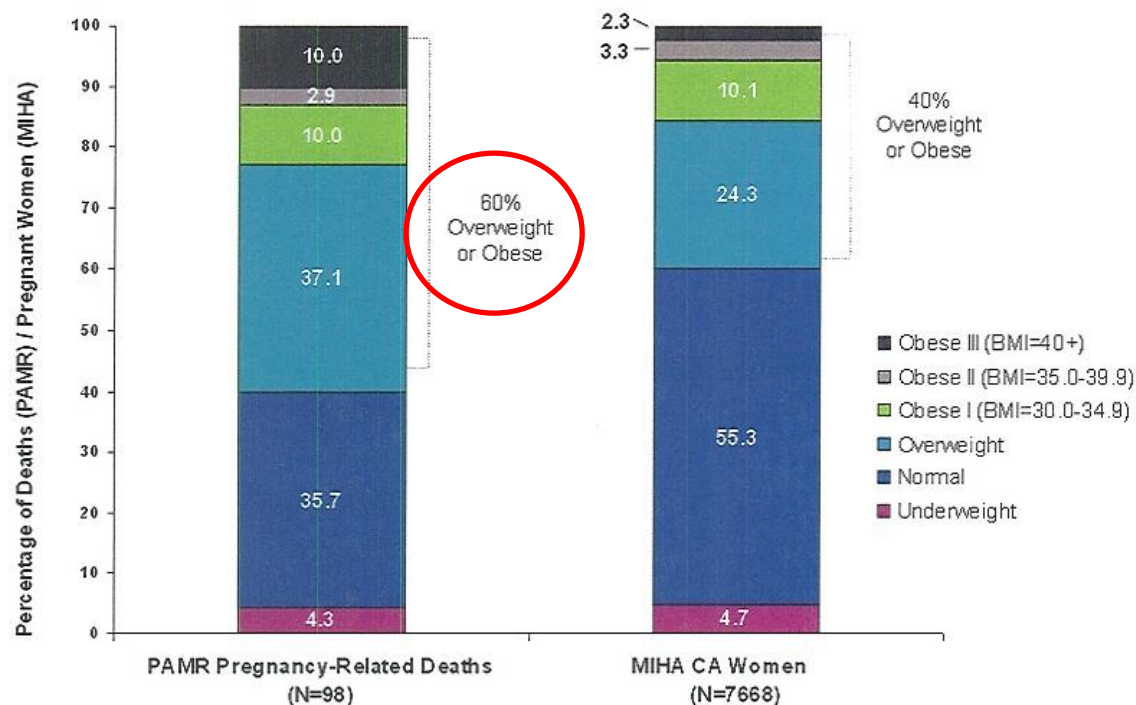
cmqcc.org/maternalmortality, accessed 9/3/2013

Why is maternal mortality increasing?

How does this relate to disparities?

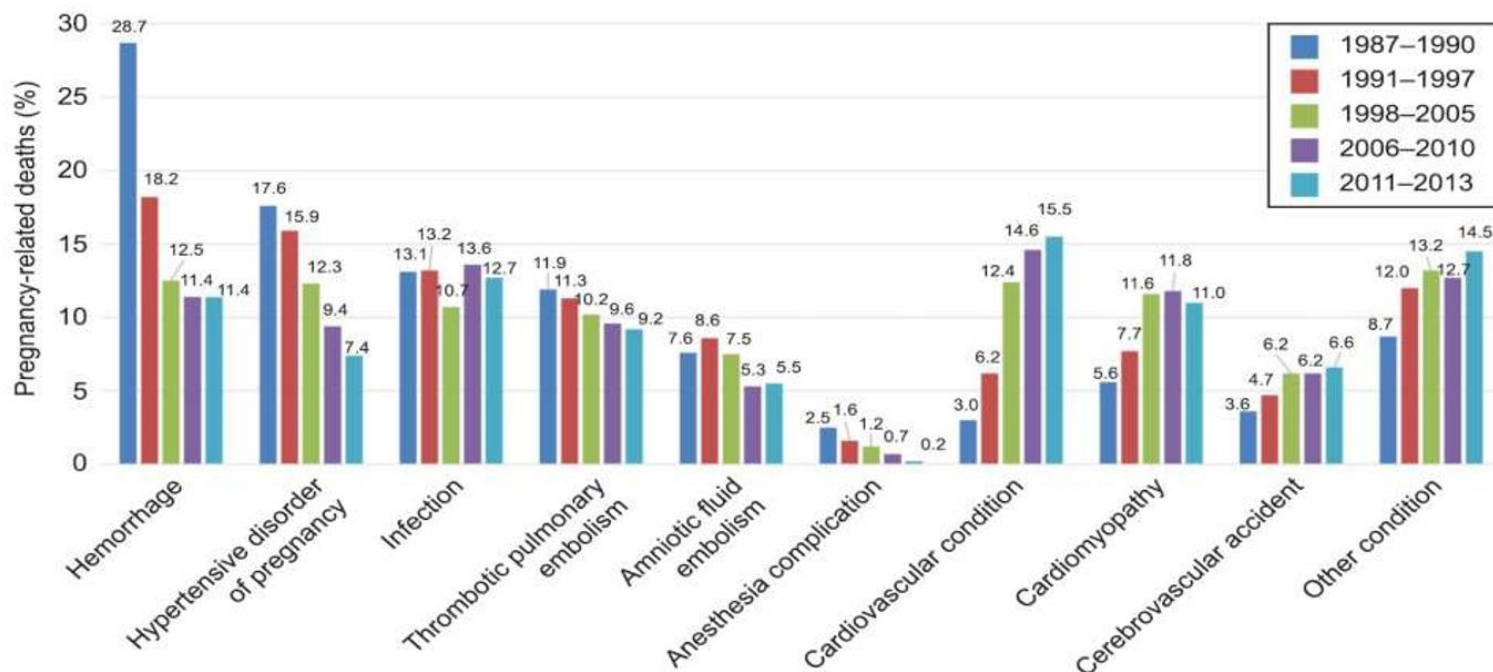
- Obesity was significant risk factor for maternal mortality

Figure 10. Pre-pregnancy BMI Status of CA-PAMR Pregnancy-Related Deaths and all Women with Live Births, California; 2002-2003



cmqcc.org/maternalmortality, accessed 9/3/2013

Cause-specific proportionate pregnancy-related mortality: United States, 1987–2013.



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

What can we do about it?

- Social factors such as low levels of social support, low SES, chronic exposure to environmental hazards/stress (allostatic load) including racism and difficulty accessing care
 - Stop tendency to focus on individual level risk factors;
 - Need to expand to social determinants of health
 - Characteristics of communities can mitigate (good or bad) health
 - Some segregated communities promote good behaviors, provide social support and coping mechanisms
 - (esp Hispanic communities; some not all AA communities— requires cooperating “kinsmen” or multigenerational neighbors)
 - Roberts 1997, AJP; Stack, 1974; Culhane & Elo 2005, AJOG



Given what we know what can we do about it?

- Acknowledge that women of **color** are different
- Black women are different (individually and as a group)
- They are different and they are treated different
- How that difference is measured, characterized, yet to be determined...genetic, metabolic, proteonomic, social....
 - Globally across the world maternal mortality risk for women of African ancestry is greater
 - Africa; all countries where they migrate (UK, Netherlands, Caribbean, US)
 - Disparity not adequately defined by SES, segregation
 - Zwart et al 2010, Europ J Pub Health



Given what we know...what does evidence suggests?

- **Best practices. Learn from places where MMR is improving**
- Approach the national maternal mortality “gap” by treating/conceptualizing care for AA women as though they are receiving care in a “developing country”
- Developing countries making great strides towards the Millenium Goal 5
 1. Needs to be an **ongoing political will** to address the problem
 2. Skilled **(INTERESTED) birth attendant**
 - Provider attitude, communication
 - Providers that look like them
 - Continuity of providers and/or accountability between inpatient and outpatient
 - Seamless communication across providers/sites/visits especially if seen more than once, at same or different site
 - Likely need more mid-level clinicians (time); lay persons/educators

Given what we know...what does evidence suggests?

- **Best practices. Learn from places where MMR is improving**
 3. **Contraception**—prevent pregnancy;
—address “wantedness”; avoid unintended or mistimed pregnancy
 4. Address education, economic empowerment early
—(teens, young adults)

Given what I know, what potential tests of change can we consider?

- Treat different...in a good way
- Develop a **research program to isolate best practices for standardized treatment of black women** comparable to the goals of emerging guidelines for tx of “HTN, DM, obesity”
- Being Black or AA is significant risk factor for all those conditions, and in most instances is a more prevalent condition
- AA could or should be a “**trigger**” for **enhanced scrutiny, care**, sticking to the protocol



Weathering hypothesis

- Stress, inflammation, “**allostatic load**”—when faced with an acute event, women of color may have less resources to recruit/combine/overcome; less resilient.

—What interventions can be brought to bear to decrease/ameliorate these changes?

Cumulative exposure to economic disadvantage



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Reducing Disparities in Preterm Birth AND Reducing Disparities in Preterm Birth Prevention



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Decreasing Preterm Birth: How to do it?

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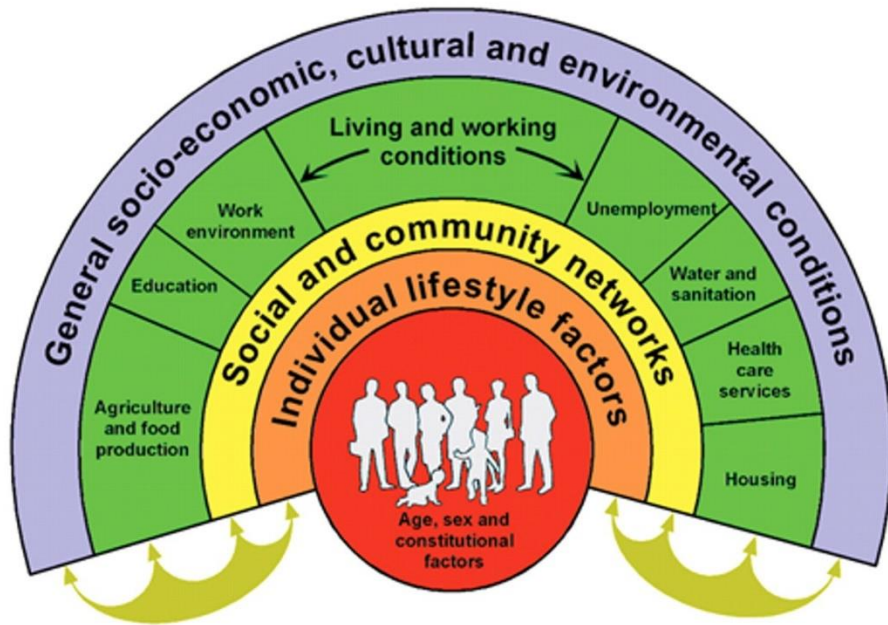
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Fielding School of Public Health



Social Determinants of Health

Individuals
Patients/providers
Hospitals
Communities
Payers



Preterm birth statistics



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- As many as 11.4 percent of all pregnancies end in early deliveries.
- About 450,000 babies in the United States alone are born too soon and 15 million babies are born preterm around the world - that's 1 in 10!
- 80 plus percent of preterm births are unanticipated.

Risk factors for preterm birth

Some Factors Associated with Preterm Birth

Social, Personal, and Economic Characteristics

- ✓ Teens and women over age 35
- ✓ Black race
- ✓ Women with low income

Pregnancy and Medical Conditions

- ✓ Prior preterm birth
- ✓ Infection
- ✓ Carrying more than 1 baby (twins, triplets, or more)

Behavioral

- ✓ Tobacco use
- ✓ Substance use
- ✓ Stress



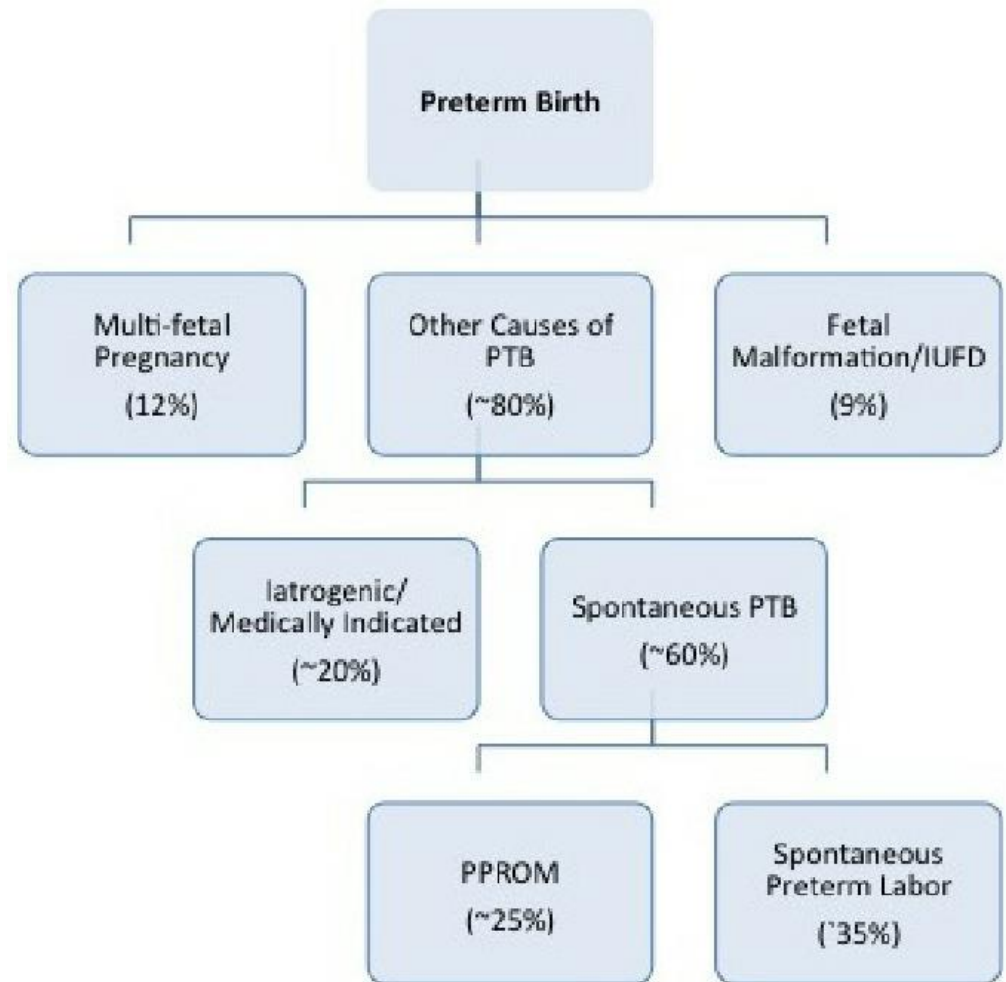
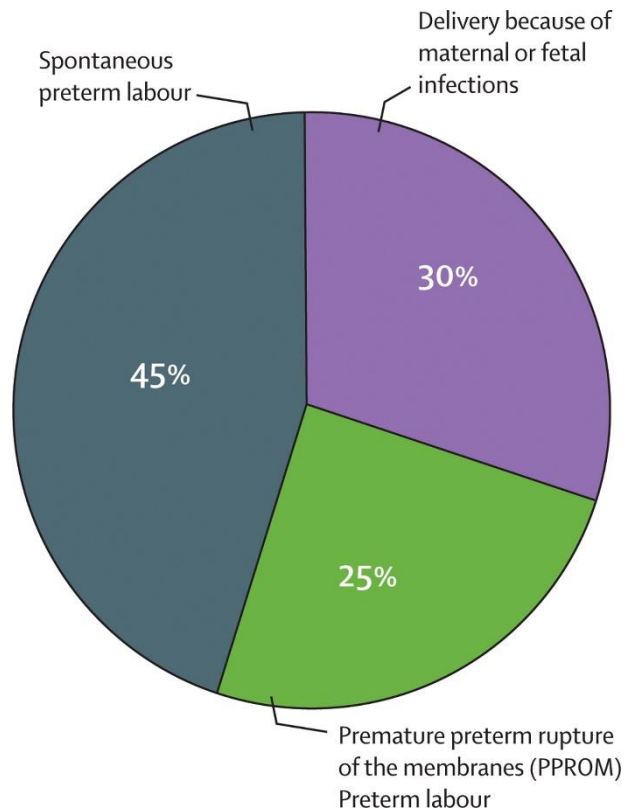
For more information visit: www.cdc.gov/reproductivehealth/MaternalInfantHealth/PretermBirth.htm

National Center for Chronic Disease Prevention and Health Promotion
Division of Reproductive Health



- Having had preterm birth previously
- Pregnancy with more than one child
- **Interval of less than 6 months between pregnancies**
- **In vitro fertilization**
- Uterus, cervix or placenta problems
- **Cigarette smoking and drug usage**
- **Drinking alcohol**
- Being pregnant with a baby with certain birth defects
- Infection of amniotic fluid or lower genital tract
- Condition such as blood pressure and diabetes
- Multiple abortions or miscarriages
- Trauma
- **Stressful events such as domestic violence**
- **Pregnancies at an age below 17 or after 35**
- **BOLD: potentially modifiable**

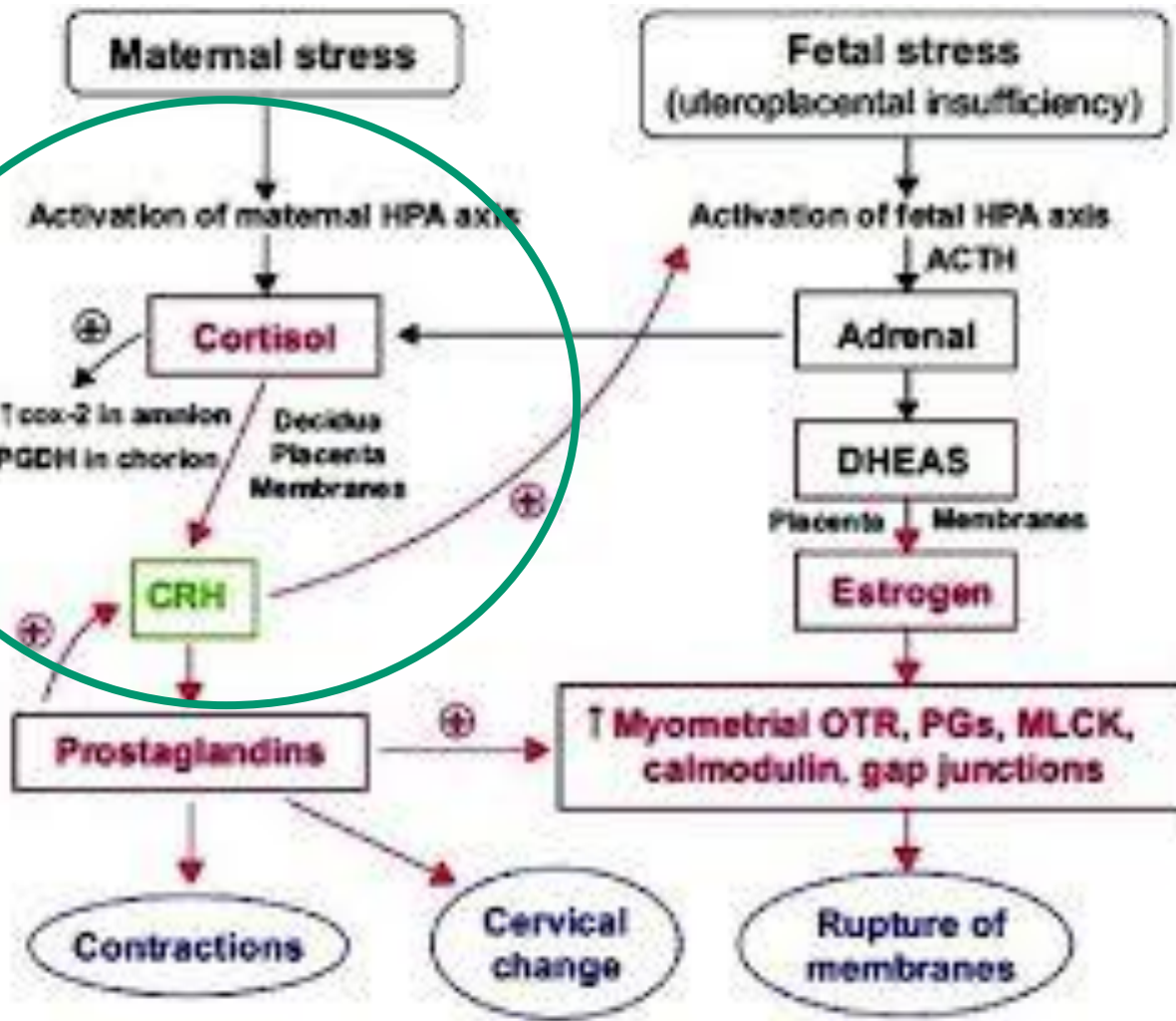
Reasons for preterm birth



Pathophysiology of spontaneous preterm birth

Infection

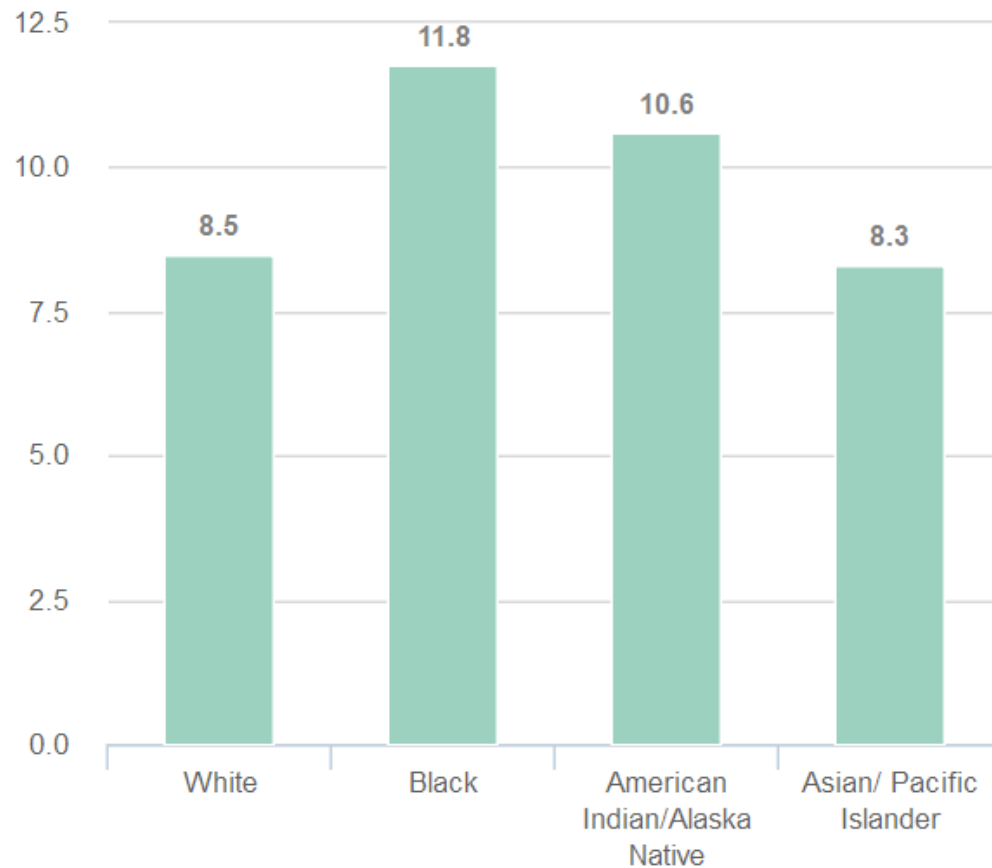
Bleeding



PRETERM BIRTH BY RACE

California, 2016-2018 Average

Percent of live births



Preterm is less than 37 weeks

Source: National Center for Health Statistics © 2020 March of Dimes Foundation. All rights reserved.

Evidence-Based Strategies for Individuals (patients)



1. Smoking cessation

- Smoking associated with fetal growth restriction, abruption, PTB and SIDS
- **1990 US Surgeon General:**
 - stop smoking before pregnancy or 1st trimester reduce risk to that of “never smoked”
- **Meta-analysis smoke free legislation America & EU:**
 - 10% reduction in PTB's



2. Optimize birth spacing, pregnancy intention

- 50% of births unplanned or unintended
- 30% of women have short birth spacing
 - (<18 months)
 - Ideal >18-24 mos

Evidence-Based Strategies for Providers



2. Optimize birth spacing, pregnancy intention

— Be sure to ask

- “what is your reproductive life plan?”
- “Are you planning to get pregnant in the next year?”

— Be sure to offer

- No cost share FDA approved contraception



Evidence-based Strategies for Providers

- WELL WOMAN VISITS include PRECONCEPTION counseling for AA women on PTB risk and how to reduce it
- Optimize medical conditions (diabetes, hypertension, weight loss)
- Stop smoking, drinking, drugs
- Prenatal vitamins (folate)



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Evidence-based Strategies for Providers



- Well woman visits include INTERCONCEPTION counseling
 - starts the day after delivery, documented in chart, reinforced with subsequent visits
- Outreach to ensure 3-6 week postpartum visit and follow up re: interconception health needs
 - Special protocol for AA moms: extra time to make sure she understands her increased risk for subsequent PTB, CVD, depression, demands for medically fragile premie
- **Especially pertinent: inform women with preterm birth at risk for RECURRENT preterm birth, seek treatment early with subsequent pregnancy**



Evidence-based Strategies for Provider

- Intake assessment at first prenatal visit on social support, social barriers AND referring eligible AA women to community support and public health programs such as BIH, WIC, Home Visiting; consider referrals for stress management if desired
- Inform patient what to say if they think they might be in PTL, emphasize that this means they **need to be seen** and assessed right away
- Key words....Especially AA moms—the first thing they should say; “ **I have already had a preemie**”
- **Less triage over the phone....**see the patient
- Group prenatal care



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Evidence-Based Strategies for Providers

2. IVF-limit to one embryo

- 60% twins born preterm;
 - average 35 weeks
- 50% twins deliver before 37 weeks
- 10% twins deliver before 32 weeks

Cute, but high risk!



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Evidence-based Strategies for Providers

- Eliminate non-medically indicated early elective delivery
 - **Avoid inductions before 39 weeks**
- **Low dose aspirin to prevent preeclampsia in high risk women**
- **Access to progesterone (17-OH-P) for women with prior PTB**
- Measure **cervical length** at 20 week anatomy scan
 - **<2.5 cm 20% risk preterm delivery**
- Vaginal progesterone and cerclage for women with short cervix
 - **Cost effective**
- Progesterone treatment decreases PTB by 50% compared to placebo



Evidence-based Strategies for Hospitals

- 100% commitment (as a QI project) to a preterm labor assessment protocol and implementation of PTL toolkit; **standardized protocols—equitably applied**
- Prenatal birth classes free of charge for all women with a focus on education about preterm labor, signs and symptoms and what to do
- Less triage over the phone, go see your doctor or come in



Evidence-based Strategies for Hospitals

- Ensure access to postpartum LARC
 - (policies, inventory, trained providers)
- PTB moms:
 - is there special discharge education,
 - do they offer special follow-up?
 - Some hospitals follow-up with recently discharged patients to reduce readmission- are they doing this for postpartum moms with tailored follow-up?



Insurers—what can you do?

- Benefits recognize that “well woman visits” is **plural** includes preconception, interconception, pregnancy and postpartum care
- Work with business community to **stop targeted marketing of tobacco** in AA community with an emphasis on impact on PTB, SIDS, asthma, etc.
- **Pay for serial cervical length assessments** in women at risk
- **Remove pre-authorization requirements for progesterone**, can take weeks to get approval. Cover generic progesterone
- Establish perinatal care managers to identify/assist/educate AA moms



Public Health (state and local partnership)

- Strategic health information campaign regarding risks and ways to maximize health
- Birth spacing awareness campaign and where to go for reproductive planning
- More information to public re: normal gestational age ≥ 37 weeks. *“normal outcome” for prior preterm baby is not “normal”*
- Ask community/ad execs to help with messages specific to AA population and other “at risk” vulnerable populations
- Prepare packet on social supports and resources for providers to give to each patient after the first prenatal visit.
- Regular reporting on data outcomes, stratified by race
- Support for a “backbone” team to reach out and coordinate to partners in housing, transportation, community safety, food access—Health in all policies



KD Gregory A. FALM Sept 2020



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Community leaders (business, elected, non-elected)

- Examine data from Health Disadvantage Index to understand the measures of disadvantage and make a list of can do's and prioritize them
- Meet with key businesses to identify role and opportunities for improving AA birth outcomes through worksite initiatives and incentives



Community groups (including churches):

- How can they support AA moms?
 - Create a caring circle around her— provide meals, babysitting for other children while she takes herself/preterm baby to appointments, help with transportation to appointments, etc.
- Help educate all generations and men about birth spacing so women are supported in their reproductive life planning?



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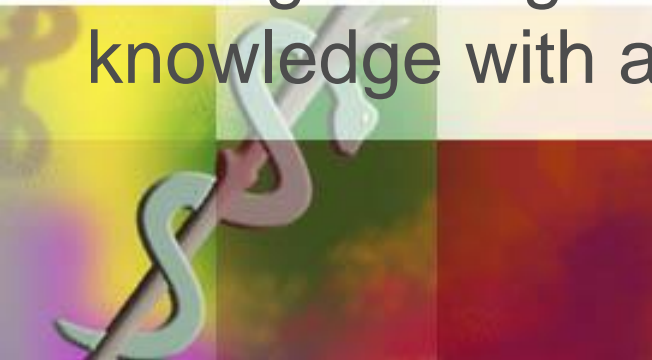


Evidence-based Strategies for Preterm Birth Prevention: Do they work?



Does it make a difference?...Real life evidence

- Australia implemented 6 of proposed strategies
Newham JP et al AJOG 2016
- “thewholeninemonths”
- 12 months evaluation: reduced rate of PTB by 7.6% compared to prior year
- Estimated 200 preterm births prevented
- Conclude: multifaceted geographic based PTB prevention program in a relatively high resource setting can significantly reduce the PTB using existing knowledge with an effect of 7-8%



Prematurity Campaign Interventions

1. Smoking cessation
2. Optimize birth spacing and pregnancy intentionality
3. Eliminate non-medically indicated early elective deliveries (inductions and c-sections)
4. Group prenatal care
5. Low-dose aspirin to prevent preeclampsia
6. Access to progesterone shots for women with a previous preterm birth
7. Vaginal progesterone and cerclage for short cervix
8. Reduce multiple births conceived through Assisted Reproductive Technology



Best way to avoid maternal mortality and preterm birth...

Primary Prevention!



SEE WHAT KISSING
CAN LEAD TO?



QUESTIONS?

