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# Addressing Healthcare Disparities in Postpartum Hypertension Care through Clinical Pharmacist Integration

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# Disclosures

- I have no financial disclosures or conflicts of interest

# Pharmacist Objectives

1. **DESCRIBE** healthcare disparities within postpartum care and their impact on adverse health outcomes and maternal mortality

2. **RECALL** common barriers to care that patients face within the postpartum period

3. **DISCUSS** methods of closing healthcare gaps through interprofessional collaboration and utilization of telehealth

4. **UNDERSTAND** how pharmacists can address healthcare disparities and barriers to enhance postpartum hypertension control and improve health outcomes

# Pharmacy Technician Objectives

1. **DESCRIBE** healthcare disparities within postpartum care and their impact on adverse health outcomes and maternal mortality

2. **RECALL** common barriers to care that patients face within the postpartum period

3. **DISCUSS** methods of closing healthcare gaps through interprofessional collaboration and utilization of telehealth

4. **UNDERSTAND** how pharmacy technicians can address healthcare disparities and barriers to enhance postpartum hypertension control and improve health outcomes

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# Background

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# Question #1

True or False: Maternal morbidity in the United States has been decreasing over the past three decades.

a) True

b) False

# Maternal Morbidity in the United States

Maternal morbidity has **doubled** within the past three decades

**40%** of all maternal deaths occur during the **first 6 weeks postpartum**

Cardiovascular causes account for **nearly half** of all maternal deaths

**60%** of pregnancy-related deaths are preventable

MMWR Morb Mortal Wkly Rep 2019;68:423–9
J Am Heart Assoc. 2021 Aug 3; 10(15): e022040

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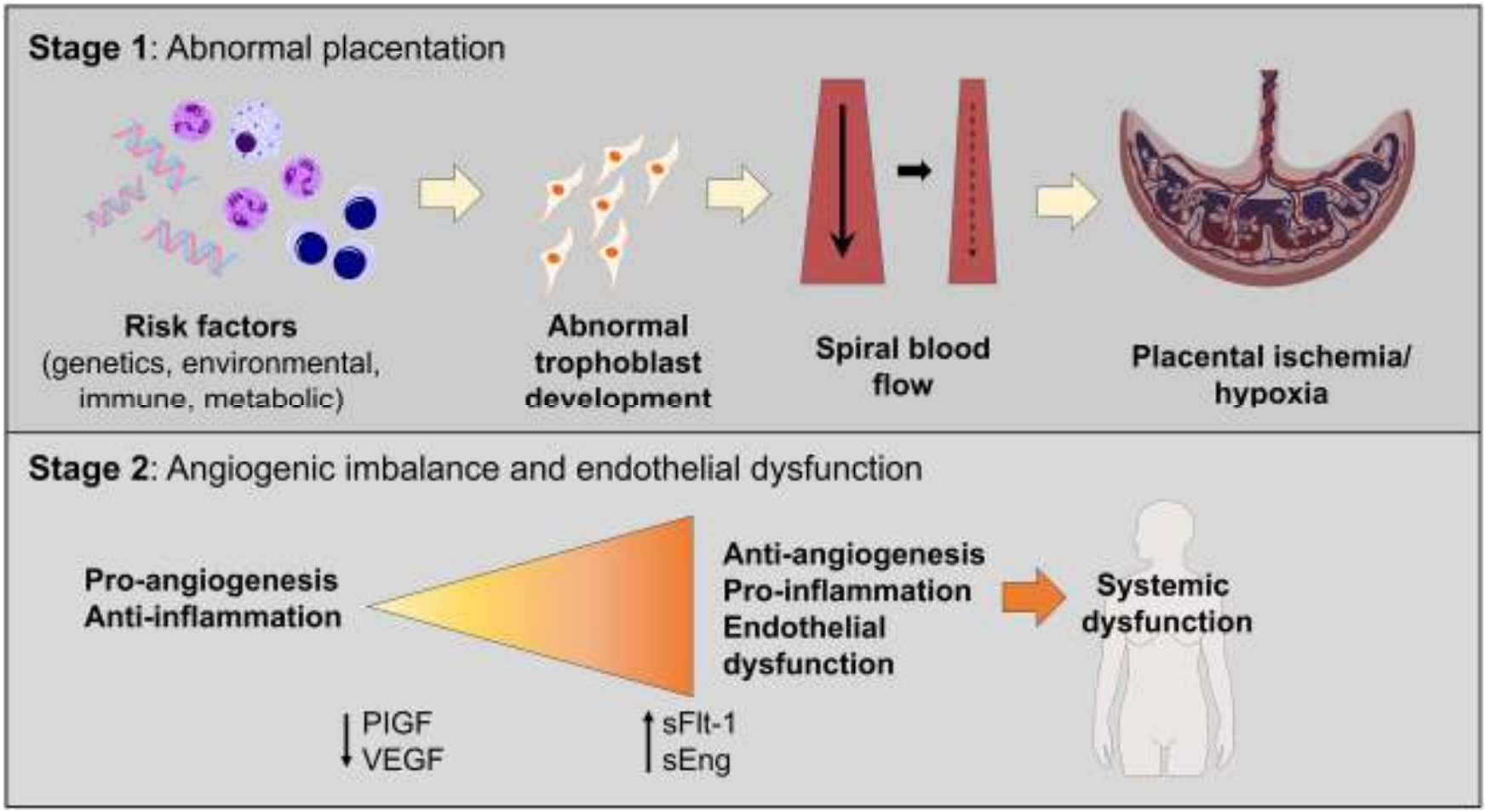
# Hypertensive Disorders of Pregnancy (HDP)

- Complicates ~15% of pregnancies
- Significant driver of **maternal morbidity and mortality**
- Leading cause of postpartum readmissions
- Increases risk for long-term cardiovascular disease

| |
|---|
| Chronic hypertension (cHTN) |
| Gestational hypertension (gHTN) |
| Preeclampsia (PEC) with or without severe features |
| Superimposed preeclampsia (SiPEC) |
| Eclampsia |

JAMA. 2016 Mar 8;315(10)1026-33.
Curr Obstet Gynecol rep. 2022; 11(3): 159-168
MMWR Morb Mortal Wkly Rep. Apr 29 2022;71(17):585-591.

# HDP Pathophysiology




Front Med (Lausanne). 2023 Mar 16;10:1144170

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# Question #2

Which of the following is considered a key risk factor for maternal cardiovascular mortality?

a) Age <40 years
b) Black race
c) >3 previous pregnancies
d) Vegetarian diet

# Risk Factors for Maternal Cardiovascular Mortality

1. Black race
2. Age >40 years
3. Prior history of hypertensive disorders
4. Obesity

J Am Heart Assoc. 2021 Aug 3; 10(15): e022040

# HDP Management

Clinical Surveillance / Early Diagnosis

Blood Pressure Control / Medication Management

Curr Obstet Gynecol rep. 2022; 11(3): 159-168

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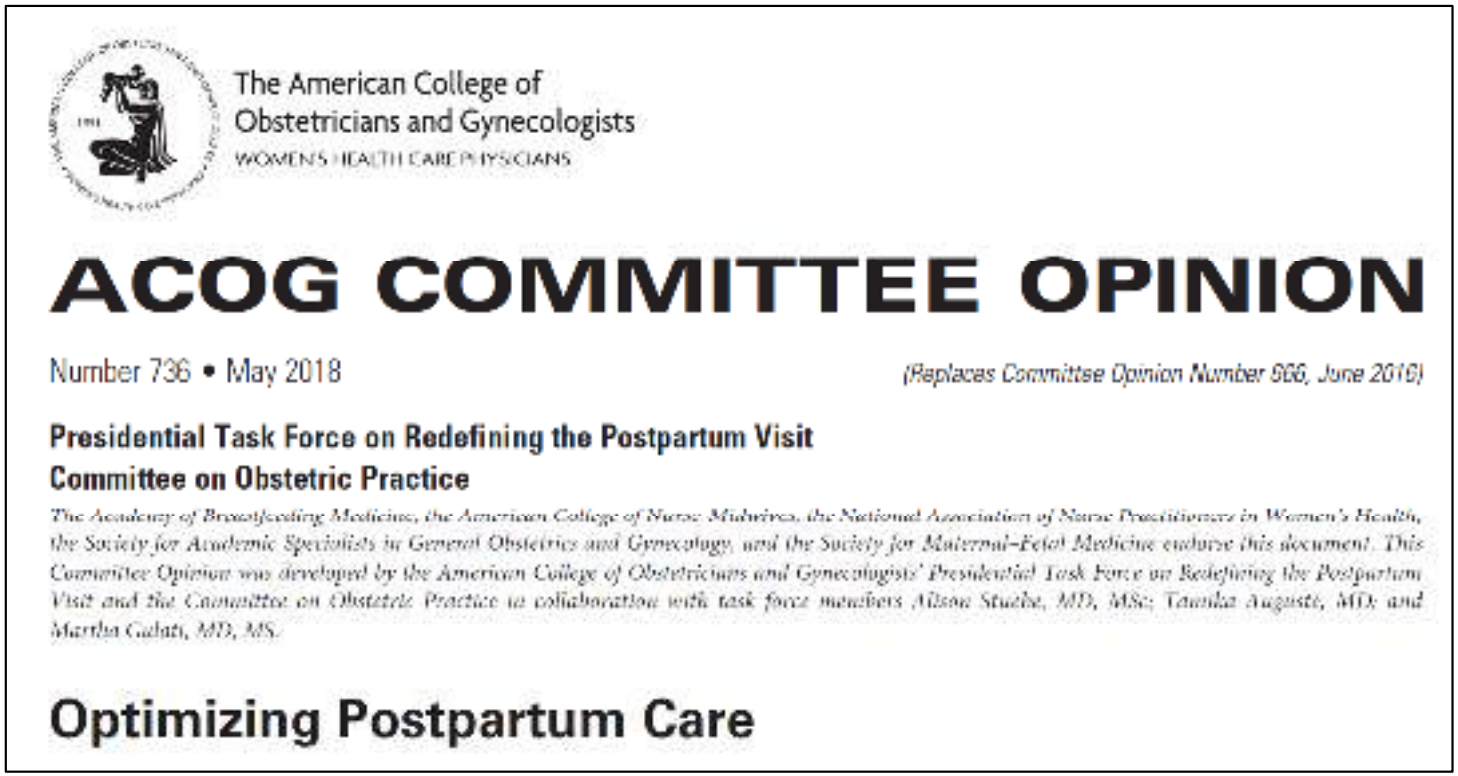
# Postpartum HDP Clinical Guidance



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

ACOG COMMITTEE OPINION

Number 736 • May 2018

(Replaces Committee Opinion Number 666, June 2016)

**Presidential Task Force on Redefining the Postpartum Visit**
**Committee on Obstetric Practice**

*The Academy of Breastfeeding Medicine, the American College of Nurse-Midwives, the National Association of Nurse Practitioners in Women's Health, the Society for Academic Specialists in General Obstetrics and Gynecology, and the Society for Maternal–Fetal Medicine endorse this document. This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Presidential Task Force on Redefining the Postpartum Visit and the Committee on Obstetric Practice in collaboration with task force members Alison Stuebe, MD, MSc; Tanika Auguste, MD; and Martha Gulati, MD, MS.*

## Optimizing Postpartum Care

Obstet Gynecol. 2018 May;131(5):e140-e150.

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# Clinical Guidance – 2018 ACOG Committee Opinion

- BP evaluation is recommended for women with HDP **no later than 7–10 days postpartum**, and women with severe hypertension should be seen **within 72 hours**
  - >50% postpartum strokes occur **within 10 days of discharge**

- "..the usefulness of an in-person assessment should be weighed against the burden of traveling to and attending an office visit with a neonate"
  - "Additional mechanisms for assessing women's health needs after birth include home visits, phone support, text messages, **remote blood pressure monitoring**, and **app-based support**"

Obstet Gynecol. 2018 May;131(5):e140-e150.

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# Postpartum Healthcare Disparities

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# Healthcare Disparities

"A difference between population groups in the way they **access**, **experience**, and **receive** healthcare"

Agency for Healthcare Research and Quality (US); 2021 Dec. Report No.: 21(22)-0054-EF.

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# Risk Factors for Maternal Cardiovascular Mortality

1. **Black race**
2. Age >40 years
3. Prior history of hypertensive disorders
4. Obesity

J Am Heart Assoc. 2021 Aug 3; 10(15): e022040

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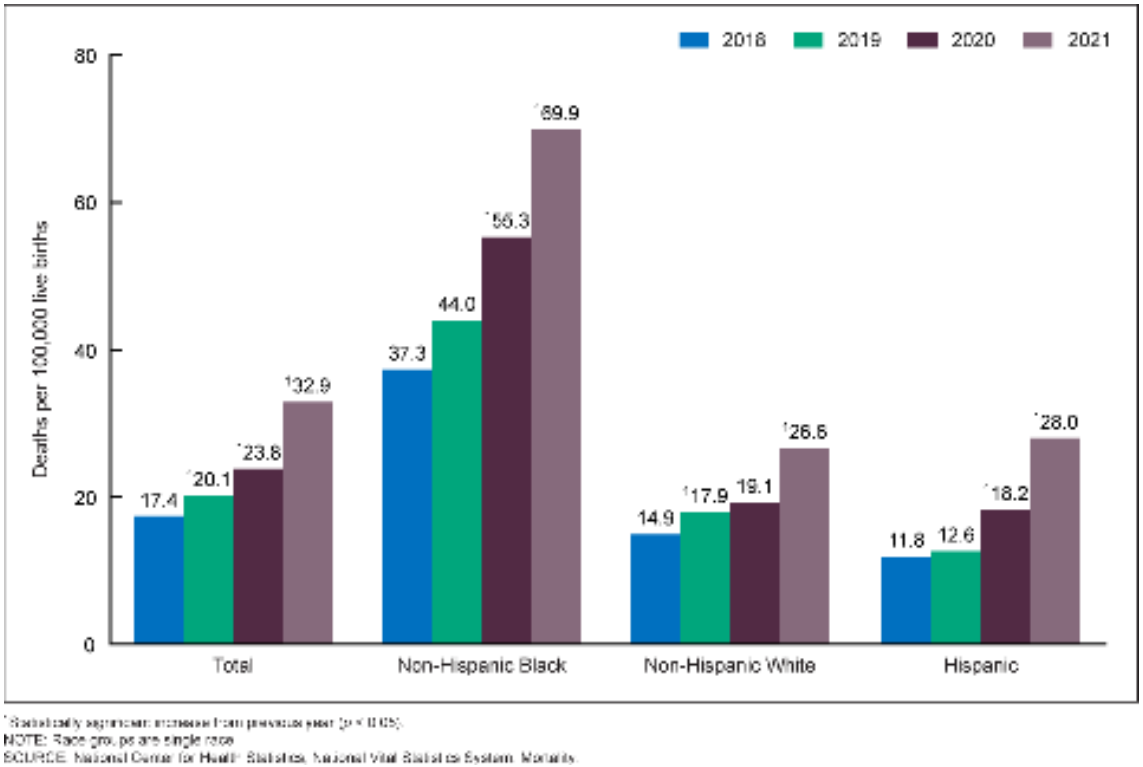
# Black Maternal Morbidity and Mortality

- Black women are more likely to have **HDP and cardiovascular complications** that increase risk of maternal morbidity and mortality

- Black women are **three to four times more likely to die due to pregnancy-related causes** versus non-Hispanic White counterparts




Maternal Mortality Rates in the US; CDC 2021

MMWR Morb Mortal Wkly Rep. 2019;68:762–765.
J Am Heart Assoc. 2021 Aug 3; 10(15): e022040

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# Black Maternal Morbidity and Mortality

CNN Sports Football Tennis Golf Motorsport US Sports More Watch Listen

## Olympic gold medalist Tori Bowie died from childbirth complications, autopsy finds

By Jamie Lynch and Deborah Ross, CNN

Updated 8:28 AM EDT, Wed June 14, 2023



Tori Bowie of the United States crosses the finish line to win the 4x100m relay final at the 2016 Olympic Games in Rio de Janeiro. Quinn Rooney/Getty Images

CNN. 2023.

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# Question #3

Which of the following impact disparities within maternal morbidity and mortality? Select all that apply.

a) Implicit biases
b) Systemic discrimination
c) Incidence of chronic diseases
d) Social determinants of health (SDOH)

# Black Maternal Morbidity and Mortality: Key Factors

Likely multifactorial, but key factors include:

- Implicit biases
  - Including delayed recognition of HTN / HPD s/sx
- Systemic / structural healthcare discrimination
- Increased incidence of chronic diseases
- Limited healthcare access and coverage
- Other social determinants of health
  - Ex. lack of adequate housing or transportation


Office of Disease Prevention and Health Promotion

MMWR Morb Mortal Wkly Rep. 2019;68:762–765.
J Am Heart Assoc. 2021 Aug 3; 10(15): e022040
JAMA Netw Open. 2020 Dec 1;3(12):e2030815.

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# Implicit Bias in Obstetrical Care

Stressful working conditions are associated with increased implicit bias

- Ex. labor and delivery settings

Society for Maternal–Fetal Medicine Survey: 84% of clinicians agree that disparities affect their practice, but only 29% believe their personal biases affect patient care

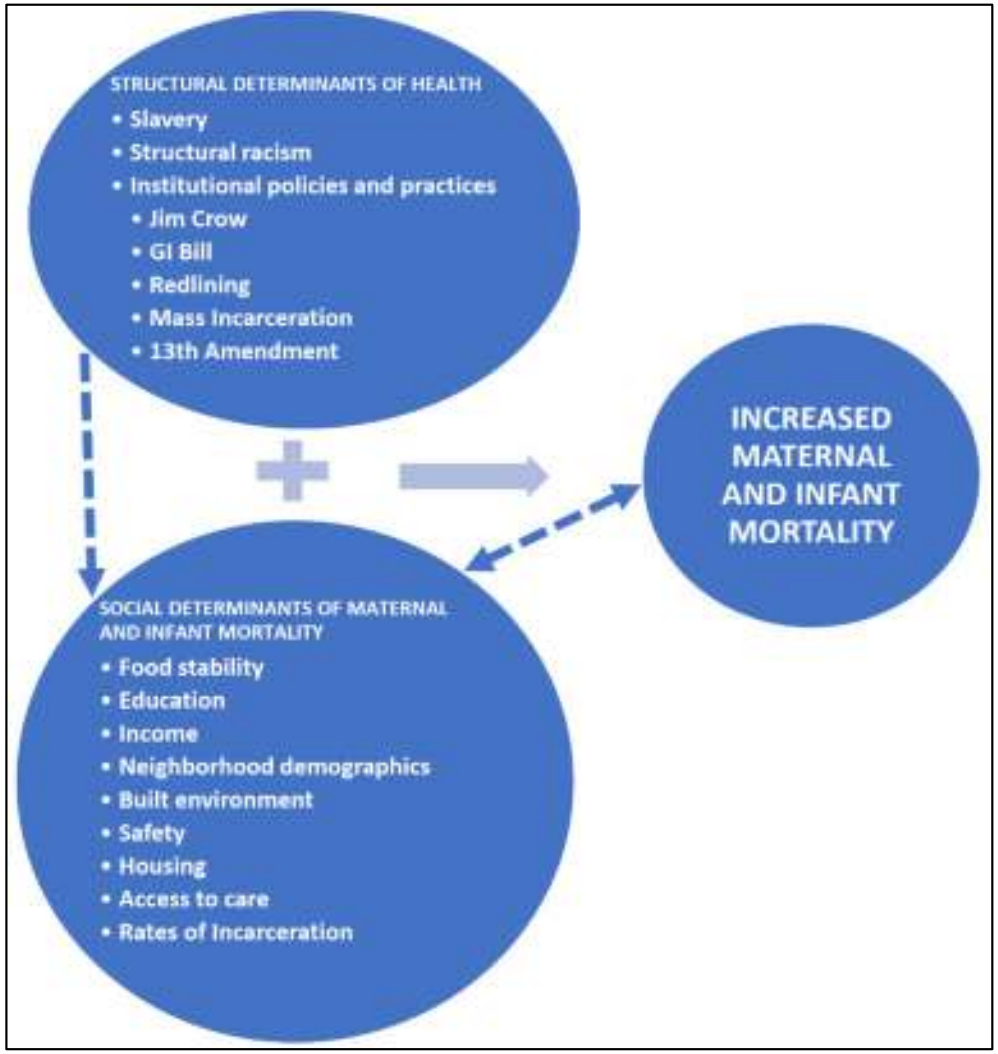
30% of Black and Hispanic women who delivered in hospitals report provider mistreatment, versus 21% of White women

A 2012 study showed cesarean sections were more common among Black and Latina women than White women, when adjusted for medical necessity

J Womens Health (Larchmt). 2021 Feb;30(2):270-273
Reprod Health 2019;16:77.
Obstet Gynecol 2018;131:770–782.
Soc Probl 2012;59:207–227.

# Structural and Social Determinants of Health Disparities

"Intergenerational transmission of the stress that stems from cumulative exposure to interpersonal racism …have been associated with unfavorable pregnancy and childbirth outcomes …which resultantly have significant and multifaceted implications for longstanding maternal and child health outcomes"




Healthcare (Basel). 2023 Feb 3;11(3):438.

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# Healthcare Access

- Financial barriers
  - Insurance limitations
    - Medicaid coverage gap
- Limited healthcare resources
  - Provider shortages
    - PCPs
    - Maternal fetal health clinicians
  - Clinician burnout
  - Understaffed, overcrowded facilities
- Physical accessibility
  - Transportation needs
  - Maternity care “deserts”


March of Dimes, ABC News, 2023

Healthcare (Basel). 2023 Feb 3;11(3):438.

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# Addressing and Closing Healthcare Gaps

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# National Initiatives

- CDC
  - Enhancing Reviews and Surveillance to Eliminate Maternal Mortality **(ERASE MM) Program**
    - Funds maternal mortality review committees (MMRCs)
  - **HEAR HER Campaign**
    - Public-facing resources including raising awareness of urgent maternal warning signs



https://www.cdc.gov/maternal-infant-health/about/index.html

# National Initiatives cont'd

- Black Maternal Health Caucus

  – **The Momnibus Act**


    - <u>13 individual bills aiming to:</u>
      - » Invest in social determinants of health (SDOH)
      - » Expand telehealth / digital tools
      - » Fund community-based organizations
      - » Improve quality measures and data collection processes

    - Introduced to Congress in 2021, currently still in progress

https://blackmaternalhealthcaucus-underwood.house.gov/Momnibus

# National and State Initiatives



heart.org/-/media/Files/About-Us/Policy-Research/Policy-Positions/Access-to-Healthcare/Maternal-Health--Executive-Summary.pdf
health.ny.gov/press/releases/2023/2023-08-24_benefits_expansion

# NewYork-Presbyterian Initiatives

# Community Initiatives

4Kira4moms

## Our Story

In 2016, our founder, Charles Johnson, lost his wife Kira, during a routine C-section at Cedar Sinai hospital in Los Angeles, California. He founded 4Kira4Moms in 2017 as a response to his experience, to be a voice for other mothers and families facing unnecessary maternal loss, and putting an end to the maternal mortality health crisis. Black women are disproportionately affected by this epidemic, where they are 3x more likely to die from pregnancy than white women.

LEARN MORE ›

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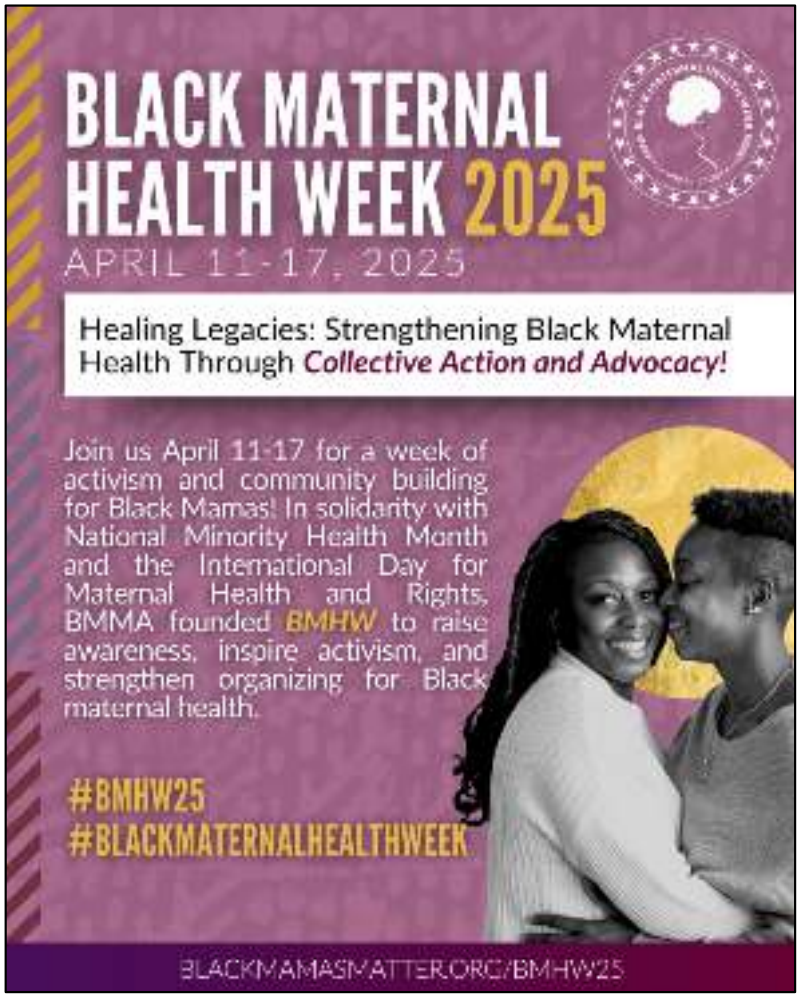
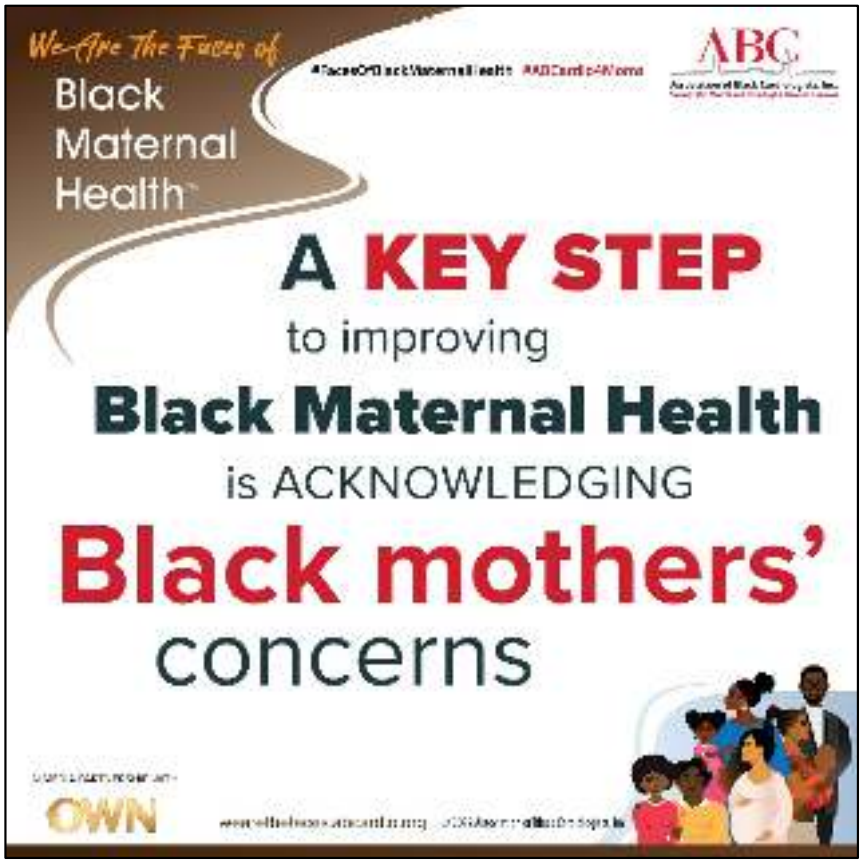
# Other Initiatives




https://blackmamasmatter.org/
https://wearethefaces.abcardio.org/#about

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# Question #4

Which of the following services can pharmacists or pharmacy technicians provide to help address postpartum healthcare disparities?

a) Incorporate remote patient monitoring (RPM) services
b) Eliminate intergenerational structural discrimination
c) Provide early diagnosis of chronic diseases
d) Establish insurance coverage on behalf of patients

# Pharmacy Opportunities to Address Disparities

## Identify SDOH and risks of maternal morbidity

- Risk factors: Black race, prior history of cardiovascular disease, obesity, age >40
- SDOH: education, economic stability, healthcare access, community environment, etc.

## Improve healthcare accessibility

- Incorporate telehealth and remote patient monitoring (RPM)
- Utilize technology (apps, Epic MyConnect, etc.)
- Expand pharmacist scope of practice to enhance interprofessional collaboration

## Optimize chronic disease management

- Ex. diabetes, hypertension, obesity, chronic heart disease

## Educate patients and family

- Medication management
- Blood pressure monitoring technique
- Urgent maternal warning signs

# Improving follow-up by enhancing access to care for postpartum hypertensive patients

Yale School of Medicine, New Haven, CT

Aim to assess compliance to ACOG follow-up recommendations

Clinical pharmacists completed postpartum visits via telehealth

## Results

94% saw a health care provider within 10 days discharge vs. 65% (OR 7.48 [95% CI 1.71-32.70])

Shorter no. of days until follow-up, mean of 4 days vs. 7 days ($p < 0.001$)

Conclusion: a team-based RPM program leads to improved adherence to recommended follow-up and may allow for opportunities to identify and reduce maternal complications

American Journal of Obstetrics & Gynecology
Volume 226, Issue 1, Supplement, S213-S214, Jan 2022

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# New Healthcare Service Initiative at NYP

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# Center for Health Justice at NewYork-Presbyterian (NYP)

- Aims to **understand** and **address** root causes of **health inequities**
- Invests in research, education, and programing
- Building a network of ongoing projects and initiatives across NYP and academic medical partners
- Advocates for policy change to drive measurable **improvements in health outcomes for all**

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# NYP Postpartum RPM Program

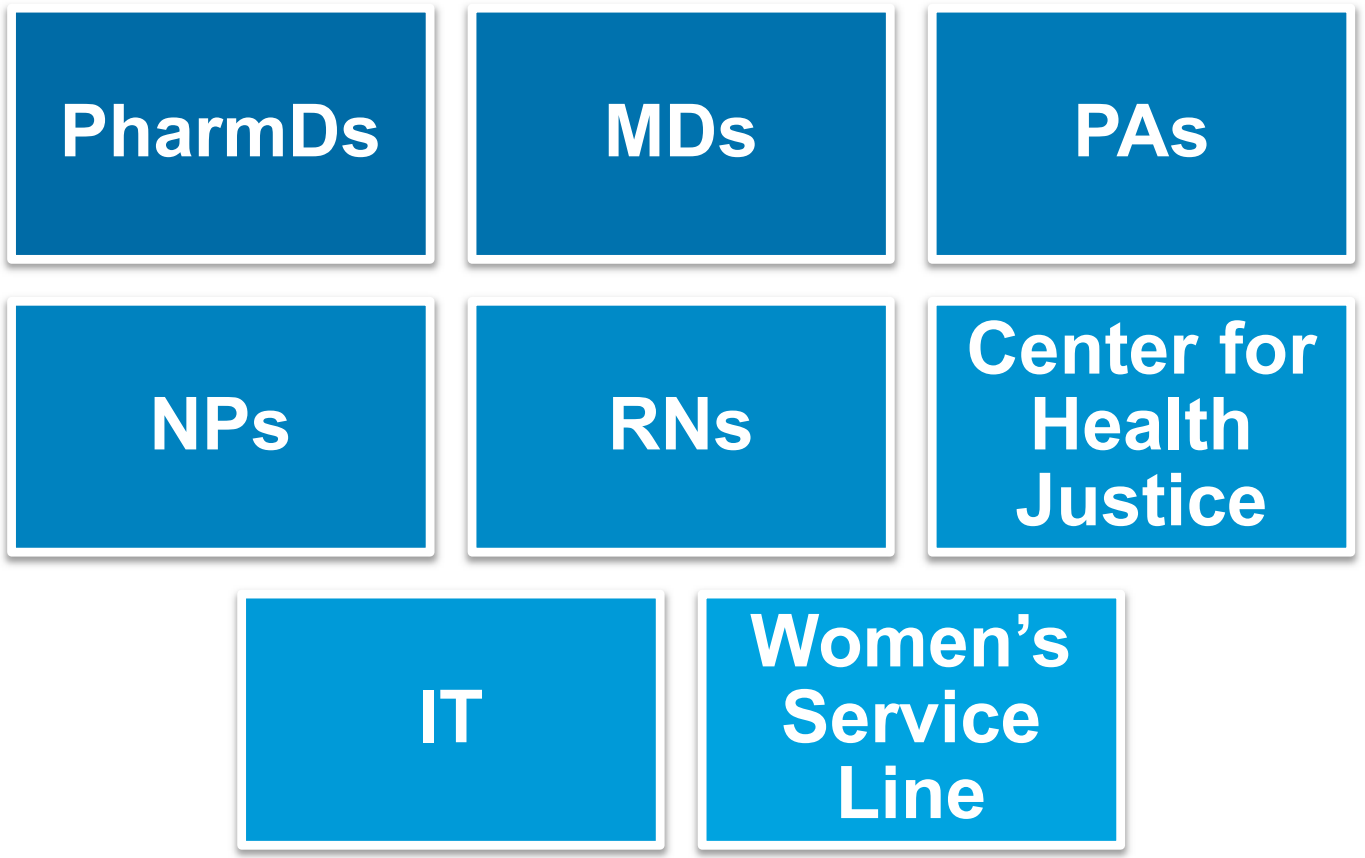
**Grant from Institutional Center for Health Justice**

Mature our existing RPM program

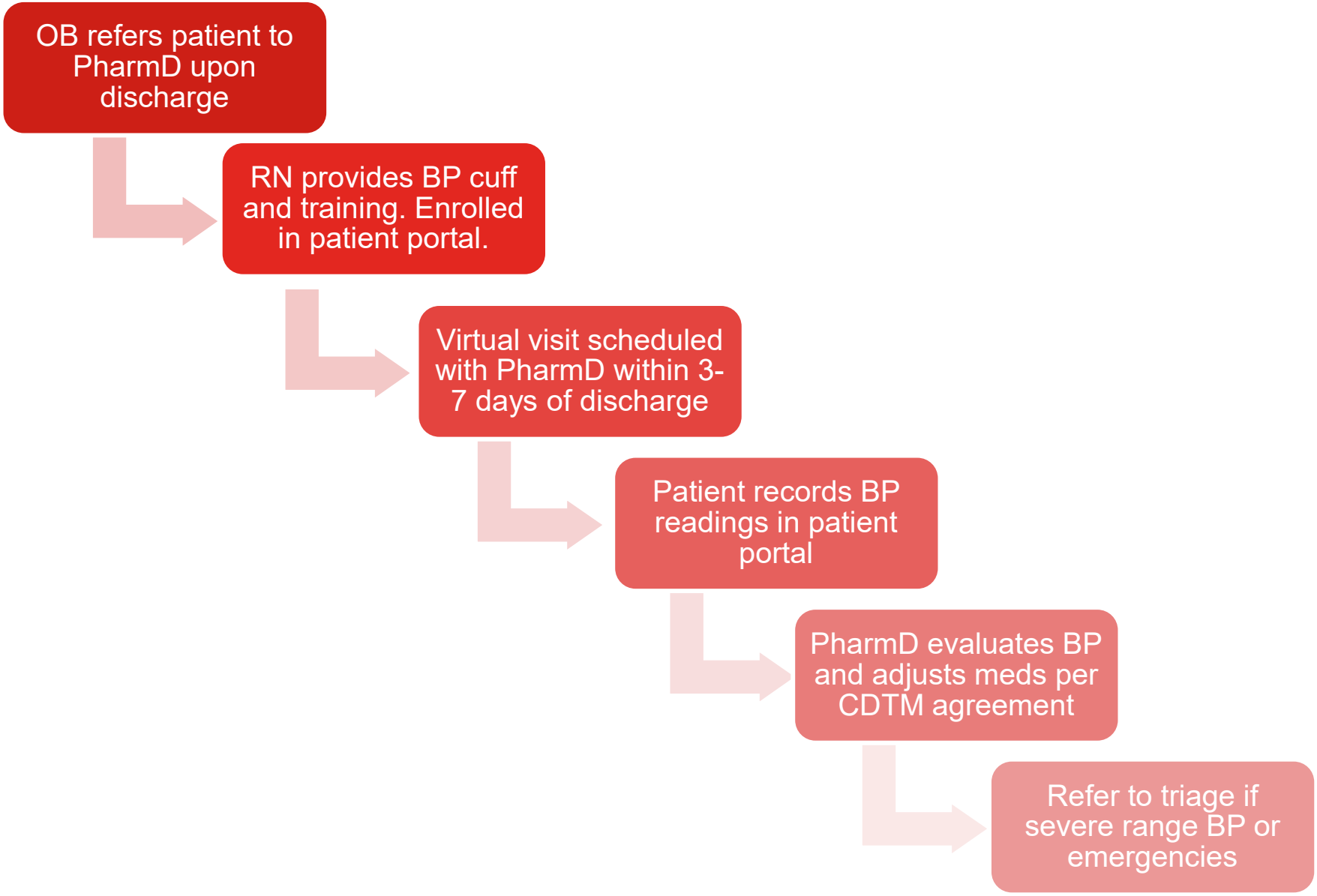
**Goals:**

- Address key factors impacting maternal morbidity and mortality in the postpartum period
- Improve blood pressure management and outcomes
- Provide connections to follow-up after delivery

# Interdisciplinary Team



# Program Workflow

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# CDTM Agreement

| Medication | Initial Dose | Emergency Dose | Titrating Dose | Maximum Daily Dose |
|---|---|---|---|---|
| Labetalol | 200 mg BID | 200-300 mg x 1 | Increase by 200 mg per dose | 2400 mg |
| Nifedipine XL | 30 mg daily | 30-60 mg x 1 | Increase by 30 mg per dose | 120 mg |
| Enalapril | 10 mg once | Contact provider | Increase by 10-20 mg per dose | 40 mg |
| Hydrochlorothiazide | 12.5 mg daily | Contact provider | Increase by 12.5-25 mg per week | 50 mg |

**Medication Access**

Affordability

Insurance coverage

Blood pressure devices

Lactation safety

Curr Obstet Gynecol Rep. 2022; 11(3):159-168.

# Successes to Date

## Planning Oct 2023 – Apr 2024

- Comprehensive standard operating procedure
- New referral order and dedicated pharmacy template
- Standardized documentation template
- Postpartum HTN CDTM agreement

## Launch May 2024

- Attended Trauma-Informed Training for Advanced Practice Clinicians
- Started at one campus
- Avg 1-2 new referrals per week during program launch

## Optimization Ongoing

- Steady referrals; ~5-8 per week
- Weekly meetings with providers
- Coordinated transition to long-term follow-up at WCIMA
- Open dialogue to share best practices with Yale team

# Overall Impact to Date

221 patient referrals, 183 (~**83%**) engaged with pharmacists

- Triaged **15** patients to ED w/ severe range BP + symptoms, **4** of which led to readmission
- Adjusted antihypertensives for **73** (~40%) patients
- Referred **9** patients to breastfeeding warmline
- Connected **45** patients to a primary care provider at NYP
- Education provided to **all** patients including diagnosis, severe maternal warning signs, BP goals, device technique
- “Graduated” **154** patients

# Measures

## Process Measures

- Staff completion of training, education, and onboarding
- Number of patients referred to pharmacy
- Number of patients who kept first visit
- Time to engagement in care
- Number of visits patients utilized

## Outcomes Measures

- Engagement in care
- Number of ED visits after postpartum discharge
- Readmission for severe range BP or other severe morbidities

# Future Goals

- **Increase clinic capacity**
  - Already reaching all eligible patients with HDP
  - Now reaching out to patients at high risk due to prior history of HDP
- **Expand to all NYP campuses**
- **Analyze program effectiveness**
  - Review patient satisfaction, engagement with care, readmission rates
- **Establish additional services**
  - "Heart Path" / "4th Trimester" service for interprofessional management of long-term chronic diseases (HTN, HLD, DM, etc.)

# Conclusions

Hypertensive disorders of pregnancy (HDP) are a **leading cause** of maternal morbidity and mortality

**Black women** are **more likely** to experience HDP and are at **higher risk** for maternal morbidity and mortality

**Key barriers** that increase health disparities within postpartum care include:

- Implicit biases
- Systemic discrimination
- Social determinants of health, such as limited healthcare access

**Pharmacists and pharmacy technicians** can address postpartum care disparities by:

- Identifying at-risk patients
- Enhancing patient education
- Optimizing chronic disease management
- Leveraging technology

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# Acknowledgements


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- Dr. Heather Lipkind, MD, MS for review of this presentation

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# Thank You

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