



Maternal Webinar Series:
"Quality Tools and Strategies for
Postpartum Care Optimization"

July 2, 2024



GaPQC Maternal Lectures – 2024

DATE	SUBJECT/TITLE	SPEAKER(S)
May 7, 2024	Equity, Bias, & Quality Care	Dr. Rose Horton
June 4, 2024	QI Change-Back to the Basics	Dr. Stephanie Radke
July 2, 2024	4 th Trimester Care & 3 Day Follow-up for BP Checks	Dr. Jamie L. Morgan
August 6, 2024	Pregnancy, Cardiac Conditions, and Bedside Care-Oh My!	Dr. Kathryn Lindley
September 3, 2024	It's Only Just Begun: Cardiovascular Risk Beyond Birth-Team Based Approach to Cardio-Obstetrics	Dr. Deirdre Mattina
October 2, 2024	Cardiac Care in the 4 th Trimester	Dr. Jennifer Lewey
November 5, 2024	Measuring & Communicating Blood Loss During OB Hemorrhage and the Why Behind It	Kristi T. Gabel
December 3, 2024	Cardiac Care in the 4 th Trimester through Text Messaging and Telemedicine	Dr. Monika Sanghavi
January 7, 2025	4 th Trimester Care for High-Risk Patients-Telemedicine to Reduce Re-admissions	Dr. Kathryn L. Berlacher

Maternal Updates



- GaPQC Biannual Survey

[Maternal Initiatives - Hypertension and Cardiac Conditions in Obstetric Care Survey \(surveymonkey.com\)](https://surveymonkey.com)

- Next GaPQC Maternal Webinar Tuesday, August 6th at 2:00 PM EST

Dr. Kathryn Lindley – Guest Speaker

- **Data**

Q1 Jan – March – submission due by April 30th

Q2 April – June – submission due by July 31st

Q3 July –Sept. – submission due by October 31st

Q4 Oct. – Dec. – submission due by January 31st

- **Maternal and Infant Health Initiative (MIHI): QI Webinar from Medicaid**

July 16th: Addressing Hypertension Before, During, and After Pregnancy

Register: [Register Program - Mathematica WebEx](#)

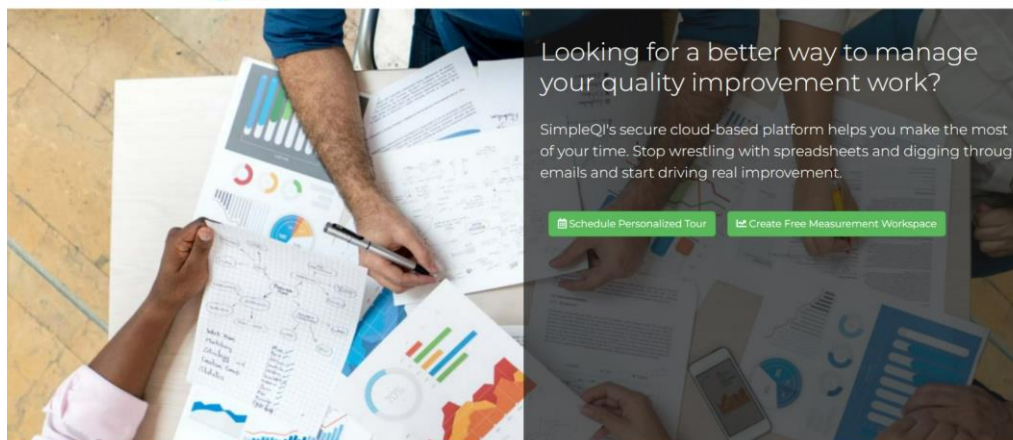
- **Maternal Health ECHO**

August 21st: Cardio-OB: Addressing Cardiac Health for women in the CSRA



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Looking for a better way to manage your quality improvement work?

SimpleQI's secure cloud-based platform helps you make the most of your time. Stop wrestling with spreadsheets and digging through emails and start driving real improvement.

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Plan & Measure Improvement

Collaboratively define drivers and change ideas that contribute to your aim. Run PDSA cycles to test your changes and theories, and chart your results.

Streamline Measurement

Prepare, analyze, and visualize data using tools built for the sole purpose of supporting quality improvement projects.

Increase Visibility & Collaboration

View drivers and changes that are leading you toward or away from your goals. Share activities, learnings and experiences across projects to drive engagement and results.



Maternal Updates Continued

Wave II Recruitment is Ongoing

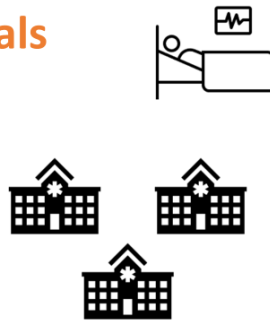
Wave 1 – July 2022

HOSPITAL	REGION	LEVEL OF CARE
Atrium Health Navicent	Macon	III
Augusta University Medical Center	Augusta	III
Northeast GA Medical Center-Braselton	Atlanta	III
Northeast GA Medical Center-Gainesville	Atlanta	III
Grady Health System	Atlanta	III
Liberty Regional Medical Center	Savannah	I
Memorial Health University Medical Center	Savannah	III
Northside Hospital Atlanta	Atlanta	III
Northside Hospital Cherokee	Atlanta	III
Northside Hospital Forsyth	Atlanta	III
Northside Hospital Gwinnett	Atlanta	III
Wellstar Kennestone Hospital	Atlanta	III

Wave 2 - January 2024

HOSPITAL	REGION	LEVEL OF CARE
Coffee Regional	Savannah	I
Northeast GA Medical Center-Habersham	Atlanta	I
Piedmont Columbus Regional	Columbus	III
Tift Regional Medical Center	Macon	II

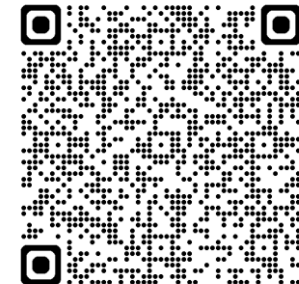
16 Hospitals



Cardiac Conditions Initiative
Goal: 28 Hospitals by 2027



GaPQC Cardiac Initiative Enrollment Form



[GaPQC CCOC Enrollment Form.pdf \(wsimg.com\)](https://wsimg.com/GaPQC-CCOC-Enrollment-Form.pdf)

Women'sHealth



Improvement Advisor

JENNIFER BOLAND



Jennifer.Boland@dph.ga.gov

Key Driver Diagram: Maternal Cardiac Conditions

GOAL: To reduce severe morbidity/mortality related to maternal cardiac conditions in Georgia.

SMART AIM: By 02/6/2026, **National Wear Red Day**, to reduce harm related to existing and pregnancy related cardiac conditions through the 4th trimester by **20%**

Key Drivers

Readiness: EVERY UNIT - Implementation of standard processes for optimal care of cardiac conditions in pregnancy and post-partum.

Recognition & Prevention: EVERY PATIENT - Screening and early diagnosis of cardiac conditions in pregnancy and post-partum.

Response: EVERY UNIT - Care management for every pregnant or postpartum woman with cardiac conditions in pregnancy and post-partum.

Reporting/System Learning: EVERY UNIT - Foster a culture of safety and improvement for care of women with cardiac conditions in pregnancy and post-partum.

Respectful, Equitable, and Supportive Care — EVERY UNIT/PROVIDER/TEAM MEMBER - Inclusion of the patient as part of the multidisciplinary care team.

Interventions

- ☐ Train all obstetric care providers to perform a basic Cardiac Conditions Screen.
 - ☐ Establish a protocol for rapid identification of potential pregnancy-related cardiac conditions in all practice settings to which pregnant and postpartum people may present.
 - ☐ Develop a patient education plan based on the pregnant and postpartum person's risk of cardiac conditions.
 - ☐ Establish a multidisciplinary "Pregnancy Heart Team" or consultants appropriate to their facility's designated Maternal Level of Care to design coordinated clinical pathways for people experiencing cardiac conditions in pregnancy and the postpartum period. **S1**
 - ☐ Establish coordination of appropriate consultation, co-management and/or transfer to appropriate level of maternal or newborn care.
 - ☐ Develop trauma-informed protocols and training to address health care team member biases to enhance quality of care
 - ☐ Develop and maintain a set of referral resources and communication pathways between obstetric providers, community-based organizations, and state and public health agencies to enhance quality of care. *
-
- ☐ Obtain a focused pregnancy and cardiac history in all care settings, including emergency department, urgent care, and primary care.
 - ☐ In all care environments assess and document if a patient presenting is pregnant or has been pregnant within the past year. **S2**
 - ☐ Assess if escalating warning signs for an imminent cardiac event are present.
 - ☐ Utilize standardized cardiac risk assessment tools to identify and stratify risk.
 - ☐ Conduct a risk-appropriate work-up for cardiac conditions to establish diagnosis and implement the initial management plan.
-
- ☐ Facility-wide standard protocols with checklists and escalation policies for management of cardiac symptoms.
 - ☐ Facility-wide standard protocols with checklists and escalation policies for management of people with known or suspected cardiac conditions.
 - ☐ Coordinate transitions of care including the discharge from the birthing facility to home and transition from postpartum care to ongoing primary and specialty care.
 - ☐ Offer reproductive life planning discussions and resources, including access to a full range of contraceptive options in accordance with safe therapeutic regimens. *
 - ☐ Provide patient education focused on general life-threatening postpartum complications and early warning signs, including instructions of who to notify if they have concerns, and time and date of a scheduled postpartum visit. **S3**
-
- ☐ For pregnant and postpartum people at high risk for a cardiac event, establish a culture of multidisciplinary planning, admission huddles and post-event debriefs.
 - ☐ Perform multidisciplinary reviews of serious complications (e.g. ICU admissions for other than observation) to identify systems issues. **S4**
 - ☐ Monitor outcomes and process data related to cardiac conditions, with disaggregation by race and ethnicity due to known disparities in rates of cardiac conditions experienced by Black and Indigenous pregnant and postpartum people. **Process Measures – 1-5**
-
- ☐ Screen for structural and social drivers of health that might impact clinical recommendations or treatment plans and provide linkage to resources that align with the pregnant or postpartum person's health literacy, cultural needs, and language proficiency.
 - ☐ Engage in open, transparent, and empathetic communication with pregnant and postpartum people and their identified support network to understand diagnoses, options, and treatment plans.
 - ☐ Include each pregnant or postpartum person and their identified support network as respected members of and contributors to the multidisciplinary care team. ***S5**



Resources and Opportunities



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 Northeast Georgia Health System
CENTER FOR SIMULATION AND INNOVATION
675 White Sulphur Road, Building B
Gainesville, GA 30501

Join Us for the Obstetric Patient Safety (OPS) Workshop - 3rd Edition

Hospitals in Georgia,

send your obstetric and emergency department staff
for a comprehensive learning experience.

Don't miss this opportunity to improve patient safety and outcomes. Enhance
your skills in managing obstetric emergencies through simulation and debriefing.

- Learning Outcomes:**
- Identify high-risk factors for obstetric emergencies.
 - Demonstrate effective management of pregnant and postpartum individuals during obstetric emergencies.
 - Engage in role-playing simulations with a multidisciplinary team.

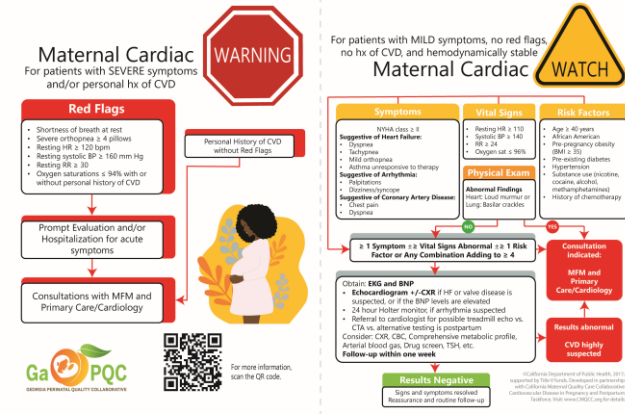
Workshop Dates:	June 5	September 18 and 19
	July 25	October 24
	August 19	December 4 and 5

For Registration and Inquires Contact: Tasha Murchison at Tasha.Murchison@nghs.com

The Association of Women's Health, Obstetric and Neonatal Nurses is accredited with distinction as a provider of nursing continuing professional development by the American nurses Credentialing Center's Commission on Accreditation. Accredited status does not imply endorsement by AWHONN or the ANCC of any commercial products displayed or discussed in conjunction with an educational activity. AWHONN is approved by the California Board of Registered Nursing, Provider #CEP580.

Physicians, this activity was planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of AffinityCE and AWHONN. AffinityCE is accredited by the ACCME to provide continuing medical education for physicians. AffinityCE designates this live activity for a maximum of 10.75 AMA PRA Category 1 Credits™. Physicians, physician assistants, and nurse practitioners should claim only the credit commensurate with the extent of their participation in the activity.

¹ This program is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$5,170,233 with zero percentage financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government



PEACH

Pregnant and Postpartum Heart Disease Warning Signs

Palpitations
Heart beating too fast or skipping beats

Edema
Swelling in your hands or feet

Abnormal Breathing
Hardtime catching your breath

Chest Pains

High Blood Pressure

Georgia cares about the heart health of pregnant and postpartum people. Look out for the **PEACH** heart warning signs that something might be seriously wrong.

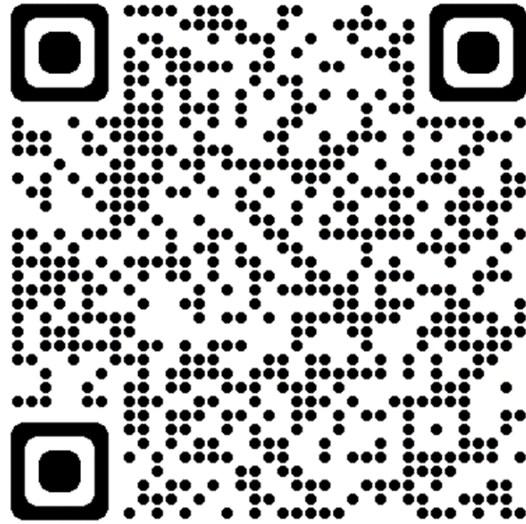
Pregnancy can impact your heart health for up to a year after the pregnancy ends. Not all doctors will know that you were pregnant. Remember to say **"I was pregnant this past year and now I am having..."**

Use this QR code to get more information about heart health warning signs.

If you are experiencing any of these warning signs, call: _____

GaPQC

GEORGIA PERINATAL QUALITY COLLABORATIVE



PEACH

Señales de advertencia de enfermedades cardiacas durante el embarazo y el posparto

Palpitaciones
corazon latiendo demasiado rapido o saltandose latidos

Edema
hinchazon en tus manos o pies

Anormal Respiración
respiración anormal: dificultad para alcanzar el aliento

Corazón con Dolor
dolor en el pecho

Hipertensión
presión arterial alta

Georgia se preocupa por la salud del corazón de las personas embarazadas y en el posparto. Está atenta a las señales de advertencia del corazón de PEACH que indican que algo puede estar muy mal.

El embarazo puede afectar la salud de su corazón hasta un año después de que termine el embarazo. No todos los médicos saben que los estado embarazada. Recuerda decir "Tuve un embarazo este ultimo año y ahora estoy teniendo..."

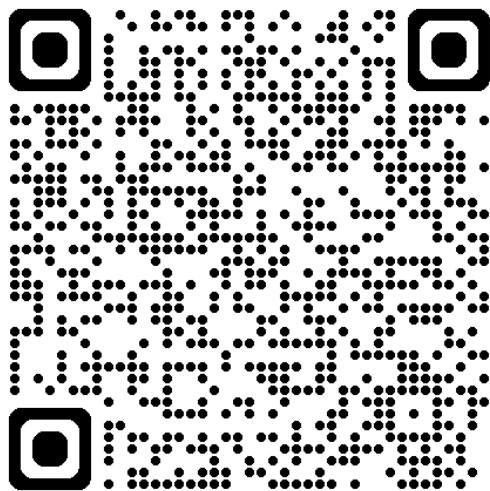
Use este código QR para obtener más información sobre las señales de advertencia de la salud del corazón.



www.georgiapqc.org/cardiac-education



American
Heart
Association.



The Role of Maternal Health in Cardiovascular Health

Pregnancy related deaths in the U.S. have risen 140% over the last three decades and cardiovascular disease is the leading cause of death. In this learning module, interdisciplinary experts, guided by the overarching goals to improve women's cardiovascular health and eliminate maternal health disparities, identify, and explain the increased cardiovascular risk and contributing comorbidities that affect pregnant and recently pregnant individuals. These trends disproportionately affect women of color.

Claim CE and ABIM MOC Credit

Register for free learning module. >



<https://professional.heart.org/en/education/role-of-cardiovascular-health-in-maternal-health>



American
Heart
Association.



Addressing Health Disparities

This course aims to guide an understanding of holistic community solutions that can increase equity and improve systems of care.

Open Access

Health Equity

 Courses

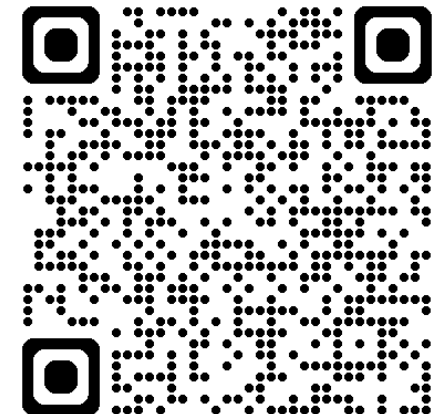
Access Now

About this Course

Most of us are aware that health disparities in the United States are disproportionately caused by several factors. Some of these factors include socioeconomic status, race and ethnicity. As we examine communities having increased prevalence and incidence of cardiovascular disease (CVD), addressing health disparities are integral to these problematic trends.

This course aims to guide an understanding of holistic community solutions that can improve access to care between primary and specialist and individual knowledge of health.

<https://education.heart.org/productdetails/addressing-health-disparities>



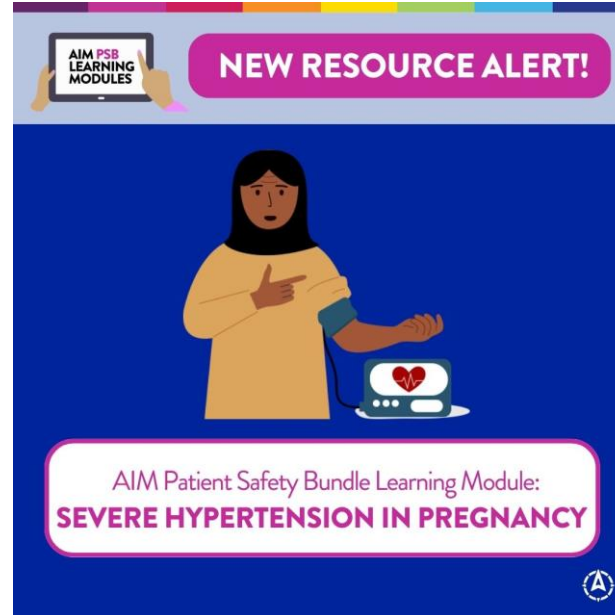
AIM PATIENT SAFETY BUNDLE LEARNING MODULES

Each course features a comprehensive overview of an AIM Patient Safety bundle and its key elements.



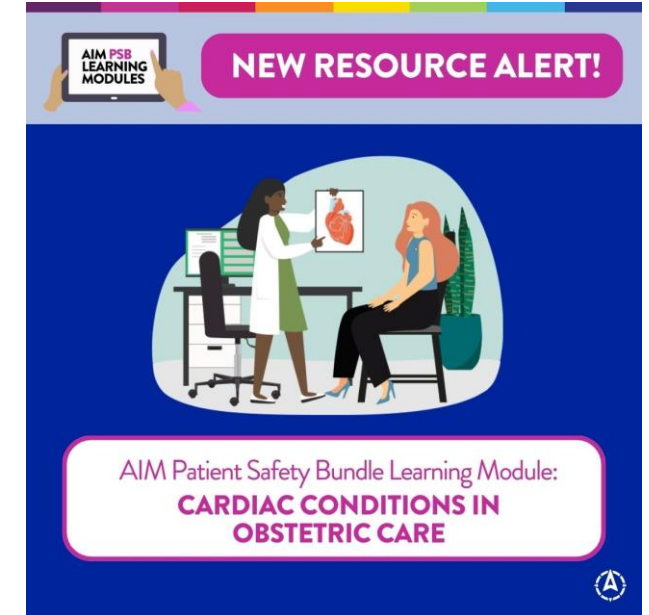
Course Description

Course



Learning Objectives

Post-Test



Pre-Test

Certificate

<https://saferbirth.org/psb-learning-modules>

Nursegrid Learn®

Improve maternal health: free patient safety courses

The Alliance for Innovation in Maternal Health (AIM) has created the Patient Safety Bundles, developed by experts, to provide evidence-based guidance on preventing severe complications during pregnancy and postpartum.

Evidence-driven:

Developed by multidisciplinary experts to address leading causes of preventable maternal harm.

Clinically specific:

Tailored to the unique needs of pregnant and postpartum individuals.

Earn free CE:

Nursegrid Learn is making these courses available for a limited time (through July 31, 2024) to show our support for improving Maternal Health!

Free for a limited time

<https://learn.nursegrid.com/>



AIM Patient Safety Bundle: Severe Hypertension in Pregnancy

Single Course
Price: FREE



AIM Patient Safety Bundle: Care for Pregnant and Postpartum People with Substance Use Disorder

Single Course



AIM Patient Safety Bundle: Cardiac Conditions in Obstetric Care

Single Course
Price: FREE

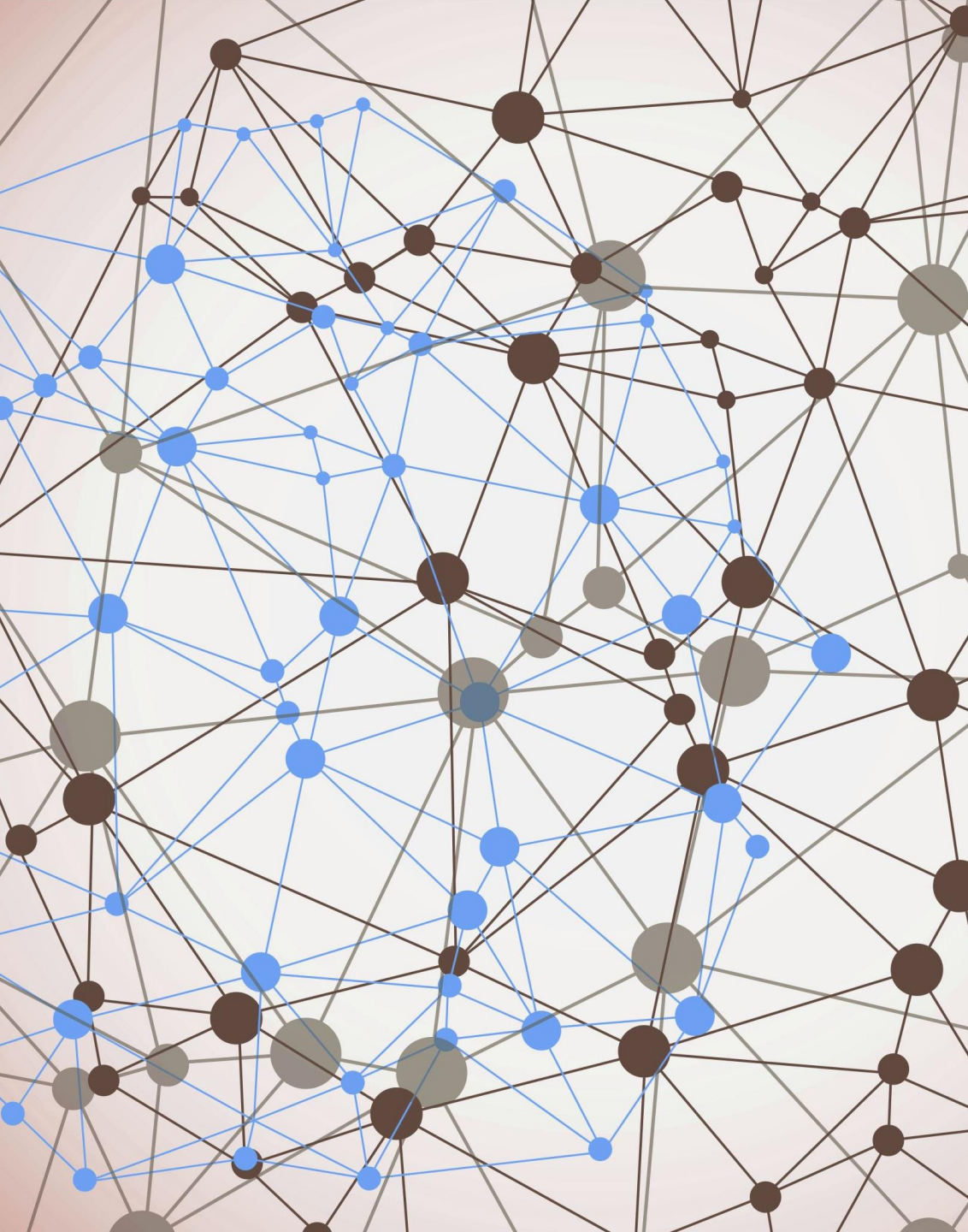
PSB Learning Modules – CME/CE Update

- If a participating hospital does not utilize HealthStream LMS, we are offering free continuing education credits on NurseGrid Learn.
- They will be hosted on here until July 31st, 2024 so share this with your hospitals so they can earn CME/CE credits!



Jamie L. Morgan, MD
UT Southwestern Medical Center
Assistant Professor in the Department of
Obstetrics and Gynecology





Quality Tools & Strategies for Postpartum Care Optimization

Jamie Morgan, MD

Associate Professor of OBGYN, Division of
Maternal-Fetal Medicine

University of Southwestern Medical Center

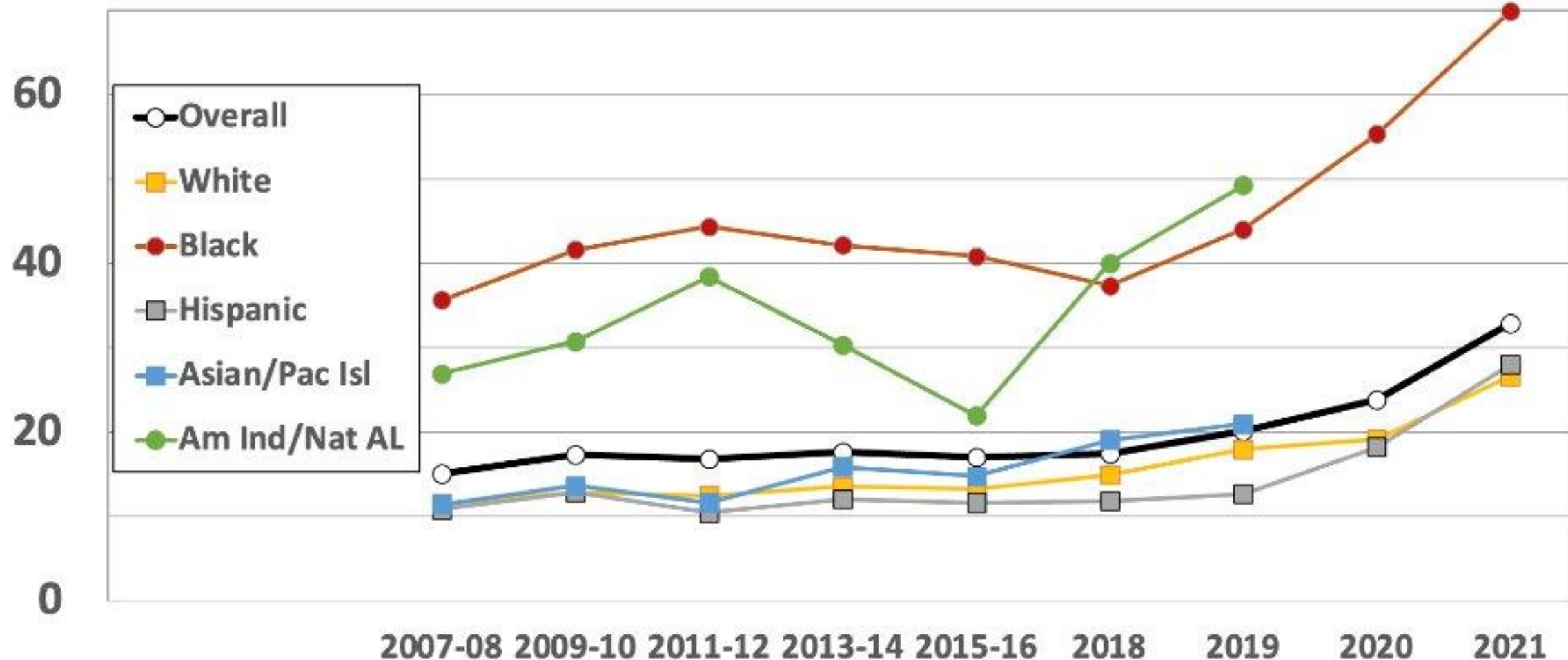
Today's Agenda

- Background/state of maternal health in the US
- Level setting: leveraging the quality improvement paradigm, tools and strategies to address the quality gap
- Importance of the immediate postpartum transition period
 - Quality tools targeting pre-hospital discharge
 - Strategies to optimize medical/obstetrical co-morbidities
- Enhancing care coordination in the postpartum period
 - Innovative tools and approaches
 - Use of toolkits, bundles and checklists

Current State of Maternal Health

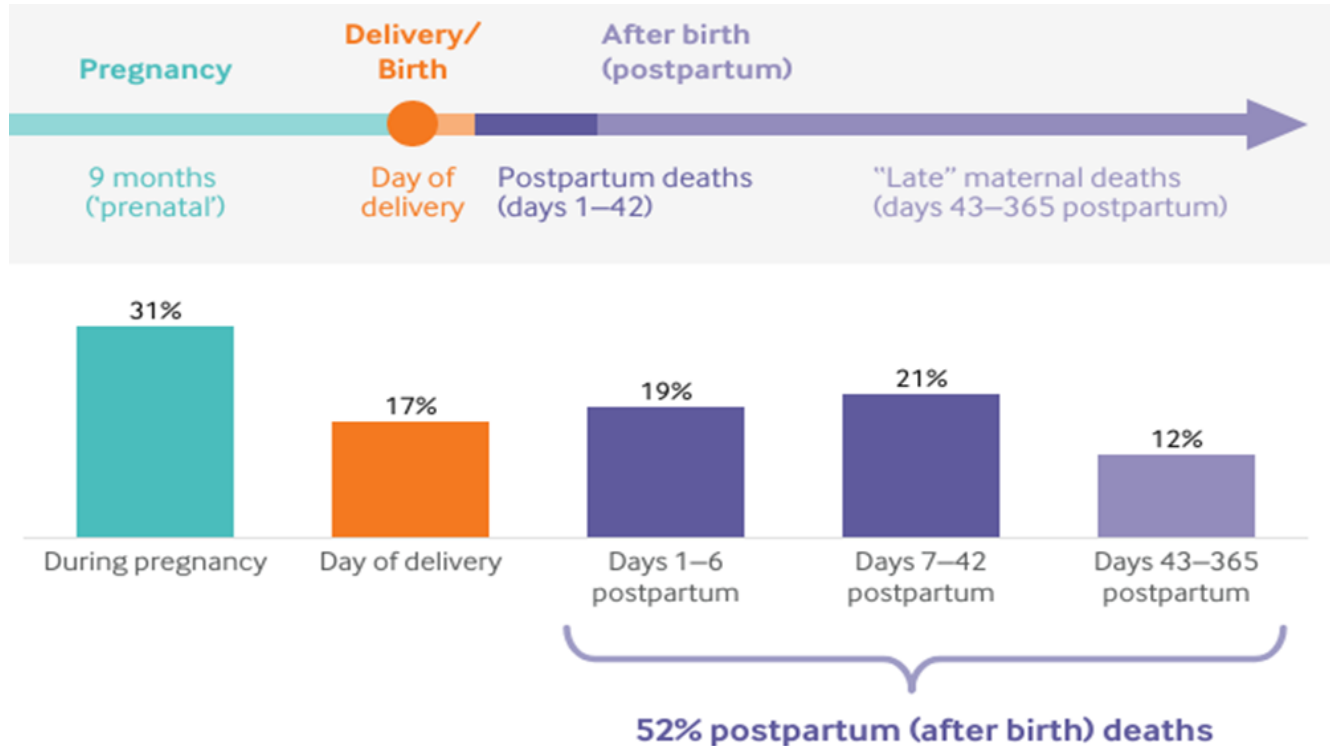


Pregnancy-Related Maternal Deaths per 100,000 live births



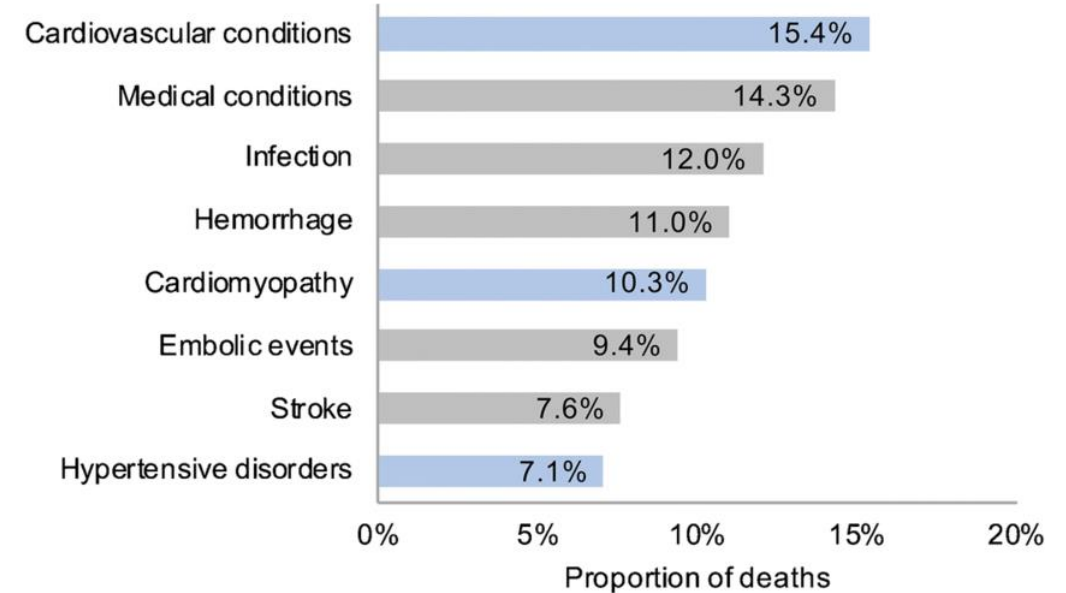
Plotted from data in: Peterson et al, MMWR 68: 762-765, 2019
Hoyert et al., NVSS, Health e-Stats, March 2023
Fleszar et al, JAMA 330: 52-61, 2023 (July 3)
Graphic by Dr. Andy Combs (used with permission)

Timing & Causes of Pregnancy-Related Deaths

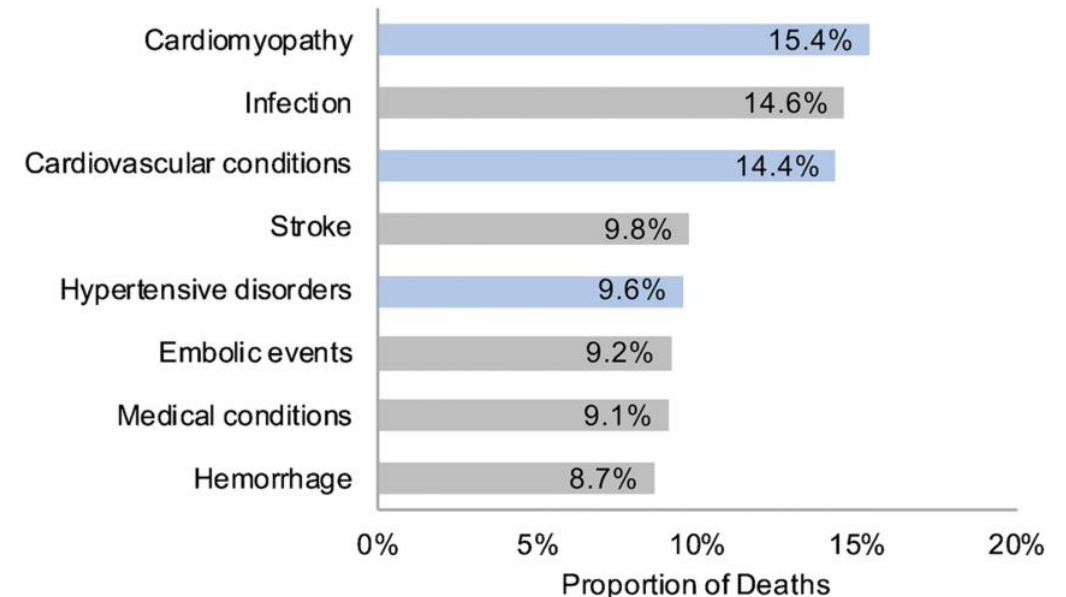


Left graphic: National Center for Health Statistics, National Statistics System, prepared by ABC

All pregnancy-related deaths

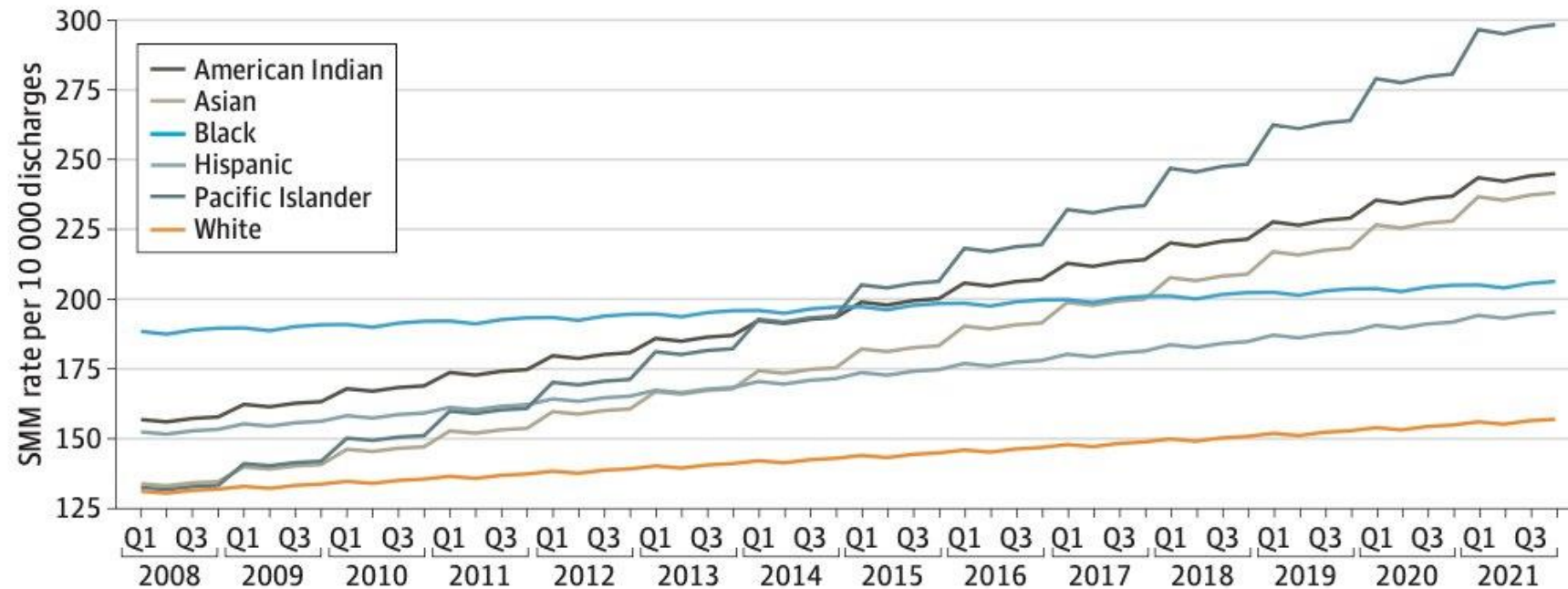
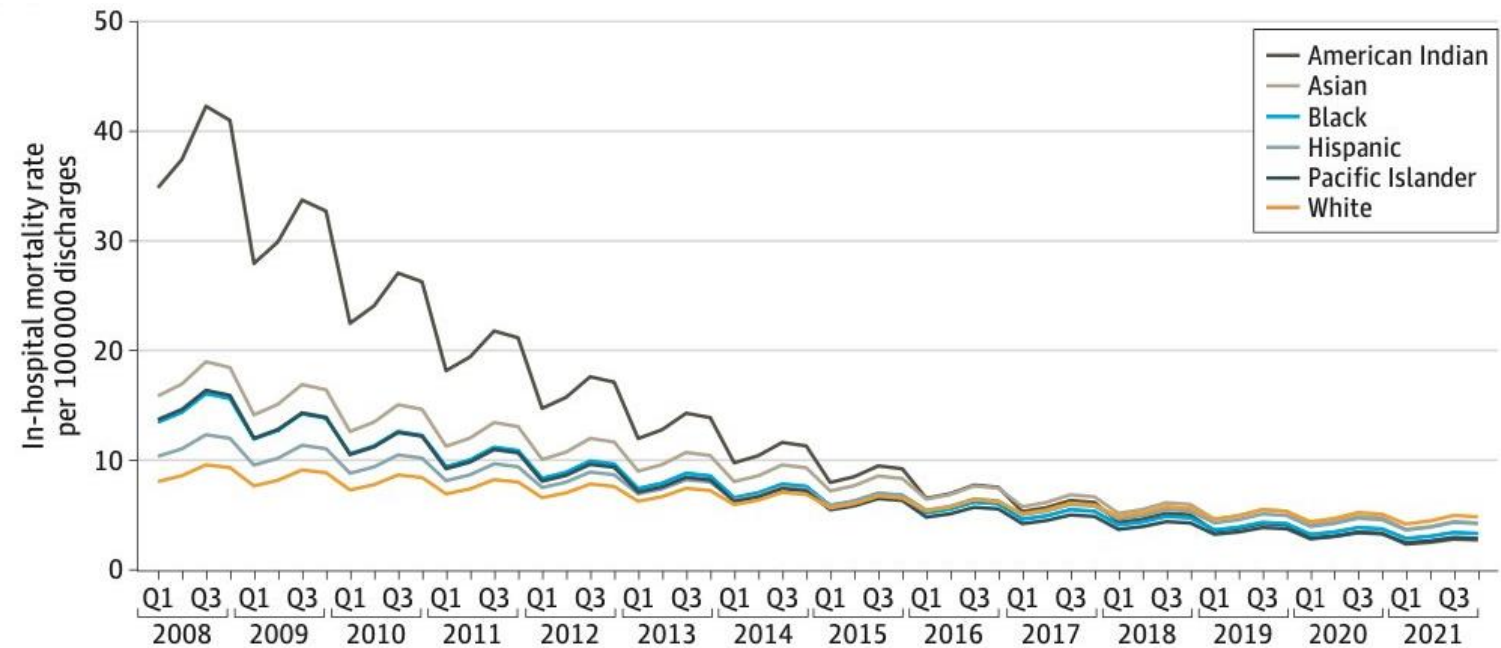


Postpartum pregnancy-related deaths



Right graphic: Fitzsimmons, et al. (2020). Differential Outcomes for African-American Women with Cardiovascular Complications of Pregnancy. Current Treatment Options in Cardiovascular Medicine. 22. 64. 10.1007/s11936-020-00863-5.

In-Hospital Maternal Mortality



Severe Maternal Morbidity

Data Source: Premier PINC AI Healthcare Database
N = 11,628,438 (approx 20% of US births)

Fink et al., JAMA Netw Open 6:e2317641, 2023 (June)

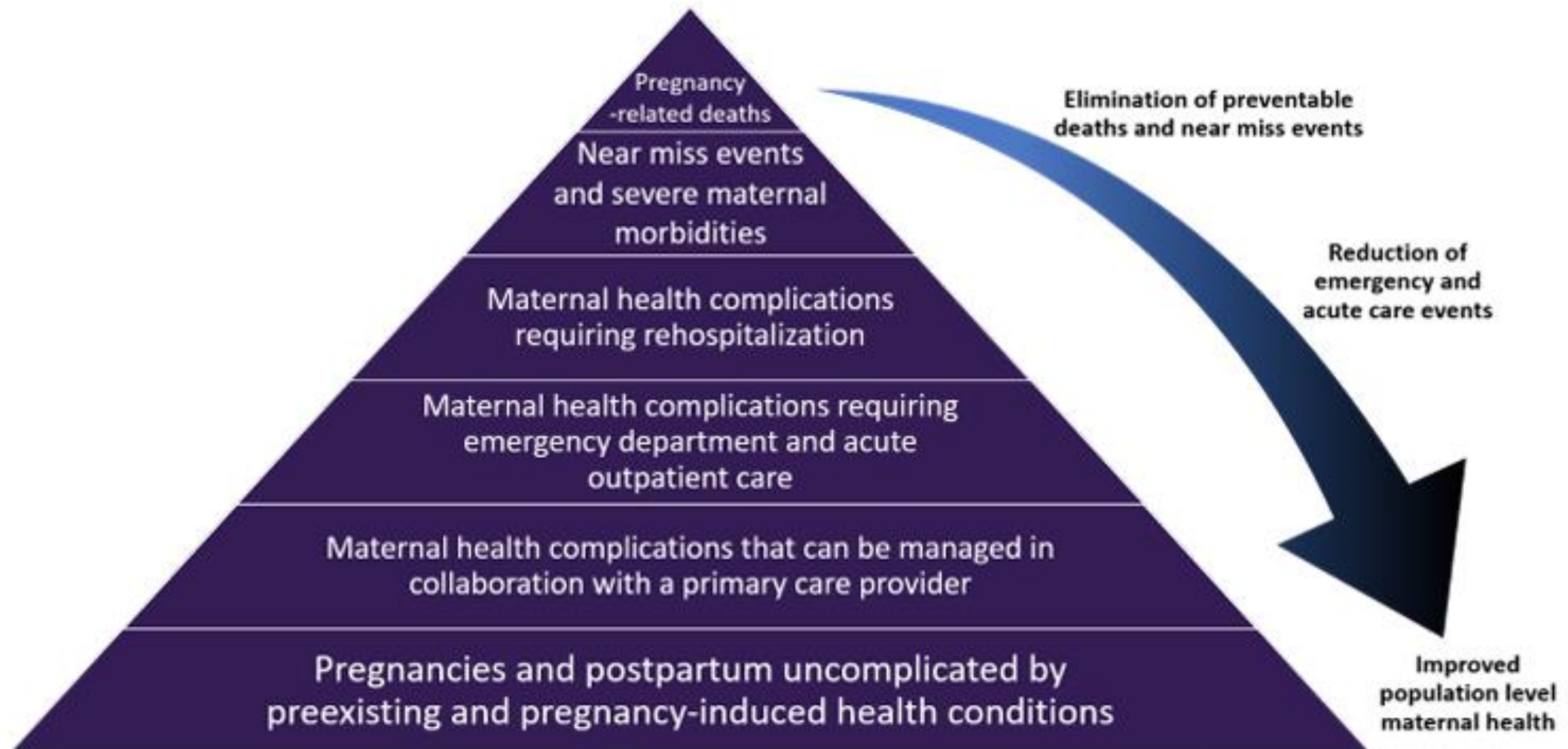


Figure 3. Pyramid of maternal morbidity and mortality outcomes and effects

Top 5 Contributing
Factors to Pregnancy-
Related Deaths in
Texas (2019)

**Patient/Family
Domain**

19%

- Chronic disease

15%

- Lack of knowledge regarding importance of event, of treatment or follow up

14%

- Lack of access/financial resources

13%

- Delay or failure to seek care

12%

- Mental health conditions

24%

- Clinical skill/quality of care

19%

- Failure to screen/inadequate assessment of risk

18%

- Lack of knowledge regarding importance of event, treatment or follow up

13%

- Delay in referring or access to treatment

6%

- Discrimination

Top 5 Contributing
Factors to Pregnancy-
Related Deaths in
Texas (2019)

**Provider
Domain**

How do we address factors contributing to maternal mortality, especially those outside of the hospital?



Complex problems = Complex solutions

Action and strategies needed by many groups at many levels

1. Women and families
2. States, tribes and local communities
- * 3. Healthcare professionals
4. Health systems, hospitals and birthing facilities
5. Payors
6. Employers
7. Innovators
8. Researchers

THE SURGEON GENERAL'S CALL TO ACTION

TO IMPROVE MATERNAL HEALTH

HEALTHCARE PROFESSIONALS

Ensure quality preventative
healthcare for all women,
children and families

Address disparities such as
racial, socioeconomic,
geographic and age to
provide culturally
appropriate care in clinical
practices

Help patients to manage
chronic conditions

Communicate with women
and their families about
their pregnancy

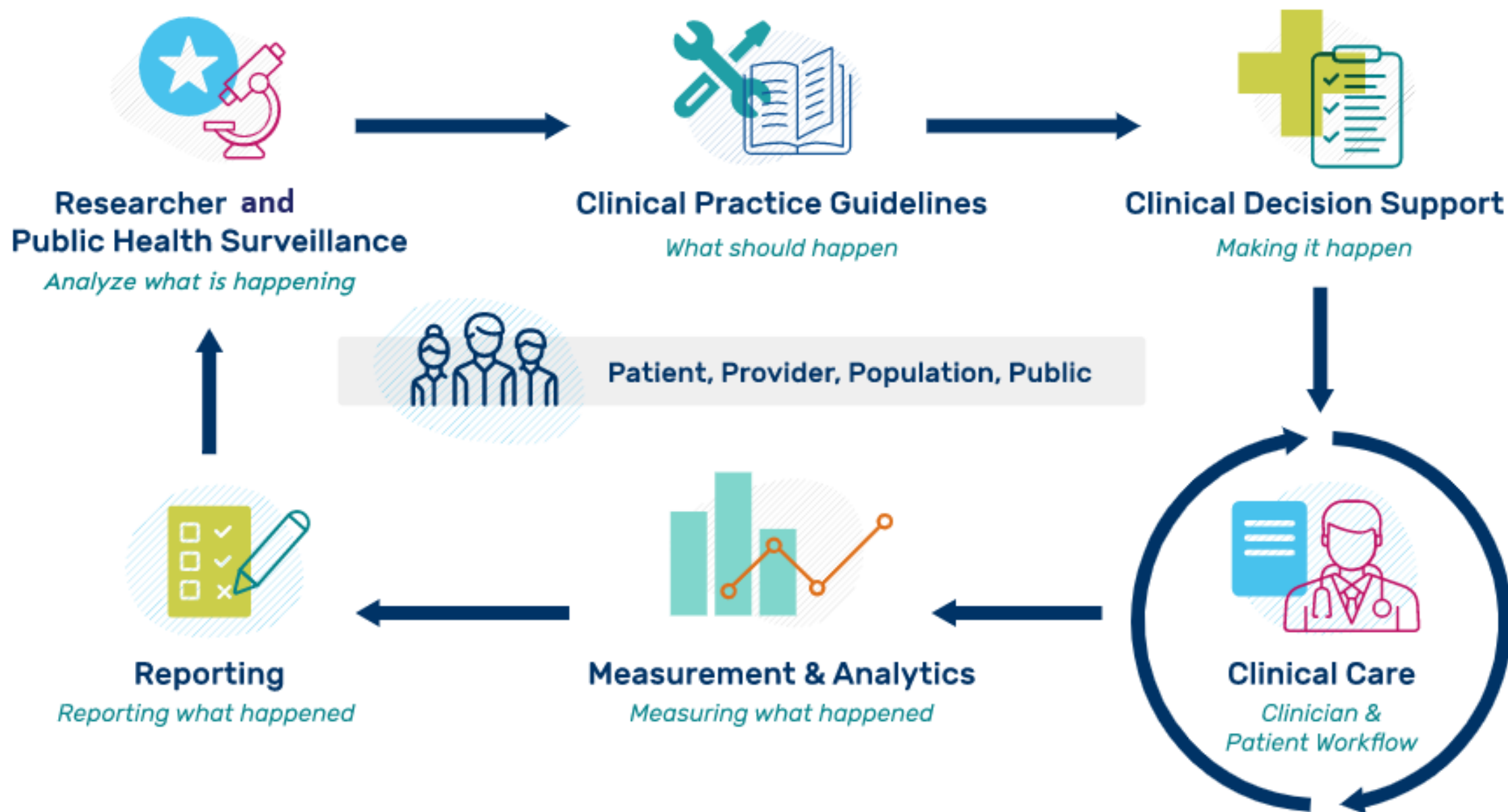
Facilitate timely recognition
of early warning signs up to
one year after pregnancy

Improve healthcare services
during the postpartum
period and beyond



How Can We Help? The QI Paradigm

Figure 1-1: The Quality Improvement Ecosystem Diagram



Addressing Gaps in Care Quality = Toolkits, Bundles & Checklists



Toolkit

An "inventory" of different tools for quality improvement that can be selectively used or individualized to meet the current QI priorities and capabilities



Bundle

A bundle is a structured way of improving the processes of care and patient outcomes by using a small, straightforward set of evidence-based practices that, when performed collectively and reliably, have been proven to improve patient outcomes



Checklist

Algorithmic listing of actions to be performed in a given clinical setting, the goal being to ensure that no step will be forgotten

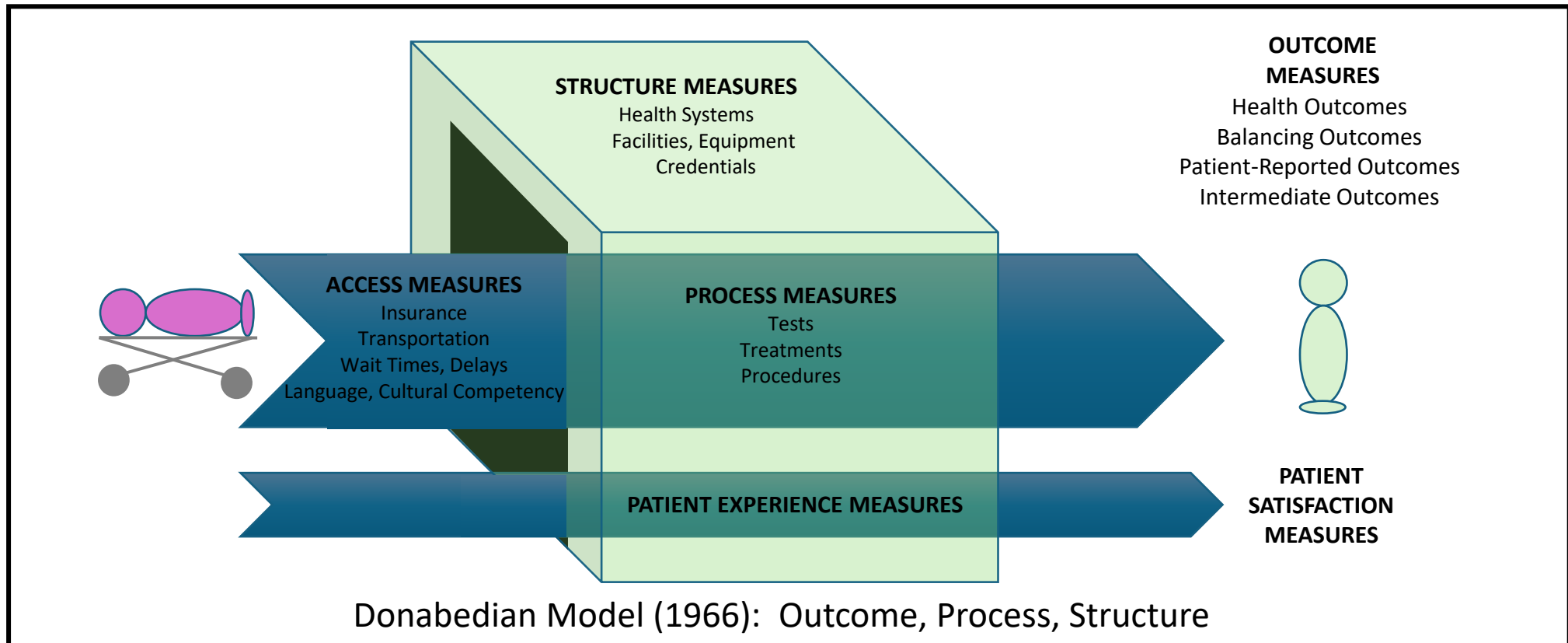
<https://qualityindicators.ahrq.gov/resources/toolkits>

<https://www.ihl.org/insights/what-is-a-bundle>

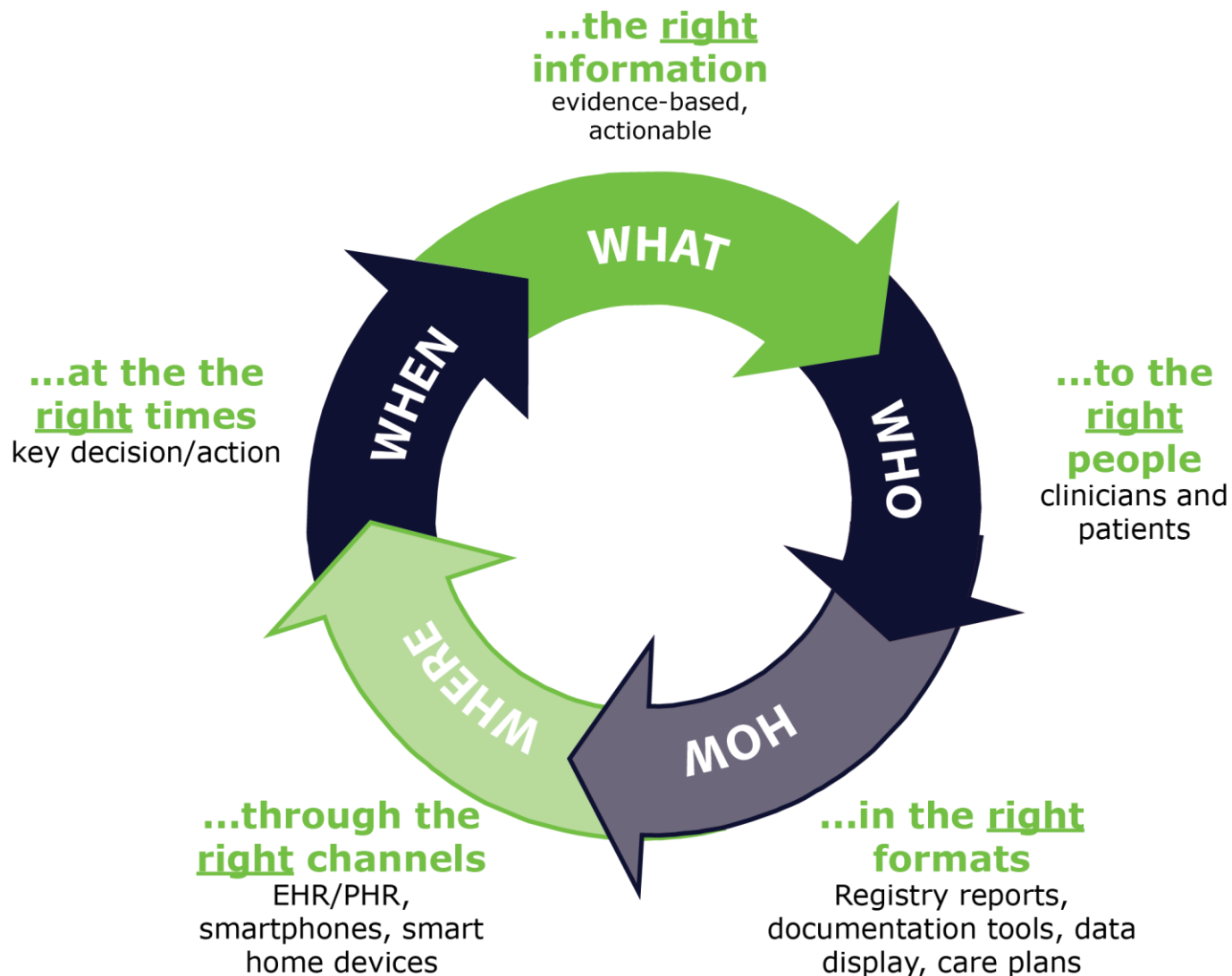
<https://psnet.ahrq.gov/primer/checklists>

Assessing Improvements = Quality Measures

- Quantifies healthcare processes, outcomes, patient perceptions, and organizational structure and/or systems
- Associated with the ability to provide high-quality health care and/or that relate to one or more quality goals for health care
- Supported by evidence



Implementing Improvement: Optimizing Patient & Clinician Workflow



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<https://hiteqcenter.org/Resources/HITEQ-Resources/guide-to-improving-care-processes-and-outcomes-in-health-centers>



https://mhcc.maryland.gov/mhcc/pages/apc/apc_icd/apc_icd_practice_transformation.aspx

Alliance for Innovation of Maternal Health (AIM) Safety Bundles



Obstetric Hemorrhage



Severe Hypertension in
Pregnancy



Safe Reduction of Primary
Cesarean Birth



Cardiac Conditions in
Obstetric Care



Care for Pregnant and
Postpartum People with
Substance Use Disorder



Perinatal Mental Health
Conditions



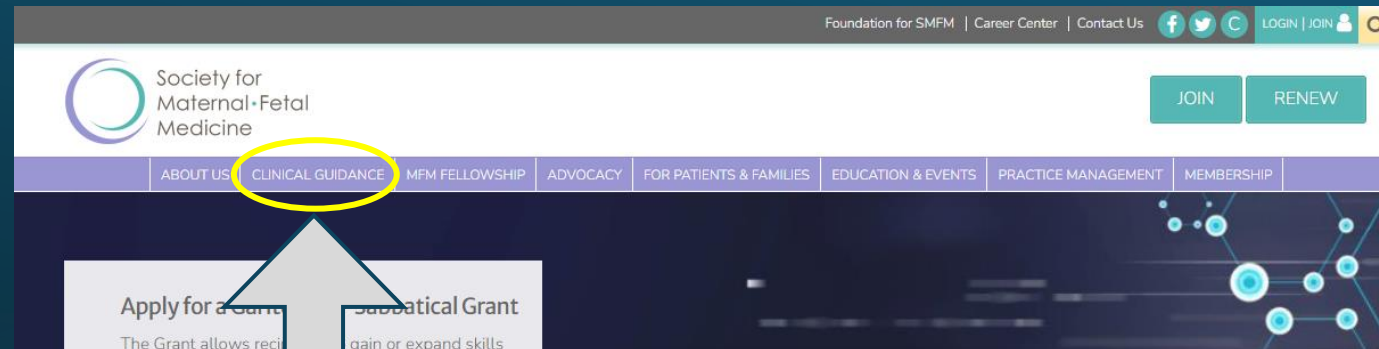
Postpartum Discharge
Transition



Sepsis in Obstetrical Care

<https://saferbirth.org/patient-safety-bundles/#core-aim-psbs>

Society for Maternal-Fetal Medicine (SMFM) Checklists



Checklists

The regular use of checklists—standardized, validated, evidence- or consensus-based processes—promotes consistency in obstetrical care and contributes to provide safe, efficient, high-quality patient care. The SMFM Patient Safety & Quality Committee encourages our members to incorporate the checklists below into their clinical practice to help improve the safety dynamics of their hospital. *The information in the SMFM Patient Safety Checklists should not be construed as dictation of an exclusive course of treatment or procedures to be ordered. Although the components of a particular checklist may be adapted to local resources, standardization of checklists within an institution is strongly encouraged.*

- [Amniotic Fluid Embolism, Initial Management](#) (April 2021)
- [Amniocentesis or Chorionic Villous Sampling](#) (July 2018)
- [Cesarean Delivery, Surgical Safety Checklists](#) (November 2021)
- [Diabetes Mellitus, Pregestational, Antepartum Care](#) (November 2020)
- [HIV, Pregnancy Management](#) (November 2020)
- [Hypertensive Disorders, Postpartum Discharge](#) (October 2020)
- [Maternal Transport Briefing Form and Checklist](#) (November 2020)
- [Operative Vaginal Delivery](#) (May 2020)
- [Placenta Accreta Spectrum, Emergency Checklist, Planning Worksheet, & System Preparedness Bundle](#) (September 2023)
- [Postpartum Visits for Normal and Complicated Pregnancies](#) (June 2022)
- [Preeclampsia, Low-Dose Aspirin, Risk Factor Screening](#) (September 2020)
- [Pregnancies Resulting From In Vitro Fertilization](#) (July 2022)
- [Thromboembolism Prophylaxis, Post-Cesarean](#) (October 2020)
- [Twin Pregnancy, Monochorionic](#) (November 2020)

Click “SMFM Checklists and Patient Safety Bundles”

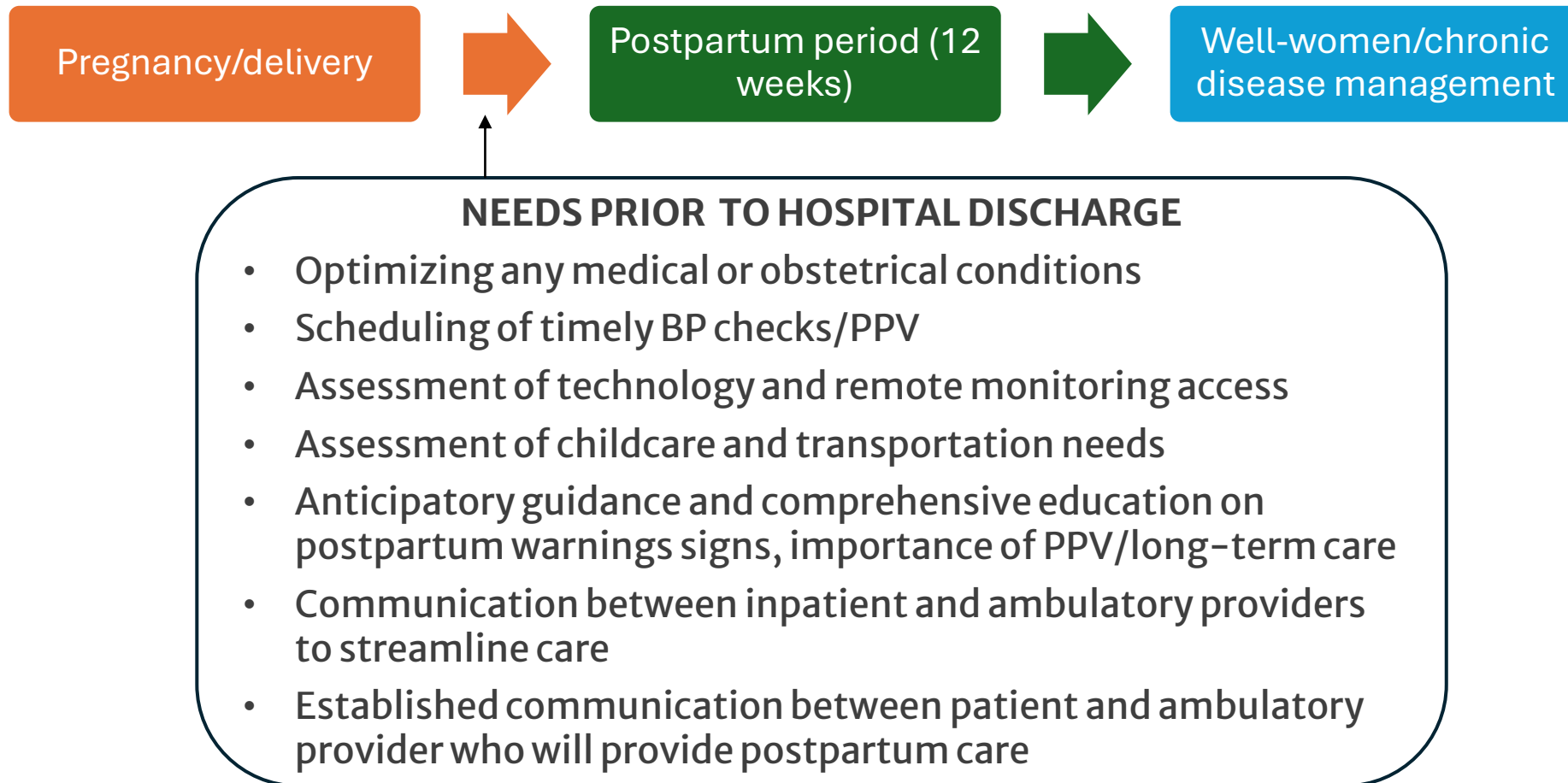
Preparing for the Immediate Postpartum Transition



*“By failing to prepare, you
are preparing to fail.”*

-Benjamin Franklin

Postpartum Transitions of Care



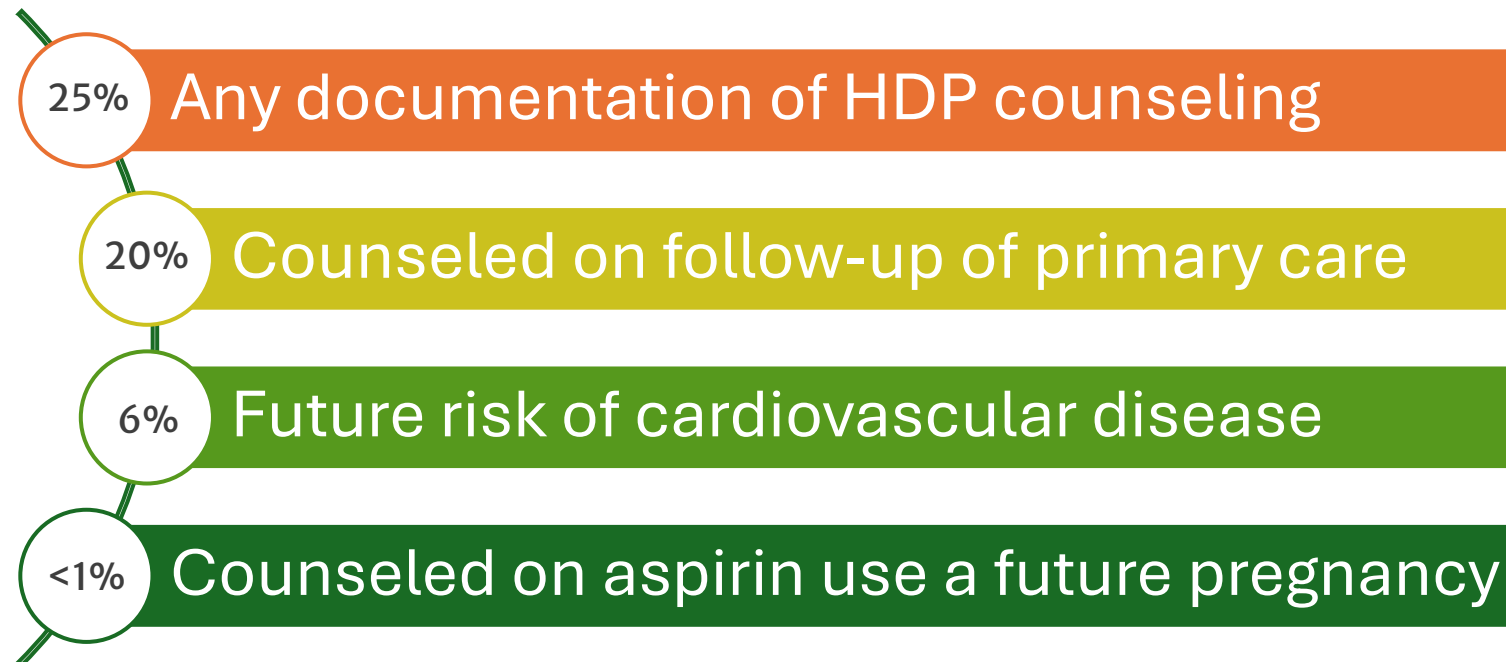
Postpartum Transition: Where Are We Going Wrong?

Four major themes were identified from the focus group discussions describing women's postpartum experiences:

1. Lack of women's knowledge about postpartum health and lack of preparation
2. Lack of continuity of care and absence of maternal care during the early postpartum period
3. Disconnect between providers and postpartum mothers
4. Need to bridge the gap with innovative approaches to care

Postpartum Education Gap for Women with HDP

Of 253 women with HPD surveyed in the postpartum period:



Measuring & Closing the PP Gap: Needed Quality Measures

Summary of recommended measures for hypertension and preeclampsia.

1. Proportion of pregnant women with sustained and unresolved blood pressure (systolic ≥ 160 or diastolic ≥ 110) who receive an antihypertensive agent within 30 minutes of continued blood pressure elevation
2. Proportion of women with a history of preeclampsia that required delivery at <34 weeks of gestation or with a history of multiple pregnancies with preeclampsia who receive low-dose aspirin antepartum
3. Proportion of women who delivered with preeclampsia with severe features who receive magnesium sulfate for seizure prophylaxis
4. Proportion of postpartum women with a current diagnosis of gestational hypertension, preeclampsia, or eclampsia who have documented care transition with a primary care provider and documented patient education on future cardiovascular and metabolic complications before hospital discharge



Proposed 2024 SMFM Metric on HDP Discharge Counseling

Table 1. Metric 1: Education on lifelong risks of hypertensive disorders of pregnancy (HDP)

Characteristic	Description
Brief title	Education regarding long-term health risks of HDP
Narrative description	Percentage of persons with HDP who receive education about long-term health risks before discharge from childbirth hospitalization, including recommendation for primary care follow-up.
Denominator	Number of persons with HDP hospitalized for childbirth
Exclusions from denominator	Persons not discharged to home (e.g., transferred to another facility or died during the delivery hospitalization).
Numerator	Number of persons in the denominator who received education before hospital discharge regarding both (a) long-term health risks of HDP and (b) recommendation to follow-up with primary care. (See Box for sample educational briefing.).

From DRAFT copy: Burns N, Kumar, N, Morgan J, Combs CA. SMFM Quality Metric for Hypertensive Disorders of Pregnancy – Patient Education and Transition to Primary Care

Optimize Postpartum Discharge Education & Planning

Patient Education

- ☐ Provide all education in patient's own language (via interpreter if necessary).
- ☐ Reinforce all education with a handout in patient's own language.
- ☐ Review warning symptoms and when to seek medical care.
- ☐ Discuss antihypertensive medications including dosage, schedule, potential side effects, hold parameters, and impact on breastfeeding.
- ☐ Discuss the diagnosis, recurrence risk in future pregnancy, and recommendation for low-dose aspirin to reduce recurrence risk.
- ☐ Discuss the long-term risk of cardiovascular disease, recommendation for annual screening of blood pressure, and lifestyle interventions to reduce risk (diet, weight management, exercise, smoking cessation).



SMFM Discharge **Checklist** for Women with Hypertensive Disorders of Pregnancy (HDP)



SMFM HDP Discharge Checklist

Follow-Up

- ☐ Provide contact information for obstetrical provider (phone, electronic patient portal).
- ☐ Schedule follow-up within 3 weeks after delivery (in-person or telehealth).
- ☐ Evaluate and address barriers to care, such as:
 - ☐ Transportation and childcare for visit(s)
 - ☐ Access to telephone if needed to call provider or reschedule appointments
 - ☐ Access to interpretation services if needed

If remote BP monitoring **will be used** (eg telehealth, smartphone app):

- ☐ Evaluate and address barriers to care, such as:
 - ☐ Access to blood pressure cuff
 - ☐ Access to necessary technology (smartphone, internet)
 - ☐ Literacy, ability to read and interpret numbers, dyslexia
- ☐ Provide instruction on how to measure blood pressure.
- ☐ Discuss target blood pressures (systolic less than 150 mm Hg; diastolic less than 100 mm Hg).
- ☐ Discuss blood pressures requiring prompt notification (systolic 160 mm Hg or greater; diastolic 110 mm Hg or greater).

If remote BP monitoring **will not be used**:

- ☐ Severe hypertension: Schedule office visit for BP check within 72 hours.
- ☐ Nonsevere hypertension: Schedule office visit for BP check at 7 to 10 days after delivery.



Postpartum Discharge Transition Bundle

Readiness — Every Unit

Develop and maintain a set of referral resources and communication pathways between obstetric providers, community-based organizations, and state and public health agencies to enhance services and supports for pregnant and postpartum families.*

Recognition & Prevention — Every Patient

Establish a system for scheduling the postpartum care visit and needed immediate specialty care visit or contact (virtual or in-person visit) prior to discharge or within 24 hours of discharge.*

Screen each patient for postpartum risk factors and provide linkage to community services/ resources prior to discharge.*

Response — Every Event

Provide patient education prior to discharge that includes life-threatening postpartum complications and early warning signs, including mental health conditions, in addition to individual patient-specific conditions, risks, and how to seek care.*

Provide each postpartum patient with a standardized discharge summary form that details key information from pregnancy and birth.*

UTSW HTN Discharge Practice Guideline

Postpartum Patients:

For patients requiring repeated doses of IV antihypertensive agents postpartum or with persistently elevated BPs ≥ 150 s systolic or 100s diastolic, consideration should be given to initiating PO antihypertensive agents, to maintain blood pressures SBP < 150 and DBP < 100 .

- i. When considering discharge to home, recorded blood pressures should be at goal (SBP < 150 and DBP < 100) for at least 24 hours.
 1. Patient should not be discharged if they have two or more SBPs ≥ 150 or two or more DBPs ≥ 100 in the 24 hours preceding.
- ii. If an oral antihypertensive agent is initiated or uptitrated, discharge should be postponed for at least 24 hours.
- iii. Patients discharged to home with a diagnosis of severe preeclampsia should be given an outpatient nursing blood pressure check within 3-5 days. Patients discharged to home with a diagnosis of gestational hypertension should be given an outpatient nursing blood pressure check within 10 days.

An illustration featuring a row of five pregnant women in profile, facing right. They are depicted in a stylized, flat-art manner with solid colors for their skin and hair. From left to right, the women have dark skin and long dark hair (wearing an orange top), light skin and short blonde hair (wearing a pink top), dark skin and long dark hair (wearing an orange top), dark skin and short dark hair in a bun (wearing a blue top), and light skin and short blonde hair (wearing a pink top). Their hands are visible, some resting on their bellies. The background consists of vertical stripes in shades of pink, blue, and orange. A white rectangular box with a thin black border is centered in the upper half of the image, containing the title text.

Care Coordination in the Postpartum Period

Why is postpartum care critical to overall short + long-term wellness?

15% of severe maternal morbidity develops de-novo within 6 weeks of discharge delivery

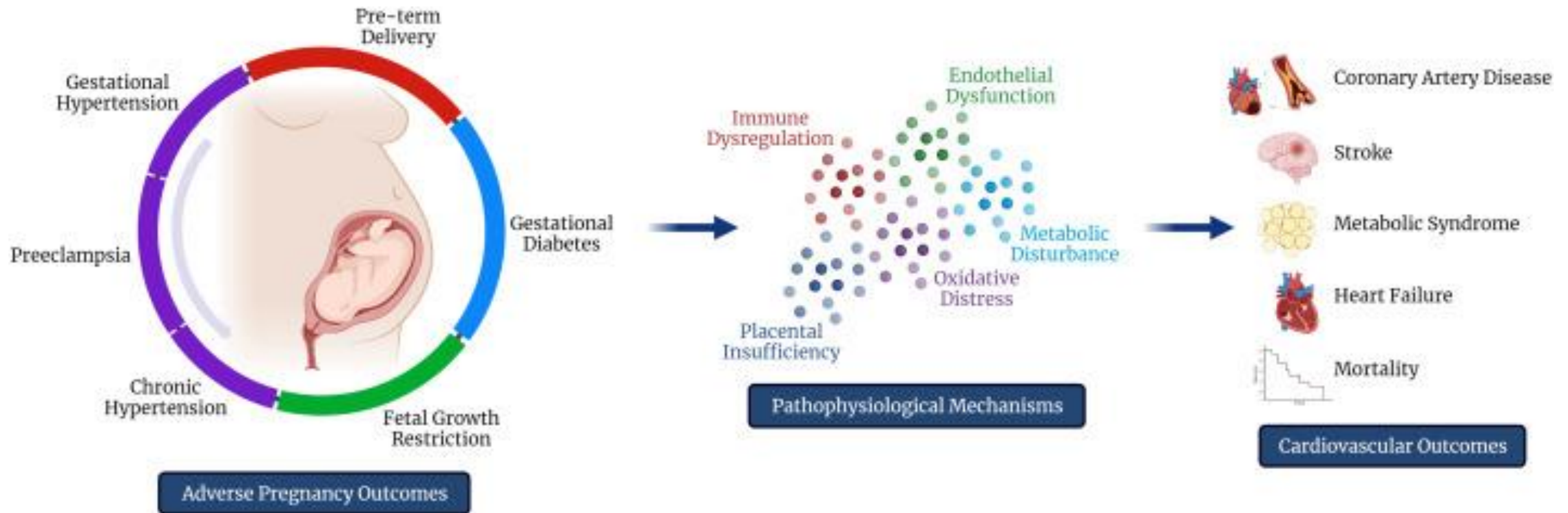
Less than half of women feel prepared to care for themselves postpartum

>1/3 of women experience lasting health problems after birth

Poor maternal physical and psychological health in the postpartum period adversely impact the health of their children

Pregnancy complications can portend an increased lifetime risk of cardiometabolic disease

Long-Term Health Implications of Adverse Pregnancy Outcomes (APOs)



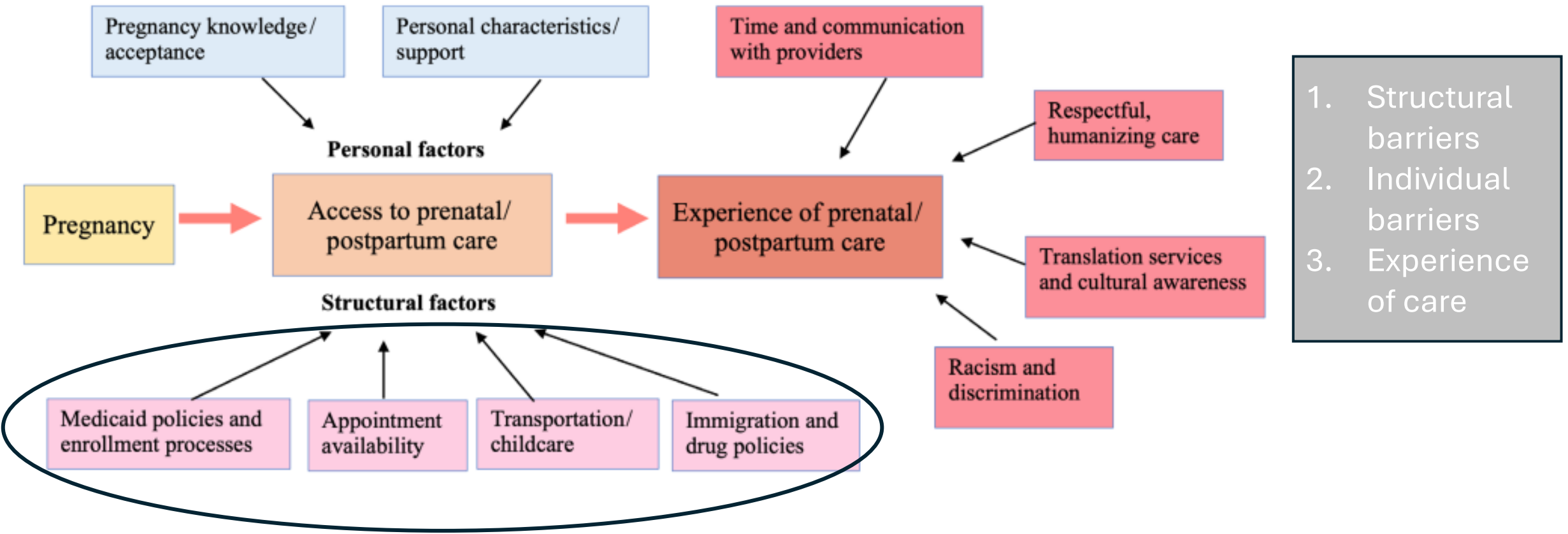
Current State of Postpartum & Transitional Care

Table 2. Rates of Utilization of Care During Preconception, Pregnancy and Post-Delivery, Stratified by Medicaid and Commercial Health Insurance Plans

Utilization in each time period	Complicated pregnancy				Comparison pregnancy
	GDM	DM	HDP	Total	Total
Medicaid health insurance	N=2,367	N=344	N=4,690	N=6,671	N=20,658
Utilization of post-delivery care, %					
Postpartum obstetric visit	67.4 %	65.1 %	63.8 %	65.0 %	61.5 %
Emergency room visit in 3 months post-delivery	12.2 %	16.9 %	14.2 %	13.6 %	11.7 %
Glucose testing* in 3 months post-delivery	5.7 %	14.8 %	2.1 %	3.3 %	0.5 %
Insurance coverage ≥ 6 months after delivery, %	47.4 %	66.9 %	57.0 %	54.2 %	49.7 %
Primary care visit in 12 months post-delivery	55.0 %	69.6 %	57.0 %	56.6 %	51.7 %
Commercial health insurance	N=499	N=78	N=637	N= 1070	N=2941
Utilization of post-delivery care, %					
Postpartum obstetric visit	48.7 %	56.4 %	52.6 %	50.7 %	44.6 %
Emergency room visit in 3 months post-delivery	4.6 %	10.3 %	6.0 %	5.5 %	3.8 %
Glucose testing* in 3 months post-delivery	11.4 %	26.9 %	4.7 %	8.2 %	0.5 %
Insurance coverage ≥ 6 months after delivery, %	91.2 %	88.5 %	88.7 %	88.4 %	89.8 %
Primary care visit in 12 months post-delivery	57.4 %	68.1 %	63.9 %	60.0 %	49.5 %

Factors Contributing to Underutilization

Medicaid member-identified factors affecting the use of timely, high-quality prenatal and postpartum care



Goals of Improving Postpartum Care Transitions

1

Reduce maternal morbidity and mortality in the postpartum period

2

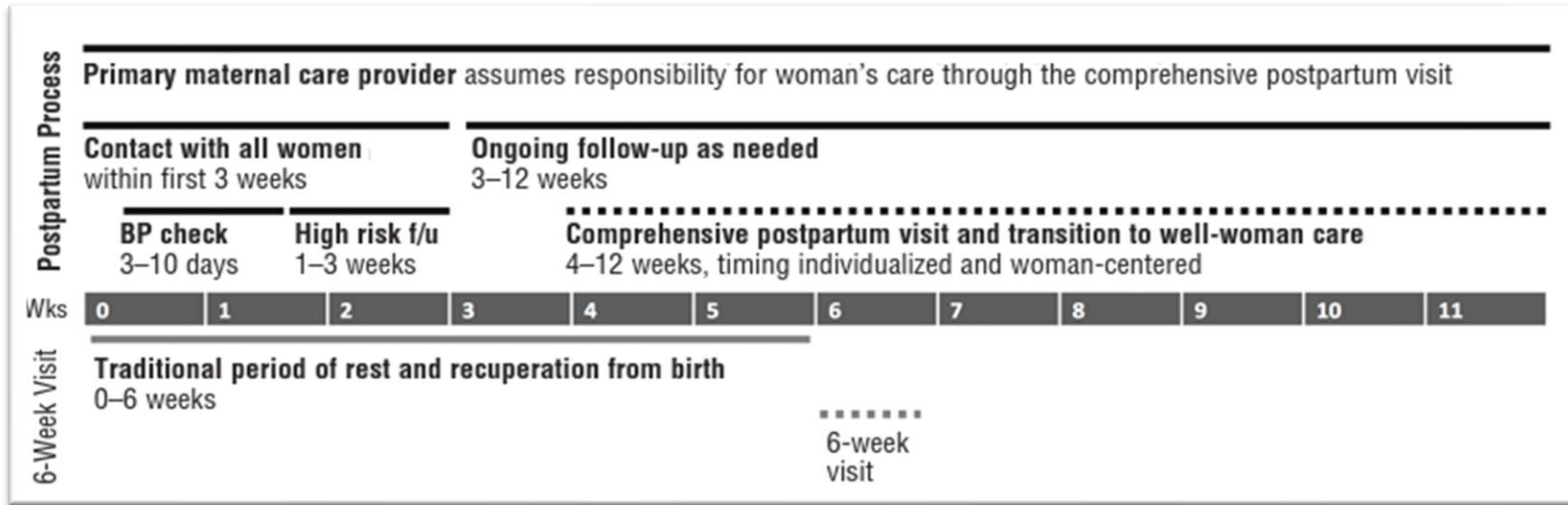
Optimize short and long-term maternal health and wellness after pregnancy

- Improve postpartum care attendance & access
- Improve the quality of postpartum care
- Ensure successful transition to ongoing/subspecialty care

3

Reduce racial, ethnic and payor status disparities in postpartum access, outcomes and wellness

Proposed Paradigm Shift



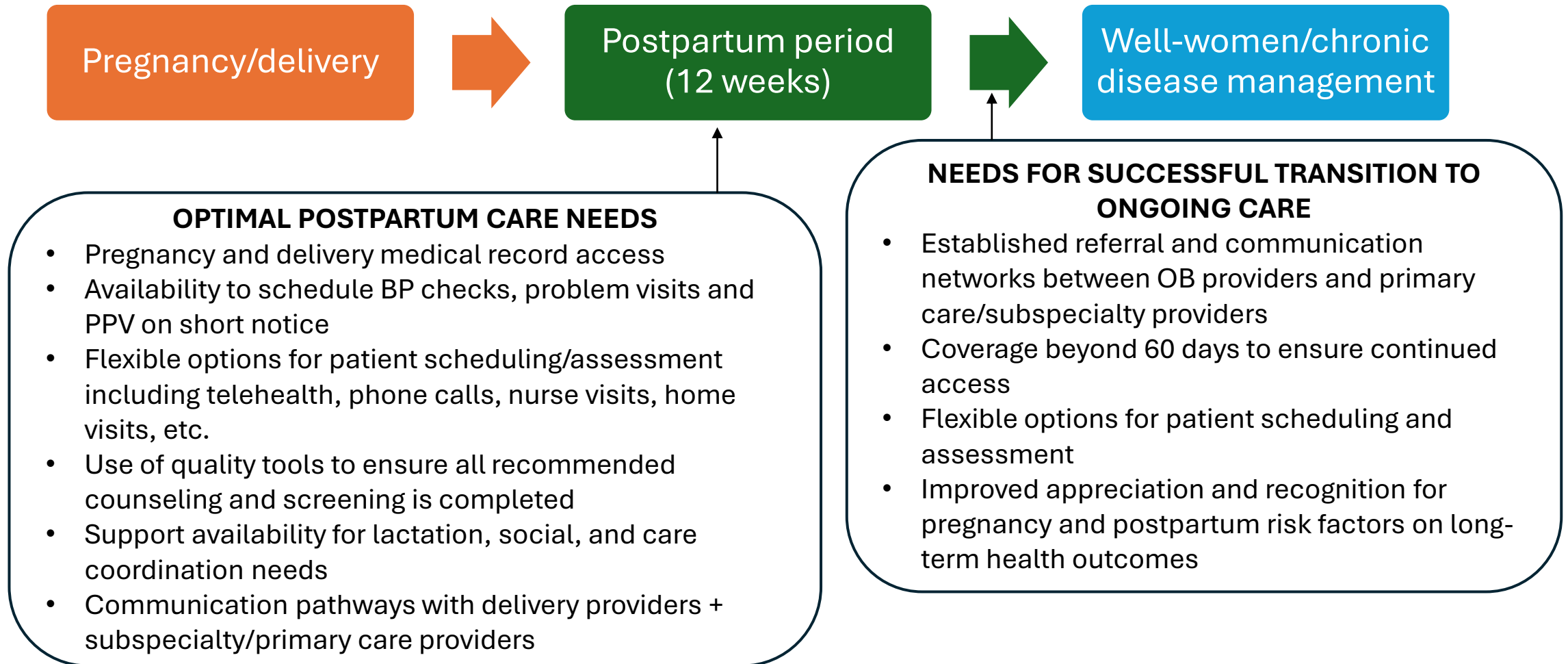
ACOG "Optimizing Postpartum Care" Practice Guideline

Current Postpartum Care Practices in the United States and ACOG Recommendations.*

Variable	Current Practice	ACOG Recommendation
Overall framework	6-wk postpartum period, with single visit to give the "all-clear"	12-wk "4th trimester"; postpartum care is an ongoing process
Timing and frequency of care	Comprehensive visit at 4-6 wk post partum, the only visit for most women; $\leq 40\%$ rate of nonattendance at postpartum visit and high rate (approximately 50%) of reported unmet need after postpartum visit	Individualized care, including but not limited to initial assessment in person or by phone within 3 wk post partum and comprehensive well-woman visit within 12 wk post partum for all women
Care team coordination	"Inconsistent" and "fragmented"; transitions from intrapartum to postpartum to well-woman care often unsupported	Unified message on importance of postpartum care; anticipatory guidance about transitions (e.g., prenatal discussions about reproductive life planning and postpartum care plan); multidisciplinary coordination

Horwitz ME, et al. Postpartum care in the United States – New Policies for a New Paradigm. N Engl J Med 2018

Ongoing Postpartum & Long-Term Care Needs



Addressing Access/ Structural Barriers = Innovative Models & Delivery of Care

- Text messaging
- Web-based curricula
- Telemedicine
- Patient navigation
- Home visits
- Dedicated transitional clinics

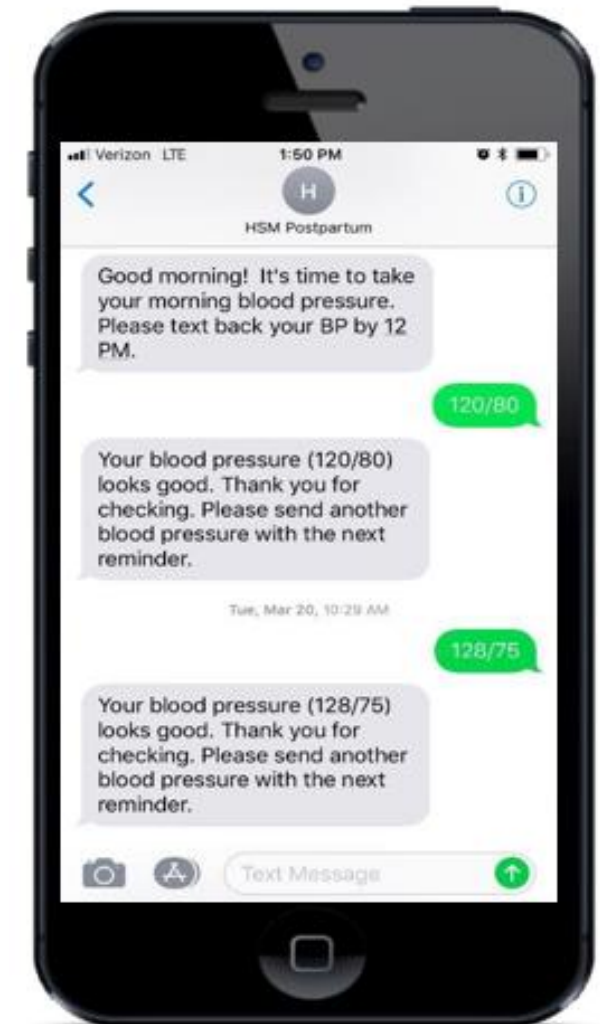


Randomized Controlled Trial Results Summary

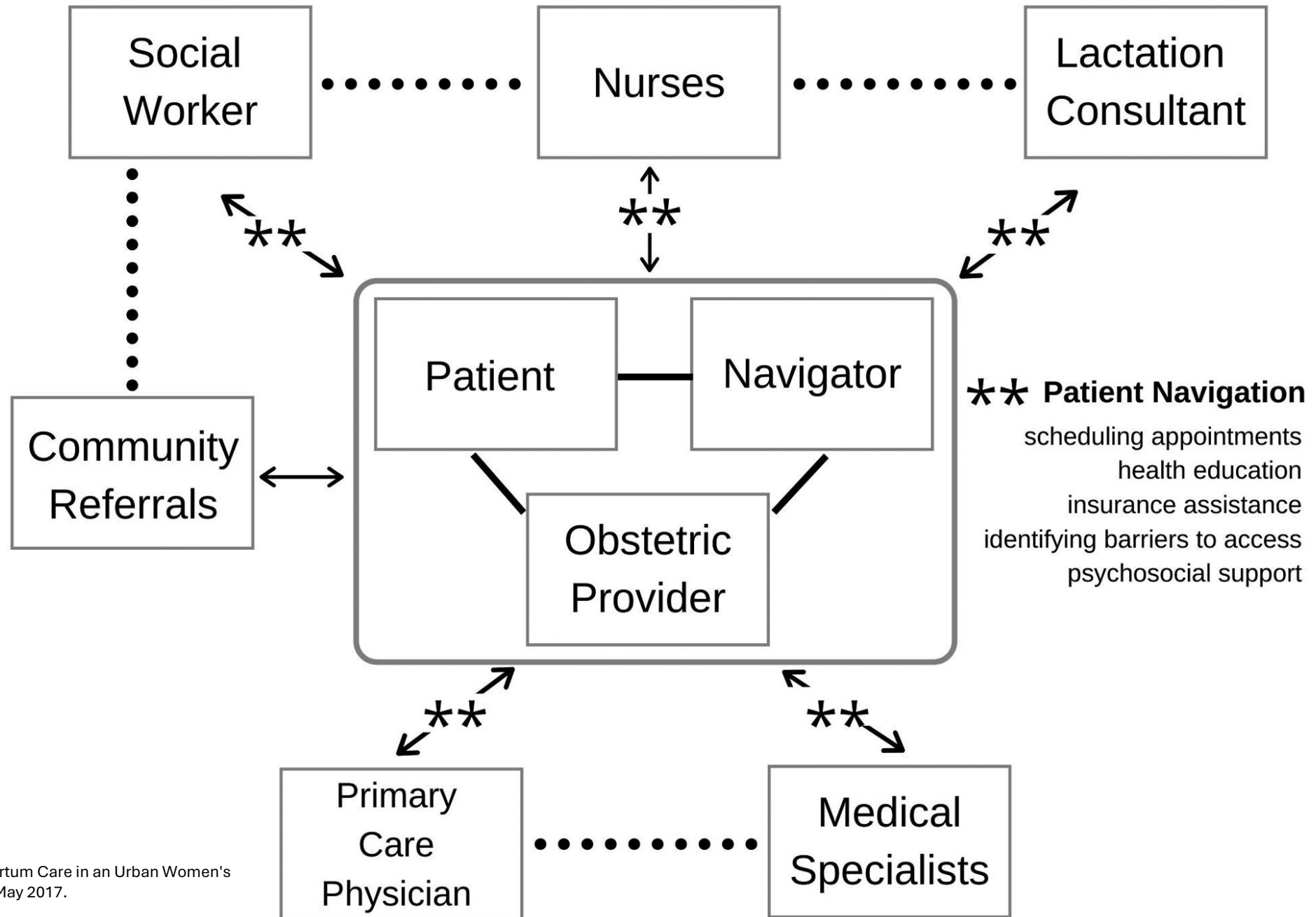
	Standard care Office visits, n=103	Intervention Text messaging, n=103	P values
One BP Reading in 10 Days Percent of patients with one blood pressure obtained within 10 days post-discharge	43.7%	92.2%	<0.001
Readmission Rate 7-day readmission rate for postpartum hypertension	3.9%	0.0%	0.04
Postpartum Visit Attendance Percentage of patients attending their six-week postpartum visit	58.2%	68.9%	0.04
ACOG Guideline Adherence Percent of patients meeting ACOG guidelines for postpartum blood pressure monitoring		84%	
Likelihood to Recommend Median score on Likert scale of 5 (strongly agree) to 1 (strongly disagree)		5 (5-5)	

Comparing office-based follow up with text-based remote monitoring in postpartum hypertension management

Text Messaging



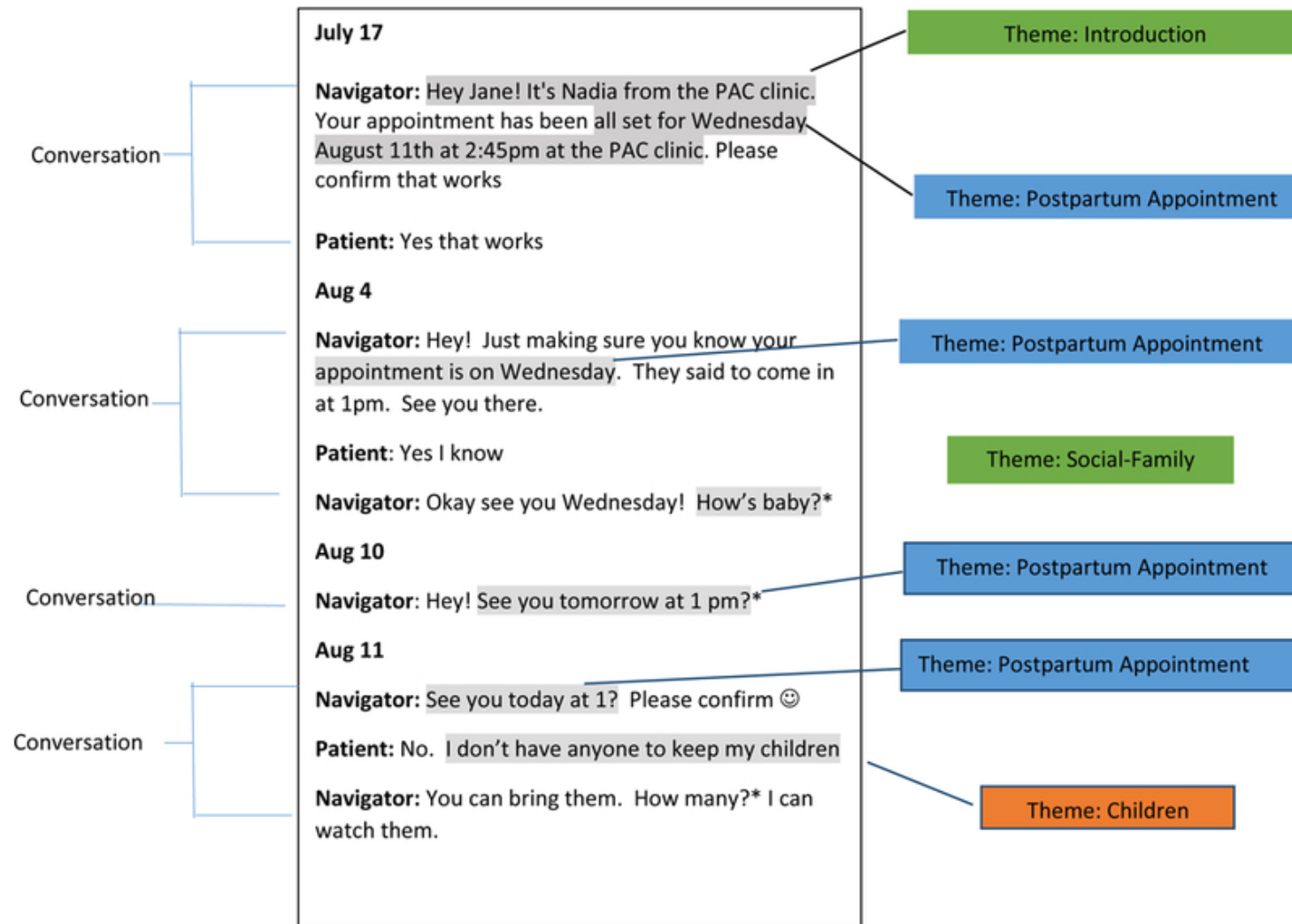
Patient Navigation



Yee, LM, et al. Using a Patient Navigator to Improve Postpartum Care in an Urban Women's Health Clinic. *Obstetrics & Gynecology* 129(5):p 925-933, May 2017.

Yee LM, et al. Bridging the postpartum gap: best practices for training of obstetrical patient navigators. *Am J Obstet Gynecol.* 2021

Combining Approaches: Navigation + Texting



*Indicates a lack of response from the patient

Communication Categories:

- Postpartum Care Coordination (Blue)
- Rapport-building (Green)
- Motherhood (Orange)

Electronic Reminders

Your patient was enrolled in Heart Safe Motherhood and has an upcoming postpartum visit.

Hypertensive Diagnosis	***
Blood Pressure Medication	None/***
Gestational Diabetes	Yes/No
Primary Care Provider	[Name from Epic Banner]***

Counseling Dotphrases: dotphrases have been shared with you to facilitate counseling after pregnancy complicated by hypertension. Contact information for primary care and Penn Cardiology are also shown below.

[HDP-COUNSEL]

Women with gestational hypertension and preeclampsia are at higher risk of developing preeclampsia in future pregnancies. We recommend starting low dose aspirin (81 mg) at 12-16 weeks in a future pregnancy to reduce that risk.

Women with hypertensive disorders of pregnancy are at increased risk of cardiometabolic disease long-term including hypertension, diabetes, coronary artery disease, heart failure, and stroke.

I recommend you see a primary care provider/***cardiologist in 4-6 weeks to discuss ways you can reduce your risk of cardiovascular disease.

[HDP-FINDPCP]

If you do not have a primary care provider, you can find a provider through Penn Medicine (<https://www.pennmedicine.org/for-patients-and-visitors/find-a-program-or-service/primary-care>) or you can contact your insurance company to find in-network providers.

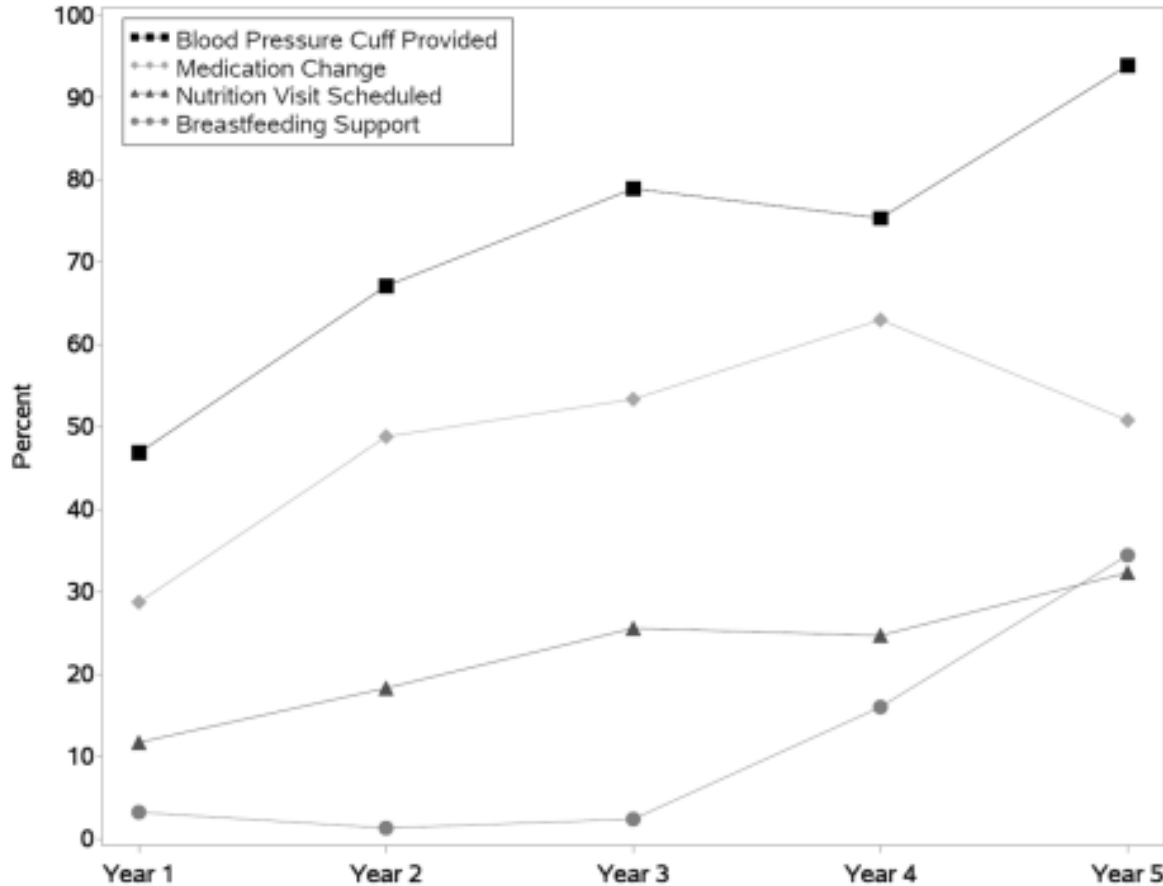
[HDP-CARDIOLOGY]

Women with preeclampsia with severe features, chronic hypertension with superimposed preeclampsia, or preterm preeclampsia may benefit from follow-up with a cardiologist. Please call 215-██████ to schedule follow-up.

Rate of counseling received by patients from providers during postpartum visit:

	Nudge group	Usual care group
Transitions of care	38.5%	22.9%
CVD risk	21.9%	8.6%
Aspirin use	14.6%	1.9%

Complex Care Transition Clinics



Postpartum Transition Clinic Referral Criteria

- Antepartum preeclampsia (210/412, 51%)
- Postpartum preeclampsia/HTN (92/412, 22.3%)
- Chronic HTN with superimposed preeclampsia (42/412, 10.2%)
- Chronic hypertension (37/412, 8.8%)
- Gestational hypertension (31/412, 7.8%)

Almost half (47.3%) had 2-3 visits

No show rates consistently ~25%

UTSW Complex Postpartum Care Clinic (CPCC)

AIM: To identify women with unexpected pregnancy complications and/or outcomes and provide further counseling on risk with future pregnancies and risk of future disease.

Target patient population:

1. Women with adverse pregnancy outcomes known to increase atherosclerotic cardiovascular disease (ASCVD) risk and who may benefit from prevention efforts to decrease ASCVD risk:
 - a. Pre-eclampsia, particularly severe pre-eclampsia and severe pre-term pre-eclampsia
 - b. Gestational hypertension (GH)
 - c. Chronic hypertension complicated by preeclampsia
 - d. Gestational diabetes
 - e. Fetal growth restriction or small-for-gestational-age infant, particularly those requiring intervention prior to 37 weeks
2. Women with other unexpected pregnancy complications and/or outcomes (not already listed above), including but not limited to:
 - a. Spontaneous preterm delivery <37 weeks, particularly early PTB <34 weeks
 - b. Placental abruption (suspected and/or confirmed)
 - c. Unexpected fetal demise >20 weeks
 - d. Acute fatty liver of pregnancy
 - e. Other unexpected complications or outcomes with risk of recurrence and/or potential to impact future maternal health/pregnancy planning

For target population #1: Patient seen by MFM → initial counseling provided by MFM using material/scripts developed cardiology → referral placed to cardiology if:

1. Patient requests
 2. Patient has a history of premature ASCVD
 3. Patient has an LDL >190
- ➔ If referred to cardiology, please obtain a lipid panel and a1c. Results will be followed up at cardiology visit.
- ➔ If none of the above, patient is referred to primary care with guidelines created by cardiology on how aggressive to be with risk factor modification

Supporting & Measuring Postpartum Care Quality Improvements: Toolkits, Bundles, Checklists & Metrics



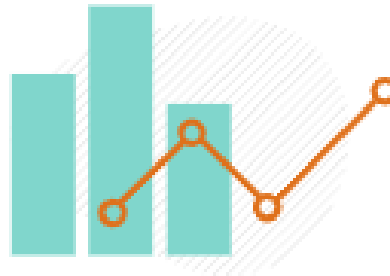
Clinical Practice Guidelines

What should happen



Clinical Decision Support

Making it happen



Measurement & Analytics

Measuring what happened



TOOLKIT: 4th Trimester Project

Resources For Care Teams



Postpartum Toolkit
Materials



New Parent Materials

Postpartum Checklist

Your health care team is working for your best care.

This checklist is a tool to connect around what might be most helpful.



Please review the checklist below and write where you have concerns, questions and/or would like information. You do NOT need to be experiencing a problem to learn about resources.

I have a concern or question

I would like more
information / a referral

Physical recovery

Bleeding, including amount, color, odor	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Cramping	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Pelvic floor, such as pressure or pain	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Incontinence (leaking pee or poop)	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Hemorrhoids (pain, itching, or swelling after pooping)	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Cesarean section birth recovery	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Vaginal birth recovery	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Signs of infection	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Exercise / activities	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Improve PPV Quality, Consistency, and Referrals

Postpartum visit **checklists** for normal and complicated pregnancy

- Condensation of ACOGs 94-page Postpartum Toolkit
- Two separate checklists to provide comprehensive postpartum care recommendations
- 1st checklist encompasses routine needs for all patients in the first checklist using the 5 “Bs”

BOX 1

Postpartum visit checklist for all patients: the 5 “Bs” of postpartum care

This is a sample checklist only.

Practices and facilities are encouraged to customize the checklist to fit their unique circumstances.

Baby

- ☐ Feeding method
- ☐ Child care strategy
- ☐ Pediatrics care provider
- ☐ Caregiver immunization
- ☐ Home safety

Breasts

- ☐ Breast pain
- ☐ Breastfeeding issues
- ☐ Lactation consultation if indicated

Below the waist (bowels and bladder, bottom, bleeding)

- ☐ Urinary and rectal incontinence
- ☐ Incisional pain/healing
- ☐ Lochia/vaginal bleeding
- ☐ Laceration assessment
- ☐ Pap/colposcopy if indicated

Baby blues/postpartum depression

- ☐ Validated depression screening (EPDS, PHQ-9)
- ☐ Social and emotional support assessment
- ☐ Sleep hygiene
- ☐ Psych referral if indicated

Birth control/future reproductive plans

- ☐ Birth control discussion
- ☐ Future pregnancy plans
- ☐ Referral for interconception consultation if indicated

2nd Checklist: Follow-up, referral, counseling, and preconception considerations for postpartum patients with complex conditions

BOX 2

Checklist of additional considerations for postpartum patients with selected pregnancy complications or medical conditions

This is a sample checklist only.

Practices and facilities are encouraged to customize the checklist to fit their unique circumstances.

Condition	Additional testing or special follow-up	Referral to subspecialty or primary care	Counseling about cardiovascular or metabolic risks	Preconception consultation
Pregnancy complications				
Hypertensive disorders ^a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spontaneous preterm birth				
Cervical insufficiency	—	—	—	<input type="checkbox"/>
Spontaneous preterm labor	—	—	<input type="checkbox"/>	<input type="checkbox"/>
Preterm prelabor rupture of membranes	—	—	<input type="checkbox"/>	<input type="checkbox"/>
Fetal growth restriction	—	—	<input type="checkbox"/>	<input type="checkbox"/>
Gestational diabetes mellitus ^b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	—
Medical conditions				
Cardiovascular disease ^c				
Congenital/acquired heart disease	<input type="checkbox"/>	<input type="checkbox"/>	—	<input type="checkbox"/>
Peripartum cardiomyopathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulmonary hypertension	<input type="checkbox"/>	<input type="checkbox"/>	—	<input type="checkbox"/>
Chronic hypertension requiring treatment	<input type="checkbox"/>	<input type="checkbox"/>	—	<input type="checkbox"/>
Diabetes mellitus, pregestational (type 1 or type 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatologic disease				
Systemic lupus erythematosus	<input type="checkbox"/>	<input type="checkbox"/>	—	<input type="checkbox"/>
Antiphospholipid antibody syndrome	—	<input type="checkbox"/>	—	<input type="checkbox"/>
Other collagen vascular diseases	—	<input type="checkbox"/>	—	<input type="checkbox"/>
Pulmonary conditions				
Asthma, severe or uncontrolled	—	<input type="checkbox"/>	—	<input type="checkbox"/>
Cystic fibrosis	—	<input type="checkbox"/>	—	<input type="checkbox"/>
Gastrointestinal disorders				
Inflammatory bowel disease	—	<input type="checkbox"/>	—	<input type="checkbox"/>
Portal hypertension	—	<input type="checkbox"/>	—	<input type="checkbox"/>

SMFM Measure: Timely Follow Up after Severe HTN

SMFM Special Statement: Quality metric for timely postpartum follow up after severe HTN

- Codifies ACOG recommended 72 hour follow up into quality measure
- Designed to be measured using automatic calculations from billing codes derived from claims data

Measure specification	
Characteristic	Description
Brief title	Severe hypertension in pregnancy, timely postpartum follow-up
Narrative description	Percentage of patients who were evaluated within 3 d after hospital discharge from a childbirth hospitalization complicated by severe hypertension, severe preeclampsia, HELLP syndrome, or eclampsia
Denominator	Number of patients during the measurement period who had a delivery hospitalization (defined by the CPT codes listed below) and who had a diagnosis of a severe hypertensive disorder of pregnancy during that hospitalization (defined by the ICD-10 codes listed below)
Numerator	Number of patients included in the denominator who had at least 1 visit (defined by the CPT codes listed below) occurring within 3 d after discharge from the hospitalization defined in denominator. Visits with or without a telemedicine modifier (–95) can be included in numerator

Proposed SMFM Measure: Timely Transition to Postpartum Care

Characteristic	Description
Brief title	Timely postpartum transition to primary care for patients with HDP.
Narrative description	Percentage of HDP patients who have an office visit with a primary care provider within 12 months after delivery.
Denominator	Number of patients who gave birth and who had an HDP during pregnancy or within 4 weeks postpartum.
Exclusions from denominator	Patients who died during delivery hospitalization.
Numerator	Number of patients in the denominator who had at least one office visit with a provider credentialed in internal medicine, family medicine, or related subspecialties within 12 months of delivery.

Final Thoughts

1. Intrapartum/hospital-based maternal morbidity and mortality have declined, but rates remain unacceptably high both before and after delivery.
2. There is no healthcare quality without equity; therefore, equity considerations are fundamental to improving maternal outcomes and must be integrated at all levels of the healthcare system.
3. Improving postpartum care, follow-up and long-term health starts before the patient is discharged after her delivery hospitalization
4. Despite the long-term health implications of adverse pregnancy outcomes, postpartum care, counseling or transition to primary care/specialists is inadequate and inequitable.
5. A postpartum care paradigm shift is necessary, including transitioning to patient-centered alternative care models with consistent implementation of available quality tools.

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Questions?

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