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Pilot Study: Implementing a Postpartum Cardiometabolic Clinic Service Line

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FINANCIAL DISCLOSURE

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- **FINANCIAL DISCLOSURES NONE**

- **PERSONAL DISCLOSURE:**
  - **Mom of 2 (11 year old girl/ 8 year old boy)**
  - **Had a baby in the NICU**
  - **1st hand experience in forgetting "mom's health" in the postpartum period**

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OBJECTIVES

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- **The Why: In The Beginning….**
- **The Weeds: Setup, Operations, Organization**
- **The Data: What Have We Found?**
- **The Future: Where Are We Going?**

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THE WHY: IN THE BEGINNING….

WHAT IS POSTARTUM?

Google

The postpartum period **begins soon after the delivery of the baby and usually lasts six to eight weeks and ends when the mother's body has nearly returned to its pre-pregnant state**. The postpartum period for a woman and her newborn is very important for both short-term and long-term health and well-being.

Merriam-Webster Est. 1828

post·par·tum ˌpōs(t)-ˈpär-təm

1 : occurring in or being the period following childbirth

a *postpartum* hemorrhage

postpartum care

NIH NATIONAL CANCER INSTITUTE

postpartum

(post-PAR-tum)

The time that begins right after a woman gives birth and lasts about 6 weeks.

WHAT IS POSTPARTUM?

My Postpartum Care Checklist

The postpartum period—the 12 weeks following the birth of a child—is an important time for your health. As you recover from childbirth and learn to care for your baby, your postpartum check-ups will help make sure you are

- healing physically, mentally, and emotionally
- feeling good about your health and your baby's care
- feeling that you can ask for help if you need it

WHAT IS POSTPARTUM?

Table 1. Suggested Components of the Postpartum Care Plan* ⇦

Element	Components
Care team	Name, phone number, and office or clinic address for each member of care team
Postpartum visits	Time, date, and location for postpartum visit(s); phone number to call to schedule or reschedule appointments
Infant feeding plan	Intended method of infant feeding, resources for community support (eg, WIC, Lactation Warm Lines,
Reproductive commensura	cts,
Pregnancy c	gestational ndations for any future pregnancies
Adverse pregnancy outcomes associated with ASCVD	Adverse pregnancy outcomes associated with ASCVD will need baseline ASCVD risk assessment, as well as discussion of need for ongoing annual assessment and need for ASCVD prevention over lifetime.
Mental health	Anticipatory guidance regarding signs and symptoms of perinatal depression or anxiety; management recommendations for women with anxiety, depression, or other psychiatric issues identified during pregnancy or in the postpartum period
Postpartum problems	Recommendations for management of postpartum problems (ie, pelvic floor exercises for stress urinary incontinence, water-based lubricant for dyspareunia)
Chronic health conditions	Treatment plan for ongoing physical and mental health conditions and the care team member responsible for follow-up

Abbreviations: ASCVD, atherosclerotic cardiovascular disease; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

*A Postpartum Care Plan Template is available as part of the ACOG Pregnancy Record.

In a 20 minute Return Visit

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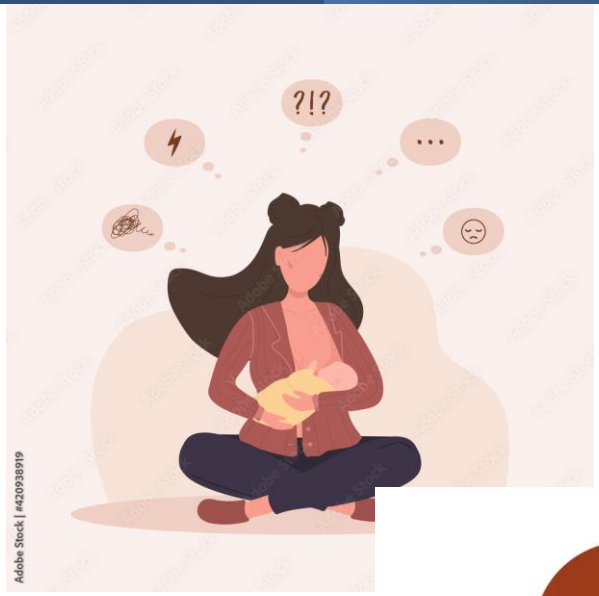
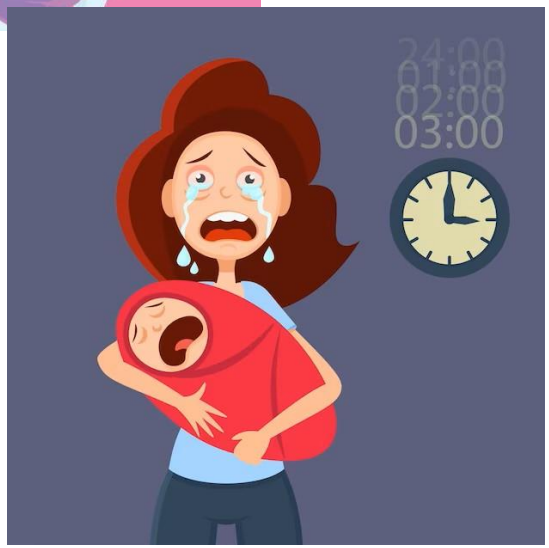
WHAT IS POSTPARTUM?





WHAT IS POSTPARTUM?

COMPLICATED PREGNANCY

Original Article

Risk
wom
pregr

Jessica Tray
Pages 2067-20

Cite this a

Table 3. Risk perception by hypertensive disease severity.

	Preeclampsia without severe features ($N=76$)	Preeclampsia with severe features ($N=41$)	Chronic hypertension ($N=29$)	p value*
↑ risk of hypertensive complications in future pregnancy				
	% ($N=55$)	% ($N=30$)	% ($N=23$)	
Yes	40 (22)	70 (21)	73.9 (17)	
No	60 (33)	30 (9)	26.1 (6)	**0.004**
↑ risk of developing hypertension during their lifetime				
	% ($N=70$)	% ($N=37$)	% ($N=28$)	
Almost no risk	10 (7)	5.4 (2)	3.6 (1)	
Slight risk	47.1 (33)	29.8 (11)	21.4 (6)	
Moderate risk	32.9 (23)	27 (10)	42.9 (12)	
High risk	10 (7)	37.8 (14)	32.1 (9)	**0.01**
↑ risk of myocardial infarction				
	% ($N=70$)	% ($N=37$)	% ($N=28$)	
Almost no risk	28.6 (20)	16.2 (6)	14.3 (4)	
Slight risk	47.1 (33)	51.4 (19)	50 (14)	
Moderate risk	20 (14)	21.6 (8)	28.6 (8)	
High risk	4.3 (3)	10.8 (4)	7.1 (2)	0.64
↑ risk of stroke				
	% ($N=70$)	% ($N=37$)	% ($N=28$)	
Almost no risk	41.4 (29)	29.7 (11)	25 (7)	
Slight risk	40 (28)	40.5 (15)	53.6 (15)	
Moderate risk	14.3 (10)	18.9 (7)	17.8 (5)	
High risk	4.3 (3)	10.8 (4)	3.6 (1)	0.61
Decreased desire for future pregnancy				
	% ($N=55$)	% ($N=30$)	% ($N=23$)	
Yes	40 (22)	70 (21)	73.9 (17)	
No	60 (33)	30 (9)	26.1 (6)	**0.004**

*p values calculated based on responses completed by question.
p Values < 0.05 are in bold.

COMPLICATED PREGNANCY

Postpartum care in a cardio-obstetric clinic after preterm preeclampsia: patient and healthcare provider perspectives

Alexandria C. Kraus, MD; Johanna Quist-Nelson, MD; Stanthia Ryan, MD; Alison Stuebe, MD, MSc; Omar M. Young, MD; Elizabeth Volz, MD; Catalina Montiel, MPH; Lauren Fiel, RN; Idil Aktan, MD; Kristin P. Tully, PhD

vided about preeclampsia (M2). Multiple patients anticipated being well after delivery once the "the immediate danger was over" (M6) because "you're kind of always told, oh, the cure for preeclampsia is delivery" (M3). This

I think I was supposed to have gotten a list of healthcare providers, mental healthcare providers in my area, but I don't know that I actually got it. I know I was supposed to, but I may have to follow-up on that. (M6)

"getting used to so much stuff" in the postpartum period that they were not able to process initial information provided about preeclampsia (M2). Multi-

LIFE HAPPENS

2020

BACKGROUND

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- **State of GA: 66.3 deaths/100,000 live births**
- **National Rate: 29.6 deaths/100,000**
- **Highest rates among those who are Black, publicly insured or uninsured.**
- **53% are within 64 days postpartum**

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BACKGROUND

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- **Contributors to Severe Morbidity and Mortality in the state:**
  - **Obesity: 42%**
  - **Bias/Discrimination: 15%**
  - **Mental Health Conditions 18%**
  - **Substance Use 13%**

- **Majority of deaths are occurring intrapartum/peripartum/postpartum period**
  - **Obesity**
  - **Cardiovascular**
  - **Metabolic disease**

- **60% are cardiac related (cardiomyopathy, cardiovascular disease, embolism, preeclampsia)**

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BACKGROUND

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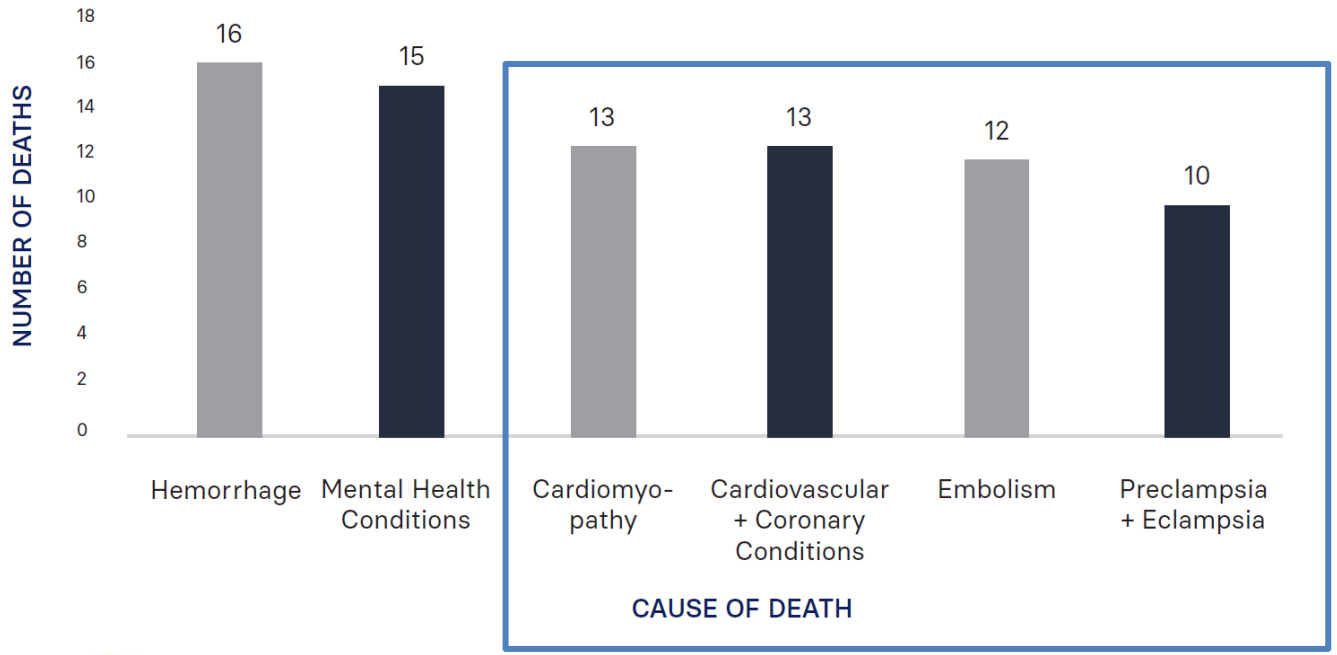
Figure 8 **Leading Causes of Pregnancy-Related Deaths**
Georgia, 2018-2020 (n=79)



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2018-2020 MMRC Report

POSTPARTUM CARDIOMETABOLIC CLINIC

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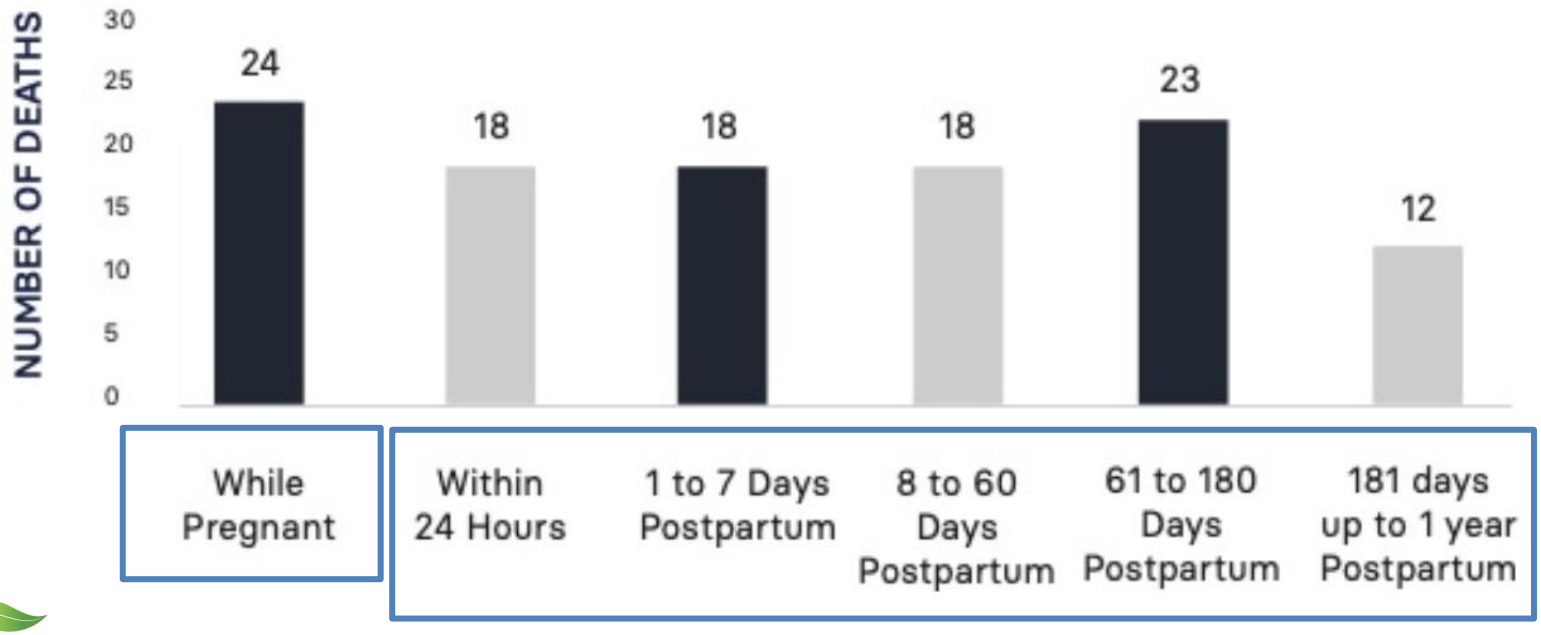
Figure 2 **Pregnancy-Related Deaths by Timing of Death in Relation to Pregnancy,** Georgia, 2018-2020 (n=113)



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MATERNITY CARE DESERT GEORIGA

- **The Georgia Board of Health Care Workforce 2019 Annual Report**
  - **9 Georgia counties without a physician**
  - **18 without a family physician**
  - **32 without an internist**
  - **77 without a psychiatrist**

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DETERMINANTS OF MATERNAL HEALTH

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  - The standard of something as measured against other things of a similar kind
  - The degree of excellence of something

- **EQUALITY**
  - Equal treatment for all

- **EQUITY**
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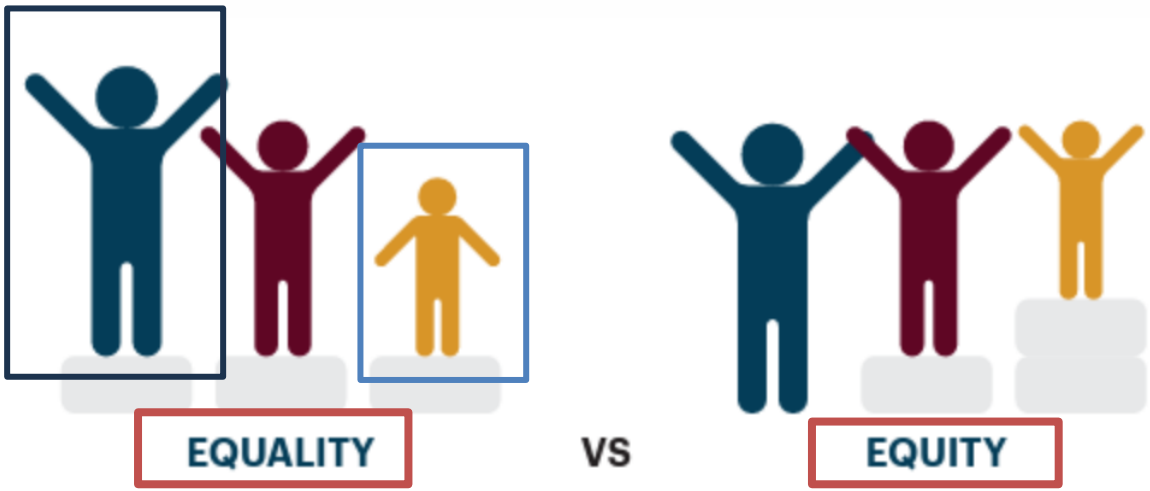

- Urban setting
- Access to care
- Adequate insurance coverage
- Support systems

- Underserved setting
- No obstetric services
- No insurance coverage
- Affected by other social determinants of health

- National Evidence Based Guidelines
- Hospital Protocols
- In theory, could go to any hospital/clinic for care

- Improved insurance access/payor coverage for all peripartum care (including postpartum –Medicaid Extension)
- Telehealth options
- Support systems (mental health, nutrition, primary care)
- Transport to higher levels of care when needed in a seamless fashion

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DETERMINANTS OF HEALTH

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- Georgia's Maternal Mortality Review Committee (MMRC)
  - 70% of Georgia's maternal deaths are preventable
- Key contributors
  - Poorly controlled chronic health conditions
  - Mental health conditions
  - Health system that offers poorly-coordinated care, particularly in the postpartum period
- Among key solutions, the MMRC recommends
  - Improved postpartum follow-up and case management
  - Especially with chronic mental health conditions and cardiometabolic complications of pregnancy

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THE WEEDS: SETUP, OPERATIONS, ORGANIZATION

INITIATIVE: EQUITY IN POSTPARTUM CARE

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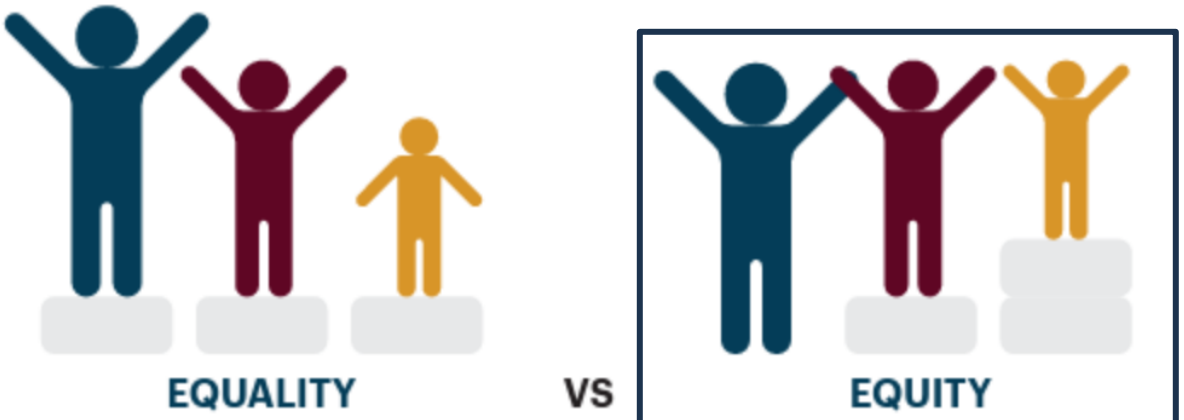

Paradigm Shift in Postpartum Care

- **Postpartum Clinic**
- **Telehealth and In Person Options**
- **All patients with a cardiometabolic issue in pregnancy**
- **Multidisciplinary care**
  - **Mental Health**
  - **Nutrition**
  - **Primary Care**
  - **Cardiology**
  - **Endocrinology**

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POSTPARTUM CARDIOMETABOLIC CLINIC

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ELIGIBLE PATIENTS:

- Any Hypertensive Disease in Pregnancy
- Any diabetes in pregnancy
- Other cardiometabolic issue not including adult congenital heart disease

- Refer patients ***either during pregnancy after diagnosis of HDP or DM***
- Will be scheduled *out* ***12 weeks postpartum ; does not replace standard postpartum visit***
- In-person visits and Telehealth visits are both options
- Clinic Started 9/2022

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- **One half session per week**
- **6 patients**
- **30-minute slots**
- **Any patient with a history of Diabetes, hypertension, or cardiometabolic disease in pregnancy can be referred**

REFERRALS:

- **Cardiology**
- **Endocrinology**
- **Primary Care**
- **Mental health resources (pamphlet created, referral to psychiatry if needed with Dr. Woo)**
- **Nonsurgical Weight Loss (Emory Bariatric Center)**

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- **Emory Women's Cardiology Clinic**
  - Dr. Gina Lundberg
  - Dr. Carolina Gongora
  - Dr. Puja Mehta
  - Dr. Lakshmi Tummala (Grady)
- **Endocrinology**
  - Dr. Priya Vellanki (Grady)
  - Diabetes Management Program (MOT, Clifton, virtual)
  - Multidisciplinary DM Clinic through Primary Care (Dr. Saria Hassan)
- **Primary Care**
  - Dr. Anne Dunlop
  - Dr. Megha Shah
  - Dr. Mohammed Ali
- **Mental Health Alliances**
  - Erin Ferrante, PhD MPH
  - Peace for MOMS
  - Vasiliki Michopolous, PhD
  - Toby Goldsmith, MD

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THE DATA: WHAT HAVE WE FOUND?

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- **Patients often do not understand why delivery occurred even in situations like preeclampsia with severe features**
- **Explanation of health risks during time of delivery is overwhelming**
- **Appreciate the opportunity to "debrief" after the acute postpartum phase has completed and they can reflect upon their experience**
- **Often are not aware of long term maternal metabolic health risks**
- **50% do not have primary care physicians**
- **"I want to do something to get better, I don't know what to do"**
- **" I didn't feel heard"**
- **"I told them my blood pressure was elevated at home, but at the ED I was told I was fine"**
- **"My child's pediatrician told me my blood pressure was high"**

	Overall (n=150)	Attended PPMC (n=93)	Did not attend PPMC (n=57)	p-value
Demographic information				
Age (years); mean (SD)	33.2 (5.7)	33.6 (5.4)	32.4 (6.1)	0.243
Race				0.263
African American	110 (73.3)	64 (68.8)	46 (81)	
Caucasian	25 (16.7)	19 (20.4)	6 (11)	
Asian	9 (6.0)	7 (7.5)	2 (3)	
Unknown	6 (4.0)	3 (3.2)	3 (5)	
Ethnicity				0.916
Hispanic	10 (6.7)	7 (7.5)	3 (5.3)	
Non-Hispanic	134 (89.3)	82 (88.2)	52 (91.2)	
Unknown	6 (4.0)	4 (4.3)	2 (3.5)	
Insurance				0.104
Public	40 (26.7)	21 (22.6)	19 (33.3)	
Private	109 (72.7)	72 (77.4)	37 (64.9)	
Uninsured/self-pay	1 (0.7)	0 (-)	1 (1.8)	
Education				0.149
High school	9 (6.0)	7 (7.5)	2 (3.5)	
College	39 (26.0)	26 (28.0)	13 (22.8)	
Post-graduate school	43 (28.7)	30 (32.3)	13 (22.8)	
Unknown	59 (39.3)	30 (32.3)	29 (50.9)	
Gravidity; mean (SD)	2.8 (2.0)	2.5 (1.6)	3.3 (2.4)	0.072
Parity; mean (SD)	2.0 (1.6)	1.8 (1.0)	2.4 (2.2)	0.182

RESULTS

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	Overall (n=150)	Attended PPMC (n=93)	Did not attend PPMC (n=57)	p-value
Demographic information				
Age (years); mean (SD)	33.2 (5.7)	33.6 (5.4)	32.4 (6.1)	0.243
Parity; mean (SD)	2.0 (1.6)	1.8 (1.0)	2.4 (2.2)	0.182
Cardiometabolic history				
Reason for PPMC referral				
Diabetic indication[1]	44 (29.3)	29 (31.2)	15 (26.3)	0.525
Hypertensive indication[2]	137 (91.3)	85 (91.4)	52 (91.2)	0.971
Maternal cardiac disease	4 (2.7)	1 (1.1)	3 (5.3)	0.154
Visits attended or scheduled within 6 months postpartum				
Any (≥ one specified below)	89 (59.3)	68 (73.1)	21 (36.8)	**<0.001**
Primary Care	51 (34.0)	38 (40.9)	13 (22.8)	**0.023**
Cardiology	58 (38.7)	48 (51.6)	10 (17.5)	**<0.001**
Endocrinology	11 (7.3)	9 (9.7)	2 (3.5)	0.207
Labs available for review after PPMC visit				
Lipids/triglycerides	31 (20.7)	27 (29.0)	4 (7.0)	**0.002**
Hemoglobin A1c	30 (20.0)	26 (28.0)	4 (7.0)	**0.002**
2-hr Glucose Tolerance Test	9 (6.0)	7 (7.5)	2 (3.5)	0.484
# Postpartum days that PPMC visit occurred (days); mean (SD)		90.8 (18.3)	N/A	
PPMC visit type			N/A	
In-person		30 (32.3)		
Virtual		63 (67.7)		
Other co-existing conditions addressed during PPMC visit			N/A	
Nutrition/weight loss		58 (62.4)		
Mental health		41 (44.1)		

RESULTS

Two times more likely to have follow up with primary care, cardiology, endocrinology or have cardiometabolic labs drawn

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POSTPARTUM CARDIOMETABOLIC CLINIC

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Optimizing the 4th Trimester: Factors That Drive Attendance to a Comprehensive Postpartum Cardiometabolic Clinic

Natalie Poliektov[1], Asmita Gathoo[1], Kaitlyn Stanhope[1,2], Suchitra Chandrasekaran[1]

[1]Department of Gynecology and Obstetrics, Emory University
[2]Rollins School of Public Health, Emory University

The 4th Trimester and Beyond: Optimizing Maternal Health Through a Novel Postpartum Clinic Service Line

Natalie Poliektov[1], Asmita Gathoo[1], Kaitlyn Stanhope[1,2] Suchitra Chandrasekaran[1]

[1]Department of Gynecology and Obstetrics, Emory University
[2]Rollins School of Public Health, Emory University

HAS IT WORKED?

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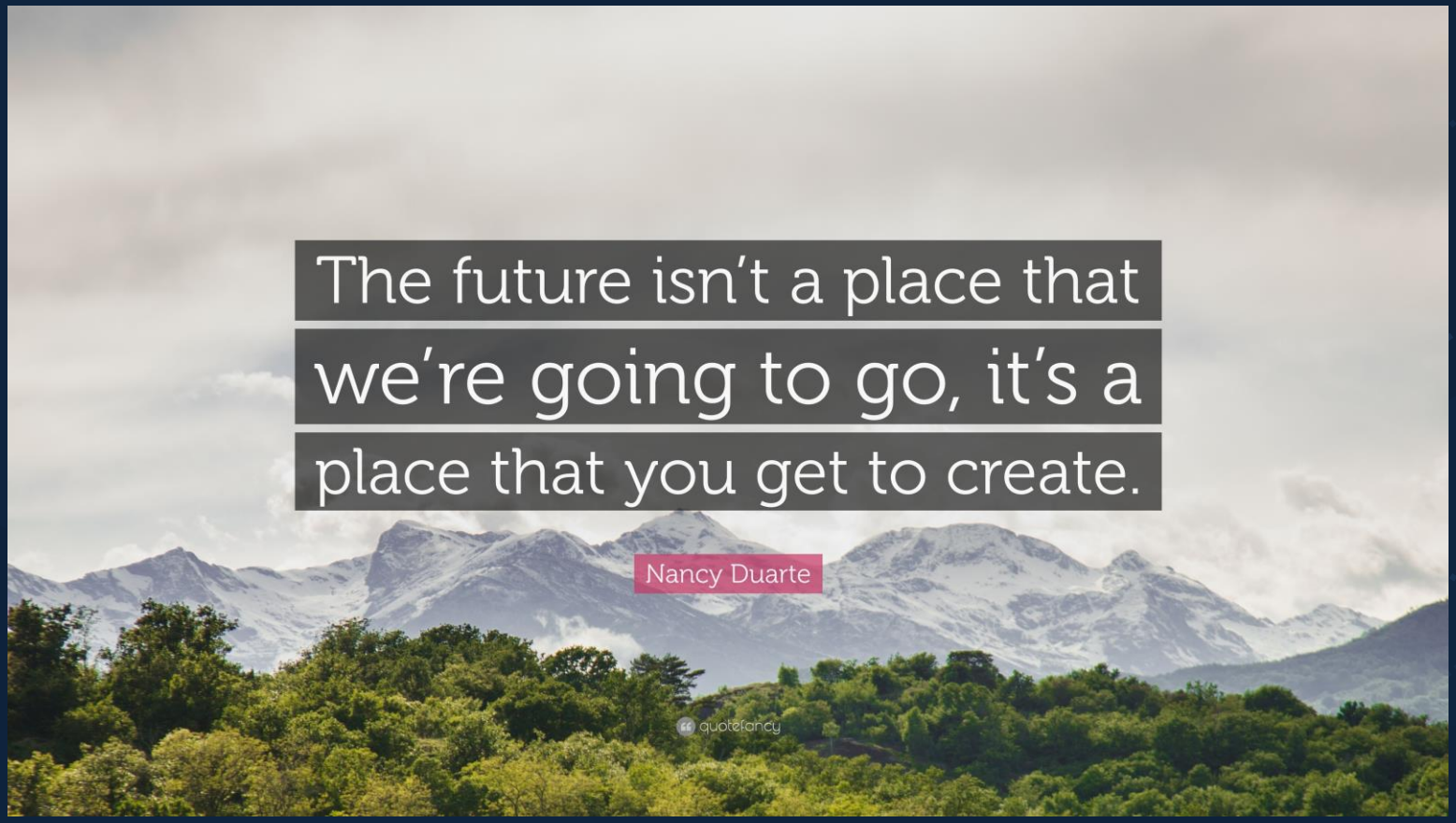
THE FUTURE: WHERE ARE WE GOING?



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- **Multidisciplinary Postpartum Transition of Care Clinic**
  - **Cardiology**
  - **Endocrinology**
  - **Psychiatry/Mental health resources**
  - **Nutrition**
- **Multiple days per week (2-3)**
- **Dedicated 2-3 OB Providers**
- **Telehealth and In-person options**

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Obstetric care and delivery at local/regional hospital

Pregnancy/Delivery complicated by hypertension, diabetes, or other cardiometabolic complication
Maternal Mental health

Place Referral to

Blossom After Baby- Emory Center for Postpartum Health and Wellness

In-person or Telemedicine Consultation

Patients Interface with experts in the field via Telemedicine (in coordination with DOH or general physician) or in person visit and get referrals or connections with regional

- **Medicine/Specialty physicians with expertise in postpartum health**
- **Nutrition Counseling**
- **Mental Health Providers**
- **Direct patient counseling on short and long term risks**
- **Referral to community support groups**

Clinic Reaches out to **Stakeholders and performs Focus Groups:** DOH, ECHO, Established Community Service Board

MULTIDISCIPLINARY CONNECTIONS

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COMMUNITY

CARE ACCESS

TECHNOLOGY

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SPEAKING UP!

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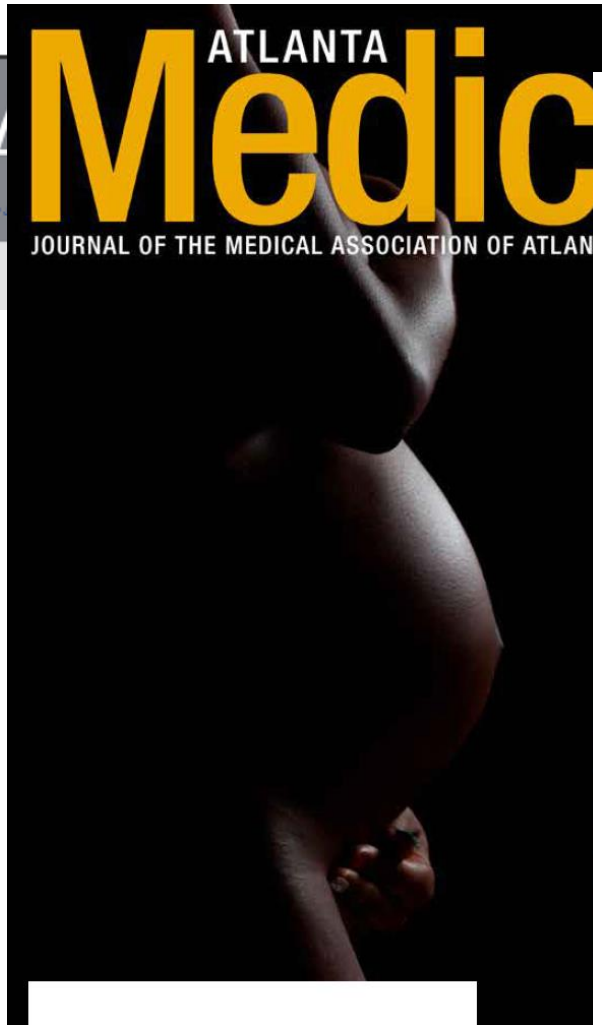

for

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THANK YOU!