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Conference 2023

Implementation of Pre-Discharge Appointment Scheduling to Increase Attendance at Postpartum Hypertension Screening

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Learner Objectives

- Explain the background and purpose of this quality improvement (QI) project
- Explain the literature behind the workflow change
- List the steps and use of the theoretical framework in the planning and implementation of this QI project
- Outline the methods used in this QI project, including protection of human subjects and project data
- Explain the data collection methods used in this QI project
- Analyze QI project data results

Problem Background

- Complications from severe maternal hypertension (SMH) are leading causes of maternal mortality
- SMH in Black and Hispanic women is four times the rate for White women
- Hypertensive disorders of pregnancy (HDPs) rose from 13.3% to 15.9% from 2017-2019
- COVID-19 infection is associated with increased risk of preeclampsia
- Of deaths secondary to HDP, 75% occur in the postpartum period
- Severe morbidities include ASCVD, ESRD, chronic hypertension, pulmonary edema, heart failure
- Maternal Hypertension Safety Bundle Implemented January 2021

ACOG, 2018; Aziz, et al 2019; Bernstein et al 2017; Conde-Agudelo & Romero, 2021 Davis, et al 2021; Ford, 2022; Hogan, et al 2019; MDMOM 2022

Clinical Guideline: Solution

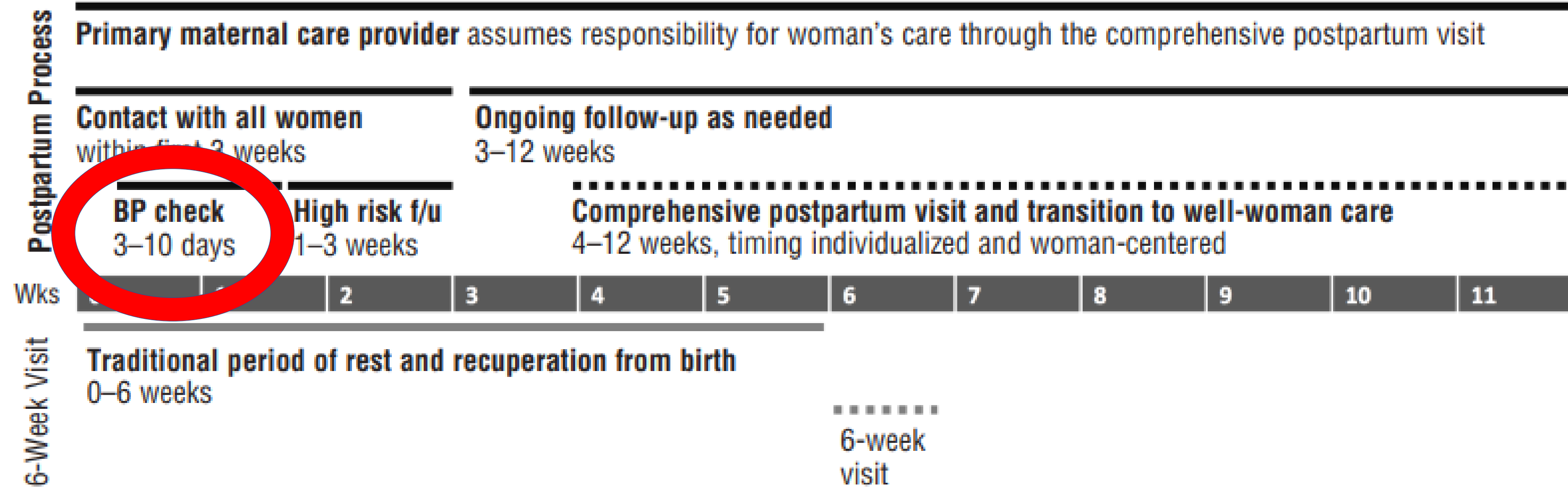


Figure 1. Proposed paradigm shift for postpartum visits. The American College of Obstetricians and Gynecologists' Presidential Task Force on Redefining the Postpartum Visit and the Committee on Obstetric Practice propose shifting the paradigm for postpartum care from a single 6-week visit (bottom) to a postpartum process (top). Abbreviations: BP, blood pressure; f/u, follow-up. ⇦

e142 Committee Opinion *Optimizing Postpartum Care* OBSTETRICS & GYNECOLOGY

Pre-Implementation Data*

Instructed to Monitor BP at Home?		Instructed to Follow-up for One-Week BP Check?		Appointment Scheduled Prior to Discharge?		Attended One-Week BP Check Appointment?	
Yes	No	Yes	No	Yes	No	Yes	No
7	55	36	26	2	60	25	37

*Population of patients who experienced severe hypertension during peripartum stay October 2021-February 2022, *n*=62

Purpose

- ACOG and MHSB guidelines call for a postpartum blood pressure check appointment 7-10 days after delivery for all women with a hypertensive disorder of pregnancy

- The purpose of implementing this quality improvement project was to increase attendance at the postpartum blood pressure screening by scheduling the appointment prior to discharge

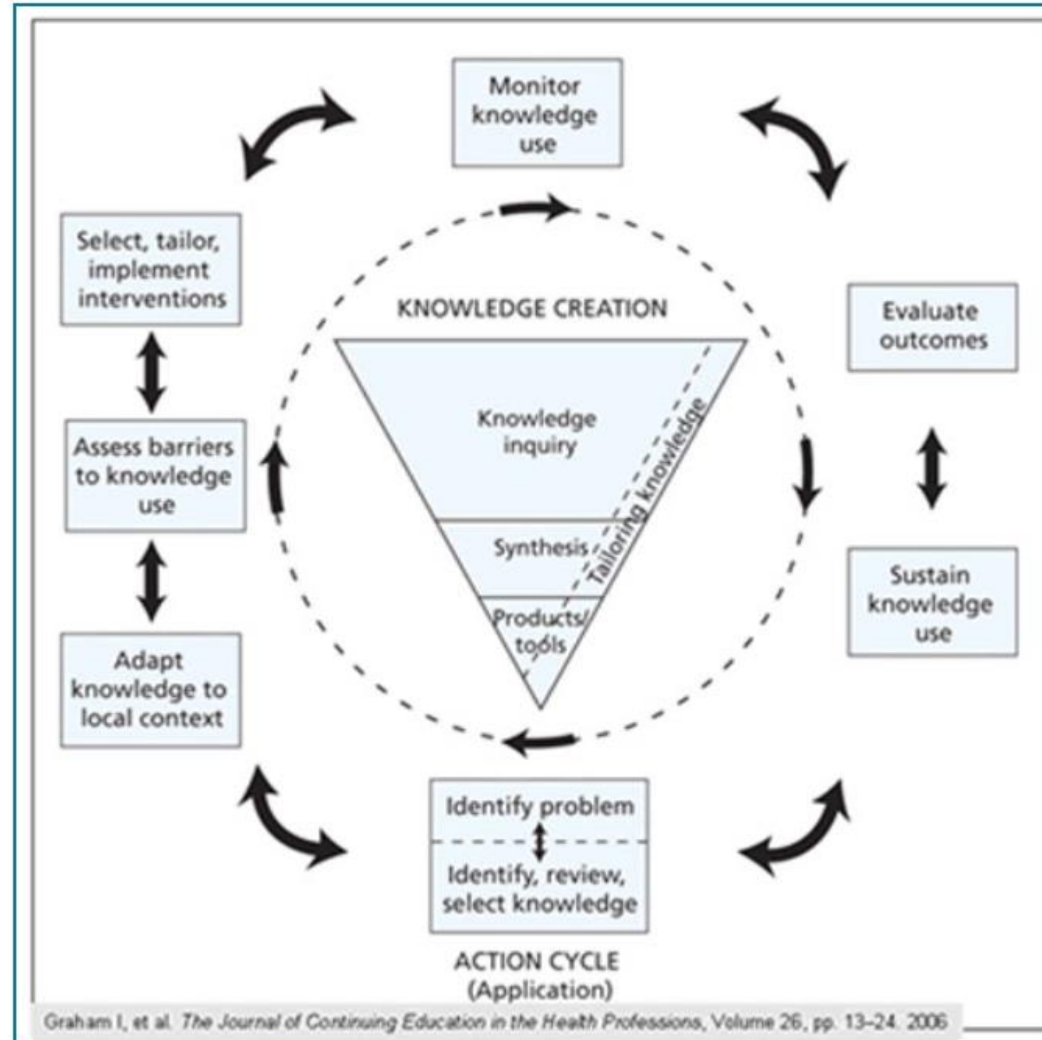
Project Goals

- **Short-term:**
  - Create EMR report to identify all patients with ICD-10 codes that correspond to HDP
  - MCU nurses will deliver names of 100% of patients with HDP to the PCA, daily
  - 100% of patients with HDP will have a 7-10-day postpartum blood pressure (PPBP) scheduled prior to discharge home
- **Long-term:**
  - 100% of patients who experience HDP will have a PPBP appointment scheduled and printed on their AVS prior to discharge home
  - 100% of patients who experience HDP will attend a PPBP appointment within 10 days

Literature Review

- **Literature review:** Rate of postpartum blood pressure screening increased when the appointment is scheduled prior to discharge
  - 69.7% to 94% ($p<0.001$) (Polk et al, 2021)
  - 33.5% to 59.4% ($p<0.001$) (Suresh et al, 2021)
  - 70.3% to 88.1% ($p<0.001$) (Yee et al, 2017)
- **Proposed Solution:**
  - Provide education to OB providers and MCU staff regarding the ACOG and MHSB postpartum visit guidelines for patients who experience HDP
  - Workflow redesign with RN recognition and PCA notifying and messaging OB offices to schedule appointments
  - Postpartum blood pressure check appointment will be printed on the patient's AVS prior to their discharge home

Knowledge to Action



Graham I, et al. *The Journal of Continuing Education in the Health Professions*, Volume 26, pp. 13–24. 2006

Methods: Quality Improvement

- **Sample**
  - Inclusion criteria: All postpartum women with diagnosis of an HDP receiving care from two participating OB provider groups
  - Exclusion criteria: Postpartum women with HDP receiving care from one non-participating OB provider group and postpartum women readmitted for any postpartum complication
- **Setting**
  - Community hospital, ~200 births per month
  - Early adopter of Maternal Hypertension Safety Bundle: Implemented January 2021
  - 50% of the births occur in women who are non-Hispanic Black, Hispanic, or Asian
  - 15-week project implementation period: August 29-December 11, 2022

Data Collection

- **Chart Review**
  - Data collected in REDCap data collection tool, created for this QI project
  - PCA notebook checked against EMR report, weekly, percentages calculated
- **Process Measures**
  - Number of patients with HDP whose names were identified and delivered to the PCA
  - Number of patients with HDP who had PPBP appointment scheduled prior to discharge
- **Outcome Measures**
  - Number of patients with HDP who had PPBP appointment printed on their AVS prior to discharge
  - Number of patients with HDP who attended their PPBP appointment within 10 days

Ethical Considerations

- This project was evaluated by Howard County General Hospital's Nursing Inquiry Committee and accepted as a quality improvement project
- Project received a Non-Human Subjects Research determination from the University of Maryland Baltimore Institutional Review Board
  - De-identified data collected in REDCap data collection tool
  - Electronic data kept on password protected computer
  - De-identified data shared in the aggregate

Race and Ethnicity of Patient Population During Project Implementation, *n*=117

Race/Ethnicity	Number (%)
NH White	50(42)
NH Black	38(32)
NH Asian	10(8.5)
Mixed	0(0)
NH Other	7(5.9)
NH Patient Did Not Provide	2(1.7)
Hispanic White	5(4.2)
Hispanic Black	1(0.8)
Hispanic Other	4(3.4)
Ethnicity Patient Did Not Provide	1(0.8)

Note: Patient-identified race and ethnicity, NH=non-Hispanic

Project Outcomes

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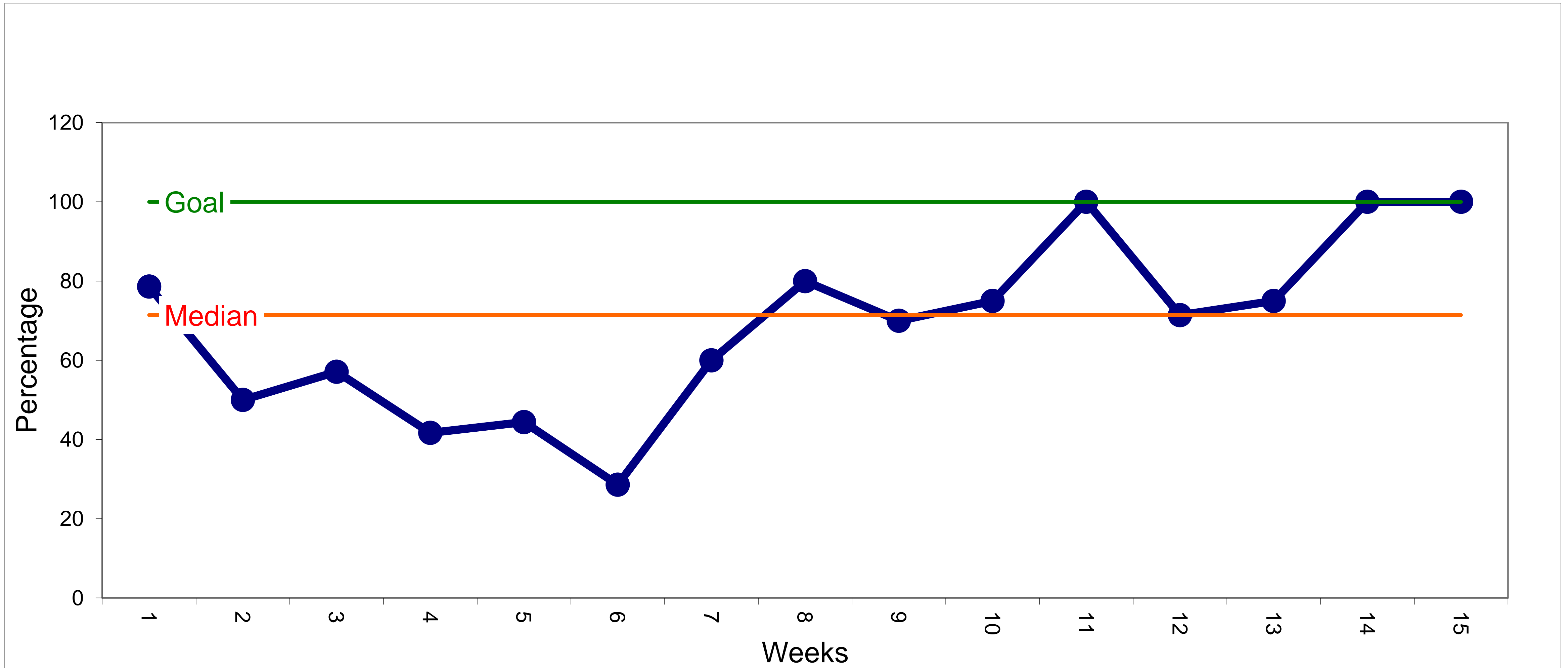
Project Goals	Pre-Implementation Data *n*(%)	Post-Implementation Results *n*(%)
Patient Identified and Reported to PCA	0(0)	77(65.8)
Appointment Scheduled Prior to Discharge	2(3.2)	21(17.9)
Appointment Printed on AVS	2(3.2)	23(19.7)
Appointment Attended	25(40.3)	76(65)

Percentage of Patients Identified and Reported to the Patient Care Assistant



Percentage of Attendance at Postpartum Blood Pressure Check Appointment

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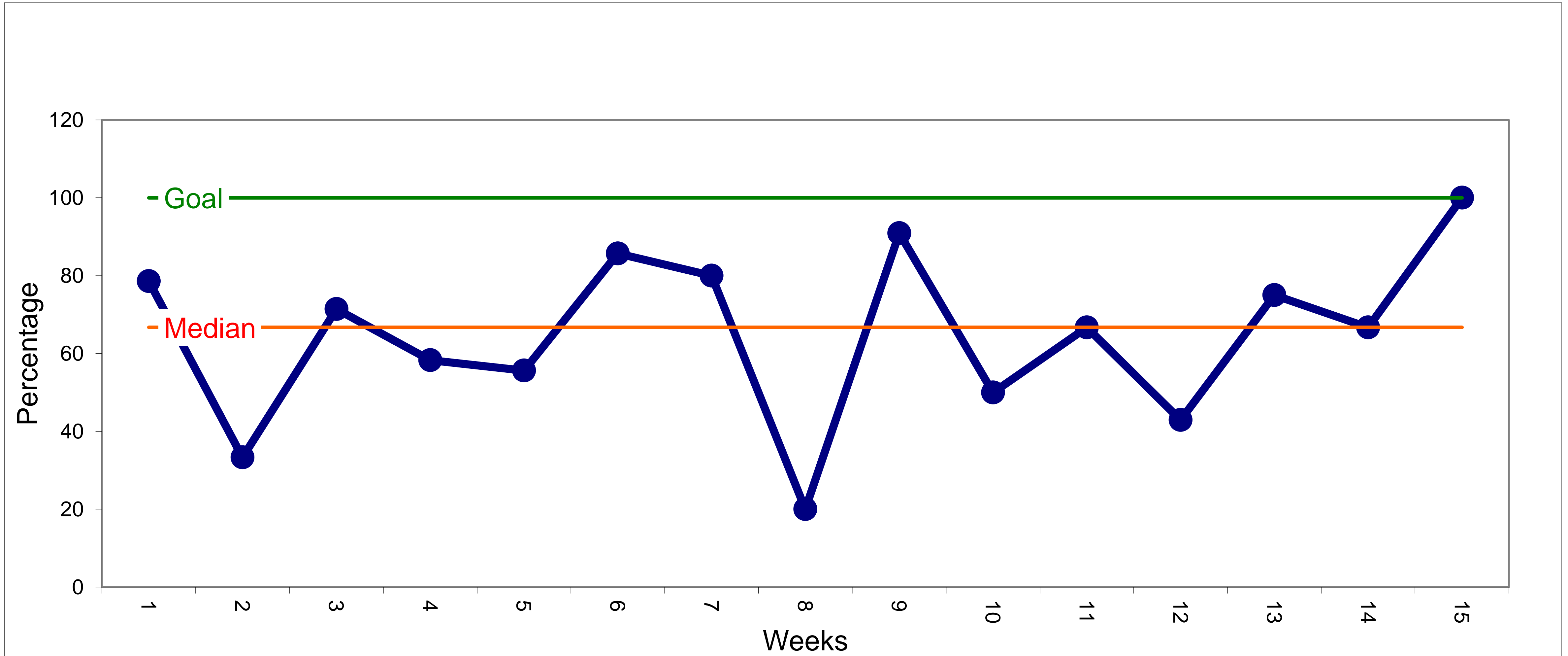

Appointment Attendance and Non-Attendance by Race and Ethnicity

Patient Population	Appointment Attended N(%)	Appointment Not Attended N(%)
White, non-Hispanic (42%)	31(40.8)	19 (46.3)
Other than White, non-Hispanic (58%)	45(59.2)	22(53.7)

Patient-Identified Race and Ethnicity
Note: Non-White includes Hispanic, Black, Asian, Mixed, Other, and Patient Did Not Provide

Discussion

- **Facilitators**
  - Education on evidence-based guidelines for postpartum follow-up for patients with HDP
  - Providing staff with clear guidelines and processes
  - On-site and in-person support by QI project lead and project champions
- **Similarity to Other QI projects**
  - Initiating the process of scheduling prior to discharge increases PPBP attendance
  - Racial disparities in appointment non-attendance decreased
- **Limitations**
  - Appointment scheduling and printing on AVS prior to discharge did not increase over implementation period
  - Project outcomes limited due to lack of participation from one OB group, no postpartum follow-up process identified for house officer patients

Conclusions

- Quality improvement projects with a designated project lead, support of nursing and physician leadership facilitates project implementation and uptake
- This QI project, which facilitated postpartum appointment scheduling prior to discharge, increased appointment attendance over the implementation period
- This QI project provides evidence that implementing pre-discharge appointment scheduling decreases racial disparities in appointment attendance
- Significant racial disparities exist in maternal morbidity and mortality, however implementation of Maternal Safety Bundles decreases these disparities (Ford et al, 2022; Howell 2018)
- Increased attendance provides increased opportunities for screening and potentially decreases racial disparities in maternal morbidity and mortality
- Quality improvement projects provide opportunities to implement practice changes

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Thank you!

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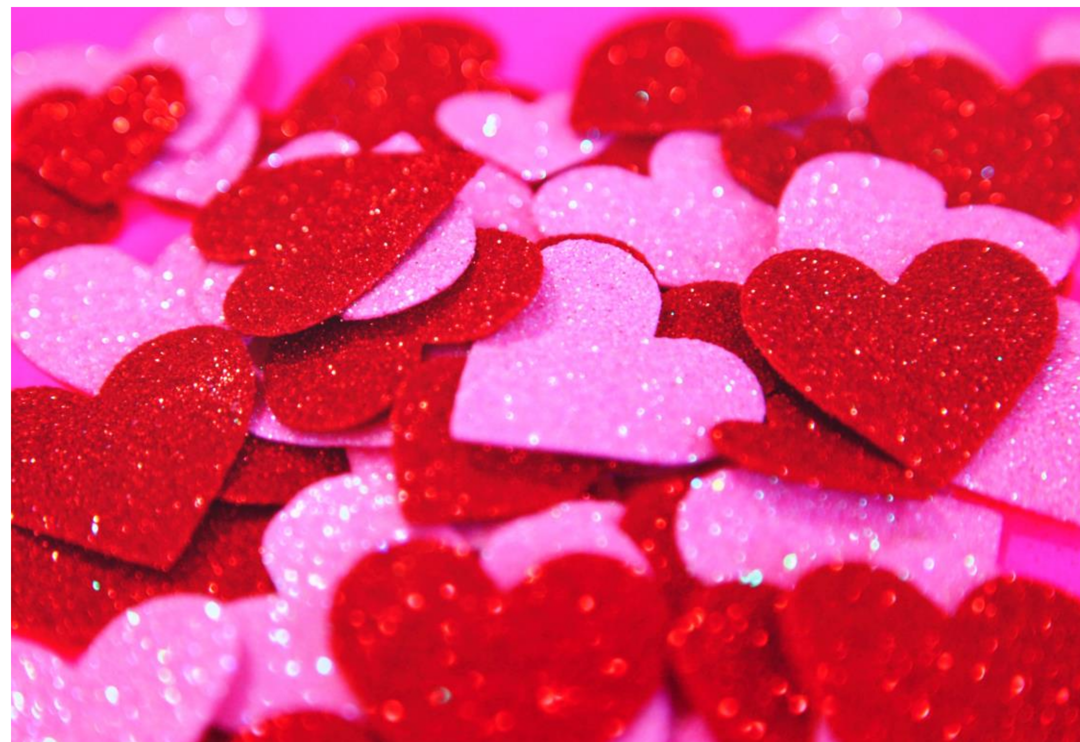
- Morgan Risley – Clinical Site Representative
- Karen Maggio – Sponsor
- Carolyn Greely – Faculty Advisor
- Claire Bode – Faculty Reader
- Deb Schinner, Cathy Downey, Cathy Bothe
- Evelyn and Sylvia, our PCAs
- The nurses in the participating units



Questions?