



Background

- With more institutions implementing lower blood pressure (BP) targets prior to postpartum discharge for patients with hypertensive disorders of pregnancy, a growing number of patients are discharged on anti-hypertensive (anti-HTN) medication.
- There is limited data on outcomes with lower blood pressure targets for initiating anti-HTN medication.

Objective

- To evaluate risk factors associated with being discharged on anti-HTN medication with lower BP goals.

Study Design

- A retrospective cohort study of birthing patients with peripartum HTN at a quaternary care center over 2 years.
- This study is part of an ongoing postpartum quality improvement project that entails lower BP targets and universal remote BP monitoring.
- Goal blood pressure was under 140/90 leading up to discharge.
- Inclusion criteria: delivery at the study institution and diagnosis of HTN disorder of pregnancy.
- Primary outcome: prescription of anti-HTNs at time of discharge.
- Characteristics associated with discharge on anti-HTNs were compared between groups.

Results

- Out of 6410 deliveries between April 2022-April 2024, 2019 (31.5%) were affected by HTN disorder of pregnancy.
- Total 666 (33.0%) were discharged on anti-HTN medication.
- Baseline characteristics associated with discharge on anti-HTN included maternal age 40 and above (17.0% vs 11.8%, p=0.001), non-Hispanic Black race (13.7% vs 9.5%, p=0.005), chronic HTN (28.4% vs 12.3%, p<0.001), prenatal aspirin use (52.1% vs 33.6%, p<0.001), and having public or no insurance (25.2% vs 19.7%, p=0.005).
- Other risk factors for discharge on anti-HTN medication include proteinuria (43.2% vs 23.6%, p<0.001) and preeclampsia with severe features (40.4% vs 5.1%, p<0.001).
- Patients discharged on anti-HTNs were more likely to be compliant with remote BP monitoring (97% vs 94.2%, p=0.013) and undergo outpatient medication adjustments (24.6% vs 14.5%, p<0.001).

Conclusion

- At an institution implementing lower BP targets postpartum aiming for normotension, certain traditional high-risk patients remain at increased risk for discharge on anti-HTN medication.
- Continued research is needed to identify ways of mitigating long-term comorbidities for this high-risk cohort.

With implementation of lower blood pressure targets postpartum aiming for normotension, certain traditional high-risk patients remain at increased risk for discharge on anti-HTN medication.



Questions? Email Dr. Jenny Mei at jennyangmei@gmail.com

Table 1: Baseline Characteristics by Need for Anti-Hypertensive Medication on Discharge

Characteristic	Medication on Discharge (n=666)	No Medication (n=1353)	P-value
Maternal age in years (mean±SD)	34.4±5.7	33.7±5.2	0.02
Maternal age 35 and above	336 (50.5%)	623 (46.0%)	0.06
Maternal age 40 and above	113 (17.0%)	160 (11.8%)	0.001
Race/Ethnicity			
Asian	118 (17.7%)	235 (17.4%)	0.005
Black	91 (13.7%)	128 (9.5%)	
Caucasian	223 (33.5%)	520 (38.4%)	
Hispanic/Latina	170 (25.5%)	304 (22.5%)	
None of the above/ Mixed	64 (9.6%)	166 (12.3%)	
Race			
Nulliparity	432 (64.9%)	930 (68.7%)	0.08
BMI (kg/m ²) at delivery (mean±SD)	31.6±7.4	30.0±5.8	<0.001
Obese (>=30 kg/m ²)	345 (51.8%)	609 (45.0%)	0.004
Gestational age (mean± SD)	37w2d±17d	38w6d±12d	<0.001
Chronic hypertension	189 (28.4%)	166 (12.3%)	<0.001
Pre-gestational diabetes mellitus	57 (8.6%)	25 (1.8%)	<0.001
Aspirin use	347 (52.1%)	455 (33.6%)	<0.001
Insurance			
Private	498 (74.8%)	1086 (80.3%)	0.005
Public or No Insurance	168 (25.2%)	267 (19.7%)	
Mode of delivery			
Vaginal delivery	345 (51.8%)	1010 (74.6%)	<0.001
Cesarean delivery	321 (48.2%)	343 (25.4%)	
Postpartum hemorrhage	127 (19.1%)	178 (13.2%)	<0.001
Composite maternal morbidity	15 (2.3%)	12 (0.9%)	0.01
Postpartum LOS in days (mean± SD)	3.2±1.7	2.0±0.8	<0.001

Table 2. Risk Factors for Discharge on Anti-Hypertensive Medication

Risk Factor	Medication on Discharge (n=666)	No Medication (n=1353)	P-value
Hypertension diagnosis at discharge			
Gestational hypertension	186 (27.9%)	866 (64.0%)	
Preeclampsia without severe features	117 (17.6%)	270 (20.0%)	
Preeclampsia with severe features or HELLP	268 (40.2%)	69 (5.1%)	<0.001
Chronic hypertension only	95 (14.3%)	148 (10.9%)	
Proteinuria	288 (43.2%)	319 (23.6%)	<0.001
IV anti-hypertensives given	186/268 (67.9%)	10/69 (14.5%)	<0.001
Method of diagnosis of preeclampsia with severe features			
Severe range blood pressures	209/268 (78.0%)	11/69 (15.9%)	<0.001
Lab abnormalities or Clinical symptoms	59/268 (22.0%)	58/69 (84.1%)	
Remote monitoring compliance	543 (97.0%)	966 (94.2%)	0.01
Outpatient Medication Changes	164 (24.6%)	196 (14.5%)	<0.001
Postpartum ED visit or readmission	16 (2.4%)	28 (2.1%)	0.63