Quality Improvement Study for Postpartum Hypertension Readmissions

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PROBLEM
• Preventable readmissions regarding hypertension have been flagged as an area for improvement in OB6YN at Aurora Healthcare. Between November 2014 to Nov 2015, 57% of our obstetric postpartum readmissions were secondary to hypertension.
• Additionally, chronic disease (hypertension) and health literacy are measures identified on the Milwaukee County Community Health Needs Assessment as areas for our community to improve.
• In 2013, the American Congress of Obstetricians and Gynecologists (ACOG) recommendations for treatment of hypertension in pregnancy were updated and were gradually incorporated through the multidisciplinary team of attending physicians residents, midwives, and nursing staff.
• Traditionally, discharge planning, follow-up, and BP checks, as well as education on postpartum preeclampsia, was up to discretion of the admitting provider within our healthcare system.

BACKGROUND
Preeclampsia is traditionally defined as new onset elevated blood pressures with associated proteinuria in the later half of a pregnancy. In a 2009 study, 27% of obstetric readmissions were due to hypertensive disease. In the last several years, recognition of new preeclampsia or worsening preeclampsia in the postpartum period has increased, although the overall incidence is not well defined. Recent guidelines for treatment of preeclampsia have focused on timing of delivery and increasing awareness of the importance of preeclampsia in the postpartum period. While blood pressure often decreases in the 48 hours after delivery, increases can be seen 3-6 days postpartum.

There is limited evidence on specific management of postpartum hypertension. Postpartum surveillance for hypertensive disease in pregnancy includes blood pressure monitoring for 72 hours postpartum and repeat assessment 7-10 days postpartum. As many women are discharged home prior to possible increase in blood pressure and development of preeclampsia, patient education is of utmost importance. Additionally, ACOG recommends that all postpartum women receive discharge instructions that include the signs and symptoms of preeclampsia and the importance of follow-up if symptoms develop. Hospital readmission rates are a focus of the Centers for Medicare and Medicaid Services. Hypertension was therefore identified as a system opportunity to improve health care quality and patient education in order to reduce preventable readmissions.

OBJECTIVE
• Our initial goal was to analyze characteristics of our patients who have been readmitted and identify commonalities that could help prevent readmission at our facility.
• Our secondary goal was to improve our discharge process and decrease preventable readmissions for hypertension.

METHODS
We performed a retrospective chart review from Nov 2014 to Nov 2015 to examine demographic data, comorbidities during hospitalization and readmission diagnosis. 28 readmissions for postpartum hypertension were noted, representing 57% of total obstetric readmissions.

Discharge instructions and blood pressure monitoring postpartum were two areas identified for improvement. 18% of patients had printed instructions regarding postpartum hypertension and 46% had scheduled follow-up for BP check. Via multi-disciplinary education sessions, we aimed to increased surveillance for postpartum vitals for at risk patients and provide appropriate verbal and written precautions for signs and symptoms of de novo or worsening hypertensive disease. We also improved access to care by scheduling earlier blood pressure checks within 72 hours of discharge and utilization of visiting nursing services for blood pressure evaluation. Nursing leadership assisted with nursing education and assistance with written discharge instructions.

Identical measures were then collected and analyzed from June 2016- Dec 2016 for improvement.

RESULTS
Average number of days to readmission was 6 days postpartum and the most common days for readmission were postpartum days 2-3. After intervention, 61% of readmissions were identified as related to hypertension, with 31 total readmissions. Overall, there was a significant improvement in written discharge instructions regarding postpartum hypertension with 54% receiving written instructions. 33% had blood pressure checks and 13% had visiting nursing services arranged on discharge.

CONCLUSIONS
Over the course of the study, we improved patient and provider awareness of postpartum hypertension which could be related to the increasing readmission rates. We increased efforts to optimize outpatient medical management of hypertension and reduce preventable readmissions.

Improvement in discharge instructions for patient did not decrease overall admission for postpartum hypertension but may have improved overall patient care. Our chart review was limited to patients who did require re-admission and we did not evaluate those who received visiting nursing cares. Overall cost analysis would be beneficial to evaluate the economic impact of home health care in decreasing readmission rates. Optimal management of postpartum preeclampsia has not yet been established, and further studies for reducing readmission will be important, given the potential morbidity of preeclampsic disease.

REFERENCES
• “Hypertension in Pregnancy” (2013), American Congress of Obstetricians and Gynecologists
• Milwaukee County Community Health Needs Assessment; 2015-2016 Executive Summary