Initiation of an Antihypertensive Protocol: An Effort to Reduce Treatment Response Times on Labor and Delivery

Author
Leigha C. High, MD

Objective
To evaluate and improve the current method of treatment for patients admitted to Labor and Delivery who meet severe range blood pressure criteria. The results of this study will act as a reference for future EHR order sets utilized on Labor and Delivery (L&D) in the hopes of decreasing the time patients spend in the severe blood pressure range, thereby decreasing the risk of maternal stroke and/or seizure.

Methods
Collaboration with Pharmacy and Nursing produced new hypertensive order panels within the EPIC electronic health system in an effort to streamline availability of acute onset severe hypertension medication on Labor and Delivery. Treatment times from onset of second severe range blood pressure (defined as systolic >160 or diastolic >110) to treatment were compared from February 2017 to March 2019 (the first month of order panel implementation). The average time to treatment after second severe range blood pressure was calculated in an effort to assess improvement from Feb 2017 data that reported only 80% of acute severe range blood pressures were treated within the recommended guideline of 1 hour set forth by The American College of Obstetricians and Gynecologists (ACOG).

Results
A total of 24 patients were treated using the new order set panels from March 1 to March 31, 2019. The shortest treatment time interval from second severe range blood pressure to medication administration was 1 minute and the longest was 102 minutes. The average treatment time was 21.6 minutes. 96%, of acute onset severe range blood pressures were treated within one hour. Additionally, 79% of severe range blood pressure treatment occurred in 30 minutes or less.

Discussion
These results demonstrate an improvement of acute severe range blood pressure treatment time within one hour from 80% to 96%. Additionally, the average treatment time of 21.6 minutes was substantially under the 1-hour goal.