Monday, April 23, from 9:30 – 10:00 a.m. & 2:30 – 3:00 p.m.
WAPC 2018 Poster Session

Creating a Risk Stratification Tool to Standardize Postnatal Management of Neonates with Prenatally Diagnosed Congenital Heart Disease
Innovative program/project

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Introduction: Fetal echocardiography improves prenatal detection of congenital heart disease (CHD) and allows for specialized delivery planning in neonates at high risk for complications in the immediate postnatal period. Our institution delivers patients with prenatally diagnosed CHD at an adjoining obstetrics center to improve access to multidisciplinary care after delivery but found postnatal needs were not clearly communicated and led to delays in intervention. Studies have shown that risk stratification tools can facilitate timely intervention in patients with CHD.

Objectives/purpose/goals: We initiated a quality improvement initiative to standardize postnatal management by risk stratifying neonates with prenatally diagnosed CHD using the fetal cardiologists' interpretation of the fetal echocardiogram. Our aims were to validate the tool by verifying the accuracy of the predicted risk in anticipating postnatal needs and to assess for compliance to the guidelines after implementation.

Intervention/practice: A 5 tiered cardiac risk stratification tool, Fetal Level of Concern, was created to specify anticipated admission location after delivery, need for prostaglandins, and urgency of post-natal cardiac evaluation and intervention. The Fetal Level of Concern (FLC) was assigned by a fetal cardiologist based on the fetal echocardiographic findings and added to the mother’s electronic medical record. Deliveries of patients seen by the fetal cardiologists were tracked with FLCs noted on all patients. After each delivery, cardiologists completed surveys documenting communication and assessment times. Postnatal interventions were recorded and compared to the assigned FLC for accuracy.

Results: Since the initiation of the FLC tool in March 2016, there were 50 deliveries with a prenatally designated FLC. Fetal cardiologists accurately anticipated the early postnatal management by the designated FLC in 98% of deliveries. After implementation, cardiologists met expected evaluation times in 66% of deliveries which improved to 80% of deliveries when comparing first half and second half of deliveries in the cohort.

Conclusions: Creation of a center specific risk stratification tool for neonates with prenatally diagnosed CHD is an effective method to standardize communication after delivery. Our tool accurately anticipated postnatal needs for infants with prenatally diagnosed congenital heart disease. After implementation, there was an improvement in timely evaluation by cardiology. Future endeavors will look at time to intervention for patients with high FLC.