Racial and Ethnic Disparities in Severe Maternal Morbidity during Delivery at a Pennsylvania Hospital System

Vanessa Singh
Kay Young
Lehigh Valley Health Network, kay.young@lvhn.org
Obianuju Egwuowu

Follow this and additional works at: https://scholarlyworks.lvhn.org/research-scholars

Part of the Obstetrics and Gynecology Commons, and the Sociology Commons

Published In/Presented At

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.
Racial and Ethnic Disparities in Severe Maternal Morbidity During Delivery Hospitalization at a Pennsylvania Hospital System

Vanessa Singh, Kay Young, MSN, RNC-OB, CCE, Obianuju Egwuonwu, DO, PGY3

Lehigh Valley Health Network, Allentown, Pennsylvania

INTRODUCTION & OBJECTIVE

- Severe maternal morbidity (SMM) as indicated by the CDC as “unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman’s health” has steadily increased in the past years and has affected over 50,000 women in the United States. ¹
- With an interest in determining the prevalence of SMM at LVHN and how it compares to national values, this quality improvement study intends to gather data that can be used to target interventions for populations that are at the highest risk of SMM during delivery hospitalization at LVHN.

METHODS

INCLUSION CRITERIA

- All patients ages 18 and older who received prenatal care through Lehigh Valley Physicians Group or Center for Women’s Medicine and have delivered at either Lehigh Valley Hospital Cedar Crest or Lehigh Valley Muhlenberg from January 1, 2016 to December 31, 2020

EXCLUSION CRITERIA

- Patients under the age of 18, who have no documented race/ethnicity, who delivered at a hospital other than Lehigh Valley Hospital Cedar Crest or Muhlenberg, who did not have an indicator of SMM, or who have had less than three documented prenatal visits.

1. Preform a comprehensive literature review to investigate how hospitals.
2. Identify the total number of patients that delivered at LVH-CC and LVH-M during the year 2020 who also met the criteria for SMM.
3. Conduct a retrospective chart review for qualifying patients using the EPIC electronic records to identify patient demographic information, patient age at delivery, primary or preferred language, primary insurance coverage, presence of SMM indicators during delivery hospitalization, and fetal information.

DATA

N=51 patients for delivery hospitalization at LVH-CC and LVH-M during 2020

Most Prominent Indicators of SMM at LVH-CC and LVH-M

- Indicators of SMM
  - Acute myocardial infarction, anemia, acute renal failure, acute respiratory distress syndrome, anaphylactic fluid embolism, cardiac arrest, ventricular fibrillation, conversion of cardiac rhythm, disseminated intravascular coagulation, eclampsia, heart failure/arrest during procedure, puerperal cerebrovascular disorders, pulmonary edema/acute heart failure, severe anesthesia complications, sepsis, shock, sickle cell disease with crisis, air and thrombotic embolism, blood products transfusion, hysterectomy, temporary tracheostomy, and ventilation

- Inclusion criteria
  - 2016 Muhlenberg from January 1, 2016 to December 31, 2020
  - Cedar Crest or Lehigh Valley Physicians Group or Center for Women's Medicine and have delivered atthrough Lehigh Valley Physicians Group or Center for Women's Medicine and have delivered at
  - All patients ages 18 and older who received prenatal care

Discussion

- Limited analysis was able to be performed when studying the relationship between race/ethnicity and SMM. This was due to a sample size that lacked significant variance in racial and ethnic makeup.
- The top three prominent indicators of SMM found at LVH-CC and LVH-M in 2020 are acute renal failure (34 diagnoses), hysterectomy (14 diagnoses), and blood product transfusion (6 diagnoses).
- Findings stemming from this include that 91.7% of patients induced for preeclampsia had acute renal failure. Studies have linked preeclampsia as a common cause of acute kidney injury.

FUTURE DIRECTIONS

- Further inquiry into whether the racial/ethnic makeup of the population that met criteria for SMM is comparable to the general racial/ethnic makeup of the patient population that delivered at LVH-CC and LVH-M would reveal possible disparities in healthcare.
- Review of calendar years prior to 2020 would lead to an increased sample size and allow for a more powerful statistical analysis regarding the relationship between race and ethnicity and the indicators of SMM.
- One possible target for intervention aimed at reducing SMM can be in patients diagnosed with preeclampsia, as 91.7% had a subsequent diagnosis of acute renal failure. Additionally, investigation into contributors to the two other leading indicators of SMM, blood product transfusion and hysterectomy, could contribute to prevention strategies.

REFERENCES