Astrid Forde

NU 603

TOE Assignment:

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| TABLE OF EVIDENCE | Title:Maternal Outcomes by race for women aged 40 years and older. |
| *Full Citation:* | Booker, W. A., Gyamfi-Bannerman, C., Jean-Ju Sheen, Wright, J. D., Siddiq, Z., D’Alton, M. E., Friedman, A. M., & Sheen, J.-J. (2018). Maternal Outcomes by Race for Women Aged 40 Years or Older. *Obstetrics & Gynecology*, *132*(2), 404–413. https://doi-org.proxy1.lib.tju.edu/10.1097/AOG.0000000000002751 |
| *Type of Study:* | This is a Retrospective Cohort Study |
| *Research Question:* | The purpose of this research study was done to see temporal trends in severe maternal morbidity and overall comorbid risk by race in women aged 40 years or older were evaluated as were common pregnancy complications including preeclampsia, gestational diabetes, and cesarean delivery. |
| *Setting/Site:* | This study was conducted in an inpatient facility in the United States(Nationwide Inpatient Sample). |
| *Sample:* | A total of 1,724,694 deliveries (all patients) were included in this study.  Inclusion criteria is pregnant women 40 years and older (aged 40-54) and also all races.  Exclusion criteria are pregnant women 39 years and younger. |
| *Methods* | The study was done using a Retrospective Cohort study. This was done by comparing mortality and morbidity rates with another group in the study and also to help determine the factors that influence in the influence of morbidity or mortality. |
| *Variables/Measures:* | IV- pregnant women  DV- maternal mortality and or morbidity  Operational definitions: Morbidity and mortality rate |
| *Results:* | The findings were that for women 40 years and older, black women were at an increased or highest risk overall for both morbidity and mortality rates compared to Whites, Native Americans, Asians or Pacific Islanders and Hispanic women. Black women were also at an unadjusted risk of 104% higher than white women. |
| *Level of Significance:* | (P < .01)  Risk for severe morbidity was lowest among women with a score of 0 (1.3%, 95% **CI 1.3–1.3%)**, increased for women with a score of 1 or 2 (3.4%, 95% 3.4–3.5%), and was highest for women with scores less than 2 (12.1%, 95% **CI 11.7–12.5%).** |
| *Your Critique* | A good thing about the research is that it was research for over a decade with diverse pregnant women. It had a huge sample size. The experiments also answered the selected research question. The data did not support the conclusions of the research study in regards to mortality. |
| Suggestions for Further Study: | No suggestions of further studies were made. |

Table 2

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| TABLE OF EVIDENCE | Racial and ethnic disparities in pregnancy- related mortality in Illinois, 2002-2015 |
| *Full Citation:* | Koch, A. R., & Geller, S. E. (2019). Racial and Ethnic Disparities in Pregnancy-Related Mortality in Illinois, 2002–2015. *Journal of Women’s Health (15409996)*, *28*(8), 1153–1160. https://doi-org.proxy1.lib.tju.edu/10.1089/jwh.2018.7557v |
| *Type of Study:* | This is a Retrospective Cohort Study. |
| *Research Question:* | The purpose of this research study was done to determine pregnancy related mortality rates in the state of Illinois from the year 2002-2015 by comparing racial and ethnic disparities and also, with associated critical factors. The research was derived from the Illinois Department of Public Health's maternal mortality data. |
| *Setting/Site:* | The research was conducted in the state of Illinois, USA, (hospitals) where maternal mortality data between 2002-2015 was derived from the Illinois Department of Public Health. |
| *Sample:* | There were 272 women per 100,000 live births in this study. Inclusion criterias were Black, White and Hispanic pregnant women. Exclusion criteria are other races, none pregnant women and women not living or giving birth in Illinois. |
| *Methods* | Maternal deaths were retrieved by the Illinois Department of Public Health using multiple methods, including direct notification by hospitals, a checkbox on the death certificate, vital records searches, and local news sources. |
| *Variables/Measures:* | IV- Pregnant women  DV- Maternal Mortality  Operational definitions- Mortality Rate (measured by death and birth or fetal death certificate). |
| *Results:* | The main findings were that pregnancy related mortality rates in black women was nearly four times that of white women. Most common underlying causes of death overall were embolism and vascular diseases. Also, over a third of the deaths were potentially preventable. Delays in diagnosis and treatment and inappropriate treatments were the cause of these preventable deaths. |
| *Level of Significance:* | Age p = 0.44  Education p = <0.0001  Timing of death p = 0.39  Effective size: yes  95% confidence interval |
| *Your Critique* | A strength about this research is that it was tested over a long period of time. The weakness of the study was that they should have tested more ethnic groups and also should have researched more pregnant women. Even with 14 years of accrued data, there was not sufficient evidence to examine the deaths of women of racial and ethnic groups other than black, hispanic and whites. |

Suggestions for further Study- After completing reviews of all deaths for 2015, the IDPH recommended that the state expand Medicaid eligibility up to 1 year postpartum, create and expand home-visiting programs for high-risk mothers, increase access to substance use and mental health services for pregnant and postpartum women, and adopt maternal levels of care within the state's regional perinatal system. Suggestion for further studies to be made in the other states in the USA.

Table 3

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| TABLE OF EVIDENCE | Vital Signs: Pregnancy-Related deaths, United States, 2011-2015, and strategies for prevention, 13 States, 2013-2017. |
| *Full Citation:* | Petersen, E. E., Davis, N. L., Goodman, D., Cox, S., Mayes, N., Johnston, E., Syverson, C., Seed, K., Shapiro-Mendoza, C. K., Callaghan, W. M., & Barfield, W. (2019). Vital Signs: Pregnancy-Related Deaths, United States, 2011-2015, and Strategies for Prevention, 13 States, 2013-2017. *MMWR: Morbidity & Mortality Weekly Report*, *68*(18), 423–429. https://doi-org.proxy1.lib.tju.edu/10.15585/mmwr.mm6818e1 |
| *Type of Study:* | This study is a Retrospective Cohort Study. |
| *Research Question:* | This study was conducted to research pregnancy related death in the US from 2011-2015 and also research strategies for prevention in 13 states, 2013-2017. |
| *Setting/Site:* | Pregnancy Mortality Surveillance System from selected states hospitals in the USA. |
| *Sample:* | 3,410 related pregnancy deaths. Inclusion criteria Pregnant women in these states: New York City, and the District of Columbia; Arizona, Colorado, Delaware, Florida, Georgia, Hawaii, Illinois, Mississippi, North Carolina, Ohio, South Carolina, Tennessee, and Utah. |
| *Methods* | Data from CDC's national Pregnancy Mortality Surveillance System (PMSS) or statistical method was used for 2011-2015 and was used in the study. Pregnancy-related mortality ratios were calculated overall and by sociodemographic characteristics. Detailed data on pregnancy-related deaths during 2013-2017 from 13 state maternal mortality review committees (MMRCs) were analyzed for preventability, factors that contributed to pregnancy-related deaths, and MMRC-identified prevention strategies to address contributing factors. |
| *Variables/Measures:* | IV- pregnant women  DV- mortality rate  Operational definitions- Mortality rate |
| *Results:* | Non-Hispanic black (black) women and American Indian/Alaska Native women had the highest PRMRs (42.8 and 32.5, respectively), 3.3 and 2.5 times as high, respectively, as the PRMR for non-Hispanic white (white) women (13.0). The leading causes of death included cardiovascular conditions, infection, and hemorrhage. |
| *Level of Significance:* | p<0.01 |
| *Your Critique* | The experiments were well designed and conducted. The data supports the conclusions of the research study. |

Suggestions for Further Study: No suggestions for further study. MMRC-identified prevention strategies addressing system-level factors included developing policies to ensure that women deliver at a health facility with an appropriate level of maternal care and extending Medicaid coverage for pregnant women to include 1 year of postpartum care.

PICO Topic: Are Pregnant women (P) who identify as black (I) compared to non white women(C) at an increased risk of maternal morbidity or mortality (O) over the course of their pregnancy?

Articles: