

Additional File 1. Newcastle-Ottawa Quality Assessment Scale (adapted for cross sectional studies with healthcare data for research question: What are the risk factors for severe maternal morbidity associated with the delivery admission?)

Selection: Maximum 3 stars

- 1) Representativeness of the sample:
 - a. Truly representative of the average in the US or a US state population. *(all subjects or random sampling)
 - b. Somewhat representative of the average in the US or a US state population. * (non-random sampling)
 - c. Selected group of users or non-US populations.
 - d. No description of sampling strategy
- 2) Sample size:
 - a. Justified and satisfactory. *
 - b. Not justified.
- 3) Inclusion/exclusion criteria:
 - a. Comparability between included/excluded/missing subjects or data is established, and the percent of the base population included is satisfactory (>80%).*
 - b. The percent of the base population included is unsatisfactory, or the comparability between subjects or data included/excluded is unsatisfactory.
 - c. No description of the characteristics of those who were and were not included, or those who did and did not have missing data.

Risk Factors: Maximum 4 stars

- 1) Ascertainment of the patient-level independent variables (risk factors)
 - a. Includes complete or partial review of medical records.**
 - b. Based solely on administrative data.*
 - c. Other measurement tool.
- 2) Patient-level confounding factors are controlled.
 - a. The study controls for patient-level factors, including demographic factors, and clinical and obstetrical comorbidities (at least one in each category), and is not over-controlled (i.e., does not control for route of delivery or other intrapartum variables; mediation analysis is acceptable)**
 - b. The study controls for patient-level factors, including demographic factors, and clinical and obstetrical comorbidities (at least one in each category), and controls for intrapartum variables without using mediation analysis.*
 - c. The study does not adequately control for patient-level risk factors.

Outcome: Maximum 3 stars

- 1) Assessment of the outcome:
 - a. Includes complete or partial review of medical records, with an attempt to evaluate or mitigate the impact of transfusion on the outcome.**
 - b. Based solely on administrative data, with an attempt to evaluate or mitigate the impact of transfusion on the outcome.*
 - c. Either of the above with a severely limited outcome definition (death, antepartum only), or an expanded definition based on intensive care unit admission or including pre-existing conditions, or no attempt to evaluate or mitigate the impact of transfusion on the outcome.
- 2) Statistical test:
 - a. The statistical test used to analyze the data is clearly described and appropriate, and the measurement of the association is presented, including confidence intervals and the probability level (p value).*
 - b. The statistical test is not appropriate, nor described, or incomplete.