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Disparities in caesarean section (C-section) rates by maternal socioeconomic status (SES) across diverse obstetric indicationsKamala Adhikari Dahal¹, Deborah A McNeil^{1,2}, Sheila McDonald^{1,2}, Alka B Patel^{1,2} and Amy Metcalfe¹¹University of Calgary, Canada²Alberta Health Services, Canada

Introduction & Aim: The existing inconsistent association between C-section rate and SES may be due to not analyzing the association across obstetric-indications for C-sections. This study examined the variation in C-section rates by maternal SES across diverse-obstetric-indications.

Methods: This was a cross-sectional study design that used the 2015 US Birth Certificate data. Data on demographics, SES (education and insurance status), medical conditions (e.g., diabetes, hypertension and eclampsia) and obstetric characteristics (e.g., parity and fetal presentation) were extracted. C-section rate and its association with SES adjusting for maternal age and medical conditions using multivariable log-binomial regression models were examined across 10 clinically-relevant-obstetric-groups for C-sections (Robson's 10-group).

Results: The overall C-section rate was 32.0%, with up to 34.1% for those women with high SES (i.e., highest education attainment or private insurance) and 26.6% for those with low SES (lowest education attainment or Medicaid/no private insurance and Medicaid). Ranging from 5% to 9%, the discrepancy in C-section rate between women with high and low SES was observed across all 10-obstetric groups, even in the presence of medical conditions such as eclampsia. Importantly, SES was significantly associated with the risk of C-section across 10-obstetric-groups, with varied direction/magnitude of associations. Women with graduate education compared to those who did not complete high school were more likely to have a C-section (RR: 2.4, 95% CI: 2.3-2.4) for low-risk conditions (group-1). Whereas, they were less likely to have C-section (RR: 0.7, 95% CI: 0.6-0.9) for a strongly medically-indicated-obstetric condition (group 9: abnormal fetal lies). Women without private insurance or Medicaid coverage were less likely to have C-section in almost all obstetric groups.

Conclusion: The unequal distribution of C-sections across maternal SES exists regardless of maternal age and medical conditions. This finding will draw clinicians' attention towards more equitable meeting of healthcare needs of women regardless of their SES.

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