Methods: Baseline data from the Virginia Strong Start for Mothers and Newborns program was analyzed (N=1,632). Model fit estimates of three confirmatory factor analysis (CFA) models were compared to determine the appropriate measurement structure for this data. Multiple-group CFA assessed measurement invariance across African American/Black women (n=894) and women of all other races (n=738).
Results: Robust estimates of model fit supported a hierarchical CFA model composed of four latent domains of stress (Tucker-Lewis Index =0.955; Root Mean Square Error of Approximation =0.031; Standardized Root Mean Square Residual =0.060). Standardized factor loadings of three domains - external stress, perceived stress, and enhancers of stress- indicated positive correlations with a second-order latent factor for overall maternal stress (0.96, 0.44, 0.73, respectively), whereas the fourth domain, buffers of stress, had a negative association (-0.46). Multiple-group CFA demonstrated strong measurement invariance.
Conclusion: Among Medicaid-covered pregnant women, measures for psychosocial stress were shown to be unbiased across two subgroups of maternal race. Further, these findings support the construct validity of overall maternal stress underlying the common variability among four latent domains of stress.

Distribution of severe maternal morbidity in Virginia: a population-level study

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Purpose: Rates of severe maternal morbidity (SMM) give a more holistic picture of maternal health status than maternal mortality rates do. SMM rates in the United States (U.S.) increased by 75% among delivery hospitalizations recently and SMM affects 50,000 U.S. women/year. This study aimed to estimate the burden of SMM in Virginia by applying evidence-based methods to population health data.
Methods: A retrospective cohort study using delivery hospitalization records in Virginia from 2012 through 2016 was performed. ICD-10 codes were applied to an ICD-9-based 25-condition diagnostic algorithm to identify SMM cases statewide. The burden and distribution patterns of SMM across the state were determined. Chi-square tests (at α=0.05) were used to assess whether SMM rates varied by age, race/ethnicity, geography, and receipt of blood transfusion.
Results: Most delivery hospitalizations occurred among women who were non-Hispanic white (53.82%), aged 30-34 years (30.36%), and from the Northern region (33.18%). SMM incidence (per 10,000 delivery hospitalizations) ranged from 205.7 in 2012 to 189.6 in 2016 compared to previous reports that ranged from 141.1 in 2008 to 155.3 in 2014. Rates of SMM, blood transfusion, and severe hypertension were highest among non-Hispanic black women and women ≥40 years old. Variations in SMM rates by age, race/ethnicity, geography, and receipt of blood transfusion were statistically significant (p<0.0001).
Conclusion: There are disparities in the distribution of Virginia's high SMM burden. Severe hypertension and receipt of blood transfusion are significant indicators. Multifaceted, multidisciplinary, and culturally-acceptable interventions are needed to significantly reduce this burden and improve maternal health.

Intimate partner violence and postpartum visit attendance among women in the United States

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Purpose: Intimate partner violence (IPV) has been identified as a significant predictor of poor maternal and infant outcomes, adverse maternal health behaviors, and the underutilization of prenatal care services. However, the relationship between IPV and postpartum visit attendance is underinvestigated. Guided by Andersen's Behavioral Model of Health Services Use, this study examined the association between having a history of physical IPV before or during pregnancy and postpartum visit attendance among a nationally representative sample of women in the United States.
Methods: Data for this cross-sectional study (n=140,438) were derived from Phases 6 (2009-2011) and 7 (2012-2015) of the Pregnancy Risk Assessment Monitoring System (PRAMS). Unweighted frequencies and weighted percentages were obtained to describe the distribution of the study population by IPV history. Multivariable logistic regression analysis was performed, calculating adjusted odds ratios and 95% confidence intervals. All analyses were conducted using SAS 9.4 statistical software and survey procedures to account for the weighting of the PRAMS sample.
Results: After controlling for predisposing, enabling, and need for care characteristics, findings revealed a significant association between IPV history and postpartum visit attendance. Women who reported a history of IPV were 25% less likely to attend their postpartum visit (AOR: 0.75, 95% CI: 0.62-0.92) compared to women with no history of IPV.
Conclusion: Experiencing physical IPV before or during pregnancy may be an underlying barrier to postpartum health services use. IPV victimization should be addressed in future interventions to maintain an effective continuum of care for at-risk women.