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Title

COVID-19 vaccine acceptance in pregnant women: a systematic review and meta-analysis

Priority 1 (Research Category)

Systematic review, meta-analysis, or scoping review

Presenters

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Abstract

Context: Coronavirus Disease 2019 (COVID-19) can result in substantial adverse events in pregnant women, yet many hesitate to get vaccinated.

Objective: Identify racial/ethnic and other individual characteristics associated with COVID-19 vaccine acceptance in the United States during pregnancy.

Study Design and Analysis: Systematic review and meta-analysis of the literature.

Setting/Dataset: Three databases (PubMed, Embase, Web of Science) were searched using keywords relating to immunization, COVID-19, and pregnancy.

Population Studied: Pregnant, lactating and post-partum women in the United States. Articles selected for inclusion met the following inclusion criteria: (1) conducted in the United States, (2) reported on pregnant women, (3) reported on COVID-19 vaccine hesitancy or willingness to vaccinate, and (4) reported on original research.

Outcome measures: Patient self-reported vaccine acceptance, defined as receipt of COVID-19 vaccination, intention to vaccinate, or vaccine hesitancy.

Results: Of 1592 articles, 23 met inclusion criteria and were included in the systematic review. Twenty-two of the studies examined receipt of ≥1 COVID-19 vaccine dose and/or intention to vaccinate, while one examined vaccine hesitancy. Vaccine acceptance rates ranged from 7% to 78.3%. The systematic review revealed that vaccine acceptance was associated with receiving at least a college education, receiving or planning to receive the influenza vaccine, higher income, and at least part-time employment. Meta-analyses of 22 articles demonstrated that compared to Whites, Hispanics (OR, 0.72; 95% CI, 0.58-0.91) and Blacks (OR, 0.44; 95% CI, 0.30-0.63) had less COVID-19 vaccine acceptance, while Asians (OR, 1.78; 95% CI, 1.10-2.88) had greater acceptance. College graduation or more (OR, 3.25; 95% CI, 2.53-4.17), receipt or intention to receive the influenza vaccine (OR, 3.46; 95% CI, 2.22-5.41), and at

least part-time employment (OR, 2.12; 95% CI, 1.66-2.72) were significantly associated with vaccine acceptance.

Conclusion: COVID-19 vaccine non-acceptance in pregnant women is associated with Hispanic ethnicity and Black race, while acceptance is associated with Asian race, college education or more, at least part-time employment, and acceptance of the influenza vaccine. Future COVID-19 vaccination campaigns can target identified subgroups of pregnant women who are less likely to accept vaccination.