**Trends in Maternal and Fetal Outcomes Among Pregnant Women With Systemic Lupus Erythematosus in the United States: A Cross-sectional Analysis**

[Mehta B](https://www.ncbi.nlm.nih.gov/pubmed/?term=Mehta%20B%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)1, [Luo Y](https://www.ncbi.nlm.nih.gov/pubmed/?term=Luo%20Y%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)2, [Xu J](https://www.ncbi.nlm.nih.gov/pubmed/?term=Xu%20J%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)1, [Sammaritano L](https://www.ncbi.nlm.nih.gov/pubmed/?term=Sammaritano%20L%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)1, [Salmon J](https://www.ncbi.nlm.nih.gov/pubmed/?term=Salmon%20J%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)1, [Lockshin M](https://www.ncbi.nlm.nih.gov/pubmed/?term=Lockshin%20M%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)1, [Goodman S](https://www.ncbi.nlm.nih.gov/pubmed/?term=Goodman%20S%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)1, [Ibrahim S](https://www.ncbi.nlm.nih.gov/pubmed/?term=Ibrahim%20S%5BAuthor%5D&cauthor=true&cauthor_uid=31284305)3. [Ann Intern Med.](https://www.ncbi.nlm.nih.gov/pubmed/31284305) 2019 Jul 9. doi: 10.7326/M19-0120. [Epub ahead of print]

[Author information](https://www.ncbi.nlm.nih.gov/pubmed/31284305)

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Hospital for Special Surgery and Weill Cornell Medicine, New York, New York (B.M., J.X., L.S., J.S., M.L., S.G.).

2

Mount Sinai St. Luke's, Mount Sinai West, and Icahn School of Medicine, New York, New York (Y.L.).

3

Weill Cornell Health Policy and Research, New York, New York (S.I.).

Abstract

BACKGROUND:

Although pregnancy in systemic lupus erythematosus (SLE) carries a high risk for mother and fetus, outcomes may be improving.

OBJECTIVE:

To assess nationwide trends and disparities in maternal and fetal complications among pregnant women with SLE.

DESIGN:

Retrospective cohort study.

SETTING:

United States, 1998 to 2015.

PATIENTS:

Adult pregnant women with and without SLE who had hospitalizations recorded in the National Inpatient Sample (NIS) database.

MEASUREMENTS:

Outcome measures were in-hospital maternal mortality, fetal mortality, preeclampsia or eclampsia, caesarean sections, non-delivery-related admissions, and length of stay. To assess whether trends in outcomes over time differed between patients with SLE and those without SLE, logistic or linear regression with an interaction term between year and SLE (yes or no) was used. Nationwide population estimates incorporating sampling and poststratification weights were obtained.

RESULTS:

An estimated 93 820 pregnant women with SLE and 78 045 054 without SLE were hospitalized in the United States from 1998 through 2015. Outcomes improved during those 18 years. In-hospital maternal deaths (per 100 000 admissions) declined among patients with as well as those without SLE (442 vs. 13 for 1998 to 2000 and <50 vs. 10 for 2013 to 2015), although the decrease was greater in women with SLE (difference in trends, P < 0.002). The percentage of patients with SLE in all pregnancy-related, as well as delivery-related, admissions increased significantly.

LIMITATIONS:

The sample for this analysis was identified by using diagnostic codes; detailed information on hospital-specific trends, SLE disease activity, and medications was not available. Race trends could not be analyzed. Given that NIS uses weighted estimates, the incidence of outcomes reported may not be exact.

CONCLUSION:

In this large study examining SLE and non-SLE pregnancies over 18 years, in-hospital maternal mortality and overall outcomes improved markedly, particularly among women with SLE. However, improvement is still needed, because SLE pregnancy risks remain high.

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