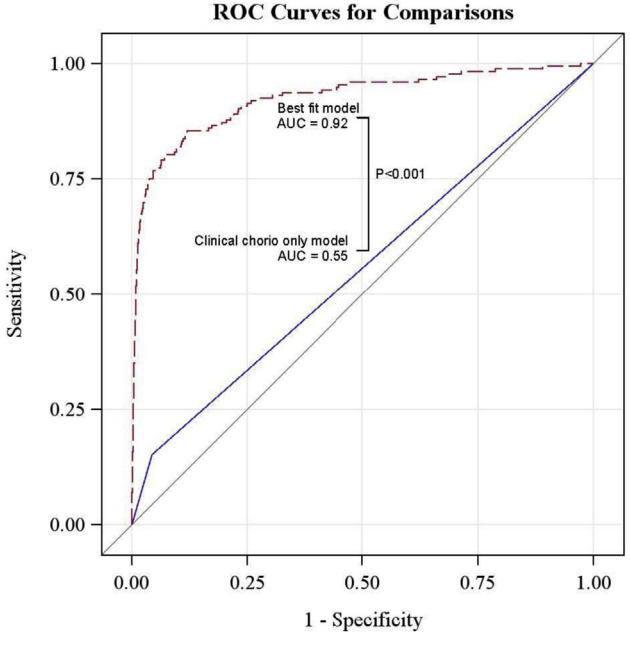
hospitals over a 3-year period, and perinatal outcomes were ascertained according to pre-specified guidelines. Liveborn, non-anomalous singleton neonates, or firstborn in case of twins, were included. Maximum maternal temperature, maternal antibiotic use and culture-proven EOS were recorded. Multivariable analysis using k-fold cross validation identified antepartum and intrapartum factors that were independently associated with EOS. The best final multivariable model was then compared with a model that included the same variables plus clinically-diagnosed chorioamnionitis and a model with clinically-diagnosed chorioamnionitis only.

RESULTS: Among 111,593 women who delivered during the study period, 175 neonates experienced EOS (0.16%, 95%CI 0.13-0.18). EOS occurred in 0.15% of the cases without fever and in 1.57% of those with temperature ≥102.2 °F (39 °C). EOS was rare in term neonates. The variables listed in the Table produced the best-fit model for prediction of EOS (area under the curve [AUC] = 0.92). This best-fit model was superior to clinical chorioamnionitis alone (AUC = 0.55; p<0.001; Figure), and adding clinical chorioamnionitis to the best model did not improve it (AUC = 0.92).

CONCLUSION: In this large cohort with rigorously collected data, proven EOS was rare, particularly in term neonates, and clinical diagnosis of chorioamnionitis was not a good predictor. A better predictor of EOS is a combination of maximum maternal temperature, BMI, gestational age and birthweight. Using this risk-stratification model should improve identification of neonates at risk for EOS and prevent unnecessary neonatal testing and intervention, as well as decrease cost.

Table: variables included in the best-fit model for prediction of EOS.

	OR	95% CI		P-value
Maximum temp 100.4-102.1 °F (38-38.9 °C)	1.90	0.94	3.86	.08
Maximum temp ≥102.2 °F (≥39 °C)	12.41	5.39	28.57	<.001
BMI, per unit increase in log BMI	2.46	1.26	4.82	.008
Gestational age, per unit increase in weeks	0.72	0.69	0.76	<.001
Birthweight <2500 g	3.55	2.02	6.27	<.001
Birthweight >4000 g	1.49	0.53	4.23	.45



214 Withdrawn

215 State-level analysis of MFM provider density and perinatal outcomes

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OBJECTIVE: To investigate whether maternal-fetal medicine (MFM) provider density is associated with improved perinatal outcomes.

STUDY DESIGN: We combined multiple national data sources, including birth/fetal death certificate data from the Centers for Disease Control and Prevention (CDC), discharge data from the Nationwide Inpatient Sample (NIS), and census data. Primary perinatal outcomes included state-level preterm birth rates (<37 weeks), stillbirth rates (greater than 28 weeks) and the rate of early term delivery (as a percent of total term deliveries). The number of MFM providers per birth per state (from the SMFM registry) was the primary predictor. We looked at the correlation between MFM provider density and perinatal outcomes accounting for potential confounders, including state demographics (income, insurance, education, malpractice) and maternal comorbidities (age, diabetes, hypertension and obesity).

RESULTS: There was wide variation in MFM provider density across states, ranging from 0 to 21.5 providers per 10,000 births with a median of 3.8. States with higher MFM density (above the median) had more maternal comorbidities, including higher rates of diabetes (5.9% vs. 5.1%; p<0.01) and advanced maternal age (15.8% vs. 13.6%; p=0.02). High density states also had higher socioeconomic status, including more women with at least a high school education (87.2% vs. 83.1%; p<0.01), less women with Medicaid (36.9% vs. 45.9%; p<0.01), more married women (61.4% vs. 57.4%; p<0.01) and a higher median income ($54,953 vs. $50,488; p=0.02). Higher MFM provider density was associated with a lower rate of preterm birth (Pearson correlation coefficient[r]=-0.26; p=0.07), less early-term delivery (r=-0.54; p<0.01), and there were no association with stillbirth rates (r=-0.05; p=0.72). In multivariable regression models adjusting for potential confounders, these associations did not remain significant.

CONCLUSION: MFM provider density varies across states. After accounting for baseline differences in populations, there was no measurable impact of MFM provider density on preterm, early-term or stillbirth rates. Devising meaningful quality metrics to measure the potential impact of MFM care in the U.S. remains a challenge.

216 Relationship between ICU Admissions and Severe Maternal Morbidity

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OBJECTIVE: Maternal ICU admission as a marker of severe maternal morbidity (SMM) has been identified by the Joint Commission and others as an indicator for multidisciplinary review. We sought more data on the incidence and characteristics of maternal ICU admission and its relationship to SMM in a large cohort of California maternal hospital admissions.

STUDY DESIGN: As part of a larger study examining SMM, ICD9codes, complete blood bank records, prolonged hospital length of stay and maternal ICU data (using internal hospital sources) were obtained