[0.14–5.63], $p = 0.91$, respectively. Sensitivity analyses showed similar results. The prevalence of PPH was 2.9%, the case fatality rate was 1.96%, and the maternal mortality ratio was 293 maternal deaths/100000 life births.

Conclusions: We found that using 600 μg misoprostol as an add-on to oxytocin in preventing PPH significantly reduces the odds of PPH without affecting other maternal outcomes.

898 | Maternal opioid use and infant birth defects in RI Medicaid enrolled population

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Background: The rapid increase of opioid-related overdoses and deaths has become a public health threat in the United States. The utilization of prescription opioids in pregnant women has increased while the results from teratogenic studies remain controversial.

Objectives: To evaluate the association between maternal opioid use during pregnancy and the incidence of congenital malformations in infants.

Methods: This retrospective cohort study evaluated Rhode Island Birth Certificate data of live births from 2006 to 2016 for mothers who were enrolled in the Rhode Island Medicaid program. The study cohort included women who gave a live birth and had no opioid dispensing or opioid use disorders during the study period. Mothers' prescription opioid exposure was obtained through pharmacy claims and defined as filled at least one prescription opioid for non-cancer pain during pregnancy. Study outcomes were assessed using ICD-9 diagnosis codes and ascertained by medical records review. Conditional logistic regression models with propensity score (PS) fine stratification and weighting with 100 strata were applied to derive the effect estimates of maternal opioid exposure on infant birth defects after adjusting for other potential confounders.

Results: Of 25,205 pregnancies included in this study, 1,898 (7.5%) mothers filled prescription opioids and 1,024 (4%) infants were diagnosed with birth defects, either major congenital malformations (MCM) or minor anomalies (MA). Comparing opioid exposed vs unexposed, total birth defects were 9.5% vs 3.6% ($P < 0.0001$), MCMs were 7.0% vs 2.7% ($P < 0.0001$), and MAs were 3.1% vs 1.2% ($P < 0.0001$). Mother exposed to an opioid during pregnancy were older (27.35 ± 5.36), more likely to have smoked (52.6%), and had a higher number of prenatal care visits (13.04 ± 5.58). Infants with prenatal opioid exposure were more likely to be born preterm (gestational age, mean ± SD: 38.3 ± 2.3 vs 38.6 ± 2.1, $P = 0.07$; preterm born, N(%): 194 (11%) vs 2108 (9%), $P = 0.01$). The conditional logistic regression analysis with PS fine stratification and weighting with 100 strata also showed significant increases of MCM and MA in infants with maternal opioid exposure compared to those who were not exposed.

Conclusions: Our results suggest a significant association between opioid use during pregnancy and an increased incidence of birth defects. Further investigation is needed to examine the effects of maternal opioid exposure on infants' long-term health outcomes.

899 | Crowdsourcing as a novel method to assess the impact of drug exposure on Belimumab pregnancy registry enrollment

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Background: The belimumab (BEL) Pregnancy Registry (BPR; GSK Study 114256), a prospective, voluntary study of BEL during pregnancy in women with systemic lupus erythematosus (SLE), has demonstrated low enrollment ($N = 60$) despite awareness activities. Crowdsourcing platforms collect feedback from online general population or physician communities.

Objectives: Understand BEL use in pregnancy, ascertain BPR awareness, and identify study enrollment barriers via two crowdsourcing platforms.

Methods: Patients (women with SLE; pregnant [P]/recently pregnant [RP]/planning a pregnancy [PP]) completed an online Amazon Mechanical Turk (mTurk) questionnaire about their SLE medication use and BPR awareness. Rheumatologists (in 8 countries with active BPR) with a history of prescribing BEL in pregnancy were surveyed via SERMO on prescribing patterns and factors relating to BPR awareness/enrollment. Surveys were active for 3 months.

Results: Overall, 151 patients (across 3 months) and 169 rheumatologists (within 48 hours) responded, primarily from the US. Most patients were 26–35 years (58%), reported mild (42) or moderate (56%) SLE, and were P/RP (51%); 49% were PP. Exposure to BEL was reported by 42% of patients (of these: P, 29%; RP, 33%; PP, 38%), of whom 54% were exposed for ≤1 year (of these: P, 16%; RP, 14%; PP, 24%). Of patients with prior exposure to BEL, 51% were BPR-aware, versus 6% of those without exposure. Overall, 60% of patients stopped BEL due to pregnancy (of these: P, 32%; RP, 37%; PP, 32%); BPR awareness did not impact discontinuation. Among rheumatologists, 46% were BPR-aware, 92% of whom were willing to refer patients to the BPR. Rheumatologists reported 23% of their patients had no concerns on BEL use during pregnancy (multiple choices allowed); concerns included the unknown BEL safety profile (75%) and wanting to reduce medication in pregnancy (28%). Overall, 86% of physicians gave reasons for not prescribing BEL during pregnancy (multiple answers allowed) including unknown pregnancy safety profile (78%), preference for other treatments (41%), and mild disease or tolerable symptoms (33%). Rheumatologists (82%) reported treating ≤5 (52%), 5–10 (26%), or > 10 (23%) patients who were P/RP/PP with BEL.

Conclusions: Crowdsourcing platforms enable rapid, targeted, high-coverage, physician and patient feedback. Findings suggest women are BEL-exposed during pregnancy, but few take part in the BPR. Barriers to BPR enrollment include moderate BPR awareness, BEL discontinuation, and low knowledge of the BEL benefit/risk profile during pregnancy. Study funded by GSK.