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**510 Contemporary trends in cesarean delivery rates and indications**



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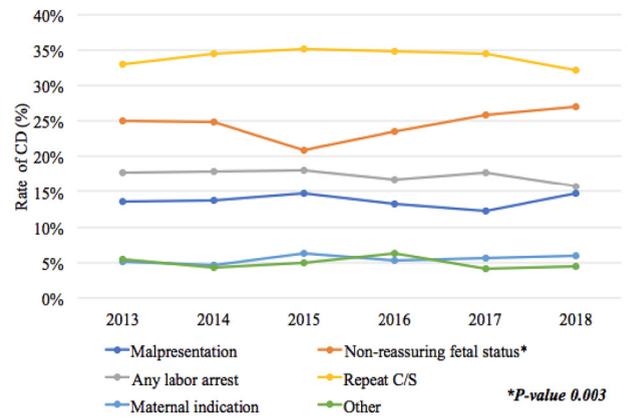
**OBJECTIVE:** The American College of Obstetrics and Gynecology (ACOG) introduced updated guidelines for labor management (2014) and fetal heart rate interpretation in an attempt to reduce cesarean delivery (CD) rates – especially the primary CD. We sought to describe CD rates and indications at a single center in order to assess the impact of these guidelines on trends in clinical practice.

**STUDY DESIGN:** Retrospective cohort study of women ≥ 23 weeks gestation delivering at a single tertiary care referral center from 2013 - 2018. Demographic characteristics, mode of delivery, and main CD indication were ascertained by individual chart review. Main CD indications were defined as repeat CD, non-reassuring fetal status (NRFS), malpresentation, maternal indications (i.e. placenta previa or genital HSV), failed labor (any stage labor arrest), or other (i.e. fetal anomaly, elective). Polynomial (cubic) regression models were used to model rates of CD and main indications over time. Subgroup analyses further examined trends for nulliparous women.

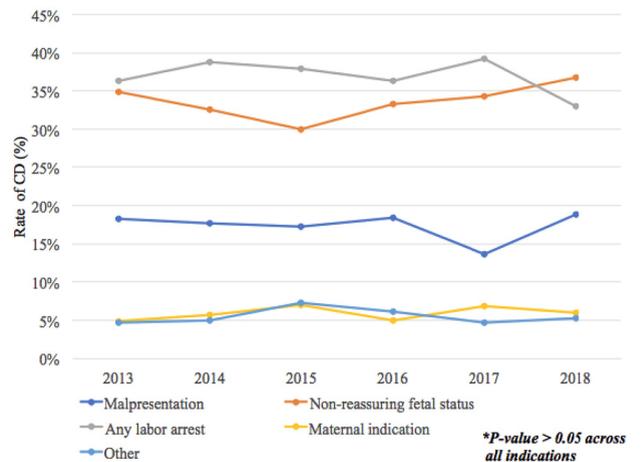
**RESULTS:** Of 24,637 women delivered during the study period, 24,050 women were included in the analysis; 7,835 (32.6%) had a CD. No clinically significant changes in the overall CD rate appeared during the study period (min 30.9% in 2014, max 34.6% in 2018). While CD for NRFS significantly changed over time - decreasing to a nadir in 2015 then rising (p=0.003), there were no differences in any other CD indications over time (Figure 1). When limited to nulliparous women, the rates of CD were similarly stable during the study period (min 30.7% in 2014, max 35.6% in 2013) and there were no differences in any primary CD indications over time (Figure 2).

**CONCLUSION:** Despite the changes in labor management definitions and guidelines encouraging vaginal birth, rates of CD and indications for CD particularly failed labor, repeat CD, and malpresentation have not significantly changed over time. Studies should evaluate whether factors like patient preference and practice/provider variation contribute to the steady rate of CD.

**Figure 1: Trends in Indications for Cesarean Delivery from 2013-2018**



**Figure 2: Trends\* in Indications for the Primary Cesarean Delivery in Nulliparous Women from 2013-2018**



**511 Choosing the optimal skin incision for cesarean delivery in patients with morbid obesity**



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**OBJECTIVE:** Although there have been studies comparing Pfannenstiel incision (PI) with supraumbilical vertical skin incision (SVI) in obese women, the optimal skin incision for cesarean delivery (CD) in patients with class III obesity has not been determined. Our objective was to evaluate if PI vs SVI had any significant differences in maternal or neonatal outcomes in women with body mass index (BMI) ≥50 undergoing CD.

**STUDY DESIGN:** We conducted a retrospective cohort study in pregnant women with BMI ≥50 undergoing CD at a single tertiary care center from 2016 to 2020. Electronic medical records and operative reports were used to collect study variables and identify the study groups: PI vs SVI. SVI incisions were performed on patients with hanging pannus (umbilicus at the level of the pubic bone) following evaluation by a multi-disciplinary team. Primary outcome was surgical blood loss. Secondary outcomes were hysterotomy type, surgical time, negative pressure wound therapy use, neonatal outcomes,