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Title

Relationship between maternal BMI and cesarean section procedure length in both family medicine and OB patients

Priority 1 (Research Category)

Women's health

Presenters

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Abstract

Context – Maternal obesity in pregnant females is a health issue that can lead to increased risks and complications following a cesarean section (c-section) procedure. There are few studies that have examined the relationship between maternal body mass index (BMI) and procedure length, and it was unclear if family medicine physicians were included in any of them. This study is relevant to family medicine in that it can confirm that BMI is related to procedure length. As more patients with higher BMIs are undergoing c-sections, there is a growing need to anticipate maternal and neonatal morbidity outcomes along with associated risks and complications.

Objective – To assess the relationship between maternal BMI and procedure length in c-sections performed by family medicine and OB/GYN physicians.

Study Design – Retrospective medical records review

Setting – A midwestern regional health network

Database – Electronic Medical Records

Population Studied – 2343 patients who have undergone a c-section. Inclusion criteria include singleton deliveries by c-section in the Department of Family Medicine or the Department of Obstetrics and

Gynecology who have a minimum gestational age of 34 weeks and 0 days, and maternal age of 16-45. Data include height, weight, BMI, and surgical operative time. Demographics data were also collected.

Intervention – N/A

Main Outcome Measure - length of surgical time

Results – The average BMI of patients undergoing a cesarean section was 35.2 (SD=8.3). BMI was shown to be statistically significantly correlated with procedure length (start to delivery: r=.147, p<0.001).

Conclusions – BMI is statistically significantly positively correlated with procedure length. This relationship can be useful in estimating c-section procedure length with a given BMI. With the everincreasing number of high BMI patients seen in both Family Medicine and OB/GYN departments, more c-sections will be favored for this patient population, leading to longer procedures with increased risks and complications such as increased risk of post-operative blood transfusions, longer hospitalizations, and increased neonatal morbidity.