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Commentary

Cesarean Delivery Rates and Trends: A Current Undeclared Global Health Emergency

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Received: August 24, 2022; **Published:** September 26, 2022

Betran., *et al*. projected the current cesarean delivery rates and trends and predicted that 2030 rates could reach 63% in Eastern Asia. The global average is estimated to rise from 21.1% to 28.5%. Everywhere, the estimated rates in 2018 are strikingly higher than the last decades and even surpass vaginal birth rates in five countries: Dominican Republic, Brazil, Cyprus, Egypt and Turkey. In Latin America, these rates reached 43% [1]. So, are the adverse effects of the non-indicated cesarean sections serious enough to call for urgent actions?

Adverse effects on health

Cesarean section has evolved over the last 100 years to be a leading life-saving procedure for the mother and her baby. However, the overuse of this procedure has proved that there are wide range of maternal and fetal unintended adverse consequences.

In a review of 196 studies from 67 studies from low and middle income countries, risk of maternal mortality following cesarean delivery was 100 times than that of high income countries [3]. Besides the surgical and anesthesia risks of this procedure, women after CS are at higher risk of abnormal placentation (placenta previa and placenta accreta spectrum), uterine rupture, ectopic pregnancy, preterm birth, abdominal adhesions and chronic pelvic pain than after being delivered normally [4]. In a longitudinal study including 17.8 million births in Brazil, Paixao., *et al*. found that CS in low-risk pregnancies is associated with 25% increased risk of under 5 years child death in comparison with normal vaginal delivery [5]. Different studies showed that CS is associated with wide range of fetal and childhood morbidities including asthma, respiratory tract infections, childhood obesity and reduced gut microbiome diversity [4].

Economic burden on health budgets

The actual expenditure on every single unnecessary cesarean delivery should count for money spent on the current procedure, the expenditure on the adverse maternal and child health outcomes and the need for repeat cesarean delivery in future pregnancies. There is no actual health economic study that report all these expenditures on CS and its consequences. To apply the universal free health systems, governments across the globe are struggling to save budgets for the health system. Unnecessary expenditure on one sector is critical. Cesarean deliveries are more costly than vaginal deliveries in every single country. Moran and his colleagues conducted an economic analysis to estimate the savings of policies targeting two outcomes: reducing primary cesarean rates in nulliparous and reducing first repeat cesarean rates by encouraging the vaginal birth after cesarean section (VBAC). If both outcomes are modeled to match a CS rate of 18.3% (similar to rates in Iceland which has the lowest CS rates in nullipara) and VBAC rates of 55.4% (equivalent to rates in Finland which has the highest VBAC rates), then the health systems in England/Wales and Ireland would save £23.0m and €3.5m respectively per year [6]. These savings are extremely important in low- and middle-income countries knowing that their CS rates are increasing sharply and thus the health expenditure is allocated unfairly on a procedure that causes more harm than benefits when done without medical indication.

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Volume 11 Issue 9 September 2022