

Impact of Maternal Nationality on Caesarean Section Rate Variation in a High-income Country

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Abstract : Cesarean sections (CS), a highly regarded surgical intervention for improving fetal-maternal outcomes and serving as an integral part of emergency obstetric services, are not without complications. Although CS has many advantages, it poses significant risks to both mother and child and increases healthcare expenditures in the long run. The escalating global prevalence of CS, coupled with variations in rates among immigrant populations, has prompted an inquiry into the correlation between CS rates and the nationalities of women undergoing deliveries at Al-Wakra Hospital (AWH), Qatar's second-largest public maternity hospital. This inquiry is motivated by the notable CS rate of 36%, deemed high in comparison to the 34% recorded across other Hamad Medical Corporation (HMC) maternity divisions. This is Qatar's first comprehensive investigation of Caesarean section rates and nationalities. A retrospective cross-sectional study was conducted, and data for all births delivered in 2019 were retrieved from the hospital's electronic medical records. The CS rate, the crude rate, and adjusted risks of Caesarean delivery for mothers from each nationality were determined. The common indications for CS were analysed based on nationality. The association between nationality and Caesarean rates was examined using binomial logistic regression analysis considering Qatari women as a standard reference group. The correlation between the CS rate in the country of nationality and the observed CS rate in Qatar was also examined using Pearson's correlation. This study included 4,816 births from 69 different nationalities. CS was performed in 1767 women, equating to 36.5%. The nationalities with the highest CS rates were Egyptian (49.6%), Lebanese (45.5%), Filipino and Indian (both 42.2%). Qatari women recorded a CS rate of 33.4%. The major indication for elective CS was previous multiple CS (39.9%) and one prior CS, where the patient declined vaginal birth after the cesarean (VBAC) option (26.8%). A distinct pattern was noticed: elective CS was predominantly performed on Arab women, whereas emergency CS was common among women of Asian and Sub-Saharan African nationalities. Moreover, a significant correlation was found between the CS rates in Qatar and the women's countries of origin. Also, a high CS rate was linked to instances of previous CS. As a result of these insights, strategic interventions were successfully implemented at the facility to mitigate unwarranted CS, resulting in a notable reduction in CS rate from 36.5% in 2019 to 34% in 2022. This proves the efficacy of the meticulously researched approach. The focus has now shifted to reducing primary CS rates and facilitating well-informed decisions regarding childbirth methods.

Keywords : maternal nationality, caesarean section rate variation, migrants, high-income country

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