

Editorial

Rising Trends of Cesarean Section Worldwide and in Pakistan: An Urgent Call for Initiating a Nationwide Audit

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World health Organization in 1985 proposed that rate for cesarean sections (CS) should ideally range between 10% to 15%¹. Since then, in both developed and developing countries cesarean section rates have increased. Cesarean sections effectively prevent maternal and perinatal mortality and morbidity when they are medically justified. However, high Caesarean section rates have an association with increased maternal morbidity in terms of increased blood transfusions in the index pregnancy while in subsequent pregnancies the woman is at risk of uterine scar rupture, placenta previa, placenta accreta, visceral injury and even hysterectomy². The association between the reduction of stillbirths or perinatal morbidity and cesarean section rates is undetermined due to lack of availability of data at the population level. However, post operatively the reduced breast feeding, delayed return to full mobility for the mother, higher risk of transient tachypnea of newborn at birth and subsequent asthma in the child are cause for concern³.

Pakistan demographic and health survey 2012-13 reported LSCS rates as reported by WHO Global survey (WHOGS) in 21 countries in 2004-2008 were 26.4%⁴ which increased to 31.2% in WHO Multi Country survey on Maternal and newborn health (WHOMCS)⁵ in 2010-11. Caesarean delivery rates of high Human Development Index countries are much higher e.g Sri Lanka 33.0%, Brazil 47% and Mexico 47.5%⁶ when compared to moderate HDI countries like India and Pakistan with CS rates of 19.2% and 22%⁷ respectively.

Within Pakistan, the reported LSCS rates vary across the provinces as well as related to urban or rural residence. (Figure 1). The caesarean delivery rates in different referral level, busy urban hospitals are high as they receive high risk referrals across regions and are not representative of the surrounding community. Even within a city like Rawalpindi, they range from 37% in Holy family Hospital to 49% in Fauji Foundation Hospital to 56% in Combined Military Hospital all with different drivers to these increasing rates. Even in the same hospital, the temporal trends reveal a progressive

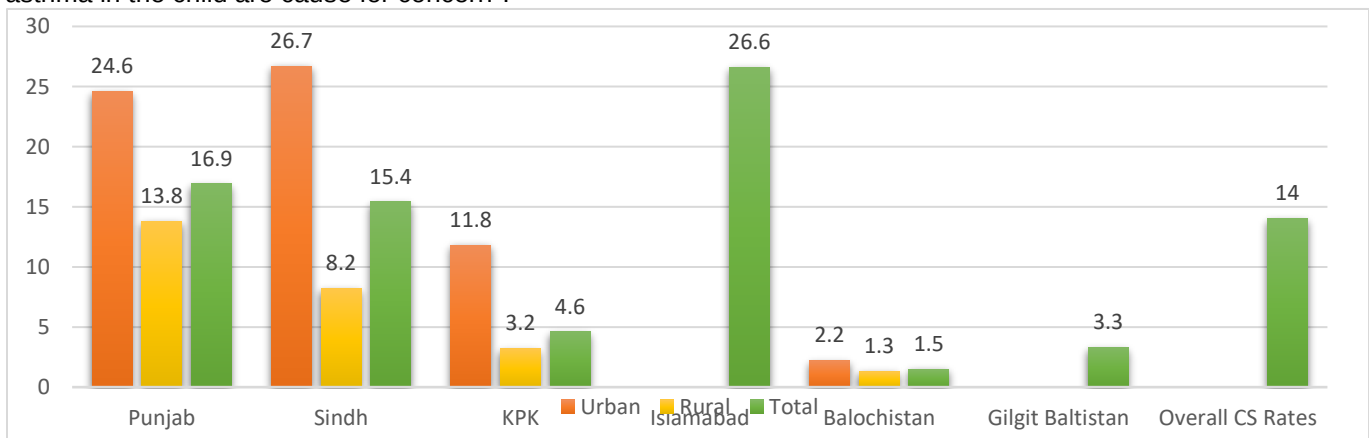


Figure 1: Cesarean Section Rates In Different Regions Across Pakistan (Pakistan Demographic And Health Survey 2012-13 Report)

Table I: Modified Robson's Classification for LSCS					
S.no	Parity	No of fetuses	Presentation	Gest age	Labor onset & Prev Scar
1.	Nulliparous	Single	Cephalic	>37 weeks	Spontaneous labour
2.	Nulliparous	Single	Cephalic	>37 weeks	Induced or CS before labour
3.	Multiparous	Single	Cephalic	>37 weeks	Spontaneous labour
4.	Multiparous	Single	Cephalic	>37 weeks	Induced or CS before labour
5.	Previous CS	Single	Cephalic	>37 weeks	
6.	All Nulliparous		Breeches		
7.	All Multiparous		Breeches		
8.		All Multiple pregnancies			Including previous scar
9.			All abnormal lies		Including previous scar
10.		All single	Cephalic	<36 weeks	Including previous scar

increase in cesarean section rates as seen over the past two decades at MCH Center PIMS, Islamabad, from 15% in 1999 to 33% in 2017. (Figure 2). Compared to the public sector facilities, the private sector is also contributing significantly with high elective, emergency as well as primary cesarean section rates sometimes for dubious indications including nuchal cord, CPD, and maternal request. In developing countries which are mainly low- and middle-income countries, richer women are five times more likely to have LSCS than their poorer peers. This is contributed partly by the fact that poorer women often deliver at home. However even in health facilities, poor women are 2.5 times less likely to have LSCS.

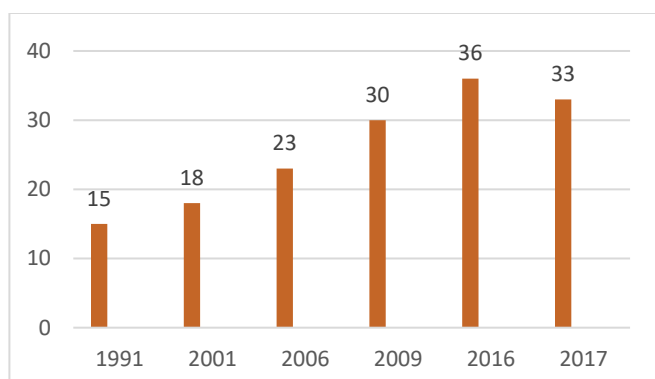


Figure 2. Cesarean Section Rates

Trends Over Past Decades at MCH Center PIMS

These worrying statistics are calling on the OBGYN community to initiate regular audits of Cesarean delivery at every level. To have uniform audit across facilities and regions, various classifications of Cesarean section have been proposed.⁸ These include indications based as well as urgency based classifications. The women based classification system suggested by Robson has been deemed the most useful one in international and national levels for audit. WHO has proposed Robson

classification⁵ as global standard tool for comparing cesarean section rates within and between various healthcare facilities at all levels. Robson categorizes women in ten groups based on five parameters namely parity, gestational age, the onset of labor, presentation as well as a number of fetuses. (table I)

The Robson Ten Group Classification System (TGCS), has reinforced the need to focus on the improved care of women in groups 1, 2 comprising of nulliparous women if the CS rates are to be reduced. The Induction rates of nulliparous and multiparous women should be constantly audited to reduce unnecessary inductions. The other important group is number 5, which includes women with a previous cesarean section. Offering a trial of labor in women with the previous scar for non recurrent indications in referral level hospitals is the way forward. The availability of anesthetist on the floor remains a major issue in less busy facilities. Although the contribution of malpresentations to overall LSCS rates is less, yet offering external cephalic version and trial of labor in selected breech presentations remains the way forward.

In 2015, the WHO declared that at the population level, LSCS rates more than 10% have not been associated with further reductions in maternal and newborn mortality rates⁹. As clinicians, it is far more important to ensure the availability of safe caesarean section to women who need it, rather than aiming to achieve a target rate. Non-clinical interventions suggested for reduction of "Unnecessary Cesarean Sections" include using clinical guidelines, organizing educational interviews, and requesting a second opinion before all but urgent LSCS. Interventions at health organization level such as collaboration with midwives can also assist in preventing future increases in LSCS rates.

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