Increased caesarean deliveries in rural Bangladesh:
what is an influence and what can be done?

KEY MESSAGE

Population based C-section rate was high (35%), well above the WHO recommended level of 19% in a rural community

Higher facility based births (84%) could not guarantee the careful selection of cases for Caesarean birth

Nearly one third of caesarean deliveries were a repeat Caesarean birth (24%)

More than 80% of C-sections were performed in for-profit private hospitals

Five out of eight maternal deaths were from post-caesarean complications

CONTEXT AND SCOPE OF PROBLEM

Caesarean section (C-section) is a component of Emergency Obstetric Care (EmOC) and is regarded as a proxy indicator of women's access to skilled care for complicated deliveries. However, the C-section rate is above WHO recommended levels (19%) and has a negative implication on maternal and newborn health outcomes. The high cost of C-sections may result in catastrophic health expenditures for families and exert additional pressure on the overburdened health system particularly in low and middle income countries. Nevertheless, the past decade has seen a tremendous increase in population based all-cause C-section rates globally. This measure is too elementary to be useful for monitoring and evaluation purposes. Monitoring C-section rates under clinical indications could determine whether or not women have provided with appropriate care.

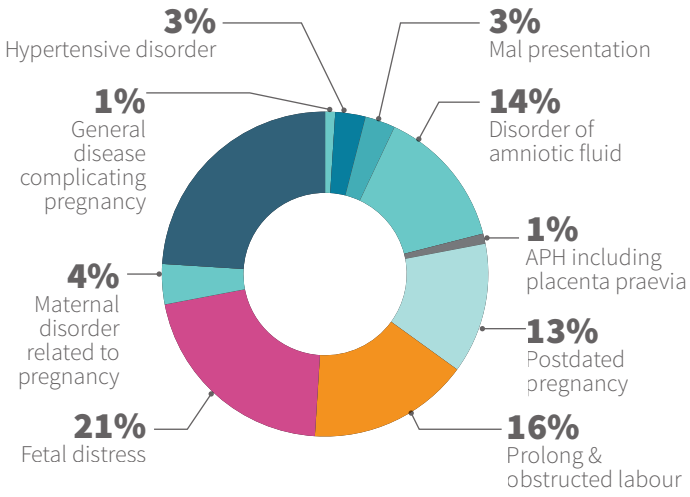
Bangladesh has made remarkable progress in maternal health, reducing maternal mortality by 40% by simultaneously increasing EmOC coverage over the past decade. However, exploitation of C-section services have been observed at an increased rate from 4% in 2004 to 23% in 2014 (Bangladesh Demographic and Health Survey). There is a paucity of data on the clinical indication of C-section at the population level which are essential for a deeper understanding of why the caesarean delivery rate is increasing and what strategies are needed to control it.

THE RESEARCH

This was a retrospective cohort study reviewing births occurring in icddr,b's service area of Matlab, Bangladesh in 2013. The data source was Health and Demographic Surveillance system (HDSS), hospital medical records, verbal autopsy and face-to-face interviews to supplement the missing data regarding C-section indications.

FINDINGS

Out of 2,549 deliveries, 84% were conducted in health facilities: 43% in icddr,b facilities, 33% in for-profit private facilities and 8% in government facilities. The overall population based C-section rate was 35%. More than 80% of C-sections were performed in for-profit private facilities. Of all C-sections, only 1.4% was conducted under Absolute Maternal Indications (AMIs) which includes uncontrolled bleeding, unstable lie or presentations (transverse lie, face or brow presentation), gross cephalo-pelvic disproportion (CPD), and uterine rupture. This survey revealed that the top five indications of C-sections were: repeat C-section; foetal distress; prolonged labour oligohydramnions; and post-maturity (figure above). The probability of C-section deliveries increased with improved socio-economic status, higher education, lower birth order, higher age, and an increase in number of antenatal attendance and presence of bad obstetric history. Eight maternal deaths occurred, of which five were C-section deliveries in private health facilities.



Clinical cuases of C-section (N=902)

POLICY IMPLICATION

The higher attendances in health facilities did not curtail the rising C-section rate, implying poor compliance with the labour management guideline which needs to be addressed. While analysing the clinical causes of C-section it suggests that some indications are not valid as per the international guideline prepared by the obstetric and gynaecological society (e.g. repeat C-sections should not be an indication for a current delivery in the absence of AMI). Moreover, the evidence denotes that the success rate for vaginal birth after C-section is much higher (80%) and maternal morbidity rate is also much lower than those with repeat C-sections, lending a strong argument to advocate for vaginal deliveries as a preferred delivery method. The high number of fetal distress and oligohydramnions was reported in this study which does not match with the existing global prevalence rate and further exploration of this issue is required. The high number of ANC attendance, reported as a determinant of C-section births, infers poor quality of ANC. The dominance of the private sector in C-section provisions, along with an increased level of adverse maternal outcomes associated with C-section deliveries demands adequate policy attention to the clinical quality of maternal care in for-profit private sector facilities.

RECOMMENDATION

- A standard labour management protocol should be implemented in all the EmONC health facilities
- 4+ ANC attendance needs to be adopted
- ANC providers should inform and engage the client in the decision making process for delivery procedures
- Proper documentation of both the maternal and fetal clinical findings are essential to validate C-section indication
- A comprehensive, evidence-based approach needs to be introduced to monitor the indication of C-sections in both public and private facilities

Recommended source for this policy brief:

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