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Cesarean Section Epidemic: A Warning to Health Policy Makers Worldwide

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The global increase in cesarean section (C-section) rates has transformed from a clinical phenomenon into a policy alarm bell.[1] Cesarean births, once reserved for high-risk pregnancies and life-saving interventions, now account for over one in five deliveries worldwide.[1, 2] In Libya, the situation is particularly striking, with approximately 60.8% of first-time births delivered by cesarean section—an unprecedented rate worldwide. As reported by Abdelghffar et al. in this issue of the Journal of the Best Available Evidence in Medicine, this is not a local apparency but a national maternal health emergency with deep-seated causes and broad implications. [3]

A Public Health Red Flag: C-Sections and Maternal Mortality in Libya

The World Health Organization (WHO) and many international public health bodies recommend that the ideal rate of cesarean section should be between 10% and 15% of all births. This range is associated with the lowest maternal and neonatal mortality rates. Beyond this threshold, there is no evidence that higher C-section rates improve maternal or newborn outcomes (WHO, 2021).[1,2]

While cesarean delivery can reduce perinatal and maternal risks when medically indicated, its indiscriminate use introduces a higher level of clinical complexity in the labor room. [1,2] The maternal mortality ratio (MMR) in Libya has shown worrying signs of increase. According to the UN and WHO estimates, Libya's MMR was approximately 70 per 100,000 live births during 2010–2015, which is already above the global SDG target of less than 70 by 2030 and far above the benchmark of 24 per 100,000 for middle-income countries.[4] More recent estimates suggest that the MMR has risen rather than declined in recent years, reflecting the ongoing deterioration of maternal care services.[5]

This alarming trend may be linked to the overuse of cesarean deliveries, which are associated with increased risks of hemorrhage, infection, and long-term complications—especially in under-resourced surgical settings.[6] However, it is important to consider that the rise in C-sections could be both a contributing factor and a symptom of broader health system failure. The growing dependence on surgical delivery may reflect misguided defensive medical practices, weak regulation, and erosion of midwifery services rather than improvements in obstetric care quality. Thus, increased MMR and rising C-sections might both be manifestations of declining healthcare quality rather than causally linked in a direct and isolated fashion.

Globally, similar patterns are emerging, countries with high private-sector dominance in maternal care, such as Brazil and Egypt, show parallel increases in both C-section rates and maternal morbidity.[7] In Libya's case, the confluence of a fragile health system, inconsistent quality control, and under-resourced surgical facilities has created an ecosystem where more interventions may actually mean worse outcomes.[3]

Obstetrics as a Market Failure: Perverse Incentives and Defensive Medicine

Health economists increasingly point to market failure as a driving force behind

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excessive C-section use.[8] In the absence of transparent pricing, information asymmetry between patients and health care providers, decisions about delivery modes often prioritize convenience, and financial incentives over clinical need.[8] Libya exemplifies this dysfunction. As by Abdelghffar et al., 65.4% of women reported lacking freedom in choosing their delivery method, and over 60% received inadequate explanations about the risks and alternatives.[3]

This dynamic is exacerbated in privatized or mixed health systems where fee-for-service models reward quantity over quality. Providers may lean toward C-sections because they are more profitable, faster to schedule, and may seem to be legally safer—especially in settings where medicolegal protections are weak or inconsistently enforced.[9]

Financial Reform as a Clinical Intervention: The Case for DRGs

An emerging solution to this dilemma lies in Diagnosis-Related Group (DRG) payment models. DRGs offer bundled payments for childbirth episodes, regardless of whether the birth is surgical or vaginal, thus neutralizing financial bias. Several countries—such as Turkey, France, and parts of Eastern Europe—have adopted DRG systems to curb non-essential cesarean rates while maintaining clinical flexibility.[10]

In Libya, adopting a DRG model or a similar bundled payment framework for maternity care could be transformative. By aligning payment incentives with evidence-based practices, DRGs help restore the balance between medical judgment and economic rationale, ensuring that decisions prioritize patient welfare, not profit margins.

Psychosocial and Demographic Consequences: From Birth Trauma to Demographic Decline

The cost of overmedicalization is not merely clinical or economic—it is deeply human, as well. Nearly 30% of Libyan women in the survey linked C-sections to psychological distress.[3] More than 40% reported limited access to psychological support during and after birth.[3] Birth trauma is strongly associated with postpartum depression, impaired mother-infant bonding, and reduced breastfeeding success.[8,11]

Moreover, Libya's C-section surge correlates with a decline in fertility. Women who delivered via cesarean had significantly fewer children than those with natural delivery (1.88 vs. 2.19). This finding is not incidental. Studies in both developed and developing countries confirm that unnecessary cesareans may lead to lower subsequent fertility due to scarring, uterine rupture risk, and physician advice to limit family size.[12] In a nation where the total fertility rate (TFR) has plummeted from 7.28 in 1980 to 2.17 in 2020, obstetric practice is clearly influencing national demography.[13]

Policy Prescriptions: A Multi-Pillar Approach to Reform

Libya's cesarean crisis is not merely a statistical outlier—it is a policy failure. A rights-based, system-wide reform is urgently needed. The following recommendations are informed by global evidence and grounded in Libya's current challenges:

1. Introduce National C-Section Guidelines: Standardize clinical protocols and establish audit systems to monitor hospital-specific rates and practices.
2. Adopt Payment Reforms (DRGs): Implement bundled or DRG-based payments for childbirth to eliminate financial bias in delivery decisions.
3. Promote Midwifery-Led Models: Expand midwife-led delivery units in urban and rural areas, as seen successfully in Tunisia and Morocco.
4. Invest in Maternal Mental Health: Include postpartum depression screening, trauma-informed care, and emotional support services in the maternal health package.
5. Mandate Informed Consent and Birth Education: Require structured antenatal sessions covering risks and options, with clear documentation of consent for non-emergency surgical interventions.
6. Enhance Legal Protections: Create regulatory bodies to enforce patient rights and professional accountability, protecting both providers and patients from legal uncertainty.

Conclusion: A Global Wake-Up Call

Libya's unprecedented C-section rate is not merely a domestic issue—it is a warning to the global community. Without coordinated reform, other nations may follow similar trajectories, especially those with fragile institutions, hybrid payment models, and weak patient protections. Unregulated medical services always carry the risk of undermining the health systems and hinder national developments—wherever you are.

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