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Escalating Caesarean Births in a Tertiary Care Centre in India: Trends and Predictors

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Abstract

Background: Global trends in cesarean section (CS) have been rising consistently. In India, the rates in tertiary hospitals are particularly high due to referral of complex cases. Trends over time and clinical indications need to be reviewed in order to inform practice and policy-making. ***Aim and objective:*** To evaluate trends and predictors of cesarean section deliveries between January 2020 and July 2025, with specific reference to the research question: "How have the rates and indications of cesarean section changed during this period, and what is their correlation with maternal and neonatal outcomes?" ***Methods:*** A retrospective observational study was conducted using institutional delivery records. Monthly and yearly data were extracted with regard to total deliveries, cesarean sections, indications for cesarean sections, and maternal demographics as well as neonatal and maternal outcomes. Statistical analysis and graphical presentation were performed using R Studio. Trend assessment and analyses of proportions were done using chi-square tests. ***Results:*** Of 15,346 deliveries, 9,430 (61.45%) were CS. The highest CS rate was in 2020 (71.54%) with a subsequent plateau at 59–61%. Leading indications were Cephalopelvic Disproportion (16.46%) and Previous CS with Mobile Head (12.98%), both with significant rising trends. Neonatal outcomes were excellent with NICU admissions at 16.92% and infant mortality at only 0.12%. Severe maternal complications were uncommon. ***Conclusion:*** This elevated CS rate is indicative of sophisticated case management and changing obstetric practice. VBAC promotion, AI surveillance, and systematic audit strategies are advocated to maximize the use of cesareans, enhance outcomes, and meet international standards.

Keywords: ***Cesarean section, obstetric indications, trends, tertiary care, India, neonatal outcomes, maternal complications***

Introduction

Cesarean section (CS) is an essential obstetric intervention when medically necessary; however, its misuse across the globe is a significant public health problem. The World Health Organization (WHO) recommends an ideal proportion of cesarean section between 10% and 15% because any rate over is likely to result in maternal and neonatal risks greater than benefits (WHO, 2021). Zizza *et al*. reported that in 47.2% of nations, the prevalence of cesarean sections was greater than 15%, particularly in nations like Latin America, the Caribbean, Europe, North America, and Oceania (Zizza *et al*, 2011). The research also found an inverse association between frequencies of cesarean sections and maternal and neonatal mortality rates in all regions of the world except Europe.

This rising trend is multi-factorial, being influenced by changing maternal demographics, obstetric practice, medico-legal considerations, and altered patient expectations (Zargar S *et al*, 2021). In India, tertiary care institutes, as referral sites for complicated pregnancies, would most likely have disproportionately large CS rates due to richer case mixes and clinical policies emphasizing safety and risk avoidance. While large-scale national surveys such as NFHS provide a broad picture, local current institutional data are needed to understand micro-level patterns underlying these macro trends.

The pandemic of COVID-19 also disrupted obstetric care, modifying delivery of care and potentially impacting CS rates by shifting clinical management and patient practices (Molina R L *et al*, 2022). In these situations, there is limited data on hand that reflects CS trends post-2020 at an institutional level in India.

This research fills this gap by retrospectively examining more than five and a half years of delivery data at a tertiary care center with high volume. The objectives are to analyze the trends over time in rates and indications for CS, describe maternal and fetal outcomes, and determine changing patterns to guide clinical decision-making and health policy.

The main research question that drives this study is: "How have the rates and indications of cesarean sections varied between January 2020 and July 2025 in a tertiary care center, and in what correlation are these variations with maternal and neonatal outcomes?".

Methodology

Study Design and Setting

This was a retrospective observational study in Department of Obstetrics and Gynaecology, District Headquarters Hospital, a high-referral obstetric volume hospital at Pollachi, Tamil Nadu. The study period was from January 2020 to July 2025.

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Study Cohort

There were 15,346 deliveries observed over the study duration, and 9,430 of these were cesarean deliveries. The study cohort included all deliveries with gestational age ≥28 weeks. Completed recording or deliveries with gestation of less than 28 weeks were excluded from analysis.

Inclusion Criteria

All the deliveries, including live births and stillbirths, were included at the tertiary care center from January 2020 to July 2025.

- Deliveries of ≥28 weeks' gestational age.
- The patients referred from other institutions with full hospital records.
- Patients with complete hospital records, including documented maternal and obstetric data such as indication for LSCS.
- Singleton and multiple gestations are encompassed.

Exclusion Criteria

- Gestational age births <28 weeks (pre-viable fetuses).
- Incomplete or missing critical data cases (e.g., missing mode of delivery, reason for LSCS, maternal demographic data).
- Planned elective LSCS cases outside the study center (if any) in whom detailed records were not available.

Data Acquisition

Monthly and yearly totals of overall deliveries, cesarean deliveries, clinical indications for cesarean delivery, maternal age groups, and parity were derived from institutional reports. These were used as the foundation for further analysis.

Determinants

Independent variables were parities, maternal age groups, and primary obstetric indications for cesarean. Neonatal outcomes of infant mortality, NICU admission, and stillbirth were examined, and maternal complications of postpartum hemorrhage and obstetric hysterectomy.

Quantitative Assessment

Descriptive and inferential statistical tests were conducted with R Studio (R Foundation for Statistical Computing, Vienna, Austria). Temporal trends were evaluated by chi-square tests of linear trend and other suitable tests for proportions. Statistical significance was at a $p < 0.05$.

Results

The overall deliveries from January 2020 to July 2025 were 15,346, out of which 9,430 were done as Lower Segment Cesarean Sections (LSCS), with the overall rate being 61.45% LSCS. The peak yearly rate of LSCS was 71.54% in 2020, after which it was sustained at a rate of 58–61% in the following years (**Table 1**). Monthly caseloads of LSCS were steady with no seasonal variation.

The Robson classification system, which has been supported by the World Health Organization (WHO, 2021), is a standardized tool for the measurement, observation, and comparison of the rate of caesarean sections between different healthcare institutions over the course of time. Group 3 exhibited the highest percentage of C-section at 16.46%, while group 5 recorded 12.98% (**Figure 1**).

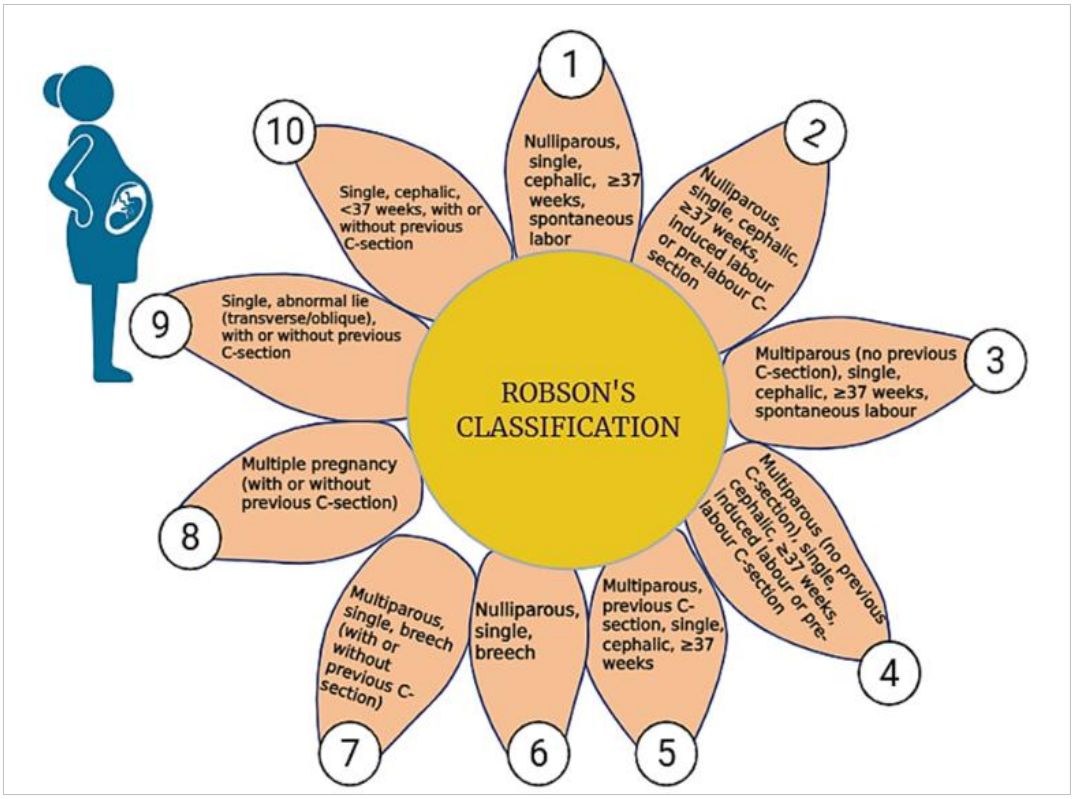

Figure 1: Robson's classification

Table 1: Annual Delivery and LSCS Volumes with Rates (2020–July 2025)

Year	Total Deliveries	Total LSCS	LSCS Rate (%)
2020	2,667	1,908	71.54
2021	2,913	1,731	59.42
2022	2,931	1,782	60.79

2023	2,804	1,642	58.56
2024	2,584	1,520	58.82
2025 (Jan-Jul)	1,447	847	58.53
Overall	15,346	9,430	61.45

Most frequent indications for LSCS were Cephalopelvic Disproportion (CPD) at 16.46% and Previous CS with Mobile Head at 12.98% (**Table 2**). Other frequent indications were Fetal Distress/MSL (12.43%), Post-dated pregnancy (6.50%), and Short Primi (6.32%).

Table 2: LSCS Indications by Total Cases and Proportion

Indication	Total Cases	Proportion (%)
Cephalopelvic Disproportion (CPD)	1,553	16.46
Previous CS with Mobile Head	1,224	12.98
Fetal Distress/MSL	1,173	12.43
Post Dated	613	6.50
Short Primi	596	6.32
Non Progression of labor	948	10.05
Failed Induction	558	5.92
Severe Oligohydramnios/IUGR	504	5.34
Severe PIH	398	4.22
Breech	396	4.20
GDM	185	1.96
Precious Baby	184	1.95
Abruption	328	3.47
Imminent Eclampsia	143	1.52
Placenta Previa	141	1.49
Twins	120	1.27
Fibroid with Pregnancy	107	1.13
Transverse/Oblique Lie	104	1.10
Cord Prolapse	41	0.43
Seizure Disorder	9	0.10
Eclampsia	0	0.00
Cardiac disease complicating pregnancy	0	0.00

Temporal analysis identified a large annual fluctuation in the distributions of most indications for LSCS (**Table 3**). Interestingly, Previous CS with Mobile Head ($\chi^2 = 455.263$, df = 5, $p < 0.0001$) and Non-progression of labour ($\chi^2 = 12.569$, df = 5, $p = 0.0273$) were found with the most extreme changes, which are indicative of shifting patterns in obstetric decision-making and rising rates of repeat cesarean sections.

Table 3: Chi-square Test Results for Trends in LSCS Indications

Indication	χ^2	df	p-value	Significant
CPD	31.545	5	7.31011140035246E-06	Yes
Previous CS with Mobile Head	454.93	5	4.24×10^{-96} ($p < 0.0001$)	Yes
Fetal Distress/MSL	28.843	5	0.000024895226729364	Yes
Post Dated	68.886	5	1.74774355344583E-13	Yes
Short Primi	43.471	5	2.96582532744932E-08	Yes
Non progression of labor	12.569	5	0.0277739853869636	Yes
Failed Induction	58.468	5	2.5182023666269E-11	Yes
Severe Oligohydramnios/IUGR	95.35	5	5.05×10^{-19}	Yes
Severe PIH	29.90	5	0.00001539	Yes
Breech	17.357	5	0.00386	Yes
GDM	93.352	5	1.32674280341187E-18	Yes
Precious Baby	8.8408	5	0.115581840775919	No
Imminent Eclampsia	9.0429	5	0.10736	No
Placenta Previa	45.05	5	1.41364768933218E-08	Yes
Abruption	57.33	5	4.33×10^{-11} ($p < 0.0001$)	Yes
Twins	18.040	5	0.0028	Yes
Fibroid with Pregnancy	67.498	5	3.39446120015095E-13	Yes
Transverse/Oblique Lie	14.923	5	0.0106945	Yes
Cord Prolapse	104.43	5	6.14616310258961E-21	Yes
Seizure Disorder	14.947	5	0.01058.	Yes
Eclampsia	29.812	5	0.0000160	Yes

Neonatal outcomes following LSCS were satisfactory (**Table 4**). NICU admission was in 16.92% of the neonates, reflecting satisfactory neonatal care. Infant mortality was very low at 0.12% and stillbirths were 0.84% of births.

Table 4: Neonatal Outcomes Following LSCS

Outcome	**Total Cases**	**Proportion (%)**
NICU Admissions	1,596	16.92
Infant Mortality	11	0.12
Stillbirths	79	0.84

Maternal complications were uncommon (**Table 5**). The most common maternal complication was postpartum hemorrhage, which was observed in 1.59% of the LSCS procedures. Uncommon were obstetric procedures such as obstetric hysterectomy and B-Lynch suture placement. Obstetric hysterectomy was performed only in life-saving contexts such as uncontrolled postpartum hemorrhage, uterine rupture, or placenta accreta spectrum, reflecting both the rarity of severe complications and the availability of surgical safety.

Table 5: Maternal Complications Following LSCS

Complication	**Total Cases**	**Proportion (%)**
Maternal Morbidity	2	0.02
Obstetric Hysterectomy	7	0.07
Postpartum Hemorrhage	150	1.59
B-Lynch Suture	13	0.14

The year wise no of cases for each indication for cesarean section was tabulated for six years (2020-2025) (**Table 6**).

Table 6: Year wise no of cases for different indications for cesarean section

Year																
2020			**2021**			**2022**			**2023**			**2024**			**2025**		
Indications	No of cases	(%)	Indications	No of cases	(%)	Indications	No of cases	(%)	Indications	No of cases	(%)	Indications	No of cases	(%)	Indications	No of cases	(%)
CPD	265	13.89	CPD	326	18.85	CPD	312	17.51	CPD	228	13.89	CPD	257	16.91	CPD	165	19.48
Fetal Distress/MSL	178	9.33	Fetal Distress/MSL	226	13.07	Fetal Distress/MSL	258	14.48	Fetal Distress/MSL	191	11.63	Fetal Distress/MSL	213	14.01	Fetal Distress/MSL	107	12.63
Breech	60	3.14	Breech	80	4.63	Breech	95	5.33	Breech	50	3.05	Breech	65	4.28	Breech	36	4.25
Non Progress of labor	220	11.53	Non progression of labour	172	9.95	Non-progression of labor	188	10.55	Non progression of labor	133	8.10	Non progression of labor	146	9.61	Non progression of labor	89	10.51
Severe PIH	109	5.71	Severe PIH	65	3.76	Severe PIH	75	4.21	Severe PIH	84	5.12	Severe PIH	39	2.57	Severe PIH	23	2.72
Short Primi	178	9.33	Short Primi	90	5.21	Short Primi	82	4.60	Short Primi	100	6.09	Short Primi	89	5.86	Short Primi	48	5.67
Post Dated	132	6.92	Post Dated	138	7.98	Post Dated	107	6.00	Post Dated	156	9.50	Post dated	49	3.22	Post dated	32	3.78
Failed Induction	162	8.49	Failed Induction	107	6.19	Failed Induction	106	5.95	Failed Induction	103	6.27	Failed Induction	36	2.37	Failed Induction	44	5.19
previous cs with mobile head	88	4.61	previous cs with mobile head	91	5.26	previous cs with mobile head	203	11.39	Previous cs with mobile head	309	18.82	Previous cs with Mobile head	333	21.91	previous cs with Mobile head	200	23.61
Transverse/ Oblique Lie	21	1.10	Transverse/ Oblique Lie	17	0.98	Transverse/ Oblique Lie	19	1.07	Abruption	72	4.38	Abruption	55	3.62	Abruption	8	0.94
Severe Oligo/SGUR	184	9.64	Severe Oligo/IUGR	113	6.54	Severe Oligo/IUGR	73	4.10	Transverse/ Oblique Lie	23	1.40	Transverse oblique lie	35	2.30	Transverse oblique lie	9	1.06
Cord Prolapse	56	2.94	GDM	72	4.16	GDM	37	2.08	Severe Oligo/IUGR	55	3.35	IUGR	70	4.61	IUGR	30	3.54
Abruption	107	5.61	Abruption	40	2.31	Abruption	46	2.58	GDM	49	2.98	GDM	23	1.51	GDM	9	1.06
Fibroid with Pregnancy	5	0.26	Fibroid with Pregnancy	21	1.21	Fibroid with Pregnancy	50	2.81	Fibroid with Pregnancy	19	1.16	Fibroid	11	0.72	Fibroid with pregnancy	1	0.12
Imminent eclampsia	26	1.36	Imminent eclampsia	34	1.97	Eclampsia	0	0.00	Imminent eclampsia	22	1.34	Eclampsia	9	0.59	Eclampsia	4	0.47
Twins	28	1.47	Twins	36	2.08	Imminent eclampsia	35	1.96	Twins	12	0.73	Imminent eclampsia	14	0.92	Imminent eclampsia	12	1.42
Placenta Previa	44	2.31	Placenta Previa	50	2.89	Twins	25	1.40	Placenta Previa	7	0.43	Twins	11	0.72	Twins	8	0.94

Seizure Disorder	5	0.26	Cord Prolapse	9	0.52	Placenta Previa	28	1.57	Cord Prolapse	0	0.00	placenta previa	21	1.38	placenta previa	4	0.47
Precious Baby	40	2.10	Seizure Disorder	0	0.00	Cord Prolapse	10	0.56	Seizure Disorder	4	0.24	cord prolapse	8	0.53	cord prolapse	7	0.83
Eclampsia	0	0.00	Precious Baby	42	2.43	Seizure Disorder	0	0.00	Precious Baby	22	1.34	seizure disorder	0	0.00	seizure disorder	0	0.00
			Eclampsia	0	0.00	Precious Baby	33	1.85	Eclampsia	3	0.18	precious baby	36	2.37	precious baby	11	1.30
												cardiac disease complicating pregnancy	0	0.00	cardiac disease complicating pregnancy	0	0.00
Total	**1908**	**100**		**1729**	**100**		**1782**	**100.0**		**1642**	**100**		**1520**	**100**		**847**	**100**

The heat map provided a clear visualization of the relative frequencies of each sign of LSCS and highlighted the dominance of Cephalopelvic Disproportion and Previous CS with Mobile Head throughout the study period (**Figure 2**).

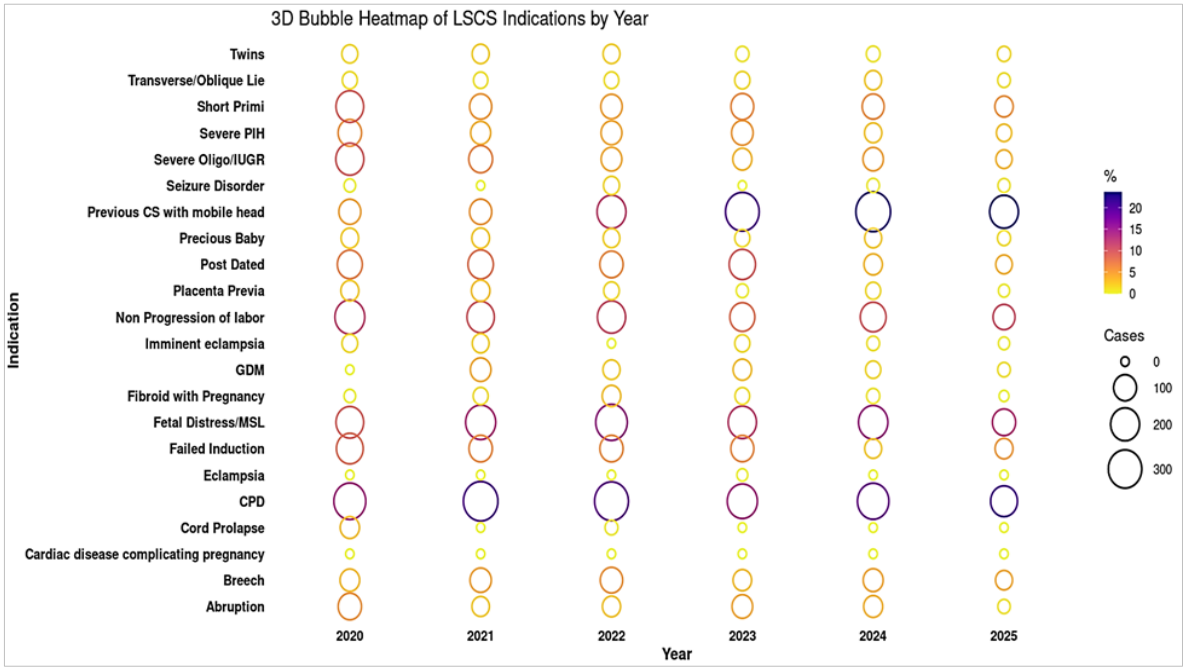

Figure 2: Temporal 3D bubble heat map of major LSCS indications

The waffle graph efficiently transformed proportional information into grid format, and it was simple to compare the overall LSCS versus vaginal delivery (**Figure 3 A**), whereas a more detailed analysis of the contribution of each indication to the overall burden of cesarean section could also be performed (**Figure 3 B**).

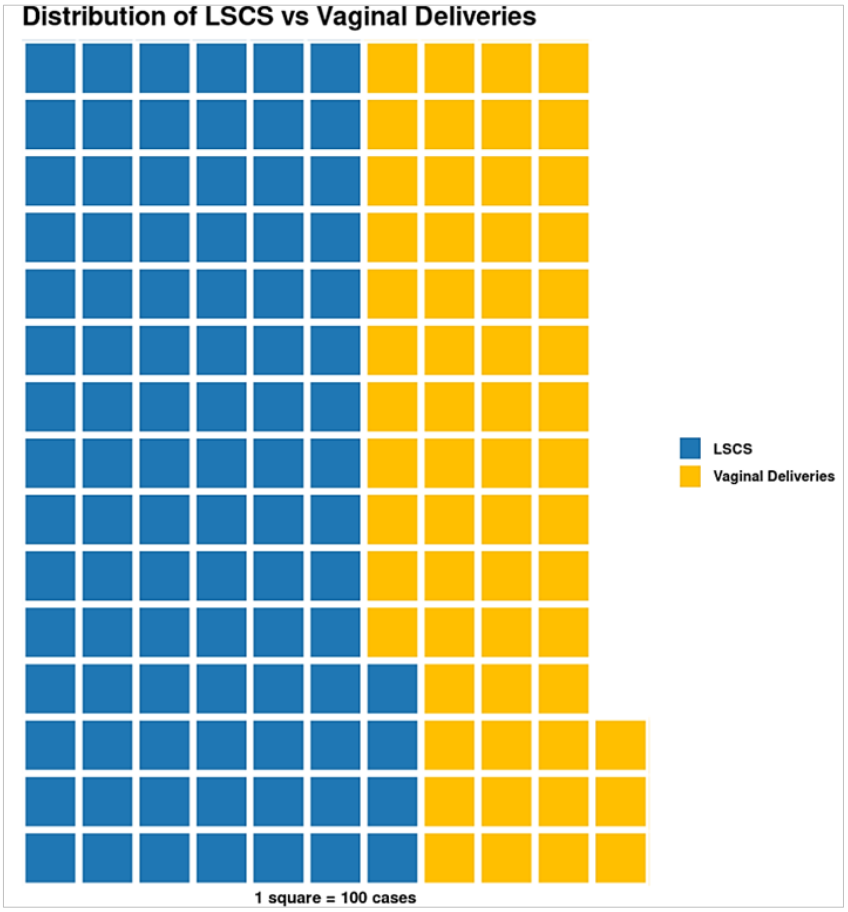

Figure 3 A: Overall delivery composition in tertiary care centre

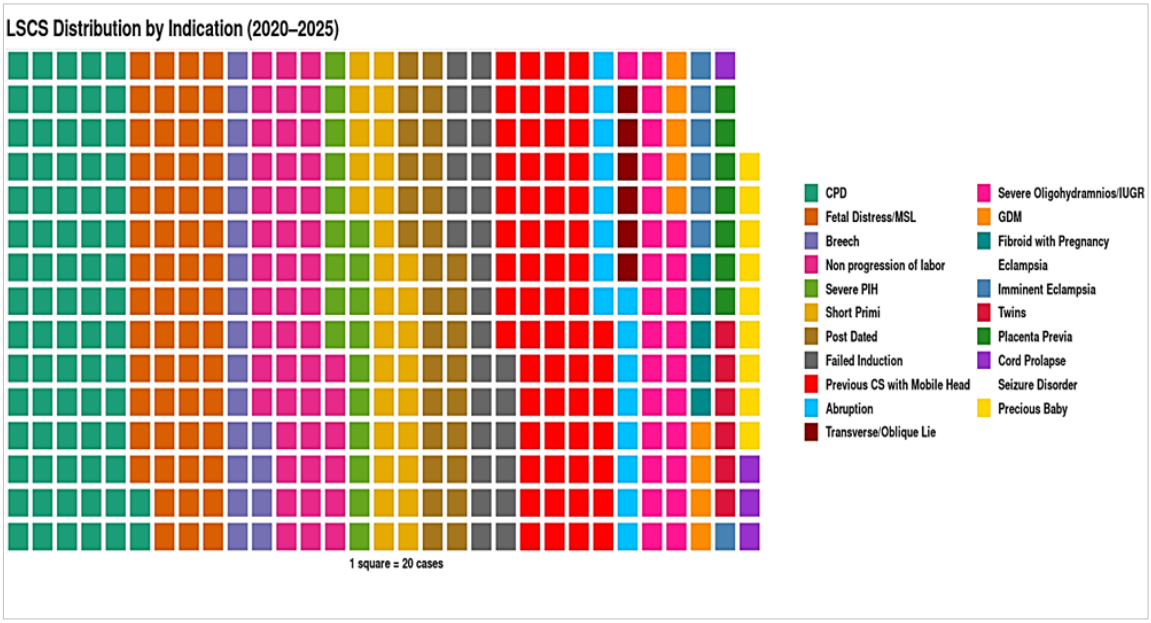

Figure 3 B: Detailed breakdown of delivery types and major CS indications

The overall LSCS rate of 61.45% is high in relation to most institutional and national rates and indicates a high cesarean burden. There are strong temporal trends in most LSCS indications, indicating changing obstetric practice and patient profiles. Neonatal outcomes are reassuring with low mortality and modest NICU admission rates and indicate good neonatal care. Maternal morbidity was low and indicates safe surgical and perioperative care. These results give valuable information about dominant trends and outcomes that can guide focused quality improvement and resource allocation initiatives.

Discussion

This all-encompassing institutional analysis presents a uniformly elevated cesarean section rate well beyond the World Health Organization (WHO) guidelines. The initial peak in 2020 is coincidental with the COVID-19 pandemic disruption of healthcare services, when elective cesarean sections would have been preferred to avoid risks from labor and optimize resource allocation. The stabilization that follows presents a slow re-adjustment to the trend of care. The consistent high rates well beyond the optimal range of 5–15% according to the WHO definition necessitate a thorough examination of the attendant obstetric practices and patient-related factors (Begum *et al*., 2017) (Ballu & Asha, 2019). This highlights the need for a comprehensive review of the medical and non-medical reasons for the high rate of cesarean deliveries, especially in a tertiary care center where complicated cases are generally referred (Ahmed *et al*., 2021; Singh *et al*., 2020). Globally, the rate of cesarean sections has been continually increasing, with some countries reporting rates well beyond the recommended rates, (Sungkar & Basrowi, 2020) in agreement with the trend presented in this study. The United States, for instance, recorded a significant increase from 4.5% in 1965 to 22.7% in 1985, and Canada recorded an increase from 17.6% in 1995 to 27.1% in 2012 (Taffel *et al*., 1987) (Hobbs *et al*., 2016).

Similarly, India has witnessed a rise in cesarean deliveries, increasing from 17.2% in 2016 to 21.5% in 2021, with certain states like Telangana, Andhra Pradesh, and Kerala having rates as high as 39%, 30%, and 27%, respectively, (Mohan *et al*., 2023). This rising trend signifies a serious public health concern, as a significant portion of these procedures, particularly in private healthcare centers, are being performed in low-risk pregnancies, and it hints at the role of economic incentives and institutional culture as much as clinical ones (Mohan *et al*., 2023). Additionally, the increasing world cesarean delivery rates, particularly in the United States, where rates reached 30% in 2006, and in European countries ranging from 14.8% to 52.2%, tend more towards a complex inter-play among innovations in medicine, defensive patterns in medicine, and socio-economic drivers than being reliant on clinical need (Bhatia *et al*., 2020). The worldwide rise in cesarean sections, and most evidently in high-income and middle-income countries, shows a hydra-headed phenomenon, which goes beyond immediate justifications in medicine, enrolling societal pressures and intricacies in the healthcare system (Tsikouras *et al*., 2022) (Beddu *et al*., 2024). The increasing trend is a universal phenomenon worldwide, with many countries crossing the WHO recommended cesarean birth rate of 10–15%, and is reflected in the Global Network for Women's and Children's Health Research as well, covering low- and middle-income countries, though it was found in 2020 (Harrison *et al*., 2020).

The increase in repeat cesarean sections following prior cesarean births mirrors the worldwide "cesarean cascade" trend, whereby initial cesareans contribute to a higher rate of repeat surgical births (Alshehri *et al*., 2019). This underscores the urgent need to expand safe Vaginal Birth After Cesarean (VBAC) services, which can effectively lower cesarean rates while ensuring safety if done correctly (Wu *et al*., 2019). On the other hand, much of the rise in the global rate of cesarean sections is due to a rise in primary cesarean births, which have increased from 7% in 1990 to an estimated 21.1% in 2022, with projections indicating a rise to 28.5% by 2030 (LoPoni *et al*., 2025).

At the same time, a deep understanding of the reasons for primary cesarean sections, such as dystocia, fetal distress, and breech presentation, is crucial to the development of focused interventions that will reduce initial surgical delivery rates (Jain *et al*., 2021). Additionally, the prevalence of repeat cesarean sections reveals an enormous opportunity lost to permit vaginal birth after cesarean delivery, although such a policy can reduce the maternal and neonatal morbidity of further surgery (Keedle *et al*., 2022). The problem is also aggravated by attitudes and perceptions of risk between patients, which have a certain ability to influence the

decision of attempting vaginal birth after cesarean (Barber *et al*., 2011). The increase in the global rate of cesarean delivery, which in 2004 reached 29.1% in the United States, suggests increasing primary and repeat cesarean sections, partly due to a fall in an increasing rate of vaginal birth after cesarean (Chestnut, 2006). Such an increase in cesarean sections can be attributed to a range of factors, including an evolution of obstetric practice, an increase in primary cesarean sections, and a global fall in attempts at vaginal birth after cesarean delivery (Umer *et al*., 2023).

Other marker changes, including fetal distress and failed induction, may be indicative of advances in fetal monitoring technology and the development of clinical decision-making algorithms; nevertheless, these are to be studied further to avoid the performance of unnecessary surgery. Similarly, the documented rise in labor inductions that can lead to a higher rate of failed induction and subsequent performance of cesarean delivery needs an extensive review of the induction procedure in tandem with patient selection criteria (Pandya *et al*., 2015). Further, the rising rate of elective cesarean sections due to maternal preference or perceived ease of delivery add to the total rise in surgical delivery (Mylonas & Friese, 2015).

Neonatal outcomes are reassuring with low mortality rates in the presence of high cesarean volumes, reflecting quality neonatal care infrastructure. Likewise, low rates of maternal complications confirm surgical safety but reflect a need to track cumulative cesarean risk. Outcomes in the long term for women, like long-term pain, adhesions, and psychological effects of surgically born babies, are less well-measured and require further investigation to place value on the full extent of outcomes. Lack of strong data on these long-term morbidities reflects a huge gap in present outcome measures, which are likely to be underestimating the total health burden of high rates of cesarean (Lusher & Djatmika, 2020).

Technological advances are at the threshold of revolutionizing obstetrics. Machine learning predictive models integrated with hospital data can identify high-risk pregnancies early, enabling appropriate intervention. AI-assisted fetal monitoring can potentially enhance detection of distress, reducing false positives and unnecessary cesareans. Digital platforms can facilitate patient education and shared decision-making, essential to reversing rising cesarean rates.

The 21.5% India caesarean delivery (CD) rate indicates sufficient national access to the delivery method, but may also hide important inequalities (Dutta R *et al*, 2025). Careful analysis of the national CD rate demonstrates important variations in CD rates across states, from 5.2% in Nagaland to 60.7% in Telangana, and across wealth quintiles, from 0% to 76.7% in Assam. The general national CD rate in India, therefore, conceals multifaceted inequalities by geographic location, economic status, and health sector variations in access to caesarean deliveries.

Institutional interventions may be directed towards ongoing audit and feedback systems, case conferences by multidisciplinary teams, and focused training in facilitating VBAC. Policymakers need to address issues of medico-legal and encourage evidence-based choices in delivery.

This study presents sobering insights into the complex determinants of trends in cesarean sections and the varied approaches required to improve outcomes and utilization.

Conclusion

This study demonstrated a consistently high cesarean section rate (61.45%) over five years, with Cephalopelvic Disproportion and Previous Cesarean with Mobile Head as leading indications. Neonatal outcomes remained favorable, with very low mortality (0.12%) and acceptable NICU admission rates (16.9%). Maternal complications were rare, with obstetric hysterectomy performed only in critical cases. The present analysis highlights that rising rates of cesarean sections are not merely a mirror reflection of obstetric risk profiles but also of systemic, training, and resource deficits. In the majority of low-income and resource-limited settings, including large segments of India, such important elements as the presence of an anesthesiologist in the labor room, availability of pain relief with epidural analgesia or Entonox, and systematic patient education in deep breathing and labor coping techniques continue to remain underutilized. The near disappearance of instrumental deliveries, such as forceps, from routine practice is a reflection of the loss of valuable skills that could otherwise cut short preventable surgical intervention. Strengthening obstetric training through regular workshops, hands-on simulation-based training programs, and updated curricula on fetal monitoring and intrapartum decision-making is an imperative. No less critical is integrating newer technological innovations, such as AI-augmented monitoring and digital documentation, so that clinicians are confident, adequately trained, and not handicapped by medico-legal anxieties. Ultimately, improving intrapartum management - by ensuring availability of pain relief in a timely manner, careful monitoring of uterine activity and fetal status, and enabling obstetricians to make decisions for the individual - could have a sweeping impact on limiting avoidable cesarean sections and improving maternal and neonatal outcomes.

Strengths and Weaknesses

The major strength of this study is the vast dataset of more than 15,000 deliveries and more than five years, with solid trend analysis in a homogenous tertiary care environment. The careful recording of indications and outcomes allows valid comparison of cesarean dynamics. Limitations include its single-center, retrospective nature, which could reduce generalizability. Changes in protocol or referral pattern over the study period can also affect results. However, the data assist in determining trends in cesarean in a high-risk obstetric population.

Declarations

Ethical Approval

The ethical approval was obtained already from the Institute of District Headquarters Hospital.

Source of Funding

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Conflicts of Interests

The authors report no conflict of interest.

Article Category

Retrospective Study

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