## AOFOG SESSION: Enhancing the best practices of labour and Reducing unnecessary cesarean sections

06.10.2025 | 09:45 - 10:45 | Ballroom West

Code: BKT042

Stream: Clinical obstetrics

Host organisation:

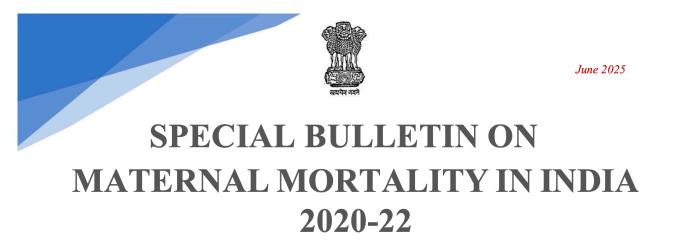
Asia Oceania Federation of Obstetrics & Gynaecology (AOFOG)

Session held in English and interpreted via live captioning in French and Spanish

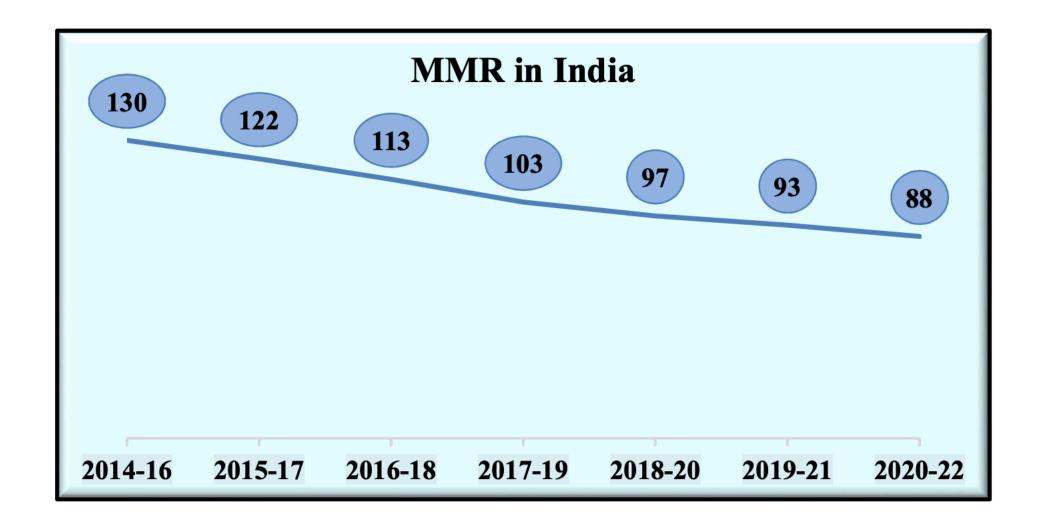
Abstract: BKT42 (View Abstract)

Chair: John Tait (New Zealand)

09:45 - 09:50	Welcome Address Speaker: John Tait (New Zealand)
09:50 - 10:05	WHO Recommendations: Intrapartum Care for A Positive Childbirth Experience Speaker: Pisake Lumbiganon (Thailand)
10:05 - 10:20	Strategies To Reduce Caesarean Sections During Labour Speaker: Rohana Haththotuwa
10:20 - 10:35	The Controversy of Caesarean Rates - Looking Forward into The Past Speaker: Jaydeep Tank (India)
10:35 - 10:45	Q&A Speaker: John Tait (New Zealand)



OFFICE OF THE REGISTRAR GENERAL, INDIA
VITAL STATISTICS DIVISION, MAN SINGH ROAD, TOWER A, 4th FLOOR





- Maternal Mortality Ratio in India has declined over the years to 88 in 2020-22 from 93 in 2019-21 and 97 in 2018-20.
- Over 45% decline in MMR since last decade across nineteen (19) SRS states.
- Kerala has an MMR of 18, Maharashtra is at 36.
- The EAG and Assam group of States has seen a steep decline.



# India could bring maternal deaths down to 70 per 1 lakh live births: UNFPA report

At this rate, India is likely to achieve the global 2030 SDG target of 70 maternal deaths per 100,000 live births, before time, according to a UNFPA report

https://indianexpress.com/article/cities/pune/india-maternal-deaths-live-births-unfpa-report-9278280/

# Talking Points

- What is the controversy?
- Is there an ideal Cesarean Rate?
- The way forward.....

"There is no justification for any region

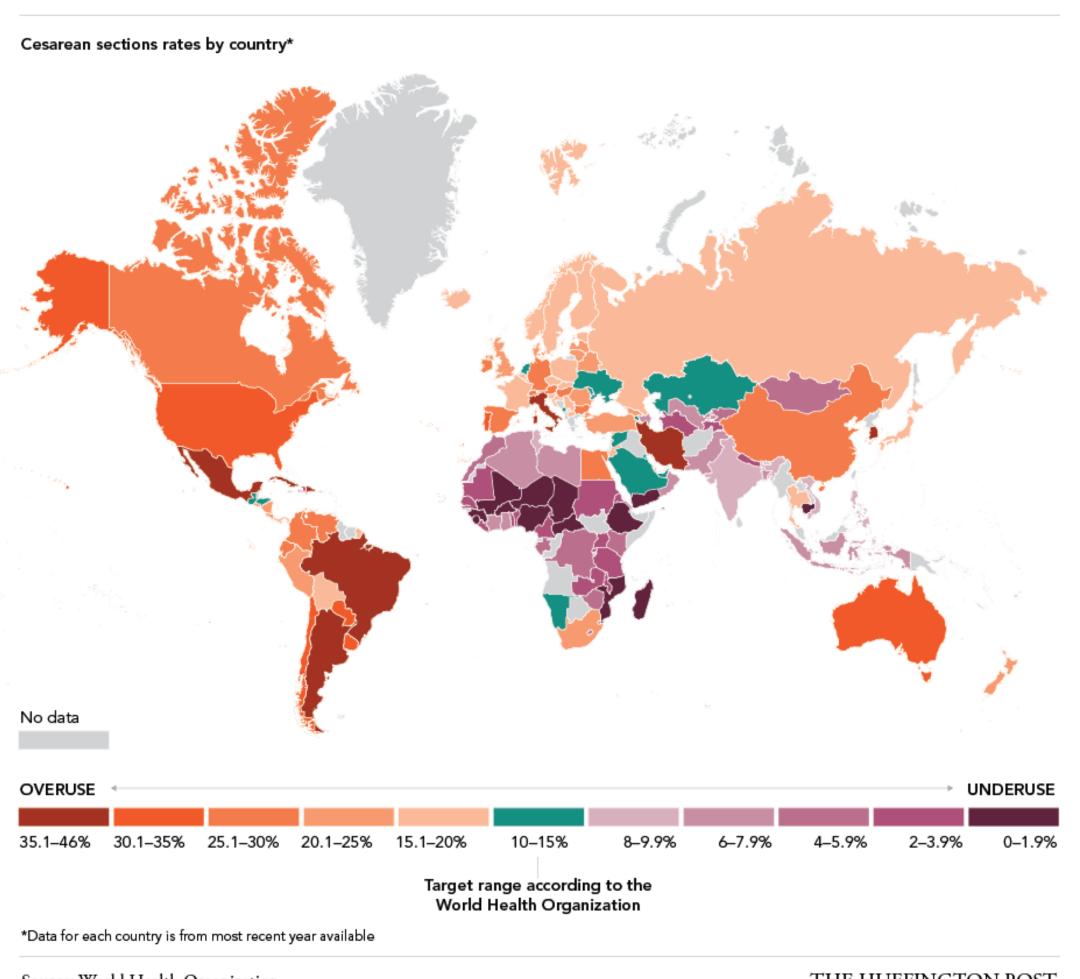
to have CS rates higher than 10-15%"

World Health Organization. Appropriate technology for birth. Lancet 1985; 2 (8452): 436-7

# Global Cesarean Rates

### Where C-Section Rates Are Too High, And Too Low

The Atlantic calls Brazil's high C-section rate — 82 percent in the country's private hospitals — an "epidemic," driven in part by doctors that push interventions like labor-inducing drugs and painful episiotomies that can make C-sections feel like a welcome alternative. But Brazil isn't the only place in the world where the rates are too high, while elsewhere in the world access to C-sections is woefully scant.



Petitioning health ministry and 2 others

### Safe birth- normal delivery Nt cesarean

Sign this petition

80 needed to reach 100

20 supporters

First name

Last name

Postal code

friends

this petition

any time.

I'm signing because... (optional)

Share with Facebook

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India





Normal delivery ho sakti hai uske bawjood doctor apna dabav Banate hain daraate hain taqi Cesarean karwana hi pade Apne Niji swarth K lye, chahe Kisi pe itne Paise ho Ya na ho Unhe pata h aisi situation mein patient K ghar wale Kahin se bhi kaise bhi arrange kr hi lenge vyapar Banaa kr rakh Diya hai. Iske khilaf kadi se kadi karyawahi honi Chahiye. Sarkar ko private hospitals K Khilaf sakht Qadam uthane chahye taqi doctors Apne kaam ko apna farz Apni zimmedari samjhe na K jeb kaatne ki machine. Hum log doctor ko bhagwan Ka roop mante hain unper Vishwas krte hain aur wo Isi vishwas Ka najayaz fayeda Uthate hain, phle Kabhi ek do case sunne Ko milta tha K operate karwana pada Aaj Uske opposite Kisi K normal delivery ho jaye to Bahut surprising hota h kyunki ab cesarean trend mein h aur Ye Sab Pais Apaisa aur sirf Paisa kamane Ka ek Zaria h aur Sarkar ko iSke Khilaf Kuch sakht Niyam banane hi chahye.

This petition will be delivered to: health ministry Delhi Government

Prime Minister

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Petitioning iNDIAN MEDICAL COUNCIL

### NORMAL DELIVERY IS FORGOTTEN. CESAREAN IS ONLY OPTION FOR LADIES

Revathi R India



delivery is only done in Government hospital who have no money. Common citizen opt for better facilities and opt for Private hospital

But I have not seen any friends who have delivered the baby through Vaginal Delivery. There are many reasons to it Doctors scare the patients with xyz reasons. Scare the patient stating reasons of food pipe circled the neck of the baby, Too many loss of water is already gone, baby is already getting suffocated..etc...hence no time for normal delivery.

We have no choice to believe the story of doctor and opt for Cesarean Delivery. Hence, a change is required to bring in New regulation in IMC (Indian Medical Council) for health of woman and child and doctors to work for benefit of society rather than in personal interest.

INDIAN MEDICAL COUNCIL

	Pregnant Mom.
	Please Don't be
offlate, I have never heard from my	•

7 supporter	rs .	
	93 needed to rea	ch 100
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Add a per (optional)	sonal message	
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	COUNCIL: NORMAL	
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This petition was delivered to:

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Petitioning Union Minister For Women & Child Development Maneka Gandhi and 5 others

1 RESPONSE

### Make it mandatory for all hospitals to declare number of Caesarean deliveries #SafeBirth

Subarna Ghosh India



Caesarean deliveries have become a business. The hospitals and doctors are making money off unsuspecting women and pushing them towards surgical deliveries.

Even though serious complications were not detected, I was cut open to deliver my baby. I wanted to have a natural birth but had to undergo a C-section as it was presented to be more 'scientific, modern and risk-free'. I was misled, manipulated, confused and my choice was overriden. For many of us, the right to informed-refusal or consent during childbirth is hardly an option either due to lack of awareness or the high-handed attitude of doctors.

It was a long, painful, depressing recovery for me and when I looked into this issue, what I found was alarming.

India's C-section rate is growing exponentially. The fact that private hospitals have a much higher rate of C-sections than public hospitals has a direct correlation to the fact that surgical deliveries cost so much more than normal ones in these facilities.

#### Sign this petition

180,346 supporters

Postal code

19,654 needed to reach 200,000

First name		
Last name		
Email		

India	<b>\$</b>

I'm signing	because	(optional)

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#### Sign

 Display my name and comment on this petition

By signing, you accept Change.org's Terms of Service and Privacy Policy, and agree to receive occasional emails about campaigns on Change.org. You can unsubscribe at any time. Recent studies show that C-sections lead to a higher risk of post-partum depression and lower breastfeeding rate in women and diseases like obesity and diabetes in children.

Despite its adverse effects on maternal and child health, hospitals and doctors are indiscriminately conducting C-sections to make more money. To discourage this trend, women need to be made aware of the C-section rates of different hospitals and maternity homes, so that they can choose their hospitals carefully.

That's why I, with support of the NGO Birth India, started this petition asking the Women and Child Development ministry to issue an advisory to the Medical Council of India to

- Make it mandatory for all doctors and hospitals to declare the percentage of Caesarean delivery rates to patients.
- Conduct enquiry against those with abnormally high C-section rate.
- Frame clear guidelines for conducting
   Caesarean to safeguard the health and rights of women and children

World Health Organisation (WHO) norms prescribe that Csection deliveries should be ideally 10-15 per cent of the total number of deliveries in the country. However, in urban Telengana, 74.8% of the private sector deliveries are by Csection and it is as high as 41% in Kerala and it is 58% in Tamil Nadu, according to a report by the ICMR School of Public Health.

It is important that even women are made aware of the impact of Caesarean sections, which truly is an emergency recourse and not a routine medical procedure. The fact is that only 10% of births should be via C-section, however, in Indian private hospitals that rate is close to 50%. This is a serious health risk and the government has to take action NOW!

Sign my petition and ask the Women and Child Development ministry to end this harmful practice by hospitals.

Image Courtesy: abdn.ac.uk

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News » India News » Maneka Gandhi calls caesarean section surgeries a racket

### Maneka Gandhi calls caesarean section surgeries a racket

Sushmi Deyl TNN I Updated: Feb 23, 2017, 01.14 PM IST









There is an alarming rise in caesarean section surgeries in India. (Representative image))

#### HIGHLIGHTS

- MIGHENO GOHUIH suggests to make it mandatory for hospitals to publicly display the surgeries and normal deliveries carried out
- We would like naming and shaming of gynaecologists who do Caesarean deliveries for no reason at all except money, she said

NEW DELHI: An alarming rise in caesarean section surgeries d in India, mainly in private hospitals d, has come under the scanner leading to over 1.3 lakh people signing an online petition, seeking government intervention to bring in accountability and transparency in institutional deliveries.

Following the petition, women and child development minister Maneka Gandhi d wrote to health minister J P Nadda, suggesting to make it mandatory for hospitals to publicly display the number of c-section surgeries of and normal deliveries carried

"I'd like to share my concern over alarming percentage of c-section surgeries being conducted in hospitals these days. This issue has been deeply worrying me as it has direct linkage with the health of women ner so. The situation is much worse in



**EXTERNAL AF** 

SOCIETY - VIDEO

FEATURED

## **Profiteering Hospitals Are Driving Alarming Rise in C-Section Deliveries in India**

BY SHWETA MARATHE AND RENUKA MUKADAM ON 21/04/2017 • 1 COMMENT

#### SHARE THIS:





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C-sections were developed to deal with life threatening medical conditions during delivery, but is being practiced irrationally for profit and convenience.



More and more affluent women in urban areas are ofting for c-sections. Credit: Reuters/Files

Recent data from the National Family Health Survey 2014-15 (NFHS-4) reveals that at the all India level the rate of C-sections have doubled over the last decade, while in last 20 years, it has risen six times. In some states like Telangana, Tripura, West Bengal, Kerala, Goa, Andhra Pradesh and Tamil Nadu, the rate is alarmingly high, with Telangana (74.9%) having the highest number of C-section deliveries in private hospitals. There is no denying that c-sections can be a life-saving procedure for child delivery and might be absolutely unavoidable in some cases. However, the increasing influence of non-medical factors for performing C-sections is a growing

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#### Caesarean section delivery rates reveal need for smarter healthcare policy

Higher than necessary C-section rates can be presented as a case of "market failure", an economic term used to describe cases where allocation of goods or services is not efficient.

INDIA Updated: Jul 18, 2017 08:01 IST

Prateek Mittal and Vartika Singh IndiaSpend



C-section is a specialised procedure that is needed to deal with complicated delivery cases. The procedure brings risk of infection and can cause complications in future pregnancies.(Reuters File)

- In 2011-12, more than 50% of deliveries in nine of 10 Telangana districts were caesarean
- section deliveries (C-sections), according to an analysis of district-level health data. In comparison, none of the districts in Rajasthan, Uttar Pradesh, Madhya Pradesh and Bihar
- had C-section rates of more than 25%.
- C-section is a specialised procedure that is needed to deal with complicated delivery cases.
- The healthy rates of C-section should range from 10% to 15%, according to this April, 2015
- World Health Organization (WHO) estimate, while a December 2015 study led by Ariadne
- $\sim$ Labs, a joint centre of Brigham and Women's Hospital and the Harvard TH Chan School of
- Public Health, suggested that optimal C-section rate could be as high as 19%.

## **NEWTON'S FOURTH LAW:**

FOR EVERY ACTION, THERE IS AN EQUAL AND OPPOSITE REACTION, PLUS A SOCIAL MEDIA OVERREACTION.

#### Tweets from @Manekagandhibjp

I seek suggestions from women, prospective mothers & doctors on ways in which we can check this increasing trend. /10

30 replies 48 retweets 60 likes

Over 1.2 lakh people signed this petition, which was started by Mumbai-based Ms Subarna Ghosh. /9

6 replies 99 retweets 77 likes

A @Change petition was also brought to my notice desiring attention towards the same issue./8

0 replies 84 retweets 38 likes

I have suggested mandating the hospitals to publicly display the no. of C-Sections vis-a-vis normal deliveries./7

21 replies 86 retweets 71 likes

I have written to Minister, @MoHFW\_INDIA, Sh. @JPNadda ji today about the scale of the problem and its repercussions./6

3 replies 99 retweets 39 likes

The situation is much worse in private hospitals, which is a matter of grave concern./

3 replies 24 retweets 42 likes

It's 58% in Telengana, 34% in TN as per the National Family Health Survey 2015-16./4

4 replies 77 retweets 40 likes

The percentage of C-Sec surgeries in some states is much higher than 10-15% as recommended by WHO./3

2 replies 67 retweets 42 likes

This issue has been deeply worrying me as it has direct linkage with the health of women per se./2

2 replies 56 retweets 36 likes

I'd like to share my concern over alarming percentage of C-Section surgeries being conducted in hospitals these days. /1

TWEETS

6 replies 105 retweets 51 likes



## The impact of Cesarean rates on mortality and morbidity

• What is almost always overlooked is that the WHO document looked upon reflected a correlation only with mortality.

Betran AP, Merialdi M, Lauer JA, et al. Rates of caesarean section: Analysis of global, regional and national estimates. Pediatric and Perinatal Epidemiology. 2007;21:98-113)

• Since there are practically no morbidity data at the population level, it has not been possible to assess the ecological relationship between caesarean section and these other outcomes.

Ana Pilar Betrán, Jun Zhang, Maria Regina Torloni, A Metin Gülmezoglu Evid Based Med December 2016, volume 21, number 6, 237

• None of the countries with a stillbirth rate of 2-4 /1000 have a Caesarean Sec on rate between the World Health Organisation recommended 10-15% threshold.

Leddy MA, Power ML, Schulkin J (2008) The Impact of Maternal Obesity on Maternal and Fetal Health. Rev Obstet Gynecol 1: 170-178

# So many problems...

• The studies on which the WHO based the 15% recommendation 30 years ago were "limited by either having incomplete data or relying on averaged cesarean delivery rates from multiple years without accounting for year-to-year variation in these estimates"

Molina G, Weiser TG, Lipsitz SR, et al. Relationship between cesarean delivery rate and maternal and neonatal mortality. JAMA 2015; 314: 2263-2270).

• The methodology of arriving at these rates was not robust and the methodology has come under scrutiny in several publications

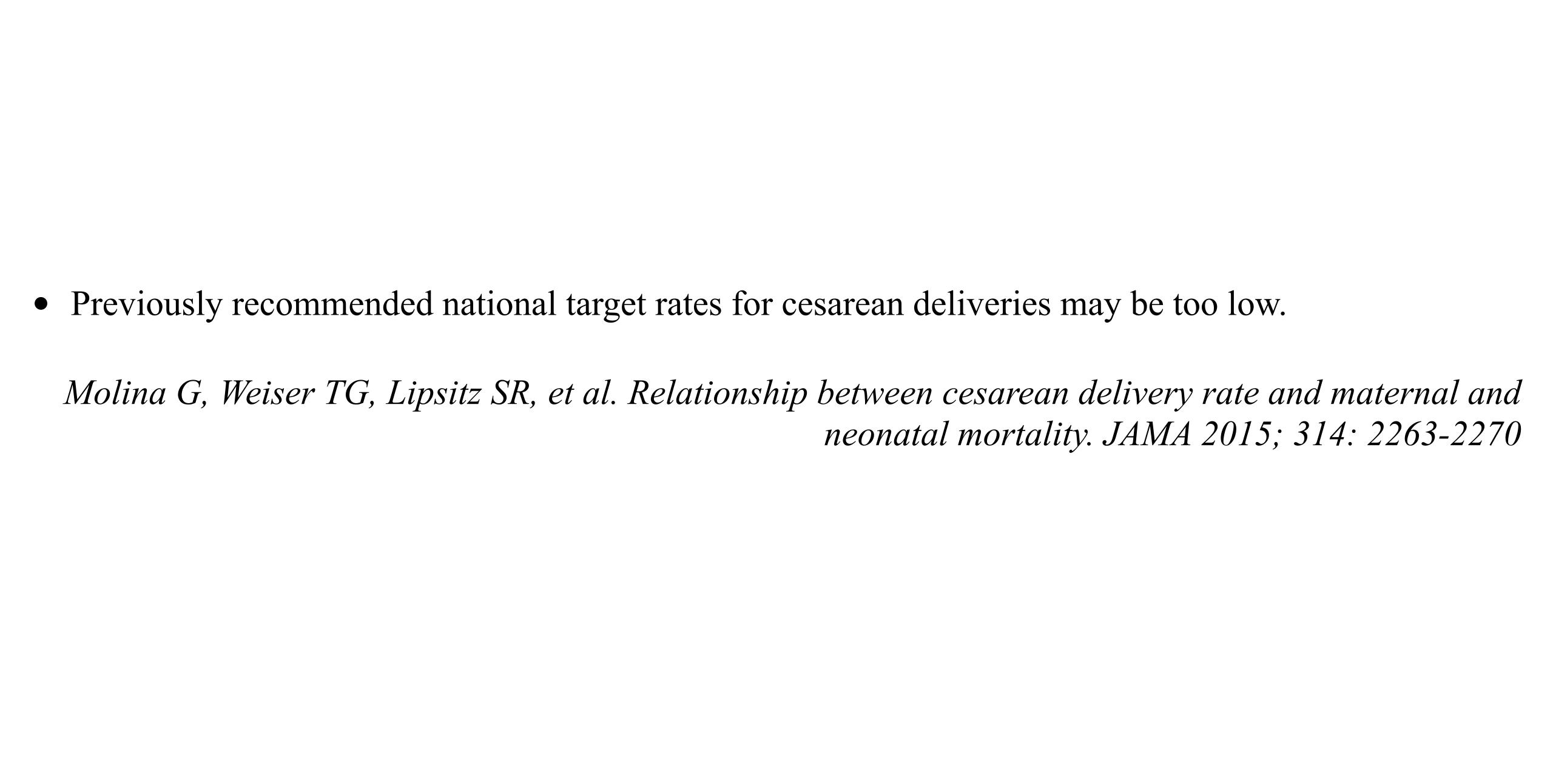
Betran AP, Torloni MR, et al for the WHO Working Group on Caesarean Section. WHO Statement on Caesarean Section Rates.

BJOG 2016;123:667–670),

• The rates were never meant to assess Cesarean rates at the level of an individual facility or individual physician or patient. These rates were an indicator of accessibility, availability and utilization of this facility, and is of use to policymakers as an indicator of maternal/perinatal health.

Betran AP, Merialdi M, Lauer JA, et al. Rates of caesarean section: Analysis of global, regional and national estimates.

Pediatric and Perinatal Epidemiology. 2007;21:98-113)



# The problem of inadequate data

- Mortality is normally the only outcome considered in the analyses.
- Maternal and newborn morbidity (eg, obstetric fistula, birth asphyxia), or psychological and social well-being (eg, maternal—infant relationship, women's psychological health or ability to successfully initiate breast feeding) as well as long-term paediatric outcomes should be considered when estimating a rate that would achieve optimal outcomes.
- However, since there are practically no morbidity data at the population level, it has not been possible to assess the ecological relationship between caesarean section and these other outcomes.

Ana Pilar Betrán, Jun Zhang, Maria Regina Torloni, A Metin Gülmezoglu Evid Based Med December 2016, volume 21, number 6, 237

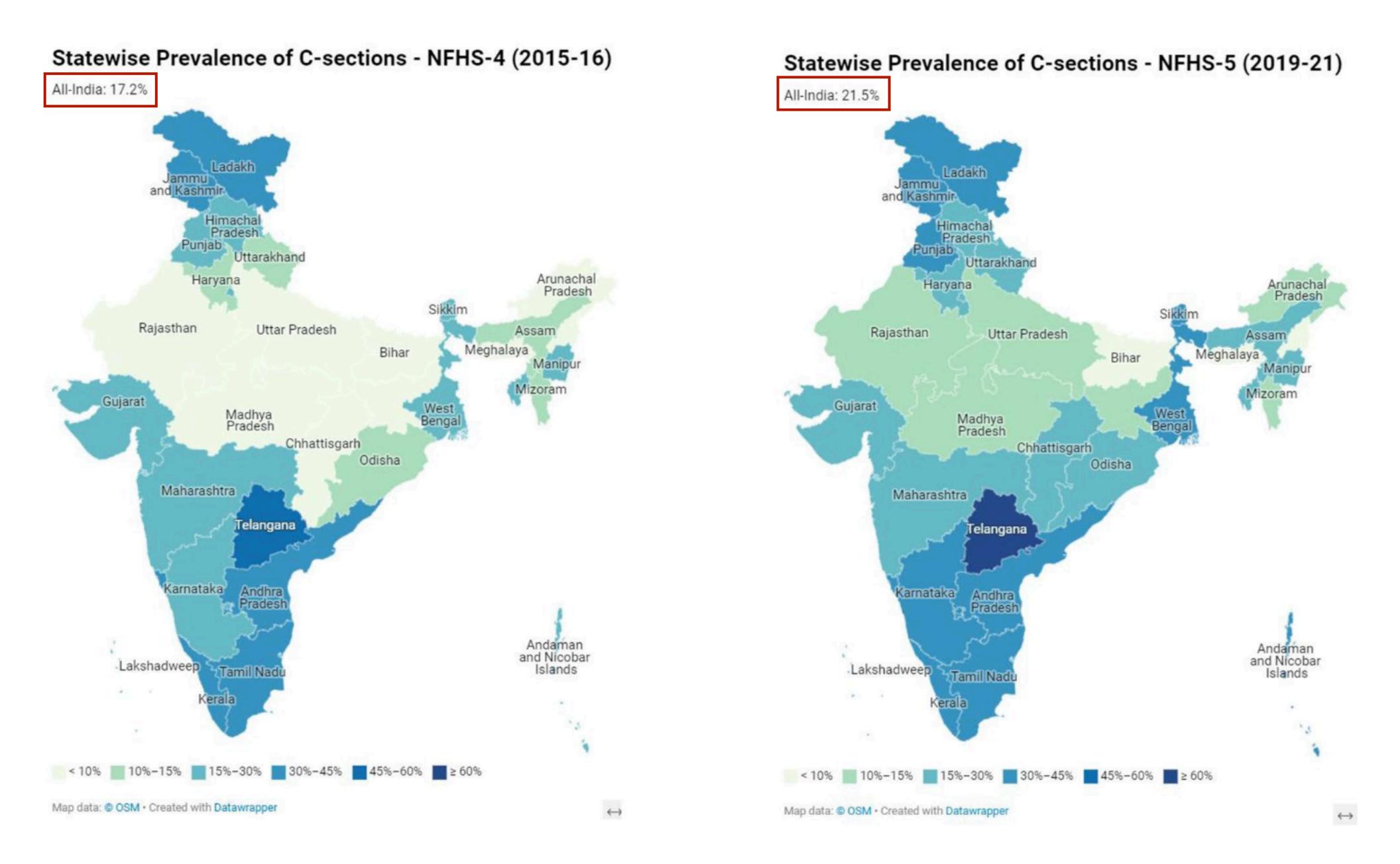
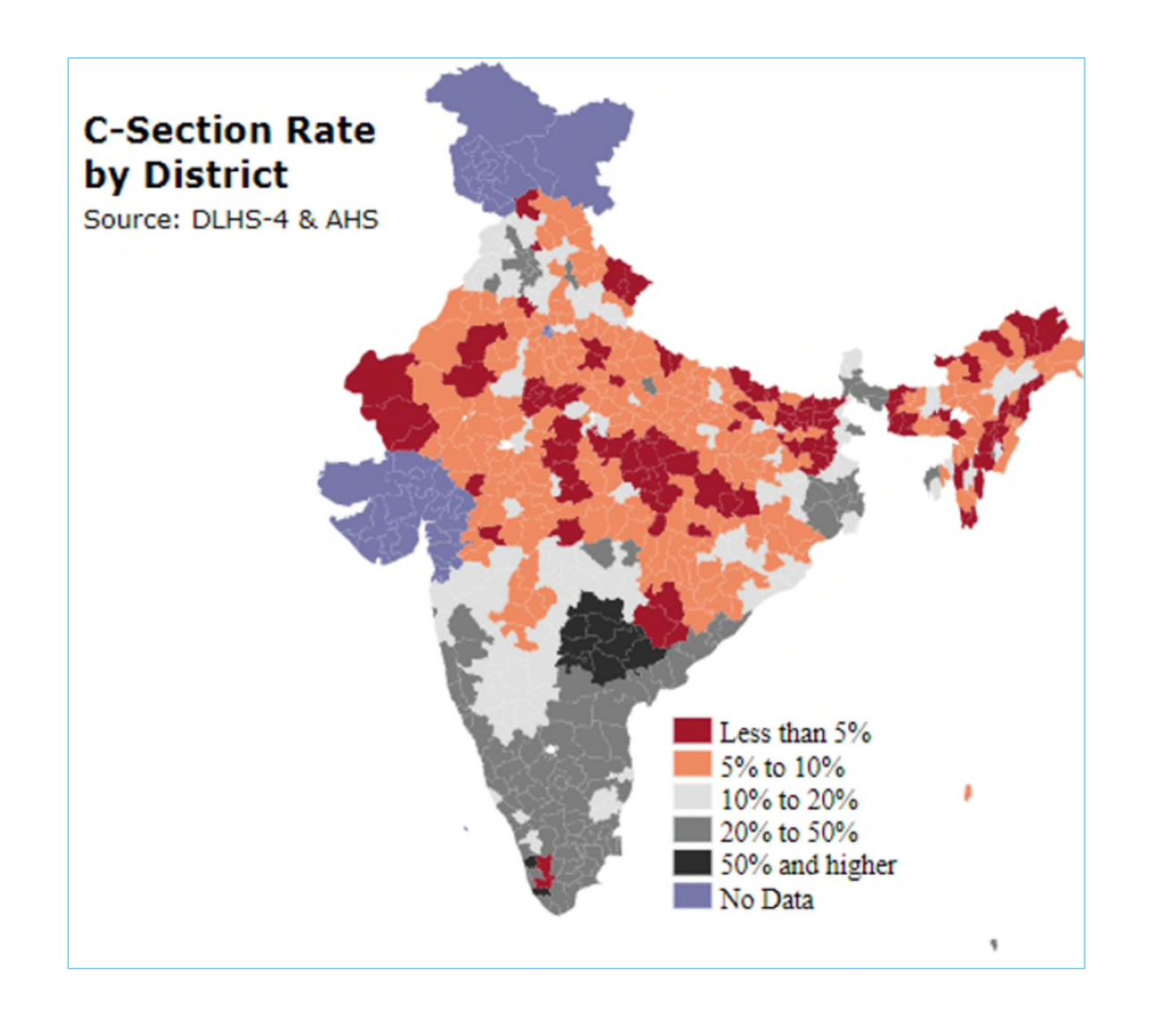
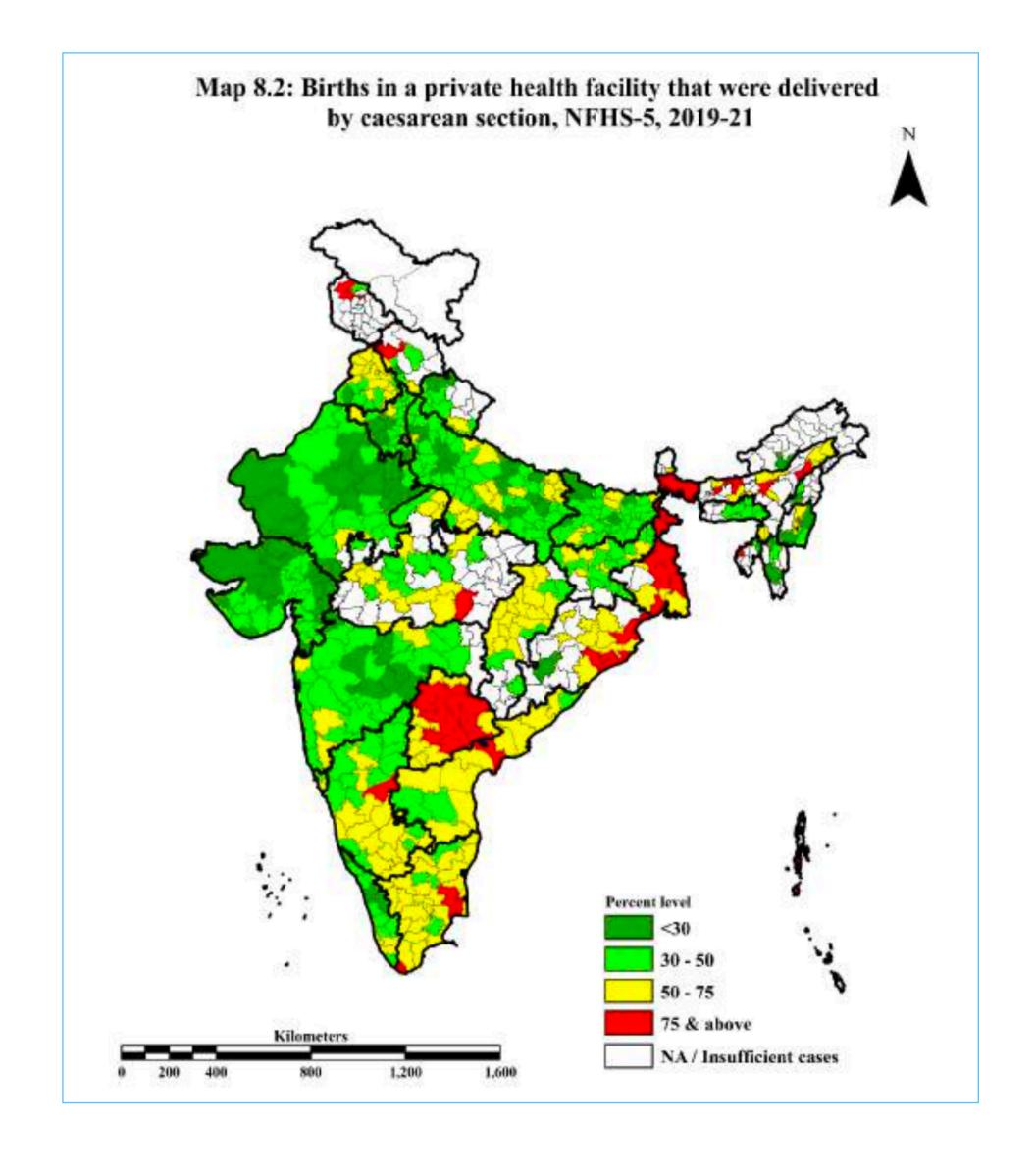


Fig. 1 Prevalence of C-Section deliveries across the states of India (NFHS-4 and NFHS-5)

# Indian Data









#### **WHO Statement on Caesarean Section Rates**

Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate

#### **Executive summary**

Since 1985, the international healthcare community has considered the ideal rate for caesarean sections to be between 10% and 15%. Since then, caesarean sections have become increasingly common in both developed and developing countries. When medically justified, a caesarean section can effectively prevent maternal and perinatal mortality and morbidity. However, there is no evidence showing the benefits of caesarean delivery for women or infants who do not require the procedure. As with any surgery, caesarean sections are associated with short and long term risk which can extend many years beyond the current delivery and affect the health of the woman, her child, and future pregnancies. These risks are higher in women with limited access to comprehensive obstetric care.

In recent years, governments and clinicians have expressed concern about the rise in the numbers of caesarean section births and the potential negative consequences for maternal and infant health. In addition, the international community has increasingly referenced the need to revisit the 1985 recommended rate.

#### Caesarean section rates at the population level

WHO conducted two studies: a systematic review of available studies that had sought to find the ideal caesarean rate within a given country or population, and a worldwide country-level analysis using the latest available data. Based on this available data, and using internationally accepted methods to assess the evidence with the most appropriate analytical techniques, WHO concludes:

- Caesarean sections are effective in saving maternal and infant lives, but only when they are required for medically indicated reasons.
- At population level, caesarean section rates higher than 10% are not associated with reductions in maternal and newborn mortality rates.
- Caesarean sections can cause significant and sometimes permanent complications, disability or death particularly in settings that lack the facilities and/or capacity to properly conduct safe surgery and treat surgical complications. Caesarean sections should ideally only be undertaken when medically necessary.
- Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate.
- The effects of caesarean section rates on other outcomes, such as maternal and perinatal morbidity, paediatric outcomes, and psychological or social well-being are still unclear. More research is needed to understand the health effects of caesarean section on immediate and future outcomes.

#### Caesarean section rates at the hospital level and the need for a universal classification system

There is currently no internationally accepted classification system for caesarean section that w allow meaningful and relevant comparisons of CS across different facilities, cities or regions. Among existing systems used to classify caesarean sectio the 10-group classification (also known as the 'Ro classification') has in recent years become widely used in many countries. In 2014, WHO conducted systematic review of the experience of users with Robson classification to assess the pros and cons adoption, implementation and interpretation, an identify barriers, facilitators and potential adapta modifications.

WHO proposes the Robson classification system as a global standard for assessing, monitoring an comparing caesarean section rates within health facilities over time, and between facilities. In orde to assist healthcare facilities in adopting the Robs classification, WHO will develop guidelines for its use, implementation and interpretation, including standardization of terms and definitions.





## **WHO Statement on Caesarean Section Rates**

Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate

- The time has come to put the debate about the preferable rate of CS on hold.
- Let's start to collect data uniformly so that in the near future we will be able to move our focus from CS rates at population level to monitoring and discussing CS rates and outcomes in each group of the Robson classification.
- Only then will we have the data and evidence that will lead us more clearly to actions to improve care.

Betran AP, Torloni MR, et al for the WHO Working Group on Caesarean Section. WHO Statement on Caesarean Section Rates. BJOG 2016;123:667–670)

# "Is there a recommended rate for Cesarean Section?"

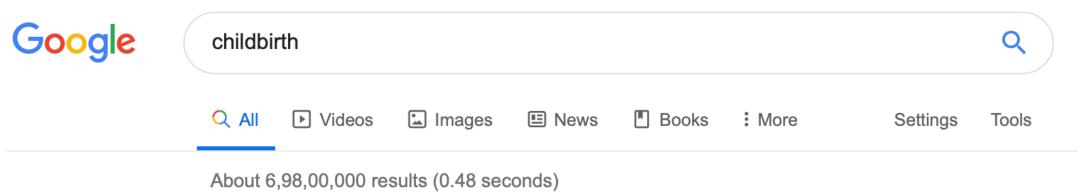
The short answer is NO.

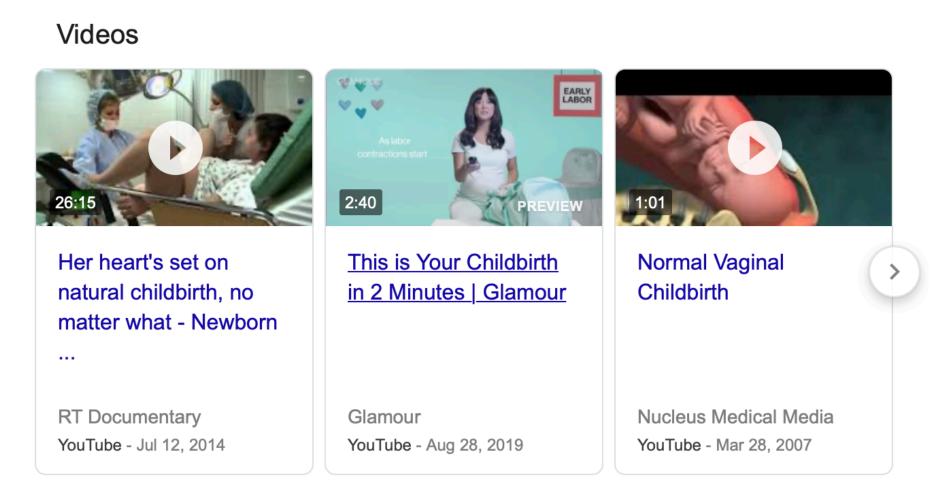


nfhs 5 cesarean rates

### People also ask :

What is the C-section rate in NFHS 5?	~
What is the current rate of cesarean sections?	~
Does Alia Bhatt have a C-section?	~
What is the birth rate of NFHS 5?	~
Is Deepika Padukone's C-section?	~
Did Anushka Sharma have a normal delivery or C-section?	~
Did Aishwarya have a C-section?	~
Did Madhuri Dixit have a normal delivery or C-section?	~
Did Kajol have a C-section?	~
Did Kareena Kapoor have a normal delivery or C-section?	~
At what age did Anushka Sharma gave birth to Vamika?	~
Is Natasha Dalal having a normal or C-section?	~
	Feedback





SN Soc Sci (2022) 2:103 https://doi.org/10.1007/s43545-022-00406-8



**ORIGINAL ARTICLE** 



#### Changing the Discourse on Caesarean Births in India: Issues emerging from NFHS-5 (2019–2021)

Shri Kant Singh<sup>1</sup> · Aditi<sup>1</sup> · Santosh Kumar Sharma<sup>2</sup>

Received: 5 March 2021 / Accepted: 10 June 2022 / Published online: 29 June 2022 © The Author(s), under exclusive licence to Springer Nature Switzerland AG 2022

#### Abstract

With increasing institutional deliveries, India has witnessed an increasing prevalence of caesarean births since 2005-2006, which by 2019-2021 increased a manifold more than WHO's estimated acceptable proportion. The paper envisages addressing the critical research question of whether private health facilities and providers are fuelling caesarean births, which could have otherwise been avoided in the overall institutional deliveries in India? Data used are from the two rounds of Indian DHS, known as NFHS. Findings are from NFHS-5 (2019–2021) with the corresponding values from NFHS-4 (2015–2016). Descriptive statistics, bivariate, and multivariate regression analysis have been used to portray caesarean births' significant cofactors across 36 states/UTs at state, 707 districts. Twenty-two percent of live births in India in the five years preceding NFHS-5 (2019–2021) were caesarean births, up from 17 percent in 2015–2016 and 9 percent in 2005–2006. Caesarean deliveries among the births in private health facilities were as high as 47 percent. The predicted probabilities of caesarean births substantially increased over the last five years, especially among young mothers, those having lower order births, well educated, and delivering in private health facilities. Disproportionately higher caesarean births in private health facilities, especially among young mothers having lower order births, exist in different states/districts despite the recent opposition to such a high prevalence of caesarean births. As a substantial proportion of caesarean births are provider-driven avoidable operations, where higher financial gains may be the real motive, it should be minimized.





जबलपुर 12 पृष्ठ ₹ 2.50 ■ वर्ष-15 ■ अंक-130

इंटरनेशनल डांस डे

## सीजेरियन रेट कम करने नहीं, सेफ्टी पर हो फोकस : डॉ. तंक णेपुल्स संवाददाता ● जबलपुर कम करने नहीं बल्कि सेफ्टी रेट पर फॉर्र्सी के राष्ट्रीय अध्यक्ष डॉ. जयदीप तंक ने की पीपुल्स से खास चर्चा

मो.नं. 9713230229

मातृ मृत्यु दर को कम करने के लिए होना होगा। आमतौर पर यह माना गर्भवती को देश में हर स्तर पर तेजी से काम जाता है कि चिकित्सक सीजर के सीजर की जरूरत हो उसका सीजर

फोकस करना होगा। यह बात उन्होंने भा.न. 9/13230229 फाकस करना हागा। यह बात उन्होंने अपने जबलपुर प्रवास के दौरान केस में द फेडरेशन ऑफ आब्स्ट्रिक एंड पीपुल्स समाचार को दिए गए विशेष जच्चा और गायनेकोलॉजीकल सोसायटी ऑफ साक्षात्कार में कही। बच्चा की इंडिया (फॉग्सी) के राष्ट्रीय अध्यक्ष डॉ. तंक ने बताया कि राज्य जान बचाने एवं प्रख्यात पीपुल्स समाचार सरकारें इस दिशा में तेजी से के लिए यह काम कर रही है इसके लिए जरूरी होता जयदीप तंक ने कहा समाज में सभी को अवेयर है। जिस मात मत्य दर को कम करने के लिए होना होगा। अगावीर पर तह गाया कर रही है

किया जा रहा है। हमें सीजेरियन रेट लिए जोर दे रहा है लेकिन ज्यादातर होना चाहिए।

सीजेरियन कम करने को लेकर चल रही रिसर्च जवाहर लाल नेहरू मेडिकल कॉलेज वर्धा की प्रोफेसर एवं

क्लीनिकल रिसर्च कमेटी की चेयरपर्सन डॉ. सुरेखा तायडे ने बताया सीजेरियन रेट कम करने को लेकर रिसर्च चल रही है। रिसर्च में हर बिंदुओं पर विशेषज्ञ चिकित्सकों द्वारा डेटा जुटाकर काम किया जा रहा है। रिसर्च के सकारात्मक परिणाम आगामी दिनों में हमें देखने को मिलेंगे। फॉग्सी अपने स्तर पर राज्य सरकारों के साथ मिलकर इस पर तेजी से काम कर रहा है।



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preventable: Assessing the burden of incessant

RESEARCH ARTICLE

Preventing the preventable: Assessing the burden of incessant caesarean deliveries in select Indian states using NFHS-5

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#### Abstract

The World Health Organization (WHO) recommends that life-saving Caesarean sections (CS) should account for 10-15% of deliveries. Southern states of India have good obstetric facilities and better public health systems than other parts of India. However, CS rates in select states are considerably higher. This study examines the prevalence and determinants of preventable CS among mothers in select Indian states, specifically the states that have high institutional deliveries (>95%) viz. Andhra Pradesh, Kerala, Karnataka, and Tamil Nadu. It further compares the complications faced by CS and vaginal delivery cases. Data has been derived from a cross-sectional survey, the National Family Health Survey-5. Bivariate and Logistic regression analyses were used. The main outcome measured is Preventable C-sections, defined as per conditions in Robson's criteria of 10-group classification based on obstetric characteristics for a woman. Results show that the preventable CS rates in these selected states were much higher than at the national level. Key correlates were higher education and middle socioeconomic status. The study highlights the need for policy reforms, maternal education, and healthcare system improvements to reduce unnecessary CS in select states of India, where the health system is exceptionally good but, have another health burden in form of demand for unnecessary caesarean deliveries



RESEARCH **Open Access** 

### Variations in the prevalence of caesarean section deliveries in India between 2016 and 2021 – an analysis of Tamil Nadu and Chhattisgarh



Varshini Neethi Mohan<sup>1\*</sup>, P Shirisha<sup>1</sup>, Girija Vaidyanathan<sup>1</sup> and V R Muraleedharan<sup>1</sup>

#### Abstract

**Background** The prevalence of C-sections in India increased from 17.2% in 2016 to 21.5% in 2021. This study examines the variations in C-section prevalence and the factors correlating to these variations in Tamil Nadu (TN) and Chhattisgarh (CG).

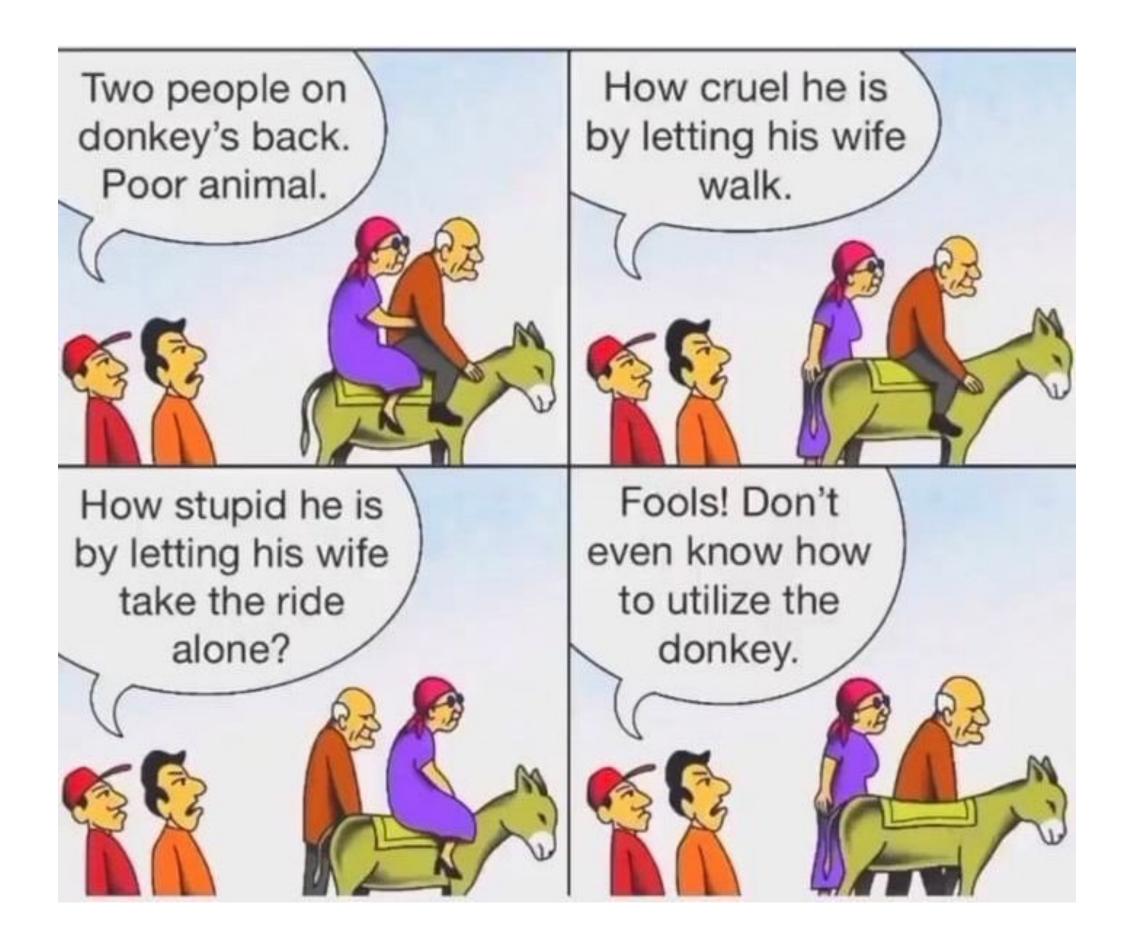
**Methods** Delivery by C-section as the outcome variable and several demographic, socio-economic, and clinical variables were considered as explanatory variables to draw inferences from unit-level data from the National Family Health Survey (NFHS-4; 2015-16 and NFHS-5; 2019-21). Descriptive statistics, bivariate percentage distribution, Pearson's Chi-square test, and multivariate binary logistic regression models were employed. The Slope Index of Inequality (SII) and the Concentration Index (CIX) were used to analyse absolute and relative inequality in C-section rates across wealth quintiles in public- and private-sector institutions.

**Results** The prevalence of C-sections increased across India, TN and CG despite a decrease in pregnancy complications among the study participants. The odds of caesarean deliveries among overweight women were twice (OR = 2.11; 95% CI 1.95–2.29; NFHS-5) those for underweight women. Women aged 35–49 were also twice (OR = 2.10; 95% CI 1.92–2.29; NFHS-5) as likely as those aged 15–24 to have C-sections. In India, women delivering in private health facilities had nearly four times higher odds (OR = 3.90; 95% CI 3.74–4.06; NFHS-5) of having a C-section; in CG, the odds were nearly ten-fold (OR = 9.57; 95% CI:7.51,12.20; NFHS-5); and in TN, nearly three-fold (OR = 2.65; 95% CI-2.27-3.10; NFHS-5) compared to those delivering in public facilities. In public facilities, absolute inequality by wealth quintile in C-section prevalence across India and in CG increased in the five years until 2021, indicating that the rich increasingly delivered via C-sections. In private facilities, the gap in C-section prevalence between the poor (the bottom two quintiles) and the non-poor narrowed across India. In TN, the pattern was inverted in 2021, with an alarming 73% of the poor delivering via C-sections compared to 64% of those classified as non-poor.

**Conclusion** The type of health facility (public or private) had the most impact on whether delivery was by C-section. In India and CG, the rich are more likely to have C-sections, both in the private and in the public sector. In TN, a state

with good health indicators overall, the poor are surprisingly more likely to have C-sections in the private sector. While the reasons for this inversion are not immediately evident, the implications are worrisome and pose public health policy challenges.





	Cost of Vaginal Birth	Cost for Cesarean birth	
Differential charging	100	150	
Same cost	125	125	
Co	ost to 100 women when the	re is 30% Caesarean Rate	
			Total cost to system
Differential charging	7000	4500	11500
Same cost	8750	3750	12500
	1750	750	
	25% extra cost for a vaginal birth		



#### Woman dies after being denied Csection



Share

By Jessica Rapana • 11 months ago



A heavily pregnant woman has reportedly died after her family refused to let her have a C-section, *China Business News* reports.

**Tweet** 

The 26-year-old woman, who was more than a week overdue to give birth to her first child, was admitted to the maternity ward of a hospital in Shaanxi Province in northern China last Wednesday.

But at about 8pm the next day, staff found her and her unborn child dead.



## Woman faces life for refusing Caesarean

A woman has been charged with murder after she allegedly refused to have a Caesarean, causing one of her twins to be stillborn.

Prosecutors said Melissa Ann Rowland, from Utah in the United States, did not want to be scarred by the surgery.

A post-mortem examination found that the 28-year-old's baby would have survived if she had had the Caesarean.

A nurse told police that Rowland said a Caesarean would "ruin' her life and she would rather "lose one of the babies than be cut like that".

#### 'Cosmetic motivations

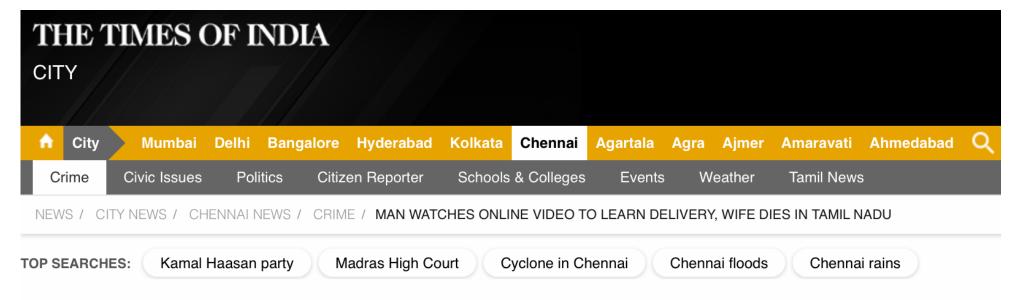
A spokesman for the district attorney said prosecutors were "unable to find any reason other than the cosmetic motivations" for Rowland's decision not to have surgery.

According to court papers, doctors told Rowland in early January that she needed a Caesarean or her twins could die.

She had visited a hospital after she could no longer feel the babies moving.

An ultra-sound scan found both had slowing heart rates. But she refused the Caesarean and left.

Later the same day, January 2, she saw a nurse at another hospital, allegedly saying she had left the first hospital because the doctor wanted to cut her "from breast bone to pubic bone."



# Man watches online video to learn delivery, wife dies in Tamil Nadu

Rajasekaran RK | TNN | Jul 26, 2018, 09:22 IST



Representative image

TIRUPUR: In a do-it-yourself delivery learnt from YouTube, a 28-year-old woman died after giving birth to a healthy 3.3kg baby at her home in Tirupur on Sunday. She was assisted by her husband and two of their friends, none medically qualified.

The woman, Krithiga, taught at a private school while her husband Karthikeyan worked

in a knitwear company. They have a three-year-old daughter. "Though she delivered the first baby in a hospital, Krithiga wanted to have delivery at home for the second child as she and her husband were in love with natural medicine. The couple gained confidence after coming to know that Lavanya, wife of his colleague, had delivered her baby at home," Krithiga's father Rajendran told TOI.

"We have seen the video. The woman had willingly agreed to be a part of the delivery," said a senior police officer.

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#### FROM AROUND THE WEB



R.N.I. NO.: MAHENG/2005/15154

# Pvt hospitals will need govt nod for C-section

Centre wants to curb

Delhi: With an aim to encourage normal deliveries, the Centre has planned to take caesarean deliveries in private hospitals under the item Contains and the contains and the patient is referred from a government pital specifying reasoned for a country, but in India the need for a C-sec surgery. The base rate of C-section under the scheme has been fixed at Rs 9,000.

A caesarean surgery is used for delivery when nor-

#### **DELIVERY NOTES**



As per WHO, the ideal rate of C-section is

only be allowed in private hospitals under the scheme efits more than 10 crore famafter they are referred there ilies belonging to the poor from public hospitals specify- and vulnerable sections of ing the reasons, which could the society.

per family annually and ben-



Rhetoric has replaced - sometimes even dangerously what is best for the woman, her baby and the family. a rational evidence based approach to this issue is vital rather than the lazy narrative of the commercialisation of medicine in general & birthing in particular.

## '30% C-Sections in rural India unnecessary'

A global study, which also picked two districts in India, has revealed a high percentage of "unnecessary", Caesarean Sections (C-Sections) even in rural and low-resource settings.

According to the study, which audited C-Sections between 2010 and 13 in Nagpur and Belgaum as ncome countries, about 30 per cent surgeries were carried out for reasons that were not life

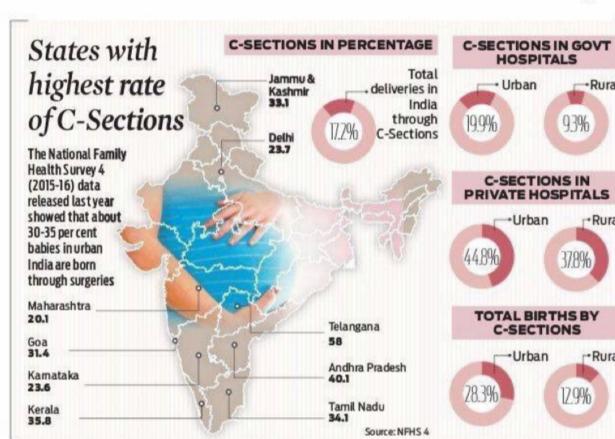
Interestingly, two weeks ago, BJP MP, Maheish Girri, had alarming growth in number of C-Section deliveries, which rekindled the demand for putting stricter measures in place to check the unhealthy trend.

The National Family Health Survey 4 (2015-16) data released last year showed that about 30-35 per cent babies in urban India are born through surgeries and in some southern states like Tel-41 per cent. At the all-India level, the rate of C-sections has dou-

In our analysis we found that ies were not done despite being required, in others they were done in spite of no clear indication," said Sivaprasad Goudar, are higher in private hospitals as tion," she said. co-author of the study published

rate of 10-15 per cent is considered appropriate for C-sections as per medical indications.

Indian figures indicate that Csections are being conducted for non-medical reasons for com-



merce or for convenience of docmal is surgery and its happening and the government," said Puneet Bedi, a gynaecologist and obstetrician at Apollo Hospital,

compared to public ones is clear-

However, Neelam Singh, a Lucknow-based gynaecologist, says tors. "Any medical procedure has some risks and when there is unwillingness to share that risk from the patients' side, doctors go nary tract infections, disturbed "The fact that C-section rates for what they consider a safer op-

ly linked to profits and the unreg- Obstetric and Gynaecologists So- al health, bioethics and health

Patients decide based on suggestions by doctors. Do doctors tell them that C-Sections increase risk of excessive bleeding, infection leading to death, urinary tract infections, disturbed sex life?

Puneet Bedi, gynaecologist and obstetrician at Apollo Hospital, Delhi

patients ask for elective

This, Bedi says, is a lame exinfection leading to death, urisex life?" he asks.

What is the way out then? Jaydeep Tank of Federation of Anant Bhan, a researcher in glob-According to WHO norms, a ulated nature of private hospicieties of India, said many times, policy suggests that accreditation of hospitals can possibly be based on rates of C-Sections.

Bedi, however, recommends a mandatory yearly audit of all child births by state health

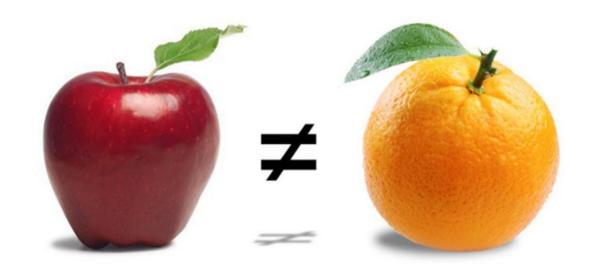


Sun, 19 August 2018
EXPRES epaper newindianexpress com/c/31362427



# Midwifery in India

- Midwifery Model in India Still beginning.
- 2.1 Million Nurse Midwives and 9,00,000 ANM's
- First Batch of professional midwives commenced training in 2020
- Geographic distribution and the capacity to qualify and train them
- Midwifery in the private sector



Not Obstetrician Led

Not Midwifery Led

Collaborative Care

# Reproductive Autonomy -Freedom to choose

- One of the challenges with changing societal narratives is how any health message is conveyed.
- The term "normal birth" carries with it a value judgement.
- It follows that if you do not conform then you are not normal, and for many women (and partners) this could translate into a sense of failure.

"There is no such thing as a normal birth – every birth experience is different. The only agenda that should ever be pursued in maternity is safe birth. Safe for the mother, safe for the baby. And safety must be at the heart of every conversation had, every decision made, every single day across the entire maternity team."

# Medicolegal Aspects

- Good faith
- Samaritan
- Capping of Damages
- Process is the punishment



# The impact of the Montgomery ruling

Informed consent is a fundamental principle of health care: anyone receiving medical treatment must agree to undergo that treatment.



#### **Statement On Cesarean Rates**

#### Cesarean rates and the confusion that surrounds them.

There is a surprising lack of clarity amongst various organisations on cesarean rates. It is altogether surprising that rhetoric has replaced - sometimes even dangerously - what is best for the woman, her baby and the family. We believe that a rational evidence based approach to this issue is vital rather than the lazy narrative of the commercialisation of medicine in general and birthing in particular.

The question which begs to be answered is therefore:

"Is there a recommended rate for Cesarean Section?"

#### The short answer is NO.

However confusion abounds in this aspect and it is worthwhile to take some time to understand the genesis of the canard of 10 to 15% Cesarean rates:

In 1985 the World Health Organization (WHO) stated: "There is no justification for any region to have CS rates higher than 10-15%" (World Health Organization. Appropriate technology for birth. Lancet 1985; 2 (8452): 436-7).

The studies on which the WHO based the 15% recommendation 30 years ago were "limited by either having incomplete data or relying on averaged cesarean delivery rates from multiple years without accounting for year-to-year variation in these estimates" (Molina G, Weiser TG, Lipsitz SR, et al. Relationship between cesarean delivery rate and maternal and neonatal mortality. JAMA 2015; 314: 2263-2270). Although the methodology of arriving at these rates was not robust - to say the least - and the methodology has come under scrutiny in several publications (Betran AP, Torloni MR, et al for the WHO Working Group on Caesarean Section. WHO Statement on Caesarean Section Rates. BJOG 2016;123:667–670), this document has provided fodder to several studies which based the utility of cesarean sections using these figures as a basic assumption.

What is almost always overlooked is that the WHO document looked upon reflected a correlation only with mortality. The rates were never meant to assess Cesarean rates at the level of an individual facility or individual physician or patient. These rates were an indicator of accessibility, availability and utilization of this facility, and is of use to policymakers as an indicator of maternal/perinatal health. (Betran AP, Merialdi M, Lauer JA, et al. Rates of caesarean section: Analysis of global, regional and national estimates. Pediatric and Perinatal Epidemiology. 2007;21:98-113)

Morbidity both fetal and maternal was not taken into account for these rates. This was and is an infirmity which has not been addressed even now, adequately, to arrive at a uniform cesarean rate. It is also true that what is not considered are the longer term effects of birth on women; in particular, pelvic organ prolapse, anal sphincter injury, sexual dysfunction, fistulae, urinary incontinence (UI) and others.

It is therefore not surprising to see data where the 10 to 15% cesarean rate has been found repeatedly wanting. None of the countries with a stillbirth rate of 2-4 /1000 have a Caesarean Sec on rate between the World Health Organisation recommended 10-15% threshold. (Leddy MA, Power ML, Schulkin J (2008) The Impact of Maternal Obesity on Maternal and Fetal Health. Rev Obstet Gynecol 1: 170-178).

An elegant report cites that previously recommended national target rates for cesarean deliveries may be too low. The same report goes on to say that the focus of discussion about CS rates should be on "supporting safe and appropriate provision of cesarean delivery . with the intent of reducing maternal and neonatal mortality without causing overuse of procedures".(Molina G, Weiser TG, Lipsitz SR, et al. Relationship between cesarean delivery rate and maternal and neonatal mortality. JAMA 2015; 314: 2263-2270) However, it was also clear that there is a "complex interplay between overall maternal health resources, emergency obstetrical services, and other factors".

Not surprisingly the WHO issued a new statement in 2015 with the headline "Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate" World Health Organization. WHO Statement on Caesarean Section Rates. Geneva: World Health Organization; 2015 (WHO/RHR/15.02).

A very recent commentary from the authors involved in the WHO statements notes-"mortality is normally the only outcome considered in the analyses. Maternal and newborn morbidity (eg, obstetric fistula, birth asphyxia), or psychological and social well-being (eg, maternal—infant relationship, women's psychological health or ability to successfully initiate breast feeding) as well as long-term paediatric outcomes should be considered when estimating a rate that would achieve optimal outcomes. However, since there are practically no morbidity data at the population level, it has not been possible to assess the ecological relationship between caesarean section and these other outcomes. The Statement also consolidates the shift in the focus of attention from the search for an optimal caesarean section rate that provides little basis for action, to a practical and feasible proposal: the use of the classification as a standard system to monitor and compare caesarean section rates at the facility or other levels. (Ana Pilar Betrán, Jun Zhang, Maria Regina Torloni, A Metin Gülmezoglu Evid Based Med December 2016, volume 21, number 6, 237)

Thus to conclude the current studies and recommendations have two fallacies, one of trying to extrapolate population level data to facility level and focusing on mortality with the exclusion of morbidity either neonatal or maternal.

#### Indian Data

As per the latest data (National Family Health Survey 2015-16 (NFHS-4), the cesarean rates at population level in India seem to be 17.2 %. The same document goes on to look at Cesarean rates in the private and public sector and whilst the discrepancy in the rates in these two sectors has been commented upon, there is no mention in the commentaries of the fact that the private sector delivers more babies than the public sector in the urban areas and absolutely no indication of morbidity rates either maternal or neonatal in either sector. There is also no acknowledgement of the fact that the lower rates in public sector could simply be a reflection of the paucity of capacity, both infrastructure and human resource.

To reiterate and quote from the WHO working group on cesarean section - "The time has come to put the debate about the preferable rate of CS on hold. Let's start to collect data uniformly so that in the near future we will be able to move our focus from CS rates at population level to monitoring and discussing CS rates and outcomes in each group of the Robson classification. Only then will we have the data and evidence that will lead us more clearly to actions to improve care". (Betran AP, Torloni MR, et al for the WHO Working Group on Caesarean Section. WHO Statement on Caesarean Section Rates. BJOG 2016;123:667–670)

FOGSI recommends the setting up of a cloud based registry linked to its website which will collect anonymous data at hospital level using the WHO recommended Robson's ten group classification system.

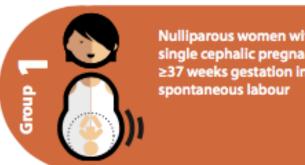
We would like to emphasise that the hallmark of labor management in the 21st century should be individualized care for the laboring woman with the expectation of a successful and safe vaginal delivery, together with the ability to intervene with a cesarean delivery, if needed, to prevent morbidity and mortality. (Adapted from Caughey A B BIRTH 41:3 September 2014)

(Drafted by Jaydeep Tank with inputs from Team FOGSI)



https://www.fogsi.org/fogsicesarean-rates-jdt/

#### **Box 1: Robson classification**











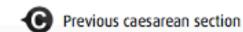














# The way forward

- WHO proposes the Robson classification system as a global standard for assessing, monitoring and comparing caesarean section rates within healthcare facilities over time, and between facilities.
- In order to assist healthcare facilities in adopting the Robson classification, WHO will develop guidelines for its use, implementation and interpretation, including standardization of terms and definitions.
- Collect granular data at a nationwide level using the Robson's classification.
- Focus on quality of care to provide cesareans where medically indicated.











Advancing

Delivery of (Quality)

Healthcare through

**U**pgraded

Newborn (and Intrapartum Care)

**Approaches** 

Adhuna/अधुना—meaning The Now or The Present in Sanskrit—symbolizes the urgency and immediacy of the healthcare reforms we are about to introduce.



To catalyze improvements in intrapartum quality of care in the private sector and embed innovations in care packages across the maternal, newborn (MNH) and women's health (WH) spectrum in 29 districts across four states of India.

#### **Project Partners**

#### **Gates Foundation**







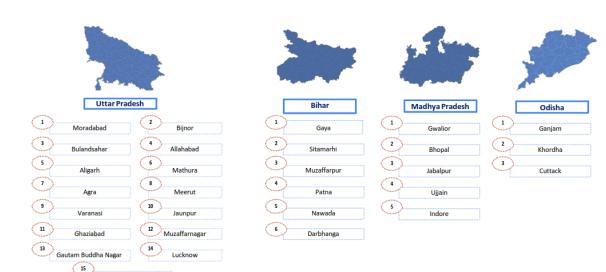




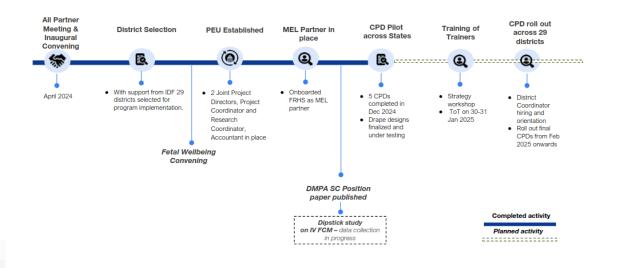
#### **Project Outcomes**



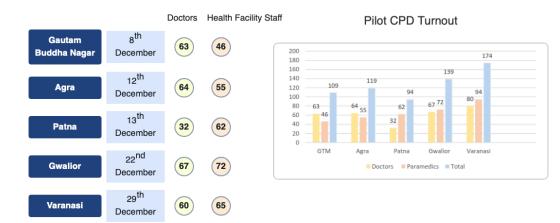
#### Scope of the Project



#### Project progress I In a nutshell



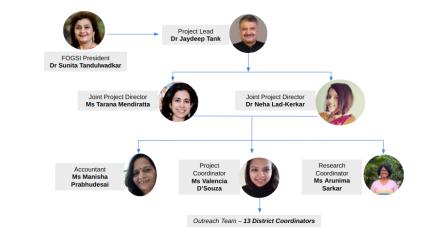
#### CPD - 1 Rolled out in 5 Districts in Dec 2024



#### Project Team - FOGSI Leadership



#### **Project Team – Program Enablement Unit (PEU)**



For additional details please contact the FOGSI-PEU Office at +91 2235218025

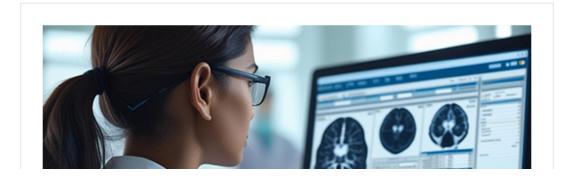


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Koita Foundation drives large-scale digital transformation across healthcare and social sectors by partnering with NGOs, academic institutions, and healthcare organizations. Through technology adoption, training, and capacity building, KF enables organizations to improve efficiency, expand reach, and create sustainable impact for underserved communities nationwide.



The hallmark of labor management in the 21st century should be individualised care for the labouring woman with the expectation of a successful and safe vaginal delivery, together with the ability to intervene with a cesarean delivery, if needed, to prevent morbidity and mortality.

Adapted from Caughey A B BIRTH 41:3 September 2014

Look forwards with hope not backwards with regret

History is

Herstory

too