International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Mungi DV. Int J Reprod Contracept Obstet Gynecol. 2026 Sep;15(9):3766-3772
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20263080

Review Article

Planned birth at 39 weeks in low-risk nulliparous women: mapping international evidence to India's national health mission framework

Deepa V. Mungi*

Department of Obstetrics and Gynaecology, Khan Bahadur Bhabha Hospital, Kurla West, Mumbai, Maharashtra, India

Received: 04 July 2026
Revised: 06 August 2026
Accepted: 13 August 2026

***Correspondence:**
Dr. Deepa V. Mungi,
E-mail: dvmungi@gmail.com

ABSTRACT

Global obstetric practice has shifted over the past decade from routine expectant management of low-risk term pregnancies toward active consideration of planned birth at 39 weeks, while India's public health system has, over the same period, achieved substantial gains in institutional delivery, antenatal coverage, and high-risk pregnancy tracking under the National Health Mission (NHM). This review synthesizes the international evidence for planned 39-week birth in low-risk nulliparous women, examines the small emerging Indian evidence base, weighs areas of continuing debate around implementation and external validity, and maps the resulting picture onto the operational architecture of PMSMA, LaQshya, and SUMAN. International randomized and cohort evidence consistently favors planned 39-week birth, with reduced caesarean delivery and reduced hypertensive disorders of pregnancy; the largest available cohort found a substantial reduction in perinatal mortality for planned birth overall, though this benefit was driven predominantly by scheduled caesarean rather than induction specifically. Two Indian trials identified to date, both small, point in the same direction as the international literature and do not show any caesarean-increasing effect of induction. Real-world implementation data complicate a purely reassuring picture, raising legitimate questions about indication creep, external validity, and systemic workload. The more consequential India-specific finding is infrastructural rather than physiological: national first-trimester registration has risen sharply, but this reflects administrative registration rather than confirmed dating ultrasound, making gestational-age precision the central prerequisite for any 39-week protocol in India. A phased approach, gated on confirmed dating and supported by prospective audit, offers a measured pathway for evaluating this practice in the Indian context.

Keywords: Elective induction of labor, 39 weeks gestation, Caesarean section, National Health Mission, Perinatal mortality, India

INTRODUCTION

For much of the last several decades, the default approach to low-risk, vertex-presenting term singleton pregnancies was expectant management until 41–42 weeks, on the premise that spontaneous labor optimized maternal-fetal outcomes. A large multicenter randomized trial complicated this default by demonstrating that induction of labor (IOL) at 39 weeks in low-risk nulliparous women reduced caesarean delivery and hypertensive morbidity without increasing adverse perinatal outcomes.[1] This prompted both the American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) to state that offering elective induction at 39 weeks to appropriately selected low-risk nulliparous women is a reasonable option.[8,9]

India's public maternal health system has, over the same period, achieved substantial gains through the National Health Mission (NHM): institutional delivery rates, antenatal care coverage, and structured high-risk pregnancy tracking have all risen sharply, most recently documented in the newly released National Family Health Survey-6 (NFHS-6, 2023–24), alongside a sustained

decline in maternal mortality to 88 per lakh live births.[2,3] This creates a timely question: does the international evidence base for 39-week planned birth transfer cleanly to the Indian public system, and if so, what would the NHM's existing architecture need to do differently to support it safely?

This review addresses that question directly, and does not treat it as settled in either direction. Rather than assuming either that international evidence transfers unmodified to Indian practice, or that Indian settings necessarily behave differently from high-resource ones, it examines what the actual — and still limited — Indian evidence shows, weighs the areas where the international literature remains contested, and maps the resulting implications onto the specific programmatic tools India already has: PMSMA for risk stratification, LaQshya for labor-room quality, and SUMAN for assured maternity care.

METHODS

This is a narrative review. Literature was identified through targeted searches for: the primary international trials, systematic reviews, and cohorts establishing the evidence base for planned birth at 39 weeks; real-world implementation data examining how this evidence has translated into practice outside the original trial settings; and Indian randomized or observational data addressing elective induction versus expectant management at or around 39 weeks in low-risk nulliparous women, and India-specific Robson classification audit literature; and (iv) current Government of India and Ministry of Health and Family Welfare (MoHFW) programmatic data on PMSMA, LaQshya, SUMAN, and successive National Family Health Survey rounds.

This search was not conducted across multiple bibliographic databases with formal deduplication, was not screened by two independent reviewers, and studies were not scored using formal risk-of-bias instruments. This is disclosed as a limitation of scope rather than implied as systematic-review methodology; given how limited the confirmed Indian evidence base for this specific clinical question currently is, a systematic review label would overstate the rigor behind the included-study count. Publication bias and selective reporting cannot be excluded, since this review did not follow a systematic-review search and screening protocol.

RESULTS

International evidence: the case for planned 39-week birth

Before the trial evidence specific to 39 weeks emerged, a Cochrane systematic review of induction of labor at or beyond 37 weeks' gestation[4] had already established that a policy of labor induction at or beyond term was associated with fewer perinatal deaths and fewer caesarean deliveries than expectant management, across a broad gestational window.

The pivotal trial in this literature was a multicenter randomized trial of 6,106 low-risk nulliparous women assigned to induction at 39^{+0}–39^{+4} weeks versus expectant management.[1] Induction did not significantly reduce the composite adverse perinatal outcome, but did significantly reduce caesarean delivery (approximately 19% versus 22%) and hypertensive disorders of pregnancy (relative risk 0.64, 95% confidence interval 0.56–0.74).

A secondary analysis of this trial cohort examined which patient characteristics modified the benefit of induction within the induction arm.[5] A subsequent meta-analysis of six cohort studies (n=650,409) found a pooled relative risk for caesarean delivery of 0.83 (95% confidence interval 0.74–0.93) with elective induction at 39 weeks, consistent in direction and magnitude with the randomized trial.[6]

The largest and most recent population-based evidence comes from a Queensland, Australia cohort of 472,520 low-risk pregnancies.[7] Planned birth at 39^{+0}–39^{+6} weeks (by induction or scheduled caesarean, combined) was associated with 52% lower odds of perinatal mortality (adjusted odds ratio 0.48, 95% confidence interval 0.30–0.76). This combined figure requires a caveat: when disaggregated by method, the reduction was statistically significant for scheduled caesarean alone (aOR 0.39) but not for induction of labour alone (aOR 0.61, 95% confidence interval 0.32–1.17). The study's own authors caution against reading this as unqualified support for routine planned birth by either method pending confirmatory randomized trials.

Both ACOG's practice advisory and SMFM's clinical statement on this evidence base are notably conditional: both bodies specify that the option should be offered only where gestational dating has been confirmed by an ultrasound examination performed early in pregnancy, and only within the eligibility parameters of the underlying trial.[8,9] This dating precondition, agreed upon by both major professional societies, is the pivot point on which the applicability of 39-week planned birth to any lower-resource setting turns, and is taken up again in this review's discussion of the Indian context below.

Taken together, this evidence base is large, methodologically diverse, and directionally consistent: planned birth at 39 weeks in low-risk nulliparous women does not increase, and in several analyses reduces, caesarean delivery, with a more method-specific and still-developing picture for perinatal mortality.

INDIAN EVIDENCE: TWO SMALL STUDIES, SAME DIRECTION

Indian data specific to this question is limited but real, and does not show any cesarean-increasing effect of induction.

The ELITE-39 trial was an open-label randomized controlled trial at a tertiary Indian maternity centre (n=360; 179 induction, 180 expectant management, enrolled April 2019–December 2021).[10] Caesarean delivery rates were 17.3% with induction versus 25% with expectant management (p = 0.08) — numerically lower with induction, though not statistically significant at this sample size. One intrapartum stillbirth occurred in the induction arm, and two neonatal deaths occurred in the expectant-management arm. The authors' own conclusion — that elective induction was not associated with increased caesarean delivery, but that findings should not be generalized to all low-risk Indian women without further data — is a reasonable and worth-preserving caveat.

A pilot open-label randomized controlled trial at a government medical college in Ranchi, Jharkhand (final analysis n=54; 27 per arm) found a significantly lower caesarean delivery rate with induction (intention-to-treat: 33.3% versus 60%, p=0.038) and a shorter postpartum hospital stay.[11] Neonatal outcomes trended favorably for induction but were not statistically significant, consistent with the study's small sample size.

Both studies are small, likely underpowered for outcomes beyond their primary caesarean-rate endpoint, and single-centre. Neither should be over-interpreted as definitive. But as far as the identifiable evidence goes, India's own emerging data is consistent with, rather than contrary to, the international literature summarized above.

The evidence discussed above, together with the real-world implementation data taken up later in this review, is summarized in Table 1.

INDIA'S NHM ARCHITECTURE: EXISTING SUPPORT FOR RISK-STRATIFIED PLANNED BIRTH

India's demand-side push toward institutional delivery began in earnest with the Janani Suraksha Yojana (JSY) conditional cash transfer scheme, an independent impact evaluation of which found substantial increases in facility-based birth and an associated reduction in early neonatal mortality.[12] Institutional delivery has continued to rise since: NFHS-5 (2019–21) recorded 88.6% institutional delivery, and NFHS-6 (2023–24) now records 90.6%, alongside antenatal care coverage of 95.9% and first-trimester registration of 76.2%.[2,13] Skilled birth attendance improved to 91.3%.

The Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), now a decade into implementation, has delivered free specialist-led antenatal checkups to more than 7.5 crore women nationally, using a structured risk-identification system and, under its extended arm, individual tracking of identified high-risk pregnancies through delivery and 45 days postpartum.[14] The LaQshya labour-room quality improvement initiative provides the quality-of-care scaffolding — structured partograph plotting, respectful maternity care protocols, and facility-level audits — that any expanded induction policy would rely on for safe intrapartum monitoring.[15] The Surakshit Matritva Aashwasan (SUMAN) initiative provides the assured-care, zero-denial framework around which entitlements to such services would sit.[16]

Read against the JSY experience specifically, this NHM architecture represents a meaningful evolution: JSY demonstrated that India's public system can shift population-level behaviour at scale, but its early evaluations also showed that a scale-first approach without matched quality infrastructure produced uneven gains. PMSMA, LaQshya, and SUMAN were built, in part, to close exactly that quality gap — directly relevant to whether a 39-week planned-birth policy could now be implemented as a quality-monitored programme rather than a repeat of unmonitored scale-up.

THE RATE-LIMITING FACTOR: GESTATIONAL AGE PRECISION, NOT INDUCTION PHYSIOLOGY

As established above, both ACOG and SMFM condition their endorsement of 39-week planned birth on confirmed early-pregnancy dating.[8,9] This is not a formality. A 39-week planned birth policy is only as safe as the gestational dating behind it. The NFHS-6 first-trimester registration figure (76.2%) is frequently, and incorrectly, read as equivalent to first-trimester dating ultrasound coverage.[2] At the ASHA/ANM sub-centre level, first-trimester registration is predominantly a biochemical or administrative line-listing event; a confirmed crown-rump-length (CRL) scan before 12 weeks is a distinct and less universally available service, particularly outside urban tertiary centres.

The clinical stakes of this gap are well documented. A large cohort study found that even early-term birth (37–38 weeks) carries measurably higher neonatal morbidity than birth at 39 weeks, including higher rates of respiratory distress, hypoglycemia, and NICU admission.[17] A separate large cohort specifically implicated respiratory morbidity as significantly elevated in late-preterm birth relative to term birth.[18] If a 39-week induction is scheduled against an inaccurate last-menstrual-period-based or late-ultrasound estimate, a 2–3 week margin of error can convert a nominal 39-week induction into a true 36–37 week delivery — moving the neonate into precisely the gestational window this literature identifies as higher-risk, with downstream pressure on special newborn care units (SNCUs).

ROBSON CLASSIFICATION AND AUDIT INFRASTRUCTURE

The Robson Ten Group Classification System, endorsed by WHO as the global standard for monitoring and comparing caesarean section rates, offers India's existing audit apparatus a ready-made tool for tracking the effect of any expansion in induction practice.[19-21] Indian

institutional data using this classification already exist: a tertiary-centre Robson audit in Kerala found that induced labor (Robson groups 2A and 4A) contributed disproportionately to the overall caesarean rate at that centre, underscoring that induction's effect on operative delivery is setting-specific and worth tracking locally rather than assumed from trial data alone.[22]

This is not a purely theoretical proposal. A multicentre, stepped-wedge, cluster-randomized pilot trial across four public tertiary hospitals in Karnataka — all LaQshya-accredited or undergoing accreditation, with baseline caesarean rates above 40% — tested structured provider training paired with monthly Robson-based audit-and-feedback.[23]

The intervention produced a 5.5% absolute reduction in the primary caesarean outcome (45.2% versus 39.7%; not statistically significant given the trial's pilot scale) and an 18% absolute reduction in oxytocin augmentation, with no adverse safety signal. The trial's own authors caution that their results may not generalize to facilities without an existing national quality-improvement framework — itself an argument for building deliberately on LaQshya's foundation rather than assuming this approach transfers automatically elsewhere.

This audit infrastructure is also relevant against the backdrop of India's rising national caesarean rate — 21.5% under NFHS-5 and 27.2% under NFHS-6 — a rise that increases, rather than diminishes, the case for granular Robson-based monitoring of any change in induction practice.[2,13]

Table 2 maps the operational requirements of a 39-week planned-birth policy against current NHM capacity, drawing together the infrastructure discussed in this section.

Table 1: Evidence summary — International and Indian evidence on planned birth at 39 weeks, and real-world implementation data, grouped thematically and ordered chronologically within each group.

Study	Design and population	Key finding
International evidence		
Grobman et al, 2018[1]	RCT, n=6,106 low-risk nulliparas	Induction reduced caesarean (18.6% versus 22.2%) and hypertensive disorders; composite perinatal outcome not significant
ACOG Practice Advisory, 2018/SMFM Statement, 2019[8,9]	Professional guidance	Endorse induction as reasonable option, conditional on confirmed early dating
Grobman and Caughey, 2019[6]	Meta-analysis, 6 cohorts, n=650,409	Pooled RR 0.83 for caesarean with induction
Middleton et al, 2020 (Cochrane)[4]	Systematic review, induction ≥37 weeks	Fewer perinatal deaths, fewer caesareans versus expectant management — pre-ARRIVE background
Crawford et al, 2025[7]	Cohort, n=472,520 low-risk pregnancies	Combined planned birth reduced perinatal mortality 52%; induction alone not independently significant (aOR 0.61)
Indian evidence		
Lalithadevi et al, 2024 (ELITE-39)[10]	Indian RCT, n=360	Caesarean rate 17.3% versus 25%, not significant, same direction as international trials
Aakanksha et al, 2026[11]	Indian pilot RCT, n=54 analyzed	Caesarean rate significantly reduced (33.3% versus 60%, ITT); authors' own caveat regarding workload/cost burden at scale
Real-world implementation data		
Einerson et al, 2020[27]	RCT cost sub-study, n=1,201	No significant cost difference between induction and expectant management
Wood et al, 2023[25]	National cross-sectional study, USA	Caesarean decline continued significantly alongside induction rise post-ARRIVE
Attali et al, 2025[24]	Retrospective cohort, 9,523 inductions, single French tertiary unit	Induction rose across all indication groups post-2018, not only the ARRIVE-matched population
Azria et al, 2024[26]	Ethics and external-validity review	Only 27% of eligible women consented to randomization; modest post-trial safety-signal increases reported elsewhere
NHM infrastructure and audit evidence		
Lim et al, 2010[12]	JSY national impact evaluation	Institutional delivery increased, early neonatal mortality reduced; also uneven scale-without-quality gains

Continued.

Study	Design and population	Key finding
Spandana and Shivanna, 2020[22]	India-specific Robson audit, Kerala tertiary centre	Induced labour disproportionately contributed to local caesarean rate
Vogel et al, 2024 (Nature Medicine, WHO LCG trial)[23]	Indian multicentre cluster RCT, 4 Karnataka hospitals	Caesarean reduction trend (pilot, not significant); oxytocin use significantly reduced; no safety signal

Table 2: NHM feasibility matrix — mapping the operational requirements of a 39-week planned-birth policy against current NHM capacity.

Operational parameter	High-resource trial environment	NHM India infrastructure	Constructive action
Antenatal screening and risk tracking	Digital scheduling; decentralized primary clinics	PMSMA risk-marker system; extended tracking through delivery and postpartum	Use existing PMSMA line-listing to prioritize scheduling discussions for flagged high-risk cases
Gestational age verification	Universal first-trimester CRL dating	76.2% first-trimester registration (NFHS-6); confirmed CRL dating coverage is lower and not separately reported nationally	Targeted point-of-care dating ultrasound training for CHOs/Medical Officers; restrict elective 39-week protocols to confirmed-dating cases
Intrapartum quality and surveillance	1:1 nursing; continuous CTG	High delivery volumes; LaQshya quality-improvement structure	Enforce LaQshya partograph and monitoring checklists specifically for induced labors
Surgical delivery rate oversight	Low baseline caesarean rate; standardized protocols	National caesarean rate 27.2% (NFHS-6, up from 21.5% in NFHS-5)	Track Robson Group 1-to-2 shift under any induction expansion through routine audit mechanisms
Neonatal buffer capacity	High NICU bed availability	Expanding SNCU network, unevenly distributed	Reserve planned 39-week inductions for indicated, confirmed-dating cases to protect SNCU capacity for genuine preterm admissions

DISCUSSION

Read together, this evidence points to a specific interpretation. A Cochrane synthesis, a pivotal randomized trial, its meta-analytic and cohort follow-ups, and now two small Indian trials converge on the same direction of effect for caesarean delivery.[1,4-7,10,11] The picture for perinatal mortality is more method-specific than a single combined figure suggests, and the available Indian data, while directionally consistent, remain insufficient on their own to justify universal policy adoption without further multicentre evaluation across diverse public-sector settings.

Implementation realities and unresolved questions

Real-world implementation data complicate a straightforwardly reassuring picture, though not uniformly. A French tertiary-unit study found that induction rates rose across all indication groups after 2018, not only the ARRIVE-matched population, with the largest relative increases in breech and fetal-pathology inductions.[24] Set against this, US national data over the same period found a statistically significant continuing decline in cesarean delivery alongside the rise in induction, suggesting the trial's core effect has, at least in aggregate, persisted at scale.[25] Reconciling these findings is not straightforward: population-level caesarean trends can mask the kind of indication creep the French data describe. A shrinking caesarean rate does not, by itself, confirm that expanded induction has stayed within its evidence base. A separate US cohort recorded modest but statistically significant increases in maternal transfusion, ICU admission, and assisted neonatal ventilation in the post-trial period, a caution worth holding alongside the reassuring national trend rather than in place of it.[26]

External validity is a further open question. Only 27% of women eligible for the foundational trial actually consented and were randomized, a substantial gap between the study population and the general population of low-risk nulliparous women to whom the finding is often generalized.[26] Cost evidence is mixed rather than settled: the largest randomized cost sub-study, drawn from the foundational trial's own sites, found no significant difference in direct healthcare costs between induction and expectant management, though concerns about the resource intensity of induction have been raised elsewhere in the literature.[27] Workload and systemic burden remain more genuinely unresolved — the authors of the Indian pilot trial discussed above note explicitly that their own study did not assess the systemic burden or cost

implications of routine induction on already-strained public labour wards, and conclude that population-level rollout is challenging for this reason even as they support induction as an option for women who actively choose it.[11] Patient autonomy and preference form a final, distinct axis: informed consent in the perinatal period carries particular complexity, and international commentary has raised ethical questions about the boundary between offering an evidence-based option and shaping the terms of childbirth by default.[26]

Why India's challenge differs

Viewed against this fuller picture, the principal challenge facing Indian obstetrics differs in kind from the debate occupying much of the international literature. That debate has centred on whether elective induction should be offered routinely at all, and on the downstream effects of doing so at scale. In the Indian public-sector context, a more basic prerequisite precedes that question: whether gestational age can be established accurately enough, in enough pregnancies, to schedule any 39-week intervention safely in the first place. Both ACOG and SMFM's own endorsements of the practice are conditional on confirmed early-pregnancy dating — a precondition Indian data suggest is not yet reliably met at population scale, given the gap between administrative first-trimester registration (76.2%, NFHS-6) and confirmed dating-ultrasound coverage.[2,8,9]

India's National Health Mission already possesses much of the programmatic architecture this approach would require, through PMSMA, LaQshya, and SUMAN.[14-16] Nor would an adaptation-first approach be a novel departure for Indian obstetric practice: an indigenously developed protocol for active labour management, built specifically for settings without universal access to epidural analgesia, has been in use and independently replicated across Indian centres for over two decades.[28] The lesson worth carrying forward is not the protocol itself, which addresses a different clinical question, but the underlying model — taking an internationally validated principle and re-engineering its specific implementation around Indian infrastructure, rather than adopting it unmodified.

CONCLUSION

Rather than introducing a universal induction policy, a phased implementation restricted to women with confirmed early-pregnancy dating, accompanied by prospective outcome monitoring and supported by adequately powered multicentre research, offers a measured pathway for evaluating planned birth at 39 weeks in the Indian context. The central question is therefore no longer whether planned birth at 39 weeks can improve outcomes under trial conditions, but how it can be implemented safely and equitably within India's public health system. Answering that question will require evidence extending beyond efficacy alone, to implementation science, health-system capacity, patient preference, and long-term maternal and neonatal outcomes. Future Indian evidence should therefore focus as much on implementation as on efficacy.

Recommendations

Four steps follow. First, first-trimester registration should not be treated as a proxy for dating accuracy; any 39-week protocol considered in the Indian public sector should require documented CRL-confirmed dating before eligibility, not administrative registration alone. Second, investment should prioritize targeted point-of-care dating ultrasound training for Community Health Officers and Medical Officers at primary care facilities, since building this capacity directly addresses the identified gap, rather than restricting access to a subset of women for a caesarean-risk concern the available Indian data do not support. Third, the Robson Ten Group Classification System should be applied prospectively at any facility piloting expanded induction practice, building on the demonstrated feasibility of audit-and-feedback in Indian public hospitals, to generate the real-world outcome data this field currently lacks. Fourth, adequately powered multicentre Indian trials — stratified by facility type and confirmed-dating status — should be commissioned to resolve, rather than presume, how this evidence generalizes to Indian public-sector volumes and resourcing.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Grobman WA, Rice MM, Reddy UM, Tita ATN, Silver RM, Mallett G, et al. Labor induction versus expectant management in low-risk nulliparous women. N Engl J Med. 2018;379(6):513-23.
2. Ministry of Health and Family Welfare, Government of India; International Institute for Population Sciences. National Family Health Survey-6 (NFHS-6), 2023-24: Fact Sheets. New Delhi: MoHFW; 2026.
3. Sample Registration System (SRS) 2021-23, Registrar General of India. Special Bulletin on Maternal Mortality in India. Available at: https://censusindia.gov.in/nada/index.php/catalog/46177. Accessed on 15 May 2026.
4. Middleton P, Shepherd E, Morris J, Crowther CA, Gomersall JC. Induction of labour at or beyond 37 weeks' gestation. Cochrane Database Syst Rev. 2020;7(7):CD004945.
5. El-Sayed YY, Rice MM, Grobman WA, Reddy UM, Tita ATN, Silver RM, et al. Elective labor induction at 39 weeks of gestation compared with expectant management: factors associated with adverse outcomes in low-risk nulliparous women. Obstet Gynecol. 2020;137(3):455-62.
6. Grobman WA, Caughey AB. Elective induction of labor at 39 weeks compared with expectant management: a

meta-analysis of cohort studies. Am J Obstet Gynecol. 2019;221(4):304-10.
7. Crawford K, Carlo WA, Odibo A, Papageorghiou A, Tarnow-Mordi W, Kumar S. Perinatal mortality and other severe adverse outcomes following planned birth at 39 weeks versus expectant management in low-risk women: a population based cohort study. EClinicalMedicine. 2025;80:103076.
8. American College of Obstetricians and Gynecologists. Practice Advisory: Clinical guidance for integration of the findings of the ARRIVE trial: labor induction versus expectant management in low-risk nulliparous women. Washington, DC: ACOG; 2018.
9. Society for Maternal-Fetal Medicine (SMFM) Publications Committee. SMFM statement on elective induction of labor in low-risk nulliparous women at term: the ARRIVE trial. Am J Obstet Gynecol. 2019;221(1):B2-4.
10. Lalithadevi P, Rengaraj S, Dasari P, Adhisivam B. Elective induction of labor versus expectant management at 39 weeks among low-risk nulliparous pregnant women: a randomized controlled trial in India (ELITE-39 trial). Int J Gynecol Obstet. 2024;167(1):427-33.
11. Aakanksha, Kumari A, Tirkey S. Elective induction of labour at 39 weeks in low-risk nulliparous women versus expectant management: a pilot randomized control trial. Int J Reprod Contracept Obstet Gynecol. 2026;15(2):610-7.
12. Lim SS, Dandona L, Hoisington JA, James SL, Hogan MC, Gakidou E. India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: an impact evaluation. Lancet. 2010;375(9730):2009-23.
13. Ministry of Health and Family Welfare, Government of India; International Institute for Population Sciences. National Family Health Survey-5 (NFHS-5), 2019-21: Fact Sheets. New Delhi: MoHFW; 2021.
14. Ministry of Health and Family Welfare, Government of India. Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA): programme overview. Available at: https://pmsma.mohfw.gov.in/. Accessed on 04 July 2026.
15. Ministry of Health and Family Welfare, Government of India. LaQshya: Labour Room Quality Improvement Initiative — operational guidelines. New Delhi: MoHFW, National Health Mission. Available at: https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=1307&lid=690. Accessed on 04 July 2026.
16. Ministry of Health and Family Welfare, Government of India. Surakshit Matritva Aashwasan (SUMAN) — operational guidelines. New Delhi: MoHFW, National Health Mission. Available at: https://www.myscheme.gov.in/schemes/suman. Accessed on 04 July 2026.
17. Sengupta S, Carrion V, Shelton J, Wynn RJ, Ryan RM, Singhal K, et al. Adverse neonatal outcomes associated with early-term birth. JAMA Pediatr. 2013;167(11):1053-9.
18. Hibbard JU, Wilkins I, Sun L, Gregory K, Haberman S, Hoffman M, et al. Respiratory morbidity in late preterm births. JAMA. 2010;304(4):419-25.
19. Robson MS. Classification of caesarean sections. Fetal Matern Med Rev. 2001;12(1):23-39.
20. World Health Organization. WHO Statement on Caesarean Section Rates. Geneva: WHO; 2015. Available at: https://www.who.int/publications/i/item/WHO-RHR-15.02. Accessed on 04 July 2026.
21. Vogel JP, Betrán AP, Vindevoghel N, Souza JP, Torloni MR, Zhang J, et al. Use of the Robson classification to assess caesarean section trends in 21 countries: a secondary analysis of two WHO multicountry surveys. Lancet Glob Health. 2015;3(5):e260-70.
22. Spandana S, Shivanna AK. The ten group Robson classification: a retrospective study to identify strategies to optimise caesarean section rates. Int J Reprod Contracept Obstet Gynecol. 2020;9(12):5082-6.
23. Vogel JP, Pujar Y, Vernekar SS, Armari E, Pingray V, Althabe F, et al. Effects of the WHO Labour Care Guide on cesarean section in India: a pragmatic, stepped-wedge, cluster-randomized pilot trial. Nat Med. 2024;30:463-9.
24. Attali I, Cormier J, Goffinet F, Le Ray C. Does induction of labor without a medical indication explain the overall increase in the induction rate: an observational study before and after the ARRIVE trial. BMC Pregnancy Childbirth. 2025;25:349.
25. Wood R, Freret TS, Clapp M, Little S. Rates of induction of labor at 39 weeks and cesarean delivery following publication of the ARRIVE trial. JAMA Netw Open. 2023;6(8):e2328274.
26. Azria E, Haaser T, Schmitz T, Froeliger A, Bouchghoul H, Madar H, et al. The ethics of induction of labor at 39 weeks in low-risk nulliparas in research and clinical practice. Am J Obstet Gynecol. 2024;230(3):S775-82.
27. Einerson BD, Nelson RE, Sandoval G, Esplin MS, Branch DW, Metz TD, et al. Cost of elective labor induction compared with expectant management in nulliparous women. Obstet Gynecol. 2020;136(1):19-25.
28. Daftary SN, Desai SV, Thanawala U, Bhide A, Levi J, Patki A, et al. Programmed labor—indigenous protocol to optimize labor outcome. J South Asian Fed Obstet Gynaecol. 2009;1(1):61-4.

Cite this article as: Mungi DV. Planned birth at 39 weeks in low-risk nulliparous women: mapping international evidence to India's national health mission framework. Int J Reprod Contracept Obstet Gynecol 2026;15:3766-72.