

Review Article

Maternal deaths in Uttar Pradesh – a silent emergency

Tridibesh Tripathy^{1*}, Byomakesh Tripathy², Shankar Das³, Rakesh Dwivedi¹, D. R. Sahu¹,
Anjali Tripathy⁴, Sanskriti Tripathy⁵

¹Department of Social Work, University of Lucknow, Lucknow, Uttar Pradesh, India

²G. M. University, Sambalpur, Odisha, India

³School of Health Systems Studies, TISS, Mumbai, Maharashtra, India

⁴Knowledge Management and Research, India Sanitation Coalition, FICCI, New Delhi, India

⁵Department of Medical and Pharmaceutical Biotechnology, Hochschule Fresenius University of Applied Sciences, Idstein, Germany

Received: 28 July 2026

Revised: 02 October 2026

Accepted: 06 October 2026

*Correspondence:

Dr. Tridibesh Tripathy,

E-mail: tridibeshtripathy@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Any maternal death is actually a silent emergency. A single digit maternal mortality (MM) rate and MM ratio is desirable as there will be circumstances that will be out of reach from the medical care like the case of Smita Patil, the famous Indian actress of Mumbai. She died while giving birth to her son on 13 December 1986. The recent sample registration system (SRS) shows that the MM rate of Uttar Pradesh has decreased but the MM ratio has increased. The denominator of MM rate is 100,000 women in the reproductive age group of 15-49 years. This denominator is unreliable as it includes women who are infertile, unmarried, spinsters and widow and are not related to fertility. The MM rate covers deaths from conception till birth of the child. Hence, the deaths due to complications during pregnancy and abortions are accounted here. Similarly, the MM ratio covers deaths during births till 42 days after delivery. Two-thirds of all maternal deaths take place during intra natal care (INC) and post-natal care (PNC) and especially during PNC. The denominator of MM ratio is 100,000 live births (LB). This is a reliable denominator as we can track the child as well as the mother. Hence in policy making MM ratio is used but not MM rate but both indicators have to be reduced. The article in its conclusion mentions the future steps that are or will be taken up by the Government of Uttar Pradesh.

Keywords: Maternal health, ANC, INC, PNC, MM rate, MM ratio, NFHS

INTRODUCTION

Through the performance of indicators in the recent national family health survey (NFHS), the article justifies the reduction of maternal mortality rate (MM) rate in Uttar Pradesh (UP) and explores reasons for the increase of MM ratio in UP. It also reflects and dwells on the reasons that can be attributed to the rise in MM ratio.^{1,2}

According to the latest sample registration system (SRS) bulletin on maternal mortality, the MM rate of India is 5 and the MM ratio of India is 87. The corresponding figure for UP is 13 and 154. In the previous bulletin on MM, the

figure of MM rate in India was same as the current figure and it was 88 for MM ratio, a point higher than the current status. Similarly, the figure of MM rate in UP was 12 and 141 for MM ratio. This shows that UP did better in rate but not in ratio. The NFHS data shows that the care of mothers during pregnancy is better and the care is poor during birth and after birth. Technically, ante natal care (ANC) is done in a better way but intra natal care (INC) and post-natal care (PNC) is not in a better way.^{1,2}

The timing of MM rate is from conception to birth whereas the timing of MM ratio is from births until 42 days after delivery. In the following section, it is seen that the

performance of indicators like ANC, institutional deliveries, PNC, women's empowerment and digital inclusion of mothers and pregnant women through the NFHS's 6th round data shows positive trends. However, as per the NFHS 6th round data, INC has shifted towards the private sector. As a result, the care during PNC has also suffered as the outreach service of private sector is very low.¹⁻⁶

This tells us the importance of maternal death review (MDR) of each maternal death. The Government of UP has also put steps to strengthen the process of MDR. As the ANC component has done well, the MM rate has come down in UP but as the INC and PNC are not done optimally, the MM ratio has increased in UP. When we review the related indicators, it is seen that the indicator for PNC in NFHS is only valid for 2 days after delivery. There is no indicator for the rest 40 days. MM ratio covers deaths till 42 days after delivery. As the PNC was poor in the remaining 40 days, the MM ratio scaled up.¹⁻⁶

LITERATURE REVIEW

NFHS's 6th round shows that there are significant improvements in maternal health (MH) indicators in the state of UP. These indicators are regarding ANC, institutional deliveries, PNC, women's empowerment, digital inclusion of mothers and pregnant women. Among these, the ANC indicator has performed the best.²

In UP, 96.9% of pregnant women receive ANC which is a gain of 2.5% from the 5th round of NFHS. It is because earlier the entry of pregnant women in to the health system happened at the time of delivery or the 4th trimester of pregnancy. Currently, this entry is much earlier. The entry of pregnant women in the 1st trimester of pregnancy has improved from 62.5% in the 5th round to 70.6% in the 6th round. There is a gain of 8.1% in this crucial indicator.²

There is an increase of 2.5 percentage points for mothers who had any ANC visit in UP. Another important indicator on ANC is the percentage of pregnant women receiving 4 ANC's in UP. This has improved from 42.4% to 51.8% which is a rise of 9.4%. The improvement is attributed to the investment in health workers, active participation of the community and focus on maternal health components of the MH program. Moving on, the digital inclusion indicator shows that 70% of pregnant women are digitally included thereby increasing their health awareness, increase in the financial inclusion process and the empowerment of women. Information on ANC, maternal nutrition, immunization, identification of danger signs of pregnancy and there by the identification of high risk (HR) cases of pregnancy also reach pregnant women on time.¹⁻⁶

Among all these improvements, a worrying trend also emerges from the 6th round data of NFHS. Pregnant women are moving away from the public health system while seeking maternal care. Women seeking care in the public health system during delivery care has dropped

from 57.7% to 51.8% i.e. a drop of 5.9%. Further, birth in a public health facility through caesarean section (CS) has increased by 0.3 percentage points from 5th to 6th round. The increase in the related indicator for private facility is 7.9 percentage points. Overall, also the CS section births have increased by 5.8 percentage points from 5th to 6th round of NFHS.²

It is seen that higher the CS deliveries particularly in private sector lower is the PNC as the front-line workers (FLW) of the public health system do not take interest in following up these cases as they do not get honorarium for these deliveries. All private facilities do not provide optimum INC also during birth as their network at the outreach level is poor.³⁻⁶

NFHS data also shows that the MM ratio increase is not directly attributed to early marriage in UP as there is a reduction of 2.1 percentage points for the indicator regarding women in the age group of 20-24 years who were married before 18 years. Hence, the major attributors are poor INC and poor PNC.²⁻⁶

To add to that, the life time risk (LTR) of a pregnant woman in the state of UP is 0.44% which is highest in India. This means if a woman delivers in UP, the chance of maternal death is 44 out of 100 occurrences of maternal deaths. The LTR is also a contributing factor to high MM ratio although the MM rate data is used to calculate LTR.¹⁻⁶

REFLECTIONS

The use of private sector by pregnant women for deliveries through CS can be because of advertising, misinformation, assurance of painless labor. Further the assurance that surgery is necessary, safer, and convenient even without warranting clinical conditions also lead to increase in CS deliveries. Pregnant women also depend on the internet for information about pregnancy, nutrition, precautionary steps and labor including child birth. The contents especially methods to avoid labor pain makes CS a better option. The information coupled with the promotional advertisements regarding the private sector acts as the pull factor for the increasing use of private sector.⁷⁻¹²

Another aspect is that the public health system (PHS) encourages normal deliveries whereas the preference among young women is towards CS. That's why most women prefer the private sector. The need of the hour is that pregnant women need counseling that is effective and need based so that they can make informed choices. The message should percolate among the masses that private sector is not always the best option.⁷⁻¹²

Another aspect is addressing both qualitative and quantitative aspects of MM. The MM rate and MM ratio reflect the number of deaths but qualitatively the three delays attributed to MM at the community level have to be addressed as well. The first delay regarding deciding on the

place of delivery is addressed through the strategy of increasing the skilled birth attendants (SBA). The second delay is in referral. The UP government runs 4,845 emergency medical vehicles (EMV) to address the second delay mentioned above. The third delay is in reaching the right institution for delivery. The strategy to address this delay is the number of functional first referral units (FRU) which are exclusively for MH and currently the state of UP has 301 functional FRUs.⁷⁻¹²

These are the probable reasons that can be attributed for the current performance of the indicators of maternal health. Hence, both the quantity and the quality aspect of the MM rate and the MM ratio have to be addressed. The conclusion section deals with the ongoing and future efforts of the Government of UP on MH.⁷⁻¹²

CONCLUSION

The Government of UP should now build upon the progress achieved regarding maternal health as reflected by the NFHS data. In this context, the state information commission (STC) has set up a state control room (SCR) so that medical care provided to pregnant women can be monitored and assisted. For this, the total number of expected deliveries will be pre-allocated to medical colleges, medical institutions, hospitals and health centers.

The state is going to launch the Mukhyamantri Matritva Surakhya Yojna (Chief Minister's Maternal Protection Scheme) to deal with MH. In this scheme, pre delivery plan for every pregnant woman will be prepared. Along with that, HR cases will be identified and these cases will be provided with immediate superior medical care. Nutrition kits, ayurveda, yoga and naturopathy, unani, siddha, homoeopathy (AYUSH) kits, delivery kits will also be provided to all pregnant woman. Nutritional support will also be provided during the pre-natal period.

The other ongoing components that will strengthen maternal health are provision of Ayushman card, strengthening of Janani Surakhya Karyakram (mother protection program), Janani Shishu Surakhya Karyakram (mother child protection program) are other steps. For the poor, state sponsored schemes on medical and financial provisions will be implemented effectively.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Government of India, Registrar General & Census Commissioner, Vital Statistics Division, Sample Registration System. Special Bulletin on Maternal Mortality in India, 2022-2024; 2026. Available at:

- <https://censusindia.gov.in/nada/index.php/catalog/47151>. Accessed on 17 July 2026.
2. International Institute of Population Sciences (IIPS), National Family Health Survey (NFHS 6), 2023-24. India & State/UT Fact Sheets, Mumbai, IIPS; 2026. Available at: [https://www.nfhsiips.in/nfhsuser/assets/National%20Family%20Health%20Survey%20\(NFHS-6\)%202023-2024%20Fact%20Sheets.pdf](https://www.nfhsiips.in/nfhsuser/assets/National%20Family%20Health%20Survey%20(NFHS-6)%202023-2024%20Fact%20Sheets.pdf). Accessed on 17 July 2026.
3. Penman ID, Ralston SH, Strachan MWJ, Hobson R. Davidson's Principles & Practice of Medicine, 24th Edition. Elsevier Limited Publishers; 2023.
4. Park JE, Park K. Text book of preventive & social medicine, 11th edition. M/s Banarasi Bhanot Publishers, Jabalpur; 1987.
5. Singh M, Saini S. Conceptual Review of Preventive & Social Medicine, Second edition. CBS Publishers & Distributors Pvt Ltd; 2020.
6. Park K. Text Book of Preventive & Social Medicine, 27th edition. Bhanot Publishers, Jabalpur & Pune; 2023.
7. Ministry of Health & Family Welfare, Government of India. India Newborn Action Plan. 2014. Available at: https://newbornwhocc.org/pdf/INAP_Final.pdf. Accessed on 17 July 2026.
8. Ministry of Health & Family Welfare, Government of India. Program Implementation Plan. 2026. Available at: <https://ncdc.mohfw.gov.in/uploads/pdf/NHM%20PIP%20Guidance%20Note%20FY2026-27.pdf>. Accessed on 17 July 2026.
9. GOI. Maternal Health Division, Maternal Death Review Guidelines, NHM. Available at: <https://www.nhm.up.gov.in>. Accessed on 5 July 2026.
10. GOI. Child Health Division, Maternal & Child Health Guidelines, NHM. Available at: <https://www.nhm.up.gov.in>. Accessed on 17 July 2026.
11. United Nations Sustainable Development Goals. Goal 3: Good Health and Well-being. 2015. Available at: <https://www.un.org/sustainabledevelopment/health/>. Accessed on 17 July 2026.
12. GOI. UNFPA, NHM, Village Health Nutrition Sanitation Day Guidelines. Available at: www.nhm.gov.in. Accessed on 17 July 2026.

Cite this article as: Tripathy T, Das BTS, Dwivedi R, Sahu DR, Tripathy A, et al. Maternal deaths in Uttar Pradesh – a silent emergency. Int J Community Med Public Health 2026;13:6988-90.