

Letter to the Editor

Mortality trends and risk factors among tribal children in India

Sir,

Neonatal mortality, a death occurring within the first 28 days of life after live birth, is the most vulnerable time for newborns' survival. These neonatal mortality rates also vary according to the characteristics of perinatal healthcare pathways and practices. Maternal and child health (MCH) care services are closely associated with reproductive, maternity, and newborn health. Neonatal mortality is notably higher among Indian tribal (indigenous) populations. Among them, neonatal mortality rate stands at 28.8 per 1,000 live births, expressively exceeding the national (India) average of 24.9. Further, under-5 mortality rate is 50.3 per 1,000 live births, which is also exceeding the national rate by a

considerable margin (41.9).¹ India is home to over 100 million Scheduled Tribes (ST), accounting for 8.6% of its total population, and hosts world's second-largest indigenous population.² Health outcomes of these vulnerable communities are disproportionately affected due to their remote habitation in challenging terrains, poor socioeconomic conditions, and traditional cultural norms that bound them to avail limited access to essential healthcare services.

However, a trend of reduction in neonatal mortality in tribal populations occurred over two decades; it is still high compared to mortality rates in India at country level, indicating it is not uniform across all geographical areas and societies, particularly in tribal population (Figure 1).

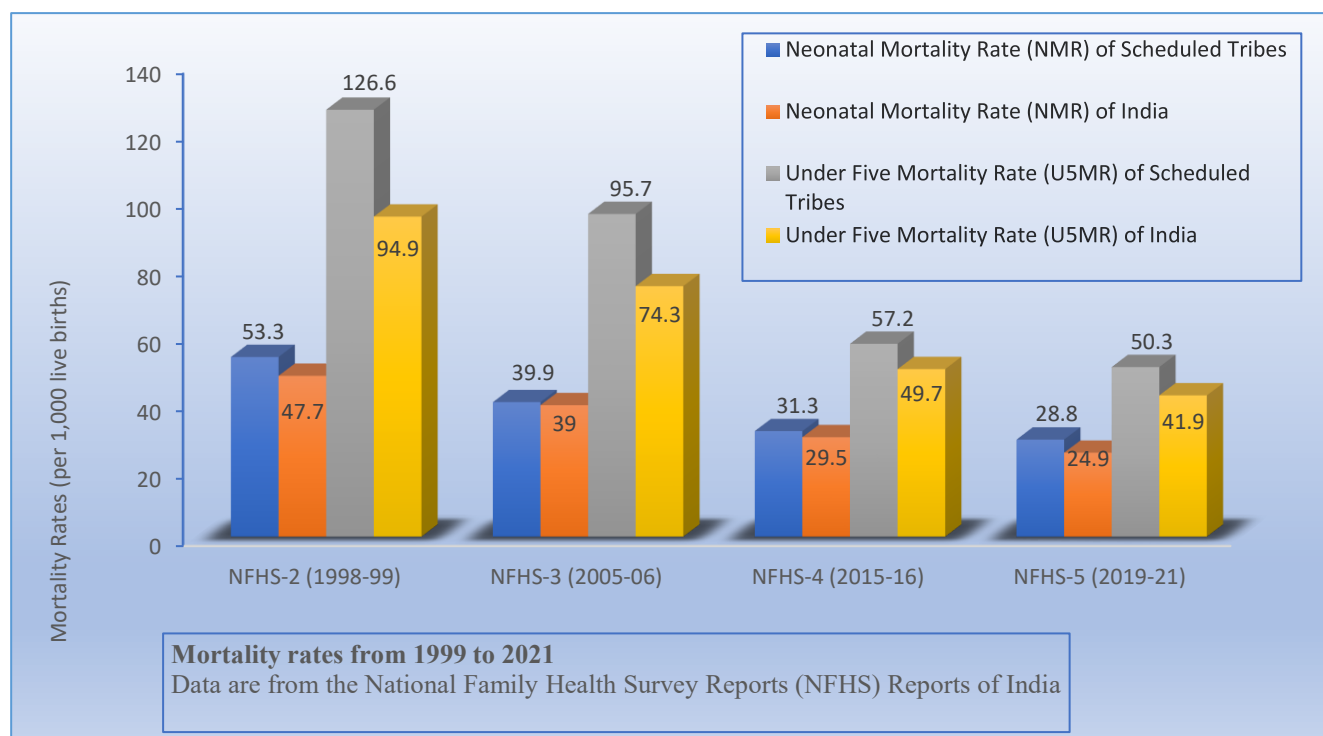


Figure 1: Trends in neonatal and under-five mortality rates among scheduled tribes in India compared to the national average (India).

But the problems are so many, and several underlying factors, including poor socioeconomic conditions, isolation, and difficult terrain habitation lead to vulnerability and contribute to these disparities, that the risk remains daunting. The main causes of neonatal mortality among tribal populations include preterm births, birth asphyxia, neonatal infections, malnutrition, and congenital anomalies. Almost one-third (32.1%) of

neonatal deaths occurred by premature delivery and low-birth-weight, attributed to more than one-fifth (21.4%), followed by respiratory disorders and infections have been attributed as primary contributors to most neonatal deaths in tribal communities.³

Focused strategies are needed to improve tribal literacy, empower communities, and increase healthcare access

and utilization. Preterm birth, which occurs before 37 weeks of gestation, is one of the leading causes of neonatal mortality, and a substantial proportion of neonatal deaths in tribal communities occur among preterm infants. Neonatal mortality contributes considerably to overall infant and under-five mortality, accounting for up to 70% of infant deaths and 50% of deaths among children aged less than 5 years.⁴ Hence, this is a serious concern to prevent these preventable deaths. Moreover, tribal populations face heightened perinatal risks, such as higher rates of stillbirths, premature deliveries, and low birth weights, and they are exposed to considerably higher early neonatal deaths (within the week after live birth) than late neonatal deaths.^{5,3}

Despite their increased susceptibility to depression and anxiety throughout pregnancy and the postpartum phase, tribal women continue to be inadequately supported by public health initiatives focused on maternal mental health. These disorders can jeopardize essential caregiving practices vital for ensuring the survival of children.⁶ Recently, in 2023, only 81.6% of deliveries among STs occurred in hospitals, compared to the national average of 89%. Further, only 52% of tribal infants received all birth-dose vaccinations, far below the national average of 67%. This leaves nearly half of tribal newborns (48%) unprotected against preventable diseases during their most vulnerable early days.^{7,1} Various factors played a role in the underutilization of ANC services, including a lack of awareness and prevailing attitudes towards pregnancy care. Moreover, there was a common inclination towards traditional healers, attributed to their accessibility, affordability, and the use of herbal treatments.⁸

Gaps in institutional delivery and vaccination coverage, along with preterm birth, low birth weight, poverty, and inadequate maternal health and nutrition, contribute significantly to adverse neonatal outcomes and mortality among tribal populations in India. Harmful home-care practices, untreated maternal complications, and inadequate neonatal care further increase the risk of infections and death among mothers and newborns. Most tribal women begin childbearing during adolescence, before reaching full biological and social maturity. Nevertheless, all newborn babies should ensure essential newborn care such as thermal protection, Kangaroo Mother Care (KMC)-promoting early skin-to-skin contact between mothers and newborns for proper temperature regulation, umbilical cord hygiene, early initiation and exclusive breastfeeding, preventive treatment, including BCG and hepatitis B vaccination, vitamin K administration and ocular prophylaxis, as well as assessment for signs of serious health problems (low birth weight, illness, or maternal HIV infection).⁹ The health measures since pregnancy, at birth and during the four weeks of life, can prevent maximum newborn deaths if skilled health workers perform effective health procedures at birth, with prompt treatment of conditions

such as pneumonia, prematurity, low birth weight, diarrheal diseases, neonatal infections, and birth trauma. Despite government's several running initiatives, significantly gaps in grassroots healthcare delivery still persist due to inadequate resources and high healthcare costs. Tribal infants face high mortality due to the challenges of delivering healthcare services and their socioeconomic conditions. Within many resource-challenged and culturally varied settings, traditional healers assume a vital role in healthcare provision, delivering care for multiple conditions, including noncommunicable diseases like type 2 diabetes.¹⁰ To improve neonatal survival effectively, strategies must focus on enhancing perinatal care, nutrition supplementation, childbirth in hospitals, and ensuring all birth dose vaccinations at scheduled times to lower neonatal deaths. Improving outreach health services and community-based interventions is essential in underserved community areas.

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REFERENCES

1. Ministry of Health and Family Welfare, India. National Family Health Survey-5 (2019-21). New Delhi: Ministry of Health and Family Welfare, India; 2021. Available at: <https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf>. Accessed on 14 August 2026.
2. Ministry of Tribal Affairs, Government of India. STs Statistical Profile at a Glance. New Delhi: Ministry of Tribal Affairs, Government of India. Available at: https://tribal.nic.in/downloads/Statistics/STsStatistica lProfileAtaGlance_09072024.pdf. Accessed on 14 August 2026.
3. Kumar D, Srivastava S. Neonatal mortality and associated factors in tribal community. *Indian J Public Health*. 2024;68(2):336-7.
4. Lawn JE, Cousens S, Zupan J. Lancet Neonatal Survival Steering Team. 4 million neonatal deaths: when? Where? Why? *Lancet*. 2005;365(9462):891-900.
5. Singh T, Kumar D. Perinatal risk in India's Scheduled Tribes. *Lancet*. 2024;404:933-4
6. Singh, Taranand, and Dinesh Kumar. Children under 5-year mortality and the risk of maternal mental illness among India's scheduled tribe. *Indian J Psychiat*. 2025;67(3):350-3.
7. Kusuma YS, Kumari A, Rajbangshi P, Ganie A, Sarala R, Kumar D, et al. Vaccination and associated factors among tribal children of 1 year age in nine Indian districts: A cross-sectional study. *Trop Med Int Health*. 2023;28(7):530-40.

8. Kumar D. A Qualitative Study on Maternal and Child Health Practices among Baiga Tribe of Madhya Pradesh State in Central India. *J Community Health Management*. 2016;3(1):23-7.
9. World Health Organization. Newborns: improving survival and well-being, 2020. Available at <https://www.who.int/en/news-room/fact-sheets/detail/newborns-reducing-mortality>. Accessed 14 August 2026.
10. Saxena N, Dinesh K, Aparup D. Connecting the unconnected. *Current Sci*. 2021;120(1):24-6.

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