

# India needs 'giant leap' to meet 2030 targets in reducing child mortality rates

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IIASA researchers have found that almost half of the districts in India are not on track to reduce the mortality rates of newborns and meet the target set out under Sustainable Development Goal 3 (SDG3) for 2030, while a third will not meet the target for under-five mortality rates.

India still has the world's highest number of deaths among children under five and newborns, around 1.1 million per year. The new study, by IIASA researchers Jayanta Bora and Nandita Saikia, is the first to evaluate neonatal and under-five [mortality](#) at a [district](#) level in India, as well as a state level, with respect to SDG3. They aimed to provide information to help policymakers and health professionals set better objectives to reduce childhood mortality.

"The state-level mortality rate does not reflect the inter-district variation in neonatal or under-five [mortality rates](#). While some districts of a particular state may already have achieved the SDG3 target 15 years in advance, some districts will not achieve this even by the 2030 target time," says Bora. "Mortality rates vary enormously across the districts."

Under SDG3, "Ensure healthy lives and promote well-being for all at all ages," all countries should aim to reduce [neonatal mortality](#) to 12 deaths per 1,000 live births per year, and under-five mortality to a maximum of 25. Saikia and Bora used data from India's National Family Health Survey, a survey of the full birth history of Indian women aged 15-49, carried out most recently in 2015-16, and used the data from the previous round conducted in 2005-06 to model future trends.

They found that the various measures employed in India have cut the number of deaths of under-fives by around half in in the past 23 years, from 109 deaths per 1,000 live births in 1990 to around 50 in 2013, but this is still double the target. The number of neonatal deaths remains around 2.4 times higher than the target, at around 29 deaths per 1,000 live births.

The picture, however, is very complex. For example, the under-five mortality rate for boys in the South West district of Delhi is 6.3 per 1,000 live births, well within SDG3 targets. However, in Rayagada in Odisha, the mortality rate is 141.7. The researchers found that just 9 percent of districts in India overall have so far reached the SDG3 targets for neonatal mortality, with 14 percent reaching the targets for under-five mortality.

The vast majority of the worst performing states on mortality rates are in the poorer states of north-central and eastern India, although there are some high-risk districts in richer, more developed states such as Andhra Pradesh and Gujarat. Almost all districts in the most populous states of Uttar Pradesh, Bihar, Madhya Pradesh, and Chhattisgarh will fail to achieve the SDG3 goal on neonatal mortality. In Uttar Pradesh, the research showed that not a single district would meet the target for under-five mortality.

There is also some variation between genders. The female neonatal mortality rate is below that of males, which is expected as this is the global trend. However, this is not the case with under-five mortality, indicating gender discrimination, something discussed in earlier research by Saikia.

Much of the variation is likely due to socioeconomic and geographic disparities. District-level female literacy rates vary from 24-89 percent while urbanization ranges from 0-100 percent. There are also large

differences in the implementation of mortality reduction schemes and the accessibility and availability of healthcare.

"Since about 52 percent of districts are lagging behind when it comes to neonatal mortality rates, neonatal health should be prioritized. At the same time, district-specific, instead of state-specific, programs should focus on the most vulnerable population subgroups," says Bora.

One of the main barriers identified by Saikia and Bora is the inadequate operational management of the available mother and child healthcare services, which they say the government should focus on, particularly in the lowest-performing districts, which may be in richer and more advanced states, not just in struggling, poorer states like Uttar Pradesh. Chhattisgarh and Uttar Pradesh will need particular help, however. More education for girls and mothers in less developed communities in poorer, rural areas should also be a priority, while NGOs could help by providing community-based awareness programs for all parents. State governments should focus on improving public health facilities and ensure they are properly staffed.

"It is important to note that India experienced the highest reduction in mortality rate in the period 2005-2016. Therefore, to achieve the SDG-related mortality goals at the district level, it needs to intervene more rigorously than ever," says Saikia. "The majority of Indian districts need to make a giant leap to reduce their neonatal and under-five mortality rates."

**More information:** Jayanta Kumar Bora et al, Neonatal and under-five mortality rate in Indian districts with reference to Sustainable Development Goal 3: An analysis of the National Family Health Survey of India (NFHS), 2015–2016, *PLOS ONE* (2018). [DOI: 10.1371/journal.pone.0201125](https://doi.org/10.1371/journal.pone.0201125)

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