Accelerated progress to reduce under-5 mortality in India

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India has made steady progress in reducing deaths in children younger than 5 years, with total deaths declining from 2·5 million in 2001 to 1·5 million in 2012.[1] Achievement of the 2015 Millennium Development Goal for under-5 mortality (MDG4) for India—38 deaths or fewer in children younger than 5 years per 1000 live births—is important for the country's children and for reaching global targets.

Neonatal and 1–59 month mortality vary substantially between subregions of India as a result of the underlying differences in social and economic status, child nutrition status, health services, work culture, gender bias, and other factors that affect child mortality. The National Rural Health Mission recommends district-based planning for maternal child health programmes and, indeed, for other disease-specific initiatives. Availability of district-based mortality data and reliable information about barriers to achieving MDG targets in some of the districts is important for more effective local planning and action.

In *The Lancet Global Health*, Usha Ram and colleagues[2] report neonatal and 1–59 month mortality data for 597 districts in India in 2012 and compare these data with 2001 findings to assess progress towards achieving the 2015 MDG4. The key findings are that, from 2001 to 2012, under-5 mortality declined by an average of 3·7% (IQR 3·2–4·9) per year and that just over a third of all districts are on track to reach MDG4 by 2015. An important but not surprising message is that 222 districts are likely to achieve MDG4 only after 2020. These lagging districts account for over half of the total deaths in children younger than 5 years. Expectedly, the rate of decline in the lagging districts is slower for neonatal mortality than for 1–59 month mortality.

Insights into why many districts have a slow rate of decline in child mortality despite efforts of the National Rural Health Mission are beyond the scope of the article by Ram and colleagues.[2] District-level, cause-specific mortality data are not provided because they are not available. Further analyses are needed to identify barriers to progress that can be corrected as district plans and programmes are redesigned and reinforced.

Diarrhoea, pneumonia, and high rates of undernutrition and micronutrient deficiencies are common causes and contributing factors to postneonatal deaths. Although use of oral rehydration solution has improved in most parts of India, use is substantially lower than in some neighbouring countries, and zinc treatment has been slow to pick up. The contribution of pneumonia to under-5 mortality is still high because of persistent difficulties in access to treatment and in navigation of referral pathways. This issue needs urgent attention.

Prevention works better wherever access to treatment is a challenge. Rotavirus and pneumococcal conjugate vaccines should be introduced when feasible, and use of pentavalent vaccines that also provide protection against *Haemophilus influenzae* infections needs scaling up. Interventions to improve water, sanitation, and hygiene are nearly as effective as these vaccines and should be prioritised.

With respect to acceleration in reduction of neonatal mortality, the progress made to increase the proportion of women giving birth in hospital has been impressive in many parts of India, and this progress needs a further push in areas where this achievement is less striking. Surveillance for adoption of best practice in health facilities would ensure progressive reduction in early neonatal mortality and linkage with community-based programmes after hospital discharge. The mortality and morbidity reduction as a result of improved newborn care practices has been repeatedly shown.[3-5] Home visitation programmes, supported by community mobilisation, should be scaled up. Much work needs to be done to support recognition, care seeking, and referral of sick neonates and young infants to appropriate facilities.

The districts that have the greatest challenges merely need stronger government and community efforts. Programme implementation can be supported by promotion of innovation in care delivery and strengthening of programme management. Financial incentives, where appropriate, should be considered to improve care seeking and access to treatment. In less well performing districts, not-for-profit institutions working in close synergy with local health systems can help to improve programme implementation and monitoring.

Overall, the steady decline in under-5 mortality in a large country like India is laudable; however, acceleration

through greater investment, focus, and innovation is needed in regions and districts that are doing less well. This goal can be achieved, as shown by some of India's neighbours.

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