

Strategies to reduce perinatal mortality



In the past few decades, there has been an impressive decline in the mortality of children younger than 5 years worldwide. Child mortality was given impetus by Millennium Development Goal (MDG) 4, which aimed to reduce the under-5 mortality rate by two-thirds, between 1990 and 2015. Although this figure will not be reached globally, child mortality has nevertheless been reduced by 53% over this period.¹ However, the reduction in neonatal mortality has been much slower, with the result that, by 2012, neonatal mortality constituted 44% of all deaths in children younger than 5 years.² To reduce child mortality further, a focus on preventable neonatal deaths is essential.

In *The Lancet Global Health*, Catherine Pitt and colleagues³ report findings from their cluster-randomised controlled trial of the cost and cost-effectiveness of the Newhints newborn home-visit strategy in rural Ghana. Similar studies have been done in south Asia,⁴ but this was the first to be done in sub-Saharan Africa. The Newhints intervention consisted of home visits to pregnant women and their newborn babies by community-based surveillance volunteers. One of the primary objectives of the study was to assess the effect of the intervention on neonatal mortality. In the paper presenting the results of the Newhints trial,⁵ Betty Kirkwood and colleagues reported that, although there was a reduction in neonatal mortality of 8% in the intervention group, this did not reach statistical significance. However, the investigators did a meta-analysis by combining their results with three studies from south Asia, which then showed a significant reduction in neonatal mortality of 12%.

Using the finding of a 12% reduction in neonatal mortality, Pitt and colleagues show that, even though the reduction in neonatal mortality was relatively modest, the intervention would still be cost-effective.³ With further statistical modelling they calculate that such an intervention is likely to be cost-effective across a wide range of neonatal mortality rates—namely, 20–60 deaths per 1000 livebirths. The conclusions of the study support the WHO recommendation that a newborn home-visiting programme should be implemented in low-income and middle-income countries.⁶

Despite these findings, the study should be viewed in its context. The region in which the study was done

already had an existing cadre of community-based surveillance volunteers who assisted with, for example, registration of births and national immunisation days. These volunteers received further training from the study team to undertake home visits during pregnancy and during the first week of life of the neonate. The volunteers received monthly incentives of US\$3-49 to do these visits, and similar bonus payments for good performance. In the absence of such an existing cadre in the community, it might be necessary to pay a modest salary to establish such workers, which would substantially increase the cost of the intervention.

As Pitt and colleagues rightly point out, their findings would be expected to be relevant to other rural areas of Ghana and rural areas of other similar countries. However, such a system would not easily be transferable to an urban setting. With the increasing urbanisation that is taking place in most low-income and middle-income, different strategies might need to be developed to ensure effective early follow-up of newborn babies.

The Newhints trial was not expected to have more than a small effect on the mortality rate in the first 24 h after birth, which is mainly attributable to birth asphyxia and complications of prematurity.⁵ However, 36% of all neonatal deaths happen in the first 24 h after birth.⁶ Prevention of these deaths requires appropriately trained health-care professionals, adequately equipped facilities, and the necessary life-saving commodities for women and newborns. The same requirements are needed for the management of serious illness later in the neonatal period that might be detected by community health workers and referred for treatment. The quality of maternal and newborn care in health facilities in many countries with a high burden of maternal and neonatal deaths is often suboptimum, resulting in many preventable deaths, and this situation needs to be addressed.

In addition to the focus on neonatal mortality, stillbirths were not part of the MDG agenda, despite having a major effect on pregnancy outcomes. Estimates show that 2.9 million neonatal deaths occur globally each year, and an additional 2.6 million babies are stillborn.⁷ It is therefore encouraging that the most recent Cochrane review on community-based intervention packages not only confirmed the

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findings of the Newhints meta-analysis with regard to a reduction in neonatal mortality, but also showed a significant reduction in stillbirths.⁸

Thus, although community health workers should be an important component of strategies to reduce perinatal mortality, a continuum of quality care during pregnancy, labour, delivery, and throughout the neonatal period will be key to achievement of the reduction, and ultimately the elimination, of avoidable perinatal deaths.

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I declare no competing interests.

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