

## Maternal and perinatal mortality in resource-limited settings

Claudia Hanson and colleagues (July, 2015)<sup>1</sup> report that maternal mortality was four times higher in women who lived more than 35 km from a hospital in rural Tanzania than in women who lived within 5 km of a hospital. We strongly agree with the findings of their study, but are interested to know whether a similar association was noted between distance and perinatal mortality.

Of the 17 427 deliveries at Modilon Hospital, the only referral hospital in the Madang Province of Papua New Guinea, over a 6-year period, three-quarters of pregnancy-related deaths were recorded in women presenting late to hospital as a result of distance and logistical constraints limiting access

to hospital. Additionally, poor quality obstetric care in peripheral health facilities caused a clinically significant increase in the risk of late presentation and maternal deaths in our setting in Papua New Guinea.<sup>2</sup> Because of the high maternal mortality in Papua New Guinea, increased efforts have been made by the government and its partners to improve availability and accessibility of quality obstetric care.<sup>3</sup> Consequently, our in-hospital maternal mortality ratio declined from 893 per 100 000 livebirths in 2009 to 363 per 100 000 livebirths in 2014 ( $p < 0.001$ ; figure).

We would be interested to know whether Hanson and colleagues noted any correlation between maternal and perinatal mortality in relation to distance in their study.<sup>1</sup> Although access to professional health care during childbirth should obviously reduce perinatal mortality in parallel

with maternal mortality, we did not find this in our setting ( $p = 0.10$ ; figure). This result highlights the fact that efforts aimed at reducing maternal mortality in developing countries should not overlook neonatal survival.

We declare no competing interests.

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- 1 Hanson C, Cox J, Mbaruku G, et al. Maternal mortality and distance to facility-based obstetric care in rural southern Tanzania: a secondary analysis of cross-sectional census data in 226 000 households. *Lancet Glob Health* 2015; **3**: e387–95.
- 2 Bolnga JW, Hamura NN, Umbers AJ, Rogerson SJ, Unger HW. Insights into maternal mortality in Madang Province, Papua New Guinea. *Int J Gynaecol Obstet* 2014; **124**: 123–27.
- 3 University of Technology Sydney. Maternal and Child Health Initiative PNG. 2013. <http://www.uts.edu.au/research-and-teaching/our-research/who-collaborating-centre/key-strength-areas/maternal-and-child-1> (accessed June 8, 2015).

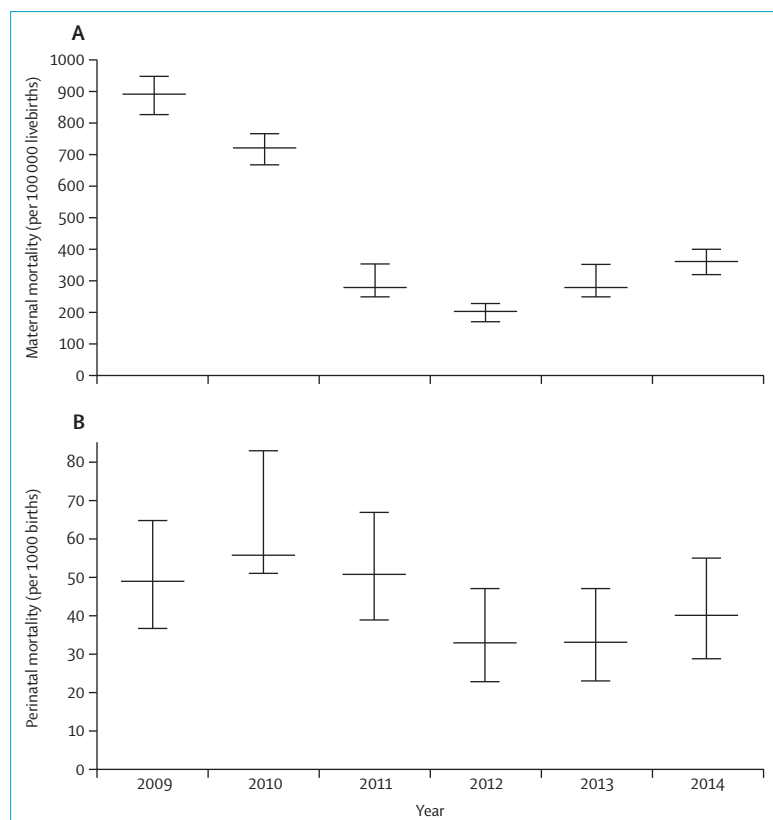


Figure: Trends in (A) maternal mortality and (B) perinatal mortality at Modilon Hospital, Papua New Guinea, 2009–14

Data are mean and error bars are 95% CI.