Incomplete vital registrations systems mean that causes of death during pregnancy and childbirth are poorly understood in low-income and middle-income countries.

To inform global efforts to reduce maternal mortality, researchers from
King's College London and institutes in Pakistan, Mozambique, India and Canada have studied the reasons why 143 women died during pregnancy and soon after birth in the Community-Level Interventions for Pre-eclampsia (CLIP) cluster randomized control trials of over 60,000 women in Pakistan (105 deaths), Mozambique (22 deaths) and India (16 deaths).

The study, published today in *Lancet Global Health*, compared three different ways of determining the causes of death for these women, the majority of which were in their late 20s when they died.

Lead researcher, Laura Magee, Professor of Women's Health in the School of Life Course Sciences at King's, noted that: "In these three countries, where individual health care providers work exceptionally hard within constrained circumstance, women died in pregnancy 10 to 30 times more often than they do here in the UK. Each one of these deaths is a tragedy within the woman's family and her community, especially as we identified that there were often missed opportunities to avoid the mother's death that arose from social, economic or health system factors."

The team compared physician review and computerized analysis of verbal autopsies (interpreting verbal autopsies [InterVA] software), to understand their agreement on maternal cause of death. It was concluded that careful review by doctors of individual women's stories before they died provided insights that agreed better with an older computerized approach to finding out why women died (InterVA-4), than with a newer version (InterVA-5).

Co-lead researcher, Peter von Dadelszen, Professor of Global Women's Health in the School of Life Course Sciences, continued:

"This gap between what InterVA-5 determined had happened and what
had actually happened is very important, as we must learn from each and every one of these sad stories to provide better care in future."

The findings conclude that improvements need to be made to InterVA-5. While InterVA-4 and InterVA-5 were accurate in identifying high blood pressure in pregnancy as a cause of death, InterVA-5 chose bleeding after birth as the cause of death more frequently than it should have and was least likely to assign medical causes such as heart disease, HIV and malaria as often as it should have. In the UK, these 'indirect' medical causes of maternal death are of increasing importance.

Professor von Dadelszen added: "Accuracy in finding the cause of death helps to identify opportunities for improving pregnancy outcomes no matter where a woman lives, whether in Matiari, Mumbai, Maputo or Manchester."


Provided by King's College London


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