



Report for PBE on economic assistance to the Maternal Mortality Campaign

Introduction

In April last year, PBE asked an economist from the Bank of England to look at a request from the Maternal Mortality Campaign to investigate data on maternal mortality and morbidity and child mortality in order to provide economic arguments about the cost and benefits of investment in health care initiatives to reduce mortality. The materials would be used by MMC in their campaigns, particularly in respect of the Millennium Development Goal 5.

The specific requests from MMC were to:

- Investigate the origins and assumptions underlying a commonly quoted estimate from USAID dating from 2002 that the global cost of maternal and infant mortality is "\$15 bn a year in lost productivity".
- Update the estimates on the cost of maternal mortality.
- If feasible, build an economic model based on the costs and benefits of investment in maternal healthcare, to show the economic case for such investment in terms of higher GDP growth in a way that would persuade finance ministers as well as campaigners.
- Review the wealth of reports and data on maternal mortality in order to provide statistical evidence in support of MMC's campaigns.

Research and investigation

- The economist located the original paper from which the USAID estimate was drawn and had a productive correspondence with the author, Dr Bart Burkhalter, who provided a paper documenting all the assumptions and calculations underlying the estimate. The model (REDUCE) that was used to produce the USAID estimate, was reviewed, together with other research into maternal mortality that used the REDUCE model.

- A number of other studies and statistical reports on maternal mortality including from the UN, USAID and Lancet journal were reviewed.
- Briefing was produced on the costs and benefit calculations in a report on broader investment healthcare in Africa by Harmonization for Health in Africa.
- A comparison was made of the different assumptions used to formulate cost and investment figures in the various studies.

The outcomes of the project

- Briefing was provided to MMC on the assumptions underlying the USAID estimate of global maternal mortality, and the economist provided further disaggregated data drawn from the original study. A review of the literature found an extensive search by Swedish authors Islam and Gerdtham on this exact topic. The authors used both electronic searches of published studies and manual searches for grey (unpublished) literature and found only one published paper (a cost-benefit study of emergency obstetric care in Bangladesh) and four unpublished papers that used the REDUCE model. The unpublished papers showed the economic cost of maternal ill health and mortality in four African countries.
- Briefing was provided as background for the Maternal Mortality Campaign's work around the African Union Summit in July 2010 and received positive feedback from Caroline Green at MMC.
- It did not prove possible to update Dr Burkhalter's estimates of the global cost of maternal mortality, largely because of lack of comparable data. One of the main learning points in the project was the huge difficulty in finding reliable data and data that is comparable across countries. There is also a lack of a coherent methodology on measuring costs. A key finding of Islam and Gerdtham was that: "although it is evident that MNIH (maternal-newborn ill-health) results in suffering for women and children and hinders economic development through its huge burden for society, in order to stimulate further policy debate future research efforts should be directed towards theoretically sound and comprehensive COI (Cost of Illness) studies with use of longitudinal and experimental data."
- Simple calculations were provided using more recent data to estimate the cost of maternal mortality globally and in two national contexts. The work showed how such estimates vary according to different underlying assumptions and the uncertainty of some data.