Saving South Africa's mothers, newborns and children – can the health system deliver?

South Africa is one of only 12 countries where the under-5 mortality rate is higher than the baseline of 1990. We are not just off track for Millennium Development Goal (MDG) 4, but actually going in the wrong direction. Each year an estimated 2 500 mothers die, 20 000 babies are stillborn and another 21 900 die before they reach 1 month of age, and an additional 52 600 children die before their 5th birthday, most from preventable and treatable causes and with no measurable progress being made in mortality reduction. The rates of maternal and child mortality are many times higher than those in other middle-income countries such as Brazil, Argentina and Thailand. HIV/AIDS is a leading contributor to both maternal deaths (44%) and under-5 mortality (57%). However, many of the same factors that are responsible for the rise of HIV/AIDS, such as poor quality of health services, lack of leadership, poverty and gender inequities, are also responsible for poor maternal and child outcomes independent of the impact of HIV/AIDS.

In their recent *Lancet* paper (see references at end) Chopra *et al.* apply Lives Saved Tool (LiST) modelling to estimate the impact of a wide range of possible neonatal and childhood interventions. They estimate that 11 500 neonatal deaths could be prevented each year if existing interventions were effectively and consistently implemented to cover 95% of mothers and newborns. This estimate does not include moderately advanced interventions such as continuous positive airway pressure (CPAP) ventilation for preterm babies with respiratory distress that are already used in South Africa. The highest-impact interventions are intrapartum care including the full obstetric care package, as well as antenatal steroids for preterm birth, care of sick newborns, kangaroo mother care, and routine postnatal care.

Scaling up prevention of mother-to-child transmission of HIV (PMTCT) along with improved infant feeding would save around 37 200 child lives each year. Preventive child care and case management of other childhood illness are important, but the analysis of lives saved shows relatively low impact since preventive care in South Africa is already at high coverage, so for example the incremental lives saved in going from 83% coverage for measles immunisation to 95% is low, although the public health importance is still high. In addition most child deaths are neonatal or HIV related, and less than 10% are directly due to diarrhoea and pneumonia. However, it is important to sustain high levels of effective coverage of preventive care and case management.

In summary, almost 50 000 newborn and child lives could be saved in the year 2015 if South Africa reached high, effective coverage, especially of PMTCT and newborn care. This would put South Africa right on target for MDG 4 (Fig. 1), and also contribute significantly to progress for maternal health (MDG 5).

This is a synopsis of one of the papers in the recent *Lancet* series 'Health in South Africa'.

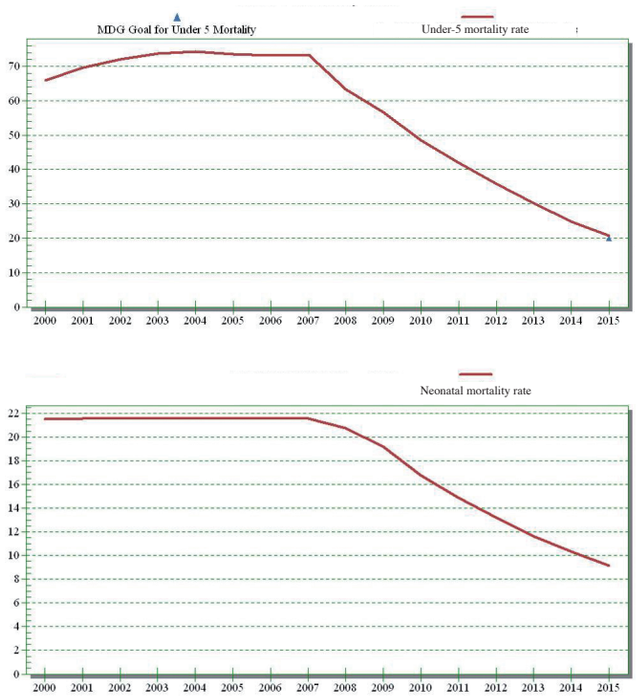

Fig. 1. Predicted progress towards reduction of child mortality (above) and neonatal mortality (below) if coverage of prevention of mother-to-child transmission of HIV, newborn care, and preventive child care reached 95% by 2015.

However, to save these lives in the real world of the South African health system, the challenge is to ensure not only high coverage for all but also higher-quality coverage. Too often the high-impact interventions are being performed sub-optimally. For example, even though more than 90% of women complete at least one antenatal visit a recent assessment showed that only about 11% received the full set of interventions required. The quality gap between contact with the client and provision of effective care is especially important in diluting the effectiveness of more complex interventions such as PMTCT. Large-scale investment in the employment of thousands of HIV counsellors in ANC clinics has increased the coverage of HIV testing to almost 70% of pregnant women, but only 60% of the women subsequently identified as HIV infected and 45% of their babies received nevirapine – a cascade of missed opportunities.

The situation for newborns and children gives a similar image of decreasing care along the time continuum. Despite the high coverage of institutional delivery and immunisation there are missed opportunities for high-impact child survival interventions. Coverage of postnatal care in the first few days after delivery is not routinely measured but is estimated to be less than 10% in South Africa. Filling the gap for early postnatal care in the first few days after birth is crucial, as this is the time of highest mortality for mothers and babies and

also the key moment for effective support for feeding choices related to PMTCT.

Strong leadership and local accountability are critical for success, especially at the primary care and district hospital levels. Re-energising and re-motivating health workers are priorities. The *Lancet* paper gives a number of examples from around the country demonstrating success in improving quality of care, but these are all relatively small in scale. A more systematic approach implemented at a larger scale across the country is urgently required. This will require a new level of leadership, vision and commitment. Our new Minister of Health is saying the right things – the crucial test will be for action to follow, with the health system delivering to save lives and put us on track for the MDG 4 goal that we now have the ability to meet.

Mickey Chopra and Joy E Lawn, for the author team

Mickey Chopra
Chief of Health UNICEF
New York

Joy E Lawn
Director Evidence and Policy, Saving Newborn Lives, Save the Children
Cape Town

Corresponding author: *joylawn@yahoo.co.uk*

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