



Addressing infant mortality

Childhood mortality rates have been used as a yardstick for measuring the development of countries for many years, and the improved survival of children below the age of 5 years is one of the aims of the 2015 Millennium Development Goals (MDG).¹ Even though mortality rates for children aged between 1 month and 5 years have shown a steady decrease in the last 25 years, the neonatal mortality rate for infants below 1 month has remained constant. Each year an estimated 4 million babies die in the first 4 weeks of life (neonatal deaths), with a similar number of stillborns, giving an enormous annual burden of perinatal deaths.²

To attain the improved childhood survival goal of the MDG the emphasis must shift to the prevention of neonatal deaths, especially in poor communities. Only 1% of these deaths are found in high-income countries, the remaining 99% being in middle- and low-income countries.

It is estimated that 28% of all infants aged under 1 month die because of preterm birth. Although they constitute only 14% of deliveries, they account for 60 - 80% of neonatal deaths. It is therefore important to try to establish why these babies die. It is felt that a reduction of mortality in moderately preterm and growth-restricted infants is feasible without the need for complex and expensive technology.

Using systems like the *ICD 10* codes does not distinguish true preventable neonatal deaths from those conditions in which resources, or the lack thereof, play a role. The Perinatal Problem Identification Programme identifies more of the possibly preventable factors in neonatal deaths.³ There is an inherent problem in classifying the primary cause of death as prematurity. If babies can survive with appropriate care and technology in the same country in the private sector, surely the deaths in the state sector cannot simply be blamed on prematurity? Other factors such as limited staffing and resources, the unaffordability of surfactant, overcrowding and infections should be named as important causes contributing to these deaths. Not identifying these modifiable factors leaves the onus on the obstetric services to reduce low-birth-weight rates, and ignores the responsibility of the health service to ensure good newborn care.

A reduction in the neonatal mortality of most low-birth-weight infants can be achieved by providing basic resuscitation, encouraging breast-feeding, preventing hypothermia and promoting kangaroo mother care (KMC).⁴ In South Africa many of these components of essential newborn care are currently being addressed with the teaching of resuscitation of newborns included in most pre- and postgraduate medical school curricula and an outreach programme to teach resuscitation skills to all staff involved in

newborn care. Breast-feeding has become the gold standard, but is increasingly coming under siege owing to the high incidence of HIV in mothers. The many advantages of exclusive breast-feeding must be stressed. KMC promises to help reduce the unbearable and ever-increasing load of small babies currently receiving conventional intensive care in neonatal services. Whether this drive derives from a belief in the benefits associated with KMC, or is a desperate attempt by neonatologists to cope with the ever-increasing load of small babies, or both, is debatable. Unfortunately the medical aid schemes in South Africa do not fund this very cost-effective form of care. Our immediate aim should be to provide essential basic care to every newborn infant in South Africa.

There is a need for diagnostic demarcation if valid geographical comparisons of neonatal deaths are to be made both in terms of providing more accurate statistics and with the aim of improving services. South Africa consists of a mixture of high-, medium- and low-income communities. The favourable outcome of small babies in the private sector is well known, as is the frustration of doctors who are restricted by arbitrary weight cut-offs for intensive care in the state sector. Velaphi⁵ found in his current study that 50% of infants weighing less than 1 000 g survived, but this number could be substantially increased if all had access to comprehensive care. The dreaded increased incidence of poor neurological outcome when small infants are saved by intensive care did not occur in high-income countries, except in babies with extreme prematurity.

Training of medical and nursing personnel is an integral part of the service provided by most neonatal intensive care units in the state sector. A large proportion of these trained doctors and nurses eventually move to the private sector, where almost every preterm baby is offered neonatal intensive care. However, how can teaching hospitals train future health workers in the private sector to care for extremely immature babies if there is restricted access to intensive care for these babies in the state sector?

If the aim is to reduce infant mortality in South Africa, we may need to re-evaluate every aspect of neonatal services. It is essential to improve the basic care of all infants in the rural areas, as well as provide facilities to ventilate more babies in towns and cities. During the antenatal period, diagnosis of perinatal infections, HIV care and the administration of prenatal corticosteroids will improve outcomes. The lives of many preterm infants could be saved in smaller hospitals with the use of intermediate technology such as the early use of surfactant and continuous positive airway pressure ventilation (CPAP). With careful planning, good affordable care at an appropriate level could be offered to all newborn infants in South Africa.



Thanks to Professors J Smith and D Woods for their invaluable input.

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