

ABSTRACT

Maternal and Child health is a global priority. Numerous treaties, initiatives and programmes have been formulated to try and improve the health and well-being of pregnant women and mothers and their children. The latest effort is the Millennium Development Goals that aim to inspire countries to drastically reduce maternal and child mortality and address specific disease and related challenges by 2015.

International figures currently show that despite the many commitments, the health status of mothers and children remain poor in most developing countries. The same is true for South Africa despite its middle income status. Local data show a steady increase in infant and under-5 mortality, and maternal health status is also not optimal.

South Africa has adopted almost all international treaties, initiatives and programmes. Concerted efforts must therefore be made to rectify and address the core contributing factors to poor maternal and child health. Whilst many of these lie outside of the health sector, the health services have a significant contribution to make and, at the very least, health interventions with known effectiveness must be implemented in the best possible way. In addition, all other sectors need to be held accountable for their role in improving maternal and child health. For children, in particular, all sectoral policies and plans need to be viewed through a child-rights lens, and child impact assessments must be done to ensure that children and their families are not harmed, but enjoy maximum benefit.

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INTRODUCTION

A partnership for Maternal, Newborn and Child Health was launched in New York in September 2005.¹ This marked an important renewed commitment towards improving maternal and child health. This partnership marked the merger of three previous initiatives: namely, the Partnership for Safe Motherhood and Newborn Health, the Healthy Newborn Partnership and the Child Survival Partnership. More than eighty members representing partner countries, United Nations (UN) and multinational agencies and various other non-governmental and academic associations are part of this initiative. The partnership has strong African support and representation. The question remains whether this will be able to effect a reversal in maternal and child mortality trends as the 2015 deadline for the achievement of the Millennium Development Goals (MDGs) approaches.

This chapter focuses on the maternal aspect of women's health and the overall health of children. Children include all persons under the age of 18 years. Maternal health refers to the period in a woman's life that involves pregnancy, child birth and postnatal care. It is integrally linked to the perinatal care of children, this being the period of gestation and the month after birth. The inextricable link between the health of mothers and children continues well beyond the perinatal period as the health and well-being of women has a profound impact on the health and well-being of the children they care for. It is important to recognise that issues of maternal health also apply to girl-children as one fifth of all pregnancies are to teenagers, placing such girls at significant health risk.

Addressing the health needs of women and children is not an issue of pure economics and should not be seen as necessary only for purposes of economic benefits in the long-term. Instead, health for women and children is a basic and non-negotiable human right that has found expression in various international and national treaties, instruments, policies, laws and programmes.

Despite these commitments throughout the developing world, pregnant women and children of all ages still die at high rates from preventable conditions. Many children remain 'invisible and excluded' as outlined in the 2006 "State of the World's Children" report by

United Nations Children's Fund (UNICEF).² In one critical analysis on the impact of the political economy on child survival, the authors note that: "a persistent high death rate among children is widely considered to be one of the most telling indicators of unmet health needs in a population."³ The adverse situation of many mothers and children in the developing world has been significantly compounded by the devastating impact of the HIV pandemic. In most developing countries women of reproductive age now have the highest HIV prevalence rates in the population, and in the absence of a well-functioning prevention of mother-to-child transmission of HIV (PMTCT) programmes, millions of babies are born with HIV-infection.

It is imperative therefore that the women and children receive special consideration in health care provision.

This chapter outlines:

- ◆ The international context of maternal and child health;
- ◆ The context of maternal and child care in South Africa (SA);
- ◆ Trends in maternal and child health in SA;
- ◆ South Africa's commitment to the various international and regional initiatives in addressing maternal and child health challenges; and
- ◆ Challenges in relation to meeting the MDGs for 2015.

The chapter primarily draws on secondary information sources that include grey and unpublished literature, as well as peer-reviewed publications reflecting the context of maternal and child health. No primary research was conducted, except a rapid audit of provinces to assess progress made on the recommendations of the 1999-2001 Saving Mothers Report.



INTERNATIONAL MATERNAL HEALTH CONTEXT

Many different treaties, policies and programmes have been developed over time to prioritise and address the health needs of pregnant women, mothers and children. The efforts of the GOBI FFF programme^a of the 1970s were laudable and certainly had the potential to save the lives of millions of children worldwide. However, this did not change the death and disease patterns brought about by diarrhoeal disease and malnutrition to any great extent and these are still amongst the number one killers of children worldwide.³

The goal of “Health for All by the Year 2000”, based on the goals of the Primary Health Care approach, is still fresh in the minds of those who fought for greater equity in health care. As the health world recognised the unattainability of this ambitious goal, new goals to try and renew efforts towards improving maternal and child health were put in place.

The MDGs is one of the most recent global efforts. Eight MDGs were formulated, each with time-bound targets. Four of the eight goals directly relate to women and children. The goal of combating HIV and HIV-related illnesses, malaria and other diseases relate very strongly to women and children as they bear the greatest burden of many of these infectious conditions. The remaining three goals speak directly to the socio-economic factors and environmental factors that impact on the lives of women and children.⁴

It is evident that the failure in improving the health of women and children is not due to a lack of global policies and programmes, but lies in the social and economic contexts in which these are applied and the overall weakness of the health systems that have to implement them. Unless these fundamentally change, it is likely that the MDGs will become yet another set of unattainable goals.

An important shift has been the rooting of maternal and child health efforts within a rights-based context, recognising health for these two priority groups as

a basic human right that should enjoy the highest priority in all spheres of activity within countries and governments. These frameworks are commented on in more detail in later sections.

MATERNAL HEALTH CONTEXT

The 1994 International Conference on Population and Development (ICPD) produced a Programme of Action that was signed by 179 countries and that subsequently became the cornerstone of most national reproductive health policies and programmes. It was remarkable not only in its recognition of the contribution of reproductive health (including maternal health) to development, but also because it was rooted in the principles of human rights. Shifting the focus away from demographic targets, the Programme of Action outlined policy steps towards realising “(a person’s) right to attain the highest standard of sexual and reproductive health... and the right of access to health care services that will enable women to go safely through pregnancy and childbirth”.⁵

The strength of using a human rights approach to improve maternal health and reduce maternal mortality is that it provides both the formal mechanisms to hold governments accountable and expose rights violations, as well as defining a developmental approach based on a set of principles and values that guide the progressive realisation of these rights.⁶ These principles of equity, transparency, accountability, participation and non discrimination, provide a lens to guide how maternal health policy should be made, priorities set, strategies developed and programmes implemented. In the context of resource strapped health services, a rights-based approach promotes systemic long term health system planning for sustained maternal mortality reduction and counters the current trend for short term, cost efficient, quick fixes that fail to address underlying power and resource imbalances.

Twelve years later, despite the ICPD’s focus on development and rights, for millions of women in developing countries, maternal mortality ratios remain high, some (for example Malawi, and Zimbabwe) are worsening, and almost everywhere there remains deep inequity between poor and rich. Poor women with limited access to care are dying during childbirth.

^a GOBI FFF refers to the programme launched by UNICEF that used the interventions of Growth Monitoring, Oral Rehydration, Breastfeeding and Immunisation as strategies to improve newborn and child survival. The FFF was added at a later stage in recognition of the crucial role of nutrition and women in child health and well-being. The three F’s represented Family planning, Female literacy, and Food supplementation

TABLE 1:
Global maternal mortality patterns

UN region	Maternal mortality ratio (maternal deaths per 100 000 live births)	Number of maternal deaths (per annum)	Lifetime risk of maternal death 1 in:
World Total	400	529 000	74
Developed regions	20	2 500	2 800
Developing regions	440	527 000	61
Africa	830	251 000	20
Asia*	330	253 000	94
Latin America and the Caribbean	190	22 000	160
Oceania*	240	530	83
South Africa	150**	1 600	70***

Source: WHO, UNICEF, UNFPA, 2004;⁷ WHO, UNICEF, UNFPA, 2004;⁹ DoH, 1998.⁸

Note: * Japan and Australia / New Zealand have been excluded from the regional averages and totals.

** South African Demographic and Health Survey, 1998.

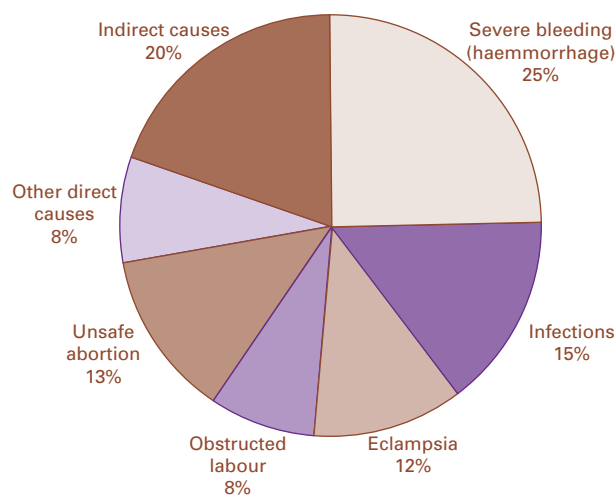
*** Estimates developed by WHO, UNICEF and UNFPA. WHO/RHR/01.9, WHO 2001.

PATTERNS OF MATERNAL MORTALITY AND MORBIDITY – WHY THE CAUSE FOR CONCERN?

The epidemiology of maternal mortality and morbidity is characterised by huge disparities between developed and developing countries. Whereas pregnant women in the developed world face maternal mortality ratios of less than 20 deaths per 100 000 live births, women in many parts of Africa and Asia have maternal mortality ratios in excess of 1000 per 100 000 live births. Each year, it is estimated that 530 000 women die in childbirth. This number has not shifted over the past decade. Even within countries, there is an unequal distribution of maternal deaths – women in rural areas are more at risk than those in urban areas. South Africa compares very favourably to the average for the developing world regions, but poorly to that for developed countries (Table 1).

The leading causes of direct deaths are consistent: haemorrhage, infection, unsafe abortion, eclampsia and obstructed labour (Figure 1). In countries with high HIV and malaria prevalence rates, the proportion of indirect deaths may be far higher with co-infection with tuberculosis a significant factor.

FIGURE 1:
Causes of maternal death^b



Source: WHO, 2003.¹⁰

Similarly, maternal morbidity patterns follow those for maternal deaths. For every maternal death, there are an estimated 30-50 women who survive but with short to long-term complications. Chronic problems that arise, including vesico-vaginal fistulae and infertility, are

^b Total is more than 100% due to rounding.



preventable and treatable with the same interventions as those available to reduce maternal mortality.¹⁰ But the social stigma associated with these complications, and the lack of access to health services, means that for many women, they continue to suffer in silence. It is within this context, that there is now a convergence of international awareness on the crisis in maternal health and mortality.

POLICY TRENDS

In the arena of maternal health, the inclusion of maternal health as a Millennium Development Goal arguably represents the single biggest policy step since ICPD.

For the first time, maternal health has been formulated as a goal (MDG 5 see table 2).

TABLE 2:
Targets and Indicators for the Millennium Goal Five

Goal	Targets	Indicators
Improve maternal health	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio, ensuring faster progress amongst the poor and other marginalised groups.	<ul style="list-style-type: none"> ✧ Maternal mortality ratio ✧ Proportion of births attended by skilled health personnel

Source: United Nations.⁴

Whereas one of the widely acknowledged problems with the ICPD Programme of Action was that it was not accompanied by a strategy (internationally or nationally) on how it was to be funded, this has shifted with the adoption of the MDG targets as the starting point for many of the international financing institutions and donor loan and grant agreements.

To ensure that the MDGs were implemented, the United Nations Secretary General commissioned The Millennium Project to develop a practical plan of action to meet the MDGs. Core recommendations of the Millennium Project Task Force Four on Child Health and Maternal Health, focused on building a functioning, inclusive health system that includes skilled birth attendants at all deliveries and ensuring access to emergency obstetric care for all women who experience complications, with human rights as the fundamental premise underpinning their recommendations.¹⁰

These recommendations have been reinforced in the maternal health and maternal mortality field through a number of mechanisms. In 2005, the Partnership for Maternal, Newborn, and Child Health (PMNCH) was launched. This represents an umbrella organisation with more than 80 organisations and partners, functioning at international through to local level. Previously the Safe Motherhood arena had been characterised by numerous organisations, many functioning independently, often with overlapping programmes, occasionally with conflicting agendas. With the establishment of the PMNCH, it is hoped that a unified framework for action will be developed, with increased resources, support for national planning processes, and promotion of donor convergence at the country level. It is still too soon to evaluate the effectiveness of this initiative.

The 2005 World Health Report focused on mothers and children.¹¹ Entitled “Make Every Mother and Child Count”, it called for scaling up of investments in health systems and human resources to ensure that maternal, newborn and child health constitute the core of health entitlements protected through public funds and social health insurance systems.

Recognising the importance of the right of women to safe pregnancy and childbirth, and the centrality of health systems to realising these rights, special mention must be made of the important contribution made by the UN Special Rapporteur on Health, in his report to the UN Commission on Human Rights.¹² The Special Rapporteur has brought into sharp focus the right of women to reproductive health and, embedded within this, the right to safe pregnancy and childbirth.

Placing maternal health on the development agenda as an MDG not only recognised the role of women in alleviating poverty, but, because of the centrality of health systems in decreasing maternal mortality, provided an opportunity to monitor access to health care and improve health systems. Countries have agreed to track and be held accountable against the target and indicators associated with MDG Five. Countries appear to be paying more attention to their nation’s maternal mortality ratios and recognise, in most instances, that the situation requires serious, sustained attention.

STRATEGIES TO REDUCE MATERNAL MORTALITY RATIOS

The fact that 530 000 women die each year in child birth, millions more become chronically disabled, and that it is generally recognised that MDG 5 is the single goal **least** likely to be achieved by 2015, has caused the international community to rewrite and evaluate past Safe Motherhood strategies, and identify the gaps.

Three issues emerged. The first is that strategies which have been implemented to improve maternal health and well-being are not necessarily the same as those that will have a significant impact on decreasing the maternal mortality ratio. Secondly, some interventions are more effective than others, and in resource strapped countries, it is vital to prioritise those most likely to decrease the number of women dying. And lastly, and most importantly, any serious attempt to decrease maternal mortality will require a head on engagement with improving health services – this cannot be ignored or bypassed.

IMPROVING MATERNAL HEALTH

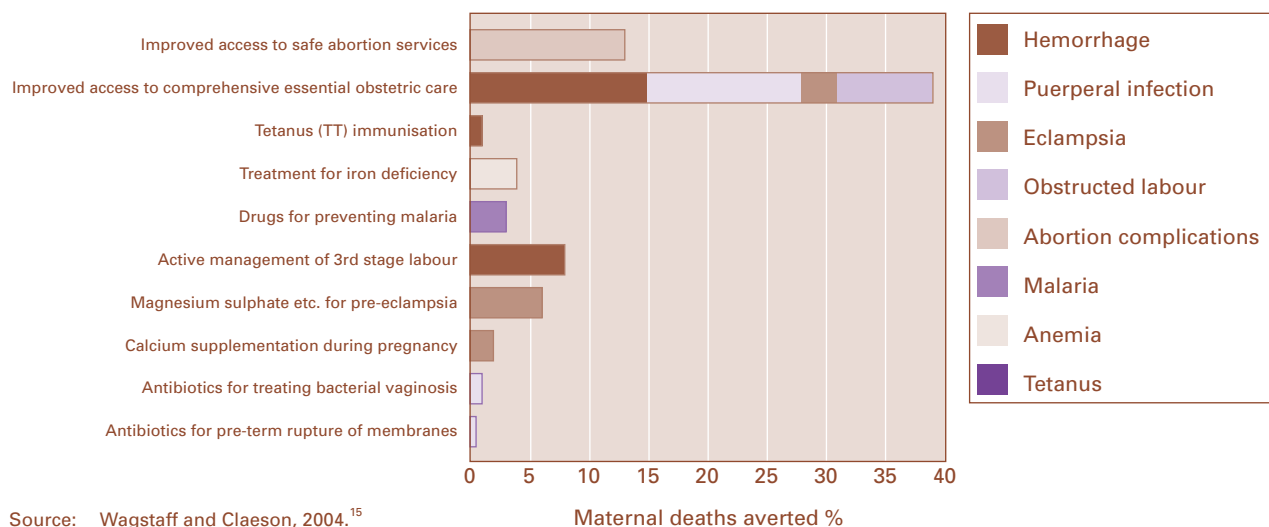
Strategies to improve maternal health start before a woman is pregnant. Facilitating the empowerment of the girl child, female education, good nutrition and ensuring access to contraception and safe abortion to ensure that each pregnancy is planned and wanted, all contribute to maternal well being. During pregnancy, antenatal care provides an essential opportunity to link

women with the health system, receive appropriate management of problems that arise during the course of the pregnancy, and treatment and support in high malaria and HIV prevalence areas. All of these are vital strategies to improve maternal health, but in and of themselves are not interventions that will significantly prevent a woman from dying in pregnancy or childbirth if complications arise and she needs skilled care and emergency treatment. For this she requires different strategies.

REDUCING MATERNAL MORTALITY

Earlier Safe Motherhood programmes adopted strategies to reduce maternal mortality based on the assumption that complications in pregnancy or childbirth in women most at risk could be prevented or predicted (Figure 2). These programmes also focused attention on training scores of traditional birth attendants (TBAs) to assist women in developing countries who were delivering at home. As a result governments and international agencies, invested energy and millions of dollars in two key interventions that have been shown to have limited impact on reducing maternal mortality ratios: training traditional birth attendants to work in the community;¹³ and adopting a risk approach to screening women at high risk for complications in pregnancy and child birth. Traditional birth attendants may certainly improve the routine delivery care that mothers and newborns receive, but they have proved ineffective in significantly reducing the maternal mortality ratio.¹⁴

FIGURE 2:
Strategies to reduce maternal deaths



Source: Wagstaff and Claeson, 2004.¹⁵



Figure 2 shows that full use of existing services would dramatically reduce maternal deaths.

The TBAs are seldom supported by health services, lack the infrastructure and life saving skills to manage complications effectively and at times fail to refer a woman requiring emergency care for fear of losing their reputation (as well as money).⁶

Adopting a risk approach will identify ‘high risk’ women through antenatal care and will indeed reduce deaths amongst these women. But, such a focus on high risk prediction will also create a false sense of security, believing that it is possible to identify all women who will develop complications and require emergency care. This is not correct. In absolute numbers, more ‘low risk’ women develop complications unexpectedly. Amongst these ‘low risk’ women complications are recognised late; there are inadequate systems to ensure timely referral to emergency care; and upon reaching these health services, appropriate care may not be available.

Recognising the failure of these two strategies, the international community called for all deliveries to be attended by skilled birth attendants (SBAs); reached consensus on the definition of a skilled birth attendant (Box 1) and recommended strategies that prioritise the scaling up of institutional deliveries. These skilled birth attendants must be able to manage normal deliveries, and recognise, stabilise and refer women who develop complications. They should preferably be situated within a health facility, and if not, should be able to tap into efficient referral systems. Further there is universal acceptance that countries must work to ensure that emergency obstetric care is available twenty four hours, seven days a week, for all pregnant women who develop complications and require emergency care.¹⁶

Box 1:

Definition of a skilled birth attendant¹⁶

“A skilled attendant is an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postpartum period, and in the identification, management and referral of complications in women and newborns.”

Source: Making pregnancy safer: the critical role of the skilled attendant: A joint statement, 2004.¹⁶

FOCUSING ON THE HEALTH SYSTEM

A strategy that requires 24 hour emergency obstetric care and the presence of SBAs either within the health facility or linked via effective referral and communication systems, requires that there must be a functioning health system that accommodates these interventions. This strategy implies a health system that is able to provide potential fluids, antibiotics, oxytocics, and anticonvulsants, perform manual removal of retained products, and assisted vaginal deliveries (basic emergency obstetric care), as well as perform caesarean sections, and blood transfusions, (comprehensive emergency obstetric care). In other words, the health system should be able to manage the major direct causes of maternal deaths, haemorrhage, obstructed labour, eclampsia, sepsis and abortion. This requires a good drug supply with essential obstetric drugs, functioning and well maintained equipment and blood bank, a good referral system and human resources skilled to perform the necessary interventions. Attention to these systems will result in a strengthened health system, not only for maternal health, but for many other medical and surgical emergencies.

LOOKING FORWARD

If health systems are understood to be core social institutions indispensable for reducing inequity and poverty, and essential for upholding rights,¹⁷ and if attaining the highest standard of sexual and reproductive health is included amongst these rights, then applying a rights based approach to the delivery of maternal health services is critical.

What does this mean for countries? It obliges countries to prioritise those interventions that are required to redress legacies of neglect. As such, it demands that countries develop plans that progressively realise those strategies that provide access to 24-hour emergency obstetric care and to skilled birth attendants. It requires that governments are held accountable for ensuring these plans are funded, and that in turn donors and international financing institutions are obliged to focus their policies to align with government. Finally, it ensures that accountability and participatory mechanisms are put in place to enforce and facilitate that even the most marginalised women in society can claim their rights without fear of discrimination.¹⁶

SOUTH AFRICAN MATERNAL HEALTH CONTEXT

The health of women follows closely on the socio-economic welfare of the family and community in SA, as is the case worldwide. The Demographic and Health Survey (1998) estimated the maternal mortality ratio for SA to be 150 per 100 000 live births.⁸ This figure means that with about 1.1 million babies born in SA, over 1 550 women annually die from pregnancy related conditions. Most of the deaths occur among poor women with insufficient access to health services.

THE SOCIO-ECONOMIC CONTEXT AND ACCESS TO HEALTH CARE

In the past decade, SA adopted the approach that women's health is paramount and ratified and embraced all of the international treaties and programmes mentioned previously. In 1995, the Government of South Africa accepted that women and children should be at the top of the health prioritisation agenda. One of the early pronouncements of the new government was free health care to pregnant and lactating women, and to children under the age of six years.¹⁹ This was to ensure access to health care for pregnant women and young children, irrespective of their economic status.

Great strides have been made since that pronouncement by former president Mandela. New clinics were built, others were upgraded, and antenatal clinic attendance improved significantly. The Demographic and Health Survey (1998) highlighted the fact that 94% of women surveyed attended antenatal care at least once during their pregnancy compared to 89% in 1994. Deliveries in health care facilities increased from 78 to 83% during the same period, suggesting that user fees acted as a deterrent to health care access.²⁰

Though SA has good laws with regard to access to health care for pregnant and lactating women, these do not translate to quality care for many poor women. There are other factors that also impact on the health of women²¹ such as the action taken when disorders are detected. Policies will only become real for the care of women when the country attends to the socio-economic situation.²² Access is lowest for the poor, of whom the majority are Africans.²³

There is a lack of equitable provision to health care as well as inequities in health outcomes. The aggregation of indicators at provincial level mask gross intra-provincial disparities. Whites generally have better health than Africans and of the more than 1 500 women who die annually because of factors related to pregnancy, very few are White. Although antenatal care figures for SA appear very impressive, the utilisation by Whites and the Indians is higher than that for Africans. These differences remain when looking at professional attendance at delivery and when analysing rural-urban access.

The underlying philosophy behind the policies and interventions for the promotion of maternal health is that improving access to health care (antenatal and intrapartum) will improve the health of women. The guidelines and policy frameworks that guide maternal, child and women's health in SA include:

- ◆ Free health care to pregnant and lactating women, and to children under the age of six years;
- ◆ Free primary health care to all;
- ◆ Choice on Termination of Pregnancy Act, 1996;²⁴
- ◆ Notification of and Confidential Enquiry into Maternal Deaths;²⁵
- ◆ Sterilisation Act, 2000;²⁶
- ◆ Contraception policy guidelines;²⁷
- ◆ Comprehensive plan for the management of HIV and AIDS;²⁸ and
- ◆ National Health Act, 2003.²⁹

CAUSES OF MATERNAL MORTALITY AND MORBIDITY

The causes of maternal ill health are similar to those in other developing countries, the only difference being the magnitude of the various components. Hypertension, bleeding in pregnancy and childbirth, infections related to pregnancy (from prolonged and neglected labour) and medical conditions make up the leading causes of the high maternal morbidity rate and maternal mortality ratio. The Notification of and Confidential Enquiry into Maternal Deaths is a process designed to evaluate, indirectly, the quality of care that women receive during pregnancy and childbirth.²⁵



Some of the underlying causes contributing to these major factors of mortality and morbidity include:

- ◆ Mismanagement of hypertension through inadequate use of magnesium sulphate in eclampsia;
- ◆ Difficulties in obtaining blood for transfusion in rural and remote centres;
- ◆ Lack of adequate emergency transport; and
- ◆ Lack of staffing generally, and, specifically, insufficient skills in anaesthetic administration.

MATERNAL HEALTH AND HIV

South Africa has one of the highest HIV prevalence rates in the world, with women of reproductive age being the most affected group. The HIV epidemic has further deepened the poverty of communities as families and communities struggle to care for those affected by HIV, in life and in death. With the increase in prevalence in pregnant women, HIV affects the health of women and children profoundly. The annual surveillance of HIV infection among pregnant women attending public health care facilities shows a steady increase in SA across all provinces. The national figures increased from 26.5% in 2002 to 30.2% in 2005. It also shows significant interprovincial variation with figures for 2005 ranging from 15.7% in the Western Cape to 39.1% in KwaZulu-Natal.³⁰

The programme for the prevention of mother-to-child transmission of HIV (PMTCT) was the first step in improving the health care of pregnant women infected with HIV in that it helped to identify those pregnant women who were HIV-positive. These women could then be counselled and educated about healthy lifestyles. Unfortunately, until the introduction of the Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for South Africa (CCMT) in late 2003²⁸ there was little available help to improve the health of those women who needed antiretroviral therapy (ART).

The programme for ART is the final step in a series of interventions towards helping HIV-positive pregnant women access care for their own health improvement. HIV has complicated the management of pregnancy and childbirth. There is evidence that anaemia is more common among HIV-positive women than in HIV-negative women.³¹ Interventions in childbirth are also

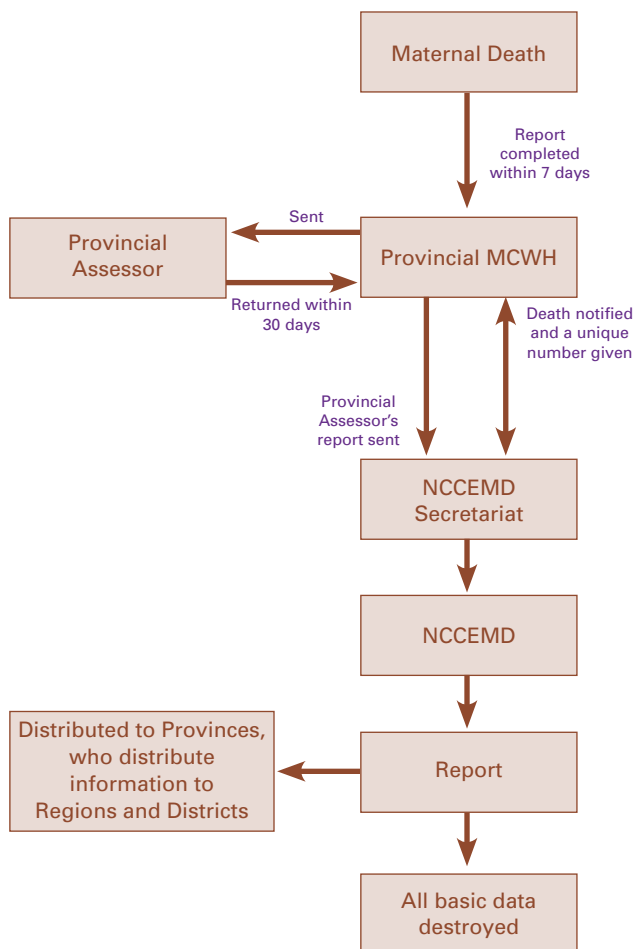
more complex, as one has to think of opportunistic and other infections. Malaria and TB are more common among people with HIV infection.^{32,33} Both these conditions are associated with anaemia. These findings highlight that HIV complicates an already dire situation for poor women.

SAVING MOTHERS

Pregnancy is one of the reproductive woman's most dangerous periods in her life. In an attempt to understand the major causes of death, the government mandated the notification of Maternal Deaths and the Confidential Enquiry into these deaths. The purpose of the system is to encourage a review of every death that occurs within a facility. The review examines the community, family or personal factors, the health system factors and the role the health personnel have played in allowing the maternal death to occur. A team of assessors (consisting of a midwife and a medical doctor) reviews the records of the deceased and, if necessary, conducts an independent and confidential enquiry into the death. The assessors send their report to the National Committee on the Confidential Enquiry into Maternal Deaths (NCCEMD), which the Minister of Health established for the purpose of identifying the causes of maternal deaths, and making recommendations for the prevention of these deaths.²⁵

The Saving Babies Report, reporting on preventable perinatal deaths and utilising the Perinatal Problem Identification Programme (PPIP) adds to the process of identifying factors that contribute to poor maternal and perinatal health and care.³⁴ Saving Mothers and Saving Babies processes are processes of audit and thus important tools for quality assurance.

Figure 3:
Notification of, and Confidential Enquiry into Maternal Deaths



Source: DoH, 2002.²⁵

PROGRESS IN IMPLEMENTING SOME RECOMMENDATIONS OF THE NCCEMD

HIV

One of the challenges is the integration of PMTCT efforts into Maternal, Child and Women's Health. The PMTCT programme falls under the HIV and AIDS unit nationally and, in some cases, provincially. This separation shifts the accountability for reducing child mortality to the HIV and AIDS unit, if the mortality is from HIV-related conditions. As the latest report of the National Committee on the Confidential Enquiry into Maternal Deaths (NCCEMD) reflects, non-pregnancy related causes accounted for the greatest number of deaths during the period 2002-2004.³⁶ Units responsible for maternal health should be responsible for reducing these numbers, with assistance from the HIV and AIDS unit.

TERMINATION OF PREGNANCY

The Choice on Termination of Pregnancy Act has resulted in fewer women dying from septic and unsafe abortion.²⁴ The national Department of Health (DoH) reports that "Over the seven-year period, access to termination of pregnancy (TOP) has increased annually". Most designated TOP facilities are public hospitals (90%), with primary health centres constituting 10%. The primary health care facilities are most accessible to the majority of women. However, there are a number of designated public health facilities that are not functional. The service in the private sector is expensive and thus not accessible to poor women. Notwithstanding this, there has been a reduction in the proportion of women dying from unsafe abortion, as reported in the 2002 Saving Mothers Report.³⁶ Women who died from unsafe abortion generally had limited access to TOP services.

The Choice on the Termination of Pregnancy Act (CTOP) has not been without opponents. The move to expanding access is therefore welcome. However, numerous sessions and workshops with nurses providing TOP services highlight the factors that prevent the more widespread accessibility of services. These include:

- ◆ Management obstruction or non-prioritisation;
- ◆ Moral and religious objection to the act of termination of pregnancy;
- ◆ National and provincial lack of will and resolve to implement the Act;
- ◆ Lack of integration of the TOP services into reproductive health services;
- ◆ Burnout for the health workers involved in the TOP services; and
- ◆ Stigma associated with provision of the service, especially in rural areas.

THE USE OF CLINICAL GUIDELINES

The NCCEMD identified the lack of clinical guidelines, especially in underserved areas, as an issue that contributes to maternal mortality. The College of Obstetrics and Gynaecology within the Colleges of Medicine of South Africa developed guidelines for the common causes of maternal deaths. The NCCEMD encourages the use of these guidelines in all health



facilities in the management of the common causes of maternal deaths.

There appears to be lack of capacity in implementing the recommendation and many health facilities do not implement the guidelines, despite the presence of these guidelines. The national DoH also developed maternity care guidelines for community health centres and district hospitals.³⁷ It appears that these guidelines also do not enjoy widespread utilisation within the targeted health care institutions.

There is also anecdotal evidence that supervision for inexperienced health workers in the underserved areas is less than optimal. The introduction of community service for recently qualified doctors has brought some relief for the women and children in underserved areas. However, there is a need to have proper supervision and guidance for the community service medical officers. These needs are felt, not only in rural areas, but in urban and peri-urban areas as well. The absence of uniform protocols in the country makes it essential to have some guidelines and protocols.

INTERNATIONAL CHILD HEALTH CONTEXT

A RIGHTS-BASED APPROACH TO CHILD HEALTH

The United Nations Convention of the Rights of the Child³⁸ (CRC), adopted by the UN General Assembly in 1989, and ratified by SA in 1996, is the key global child health rights declaration. This is supported by the African Charter on the Rights and Welfare of the Child.³⁹

Article 24 of the CRC recognises the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. In particular, the UNCRC obliges states to take appropriate measures to:

- (a) diminish infant mortality rates and child mortality rates;
- (b) ensure the provision of necessary medical assistance and health care to all children with an emphasis on primary health care;

- (c) combat disease and malnutrition through the provision of primary health care, the use of technology, and the provision of adequate nutritious foods, clean drinking water and basic sanitation;
- (d) ensure appropriate prenatal and postnatal health care of mothers;
- (e) ensure that society, parents and children, have a basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents; and
- (f) develop preventive health care, guidance for parents, and family planning education and services.

A frequently neglected section of the UNCRC is Article 23 (Box 2) which focuses on the rights of disabled children.⁴⁰

Box 2: Rights of the disabled child in the CRC

Article 23

1. States that Parties recognize that a mentally or physically disabled child should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child's active participation in the community.
2. States that Parties recognize the right of the disabled child to special care and shall encourage and ensure the extension, subject to available resources, to the eligible child and those responsible for his or her care, of assistance for which application is made and which is appropriate to the child's condition and to the circumstances of the parents or others caring for the child.

Child health is also dependent upon a number of other rights outside of health. These include the rights to survival and development, water and sanitation, nutrition, housing, social security, education, family care, and protection.⁴¹

All countries, with the exception of the United States of America, are signatories to the CRC and are obliged to report back their progress in this regard to the United Nations on a regular basis.

KEY GLOBAL ORGANISATIONS AND STAKEHOLDERS IN CHILD HEALTH

Health and children's survival in particular, is currently a key component of the global development agenda, and is dominated by three multinational agencies; the World Health Organization (WHO), United Nations Children's Fund (UNICEF) and increasingly the World Bank. The role of these global organisations in South African health policy and service development has increased significantly after the international isolation associated with the apartheid era came to an end in 1994. The WHO, for example, is a powerful player whose technical biomedical expertise is seldom questioned. The majority of these programmes are in the field of maternal and child health.

INTERNATIONAL AND REGIONAL INITIATIVES

Child survival has been the dominant selective PHC approach championed by the WHO and UNICEF. Subsequent to the initial GOBI effort, a number of additional global programmes were developed by international agencies to try and improve child health. These include the Baby-Friendly Hospital Initiative (BFHI), to try and promote breastfeeding, the Expanded Programme on Immunisation (EPI), the Vitamin A supplementation programme and, more recently, the Integrated Management of Childhood Illness (IMCI) and the PMTCT programme.

More recent global initiatives are commendable for keeping child health issues on the agenda.⁴³ The Millennium Development Goals and their importance for improving child health were reinforced by the UN Special Session on Children held in 2002.

Specific goals for children are outlined in Table 4.

'A WORLD FIT FOR CHILDREN': WORLD SUMMIT 2001

A World Fit for Children (WFC) is the outcome document of the Special Session on Children of the United Nations in 2001. Its goals fall into four priority areas:

- ◆ Promoting healthy lives;
- ◆ Providing quality education;
- ◆ Protecting children against abuse, exploitation and neglect; and
- ◆ Combating HIV.

There is a strong convergence between the outcome of the Summit and the Millennium Agenda. In essence the 'World Fit for Children' declaration adds child-centred details and focus for the MDG's.⁴⁴ The key principles and objectives of the WFC include "putting children first"; eradicating poverty by investing in children; leaving no child behind; combating forms of discrimination affecting children; and caring for every child through ensuring child survival, protection, growth and good health and nutrition. 'World Fit for children' health related goals and objectives are shown in Box 3.

TABLE 4:
Key MDG Goals and targets for children

Millennium development goal	Target, 2015
Goal 2: Achieve universal primary education	Ensure that all boys and girls complete a full course of primary schooling
Goal 4: Reduce child mortality	Reduce by two thirds the mortality rate for children under five
Goal 6: Combat HIV/AIDS, malaria and other diseases	Halt and begin to reverse the spread of HIV/AIDS. Halt and begin to reverse the incidence of malaria and other major diseases

Source: United Nations, 2000.⁴



Box 3:
Key principles of WFC

- ❖ **Infant mortality:** Reduce the infant mortality rate by at least one third, in pursuit of the goals of reduction it by two thirds by 2015.
- ❖ **Maternal mortality:** Reduction in the maternal mortality ratio by at least one third, in pursuit of the goal of reducing it by three-quarters by 2015.
- ❖ **Malnutrition:** Reduction in child malnutrition among children under-5 years of age by at least one third.
- ❖ **Water and sanitation:** Reduction of the proportion of households without access to hygienic sanitation facilities and affordable safe drinking water by at least one third.
- ❖ **Early childhood development:** Development and implementation of national early childhood development policies and programmes to ensure the enhancement of children's physical, social, emotional, spiritual and cognitive development.
- ❖ **Adolescents:** Development and implementation of national policies and programmes for adolescents, including goals and indicators, to promote their physical and mental health.
- ❖ **Reproductive health:** Access through the primary health care system to reproductive health for all individuals of appropriate ages as soon as possible and no later than 2015.

Source: UN, 2002.⁴⁴

NEW PARTNERSHIP FOR AFRICA'S DEVELOPMENT

New Partnership for Africa's Development (NEPAD) is envisaged as a key vehicle for the delivery of "our promises to children" made in the Convention of the Rights of the Child,³⁸ the Millennium Development Goals⁴ and "Africa fit for Children".⁴⁵ The African Common Position, part of the World Fit for Children Summit declaration,⁴⁴ NEPAD proposes five 'fast track strategies' to address the needs of children (Box 4).

Box 4:
NEPAD Fast-track strategies for children

- ❖ Bold political leadership against HIV/AIDS and prevention of HIV transmission amongst young people, especially young girls and infants.
- ❖ Ensuring the rights of orphans and other vulnerable children to a decent standard of living, health care and schooling.
- ❖ Bringing malaria, measles and malnutrition rapidly and decisively under control.
- ❖ Universal access to basic health services and primary education, especially education for girls.
- ❖ Better protection against all forms of violence, discrimination, abuse and exploitation.

Source: NEPAD, 2003.⁴⁶

WHAT IS THE CURRENT STATUS OF THE WORLD'S CHILDREN?

In an ironic contrast to the 2005 WHO report that called for "Making every woman and child count", the UNICEF "State of the World's Children 2006" report showed that many children in the world remain 'excluded and invisible'.² In a literal sense, children are not counted in birth or death registration systems and millions of child births and deaths go unnoticed. Only 44% and 28% of births in urban and rural areas respectively are registered in Eastern and Southern Africa.² Given that all mortality indicators for children are dependent on live births as a denominator, the ability to measure progress towards, and achievement of, the MDGs in developing countries is minimal.

Key findings of the report are highlighted in Box 5.

Box 5:
State of the World's Children Report: Excluded and Invisible – Some Key Findings²

The majority of the children in the world live in conditions of significant poverty – this manifesting in high rates of under-nutrition. A quarter of all children under-5 worldwide are moderately or severely underweight. Children also suffer many micronutrient deficiencies such as Vitamin A deficiency that greatly increases their risk for serious childhood infections.

In 2004, 4.3 million children died before their fifth birthday (one out of every 6 live births) and although children in least developed countries account for only 19% of the world's under-fives, they account for 40% of all deaths under-5.

Primary school enrolment rates for those who survive beyond their fifth birthday are 83 and 88% for girls and boys in developing countries and 65 and 71% for girls and boys in the least developed countries. However, over one third will not reach grade five and about 80% of children of secondary school age will not attend secondary school.

Considerable inequities in health prospects between rich and poor children exist within countries. Differences in being underweight, being vaccinated and dying before age five can be as high as 5 times between rich and poor. In SA the chances of dying before age five is four times higher in children from poor socio-economic backgrounds compared to rich children.

Disease profiles remain those of highly preventable conditions that are inextricably linked to living in poverty. Estimates indicate that small proportions of children with diarrhoeal disease in fact receive oral rehydration therapy. High proportions of children under-5 get acute respiratory infections (ARI) in the developing and least developed countries. Yet these are the conditions that have received attention in every single global health programme since the GOBI initiative more than 30 years ago.

Children under-15 account for 13% of new global infections and 17% of global deaths annually. In addition to being infected, children are also profoundly affected by having parents and caregivers being sick with, and dying of, AIDS.

Source: UNICEF, 2006.²

The preceding sections demonstrate that many laudable initiatives in the form of political commitments, programmes and interventions have been put in place in the last decade or so. However, the health status of children in the developing world remains a cause for concern.

THE SOUTH AFRICAN CONTEXT OF CHILD HEALTH

The health of children in SA is profoundly influenced by the social and economic conditions under which they and their families live. This is despite the middle income status of this country. This is precisely why the infant mortality rate (IMR) is regarded as an indicator of social and economic progress rather than a health indicator per se. It is therefore important to understand the broader context in which children live, as health-specific interventions are a necessary, but generally not sufficient, condition to improve the health status of children and families.

GENERAL CONTEXT OF CHILDREN

Children make up almost 39% of the South African population with over a half (54%) living in rural areas.⁴⁷ In recent years several government departments have made considerable efforts towards improving the lives of children. Currently all children have the right to free health care in the public sector. The exception to this is that normal children, or those with mild disability, pay for care at secondary and tertiary level facilities in accordance with a sliding scale linked to parental income.⁴⁸

The Department of Social Development instituted the Child Support Grant, which is a means-tested cash grant for children living in poverty, and is currently available to children up to 14 years of age. The current national uptake is 78%, ranging from 67 to 84% across provinces.⁴⁹ Current initiatives are afoot to extend this grant to all children.

Children have been granted improved access to education by the Department of Education (DoE) through a policy of exempting children who are unable to pay from school fees. Also a primary school nutrition



programme had been implemented to alleviate short-term hunger in school children. Two years ago the programme moved from the DoH to the DoE. For further information read Chapter 18 in this Review.

However, other sectors including housing, water and sanitation, labour and finance have a significant role to play in improving conditions for children. The challenges facing these sectors are compounded by the HIV epidemic with thousands of children living with ill or dying caregivers. This has a direct impact on children's ability to access health services, especially young children who are not able to consent to their own medical treatment due to their age and the health services' reluctance to attend to unaccompanied minors.⁵⁰

Abantwana Babalulilekile: Child Count, a data-base of key indicators set up to monitor progress made towards realising children's rights highlights some of the key indicators for children (Box 6).⁴⁹

Box 6:

Living conditions of children in South Africa

About 12 million (approximately 66%) children in South Africa live in income poverty, this being a monthly household income of less than R1 200 per month.

One in every four children live in overcrowded households. For all living conditions, more children are proportionally living under sub-optimal conditions compared to adults. For example, 22% (nearly four million) children live in traditional rural dwellings where basic municipal services are poor or non-existent as compared to only 14% of adults. This is indicative of population movement where children are left behind in quite difficult circumstances where adults go to cities and seek work under equally but different difficult circumstances.

Primary school enrolment figures are high for boys and girls (close to a 100%), but school completion rates are quite low.

Nearly 50% of children do not have access to clean safe water.

Source: Children's Institute, 2005.⁴⁹

CURRENT STATUS OF CHILD HEALTH

MORTALITY IN CHILDREN

As is the case with maternal health, SA has ratified and adopted almost all the international treaties and programmes discussed earlier. Several policies and programmes have been put into effect over the past ten years or so.⁵¹

Child health in SA is steeped in a rights-based context. Yet the connection between the rights, policies and laws that are meant to give effect to the rights, and programmes that are meant to give practical expression to the policies and laws often don't match. For example, despite the recognition of children's health rights in the preamble of the Health Act of 2003, very little attention is given to legal requirements for improving child health in the remainder of the Act.²⁹

Objective evidence to monitor progress made towards achieving children's rights to health is difficult as up to date mortality data on a national basis are not easily obtainable. The latest empirical data that are available on a national scale for child mortality is the 2003 South African Health and Demographic survey.⁵² The final results from the 2003 survey have not yet been published in the public domain. Data from Statistics South Africa, whilst vastly improved, still represent more than a 30% under-count of child deaths.⁵³

TABLE 5:

The Millennium Development goal targets for IMR and under-5 mortality

Indicator	1998 SA Demographic and health survey	2000 MRC burden of disease study	2015 Expected rates using 1998 as baseline
IMR	45/1 000	60/1 000	15/1 000
U5MR	59/1 000	95/1 000	20/1 000

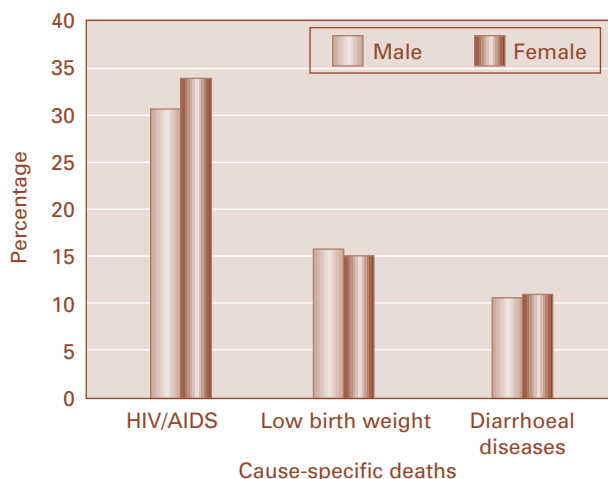
Source: UN, 2000.⁴

South Africa is, however, committed to achieving the MDGs by 2015. Table 5 depicts the progress that is required to meet this challenge that is to reduce under-5 mortality by two-thirds by 2015.

Despite the paucity of empirical child mortality data, all the modelled estimates suggest a strong upward trend in mortality rates across all age groups. This upward trend is ascribed largely to the HIV epidemic that currently accounts for about 40% of all child deaths in children under-5. This figure has been corroborated across national modelled estimates, Statistics SA data and a set of well-conducted local studies in many different settings.⁵⁴

It is also clear across all the sources of data that the remaining 60% of child deaths are mostly preventable and that despite having well-defined causes for which international and local interventions are well known, the extent of these deaths remains unchanged. The majority of deaths in the under-1 age group primarily relate to deaths in the perinatal period and diarrhoeal disease⁵⁵ (Figure 4).

FIGURE 4:
Top three cause-specific deaths of infants nationally for 2000

Source: Bradshaw et al., 2003.⁵⁴

In children older than 5, deaths due to trauma and violence (traffic accidents, burns, drowning and firearm injuries being some of the main traumatic causes) are the main causes.⁵⁵

While a Confidential Enquiry into Maternal Deaths has been established, a similar system for child deaths does not exist.

MORBIDITY IN CHILDREN

Morbidity patterns in children across the country are not well known. This situation has not changed since the previous reporting in the South African Health Review of 2000.

It is known though that in many hospitals an estimated 40% of all in-patients are HIV-related admissions.⁵⁶ The effect that this has on hospital access to children without HIV-infection is not known.

Large numbers of children are still admitted annually for complications as a result of diarrhoeal disease. In the preliminary report of the SADHS 2003, an estimated 17% of children in the 6-11 months age group had diarrhoea in the two weeks preceding the survey. It is very important to note that the 2003 survey was not done during the peak diarrhoeal season, so figures would be much higher if the survey was done at another time.⁵²

Acute Respiratory Infection remains a significant cause of morbidity and mortality. Estimates of these are expected in the full report of the 2003 SADHS.

The extent of long-term (chronic) health conditions in children are in the order of ten per cent across all conditions. This figure is probably much higher when taking the effects of HIV into account. Given the advent of antiretroviral (ARV) treatment to children,



many more children will now grow up being HIV infected, adding significantly to the pool of children with long-term health conditions.

CHILDREN'S ACCESS TO HEALTH CARE

Significant inequities still exist across rural and urban areas, between rich and poor areas in the same province and between different income quintiles in the same suburb / area. Anecdotal evidence suggests that preventative health programmes are not rendered adequately as a result of the curative workload impact and the impact of the HIV epidemic. Vitamin A supplementation for example is currently given to only 4 out of ten children who require it.⁵⁷

Coverage of the PMTCT of HIV programme, which is arguably the most cost-effective way of reducing HIV-infection in young children if implemented fully and effectively, is not known. A report on a meeting between the DoH and the Concerned Paediatricians Group in 2005, notes that whilst 78% of facilities offer PMTCT programmes, more than half of the women did not benefit from testing and of those who had testing, a further proportion do not enter into the programme.⁵⁸ Coverage also varies widely between provinces.

A recent study on practices regarding ARV roll-out for children showed that only 5% of HIV-positive children in the study sites were identified through the PMTCT programme. Their diagnosis mainly came to light as a result of attending health facilities because they were chronically ill or hospitalised.⁵⁹ Analysis of the selected treatment monitoring sites showed that by the middle of 2004 only 10% of children who should have benefited from ARV were in fact getting it.⁵⁹ The situation was not any better for adults. However, given the much narrower window between requiring treatment and dying in the case of children, this is again a situation where, if children's rights were properly understood by all duty bearers, children should be receiving greater priority in these programmes.

GAPS AND CHALLENGES IN CHILD HEALTH

It is clear from the evidence presented that child health in SA is declining rather than improving, especially for children in poor circumstances. Also, the current service provision, whilst located in a rights-based framework

and steeped in many policies and programmes, does not meet the health needs of children.

One of the most challenging issues in planning and delivery of child health services is effective integration across programmes within the DoH and with other sectors that impact significantly on child health.

It is imperative that key services that have been proven to significantly reduce mortality and morbidity in children are given priority and are implemented properly. These include perinatal services to pregnant women and their newborns, the PMTCT programme, and preventive health programmes specifically the EPI, Vitamin A supplementation and nutrition programmes.

A number of barriers to achieving these exist, perhaps the most urgent of these being adequate staffing of the services both in terms of numbers and the quality of health personnel. Further barriers include the lack of understanding as to what children's right to basic health care as stipulated in the Constitution really means and the lack of child-orientated approaches in policy development, planning and resource allocation.

CONCLUSIONS

The health of mothers and their children strongly reflects a country's commitment to health as a basic human right. It further reflects the relative priority given to its most vulnerable citizens, and further attests to gender equity, women's and child rights.

Maternal and child health are inextricably linked and improving the health of mothers impacts significantly on the health of children.

Multiple factors contribute to the attainment of good maternal and child health. Many of these lie outside of the health sector. All sectors need to be held accountable for their role in improving maternal and child health. For children in particular, all sectoral policies and plans need to be viewed through a child-rights lens and child impact assessments must be done to ensure that children and their families are not harmed, but enjoy maximum benefit.

Health services do play a crucial role and the health interventions with known effectiveness must be implemented in the best possible way. The current extent of health need, service coverage and budgetary

response is not adequately understood. Available evidence suggests that huge gaps exist. Nevertheless, the two service “points” where this most effectively lends itself to addressing the health needs of the mother-child in South Africa today is through the delivery of effective good quality perinatal services, as well as addressing the health needs of women and children in the context of the HIV epidemic.

Perhaps the most telling conclusion is that similar issues and recommendations have emerged in documents for the past decade with little notable difference in the overall health picture of mothers and children. Renewed commitment at all levels is required if South Africa is serious about getting close to achieving the MDGs.

REFERENCES

- 1 Lives. The Newsletter of the Partnership for Maternal, Newborn and Child Health. Issue 2. World Health Organization; 2006.
- 2 UNICEF. The State of the World's children: Excluded and Invisible. New York, USA: UNICEF; 2006.
URL: http://www.unicef.org/publications/index_30398.html
- 3 Werner D, Sanders D, Weston J, Babb S, Rodriguez B. Questioning the solution. The politics of Primary Health Care and child survival with an in-depth critique of oral rehydration therapy. Palo Alto: Health Wrights in association with IPHC, Third World Network and Partners in Health; 1997.
- 4 United Nations. United Nations Millennium Declaration. Resolution adopted by the General Assembly Fifty-fifth session Agenda item 60 (b). A/RES/55/2; 2000.
URL: <http://www.un.org/millennium/>
- 5 United Nations. “Report of the International Conference on Population and Development: The Programme of Action.” 1994.
URL: www.unfpa.org/icpd/docs/icpd/icpd_eng.pdf.
- 6 Task Force on Child Health and Maternal Health. Who's got the power? Transforming health systems for women and children. New York: UN Millennium Project; 2005.
- 7 WHO, UNICEF, UNFPA. Maternal mortality estimates in 2000: estimates developed by WHO, UNICEF and UNFPA. Geneva: World Health Organization; 2004.
URL: http://www.int/reproductive-health/publications/maternal_mortality_2000/mme.pdf
- 8 Department of Health. South African Health and Demographic Survey-1998. Pretoria: Department of Health; 1998.
URL: <http://www.doh.gov.za/docs/index.html>
- 9 WHO, UNICEF, UNFPA. Maternal mortality in 1995. Estimates developed by WHO, UNICEF and UNFPA. WHO/RHR/01.9. Geneva: World Health Organization; 2001.
URL: <http://www.unfpa.org/publications/detail.cmf?ID=157filterListType=>
- 10 WHO. The prevention and treatment of Obstetric Fistulae. Report of a Technical Working Group, 17-21 April 1989. Document WHO/FHE/89.5. Geneva: World Health Organization; 1989.
- 11 WHO. The World Health report 2005: make every mother and child count. Geneva: WHO; 2005.
URL: <http://www.who.int/world-health-day/2005/en>
- 12 Special Rapporteur on the right to health. Report to the Secretary General of the United Nations on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. 2004.
- 13 Koblinsky M. Indonesia, 1990-1999. Reducing maternal mortality: learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica and Zimbabwe. Washington, DC: The World Bank; 2003.



- 14 Rosenfield A, Maine D. "Maternal mortality - a neglected tragedy: where's the M in MCH?" *The Lancet* 1985; 2:83-5.
- 15 Wagstaff A, Claeson M. *The Millennium Development Goals for health: rising to the challenges*. Washington, DC: The World Bank; 2004.
- 16 World Health Organization. *Making pregnancy safer: the critical role of the skilled attendant: A joint statement by WHO, ICM and FIGO*. Geneva: WHO; 2004.
URL: <http://whqlibdoc.who.int/publications/2004/9241591692.pdf>
- 17 Gilson L. "Trust and development of health care as a social institution." *Social Science and Medicine* 2003;56:1453-68.
- 18 Schneider H, Kaka Z, Jina S et al. *A Survey to Assess the Impact of Free Primary Health Care on the Soweto Community Health Centres*. Technical Report. Johannesburg: Centre for Health Policy, University of Witwatersrand; 1997.
- 19 McCoy D and Khosa S. "Free Health" Policies. In Harrison D, editor. *South African Health Review 1996*. Durban: Health Systems Trust; 1996.
URL: <http://www.hst.org.za/uploads/files/sahr96.pdf>
- 20 Department of Health. "Celebrating 10 years of Women in Health." Pretoria: Department of Health; 2005.
URL: <http://www.doh.gov.za/docs/index.html>
- 21 Carroli G, Rooney C, Villar J. WHO Programme to Map the Best Reproductive Health Practices: How effective is antenatal care in preventing maternal mortality and serious morbidity? *Paediatric and Perinatal Epidemiology* 2001;15 (Suppl.1) p.6.
- 22 Graham W. Now or never: the case for measuring maternal mortality. *Lancet* 2002 Feb 23;359(9307):7.
- 23 Penn-Kekana L, Blaauw D. *A rapid appraisal of maternal health services in South Africa: A health systems approach*. 2002.
- 24 Republic of South Africa. *Choice on Termination of Pregnancy Act (Act 92 of 1996)*.
- 25 Department of Health. *Saving Mothers: Second report on Confidential Enquiries into Maternal Deaths in South Africa 1999-2001*. Pretoria: Department of Health; 2002.
- 26 Republic of South Africa. *Sterilisation Act (Act 44 of 2000)*.
- 27 Department of Health. *National Contraception Policy Guidelines*. Pretoria: Department of Health; 2001.
URL: <http://www.doh.gov.za/docs/policy-f.html>
- 28 Department of Health. *Comprehensive Plan for HIV and AIDS Care, Management and Treatment*. Pretoria: Department of Health; 2003.
- 29 Republic of South Africa. *National Health Act (Act 61 of 2003)*.
- 30 Department of Health. *National HIV and Syphilis antenatal sero-prevalence survey in South Africa*. Pretoria: Department of Health; 2006.
URL: <http://www.doh.gov.za/docs/index.html>
- 31 van den Broek NR, White SA, Neilson JP. The relationship between asymptomatic human immunodeficiency virus infection and the prevalence and severity of anaemia in pregnant Malawian women. *American Journal of Tropical Medicine & Hygiene* 1998;59(6):1004-7.
- 32 Steketee R, Nahlen B, Ayisi J, et al. Association between placental malaria infection and increased risk of mother-to-child transmission of HIV-1 in western Kenya. 12th World AIDS Conference. Geneva, July 1998.
- 33 Verhoeff FH, Brabin BJ, Hart CA, et al. Increased prevalence of malaria in HIV-infected pregnant women and its implications for malaria control. *Tropical Medicine and International Health* 1999;4(1):5-12.
- 34 Pattinson RC, Tlebere PM, The how, when, where, what and why babies die in South Africa. In: Pattinson RC, editor. *Saving Babies 2003: Fourth Perinatal Care Survey of South Africa*, Medical Research Council Unit for Maternal and Infant Health Care Strategies. Pretoria: PPIP Users and the National Department of Health; 2003.
- 35 Pattinson R. *Maternal Health*. In Ijumba P, Day C, Ntuli A, editors. *South African Health Review 2003/04*. Durban: Health Systems Trust; 2004.
- 36 Department of Health. *Saving Mothers – Report on Confidential Enquiries into Maternal Deaths in South Africa – 2002 -2004*. Pretoria: Department of Health 2004.
URL: <http://www.doh.gov.za/docs/index.html>
- 37 Department of Health. *Guidelines for Maternity Care in South Africa. A manual for clinics, community health centres and district hospitals*. Pretoria: Department of Health; 2002.
- 38 Convention on the Rights of the Child. Adopted and opened for signature, ratification and accession by General Assembly resolution 44/25 of 20 November 1989. Entry into force 2 September 1990. Article 12.
URL: <http://www.unhchr.ch/html/menu3/b/k2crc.htm>
- 39 African Charter on the Rights and Welfare of the Child. OAU Doc. CAB/LEG/24.9/49 (1990), entered into force Nov 29, 1999.
URL: http://www.unicri.it/wwd/trafficking/minors/docs_ilr/1990_african_charter_child.pdf
- 40 Muller L. *A review of South African child health policies, laws and programmes. A Project 28 Policy Review*. Cape Town: Children's Institute, University of Cape Town; 2006.
- 41 Shung-King M, Michelson L, Kaime T, Proudlock P, Venekens-Poane A, Ndlovu N. Children's right to health. In: Coetzee E, Streak J, editors. *Monitoring child socio-economic rights in South Africa.: Achievements and challenges*. Cape Town: Idasa; 2004. p.129-70.
- 42 Wigton A, Hussey G, Fransman D, Kirigia J, Mangan B. The winter 1996 mass immunisation campaign - is it the best strategy for South Africa at this time? *S Afr Med J* 1996;86:794-5.

- 43 Solarsh GC, Goga A. Child Health. In: Ijumba P, Day C, Ntuli A. South African Health Review 2003/04. Durban: Health Systems Trust; 2004.
URL: http://www.hst.org.za/uploads/files/chap8_03.pdf
- 44 United Nations. "A world fit for children." Outcome document of the United Nations General Assembly Special Session on children. 2002.
URL: http://www.unicef.org/specialsession/docs_new/documents/A-RES-527-2E.pdf
- 45 Pan-African Forum for Children. Africa Fit For Children: The African Common Position. 2001.
URL: <http://www.unicef.org/specialsession/documentation/documents/africa-position-forum-eng.doc>
- 46 The New Partnership for Africa's Development (NEPAD). Health Strategy. 2003.
URL: http://www.afro.who.int/dsd/nepad_health_strategy.pdf
- 47 Jacobs M, Shung-King M, Smith C, editors. South African Child Gauge 2005. Cape Town: Children's Institute, University of Cape Town; 2005.
URL: <http://web.uct.ac.za/depts/ci/pubs/pdf/general/SA%20Child%20Gauge%202005.pdf>
- 48 Department of Health. Rehabilitation for all: National Rehabilitation Policy. Pretoria: Department of Health; 2000.
- 49 Children's Institute. Abantwana Babalulekile: Children Count 2005. Cape Town: Children's Institute, University of Cape Town; 2005.
- 50 Giese S, Meintjes H, Croake R, Chamberlain R. Health and social services to address the needs of orphans and other vulnerable children in the context of HIV/AIDS. Chapter 8. p213. Pretoria: Department of Health; 2003.
- 51 Shung-King M, Abrahams E, Giese S Guthrie T, Hendricks M, Hussey G. et al. Child Health. In: Ntuli A, Crisp N, Clarke E, Barron P editors. South African Health Review 2000. Durban: Health Systems Trust; 2000.
- 52 Department of Health, MeasureDHS ORC Macro. South African Demographic and Health Survey 2003 Preliminary report. Pretoria: Department of Health; 2004.
URL: <http://www.doh.gov.za/docs/index.html>
- 53 Statistics South Africa. Mortality and Causes of Deaths in South Africa, 1997-2003. Pretoria: Statistics South Africa; 2005.
URL: <http://www.statssa.gov.za>
- 54 Bradshaw D, Bourne D, Nannan N. What are the leading causes of death among South African children? MRC policy brief No. 3, Cape Town: Medical Research Council; 2003.
URL: <http://www.mrc.ac.za/policybriefs/childmortality.pdf>
- 55 Grandin W, Westwood A, Lagerdien K, Shung King M. Deaths at the Red Cross War Memorial Children's Hospital, Cape Town 1999-2003: A study of death notification forms. Cape Town: Children's Institute, University of Cape Town; 2005.
- 56 Giese S, Hussey G. Rapid appraisal of primary health care services for HIV-positive children at public sector clinics in South Africa. Cape Town: Children's Institute, University of Cape Town; 2002.
- 57 Barron P, Day C, Loveday M, Monticelli F. District Health Barometer Year 1. Durban: Health Systems Trust; 2005.
URL: http://www.hst.org.za/uploads/files/DHB_Year1.pdf
- 58 Department of Health. Preliminary report: South Africa Demographic and Health Survey 2003. Pretoria: Department of Health; 2003.
URL: <http://www.doh.gov.za/facts/sadhs2003/main.html>
- 59 Report on a meeting between the Department of Health and the Concerned paediatricians group. Gauteng, December 2005.
- 60 Michaels D, Eley B, Ndhlovu L, Rutenberg N. Exploring current practices in paediatric rollout and integration with early childhood programs in South Africa: A rapid situational analysis. Cape Town: Horizons program, University of Cape Town; 2006.