

REPRODUCTIVE HEALTH



Jenni Smit,ⁱ Mags Beksinska,ⁱ Arthi Ramkissoon,ⁱ Busi Kuneneⁱ and Loveday Penn-Kekanaⁱⁱ

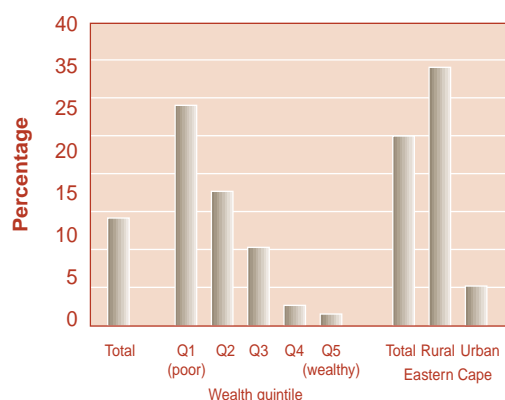
ⁱ Reproductive Health Research Unit, University of the Witwatersrand
ⁱⁱ Centre for Health Policy, University of the Witwatersrand

Distribution of antenatal visits

Number of months pregnant at time of first visit	
No antenatal care	3.1 %
Less than 6 months	62.8 %
6-7 months	28.1 %
8+ months	3.7 %
Don't know / missing	2.3 %
Median number of months pregnant	5.2

Source: SADHS 1998

Percentage of women reporting no trained assistant at delivery



Source: Analysis of SADHS 1998

Key Messages

- ◇ **Maternal health** challenges include ensuring that guidelines are implemented, and improving the technical and human quality of care provided.
- ◇ Some designated **TOP** facilities do not yet offer services.
- ◇ **Contraception** is widely available and contraceptive prevalence rates are improving, but there is an overreliance on the injectable method.
- ◇ The greatest challenge is providing appropriate contraceptive methods to women and men at risk of HIV/STIs.
- ◇ Despite high contraceptive use among teenagers, high rates of teenage pregnancy are cause for concern.
- ◇ Although there is a policy commitment to provision, **cervical cancer screening** has had minimal impact due to limited coverage of the population at risk.

Framework for Monitoring and Evaluation

Global:

- ◇ UNICEF/WHO/UNFPA Guidelines for Monitoring the Availability and Use of Obstetric Services
- ◇ WHO Reproductive Health Indicators for Global Monitoring
- ◇ Millennium Development Goals

South Africa:

- ◇ Notification of Maternal Deaths and various DoH guidelines on maternal health
- ◇ National Contraception Policy Guidelines
- ◇ National Guideline for Cervical Cancer Screening
- ◇ Health Goals, Objectives and Indicators 2001-2005

Key Indicators

- Antenatal care coverage
- Births assisted by trained health personnel
- Maternal mortality ratio (MMR)
- Perinatal mortality rate (PNMR)
- Percentage of designated TOP facilities functioning
- Contraceptive prevalence rate
- Teenage pregnancy rate
- Proportion of women ≥ 30 having ≥ 1 pap smear within 10 years

Key References and Data Sources

- ◇ SA Demographic and Health Survey (SADHS) 1998
- ◇ District Health Information System (DHIS)
- ◇ STI Baseline Survey
- ◇ Evaluation of implementation of TOP
- ◇ Saving Mothers & Saving Babies reports

Introduction

The landmark International Conference on Population and Development (ICPD) in Cairo in 1994 and the Fourth World Conference on Women in Beijing in 1995 put reproductive health firmly on the global agenda. During this period, South Africa (SA) had its first democratic election and the new government came into office with radical new policies and commitments, including the articulation of sexual and reproductive health rights in the Reconstruction and Development Programme (RDP) which was launched to redress the inequalities of the previous regime.

Reproductive health as defined in the Programme of Action of the ICPD is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes”.¹ There is a lack of clarity regarding the scope of reproductive health, sexual health and women’s health. This was alluded to in a previous edition (2000) of the South African Health Review (SAHR) in the chapter on Women’s Health² and as yet remains unaddressed. The tendency in South African policy documents and discourse is to refer broadly to Sexual and Reproductive Health. In the recently launched (2001) National Contraception Policy Guidelines (NCPG), reproductive health is described as follows: “Reproductive health implies that people are able to have a responsible, satisfying and safe sex life; and have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this is the right of men and women to be informed of and to have access to safe, effective, affordable and acceptable methods of fertility regulation of their choice, and the right of access to appropriate health care services that will enable women to go through pregnancy and childbirth safely and provide couples with the best chance of having a healthy infant”.³ Reproductive Health services are referred to as “the constellation of services aimed at fostering sexual and reproductive health. They include preventive and promotive services (such as information, education, communication and counselling); management of STIs/HIV/AIDS, infertility, abortion, and cancers of the reproductive system; contraceptive services; antenatal care, safe delivery and postnatal care”.³ In the NCPG, sexual health care is described as aiming “to enhance life and personal relationships and not merely provide counselling and care related to procreation and sexually transmitted infections”.³

In this chapter we focus mainly on five areas of reproductive health: maternal health, termination of pregnancy, contraception, teenage pregnancy and cervical cancer. Although the status of HIV/AIDS and other STIs are important components of reproductive health, they are addressed elsewhere in this Review, and are not included here in detail.

One of the key data sources for reproductive health is the SADHS. The next DHS is only scheduled to be conducted in 2004, therefore the most recent data for some indicators is for 1998.

Framework for Monitoring and Evaluation

The reproductive health indicators described and analysed here are drawn from the national Department of Health’s Strategic Plans: Health Goals, Objectives and Indicators (HGOI) 2001-2005.⁴ It should be noted that indicators are not specifically grouped under the topic ‘reproductive health’. Of the indicators listed in Table 1, only the antenatal care (ANC) coverage indicator is included in the District Health Information System (DHIS).

Table 1: Standard Reproductive Health Indicators, SA

Indicator	Numerator	Denominator	Target
Proportion of pregnant women who attend antenatal care	Number of pregnant women who attended antenatal care at least once	Number of deliveries	Increase antenatal attendance from 90% to 95%
Proportion of deliveries supervised by trained birth attendants	Number of deliveries supervised by trained birth attendants	Number of expected deliveries	Increase from 84% to 90%
Maternal mortality ratio	Number of maternal deaths related to pregnancy, or within 42 days of delivery or termination of pregnancy	Number of live births	Reduce by 25% from 150 to 100 per 100 000 live births, and by 50% to 75 per 100 000 when excluding deaths due to HIV/AIDS
% of functioning TOP facilities	Number of designated facilities providing TOP in the public sector	Total designated TOP facilities	Increase from 30% to 75% of facilities
Contraceptive prevalence rate	Number of women aged 15-49 using modern contraceptive methods	Number of sexually active women aged 15-49	Increase from 62% to 65%
Pregnancies among girls aged 15-19 years as a proportion of total pregnancies	Number of pregnancies in teenagers aged 15-19 years	Total number of pregnancies among women of all ages	Reduce from 16.45% to 13%
Proportion of PHC facilities where condoms are freely available	Number of facilities where condoms can be obtained without asking	Total PHC facilities surveyed	Improve accessibility to male and female condoms
Incidence rate of invasive cancer of the cervix	Number of women aged more than 39 years diagnosed with invasive cancer of the cervix	Total population of women older than 39 years	Reduce incidence
Proportion of women 30 years and older who had at least one pap smear within ten years according to the Cervical Screening Policy	Number of women 30 years and older who had at least one pap smear within ten years according to the cervical screening policy	Number of women 30 years and older	Screen 15% of women ≥ 30 years of age

Source: *Health Goals, Objectives and Indicators 2001-2005*⁴

Many of the World Health Organization (WHO) reproductive health indicators for global monitoring⁵ are similar to the South African standard indicators described in Table 1. In addition, WHO reproductive health indicators include 'reported prevalence of women with female genital mutilation' and 'prevalence of infertility in women'. The United Nations Millennium Development Goals⁶ also include a maternal health target ('reduce by three quarters the maternal mortality ratio') and the UNICEF World Summit for Children Goals⁷ include several maternal health indicators (maternal mortality ratio; contraceptive prevalence; adolescent fertility rate; total fertility rate; access to prenatal care; trained attendants during childbirth and referral facilities for high-risk pregnancies and emergency services).

Indicator Definitions

The definitions below are for data presented in this chapter, and in some cases differ from those defined in Table 1 (HGOI).

Maternal health: Process Indicators

Antenatal care (ANC) coverage: Proportion of pregnant women receiving some antenatal care.

DHIS data source: Estimated from the number of first ANC visits divided by the population <1 year (as a proxy for the number of pregnant women)

SADHS data source: Percentage of women surveyed who reported receiving some antenatal care from a nurse, midwife or doctor during the five years preceding the survey

Antenatal visits per client:

DHIS data source: Estimated from the total number of ANC visits divided by number of first ANC visits

SADHS data source: Median number of ANC visits reported by women surveyed during the five years preceding the survey

Births assisted by trained health personnel: Percentage of women who gave birth in the five years preceding the survey who reported receiving assistance at delivery from a doctor, nurse or midwife.

Caesarean section rate: Percentage of births that are by caesarean section.

It should be noted that the international target of 5-15% is a population-based indicator, but the data reported from the hospital minimum data set are hospital-based results.

Maternal health: Maternal Outcome Indicators

Maternal mortality ratio (MMR): The number of women who die as a result of childbearing, during the pregnancy or within 42 days of delivery or termination of pregnancy in one year, per 100 000 live births during that year.

Number of maternal deaths: The number of women who die as a result of childbearing, during the pregnancy or within 42 days of delivery or termination of pregnancy in one year. (Although this information is not strictly an indicator, it has been included due to the difficulty in obtaining the denominator data to calculate MMRs accurately.)

Maternal health: Perinatal Outcome Indicators

Perinatal mortality rate: Number of perinatal deaths per 1000 births (perinatal period is from 28 weeks gestation / 1000g to 7 days after delivery).

A more detailed account of perinatal care indices (including Neonatal death rate, Low birth weight rate, Perinatal Care Index, Stillbirth: Neonatal death ratio) is provided in another chapter of this Review.

Termination of Pregnancy

Terminations of pregnancy: The number of recorded terminations of pregnancy. Data are also reported by the sub-categories of gestational age >12 weeks, and maternal age <18 years.

Percentage of designated TOP facilities functioning: Proportion of facilities (public and private sector) which have been designated in terms of the CTOP Act that are providing TOP services.

Contraception

Contraceptive prevalence rate: Percentage of sexually active women of reproductive age (15-49 years) using modern contraceptive methods.

Condom distribution rate: Number of male (female) condoms distributed (per annum) per male (female) population ≥15 years.

Teenage Pregnancy

Teenage pregnancy rate:

SADHS data source: Percentage of women surveyed aged 15-19 who are mothers or who have ever been pregnant. The percentage of women who are mothers at the time of the survey is a more restrictive definition.

Cervical Cancer Screening

Incidence of cancer of the cervix

HGOI: Incidence rate of invasive cancer of the cervix:

Number of women ≥39 years diagnosed with invasive cancer of the cervix divided by total number of women ≥39 years.^a

Age standardised incidence rate (ASIR) of cervical cancer:

Number of new cases of cervical cancer per 100 000 population, adjusted to a standard age structure.

Proportion of women ≥30 years who have had at least one pap smear within 10 years

Maternal Health

Background

In February 1994, a Reproductive Health Steering Committee was established to undertake a national review of existing reproductive health services, followed by recommendations for future reproductive health strategy. One of the key objectives was to provide comprehensive and holistic maternity services that integrate traditional practices with modern technologies, and prioritise women's dignity in the development of services. The strategies to achieve specific goals drawn up by the RDP were then implemented from 1994.

These goals were:⁸

- ◆ antenatal care (ANC) should be free within the first 100 days

^a No recent data are currently available for the indicator as defined in the HGOI.

of government;

- ◆ 90% of pregnant women should receive antenatal care;
- ◆ 75% of deliveries should be supervised and carried out under hygienic conditions within two years;
- ◆ 90% of deliveries should be supervised by 1999;
- ◆ the right to six months paid maternity leave and 10 days paternity leave.

Some of these goals have been met: public health sector antenatal care, delivery, and postnatal care services are offered free of charge; over 94% of pregnant women attended antenatal care services in 1998; 84% of births were supervised by skilled health providers in the five years preceding the 1998 South African Demographic and Health Survey (SADHS).⁹

National maternity guidelines have been developed and lay the foundation for how maternity services should be rendered.¹⁰ Provinces were expected to adapt these according to their specific provincial needs. However, no systems have been put in place to assess if all services have received or are utilising the guidelines. In an in-depth assessment (2002) of 141 public sector PHC facilities distributed nationally, 62% reported having maternity care guidelines available. Of these, 74% had national guidelines.^b

Data

Antenatal care coverage

Antenatal coverage is an intermediate output measure of utilisation, marking progress towards the process goal of universal access to prenatal care. It is regarded as a weak proxy measure of outcome, with no link proven between prenatal visit and outcome.¹¹ It is defined as the percentage of pregnant women coming for at least one antenatal visit, and the goal is to increase antenatal attendance for care from 90% to 95%.⁴ The usefulness of this indicator is improved if it includes data on number and timing of visits.⁵

According to the 1998 SADHS, utilisation of antenatal care for births in the preceding 5 years was high. Only 3% of births were to mothers who received no antenatal care, showing an improvement in utilisation of antenatal care compared with that found in studies conducted earlier, and suggesting that antenatal services had become more accessible.⁹ Nearly three-quarters (73.1%) of births were to women who had attended four or more antenatal visits and the median number of antenatal visits was 5.3 (Table 2). Women who were less educated and women with

more babies were less likely to attend antenatal care services, and 10.7% of white women did not attend antenatal care services at all.⁹

The SADHS found that many women (62.8%) first attended antenatal services when they were less than six months into their pregnancy (Table 2).⁹ However, the median number of months pregnant at first visit was 5.2 and more than a quarter (28.1%) started antenatal care when they were six or seven months pregnant (Table 2).

Table 2: Distribution of antenatal visit frequency and timing for all live births in the 5 years preceding the survey, 1998

Antenatal visits during pregnancy	Total
None	3.1%
1	1.8%
2-3 visits	13.0%
4+ visits	73.1%
Don't know / missing	9.0%
Total	100%
Median number of visits	5.3
Number of months pregnant at time of first visit	
No antenatal care	3.1%
Less than 6 months	62.8%
6-7 months	28.1%
8+ months	3.7%
Don't know / missing	2.3%
Total	100%
Median number of months pregnant	5.2
Total number of births	4 992

Source: SADHS 1998⁹

Data on antenatal coverage are also provided by the DHIS (Table 3).¹² Indicator data collected for the DHIS are based on public and semi-private health facility data. It should be noted that the DHIS data should be interpreted with caution.¹³ Table 3 shows that increasing proportions of pregnant women utilised health services in Gauteng, KwaZulu-Natal and Mpumalanga. Antenatal coverage was lower than 80% in 2002 in Western Cape and Eastern Cape, and coverage in the Western Cape decreased from 91.7% in 2001 to 61.8% in 2002. This apparent decrease is probably due to data errors rather than an actual decline in coverage.^c

b Arthi Ramkissoon, RHRU, February 2004, personal communication.

c Calle Hedberg, March 2004, personal communication.

Table 3: Antenatal Care Coverage annualised (%)

Province	Period			
	2000	2001	2002	2003
Eastern Cape	77.5	89.7	76.5	79.3
Free State	97.4	105.2	102.1	92.3
Gauteng	77.3	103.0	109.5	133.3
KwaZulu-Natal	79.2	96.9	97.5	103.8
Limpopo	85.5	87.1	86.3	85.0
Mpumalanga	89.7	112.2	119.7	110.5
Northern Cape	71.2	85.8	89.9	75.8
North West	107.7	107.6	106.4	109.6
Western Cape	79.4	91.7	61.8	68.3

Source: DHIS Database. NDoH. Data extracted November 2003¹²

Note: Values over 100% result because the proxy denominator is larger than the true denominator. Work is underway to correct this.^d

The DHIS also reports on the average number of antenatal visits per antenatal client and shows interprovincial variation with the average number of visits per client in 2002 ranging from 3.1 in Gauteng, to 4.7 in the Western Cape.¹² The average number of visits for SA overall was approximately 4.¹⁴

According to the 1998 SADHS, antenatal care was obtained mainly from trained health personnel, with nurses or midwives providing care for 65.5% of pregnant women and doctors caring for 28.7%.⁹ Women under twenty and over thirty-four years and those with four children or more, were less likely to receive antenatal care from a doctor.⁹ Doctors were more likely to render antenatal care in urban than in rural areas (40.9% versus 16.8%). The lowest proportions of women attended by doctors were in Limpopo (formerly Northern Province), Eastern Cape and KwaZulu-Natal. Most White women (82.1%) received antenatal care from doctors, whilst only 22.8% of African women were attended by doctors. This was even more marked among rural African women, with only 14.7% receiving antenatal care from doctors and most (79.5%) attended by nurses or midwives.⁹

Births assisted by trained health personnel

The indicator on birth assistance, defined as the percentage of deliveries supervised by trained birth attendants,⁴ serves as an intermediate output indicator that marks progress towards the process goal of universal access to intrapartum care.⁵ Good medical care in hygienic conditions can reduce the risk of complications and infections to both mother and baby.⁹ This

indicator can thus be used as a proxy impact indicator linking attended delivery and improved outcome.⁵ The NDoH's goal is to increase the proportion of deliveries supervised by trained attendants from 84% to 90%.

The 1998 SADHS found that 84.4% of births in the five years preceding the survey were supervised by skilled health providers, with more than half (54.4%) attended by nurses or midwives and almost a third (30.0%) by doctors (Table 4). A small proportion of deliveries were assisted by relatives (11%) and traditional birth attendants (1.4%), whilst 2.1% of deliveries took place without assistance. A higher proportion of births was assisted by trained personnel in urban than in rural areas (93.4% versus 75.5%) and the proportion of deliveries assisted by doctors was higher in urban than rural areas (Table 4). More deliveries in the Western Cape (96.1%) and Gauteng (94.0%) were assisted by trained health personnel than in other provinces (Table 4).⁹

Table 4: Distribution of births in the preceding five years by skilled birth attendants during delivery, by residence, province and ethnic group, 1998

Attendant assistance during delivery (%)			
Background characteristic	Doctor	Nurse / midwife	Total skilled provider
Residence			
Urban	42.2	51.2	93.4
Rural	18.0	57.5	75.5
Province			
Eastern Cape	17.8	56.8	74.6
Free State	30.9	57.1	88.0
Gauteng	43.2	50.8	94.0
KwaZulu-Natal	34.1	48.5	82.6
Limpopo	13.7	64.8	78.5
Mpumalanga	20.6	55.4	76.0
Northern Cape	38.5	51.8	90.3
North West	31.4	56.9	88.3
Western Cape	44.4	51.7	96.1
South Africa	30.0	54.4	84.4
Ethnic Group			
African	24.8	57.3	82.1
Coloured	40.3	54.5	94.8
Indian / Asian	52.7	46.4	99.1
White	89.0	10.0	99.0

Source: SADHS 1998⁹

d Calle Hedberg, December 2003, personal communication.

A relationship was apparent between mothers' education and source of delivery assistance, with almost all (99.0%) with education beyond grade 12 having received assistance from trained personnel (70.3% from a doctor, and 28.7% from a nurse or midwife). In contrast, only 14.5% of women with no education were assisted by doctors and 45.2% were assisted by nurses. Poorly educated women (primary level or less) most frequently received assistance from relatives or were unassisted. Most white women (89.0%) delivered with assistance from a doctor, compared to only 24.8% of African women and only 16.4% of rural African women.⁹

In addition, analysis of the SADHS data by socio-economic status^e reveals a complex pattern of inequity. Only 1.6% of births to women in the richest quintile were delivered without a trained attendant, compared to 29.2% of births to women in the poorest quintile (Figure 1). Broad geographic categories may also mask considerable variation within provinces. In the Eastern Cape for example, the overall proportion of women delivering without a trained attendant was 25%, but this was 5.2% for urban women and 34.1% for rural women. Of concern is that over 40% of the poorest women in this province gave birth without trained assistance. Poor African women were 10 times more likely to have no attendant than African women in the top quintile, and only the very poorest White and Indian women do not have access to trained attendants at delivery.¹⁵

According to the 1998 SADHS, 83.4% of deliveries in the preceding five years occurred at health facilities (urban 92.6% versus 74.4% in rural). Women with no education were more likely to deliver at home (35.6%) compared to those who had education beyond grade 12 (2.9%). Women who received antenatal care were more likely to deliver in a health facility than those who did not.⁹

Maternal mortality ratio and other measures of maternal mortality

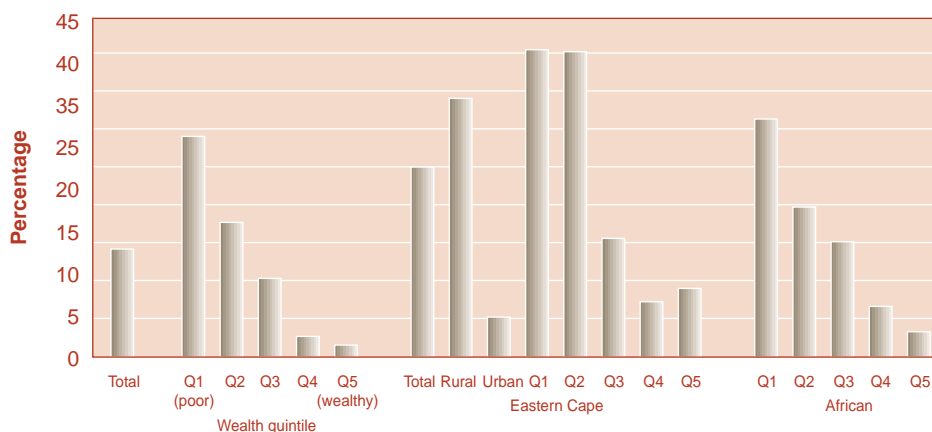
There are three distinct measures of maternal mortality in widespread use:¹⁶

- ◆ The maternal mortality ratio, the maternal mortality rate, and the lifetime risk of maternal death. The most commonly used measure is the maternal mortality ratio (MMR). This is a measure of the risk of death once a woman has become pregnant.
- ◆ The maternal mortality rate, that is, the number of maternal deaths in a given period per 100 000 women of reproductive age during the same time period, reflects the frequency with which women are exposed to risk through fertility.
- ◆ The lifetime risk of maternal death takes into account both the probability of becoming pregnant and the probability of dying as a result of that pregnancy cumulated across a woman's reproductive years.

The HGOI 2001-2005 includes the MMR as the key outcome indicator. The goal is to reduce maternal mortality by 25% from 150 to 100 per 100 000 live births, and by 50% when excluding deaths due to HIV/AIDS.⁴

In terms of the National Policy Health Act (Number 116 of 1990), the NDoH made deaths during pregnancy, childbirth and puerperium notifiable events.¹⁷ The National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD) was appointed to collect data, monitor and report on maternal deaths, and make recommendations for reducing the maternal mortality ratio. In 1999 the first report by the NCCEMD, based on a confidential study of maternal death data drawn from all levels of health care, was published.¹⁷ The 1999 NCCEMD report shed

Figure 1: Percentage of women reporting no trained assistant at delivery by wealth quintile nationally, Eastern Cape and Africans, 1998



Source: *Socio-economic Inequalities and Maternal Health in SA*¹⁵

^e The SADHS does not collect data on household income or expenditure, but does provide information on household assets, from which a weighted asset index can be constructed using Principal Component Analysis of asset variables.

some light on disease patterns resulting in maternal deaths, and also identified problems in the health system. Findings agreed with the estimation of a MMR of 150/100 000 for the period 1992-1998 reported in the 1998 SADHS.⁷ Important findings were that women aged 30 years and over were at greater risk of dying due to maternal causes than younger women, and that women in their first pregnancy, and those with five or more children were at greater risk of maternal death. The majority of maternal deaths occurred among African women (92%), 4.4% occurred in Coloured women, and less than 1% in Whites and in Indians (1.4% had no race recorded). Most of these deaths (61.5%) occurred during the postpartum period.¹⁷

The MMR is difficult to estimate in SA because reporting is health institution based and deaths in the community are often under-reported.¹⁷ Data from the 'Saving Mothers' second report¹⁸ indicated that the MMR of 150/100 000 reported in the SADHS and the first report was probably an underestimate. A more realistic figure of between 175 and 200/100 000 was estimated.¹⁸ It is also possible that there has been an increase in the MMR due to an increase in non-pregnancy related infections such as HIV/AIDS.¹⁸

Because of difficulties in obtaining denominator data to calculate the MMR, the number of maternal deaths are also reported (Table 5).¹⁸ Numbers increased markedly between 1998 and 2001 in many provinces. Whether this was due to improved reporting or to increased deaths is not known.¹⁸

Table 5: Number of maternal deaths, 1998-2001

	1998	1999	2000	2001
Eastern Cape	56	95	120	103
Free State	94	79	96	118
Gauteng	131	138	171	184
KwaZulu-Natal	188	252	238	243
Limpopo	27	63	88	62
Mpumalanga	66	72	128	96
Northern Cape	22	18	29	27
North West	58	54	115	62
Western Cape	34	34	50	42
South Africa	676	805	1 035	937

Source: *Saving Mothers: Second Report on Confidential Enquiries into Maternal Deaths in South Africa 1999-2001*¹⁸

Other Maternal Health Indicators

Perinatal mortality rate (PNMR)

The NDoH's goal is to reduce perinatal mortality by 25% from 40/1000 to 30/1000 births by 2005.⁴ The PNMR is regarded as the most sensitive indicator of obstetric care. In developed countries it is reported to be less than 6 per 1000 births, compared with a range of 30-200 in developing countries.¹³ A perinatal care survey of SA undertaken in 2000/01 reported PNMR to be in the order of 40/1000 births.¹⁹ The survey highlighted high perinatal mortality rates in metropolitan, city and town, and rural groups of 38/1000, 43/1000 and 26/1000 respectively. A more detailed account of perinatal care indices is provided in another chapter of this Review.

HIV prevalence in pregnant women

HIV prevalence is determined in pregnant women attending antenatal clinics (see the chapter on HIV/AIDS in this Review). The high rates of HIV among pregnant women provide important information about reproductive health status. HIV prevalence in 2002 increased slightly from 2001 (26.5% versus 24.8%).²⁰ The province with the highest prevalence (36.5%) in 2002 was KwaZulu-Natal, and the lowest rates occurred in the Western Cape.

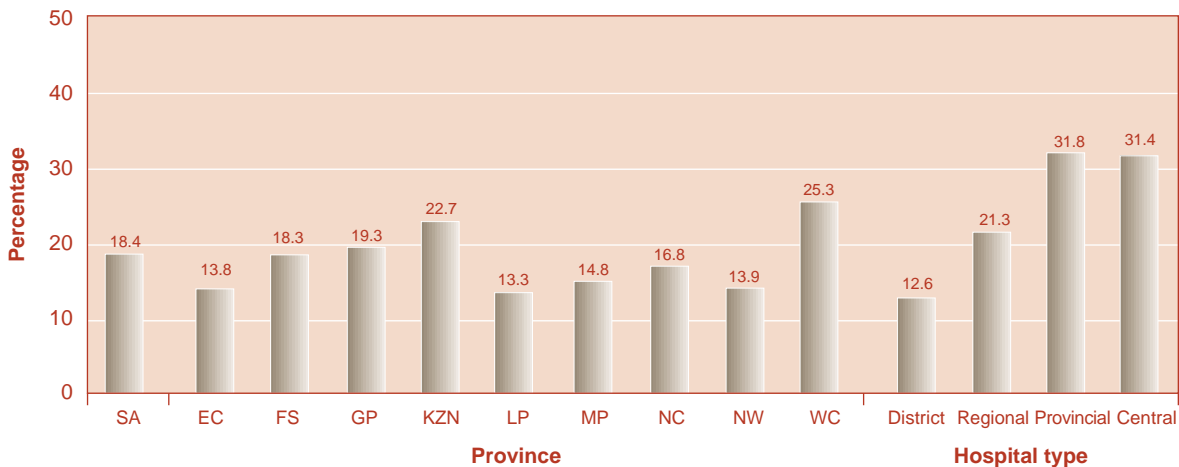
Rate of Caesarian Sections

Another key process indicator that is widely used internationally to assess the quality of maternal health care in a country is the rate of caesarean sections. The UNICEF/WHO/UNFPA guidelines recommend that the rate of caesarian sections in a country (at a population level) should be between 5% and 15%.²¹ Based on the calculation that at least 15% of pregnancies develop some sort of complication, if the caesarian section rate is below 5% it is assumed that women who need caesarian sections are not getting them, and if the rate is above 15% it is assumed that too many women are getting caesarian sections.²¹ As with all the key process indicators, it is not possible to tell from national or provincial data if women who need caesarian sections are not getting them, and if women who don't need caesarian sections are having them.

In the public sector the number of caesarian sections carried out is theoretically reported by all hospitals as part of the hospital minimum data set. Analysis of hospital returns for Caesarean Sections by province shows a range of 50 - 95%,²² therefore the data on Caesarean Section rates should be interpreted with caution, although the figures are believed to be 'broadly correct'.

In the private sector, information on the caesarian section rate is only available from the SADHS, which suggests the rate is

Figure 2: Caesarean Section Rate (%) in the public sector, 2002/03



Source: Use of the National Minimum Data Sets for Hospitals and Clinics in the Evaluation of Maternal Health Services in South Africa.²²

much higher than it should be at 37%, pointing to considerable over medicalisation^f of childbirth.⁹

The caesarian section rate (Figure 2) suggests that overall there is not a shortage of facilities that can perform caesarian sections, and not a high degree of unmet need for caesarians. If anything, the figures suggest that at least in some provinces there may be an over medicalisation of births with too many caesarian sections being done. This assumption would have to be further investigated before any conclusions in terms of policy could be drawn.

What these data indicate is that the hospital minimum data set has great potential in providing the DoH, as well as researchers and practitioners, with up to date information on the state of maternal health services in SA. More attention needs to be paid to improving the quality of data input for this data set to reach its full potential.

Data on caesarean section rates are also included in the chapters on 'Maternal Health' and 'Hospital Level Care' in this Review. Although there are differences in the values due to use of different sources or date of extraction from databases, the figures are generally similar.

Prioritising Women's Dignity in the Development of Services

Although outlined as a priority by the Reproductive Health Steering Committee, research and frequent horror stories in the media suggest that more needs to be done not just to avoid maternal mortality and morbidity, but also to improve

women's experiences of giving birth in public health facilities in South Africa.

Jewkes discovered an environment 'strongly characterised by humiliation of patients and physical abuse'²³ in a number of Midwife Obstetric Units (MOUs) in the Western Cape. Smith and Brown found that 'women using state maternity hospitals are often subjected to uncomfortable or degrading procedures for which there is no evidence or benefit'²⁴ in a study of a number of facilities in Gauteng. A number of other studies have found problems with lack of pain relief,²⁵ not allowing women's partners to attend the birth and particularly harsh treatment of poor women and teenagers using services.^{26, 27, 28, 29}

Successes, Challenges and New Developments: Maternal Health

Successes

The Confidential Enquiry into Maternal Deaths, as well as the Perinatal Care Survey, provide information on the causes of maternal and perinatal deaths that enable lessons to be learnt.

A number of important guidelines have been produced by the DoH. These include:

- ◆ Saving Mothers. Policy Guidelines for Common Causes of Maternal Deaths
- ◆ Guidelines for Maternity Care in South Africa: A manual for

f Medicalisation is the process of defining an increasing number of life's problems as medical problems. See <http://bmj.bmjournals.com/content/vol324/issue7342/>

clinics, community health centres and district hospitals

- ◆ Human Genetics Policy Guidelines for the Management and Prevention of Genetic Disorders, Birth Defects and Disability, and the
- ◆ National Maternity Case Record and Guidelines for completing the National Maternity Case Record.

Challenges

- ◆ Ensuring that guidelines are implemented. Poor health care worker performance occurred in more than half the cases of maternal deaths, with the majority happening at primary health care level. Failure to follow standard protocols was identified as a key problem.¹⁸
- ◆ Improving both the technical and human quality of care provided by health care workers is a related challenge that needs to be tackled at a number of levels. Both the Saving Mothers Reports have recommended the development of staffing norms for maternal health services, reflecting the concern that part of the explanation for poor quality care is shortage of staff. Although this has not been concretely documented, the perception is that more and more skilled staff are leaving for jobs overseas. Many of those who remain are demotivated and overworked. As well as tackling problems of the number of staff, there is also a need to review the way staff are trained and relate to patients.
- ◆ Moving beyond Voluntary Counselling and Testing services and Prevention of Mother-to-Child Transmission services towards integrating the provision of antiretroviral drugs into maternal health services. While providing treatment for mothers has great potential for reducing maternal mortality, attention must be paid to the issue of ensuring that other aspects of maternal health services that need attention are not sidelined in the attempt to provide services.

New Developments

In recognition of the lack of up to date information on the progress made in maternal and newborn health, the DoH is carrying out a detailed situational analysis of maternal and newborn care in SA in 2004. Other research projects planned to begin in 2004 include research into community understanding and participation in maternal and perinatal care, as well as staffing dynamics in maternal health.

In international safer motherhood literature there is an increasing call for invoking human rights as a way to reduce maternal deaths.³⁰ SA could use its constitution to meet this need.

Termination of Pregnancy Facilities

Background

The Choice on Termination of Pregnancy Act (Act 92 of 1996) was implemented in SA from 1 February 1997. It is one of the most liberal examples of abortion legislation in the world. The Act reflects both a desire to empower women in the country generally, and recognition that 'backstreet' abortion has been widespread, and causes significant morbidity and mortality. Midwives may perform a TOP up to and including 12 weeks of gestation. Medical practitioners may perform a TOP up to the 20th week of gestation, and in very limited circumstances after the 20th week.

Data

One of the objectives in the HGOI is to increase the percentage of designated facilities providing TOP services from 30% to 75%.⁴ TOP statistics are collected by each province which collates data from all facilities providing the service. Figures are available annually and are published by the Reproductive Rights Alliance (RRA). The most recent five year review gives an overview of the last five years of TOP provision across the public and the private sector.³¹ Key information reported includes the numbers of TOPs performed each year.⁹ This total is further broken down by maternal age (18 years or under) and gestation (over 12 weeks). The total number of TOPs performed each year continues to rise with initial data from 1997 reporting 29 375 TOPs in total. This has risen to 53 510 in 2002, and the total number performed in the 5-year period from 1997-2002 was 220 888.³¹

TOPs are available in the public and private sector. Private provision of TOPs has made an important contribution to the availability and access to the service. A number of private organisations have a network of sites in more than one province, while others are locally based in certain provinces. There is a considerable difference in availability of private facilities, with some provinces such as KwaZulu-Natal, Gauteng and Western Cape having many private facilities providing TOPs, whilst other provinces have fewer and some have none (Table 6).³¹ In the public sector there has been considerable inequity in the number of sites offering TOP services. In the five year review by the RRA, it was reported that Gauteng provided 50% of all TOPs in the first year (1997), but this was reduced to 40% over the five year

g Note that annual figures reported by RRA are from February to January of the following year, not strictly by calendar years

Table 6: TOP service provision by province, 2000 and 2003

Province	No. of designated facilities		No. of functioning facilities						% functioning facilities	
	2000	2003	Public and private		Public		Private		Public and private	
			2000	2003	2000	2003	2000	2003	2000	2003
EC	11	31	10	18	9	15	1	3	90.9	58.1
FS	9	11	5	8	4	8	1	0	55.6	72.7
GP	75	35	33	21	18	21	15	-	44.0	60.0
KZN	66	69	8	21	6	17	2	4	12.1	30.4
LP	36	41	5	35	5	34	0	0	13.9	85.4
MP	22	24	6	10	6	8	0	2	27.3	41.7
NC	2	5	2	3	2	3	0	-	100.0	60.0
NW	12	18	9	18	7	14	2	4	75.0	100.0
WC	59	72	14	55	10	31	4	24	23.7	76.4
SA	292	306	92	189	67	151	25	37	31.5	61.8

Sources: *An evaluation of the implementation of the Choice on Termination of Pregnancy Act*³²
 Judith Merckel, Reproductive Rights Alliance, December 2003, personal communication.

Note: Some data for 2003 not available.

period (1997-2002). In comparison KwaZulu-Natal, with a similar population to Gauteng, has provided 13% of the service provision.³¹

The number of designated facilities providing the service varies between provinces, as does the proportion of designated facilities that are actually providing a service (Table 6). In the Northern Cape there were only two designated facilities in 2000, but both provided the service. This has increased to three facilities in 2003. In KwaZulu-Natal however, while a far lower proportion of the designated facilities perform TOPs, a larger number of facilities offer this service.

Success, Challenges and New Developments: TOP

The number of facilities performing TOPs continues to rise and we can see from Table 6 that the number of functioning facilities has doubled between 2000 and 2003. The number of designated facilities has only marginally increased over the same time period, but the proportion functioning has improved significantly.

In the case of private facilities, there are no numbers available of functioning services in two provinces; and in both Free State and Limpopo there are no private facilities. Existing demand in other provinces indicates the need for private sector availability in all provinces, particularly for those unable to access public

services. TOP data appear to be well collected and easily accessible with regular reports from the RRA that allow for breakdown of key information by province.

Conclusions and Recommendations

Although legal TOP has been available for over five years, some designated facilities do not yet offer this service. Support to designated facilities unable to offer a TOP service is clearly needed, in particular to facilities in the more rural areas where access to TOP services is limited. The private sector could potentially play a role in under-served provinces, even though costs make their services unaffordable for many women.

Contraception

Background

Contraception plays a key role in attaining women's health. Its strongest impact on reproductive health is when it is used to prevent pregnancies that are too early, too close, too late and too many. Contraceptive prevalence is an important reproductive health indicator for global monitoring and it is often used as an indicator for development (WHO),⁵ however, this indicator does not provide information on the appropriateness of the method used. One of the key objectives in the HGOI is to increase the contraceptive prevalence rate.⁴

Data

The definition of the NDoH target is to increase the contraceptive prevalence from 62% to 65% in sexually active women by 2005.⁴ This baseline figure is taken from the first SADHS conducted in 1998.⁹ This survey is one of the most accurate ways of measuring this indicator. Family planning statistics from facilities cannot give us this information. They can, however, address the issue of method mix in contraceptive users. Most of the current information on contraceptive use was collected in the 1998 SADHS. This survey provides a wealth of information on contraceptive knowledge, attitudes and practices of women, and also addressed women's perceptions of quality of family planning services. Reasons for non-use of contraception were collected as well as reasons for breaks in contraceptive use.

Patterns of contraceptive use in sexually active women

Although the current contraceptive prevalence rate for SA reported in the SADHS is high (61.2%), this figure masks a wide variation by characteristics such as province, urban / rural setting, age, education, marital status and race (Table 7).⁹ Provincial differences in contraceptive prevalence ranged between 53.2% for Mpumalanga and 73.7% in the Western Cape. There were also distinct racial disparities in contraceptive prevalence and type of method used, with just over half (51.2%) of rural African women using a method, compared to 80.1% of Indian women. Younger women reported far higher use of contraception with the highest levels recorded for the 20-24 year age group, over two-thirds (68.0%) of whom were using a method.⁹ Education also plays a key role, with contraceptive prevalence among women who had attained an education level beyond grade 10 more than double that of women who had no education (78.1%

versus 33.1%).⁹ The majority of women (84%) obtain their contraceptive method from the public sector. The remainder used a private doctor, gynaecologist, private hospital or pharmacy.⁹

Reasons for contraceptive prevalence and method mix

The relatively high contraceptive uptake, and the method mix in South African public services deserves mention as it is unlike that of other African countries. In the sub-Saharan region SA has by far the highest contraceptive prevalence. In comparison Botswana and Namibia have contraceptive prevalence rates of 44% and 27% respectively, among women currently married or in a union.³³ However, while contraceptive prevalence in SA is relatively high, there is great reliance on a single method, the long acting progestogen-only injectable method. The patterns of contraceptive use were determined by the introduction of a strong vertical family planning service into the South African public health sector in 1974. Contraceptives were supplied at single purpose family planning clinics. In keeping with apartheid policies, the services were separated by race and also between the designated homeland areas and the Republic of South Africa. The strong political emphasis placed on the family planning programme meant that the availability of services was superior to that of other African countries. Non governmental organisations did not play a major role in the provision of contraception in SA. Some, like the Planned Parenthood Association of SA, addressed the issue of inequality of access to services by targeting special groups such as youth and those living in under resourced areas. Private sector provision covered a much smaller population than the public sector.

It is difficult to generalise about method mix as there is considerable variation among racial groups. White and Indian women predominantly use the contraceptive pill with less than 5% using the injectable method. Injectable progestin use amongst African women has been high for many years, varying between 60 and 95% in the least resourced areas. This level of injectable use ranks as one of the highest in the world.³⁴ Reasons for this unique situation are complex. The initial widespread introduction of injectables was the response to the previous government's fear of a fast growing black population. This was the focus of much criticism in the 1970s and 1980s.³⁵ Nevertheless, post-apartheid, with a progressive national contraceptive policy in place,³ the injectable method is still the most widely used and many other factors are now given for its dominance in the method mix. Many women use the injectable because of its efficacy with low failure rates (0.4 per 100 women years).³⁶ There is a strong belief among providers and clients that women will not be able to remember to take a pill every

Table 7: Contraceptive prevalence rate in sexually active women by background characteristics

Background characteristics	Any modern method (%)
Residence	
Urban	66.0
Rural	52.7
Province	
Eastern Cape	59.9
Free State	67.9
Gauteng	60.9
KwaZulu-Natal	57.1
Limpopo	53.3
Mpumalanga	53.2
Northern Cape	65.9
North West	69.6
Western Cape	73.7
Education	
No education	33.1
Sub A – Std 3 (Grade 1-5)	43.7
Std 4 – Std 5 (Grade 6-7)	53.6
Std 6 – Std 9 (Grade 8-11)	64.6
Std 10 (Grade 12)	73.1
Higher	78.1
Population	
African	57.6
African urban	62.4
African rural	51.2
Coloured	68.4
Indian / Asian	80.1
White	74.9
Age	
15-19	64.4
20-24	68.0
25-29	64.3
30-34	62.9
35-39	61.1
40-44	55.9
45-49	45.1
Total	61.2

Source: SADHS 1998⁹

day and that some women need to conceal their method of contraception from their partner.³⁷ Attitudes such as these have served to support the notion that the injectable option is ideal for both women and the over-burdened public health services of SA. The heavy reliance on one method is not unique to SA. Bongaarts and Johansson document this trend in other countries in the developing world. They ascribe the predominance of one method to the emphasis placed on that method by providers, with little method choice offered to users.³⁸

Another major reason for the high injectable use is the limited range of other contraceptive methods available in the public sector. Female sterilisation services have not been easily accessible to women, in particular in the more remote areas, and waiting lists can be long. Vasectomy services are almost non-existent in the public sector. The use of the intrauterine contraceptive device (IUD) has always been small and in recent years has reduced further due to lack of trained providers to insert an IUD, together with a concern about the high prevalence of STIs. Methods like the diaphragm are unavailable at public sector services. While the male condom has been available, it has not been actively promoted for family planning as many providers do not regard it as being sufficiently reliable for pregnancy prevention. It has been promoted instead for STI and HIV prevention. These issues were documented in the 1994 WHO assessment of reproductive health services in SA focusing on family planning.³⁵ Recommendations made in this assessment together with African National Congress health policies were the catalyst for proposed changes to family planning services. The availability of the female condom is limited to around 214 clinics across the country at present. A more detailed description of the availability of male and female condoms is provided below.

Emergency contraception was down scheduled in November 2000 and is now available over the counter in pharmacies under pharmacist supervision. It is also available in the public sector, although few clinic clients interviewed in a survey in 1999/2000 in clinics in the Western Cape, Gauteng and KwaZulu-Natal had heard of the method (23%) and it was seldom accessed from the public sector (2%).³⁹ However, 54% of providers from these clinics reported that they had supplied emergency contraception in the preceding 3 months (Table 8).⁴⁰

Table 8: Supply of Emergency Contraception by providers

Supply of Emergency Contraception	Western Cape (urban) n=90 %	Western Cape (rural) n=43 %	Gauteng (urban) n=30 %	KwaZulu-Natal (rural) n=28 %	Total n=191 %
In previous 3 months	50.0	46.5	83.3	46.4	53.9
Ever (if not in last 3 months)	30.0	41.9	6.7	10.7	26.2
Never	20.0	11.6	10.0	42.9	19.9

Source: *Expanding contraceptive choice: An Africa study of emergency contraception.*⁴⁰

Successes, Challenges and New Developments: Contraception

There have been some positive developments in the provision of contraceptive services over the last decade:

- ◆ Although vertical family planning services still remain in busy urban clinics, the integration of these services into primary health care has been ongoing since 1991.
- ◆ In 2001 a progressive contraceptive policy, which focuses on the client's right to choose, and quality of care, was launched. Service delivery guidelines for implementation of this policy have also been developed. Training of providers in this new policy is underway.
- ◆ The policy guidelines for Adolescent and Youth Health introduced in 2001 include recommendations for strategies relating to contraception. These include improving access to emergency contraception and condoms. In addition, the National Adolescent Friendly Clinic Initiative is working with primary health care clinics to make them more acceptable to youth.
- ◆ The female condom has been introduced into the public sector and is now available in over 200 sites nationally (see description of female condom programme below).
- ◆ Emergency contraception is available over the counter in pharmacies.

Research into new and old contraceptive technologies which may also offer protection against disease is currently being undertaken. The reintroduction of contraceptive devices like the diaphragm is being considered and research into the efficacy of this method against HIV is underway. A search for effective microbicides to prevent HIV is also being undertaken and most of these products are also likely to be spermicidal. New types of male and female condoms are being developed in an attempt to improve their acceptability and efficacy and to make them more affordable to more people.

Accessibility of Male and Female Condoms

In the HGOI 2001-2005, one of the objectives is to improve accessibility to male and female condoms. The indicator for this objective is the proportion of PHC facilities where condoms are freely available. This information is available from sources such as facility-based surveys.

All public sector facilities are expected to record total condom distribution for the DHIS, from which the indicator 'Condom distribution rate' is calculated (Figure 3).

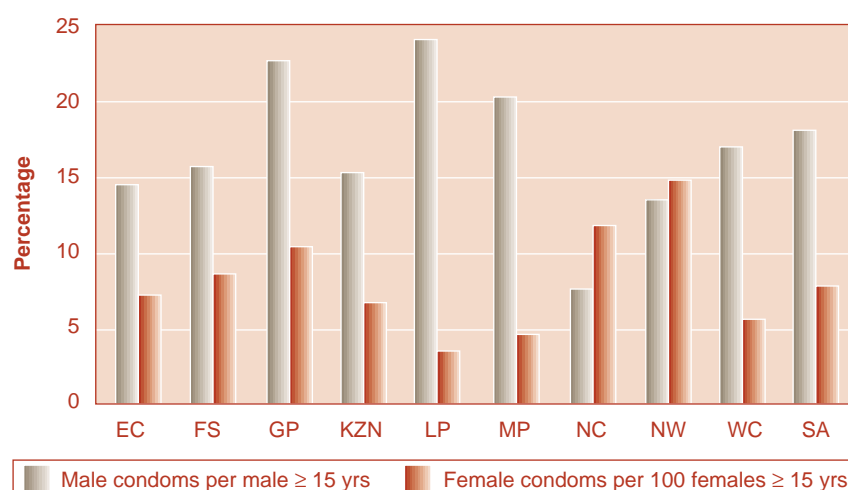
Data on condoms reported in this section are derived from the Logistic Management Information System (LMIS)⁴¹ and the National STI baseline survey of public health facilities in 2002.⁴²

Male Condoms

The NDoH is responsible for procurement and distribution of male condoms to primary sites in all provinces. The system of distribution has been improved by the introduction and maintenance of the LMIS. The system facilitates continuous supply of condoms on the basis of consumption. The approximate number of male condoms distributed to primary distribution sites in provinces in 2002 was approximately 190 million, and for 2003 the projected number was 270 million (Table 9). About 20 million condoms are estimated to be distributed every month.^{9, 43}

The National STI Baseline survey showed that, overall, during the month of July 2002, about 8 745 254 condoms were distributed through PHC public sector facilities in SA (Table 10). Five provinces, (Gauteng, Eastern Cape, KwaZulu-Natal, Western Cape and Limpopo) each distributed over a million condoms during this period. Free State and Northern Cape distributed the least number of condoms (420 565 and 174 097 respectively).

Figure 3: Condom distribution rates (male and female), Jan-Dec 2003



Source: Calculated from LMIS condom data and 2003 mid-year estimate populations (≥15 years)

Note: Data for female condoms is calculated per 100 population, since the total number of condoms distributed is much smaller than for male condoms

Table 9: Male condoms distributed to provinces, Jan-Dec 2003 (thousands)

EC	FS	GP	KZN	LP	MP	NC	NW	WC	SA
27 330	13 910	82 395	44 175	34 135	20 153	2 116	17 575	28 228	270 017

Source: LMIS, February 2004

Table 10: Estimates of total number of male condoms distributed through PHC facilities, by province in July 2002

Province	Total number of male condoms distributed [95% CI]	Condom distribution rate
Eastern Cape	1 384 732 [993 115 - 1 776 349]	9.1
Free State	420 565 [309 213 - 531 918]	5.7
Gauteng	1 765 492 [660 010 - 2 870 975]	6.1
KwaZulu-Natal	1 357 145 [750 608 - 1 963 683]	5.8
Limpopo	1 041 968 [860 501 - 1 223 436]	9.0
Mpumalanga	806 061 [607 243 - 1 004 879]	10.0
Northern Cape	174 097 [121 724 - 226 468]	7.5
North West	709 621 [522 239 - 897 004]	6.7
Western Cape	1 085 572 [701 388 - 1 469 755]	8.1
Total	8 745 253 [7 326 222 - 10 200 000]	7.2

Source: Baseline Survey of STI and HIV services⁴²

Note: Data are estimated for distribution from PHC public sector facilities only and will therefore differ from estimates for distribution to provinces (all distribution channels).

Successes, Challenges and New Developments: Male Condoms

Successes: A recent national household survey of 2 430 youth aged 15-24 years conducted by the HSRC found condom use at last sexual intercourse to be high at 53% for males and 48% for females, especially among Africans living in urban informal settings.⁴⁴

Challenges: There is a paucity of data on male condom distribution at local government and clinic level. In addition, there is evidence from the baseline survey that some PHC clinics distribute male condoms to 'non-clinic sites'.⁴² Most clinics do not record the number of condoms distributed to secondary sites. There is a need to optimise collection of data pertaining to secondary distribution of male condoms at PHC level.

New developments: In an attempt to reduce perceptions of low quality and to increase appeal to potential users, the NDoH will soon launch a new rebranded packaging for government issued male condoms.

Female Condoms

The NDoH initiated the National Introduction of the Female Condom Programme in June 1998.⁴⁵ The programme entailed provincial introduction meetings, site selection, clinic baseline assessments, provider training, female condom distribution and monitoring, and programme supervision. Female condoms were introduced at 19 pilot family planning clinic sites in eight provinces. The programme has since expanded and the total number of sites where training has been provided and which are now distributing female condoms as part of a national female condom distribution programme is 214. The facilities are distributed across all nine provinces and include a range of facilities located in rural and urban areas.

The national baseline STI survey collected information on numbers of female condoms distributed (Table 11). In total, 156 (15%) facilities reported that they distributed female condoms. An estimated total of almost 80 000 female condoms were distributed in the month of July 2002 in these provinces. North West had the highest proportion of clinics distributing the female condom (27%). The North West also reported the highest numbers of female condoms distributed in the month of July 2002. The least female condoms were distributed in the Free State. The numbers of female condoms distributed by individual clinics varied considerably with some distributing less than 10 per month to those who distributed over a thousand.⁴²

Female condoms are supplied directly by the NDoH to sites in all provinces. Few stock-outs were reported, however, the majority of stock-outs were reported in clinics that were not part of the main programme of designated clinics and were obviously reliant on an informal distribution network which was not always able to provide a consistent supply.

Table 11: Estimated proportion of clinics distributing female condoms and total numbers distributed by province in July 2002

Province	Clinics distributing FCs (%)	Total numbers of FCs distributed
Eastern Cape	12.2	3 853
Free State	11.8	1 780
Gauteng	15.1	9 275
KwaZulu-Natal	8.4	13 983
Limpopo	4.3	2 615
Mpumalanga	25.1	11 657
Northern Cape	18.7	2 474
North West	27.2	25 367
Western Cape	21.3	7 968
Total	14.5	79 361

Source: Baseline Survey of STI and HIV services⁴²

Successes, Challenges and New Developments: Female Condoms

The Female Condom Programme has successfully introduced female condoms into the designated sites and numbers of female condoms distributed are increasing annually. The challenges to the programme are mainly centred on cost, as the female condom is many times more expensive than the male condom and this is a limiting factor. The manufacturer of the female condom is developing a synthetic latex female condom that is similar in appearance to the existing condom. This could potentially reduce the price by as much as 50%, however, the cost is still greater compared to the male condom.

Conclusions and Recommendations: Contraception and Male and Female Condoms

Contraceptive methods, like male and female condoms, which offer dual protection against unwanted pregnancy and STIs may be more appropriate than hormonal methods for some women. There is already evidence that condom use is increasing, particularly among young people.⁴⁴ There is also some evidence of dual protection practice with 12% of clients from 89 clinics in Gauteng, Western Cape and KwaZulu-Natal protected from both pregnancy and STI the last time they had sexual intercourse.⁴⁶ Of these, 75% were using dual methods, and 4.5% were using a condom alone. This suggests that for women with established use of hormonal contraception, the promotion of dual method use (a hormonal method plus a barrier method) may be more appropriate. Health providers involved in the provision of contraceptive services are in an ideal position to counsel clients about the need for dual protection practices where this is appropriate.

Increased availability of the female condom should be encouraged as this increases women's choice of barrier methods, and some women may be better able to negotiate use of the female condom than the male condom.

The promotion of emergency contraception and its wider accessibility is key as a back-up to unplanned sexual activity, coercive sexual encounters and in cases of condom failure.

In conclusion, contraception is widely available and contraceptive prevalence rates are improving particularly in the younger age groups. However, contraceptive initiation is often the result of an unplanned pregnancy, particularly in the younger age groups. Young people must be fully informed about contraception prior to onset of sexual activity and need to be able to access the services for a method and counselling.

Teenage Pregnancy Background

Unplanned pregnancies among young women are a world-wide problem, with social and economic repercussions, especially for young women. The teenage pregnancy rate in SA is high, despite a relatively high reported contraceptive prevalence of 64.4% among 15-19 year old sexually active young women.⁹ A recent study of age-specific fertility rates in the Agincourt sub-district, a rural area of South Africa, reports an atypical bi-modal pattern of fertility with underlying modes of pre-marital fertility among women aged 18-20 years, and marital fertility among women aged 28-30 years.⁴⁷ Pre-marital fertility accounted for 47% of births among women aged 12-26 years, but accounted for 21% of all births. A low incidence of contraceptive use before the first birth, particularly among adolescents, and high contraceptive uptake thereafter, are reasons the authors give for the high rate of pre-marital fertility. In another study undertaken in a rural area of KwaZulu-Natal, it was also concluded that contraceptive use often commences after the first pregnancy.⁴⁸ One reason put forward for this is that young women only receive adequate education about the need for contraception once they attend for antenatal care or delivery services.⁴⁷

Data

The HGOI teenage pregnancy indicator measures pregnancies among girls aged 15-19 years as a proportion of total pregnancies. The target is to reduce the proportion of births among girls aged 15-19 from 16.4 to 13% by 2005.⁴ However the DoH's indicator should be revised as the target is based on a teenage pregnancy indicator that uses a different denominator; women aged 15-19 years, as reported in the 1998 SADHS. The SADHS found that 16.4% of women aged 15-19 years had ever been pregnant (Table 12).⁹ By age 19, 35.1% of the teenagers surveyed had been pregnant. More rural women aged 15-19 years had ever been pregnant than urban women in this age range (20.9% versus 12.5%) (Table 12). Adolescent pregnancy rates were also found to vary by province with teen pregnancy rates highest in Mpumalanga (25.2%) and lowest in Gauteng (9.5%) (Table 12).

Coloured and African teenagers had the highest rates of teen pregnancy (Table 13). Teenagers with higher levels of education were less likely to have been pregnant (Table 14).

Table 12: Teenage pregnancy and motherhood (%) by province, 1998

	EC	FS	GP	KZN	LP	MP	NC	NW	WC	SA
1998 ever pregnant	18.2	12.6	9.5	16.7	20.0	25.2	18.0	13.4	16.4	16.4
1998 ever pregnant rural	-	-	-	-	-	-	-	-	-	20.9
1998 ever pregnant urban	-	-	-	-	-	-	-	-	-	12.5
1998 mothers	14.8	8.4	8.9	13.8	14.9	18.8	15.2	11.0	13.7	13.2

Source: SADHS 1998⁹

Table 13: Teenage pregnancy and motherhood (%) by ethnic group, 1998

	African	Coloured	Indian	White	All
1998 ever pregnant	17.8	19.3	4.3	2.2	16.4
1998 mothers	14.2	15.7	2.9	2.2	13.2

Source: SADHS 1998⁹

Table 14: Teenage pregnancy and motherhood (%) by education, 1998

	Grade 1-5	Grade 6-7	Grade 8-11	Grade 10	Higher
1998 ever pregnant	29.2	17.4	16.3	10.1	4.0
1998 mothers	24.7	13.8	12.9	7.9	4.0

Source: SADHS 1998⁹

The SADHS also found that most adolescent women had never been married (96%),⁹ thus, many teen mothers interviewed could not have been not married.

Challenges

Although contraceptive use is high among teenagers, their contraceptive needs should be met before their first pregnancy, as many sexually active young women are unprotected, not only against unwanted pregnancy but also against STIs. The high rates of pre-marital fertility are also cause for concern and should be further examined as they contribute to the social and economic vulnerability of women and children.

Cervical Cancer Screening

Background

Cervical cancer is the second most common cancer in women worldwide; the global estimate was 470 600 new cases and 233 400 deaths from cervical cancer in the year 2000. Eighty percent of these cases were diagnosed in developing countries where cervical cancer is the most common cancer cause of death among women; these countries have access to only 5% of global cancer resources.

According to the National Cancer Registry report released in November 2003, cervical cancer is the most common cancer among South African women aged 15 to 29 years with young Black women being particularly vulnerable. It comprises 13% of all cancers among women from 15 to 29 years old and accounts for 17% of all cancers in this country. Incidence is greatest between the ages of 35-39 years, with 87% of cases occurring in women over 35 years.⁴⁹ It has been estimated that 1 in 41 South African women will develop cervical cancer in their lifetime.

The high incidence and mortality of the disease in developing countries has been attributed to the lack of effective cervical

screening programmes. Evidence demonstrates that mass cytology-based screening programmes can reduce the mortality due to cervical cancer; however, there are no organised or sustainable screening programmes in any sub-Saharan country, including SA. Cervical screening in these countries is mainly opportunistic and ad hoc, resulting in a limited impact on cervical cancer incidence and mortality.

Screening Policy

Screening for cervical cancer by means of a standard Papanicolaou (Pap) smear has become part of the package of care offered free of charge to all women in SA since 1996. The service is supposed to be offered at the primary level in all public sector facilities.

The 'National Guideline for Cervical Cancer Screening'^h outlines a national framework for the establishment of a screening programme. A strategy for implementation of the programme is currently being developed.

The policy states that every asymptomatic woman 30 years and older should have three free Pap smears in her lifetime, with a ten year interval between each smear. The ultimate goal of the policy is to screen at least 70% of women, nationally, within the target age group within 10 years of initiating the programme. This policy decision was based on data from the International Agency for Research on Cancer (IARC) in 1986, which emanated from several large screening programmes. Furthermore, the IARC study showed that the target age range

of the screening programme was a far more important determinant of cervical cancer risk-reduction than the frequency of screening within the defined age range.

The NDoH is committed to reducing the incidence, morbidity and mortality from cervical cancer in SA through:

1. Screening 15% of women at the age of 30 and above for cervical cancer.
2. Reducing incidence of invasive cervical cancer in women older than 39 years of age.⁴

According to the Statistics SA 2001 Census data, there are 9 429 255 women aged 30 years and over in the country. Approximately 14 million women would therefore have to be screened for cervical cancer by 2005 in order to achieve the goal of screening 15% of women in this age group.

Data

Geographic Data

Sources of impact data include the Central Statistical Service and the National Cancer Registry. This is collected on a 5-year basis, leading to difficulty in assessing short term trends. Process indicator data can be collected through routine facility-based cervical screening registers; however, the majority of public sector facilities do not offer screening services. Moreover, health care services in rural areas are inadequately developed and tend to

Table 15: Availability of cervical cancer screening services, guidelines, key IEC messages, & sterile speculums in South African public sector facilities (%)

Province	Daily Service	Guidelines	Key IEC messages	Sterile Speculums
Eastern Cape	44	31	6.3	81
Free State	76	18	5.9	94
Gauteng	67	47	47	93
KwaZulu-Natal	31	50	31	80
Limpopo	38	50	6.3	75
Mpumalanga	40	33	0.0	93
North West	53	18	18	100
Northern Cape	53	27	21	93
Western Cape	43	79	36	86
South Africa	49.6	38.6	18.6	88.2

Source: *Baseline Survey of STI and HIV services*⁴²

^h Available from <http://www.doh.gov.za/docs/factsheets/guidelines/cancer.pdf>

be focused on curative rather than preventative health care.

In a study of 141 public sector primary health care facilities, distributed nationally, conducted in July 2002, only about 49.6% reported offering a Pap smear service daily (Table 15); 15.6 % offered the service on specific days, and 34.8% of facilities did not offer this service at all. Most facilities (88%) did however, have sterile speculums available. Of facilities that offered cervical screening services, availability of the service was either in the morning or afternoon in 21% of facilities, all day in 71% of facilities, and 24 hours in 8% of facilities. The majority of facilities offering cervical screening did not advertise their services (72%).^{42, i}

Few facilities have guidelines available (Table 15). Key information, education and communication (IEC) material was available in 19% of facilities, mostly in the form of English language posters.

Data on Age / Race / Gender

An interval of 10 years after the age of sexual debut is recommended for commencement of cervical screening. The age of first sexual intercourse (and possible first Human Papilloma Virus (HPV) infection) in SA was found to be 18.4 years for women aged 15-49 years (SADHS 1998). A recent national study found the age of sexual debut in 15-24 year old African women to be 16.5 years.⁴⁴ This has implications for reduction of the recommended age of first screening (currently 30 years) to around 26 years in African women.⁴⁴

A recent South African study found that over 90% of White women and about 5% of African women had accessed cervical cancer screening in the past 10 years, reflecting the inequity in access.⁵⁰ This inequity may be responsible for the very high incidence of cervical cancer in countries such as South Africa.

White women in SA have an age-standardised incidence rate^j of 12 per 100 000 while this rate is around 35-39 per 100 000 in African women.⁵⁰

Conclusions and Recommendations: Cervical Cancer Screening

A recent development in the provision of cervical cancer screening services in SA has been the formulation of a national framework for an organised screening programme by the NDoH.

Cervical cancer can be cured if it is detected at an early stage. For early detection, we need to focus on creating mass awareness, expansion of health education, routine and mandatory inspection of the cervix, and training for health workers in early detection and prevention of new cases.

Key challenges in translating national policy into effective service delivery include inadequate allocation of resources, limited numbers of trained service providers in public sector facilities; limited capacity of national cytological laboratories; inadequate infrastructure to transport specimens to laboratories, and improving referral and feedback on abnormal smears. In addition, there is a paucity of information, education and communication material in local languages regarding the importance of screening and the implications of abnormal cytology.

There is an urgent need for cervical cancer programme implementation guidelines and for service delivery models at primary, secondary and tertiary levels of the health system to be made available in SA. In addition, there is a need to develop standardised protocols and guidelines for the referral and management of women with abnormal Pap smears, cervical cancer and other conditions.

To maximise coverage, cervical cancer screening should be provided as an integral part of comprehensive primary health care services, and should be made available to all women in the target population, including non-reproductive health clients and women with disabilities and special needs. To this end, widespread dissemination of information pertaining to cervical cancer prevention to communities, health care providers and health system managers is recommended.

There are no current data on the number of women screened for cervical cancer, the percentage of women detected with abnormal smears, and the percentage of women treated or referred for treatment in SA.

i Arthi Ramkissoon, RHRU, February 2004, personal communication.

j A cancer **incidence rate** is a measure of the frequency with which new cancers occur in a defined population during a specified period of time; it is usually expressed as the **number of cancers per 100 000 population per year**. Cancer incidence **varies with age** and in order to compare rates, either between different populations or within the same population over time, it is necessary to adjust for differences in age structure. This adjustment is called age standardisation.

There is a need to identify cervical cancer screening programme monitoring and evaluation indicators and to establish tools and systems to collect relevant data e.g. demographic information, screening results, referrals, treatment outcomes. This will facilitate monitoring implementation of the guidelines, output, impact and informed decision making.

Significant barriers to the implementation and sustainability of mass cervical cancer screening in SA are the requirements of cytology-based screening methods. These are labour and resource intensive, and require relatively complex laboratory infrastructure. New alternative screening programmes based on low technology primary screening tests, such as Direct Visual Inspection of the cervix or HPV DNA testing, appear promising and have the advantage of screening and treating women immediately at primary health care level. None have yet been approved by the FDA for primary cervical screening.⁵¹ Safety, feasibility and acceptability of these alternative methods are currently being researched in SA;⁵² if found to be efficacious and cost-effective, review of current policy should be undertaken.

In the USA, invasive cervical cancer has been classified as AIDS-defined neoplasia since 1993, and a specific screening programme for HIV infected people has been designed. The widespread HIV infection in South Africa has implications for integration of cervical screening services into PMTCT and VCT programmes.

Although screening has been provided through South African public sector health facilities for many years, there has been minimal impact on cervical cancer morbidity and mortality, because of the limited screening of the population at risk.

References

- 1 Report of the International Conference on Population and Development; 1994 Sep 5-13; Cairo. United Nations Population Information Network; 1994.
URL: <http://www.unfpa.org/icpd/docs/>
- 2 Adar J, Stevens M. Women's health. In: Ntuli A, Crisp N, Clarke E, Barron P, editors. South African Health Review 2000. Durban: Health Systems Trust, 2001.
URL: <http://www.hst.org.za/>
- 3 Department of Health. National contraception policy guidelines. Pretoria: Department of Health; 2001.
URL: <http://www.doh.gov.za/docs/factsheets/>
- 4 Health Goals, Objectives and Indicators 2001-2005. Pretoria: Department of Health; 2001.
URL: <http://www.doh.gov.za/docs/misc/indicators.html>
- 5 World Health Organization. Reproductive health indicators for global monitoring. Report of the second interagency meeting WHO Geneva 17-19 July 2000. Geneva: WHO; 2001.
Indicators available from URL:
<http://www.softgeneva.ch/RHR/DefinitionsOfSources.htm>
- 6 United Nations Development Programme Millennium Development Goals web site. Range of documents and reports relating to the MDGs.
URL: <http://www.undp.org/mdg/> or <http://www.un.org/millenniumgoals/>
- 7 UNICEF. Monitoring the situation of children and women. End-decade databases: Maternal health.
URL: <http://www.childinfo.org/eddb/maternal.htm>
- 8 African National Congress The Reconstruction and Development Programme - A policy framework. Johannesburg: ANC; 1994 [accessed 3/12/2003].
URL: <http://www.polity.org.za/html/govdocs/rdp/rdp.html>
- 9 Department of Health, Medical Research Council & Measure DHS+. South Africa Demographic and Health Survey 1998, Full Report. Pretoria: Department of Health; 2002.
URL: <http://www.doh.gov.za/facts/1998/sadhs98/>
- 10 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.
- 11 AbouZahr C, Wardlaw T. Antenatal Care in Developing Countries: Promises, achievements and missed opportunities: An analysis of trends, levels and differentials, 1990-2001. Geneva: World Health Organization; 2003.
URL: http://www.who.int/reproductive-health/docs/antenatal_care.pdf
- 12 District Health Information System (DHIS) Database. National Department of Health. Data extracted November 2003.
- 13 Day C, Gray A. Health and Related Indicators. In: Ijumba P, Ntuli A, Barron P, editors. South African Health Review 2002. Durban: Health Systems Trust; 2003.
URL: <http://www.hst.org.za/publications/527/>

- 14 Health Systems Trust. Health status indicators. Reproductive health. [accessed 21/11/2003].
URL: <http://www.hst.org.za/healthstats/113/data>
- 15 Blaauw D, Penn-Kekana L. Socio-economic inequalities and Maternal Health in South Africa. Johannesburg: Centre for Health Policy; Presentation at 22rd Priorities in Perinatal Care Conference; 2003 March.
URL: <http://www.wits.ac.za/chp/b46.pdf>
- 16 AbouZahr C, Warklaw T, editors. Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA. Geneva: WHO; 2003.
URL: http://www.who.int/reproductive-health/publications/maternal_mortality_2000/
- 17 Department of Health. Saving mothers. Report on confidential enquiries into maternal deaths in South Africa 1998. Pretoria: Department of Health; 1999.
URL: <http://www.doh.gov.za/docs/reports/mothers/contents.html>
- 18 Pattinson B, editor. Saving Mothers: Second Report on Confidential Enquiries into Maternal Deaths in South Africa 1999-2001. Pretoria: Department of Health; 2002.
- 19 MRC Unit for Maternal and Infant Care Strategies, PPIP Users, and the National Department of Health. Saving Babies 2001: 2nd perinatal care survey of South Africa. 2001.
- 20 National HIV and Syphilis antenatal sero-prevalence survey in South Africa - 2002. Pretoria: Department of Health; 2003.
URL: <http://www.doh.gov.za/docs/reports/2002/hiv-syphilis.pdf>
- 21 UNICEF/WHO/UNFPA. Guidelines for Monitoring the Availability and Use of Obstetric Services. New York: UNICEF; 1997.
URL: <http://www.unicef.org/health/guidelinesformonitoringavailabilityofemoc.pdf>
- 22 Naiker N, Penn-Kekana L, Blaauw D. Use of the National Minimum Data Sets for Hospitals and Clinics in the Evaluation of Maternal Health Services in South Africa. Presentation at 10th Reproductive Health Research Priorities Conference; 2003.
- 23 Jewkes R, Abrahams N, Mvo Z. Why do nurses abuse patients? Reflections from South African Obstetric Services. Soc Sci Med. 1998; 47(11): 1781-95.
- 24 Smith H, Brown H. Preliminary findings from pilot implementation. Presentation at 21st Priorities in Perinatal Care Conference; 2002.
- 25 Fawcus S, Rode P, Ibach F, Dyer R. Pain relief in labour at Mowbray Maternity Hospital: Audit and Intervention. Poster. 21st Conference on Priorities in Perinatal Care in Southern Africa; 2002.
- 26 Fonn S, Xaba M, Tint K, Conco D, Varkey S. Maternal health services in South Africa. During the 10th anniversary of the WHO 'Safe Motherhood' initiative. S Afr Med J. 1998 Jun;88(6):697-702.
- 27 Abrahams N, Jewkes R, Mvo Z. Health care-seeking practices of pregnant women and the role of the midwife in Cape Town, South Africa. J Midwifery Womens Health. 2001 Jul-Aug;46(4):240-7.
- 28 Hess S. Obstetric services in two Mpumalanga Hospitals. HST Update (38). Durban: Health Systems Trust; November 1998.
- 29 Penn-Kekana L, Blaauw D, Schneider H. "It makes me want to run away to Saudi Arabia" The Impact of Financial Accountability Reforms on Midwives Working In Two District Hospitals in South Africa. Presentation at International Conference on Health Systems & Reproductive Health; 2003; UK.
- 30 Cook RJ, Galli Bevilacqua MB. Invoking human rights to reduce maternal deaths. Lancet. 2004 Jan 3;363(9402):73.
- 31 Reproductive Rights Alliance. Towards Access to Reproductive Choice - 5 year review of the implementation of the Choice on Termination of Pregnancy Act, 92 of 1996 - 1997-2002. Reproductive Rights Alliance, 2002.
- 32 Reproductive Health Research Unit and Medical Research Council. An evaluation of the implementation of the Choice on Termination of Pregnancy Act. Pretoria: Department of Health; 2000.
- 33 Population Reference Bureau. Family Planning Worldwide 2002 Data Sheet. Population Reference Bureau; 2002.
URL: http://www.prb.org/pdf/FamPlanWorldwide_Eng.pdf
- 34 Reproductive Health Task Force, South African Ministry of Health & WHO-HRP Assessment of reproductive health services in South Africa, focusing on family planning: July 1994. Draft Report. South Africa: South African Ministry of Health; 1994.
- 35 Kaufman CE. Reproductive control in South Africa, Policy Research Division Working Paper No. 97. New York: Population Council; 1997.
- 36 World Health Organization Special Programme of Research, Development and Research Training in Human Reproductive Task Force on Long-acting Systemic Agents for the Regulation of Fertility. Multinational comparative clinical evaluation of two long-acting injectable contraceptive steroids: Norethisterone enanthate given in two dosage regimens and depot medroxyprogesterone acetate: Final report. Contraception. 1983; 28(1):1-20.
- 37 Smit J, McFadyen L, Harrison A, Zuma K. Where is the condom? Contraceptive practice in a rural district of South Africa. Afr J Repr Health. 2002; 6(2): 71-8.
- 38 Bongaarts J, Johansson E. 'Future trends in contraceptive prevalence and method mix in the developing world'. Stud Fam Plann. 2002 Mar;33(1):24-36.
- 39 Smit J, McFadyen L, Beksinska M, de Pinho H, Morroni C, Mqhayi M, Parekh A, Zuma K. 'Emergency contraception in South Africa: Knowledge, attitudes, and use among public sector primary health care clients'. Contraception. 2001; 64(6), 333-7.
- 40 McFadyen ML, Smit JA, Mqhayi MM, de Pinho H, Beksinska M. Expanding contraceptive choice: An Africa study of emergency contraception. A multi-centre situational analysis of emergency contraception provision and utilization at public sector clinics. Durban: Reproductive Health Research Unit; 2003.
- 41 National Department of Health STI/Barrier Methods Quarterly Meeting. Kopanong; 25-26 February 2004.
- 42 Ramkissoon A, Kleinschmidt I, Beksinska M, Smit J, Hlazo J, Mabude Z. National Baseline Assessment of Sexually Transmitted Infection and HIV services in South African public sector health facilities. Summary Report. Reproductive Health Research Unit; 2004.
URL: <http://www.rhru.co.za/site/publications.asp>
- 43 Department of Health. Financial Plan, STIs, Barrier Methods, TB/HIV Sub-Directorate 2002/3.
- 44 Shisana O, Simbayi L. Nelson Mandela/HSRC Study of HIV/AIDS - South African National HIV Prevalence, Behavioural Risks and Mass Media Household Survey 2002. Cape Town: Human Sciences Research Council; 2002.
URL: <http://www.hsrcpublishers.co.za/hiv.html>

- 45 Mqhayi M, Bekinska M, Smit J, Rees H, Nutley T, Hatzell T, Wesson J, Marumo E. Introduction of the female condom in South Africa: Programme activities and performance 1998-2001. Johannesburg (South Africa): Reproductive Health Research Unit; Draft Report, 2003.
- 46 Morroni C, Smit J, McFadyen L, Mqhayi M, Bekinska M. Dual protection against sexually transmitted infections and pregnancy in South Africa. *Afr J Reprod Health*. 2003 Aug;7(2):13-9.
- 47 Garenne M, Tollman S, Kahn K. Premarital fertility in rural South Africa: A challenge to existing population policy. *Stud Fam Plann*. 2000 Mar;31(1):47-54.
- 48 Smit J. The Injectable Contraceptive: User, Social and Pharmacological Perspectives [PhD Dissertation]. University of Natal; 2003.
- 49 Sitas F, Madhoo J, Wessie J. Incidence of histologically diagnosed cancer in South Africa, 1993-1995. Johannesburg: National Cancer Registry of South Africa, South African Institute for Medical Research; 1998.
- 50 Denny L. Experiences of South Africa. International Federation of Gynaecology and Obstetrics: Washington DC (USA); 2000.
URL: http://www.obgyn.net/avtranscripts/FIGOLecture_dennyhtm
- 51 Saslow D, Runowicz CD, Solomon D, Moscicki AB, Smith RA, Eyre HJ, Cohen C. American Cancer Society Guideline for the Early Detection of Cervical neoplasia and cancer. *Cancer J Clin*. 2002; 52:342-62.
- 52 De Souza M, Denny L, Kuhn L, Pollack A, Wright Jnr TC. Cervical Cancer Screening in Developing countries. Presentation at 10th Reproductive Health Research Priorities Conference; 2003.

