

National Baseline Assessment of Sexually Transmitted Infection and HIV services in South African public sector health facilities 2002/2003

A collaborative effort of the National Department of Health and the Reproductive Health Research Unit, University of Witwatersrand



Written by
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Summary Report 2004

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List of Abbreviations

AIDS	-	Acquired Immune Deficiency Syndrome
ANC	-	Antenatal Care
ATIC	-	AIDS Training & Information Centre
CI	-	Confidence Interval
DfID	-	Department for International Development
DHIS	-	District Health Information System
DOH	-	Department of Health
EC	-	Emergency Contraception
EDL	-	Essential Drug List
FC	-	Female Condom
HIV	-	Human Immunodeficiency Virus
IEC	-	Information, Education and Communication
IMI	-	Intramuscular Injection
LMIS	-	Logistics Management Information System
MCWH	-	Maternal, Child and Womens Health
MU	-	Million Units
NDOH	-	National Department of Health
NGO	-	Non Government Organisation
PDOH	-	Provincial Department of Health
PHC	-	Primary Health Care
PMTCT	-	Prevention of Mother to Child Transmission
PPASA	-	Planned Parenthood Association of South Africa
RHRU	-	Reproductive Health Research Unit
RPR	-	Rapid Plasma Reagin
SADHS	-	South Africa Demographic and Health Survey
STI	-	Sexually Transmitted Infection
USAID	-	United States Agency for International Development
VCT	-	Voluntary Counselling and Testing
WHO	-	World Health Organization

Foreword

It gives me great pleasure to be able to present to you this summary report of the results of the first nationwide baseline assessment of STI and HIV services in public sector primary health facilities in South Africa. It lays out a wealth of data; the success stories and the challenges that confront us as we strive to improve the delivery of care for sexually transmitted infections. This can serve as an entry point for prevention services that stand to reduce the rates of both HIV and other sexually transmitted infections.

I would like to take this opportunity to thank all those involved in this massive task, especially a core group from the Reproductive Health Research Unit, University of the Witwatersrand, and the STI & HIV Prevention Unit, National Department of Health. Without their tireless commitment this survey would not have been successful.

I am confident that these findings will make a positive contribution to improving the quality and sustainability of STI & HIV services in public sector facilities in South Africa.

Dr Melinda Wilson

Senior Advisor for AIDS and Reproductive Health
United States Agency for International Development
South Africa

Preface

A national baseline assessment of Sexually Transmitted Infection (STI) prevention and management services was conducted between August 2002 and May 2003.

Plans for this assessment started in 2001, when the STI and HIV/AIDS Prevention Unit at the National Department of Health conducted a national rapid appraisal in all provinces to obtain baseline information. Serious gaps in information required for programme planning and monitoring were recognised. Consequently, the NDOH assigned RHRU to conduct a national baseline assessment of STI services in the public sector.

The primary objectives of the assessment were to ascertain the current status of quality of care provided at PHC facilities with particular emphasis on correct drug treatment of STIs, number of clients treated for STIs, number of staff trained in syndromic management, screening and diagnosis of syphilis, HIV counseling and testing, drug and condom supply.

The information from this assessment will be used to inform the STI programme and policy review with regard to future interventions for improved management of STIs.

We are grateful to USAID for funding this project.

Eva Marumo

Deputy Director: STI and HIV/AIDS Prevention
National Department of Health



Executive Summary

There is a paucity of data available in South Africa on the management of sexually transmitted infections (including HIV) in public sector primary health care (PHC) facilities. Hence, a comprehensive national baseline survey of sexually transmitted infection (STI) and HIV prevention and management services was conducted by the Reproductive Health Research Unit (RHRU), in collaboration with the South African National Department of Health (NDOH) between August 2002 and May 2003.

The primary objectives of the survey were to ascertain the current status of quality of care provided at PHC facilities in order to inform Department of Health STI programme direction and policy review with regard to development of interventions for improved management of STIs, increasing access to STI/HIV prevention services, and reducing new HIV infections. Furthermore, it is anticipated that findings will inform the selection of measurable indicators for ongoing monitoring and evaluation of the national STI programme.

Data were collected by four tools: Facility-based information was collected through telephonic interviews of 962 randomly selected PHC facilities, and by visits to a sub-set of these facilities (n=141) for in-depth surveys. In addition, quality of care was assessed by simulated client visits to facilities (n=139). Detailed information on specific aspects of the STI prevention and management was obtained by interviews with 64 key informants from STI and reproductive health services at national, provincial and local government levels. Key findings are presented in this report. Detailed results will be published in a variety of formats.

This survey estimates that about two million symptomatic STI clients are treated at public sector PHC facilities in South Africa annually; and that about 8,400 000 symptomatic and asymptomatic STI infections occurred in 2002 in South Africa, among a population (15 years or older) of about 30 million.

It was found that 50% of professional nurses at PHC facilities were 'ever trained' in syndromic management of STIs, and hence, in many instances the national STI treatment guidelines are implemented with variable quality. Effective management of STIs in public sector PHC facilities is compromised by the lack of adequately trained staff, and by inappropriate use of available drugs. The number of facilities that provided correct drug treatment for vaginal discharge, urethral discharge, and genital ulcers was below 50% in almost all provinces except Eastern Cape (50%) and Gauteng (51%). In addition, effective management of the STI programme is compromised by the quality of history-taking, clinical examination, risk assessment and counselling practices, and by inconsistencies and discrepancies in record-keeping and collection of monitoring information in approximately 34% of the 962 PHC facilities surveyed.

A number of interventions have been identified to strengthen STI/HIV management and prevention services in public sector PHC facilities. These include in-service training and transfer of skills to health care providers, and the implementation of systems for monitoring and evaluation of key activities, for support and supervision, and for human resources management, to ensure that opportunities to provide prompt and effective treatment for STIs, and for prevention of HIV infection are not missed.

Introduction

1.1 STIs and HIV in South Africa

Sexually transmitted infections (STIs) have become a global burden; the World Health Organization (WHO) estimates that about 340 million new cases of curable STIs occur each year in people aged 15-49 years. The highest rate of new cases per 1 000 population occurs in sub Saharan Africa where an estimated 69 million new cases per year occurs in a population of 269 million adults aged 15-49, resulting in an incidence rate of 256 per 1 000.¹ The high rates of STIs that are seen in sub Saharan Africa are associated with the explosive spread of HIV in the region. In addition, untreated STIs are associated with high rates of spontaneous abortion, stillbirth, tubal infertility, and genital cancers as well as significant disease among children born to infected mothers.

STIs constitute a major public health challenge to South Africa. High rates of curable STIs have been documented with as many as 10-12% of adults of reproductive age reporting STI symptoms within the previous three month period.^{2,3} These rates are likely to be an underestimate since many STIs are asymptomatic and therefore unlikely to be detected through self-report. It is estimated that approximately 4.8 million South Africans were infected with HIV at the end of 2001, and that about 1 700 new HIV infections occur daily.⁴ STIs are associated with transmission and acquisition of HIV infection. Several studies have shown that treatment of curable STIs reduces HIV transmission.^{5,6} Prevention and early treatment of STIs is therefore a high public health priority in South Africa.

1.2 National STI Strategic Plan, Policy, Guidelines and Protocols

The South African National Department of Health (NDOH) has instituted a national HIV/AIDS/STI Strategic Plan for South Africa 2000-2005 which prioritises the effective management of patients with STIs.⁷ The key focus of the national strategy for the control and management of STIs is on syndromic STI management at primary health care facility level. National STI Treatment Guidelines that are evidence-based are commonly used at PHC level, and training of PHC staff in syndromic case management and the provision of effective drugs has been introduced. In addition, a 'PHC Package' which outlines norms and standards for prevention and management of STIs in public sector facilities has been developed. This includes the need for facilities to have annual quality of care reviews, and staff to be trained in management of STIs and HIV/AIDS/STI counselling. The PHC package also lists reading material that could help PHC staff in the proper management and treatment of STIs, and information, education and communication materials that could be issued to clients.

1.3 Rationale

There is a paucity of data available on the management of sexually transmitted infections in South African public sector primary health care facilities (which number approximately 3 600, excluding satellite and mobile clinics). Furthermore, there has been no comprehensive evaluation of major aspects of the national STI programme since the 1997 AIDS Review.

A national rapid appraisal conducted in 2001 to obtain baseline information on provincial programmes, highlighted provincial needs and gaps in information available to provincial managers. The key issue raised at the end of this activity was the need for a comprehensive survey of the South African STI programme in order to guide programme management.

In light of the above, and the desire on the part of the National Department of Health to ascertain the current status of STI prevention and management services in the country, the RHRU was funded by the United States Agency for International Development (USAID) to provide support to the NDOH in the delivery of sexual and reproductive health services, including a national baseline survey of the quality of STI care across the country.

1.4 Strategic objectives of this assessment

The strategic objective of the survey was to obtain baseline data on the prevention and management of sexually transmitted infections in South African public sector PHC facilities, with the view to informing existing health policy, and in order to facilitate the development and implementation of appropriate strategies to strengthen STI services. The assessment will also lead to the development of measurable indicators for ongoing monitoring and evaluation of the National STI programme.

The primary objectives of the survey were to assess the quality of care provided at public health facility level with particular focus on STI screening, diagnosis and management, nurse provider knowledge and practice, HIV counselling and testing, and STI drug and condom supply.

Secondary objectives included gathering information on various aspects of integration of services, to obtain information on referrals, to assess training needs, to assess the extent to which health services such as voluntary counselling and testing (VCT), and prevention of mother to child transmission (PMTCT) have been implemented, and to obtain information on the client load by type of service.

Telephonic Survey of Primary Health Care Facilities

2.1 Background

This nationwide baseline survey of the status of STI and HIV prevention and management services in public sector primary health care (PHC) facilities in South Africa was conducted in collaboration with the South African National Department of Health (NDOH) between August 2002 and May 2003. Information collected through telephonic interviews of 962 randomly selected PHC facilities from 254 sub-districts across the country are presented in this chapter.

2.2 Objectives

The main objectives of the facility-based telephonic survey were to obtain baseline data on STI and HIV prevention and management services in South Africa, to inform NDOH and Provincial Department of Health (PDOH) STI programme direction, policy review, and to identify priority interventions. In addition, findings of this survey will identify key indicators for ongoing monitoring and evaluation of the national STI programme.

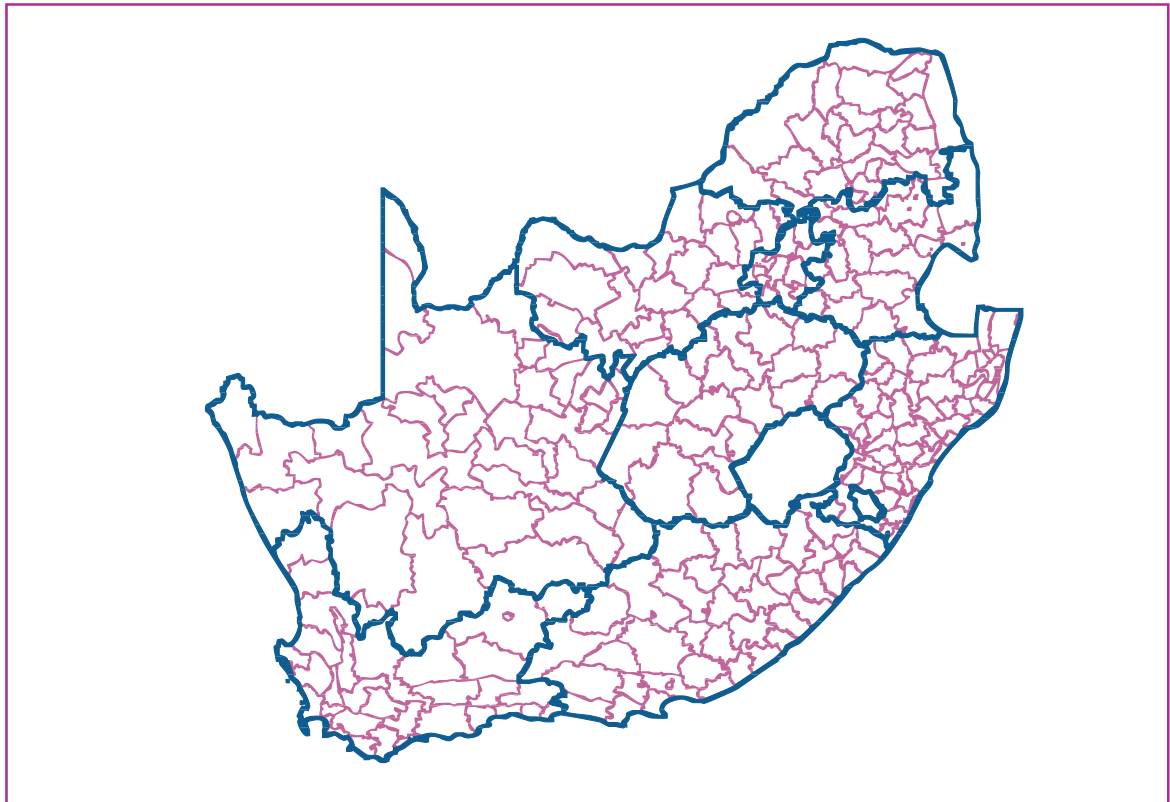
2.3 Methodology

2.3.1 Sampling strategy

The sampling frame for this survey was all public sector PHC facilities in South Africa, excluding satellite and mobile clinics, but including PHC clinics within hospitals. A comprehensive list of PHC facilities was obtained from the district health information system (DHIS). The primary objective of the sampling scheme was to obtain a representative sample of PHC facilities with sufficient power to report any facility-based prevalence by province with a 95% Confidence Interval (CI) of approximately 20%. A secondary objective was to obtain a spatially disaggregate sample in order to observe variation of STI management indicators within provinces at the level of sub-districts (municipalities). Maps of these indicators will be produced in a subsequent supplement to this report. This report deals with the primary objective of the survey, namely, reporting by province.

The sample that was drawn was stratified by the 254 sub-districts/municipalities that cover the entire country (Figure 1). In sub-districts with up to 30 facilities, three were randomly sampled, whilst in larger districts, a 10% sample was drawn. As well as achieving a minimum sample per sub-district, each province was allocated a sample of approximately 100, and no less than 75.

Figure 1: Demarcated boundaries of sub-districts (municipalities)



In predominantly rural provinces with a large number of sub-districts (Eastern Cape and KwaZulu-Natal), the sample turned out to be considerably larger to achieve this (135 and 166 respectively), whilst the allocation for Gauteng which has fewer sub-districts, was 78 (Table 1). One disadvantage of this stratification of the sample is that sampling probabilities varied considerably between sub-districts, and hence data from individual facilities in the sample had to be allocated appropriate weights. Any analysis of the data, therefore, has to take account of the sampling weights.

Table 1: Number of PHC facilities in sample, by province

Province	Eligible facilities n	Sub-districts n	Facilities sampled n	Replacements n	Final sample n
Mpumalanga	261	17	97	1	97
Free State	284	20	99	1	98
Western Cape	387	37	109	7	109
Limpopo	479	26	104	3	104
KwaZulu-Natal	627	52	166	7	164
Northern Cape	123	26	87	4	87
Eastern Cape	784	39	135	5	135
North West	429	25	95	13	93
Gauteng	261	12	78	5	75
Total	3 635	254	970	46	962

2.3.2 Data collection

RHRU staff developed the data collection instruments (questionnaires) in collaboration with DOH national and provincial programme managers. A workshop was held to discuss roles and responsibilities of RHRU and DOH, and to plan some of the operational aspects of this national baseline survey. Prior to undertaking the survey, a flyer highlighting the objectives and key processes of the survey was distributed to all PHC facilities. The flyer emphasised that the survey was being undertaken in order to guide the national and provincial STI programme by identifying areas where support was needed. Facilities ultimately selected for the survey were also provided with a detailed information leaflet.

Appointments were made for telephonic interviews with the most senior nurse provider at each facility. The questionnaire was sent to respondents in advance as it necessitated referral to data records and/or registers. Three provinces were allocated to each of the three trained interviewers who conducted the telephonic interviews. All respondents were asked to report data for the month of July 2002.

Ethical approval was obtained from the ethical review committee of the University of the Witwatersrand.

2.3.3 Sample implementation and fieldwork

During the course of fieldwork, a number of sampled facilities were found to be non-existent, closed, merged with other clinics, or were ineligible for various reasons (n=46). Where possible, these clinics were replaced by randomly choosing a substitute from the remaining clinics, and adjusting the weights to take account of the diminished total population of clinics within the stratum. In small sub-districts, the number of clinics was often exhausted, resulting in samples of less than three. Where only one clinic (or none) remained in the sample, the sub-district was merged with a geographically neighbouring one, whilst ensuring that no merges crossed provincial boundaries. Sampling weights were adjusted accordingly. It is recognised that very small samples in many sub-districts will give rise to estimates that are highly unstable. Reporting these stratum-specific estimates (either in tables or in maps) would be misleading, since they are often characterised by more extreme values than their more populous counterparts, on account of large sampling errors. In this report this is not an issue since only provincial aggregates are reported, for which sample-sizes are adequate. In more detailed secondary analysis of the data it is envisaged that stratum specific (sub-district) estimates will be used to report sub-provincial variation of indicators, but that smoothing techniques will be used to stabilise estimates for any particular area.

2.3.4 Data validation and data quality

Data validation consisted of double entry of all data and checking key variables (male condom distribution and numbers of STI clients) through a second phone call to all sampled facilities. This revealed unacceptable discrepancies between responses in the same facility in 34% of facilities (n=328). An 'unacceptable discrepancy' was defined as more than a 10% difference in reported monthly condom distribution in July 2002, and/or a difference of more than 10 in the number of recorded STI clients seen in the same month. In 97 of the facilities with discrepant results their exclusion would have resulted in samples per sub-district falling below two. These facilities were therefore subjected to a third round of validation, which entailed either a visit by a specially trained data validator, or further phone calls to the facility supervisor.

Facilities for which the discrepant results could not be reconciled to within 50% differences for monthly male condom distribution and 10 recorded STI clients were excluded from the analysis of these key variables, again with appropriate adjustment of the probability weights of the remaining sample. Sub-minimal sample-sizes in some sub-districts necessitated amalgamation of eight strata with suitable contiguous neighbouring strata. Table 1 shows the final number of facilities used in the analysis.

Table 2 summarises the verification process and gives the number of PHC facilities used for calculation of key variables. In some provinces, as few as 12% of facilities were able to give consistent data between the first and second phone calls. In the Northern Cape nearly 80% were consistent between the first and second phone call.

Table 2: Discrepancies and verification of data

Province	Number of facilities with consistent results between first and second phone call, n (%) †	Number of facilities in third round of verification‡	Number of facilities used for calculation of numbers of all STI clients	Number of facilities used for calculation of numbers of male STI clients	Number of facilities used for calculation of number of male condoms distributed *
		n	n	n	n
Mpumalanga	71 (73)	2	79	78	90
Free State	37 (38)	28	87	83	63
Western Cape	85 (78)	12	96	87	101
Limpopo	76 (73)	3	91	78	92
KwaZulu-Natal	126 (77)	9	137	101	156
Northern Cape	69 (79)	5	78	73	77
Eastern Cape	110 (81)	7	125	117	121
North West	48 (52)	12	70	65	72
Gauteng	12 (16)	19	28	24	41
Total	634 (66)	97	791	706	813

† Less than 10% discrepancy in male condom distribution numbers and difference of less than 10 STI clients between round 1 and round 2.

‡ Number of clinics contacted by additional phone call or visit in 3rd round of verification.

* Less than 50% discrepancy.

In many instances the information provided was derived from monthly statistics or by estimation, and not from registers, either because the interviewee had not consulted the register, or because incomplete or insufficient data was contained therein. In the case of the former, validation was confounded by different respondents providing different information.

Estimates of proportions of all facilities with record-keeping discrepancies by province are presented in Table 3. These percentages are estimates derived from the validation process, of the magnitude of reporting problems relating to male condom statistics and STI client load statistics in various provinces.

Gauteng was found to have the greatest number of discrepancies in STI client numbers (66%). This figure remained at this level even after 3 rounds of validation. North West Province was found to be the next highest with 25% of clinics recording discrepancies. Free State achieved the lowest (7%) proportion of inconsistent results for STI client numbers after validation.

In some provinces e.g. Gauteng, the records kept did not capture STI client information such as gender and age. This was verified during visits to facilities in this province. Some respondents at clinics that were telephoned indicated that they did not keep such records. However, this was not found to be the case in the facilities that were visited in KwaZulu-Natal.

It was found that some facilities (mostly hospitals) did not keep records of numbers of STI clients seen. The reason cited for this was that STIs were predominantly treated in PHC facilities, and hospitals only treated referrals or after-hour cases. This needs to be addressed when appraising referrals for STI management at secondary level.

The province with the most serious inconsistencies in reporting male condom distribution was Gauteng with an estimated 42% of facilities being unable to give a figure within 50% of the one they gave previously (Table 3). In all other provinces, except Free State, the proportion of facilities that were estimated to have such reporting problems was less than 10%.

Table 3: Estimates of percentage of PHC facilities with discrepancies in reporting of data after final round of verification

Province	Average estimated male condom discrepancy at least 50%,		STI record discrepancy for July 2002, with error > 10 clients,	
	%	[95% CI]	%	[95% CI]
Mpumalanga	9.2	[4.7 – 17]	16	[11 – 23]
Free State	15	[8 – 24]	7.2	[5 – 10]
Western Cape	5	[3 – 10]	14	[8 – 22]
Limpopo	8.8	[4 – 18]	13	[7 – 22]
KwaZulu-Natal	2.4	[1 – 6]	21	[14 – 29]
Northern Cape	6	[3 – 14]	9.6	[7 – 13]
Eastern Cape	4.6	[2 – 11]	9.5	[5 – 17]
North West	9.5	[5 – 16]	25	[17 – 36]
Gauteng	42	[33 – 53]	66	[55 – 76]
Total	9.3	[8 – 11]	19	[16 – 21]

Dividing facilities into those that gave results for both male condom distribution and STI client numbers that were consistent between the first and second phone call (<10% discrepancy in male condom numbers, <10 in STI client numbers), and those that did not give consistent results (Table 2, column one), are investigated whether the inconsistent reporting was associated with other facility factors. Factors that were investigated were facility size, facility location, and province. This showed that recording problems varied significantly between provinces ($p < 0.0001$), between facilities in rural, peri-urban and urban areas ($p < 0.0001$) and between facilities with less than five staff and those with more than five staff (Table 4).

Table 4: Factors associated with consistent data reporting at facilities

	Consistent response, % (n)	p-value*
All Clinics	68 (634)	
Clinic size		0.03
Less than 5 staff	71 (350)	
5 or more staff	64 (285)	
Clinic location		<0.0001
Rural	73 (326)	
Peri-urban	66 (166)	
Urban	57 (142)	
Province**		<0.0001

* p-values take account of complex survey design

** Refer to Table 2, column one

2.3.5 Data analysis: Estimates of counts and proportions given

All estimates given in this report took account of the sampling design and unequal sampling probabilities, and were carried out using appropriate survey analysis commands in STATA (StataCorp. 2003. Stata Statistical Software: Release 8.0. College Station, TX: Stata Corporation). All counts (e.g. numbers of clients, numbers of condoms distributed etc.) given in this report are provincial or national estimates of counts, based on the finite population of clinics and the counts that were reported by the sampled clinics. Confidence intervals of these estimates are obtained from appropriate variance estimates. All proportions reported are either provincial or national estimates of the proportions of clinics giving particular responses, based on the responses in the sample, again taking into account the complex survey design. Confidence intervals of these proportions were obtained in Stata calculating standard errors using the method of Rao and Scott,⁸ and using a logit transform so that endpoints always lie between zero and one.

2.3.6 Strengths and limitations

Strengths:

This is the first comprehensive national survey of STI and HIV services in public sector health facilities. The sample size of 962 (approximately 25% of public sector facilities nationally) was large enough to allow for meaningful analysis of data, and to allow for national and provincial estimates to be made. It provides information that will direct decision-making and planning of the national STI/HIV programme. The survey serves as a baseline for follow-up in 2004 and 2006 to track quality and accessibility of STI and HIV services.

One of the strengths of this survey is that it gives a statistically unbiased estimate of a number of variables and indicators. This is not the case for reporting systems such as the DHIS which are subject to a consistent downward bias in estimates, in the absence of quality assurance mechanisms that would assess the extent of under-reporting. This survey, therefore, provides a useful means of assessing some of the under-reporting which is inherent in universal information systems such as the DHIS.

Limitations:

The questionnaire was administered by telephonic survey, thereby introducing limitations inherent in this methodology such as interviewee idiosyncrasies and apathy, consistency of data given, incomplete responses, logistics (facilities without telephones, lines not working etc). These factors contribute to discrepancies in data reported and increase the need for validation. In addition, exclusion of facilities with poor record-keeping practices may have resulted in a bias of our estimates in favour of better managed facilities. Further analysis is needed to assess to what extent these clinics are different.

All data were obtained from providers only i.e. no data were collected directly e.g. by observation of facilities or by interviewing of clients. This may create some bias. The perception of the providers may not always have been objective and may have created bias.

As in any survey, the results are only as good as the data collection at source. In common with the DHIS, the validity of any estimates made from the data collected in this survey is limited by the reliability of the reporting systems that are in place at each individual facility.

2.4 Results

All data collected during this survey were reported for the month of July 2002. Data have been rounded off to two significant figures. Where relevant, 95% confidence intervals [CI] are quoted in tables. Data collected in this survey are compared to those from the DHIS or other national surveys wherever possible.

2.4.1 Description of facilities

Service providers at the PHC facilities sampled were asked whether the facility was located in a rural, urban or peri-urban area. Definitions were based on the respondents' view of where the facility was located. It was estimated by providers that 51% of all PHC facilities in South Africa are located in rural areas, 24.5% of facilities are located in urban areas and 24.5% described as peri-urban (Table 5). The provinces with the largest proportion of rural facilities are Limpopo (86%) and Eastern Cape (69%). According to the DHIS, 2 004 public health facilities (excluding mobile and satellite clinics, regional hospitals and specialised services) are located in rural areas, 1 115 are in urban areas, and 316 are in peri-urban areas. This includes PHC as well as other facilities. Definitions of urban, peri-urban, and rural are based on location of the district, rather than on location of the facility for the DHIS.

Table 5: Estimates of proportions of PHC facilities located in rural, urban and peri-urban areas, by province

Province	Rural location, % [95% CI]	Urban location, % [95% CI]	Peri-urban location, % [95% CI]
Mpumalanga	46 [38 – 54]	26 [20 – 33]	28 [22 – 37]
Free State	25 [17 – 37]	36 [25 – 48]	39 [27 – 52]
Western Cape	22 [16 – 30]	49 [40 – 59]	28 [21 – 38]
Limpopo	86 [77 – 91]	6.6 [2.8 – 14]	7.9 [4.3 – 14.2]
KwaZulu-Natal	51 [45 – 57]	20 [14 – 29]	29 [22 – 36]
Northern Cape	41 [36 – 47]	28 [22 – 35]	31 [25 – 37]
Eastern Cape	69 [63 – 74]	21 [16 – 28]	9.7 [5.8 – 16]
North West	54 [6 – 61]	9.0 [5.6 – 14]	37 [30 – 53]
Gauteng	8.6 [4 – 16]	50 [39 – 62]	41 [30 – 53]
Total	51 [49 – 54]	24.5 [22 – 27]	24.5 [22 – 27]

With the exception of two PHC facilities that identified themselves as 'semi-private', the majority (62%) reported being under the jurisdiction of the local authority (Table 6), and the rest under provincial authority.

Table 6: Estimates of proportions of PHC facilities under local authority, by province

Province	Under local authority, % [95% CI]
Mpumalanga	53 [44 – 62]
Free State	73 [59 – 84]
Western Cape	71 [64 – 77]
Limpopo	70 [59 – 79]
KwaZulu-Natal	52 [44 – 61]
Northern Cape	35 [28 – 43]
Eastern Cape	66 [58 – 73]
North West	53 [41 – 64]
Gauteng	64 [54 – 73]
Total	62 [58 – 65]

In all provinces, with the exception of Gauteng, about 25% of the PHC facilities offered 24-hour services. Of these, 55% were under provincial authority, and the rest were under local authority (Table 7). In Gauteng, only three of 78 facilities (one local authority, two provincial) offered 24-hour services.

Table 7: Estimates of proportions of PHC facilities offering 24-hour services under local authority and under provincial authority

Province	PHC facilities offering 24-hour services,		PHC facilities offering 24-hour services that are under local authority,		PHC facilities offering 24-hour services under provincial authority,	
	%	[95%CI]	%	[95%CI]	%	[95%CI]
Mpumalanga	20	[14 – 26]	30	[18-56]	70	[44-87]
Free State	10	[5 – 20]	13	[3.1-43]	87	[57-97]
Western Cape	18	[13 – 26]	18	[5.7-46]	82	[54-94]
Limpopo	50	[41 – 59]	68	[52-81]	32	[19-48]
KwaZulu-Natal	18	[13 – 24]	50	[30-70]	50	[30-70]
Northern Cape	28	[23 – 34]	25	[12-44]	75	[56-88]
Eastern Cape	25	[18 – 32]	44	[26-63]	56	[37-74]
North West	39	[29 – 51]	38	[21-58]	63	[42-80]
Gauteng	5.7	[2 – 14]	33	[3.5-91]	67	[9.4-98]
Total	25	[23 – 28]	45	[38-53]	55	[47-62]

The vast majority of facilities in the sample (>900) were PHC clinics, 26 were community health centres, and 33 were PHC facilities within hospitals. Satellite and mobile clinics were excluded from the sample. Complete data on the facility type distribution of the sample are not available as this information was not in the DHIS at the time of sampling.

2.4.2 Numbers and categories of nursing staff

In this survey, the total number of nursing staff (professional nurses, enrolled nurses, and nursing assistants) working in PHC facilities (including mobile and satellite clinics) in South Africa was estimated to be 29 653 in July, 2002. Of these, 56% were professional nurses, 18% were enrolled nurses, and 26% were enrolled nursing assistants (Table 8). The province with the greatest number of nursing staff was the Eastern Cape (5 309 nurses); approximately 62% of whom were professional nurses. The province with the lowest number of nurses was the Northern Cape (719 nurses). Of these, about 58% were professional nurses.

Given the estimated 170 215 STI clients attending PHC facilities during July 2002 (Table 8), the client load was approximately 5.7 STI clients per nurse provider per month.

According to the South African Nursing Council (SANC), the total number of registered nurses in December 2002 was 172 869. This number is much larger than that obtained during this survey since it includes nurses who worked at both hospitals and at PHC clinics, nurses who were not providing clinical services, those who were working out of South Africa, and those working in the private sector. Of the 172 869 registered nurses, 94 948 were professional nurses, 32 495 were enrolled nurses, and 45 426 were nursing assistants (auxillaries).

According to data derived from the PERSAL personnel administration system,⁹ there were 40 318 professional nurses working in the public sector in 2002. This included nurses working in secondary and tertiary level health services, as well as in primary health facilities.

The DHIS has data on total PHC headcount (all clients) and PHC nurse work days for July 2002 for 5 provinces. This calculation uses all staff, not only professional nurses. From this it is calculated that during July 2002, the average number of clients seen per work day by PHC nurses was: Eastern Cape- 3 clients, Free State- 37 clients, Gauteng- 29 clients, Northern Cape- 39 clients, North West- 31 clients. Of these, between one and three percent were symptomatic STI clients.

Table 8: Estimates of numbers of PHC nursing staff per category, by province

Province	Total nursing staff [95% CI]	Total professional nurses [95% CI]	Total enrolled nurses [95% CI]	Total enrolled nursing assistants [95% CI]
Mpumalanga	1 504 [1288 – 1720]	938 [774 – 1 102]	337 [274 – 401]	229 [184 – 273]
Free State	1 906 [987 – 2 825]	1 456 [772 – 2 139]	64 [40 – 88]	386 [148 – 625]
Western Cape	4 563 [2 038 – 7 088]	2 066 [1 436 – 2 696]	898 [287 – 1 509]	1 599 [298 – 2 900]
Limpopo	4 167 [3 349 – 4 986]	2 277 [1 897 – 2 658]	1 044 [734 – 1 354]	846 [647 – 1 046]
KwaZulu-Natal	3 631 [3 156 – 4 105]	2 234 [1 933 – 2 535]	956 [824 – 1 089]	440 [323 – 557]
Northern Cape	719 [490 – 947]	420 [280 – 560]	97 [58 – 136]	202 [150 – 254]
Eastern Cape	5 309 [2 193 – 8 424]	2 791 [1 694 – 3 888]	948 [174 – 1 723]	1 536 [257 – 2 815]
North West	4 333 [2 997 – 5 669]	2 367 [1760 – 2 973]	500 [161 – 839]	1 402 [976 – 1 828]
Gauteng	3 522 [2 358 – 4 686]	2 110 [1506 – 2 714]	481 [281 – 682]	930 [481 – 1 379]
Total	29 653 [25 064 – 34 242]	16 659 [14 903 – 18 415]	5 325 [4 209 – 6 443]	7 570 [5 615 – 9 527]

2.4.3 Number of STI clients by province

From the survey data we estimate the total number of new symptomatic STI clients attending South African PHC facilities in all provinces during July 2002 to be 170 215. The total number of cases treated as STIs at PHC facilities, reported to the DHIS, for the same month was 146 237. According to the DHIS, July makes up 7.9% of the annual STI client total for the two years 2001 and 2002 combined, therefore our best estimate of the annual figure is 2,168 344 symptomatic STI clients treated at public sector PHC facilities in South Africa. In addition, estimates indicate that about 50% of clients with symptomatic STIs may have been treated by other health service providers, mainly in the private sector.¹⁰ Several studies indicate that up to 50% of all STIs can be asymptomatic.^{11,12} Thus, approximately 8,400 000 symptomatic and asymptomatic STI infections occurred in 2002, among a population (15 years or older) of about 30 million.

As reported in Section 2.3.4, some facilities were excluded from data analysis because of discrepancies and inconsistencies in data reported. Many facilities did not routinely record the sex of STI clients or the number of STI clients that were under the age of 18 years. Of those that did, in six provinces >10% of STI clients were under 18 years of age. Best estimates of the total number of STI clients, the percentage of clients that are male, and the percentage of clients under the age of 18 years are presented in Table 9.

Of the total number of STIs recorded in all provinces, 35% were in male clients. In general males use public sector services less than females. Recent research has shown that fewer South African men than women seek care for STIs at public sector services.¹³ Provinces that showed high utilisation of services by males were Mpumalanga (42%) and Free State (41%). In other provinces utilisation by males ranged from 31% to 42% of the total number of male clients.

Table 9: Estimates of numbers of STI clients seen during July 2002, by province

Province	Total No of STI clients		Proportion of male clients,			Proportion of clients <18 years,		
	n	[95% CI]	%	[95% CI]	(n)*	%	[95% CI]	(n)*
Mpumalanga	13 902	[11 911 – 15 893]	42	[39 - 45]	(78)	12	[9 - 16]	(65)
Free State	10 262	[6 581 – 13 943]	41	[25 - 57]	(83)	9.1	[16 - 17]	(54)
Western Cape	13 198	[7 622 – 18 774]	33	[25 - 40]	(87)	12	[3.7 - 20]	(76)
Limpopo	29 062	[16 097 – 42 026]	31	[28 - 36]	(78)	20	[11 - 29]	(49)
KwaZulu-Natal	46 270	[43 881 – 57 660]	33	[28 - 39]	(101)	10.5	[5.4 - 15]	(82)
Northern Cape	2 409	[1 563 – 3 255]	42	[34 - 49]	(73)	11	[3.9 – 17.3]	(60)
Eastern Cape	22 641	[14 703 – 30 578]	33	[27 - 39]	(117)	15	[9.7 - 20]	(93)
North West	15 527	[9 698 – 21 356]	35	[30 - 41]	(65)	9.2	[4.8 – 13.5]	(58)
Gauteng	16 944	[9 679 – 24 209]	36	[29 - 43]	(24)	6.5	[0 - 13]	(16)
Total	170 215	[147 924 - 192 506]	35	[33 - 38]	(706)	11.8	[9.5 - 14]	(553)

* n = number of facilities on which estimate is based

2.4.4 Knowledge of drug treatment for STI syndromes

Syndromic management for first line treatment of STIs has proven to be most feasible and cost-effective at PHC level. It is the current recommended policy in all provinces. Treatment is based on clinical diagnosis only (symptoms and signs).

During this survey the most senior nurse provider available was asked to report on drug treatment for three commonly presenting STI syndromes; vaginal discharge, urethral discharge, and genital ulcers. Responses were assessed on correct adherence to the national protocol or an officially adopted provincial protocol. For Gauteng, responses were assessed with reference to the provincial STI treatment guidelines and/or the national guidelines.

The *National* recommended drug treatment for the following syndromes is as follows:

- ◆ *Vaginal discharge*- ciprofloxacin 500mg orally, once, plus doxycycline 100mg orally twice daily for 7 days, and metronidazole; either 2g orally, once or 400mg orally, twice daily for 7 days.
- ◆ *Urethral discharge*- ciprofloxacin 500mg orally, once, plus doxycycline 100mg orally twice daily for 7 days
- ◆ *Genital ulcers*- benzathine penicillin 2.4 m.u. by intramuscular injection, plus erythromycin 500mg orally, thrice daily for 5 days

The recommended drug treatment for STI syndromes in *Gauteng* is as follows:

- ◆ *Vaginal discharge*- ciprofloxacin 500mg orally, once, plus doxycycline 100mg orally twice daily for 7 days, and metronidazole 400mg orally, twice daily for 7 days.
- ◆ *Urethral discharge*- ciprofloxacin 500mg orally, once, plus doxycycline 100mg orally twice daily for 7 days.

- ◆ *Genital ulcers*- benzathine penicillin 2.4 m.u. by intramuscular injection once, plus erythromycin 500mg orally, four times daily for 7 days (or 14 days if LGV).

The number of facilities that correctly identified the recommended drug treatment (correct drug, dosage, duration and frequency) for all three syndromes was less than 50% in almost all provinces except Eastern Cape (50%) and Gauteng (51%). Table 10 summarises the results obtained for each province. These findings suggest a considerable lack of knowledge about correct drug treatment.

Of the three syndromes assessed, correct drug treatment of genital ulcers was found to be the weakest. In only one province was the knowledge of correct drugs for genital ulcers higher than for vaginal discharge. Reported drug treatment of male urethral discharge was better overall, as compared with vaginal discharge and genital ulcer treatment, with over three-quarter of respondents (79%) reporting the correct treatment.

Table 10: Provider knowledge of correct drug treatment of STI syndromes

Province	Vaginal discharge, % [95% CI]	Urethral discharge, % [95% CI]	Genital ulcers, % [95% CI]	All correct, % [95% CI]
Mpumalanga	47 [36 – 58]	70 [60 – 79]	55 [44 – 66]	28 [21 – 37]
Free State	73 [61 – 83]	74 [65 – 81]	61 [48 – 73]	46 [35 – 58]
Western Cape	63 [52 – 72]	62 [51 – 71]	44 [35 – 53]	32 [24 – 41]
Limpopo	60 [49 – 70]	71 [59 – 80]	47 [35 – 59]	34 [26 – 44]
KwaZulu-Natal	73 [64 – 80]	86 [78 – 91]	69 [59 – 77]	49 [41 – 58]
Northern Cape	58 [46 – 69]	81 [70 – 89]	54 [43 – 66]	38 [31 – 46]
Eastern Cape	72 [63 – 80]	86 [78 – 92]	63 [54 – 71]	50 [42 – 58]
North West	50 [39 – 61]	83 [74 – 90]	50 [38 – 62]	30 [21 – 41]
Gauteng	69 [56 – 80]	84 [74 – 91]	71 [58 – 82]	51 [40 – 62]
Total	65 [61 – 68]	79 [75 – 81]	58 [54 – 62]	41 [38 – 45]

Overall, although only 16% of nurse providers did not know the correct drug for vaginal discharge, almost one third gave incorrect dosage, duration and frequency of drug treatment (Table 11). Nurses in the Free State and KwaZulu-Natal had the best knowledge of correct drug treatment for vaginal discharge. Although most nurses in Gauteng (93%) knew the correct drug, over 50% lacked knowledge of frequency and duration of drug use.

Table 11: Provider knowledge of drug treatment for vaginal discharge

Province	Incorrect drug, % [95% CI]	Incorrect dosage, % [95% CI]	Incorrect duration, % [95% CI]	Incorrect frequency, % [95% CI]
Mpumalanga	17 [10 – 27]	49 [38 – 60]	45 [36 – 55]	44 [34 – 55]
Free State	7.0 [4 – 11]	27 [18 – 39]	31 [20 – 45]	27 [18 – 39]
Western Cape	21 [14 – 30]	37 [28 – 48]	34 [25 – 44]	33 [24 – 43]
Limpopo	31 [23 – 42]	41 [31 – 52]	40 [31 – 50]	37 [28 – 47]
KwaZulu-Natal	14 [8 – 22]	16 [11 – 22]	20 [14 – 29]	19 [13 – 27]
Northern Cape	22 [14 – 33]	33 [23 – 44]	36 [25 – 47]	39 [29 – 51]
Eastern Cape	7.8 [4.0 – 15]	12 [7.2 – 20]	10 [5.9 – 18]	11 [6.7 – 18]
North West	21 [13 – 32]	39 [28 – 50]	44 [33 – 55]	46 [36 – 57]
Gauteng	6.7 [2.5 – 17]	39 [27 – 52]	52 [40 – 64]	52 [40 – 64]
Total	16 [13 – 19]	29 [26 – 32]	30 [27 – 34]	30 [27 – 33]

Overall treatment for urethral discharge was slightly better than for vaginal discharge (Table 12); only 13% of nurse providers did not know the correct drug for urethral discharge, and less than a fifth gave incorrect dosage, incorrect duration and incorrect frequency of drug treatment. Nurse providers in Gauteng and Eastern Cape had the best knowledge of drug treatment for urethral discharge; those in the Western Cape had the least knowledge of this.

Table 12: Provider knowledge of drug treatment for urethral discharge

Province	Incorrect drug, % [95% CI]	Incorrect dosage, % [95% CI]	Incorrect duration, % [95% CI]	Incorrect frequency, % [95% CI]
Mpumalanga	16 [9.8 – 24]	29 [20 – 39]	19 [13 – 27]	19 [12 – 28]
Free State	19 [13 – 29]	22 [15 – 31]	20 [11 – 33]	23 [16 – 32]
Western Cape	28 [20 – 39]	39 [29 – 50]	41 [30 – 52]	32 [23 – 42]
Limpopo	20 [13 – 29]	23 [16 – 33]	31 [22 – 42]	24 [16 – 35]
KwaZulu-Natal	7 [3.6 – 12]	11 [6.2 – 18]	11 [6.8 – 18]	9.6 [5.7 – 16]
Northern Cape	16 [9 – 27]	16 [9.1 – 27]	19 [11 – 30]	18 [11 – 29]
Eastern Cape	7.6 [3.9 – 14]	9.3 [4.9 – 17]	8.8 [4.6 – 16]	10 [5.4 – 18]
North West	9.1 [4.8 – 17]	15 [8.7 – 26]	16 [9.7 – 26]	14 [8.2 – 23]
Gauteng	5.6 [1.9 – 16]	9.9 [4.4 – 21]	9.3 [4.1 – 20]	10 [4.5 – 21]
Total	13 [11 – 16]	18 [15 – 21]	19 [16 – 21]	17 [14 – 19]

Knowledge of treatment of genital ulcers is shown in Table 13. This was worse overall than that for either vaginal or urethral discharge. More than a quarter of respondents did not know the correct drug and over half gave incorrect duration of drug treatment. In general genital ulcers were under-treated; many clients received a single dose of bicillin only. Service providers in the Western Cape had least knowledge of all aspects of drug treatment for genital ulcers; only 22% knew the correct frequency of drug administration.

Table 13: Provider knowledge of drug treatment for genital ulcers

Province	Incorrect drug, % [95% CI]	Incorrect dosage, % [95% CI]	Incorrect duration, % [95% CI]	Incorrect frequency, % [95% CI]
Mpumalanga	15 [8.4 – 24]	24 [15 – 34]	50 [39 – 61]	56 [45 – 67]
Free State	24 [15 – 37]	25 [16 – 38]	51 [38 – 63]	48 [36 – 61]
Western Cape	42 [33 – 52]	49 [39 – 58]	62 [50 – 72]	78 [69 – 85]
Limpopo	45 [35 – 55]	46 [35 – 57]	46 [35 – 57]	43 [33 – 54]
KwaZulu-Natal	14 [9.1 – 21]	19 [13 – 27]	56 [46 – 66]	26 [19 – 34]
Northern Cape	31 [21 – 44]	37 [26 – 49]	38 [27 – 51]	50 [38 – 62]
Eastern Cape	25 [18 – 33]	32 [25 – 41]	39 [31 – 49]	37 [28 – 46]
North West	25 [16 – 38]	27 [17 – 39]	52 [40 – 64]	31 [20 – 44]
Gauteng	9.0 [3.9 – 19]	8.3 [3.4 – 19]	69 [56 – 79]	31 [21 – 44]
Total	26 [23 – 29]	30 [27 – 34]	51 [47 – 55]	42 [38 – 45]

The hypothetical number of STI clients at public sector facilities that were affected by incorrect drug treatment (incorrect drug, dosage, duration or frequency) for STI syndromes are shown in Table 14.

Table 14: Estimates of numbers of clients that could potentially be affected by incorrect drug treatment for STI syndromes during July 2002, by province

Province	Vaginal discharge clients n [95% CI]	Urethral discharge clients n [95% CI]	Genital ulcer clients n [95% CI]	All syndromes incorrect, clients n [95% CI]
Mpumalanga	6 307 [4 086 – 8 529]	3 260 [1 591 – 4 930]	4 609 [2 983 – 6 236]	8 604 [6 386 – 10 822]
Free State	2 686 [711 – 4 661]	2 728 [750 – 4 706]	2 521 [1 582 – 3 460]	4 288 [2 252 – 6 323]
Western Cape	5 506 [0 – 11 866]	5 482 [0 – 11 864]	6 861 [475 – 13 247]	7 741 [1 337 – 14 144]
Limpopo	8 200 [4 655 – 11 744]	5 770 [2 751 – 8 789]	11 231 [6 739 – 15 722]	13 552 [9 026 – 18 079]
KwaZulu-Natal	15 959 [5 813 – 26 104]	3 826 [935 – 6 717]	14 570 [6 575 – 22 565]	24 511 [13 207 – 35 815]
Northern Cape	1 246 [10 – 2 482]	137 [31 – 243]	1 353 [101 – 2 605]	1 612 [359 – 2 866]
Eastern Cape	8 286 [1 103 – 15 468]	1 215 [112 – 2 317]	9 985 [2 921 – 17 049]	13 994 [6 074 – 21 915]
North West	5 752 [2 127 – 9 377]	1 401 [362 – 2 440]	7 996 [1 760 – 14 232]	11 376 [4 430 – 18 323]
Gauteng	2 570 [0 – 5 417]	1 407 [0 – 3 426]	6 091 [0 – 13 042]	8 066 [983 – 15 623]
Total	56 512 [41 048 – 71 976]	25 225 [16 783 – 33 669]	65 217 [48 875 – 81 559]	93 745 [74 744 – 112 748]

2.4.5 STI drug stock-outs

There are five main drugs that are used in the management of people with STIs. Each facility was asked whether any of these drugs (metronidazole, ciprofloxacin, erythromycin, doxycycline, benzathine-penicillin) was out of stock during July 2002. A few respondents stated that they did not use a particular drug. This was recorded as being out of stock except where a correct alternative drug was used.

For each drug, the percentage of health facilities that were out of stock of that drug in any one province was generally small (0-17%), however the number of facilities that had any one of the essential STI drugs out of stock during July 2002 ranged from 2.4 to 24%. Limpopo and the Eastern Cape were the provinces that had the greatest problems with drug supplies; Western Cape had the most consistent supply of all STI drugs.

All provinces had drug stock-outs in some facilities during July 2002. Eight provinces had stock-outs of all five drugs and one province (Gauteng) had stock-outs of three drugs only (ciprofloxacin, erythromycin, penicillin). Eastern Cape and Limpopo provinces had the highest percentage of facilities with drug stock-outs, with both Eastern Cape and Limpopo reporting 24% of facilities with at least one drug out of stock. Drugs that were most commonly unavailable were ciprofloxacin and erythromycin in 6.2% and 5.4% of facilities respectively. In total, no drug was out of stock during the month of July in more than 6.2% of facilities. Table 15 gives the percentage of facilities per province that reported drug stock-outs for each drug.

Table 15: Estimates of proportions of PHC facilities out of stock of STI drugs during July 2002, by province

Province	Metroni- dazole, % [95% CI]	Cipro- floxacin, % [95% CI]	Erythro- mycin, % [95% CI]	Doxy- cycline, % [95% CI]	Penicillin, % [95% CI]	At least one drug out of stock, % [95% CI]
Mpumalanga	2.0 [0.3 – 11]	3.3 [0.9 – 11]	11 [6.1 – 18]	3.9 [1.3 – 11]	1.2 [0.2 – 6]	16 [9.8 – 25]
Free State	0.9 [0.2 – 4.2]	1.9 [1.1 – 3.3]	0.4 [0.4 – 0.4]	1.1 [1.1 – 1.1]	2.8 [1.5 – 5.3]	4.7 [3 – 7.3]
Western Cape	0.4 [0.1 – 0.9]	1.0 [0.6 – 1.6]	1.8 [0.4 – 7.1]	0.4 [0.1 – 0.9]	1.8 [0.4 – 7.1]	2.4 [0.8 – 6.8]
Limpopo	6.2 [2.9 – 13]	17 [11 – 27]	2.9 [1.1 – 7.1]	9.5 [4.7 – 18]	3.0 [0.8 – 11]	24 [16 – 33]
KwaZulu-Natal	1.1 [0.2 – 6.4]	1.7 [0.4 – 6]	1.1 [0.2 – 6.4]	1.2 [0.3 – 5.9]	2.2 [0.7 – 6.4]	2.9 [1.2 – 7]
Northern Cape	2.8 [2 – 3.9]	8.1 [6 – 11]	2.1 [1.3 – 3.5]	4.7 [2.6 – 8.3]	1.7 [1.7 – 1.7]	13 [11 – 17]
Eastern Cape	6.9 [3.6 – 13]	8.2 [4.2 – 15]	16 [10 – 24]	8.5 [4.6 – 15]	8.1 [5 – 13]	24 [17 – 32]
North West	1.5 [0.2 – 8.5]	6.6 [3.3 – 13]	1.9 [0.4 – 7.6]	2.6 [0.8 – 7.8]	4.6 [1.6 – 12]	10 [5.8 – 18]
Gauteng	0.0	3.9 [1.1 – 12]	2.4 [0.5 – 9.6]	0.0	0.4 [0.4 – 0.4]	6.7 [2.7 – 15]
Total	3.0 [2 – 4.5]	6.2 [4.7– 8.1]	5.4 [4 – 7.2]	4.1 [2.9 – 5.9]	3.6 [2.6 – 5.1]	13 [11 – 15]

Table 16 shows that under 10% of STI clients (n=15 970) at PHC facilities may have been affected by stock-out of STI drugs during July 2002.

Table 16: Estimates of number of STI clients attending facilities that were affected by stock-outs of STI drugs at PHC facilities, by province, during July 2002

Province	No of clients at facilities with stock-outs of STI drugs	
	n	[95% CI]
Mpumalanga	2 040	[468 – 3 611]
Free State	574	[30 – 1 118]
Western Cape	332	[0 – 981]
Limpopo	4 602	[2 348 – 6 855]
KwaZulu-Natal	509	[0 – 1 142]
Northern Cape	164	[13 – 314]
Eastern Cape	3 808	[132 – 7 484]
North West	2 614	[0 – 5 893]
Gauteng	1 330	[0 – 3 247]
Total	15 970	[9 918 – 22 023]

Overall, 8.8% of PHC facilities nationally had both STI drug stock-outs and gave incorrect drug treatment for at least one STI syndrome in July 2002 (Table 17). In Mpumalanga and Limpopo more than 10% of facilities were affected in this way. The maximum potential number of STI clients who received sub-optimal treatment as a result of both these factors was 14 324. This was determined by summarising the products of STI clients and the facility weight, for those facilities affected by incorrect treatment and drug stock-outs.

Table 17: Estimates of proportions of PHC facilities with both incorrect drug treatment for at least one STI syndrome and STI drug stock-outs, and maximum potential number of STI clients affected during July 2002

Province	Facilities with both incorrect treatment & stock-outs, % [95% CI]	Number of STI clients affected by both stock-outs & incorrect treatment n [95% CI]
Mpumalanga	15 [8 – 25]	2 793 [1 013 – 4 573]
Free State	4.7 [2.3 – 9.5]	504 [46 – 962]
Western Cape	2.1 [0.5 – 8.1]	320 [0 – 970]
Limpopo	20 [12 – 31]	3 372 [1 501 – 5 243]
KwaZulu-Natal	2.6 [0.8 – 7.5]	491 [0 – 1 119]
Northern Cape	8.1 [4.0 – 16]	696 [0 – 1 924]
Eastern Cape	11 [5.9 – 19]	2 880 [0 – 6 521]
North West	10 [5.0 – 19]	2 303 [255 – 4 351]
Gauteng	4.3 [1.2 – 14]	965 [0 – 2 360]
Total	8.8 [6.8 – 11]	14 324 [9 120 – 19 528]

2.4.6 Syphilis screening among pregnant women

In South Africa the public sector antenatal syphilis screening programme has been in existence for over 20 years. The National ANC Guidelines, published in 2000, specify that syphilis is an essential screening investigation at first ANC visit. The guidelines recommend that results be made available prior to completion of this first ANC visit since, if required, the first dose of treatment can be administered that day.

In most cases, samples are sent to government laboratories for screening by the rapid plasma reagin (RPR) test. If results are not available on the same day, clients are asked to return to the health facility for their results. During this national baseline survey, PHC facilities were asked how much time elapsed between obtaining blood samples for syphilis screening and results being made available. Since syphilis screening is not routinely performed amongst STI clients at PHC facilities, most facilities reported this information for ANC clients only.

In 2000 it was estimated that syphilis screening was available in at least 90% of ANC services in all provinces.¹⁴ The results of the present survey indicate that about 87% of PHC facilities nationally offered syphilis testing in July 2002 (Table 18). In Mpumalanga almost 100% offered syphilis testing. A third (33%) of facilities in the Eastern Cape, however, reported no provision of this service. It is possible that facilities that reported not providing syphilis screening did not offer ANC services. Most PHC facilities were not able to get syphilis test results back to clients within one day. Nationally, only 4% (n=40) achieved this target (Table 18). This includes cases where the testing site is in close proximity to the facility. Limpopo province had the highest percentage (12%) of facilities that were able to provide a one-day service, half the facilities, however, took seven days or longer to get their results. In both the Eastern Cape and Free State, less than one percent of facilities were able to provide a one-day service. In most provinces at least 50% of facilities had a turn-around time of 3-4 days. Gauteng is predominantly urban, with short distances between sites, hence the shortest median turn-around time was reported here.

PHC facilities generally utilise existing health service transport systems to transfer blood samples and results to and from laboratories. Particularly in rural areas, delays may occur as transport is often unreliable and long distances are involved. Facilities with access to fax machines are better placed to obtain results quickly.¹⁵

Table 18: Proportion of facilities with syphilis results available on the same day as sampling, median and inter-quartile range of RPR turn-around time, and facilities not offering syphilis screening.

Province	RPR result returned on the same day,	Median & inter-quartile range of RPR turn-around time,	Blood test for syphilis RPR not offered,
	% [95% CI]	% (days)	% [95% CI]
Mpumalanga	4.0 [1.7 – 8.9]	3 (2, 7)	0.8 [0.2 – 3.5]
Free State	0.9 [0.2 – 4.2]	3 (2, 6)	3.5 [1.0 – 11]
Western Cape	4.0 [1.5 – 9.1]	3 (2, 7)	3.0 [1.0 – 9.0]
Limpopo	12 [6.5 – 22]	7 (2,10)	12 [6.4 – 20]
KwaZulu-Natal	4.1 [2.0 – 8.1]	7 (3,14)	14 [9.0 – 20]
Northern Cape	2.5 [1.1 – 5.7]	3.5 (2,7)	4.3 [1.6 – 11]
Eastern Cape	0.6 [0.1 – 3.1]	5.5 (2,7)	33 [26 – 41]
North West	5.6 [2.4 – 13]	4 (2,7)	6.6 [2.5 – 16]
Gauteng	1.9 [0.3 – 10]	2 (1.75, 4)	1.9 [0.3 – 10]
Total	4.1 [3.0 – 5.7]	4 (2, 7)	12.8 [11 – 15]

2.4.7 Staff trained in STI management

Data were obtained on the number of professional nurses at PHC facilities 'ever trained' in syndromic management of STIs (including cascaded, pre- and in-service training). The proportions of professional nurses trained in syndromic management are shown in Table 19. Details of duration and content of training were not obtained and considerable variation may have occurred.

Table 19: Estimates of numbers and proportions of PHC professional nurses trained in syndromic management, by province

Province	Total number of professional nurses trained in syndromic management		Professional nurses trained in syndromic management,
	n	[95% CI]	%
Mpumalanga	424	[302 – 546]	45
Free State	1 019	[333 – 1 704]	70
Western Cape	1 198	[1 058 – 1 337]	58
Limpopo	795	[643 – 948]	35
KwaZulu-Natal	1 130	[923 – 1 337]	51
Northern Cape	146	[110 – 182]	35
Eastern Cape	1 459	[1 204 – 1 714]	52
North West	1 144	[899 – 1 388]	48
Gauteng	1 007	[801 – 1214]	48
Total	8 323	[7 465 – 9 183]	50

2.4.8 HIV counselling, testing and referral

The DOH Strategic Plan 2000-2005⁷ encourages utilisation of STI services to prevent HIV acquisition and to identify those that are infected with HIV through appropriate counselling and testing. It is essential that prompt and effective treatment of STIs in HIV infected people is initiated in order to prevent transmission of HIV from those infected with STIs. Studies indicate that up to 50% of patients presenting with symptomatic STIs may be co-infected with HIV in some clinical settings.¹⁶ Among patients with genital ulcer syndrome, HIV prevalence might even be as high as 80% in some populations.¹⁷ Promotion of HIV counselling and testing should thus form an integral part of STI management.

In 2001 the NDOH initiated a coordinated programme for voluntary counselling and testing (VCT) and prevention of mother-to-child transmission (PMTCT). The NDOH provides guidelines outlining that pre- and post-HIV test counselling should be undertaken in a confidential manner with suitably qualified personnel, such as doctors, nurses or trained lay counsellors, and that informed consent should be obtained. The NDOH Guidelines further stipulate that in instances where health facilities lack capacity to provide pre- and post-HIV test counselling services, referral to a counselling agency or other appropriate facility should be arranged prior to HIV testing.

The number of clients tested at PHC facilities for HIV in July 2002 estimated from this survey, by province, and the number referred for HIV testing are shown in Table 20. Included are PHC facilities that offer HIV testing but are not designated VCT or PMTCT sites.

The average number of clients tested for HIV in July 2002 differed significantly ($p=0.0002$) between PMTCT facilities (23 tests per month) and others (11 tests per month).

Table 20: Estimates of number of clients tested and number referred for HIV testing in July 2002, by province

Province	Number tested for HIV		Number referred for HIV testing	
	n	[95%CI]	n	[95%CI]
Mpumalanga	1 656	[1 118 – 2 193]	267	[91 – 443]
Free State	4 928	[1 354 – 8 502]	42	[8 – 76]
Western Cape	10 777	[6 798 – 14 757]	0*	
Limpopo	3 000	[1 577 – 4 424]	190	[69 – 311]
KwaZulu-Natal	10 803	[6 070 – 15 536]	1 434	[486 – 2 382]
Northern Cape	1 280	[911 – 1 650]	37	[8 – 67]
Eastern Cape	3 587	[1 827 – 5 348]	590	[319 – 861]
North West	5 470	[2 906 – 8 035]	44	[-14 – 101]
Gauteng	7 855	[3 747 – 11 963]	48	[-46 – 142]
Total	49 356	[40 412 – 58 301]	2 652	[1 637 – 3 667]

* All facilities in the Western Cape offer HIV testing, hence no clients are referred.

The estimated number of PHC nursing staff (professional nurses, enrolled nurses, and enrolled nursing assistants) trained in HIV counselling, by the end of 2002, is presented in Table 21. A total of 7 640 (27%) of all PHC facility staff are trained in HIV counselling. Of these, the majority are from North West (21%), Western Cape (16%), and Gauteng (15%). Most nurses trained in HIV counselling are professional nurses. More enrolled nursing assistants than enrolled nurses are trained in HIV counselling. The number of trained lay counsellors was not documented in this survey. Almost one-third of PHC facilities (mostly in the Eastern Cape and KwaZulu-Natal) had no nursing staff trained in HIV counselling in July 2002.

Table 21: Estimates of numbers of staff trained in HIV counselling, per category, by July 2002

Province	Total Staff trained [95% CI]	Professional nurses trained [95% CI]	Enrolled Nurses trained [95% CI]	Enrolled nursing assistants trained [95% CI]
Mpumalanga	430 [308 – 552]	359 [268 – 449]	52 [20 – 84]	19 [7 – 31]
Free State	394 [232 – 555]	391 [232 – 550]	2 [0 – 5]	22 [0 – 46]
Western Cape	1 259 [922 – 1 597]	940 [755 – 1 126]	152 [87 – 217]	167 [33 – 300]
Limpopo	785 [519 – 1 051]	659 [476 – 842]	61 [15 – 108]	65 [18 – 111]
KwaZulu-Natal	917 [653 – 1 181]	646 [463 – 829]	188 [121 – 255]	83 [37 – 129]
Northern Cape	237 [†] [140 – 333]	154 [104 – 203]	12 [3 – 21]	39 [6 – 71]
Eastern Cape	888 [†] [607 – 1 170]	811 [600 – 1 021]	61 [9 – 113]	25 [0 – 51]
North West	1 603 [1 078 – 2 129]	1 156 [821 – 1 491]	118 [50 – 186]	329 [173 – 486]
Gauteng	1 125 [800 – 1 451]	830 [621 – 1 039]	94 [47 – 142]	201 [97 – 306]
Total	7 640[†] [6 765 – 8 515]	5 946 [5 365 – 6 527]	741 [594 – 888]	950 [705 – 1194]

[†] Total numbers do not tally since one clinic in Free State and one in the Eastern Cape reported inconsistent data; in addition two clinics in the Northern Cape did not give a breakdown of the category of staff trained.

The estimated proportion of all PHC facilities offering HIV testing with or without counselling in July 2002 (69%) is shown in Table 22. The vast majority of facilities in the Western Cape (96%), Free State (89%), Gauteng and Northern Cape (88%) offered HIV testing services. The Eastern Cape was the province with the lowest proportion of facilities providing HIV testing (50%).

The proportion of all PHC facilities offering HIV counselling (including VCT and post-test support counselling) by nursing staff (excluding lay counsellors) in July 2002 is 67%. This is slightly lower than the total proportion of clinics offering HIV testing nationally (69%). In all provinces, the proportion of PHC facilities offering HIV counselling is lower than that offering HIV testing. This has been attributed to shortages of trained staff in some instances. Also, there may be some anonymous testing done for people enrolled in research trials.

Of the 501 facilities (for which data were available) who reported offering VCT services during this survey, 409 facilities (82%) actually performed tests on anyone in July 2002. The mean number of tests done at these facilities during July 2002 was 20.

Table 22: Estimates of proportion of PHC facilities offering HIV testing, proportion offering HIV counselling, and proportion offering HIV testing without offering counselling, by province, during July 2002.

Province	Facilities offering HIV testing,		Facilities offering HIV counselling,		Facilities offering HIV testing without HIV counselling,	
	%	[95%CI]	%	[95%CI]	%	[95%CI]
Mpumalanga	71	[63 – 78]	69	[61 – 76]	2.5	[1.0 – 6.3]
Free State	89	[81 – 93]	81	[71 – 88]	7.9	[3.8 – 16]
Western Cape	96	[91 – 99]	95	[90 – 98]	1.1	[0.6 – 2.3]
Limpopo	65	[55 – 73]	64	[55 – 73]	0.2	[0.2 – 0.2]
KwaZulu-Natal	55	[47 – 62]	55	[47 – 62]	0	
Northern Cape	88	[82 – 92]	84	[79 – 89]	3.3	[3.3 – 3.3]
Eastern Cape	50	[44 – 56]	48	[42 – 54]	1.9	[0.5 – 7.2]
North West	76	[66 – 84]	74	[65 – 82]	1.4	[0.4 – 5.7]
Gauteng	88	[78 – 94]	86	[76 – 93]	1.9	[0.3 – 10]
Total	69	[67 – 72]	67	[65 – 70]	1.8	[1.1 – 2.8]

By the end of 2002 the NDOH reported that VCT was available in 982 facilities throughout the country.¹⁸ These included facilities where PMTCT is available, (primary, secondary and tertiary health facilities). Through the expansion plans for both VCT and PMTCT, the DOH aims to have VCT services available in 80% of public health facilities by the end of the 2003/4 financial year. Data from this survey (July 2002) show that 53% of PHC facilities in South Africa are designated VCT sites (Table 23). This is more than the 982 facilities reported at the end of 2002 by the DOH. This may be attributed to service providers erroneously assuming that facilities were designated VCT sites if counselling and testing services were offered.

Table 23: Estimates of proportions of PHC facilities that are designated VCT sites, by province

Province	Proportion of facilities that are designated VCT sites,	
	%	[95%CI]
Mpumalanga	62	[52 – 71]
Free State	68	[56 – 79]
Western Cape	87	[81 – 92]
Limpopo	72	[62 – 80]
KwaZulu-Natal	33	[25 – 41]
Northern Cape	63	[56 – 70]
Eastern Cape	27	[20 – 35]
North West	66	[54 – 75]
Gauteng	46	[35 – 56]
Total	53	[50 – 56]

Implementation of a national PMTCT programme in South Africa commenced in May 2001 in 18 national sites and 260 access points (clinics and hospitals) which offered antenatal and perinatal services. The number of access points increased from 153 in July 2001 to 260 in December 2001. According to DOH

figures¹⁹ since implementation of the PMTCT programme, about 66 000 women have presented for antenatal care at access points, of which approximately 36 000 agreed to VCT. Approximately 600 facilities presently offer both VCT and PMTCT services that include the provision of nevirapine to mother and infant, and formula feed to women who choose to exclusively formula feed.

At the time of data collection for this survey (July 2002), PMTCT roll-out had not commenced in many provinces e.g. KwaZulu-Natal. In addition expansion of the programme in various provinces had not been officially documented.

This study shows that, as in the case of VCT services, the Western Cape had the highest proportion of PHC facilities that were PMTCT sites (57%). The lowest proportions of PMTCT facilities occurred in Mpumalanga (16%) and Free State (18%). The number of clients reported referred for by PHC facilities for PMTCT in July 2002 was 3 866 and was limited to facilities offering HIV testing and/or counselling. Provincial data pertaining to number of referrals made for PMTCT are shown in Table 24.

Table 24: Estimates of proportions of PHC facilities that were PMTCT sites and numbers of referrals made for PMTCT in July 2002, by province

Province	Proportion of facilities that were PMTCT sites,		Number of referrals for PMTCT	
	%	[95%CI]	n	[95%CI]
Mpumalanga	16	[9 – 26]	113	[25 – 202]
Free State	18	[10 – 31]	79	[0 – 168]
Western Cape	57	[46 – 67]	148	[0 – 413]
Limpopo	35	[24 – 47]	303	[25 – 580]
KwaZulu-Natal	20	[14 – 28]	1 813	[0 – 3 817]
Northern Cape	29	[19 – 40]	55	[10 – 99]
Eastern Cape	29	[21 – 39]	547	[0 – 1 321]
North West	31	[21 – 44]	242	[0 – 542]
Gauteng	22	[13 – 35]	566	[0 – 1 134]
Total	29	[26 – 33]	3 866	[1 587 – 6 144]

2.4.9 Male and female condom distribution

Male Condom Distribution

Promotion and provision of male condoms, together with demonstration of their correct use is an essential part of management of STI clients. It should also be an integral part of any encounter in antenatal and family planning services. In addition, condoms should be easily accessible for all clients at every facility during and beyond service hours.

The NDOH is responsible for procurement and distribution of male condoms to primary sites in all provinces. Over R150 million per year is spent to ensure sufficient supplies of condoms, free of charge, to the public, at the highest quality standard controlled by the SABS. About 300 million condoms were distributed in 2003, most of them by PHC facilities. Male condom distribution is managed by the Logistic Management Information System (LMIS) which facilitates continuous supply of condoms on the basis of consumption. The total number of male condoms distributed to primary sites in 2002 was 190 million. About 20 million condoms are estimated to be distributed every month through primary sites (Financial Plan, STIs, Barrier Methods, TB/HIV Sub-Directorate 2002/3).

From this survey it is estimated that during July 2002, about 8,745 254 condoms (approximately 100 million annually) were distributed through PHC facilities in South Africa. Five provinces (Gauteng,

Eastern Cape, KwaZulu-Natal, Western Cape and Limpopo) each distributed over a million condoms during this period (Table 25). In comparison, the total number of male condoms reported to the SA-DHIS (version 1.3.0.53) to have been distributed by PHC facilities during July 2002 is about 3 million less (5,667 418). The discrepancy may in part be a result of Gauteng Province not routinely reporting male condom distribution data to the DHIS at the time (STI/Barrier Methods Quarterly Meeting 26-27 August 2003).

There is a paucity of data on male condom distribution at local government and clinic level. Information was obtained on distribution of male condoms to 'non-medical sites' such as taverns. Most facilities do not, however, record the number of condoms distributed to these secondary sites.

Of the 9 provinces, three (KwaZulu-Natal, North West, Gauteng) had no PHC facilities reporting male condom stock-outs in July 2002. The percentage of facilities with condom stock-outs in July 2002 in the remaining 6 provinces ranged between 2% and 9%, with the Free State and Western Cape reporting fewer stock-outs and the highest number of stock-outs reported in Mpumalanga, Limpopo, Northern Cape, and Eastern Cape. Nationally the estimate of facilities stock-outs is under 4%. Northern Cape had a relatively high number of facilities reporting stock-outs (7%), which could affect distribution of condoms in this province. However, Limpopo, which had the second highest proportions of stock-outs (8%), still managed to distribute over a million male condoms. The National NDOH LMIS indicated a 1% stock-out in the 166 male condom primary sites between Jan 2002-Jan 2003.

Table 25: Estimates of total number of male condoms distributed and proportions of PHC facilities out of stock of male condoms in July 2002, by province

Province	Total number of male condoms distributed		Facilities out of stock of male condoms,	
	n	[95%CI]	%	[95%CI]
Mpumalanga	806 061	[607 243 – 1, 004 879]	9.2	[4 – 19]
Free State	420 565	[309 213 – 531 918]	2.3	[0 – 13]
Western Cape	1, 085 572	[701 388 – 1, 469 755]	3.1	[1 – 8]
Limpopo	1, 041 968	[860 501 – 1, 223 436]	8.4	[4 – 17]
KwaZulu-Natal	1, 357 145	[750 608 – 1, 963 683]	0.0	
Northern Cape	174 097	[121 724 – 226 468]	7.4	[2 – 22]
Eastern Cape	1, 384 732	[993 115 – 1,776 349]	6.1	[4 – 10]
North West	709 621	[522 239 – 897 004]	0.0	
Gauteng	1, 765 492	[660 010 – 2, 870 975]	0.0	
Total	8,745 254	[7, 326 222 – 10, 200 000]	3.9	[3 – 5]

Only four provinces had STI clients who attended PHC facilities with stock-outs of both STI drugs and male condoms. The estimated number of clients affected by this is shown in Table 26; very few clients (n=710) were potentially affected by attending these facilities.

Table 26: Estimates of number of STI clients at PHC facilities with both male condom stock-outs and STI drug stock-outs, by province

Province	Number of clients n [95% CI]	
Free State	104	[0 – 308]
Limpopo	578	[0 – 1 426]
Northern Cape	8.0	[0 – 22]
Eastern Cape	20	[0 – 48]
Total	710	[0 – 1 586]

Female Condom distribution

The NDOH initiated the 'National Introduction of the Female Condom Programme' in June 1998. This entailed programme introduction at provincial level, site selection, facility baseline assessments, provider training, female condom (FC) distribution and monitoring, and programme supervision. FCs were introduced into 19 pilot family planning clinic sites in eight provinces from June 1998. The programme has since expanded in all nine provinces in both urban and rural areas to health facilities at various levels. FCs are supplied directly by the NDOH to designated sites in all provinces except in the Western Cape where they are sent to a central warehouse for distribution. The NDOH procured 1.3 million FCs in 2002.

At the time of this survey (July 2002), staff from 114 facilities across the country had been trained and these facilities were officially designated as FC distribution sites. However, 156 PHC facilities reported that they distributed the FC. Since only 32 (20%) of these facilities were designated FC distribution sites, this indicates a considerable amount of additional FC distribution. A number of PHC facilities in each province were contacted to verify the initial information and in addition, were asked where they sourced their FCs and how many nurses (if any) were trained in FC distribution.

Data were collected on numbers of FCs distributed, and FC stock-outs (Table 27). Almost eighty thousand FCs were estimated to have been distributed in July 2002. This is about 1% of the number of male condoms distributed during this period. North West Province reported the highest proportion of facilities distributing the FC, with over a quarter (27%) of all facilities reporting distribution. KwaZulu-Natal Province reported the highest numbers of FCs distributed in the month of July 2002. The smallest number of FCs was distributed in the Free State. The numbers of FCs distributed by individual facilities varied from fewer than 10 per month to over a thousand. Few facilities who reported that they distributed FCs reported stock-outs (n=14), however, all but one of the stock-outs were in sites that were not officially designated, and relied on an informal distribution network which was not always able to provide a consistent supply. The National NDOH LMIS indicated a 1% stock-out in 183 designated female condom sites between Jan 2002-Jan 2003.

In response to requests by clients for FCs, non-designated facilities usually obtained stock from designated FC distribution sites. Other reported sources of FCs included local hospitals, PPASA, ATIC, and the HIV district office.

Table 27: Estimates of proportions of PHC facilities distributing female condoms, total numbers of female condoms distributed and proportions of facilities out of stock in July 2002, by province

Province	Facilities distributing FC's,		Total numbers of FC's distributed		FC stock-outs,	
	%	[95%CI]	n	[95%CI]	%	[95%CI]
Mpumalanga	25	[19 – 32]	11 657	[4 791 – 18 523]	2.2	[1.1 – 4.7]
Free State	12	[6.2 – 21]	1 780	[243 – 3 317]	1.3	[0.7 – 2.5]
Western Cape	21	[15 – 29]	7 968	[979 – 4 957]	0	
Limpopo	4.3	[1.8 – 10]	2 615	[2 134 – 8 134]	1.2	[0.2 – 6.9]
KwaZulu-Natal	8.4	[5.2 – 13]	13 983	[2 667 – 25 298]	0	
Northern Cape	19	[14 – 24]	2 474	[787 – 4 162]	0	
Eastern Cape	12	[8.1 – 18]	3 853	[1 060 – 6 647]	1.6	[0.4 – 7.0]
North West	27	[19 – 37]	2 567	[336 – 50 398]	3.6	[1.5 – 80]
Gauteng	15	[8.9 – 25]	9 275	[2 586 – 15 964]	1.9	[0.3 – 10]
Total	15	[13 – 17]	79 361	[48 788 – 109 934]	1.3	[0.8 – 23]

* All but one stock-out were in sites that were not officially designated.

Training in FC provision is conducted through training workshops, and at designated facilities. Workshops are attended by various categories of service providers, including master trainers who could potentially cascade training. During 2001, ten master trainers per province were trained. An audit of master trainers conducted in 2002 found that most of the 2001 trainers had been lost from the service.

Data were collected on the number of nursing staff (any category) trained in FC provision at PHC facilities. The estimated numbers of nurses, and the proportion of total staff trained in FC provision is shown in Table 28. Only 12% of nursing staff were trained since few sites have FCs available at present and training is ongoing. Since this survey (July 2002), the number of designated FC sites has almost doubled and many more nurses have been trained. In many of the non-designated FC sites there was no provider trained in FC distribution. At one site the nurse-in-charge reported using the instructions given in the box and the packet as the basis for counselling.

Table 28: Estimated numbers and proportion of staff trained in female condom provision at PHC facilities

Province	Total number of staff trained in FC provision		Total staff trained in FC provision at all facilities, %
	n	[95%CI]	
Mpumalanga	121	[73 – 170]	8.0
Free State	504	[0 – 1 023]	26
Western Cape	736	[504 – 968]	16
Limpopo	472	[209 – 736]	11
KwaZulu-Natal	292	[189 – 394]	8.0
Northern Cape	66	[51 – 80]	9.2
Eastern Cape	559	[361 – 757]	11
North West	352	[168 – 537]	8.1
Gauteng	514	[382 – 646]	15
Total	3 617	[2 913 – 4 320]	12



In-depth Survey of Facilities

3.1 Background

A sub-sample of 141 PHC facilities that underwent telephonic surveys (Chapter one) were selected for in-depth survey. It is anticipated that facilities used for in-depth survey will be used as sentinel sites for ongoing monitoring and evaluation of the National STI programme, and will allow tracking of changes over time.

3.2 Objectives

The main objective of this survey was to determine the quality of STI care provided at public health facility level with particular focus on utilisation of health services, availability and accessibility of services, supervision of facilities, privacy, integration of services, availability of guidelines, male condoms, partner notification, availability of IEC materials, and services for high transmission areas.

3.3 Methodology

3.3.1 Sampling strategy

A random sub-sample of facilities used for telephonic survey was selected to represent the following categories of facilities:

- ◆ Location (rural, urban, peri-urban)
- ◆ Hospital out-patients department
- ◆ Under local authority
- ◆ Community Health Centre
- ◆ Specialised services (youth, female condom)
- ◆ Training facility
- ◆ VCT services
- ◆ PMTCT services

As there was no existing database that identified facilities by the above criteria, district offices in all provinces compiled a list of between two and five PHC facilities fitting the specified criteria. In conjunction with provincial and national STI programme co-ordinators, 141 facilities were then randomly selected from the list. These included six truck-stop clinics.

3.3.2 Data collection

A flyer providing information about the objectives and methodology of the survey was sent to each selected facility prior to commencement of the survey. Each facility was then contacted by research personnel to make an appointment for the survey visit. Trained data collectors visited facilities at the appointed time to collect data by using an in-depth facility survey tool (questionnaire). This tool employed a number of methodologies viz. interviewing staff working at the facility, inspection of inventories of supplies and equipment, observations, record review of client cards and routine statistics for data collection.

3.3.3 Data validation and data quality

A team of researchers visited two randomly selected PHC facilities in each province one week after the initial visit to validate data. Data collected during validation visits was then checked against the original data for reliability and consistency. Problems encountered included missing data, the absence of records, and respondents not knowing information.

Interviewers were not able to complete all sections of the questionnaire that related to services for a variety of reasons. These included records not being available, and respondents not willing to provide information on the grounds that permission had not been sought from the departmental head. Some facilities reported not providing certain services. These included HIV counselling (7% of facilities), post-natal services (10% of facilities), and emergency contraception (8% of facilities).

3.3.4 Strengths and limitations

This was an un-weighted analysis which was done as though all facilities were selected with equal probability whereas the actual selection of facilities had been a random sample from a non-random subset of facilities. The results should therefore not be interpreted as though they are obtained from a probability sample, and for this reason statistical inference would be misleading. Nevertheless, this survey is useful in terms of providing in-depth information which supplements data obtained from other components of the survey, and gives important pointers and clues that could not be deduced from the much larger telephonic survey (Chapter two). In addition, follow-up surveys at these facilities in future will make it possible to observe changes over time.

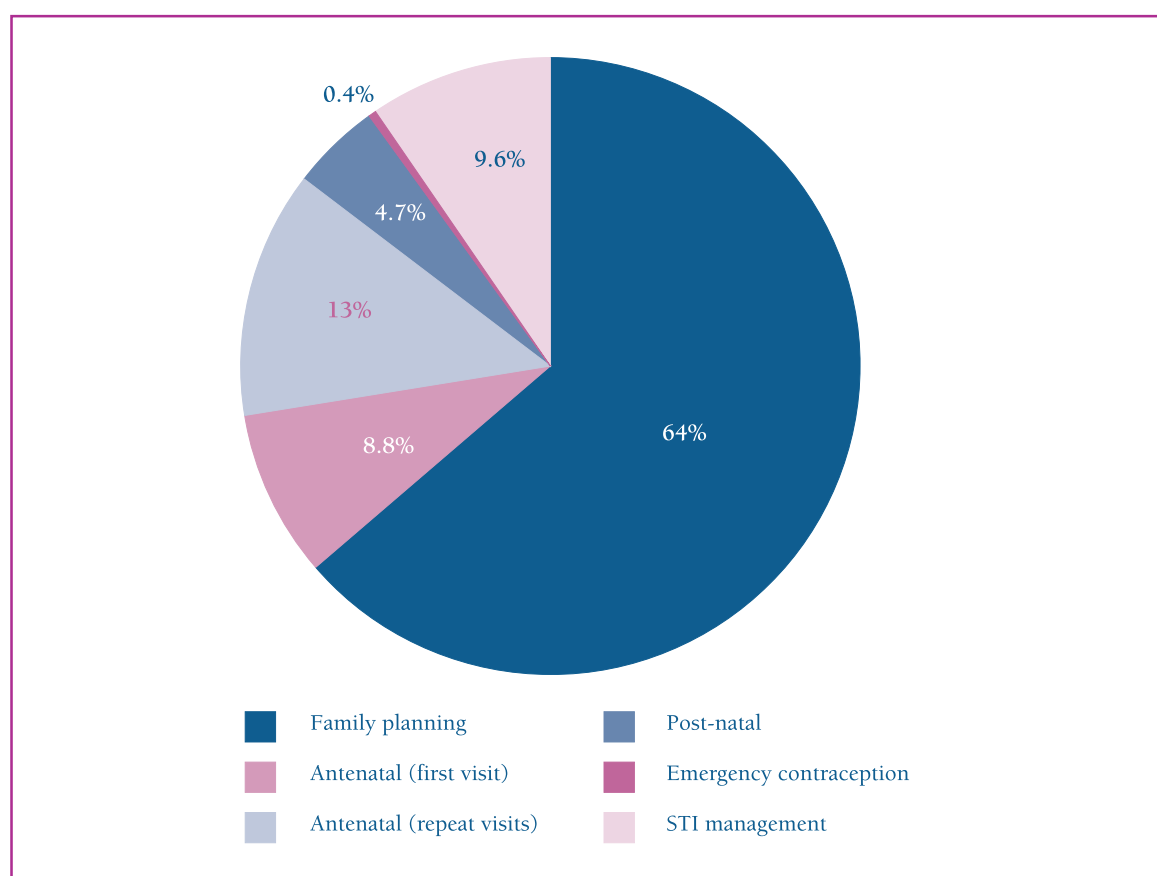
3.4 Results

3.4.1 Utilisation of sexual and reproductive health services at PHC facilities

Data were obtained from facility registers on the number of clients attending sexual and reproductive health services (family planning, antenatal, post-natal, emergency contraception and STI management). The total number of clients attending the 141 PHC facilities for these services during September 2002 was 24 180. The proportions of clients attending particular services are shown in Figure 2.

Most clients attended facilities for family planning services (64%), followed by antenatal services: any visit (22%), and STI management services (9.6%). Emergency contraception services were only utilised by a few clients (0.4%).

Figure 2: Proportions of clients attending sexual and reproductive health services at PHC facilities during September 2002 (data obtained from 141 facilities).



The vast majority of PHC facilities that were surveyed reported that males utilised any health service at the facility. Only 2.3% of facilities reported that males did not utilise any services; these facilities were located in KwaZulu-Natal, Western Cape and Limpopo.

3.4.2 Availability and accessibility of PHC services

Overall, 46% of facilities that underwent in-depth assessment were observed to be open after 4:30 pm on any specific day; 30% opened at weekends. All service providers at 16% of facilities surveyed took tea and lunch breaks at the same time. Only 21% of these facilities advertised the fact that the facility was closed during the breaks.

STI services were available on a daily basis (excluding weekends) at 95% of the facilities surveyed. All facilities in Mpumalanga, Northern Province, Northern Cape and Eastern Cape offered daily STI services. A small minority of facilities did not offer STI services at all. These were located in the Free State (12% of facilities), Western Cape (7% of facilities), and in North West Province (6% of facilities). Of the facilities that offered STI services, availability of the service was 'all day' in 80% of facilities, either in the morning or afternoon in 3.6% of facilities, and 24-hour in the rest. The majority of facilities offering STI services did not advertise this service (72%).

Screening for cervical cancer by means of a standard Papanicolaou (PAP) smear is part of the package of care offered at the primary level in public sector facilities. Of the 141 public sector PHC facilities assessed, only about 50% of facilities reported offering cervical screening services on a daily basis; 16% offered the service on specific days, and 35% of facilities did not offer the service at all. Most facilities (88%) did have sterile speculums available. Of facilities that offered cervical screening services, availability of the service was 'all day' in 71% of facilities, either in the morning or afternoon in 21% of facilities, and 24-hours in 8% of facilities. The majority of facilities offering cervical screening did not advertise this service (72%).

VCT services were mostly available on specific days (excluding weekends) at 73% of facilities that were surveyed. Twenty percent of facilities did not offer VCT services at all. Sixty three percent of facilities that offered VCT services did so during mornings and afternoons, 7.9% offered the service 24-hourly, and the rest offered it either in the morning or afternoon. The majority of facilities offering VCT services did not advertise this service (73%).

3.4.3 Availability of guidelines

Service providers at facilities that underwent in-depth assessment were asked about the availability of various national and/or provincial guidelines. Findings are shown in Table 29. STI syndromic management guidelines were reported to be available at most facilities. Less than 25% of facilities had guidelines on emergency contraception, cervical cancer screening and dual protection. Neither national nor provincial guidelines on dual protection were available at any facility that was surveyed in three provinces (Free State, Northern Cape, and North West).

Table 29: Availability of national and provincial guidelines at PHC facilities

Guidelines	National guidelines, % of facilities	Provincial guidelines, % of facilities
STI syndromic case management	77	55
Contraception/Family planning	45	31
VCT	37	27
PMTCT	27	19
Emergency contraception	24	18
Cervical cancer screening (PAP smears)	18	20
Sterilisation of speculae	13	12
Dual Protection	11	8.6

3.4.4 Supervision of PHC facilities

Overall, service providers at 90% of facilities surveyed reported having an external district clinic supervisor who visited the facility; in three provinces (Mpumalanga, Northern Cape and Eastern Cape) all facilities (100%) reported having an external supervisor. The average frequency of supervisory visits is shown in Table 30. Over 60% of facilities surveyed were visited every one to two months or more frequently.

Table 30: Frequency of external supervisory visits to PHC facilities

Average frequency of visits	Percentage of facilities %
Daily	5.0
Weekly	6.8
Twice a month	3.4
Every 2 to 3 weeks	5.0
Every 1 to 2 months	44
Every 3 to 4 months	9.2
Every 5 to 6 months	5.7
Six months and over	3.7
Other	17

Feedback on the outcomes of supervisory visits was given to staff at 54% of facilities. Thirty seven percent of facilities kept records of dates of supervisory visits, and 41% kept records of outcomes of supervisory visits.

3.4.5 Integration and privacy

The number of consulting/examination rooms at the facilities surveyed ranged from one to seventeen. These are shown in Table 31. Over 50% of facilities in the Free State, Northern Province and North West Province had a maximum of two consulting rooms. Gauteng and Western Cape had the most facilities with ten or more rooms. Eighty of facilities reported using all consultation rooms to manage clients with STIs.

Table 31: Number of consulting rooms at PHC facilities

Number of rooms	Percentage of facilities %
1	10
2	28
3	23
4	18
5	7.2
>5<10	10
≥10	3.8

Interviewers observed whether facilities offered consultation in private for all STI clients. It was reported that consultations could be observed in 20% of facilities. This occurred predominantly in facilities with few consulting rooms, except in Northern Province where consultations could not be observed. Interviewers reported that consultations could be overheard in 11% of facilities, none of which were located in Mpumalanga and Northern Provinces.

Interviewers observed that there was a separate queue for family planning clients in 36% of facilities. In cases where there was no separate queue, family planning clients queued with all other facility clients at 53% of facilities. Clients were observed to be treated in separate areas (e.g. STI, antenatal, contraception) in 43% of facilities.

3.4.6 Partner notification

Partner notification cards or slips are usually issued to index STI clients in order to facilitate notification of partner(s) of the need for treatment. Findings from this survey showed that partner notification cards or slips were available in 65% of examination rooms; of these 51% were in local languages. Most facilities (79%) kept records of notification cards and slips issued. In six provinces the number of cards and slips issued exceeded the number of STI clients seen, indicating multiple sexual partners. The ratio of cards or slips issued to the number of STI clients seen was highest in the Eastern Cape. In three provinces (Free State, North West, Northern Cape), the number of contact slips issued was less than the numbers of STI clients seen. Some slips and cards that were issued may, however, not have been recorded.

3.4.7 Male condoms

Inadequate and inconsistent record-keeping of the number of male condoms ordered, supplied and distributed was evident in most facilities that underwent in-depth survey.

Sixty five percent of the 141 facilities surveyed reported supplying male condoms to non-clinic sites. It was reported that almost 300 000 male condoms per month were supplied to 400 non-clinic sites through these facilities. The majority of these condoms (about 100 000 per month) were reported to be distributed in Gauteng.

Male condom dispensers were available in most of the facilities that were surveyed (83%), however, in the Northern Cape only 40% of facilities had dispensers. Overall, instructions on male condom use were only available in 37% of facilities (the exception was the Western Cape where 71% of facilities had instructions available).

3.4.8 IEC materials

The availability of IEC materials, topics, types of materials (booklets, leaflets, and posters), languages, and location of materials was investigated. Findings are shown in Table 32.

Most of the IEC materials that were available were in the form of English language posters that were usually found to be displayed in waiting rooms, passages and consultation rooms. Leaflets and booklets were less commonly available. Local languages (Tswana, Venda, Tsonga, Xhosa, Afrikaans, Sotho, and Zulu) were not commonly used.

The most commonly available IEC materials were on HIV/AIDS (found at 94% of facilities). Materials on STIs were available at 81% of facilities, usually combined with HIV/AIDS information. Materials on cervical cancer screening, emergency contraception, dual protection and female condoms were not found to be commonly available.

Table 32: Topic, type and language of IEC materials available at PHC facilities

Topic of IEC materials	Facilities at which available, %	Materials in English language, %	Materials available as posters, %
HIV/AIDS	94	94	91
STIs	81	95	98
Male condom	70	95	93
Contraception	56	93	91
Reproductive rights and choices	46	91	95
Antenatal care	46	83	92
VCT	45	88	87
Syphilis infection	41	93	86
Cervical cancer screening	19	84	84
Emergency contraception	16	95	86
Dual protection	6	88	88
Female condom	6	63	50

3.4.7 High transmission areas

During this survey, data were collected in order to identify programmatic needs with respect to managing special populations with STIs. Nationally, only 30% of service providers that were interviewed were aware of the existence of any commercial sex worker 'hot spots' in the vicinity of the health facility. Most providers (65%) said there were no 'hot spots' in the area and about 6% did not know if there were any 'hot spots'. KwaZulu-Natal had the highest percentage of service providers who were aware of 'hot spots' in the vicinity (47%), followed by Free State and Gauteng (43% each). The most commonly cited types of 'hot spot' were truck-stops (39%), and bars (23%).

Only 21% of service providers that were interviewed were aware of commercial sex workers utilising services at the health facility. In all provinces, the percentage of health workers who reported sex workers utilising services at the facility was less than 50%. This ranged from 42% in Gauteng to 6.7% in Limpopo and Eastern Cape.



Quality of Care Surveys Using Simulated Clients

4.1 Background

Simulated client assessments are well recognised to be a valuable research method for evaluating quality of care at health services in a first-hand manner, while minimising observation bias.^{20,21} During this survey male and female simulated clients visited family planning and STI services at selected public sector PHC facilities that had undergone in-depth surveys (Chapter 3). Key findings pertaining to quality of care received by simulated clients are presented in this chapter.

4.1.1 Objective

The objective of the simulated client assessments was to evaluate quality of STI care at selected PHC facilities by collecting data on reproductive history-taking, examination procedures, risk assessment, counselling, treatment recommendations, condom provision, and health education.

4.2 Methodology

4.2.1 Sample selection

Twenty seven facilities (three per province) were randomly selected for simulated client visits from the 162 sentinel public sector PHC facilities that underwent in-depth facility surveys (described in chapter three of this report). During November and December 2002, a total of 139 simulated client visits were made to the 27 facilities. This included visits to five truck-stop clinics.

4.2.2 Data collection

Prior to commencement of data collection, informed consent was obtained from health services management, and a flyer containing information on the use of simulated clients for data collection was distributed to facility staff. In addition, service providers working in family planning and STI services were informed that simulated clients would attend some facilities during a particular period, but that the client's identity would not be disclosed.

A team of 13 simulated clients (7 male and 6 female) with the appropriate profiles were recruited and trained to present one of four scenarios to health workers at the selected PHC facilities.

The scenarios are summarised as follows:

1. A young woman (± 18 years) seeking family planning services and complaining about a discharge.
2. An older woman (± 34 years) seeking family planning services and complaining about a discharge.
3. A young man (± 24 years) presenting with STI symptoms at STI services.
4. An older man (± 50 years) presenting with STI symptoms at STI services (including five visits to truck-stop clinics).

Simulated clients were trained in the following areas: provision of an appropriate address to facility staff; procedures to follow if medication was provided; answering questions pertaining to discharge (previous episodes, colour, odour, consistency, quantity, itchiness, pain); answering questions pertaining to urine colour, frequency, burning, pain and odour; answering questions on menstruation cycle (female clients).

In addition to scenario specific training, simulated clients were briefed on methods for avoiding undergoing physically invasive procedures during their interaction with health workers. Scenarios were selected so that taking injections would not be necessary. Simulated clients were also trained on how to avoid taking medication that required consumption at the facility. Research co-ordinators conducted debriefing sessions with clients daily so that unanticipated risks could be identified.

Simulated clients noted (mentally) all questions asked, advice offered, and treatment given at each visit. They were interviewed immediately on completion of each visit by a research coordinator (except in the case of 'older men' visiting truck-stop clinics at night who were interviewed the following day). Experiences were recorded by means of assessment checklists. Data on demographic and reproductive history-taking, examination procedures, risk assessment, counselling and referral practices, partner notification procedures, treatment recommendations, condom provision, and health education were collected.

In total 139 simulated client visits were made to selected facilities; 59 visits were made by male clients and 80 by female clients (including validation visits described below). Each client made between six and twenty visits to facilities. Two facilities had to be revisited for evaluation after the initial visit since staff were striking at one facility; at the other, the client was informed by a provider that the facility was not open to clients as she was the sole person on duty that day. Two visits were not completed for the following reasons: one client was refused treatment because he originated from a province different to the one in which the facility was located; a second client attending family planning services was refused treatment because she had 'lost' her clinic card.

4.2.3 Data validation

Simulated clients (scenario one: young women) re-visited family planning services at each of the 27 selected facilities one week after the initial visit to validate findings. Clients did not visit a facility they had initially visited to avoid being recognised as there was usually only one health worker attending to family planning clients. One client on a validation visit to a facility (that had previously been visited by four simulated clients) was told that the facility did not offer family planning or STI services and had to leave without obtaining validation data.

4.2.4 Limitations

Findings are derived from visits to a small number of facilities ($n=27$) by 13 different simulated clients. Although 139 visits were conducted, the small number of facilities limits the generalisability of the findings. Responses at the same facility are likely to be highly correlated. Calculation of standard errors was not undertaken; if it was, then 'within facility' correlation of responses would have to be taken into account, and the small number of facilities per province would result in very large standard errors. It is also possible

that simulated clients presented 'textbook' cases to providers, and the visits therefore do not capture the difficulties and embarrassments that real clients may have in communicating symptoms that they experience.

4.3 Results

In total 139 simulated client visits were made to facilities; 59 visits were made by male clients and 80 by female clients (including validation visits). In this chapter results are reported as a percentage of the number of simulated client visits for which data were available. Further analysis of data on a facility basis is in process and will be published in a separate format.

4.3.1 Sexual contact

At almost a third (29%) of visits, health providers did not ask if the client had a 'stable' or regular sexual partner. Most clients who were not asked this question were female (62%). Older clients (both men and women) were asked if they had a 'stable' or regular sexual partner more frequently than younger people.

At 17% of visits, health providers asked if the client had a casual sexual partner. Most of those asked this question were males (74%). Older clients were asked if they had a casual sexual partner more often than younger clients (65%).

At 15% of visits, health providers asked if the client had a more than one sexual partner. Males were asked this question more frequently than females (71%). Older clients were asked if they had more than one sexual partner more often than younger clients (52%).

4.3.2 Client examination procedures

Female clients

At only 4% of visits made by female clients, health providers asked if they could perform an abdominal palpation. Requests to perform an internal examination were made at 10% of visits by female clients. At 29% of visits by female clients, health providers asked if the client had experienced previous episodes of discharge.

Male clients

Requests to perform an examination of genitals were made at 21% of visits by male clients. At 26% of visits by male clients, health providers asked if the client had experienced previous episodes of discharge.

Health providers discussed examination findings with both male and female clients at 23% of visits. Examination findings were discussed most frequently with older women than with other clients.

4.3.3 Risk assessment and counselling practices

Abstinence

At 20% of client visits, service providers advised clients to abstain from sex whilst they had an STI. Most of those who were advised on abstinence were older men (39%).

Condom use

Service providers asked clients if they used condoms at 30% of visits. Male clients were asked if they used condoms more often than female clients. Most clients who were asked if they used condoms were young men (48%). Service providers asked 25% of clients who reported using condoms whether they had used a condom at last sex; 13% of clients were asked if they could discuss condom use with their partner(s).

HIV/STI Risk

At 28% of visits service providers asked the client if he or she was aware that they could be at risk of acquiring HIV or other STIs. A suggestion that the client should have a HIV test was, however, only made at 8.1% of visits. Clients were counselled by service providers about the importance of watching for signs of STIs at 31% of visits.

Contraception

Clients (both male and female) were counselled on contraception by health providers at 7.7% of visits. Providers recommended a barrier method of contraception (i.e. a male or female condom) for future use at 33% of visits, mainly to younger clients (73%).

Dual Protection

Service providers recommended the simultaneous use of dual methods of protection (i.e. both a barrier and a non-barrier method of contraception) to prevent both pregnancy and infection at 10% of visits by simulated clients. These recommendations were made at 8% of visits by male clients and 11% of visits by female clients. Providers informed clients that barrier methods could be used to prevent both pregnancy and infection at 20% of visits.

4.3.4 Partner notification procedures

Whether or not it was appropriate to provide a partner notification slip or card was contingent upon whether the provider correctly diagnosed that the client had an STI. Providers counselled clients about the need for treatment of partner(s) at 32% of simulated client visits. Clients were asked by providers if they could talk to partner(s) about the need (for partners) to be treated at 36% of visits.

Partner notification slips or cards were provided at 18% of visits. At 35% of visits at which a slip or card was not provided, health providers recommended that partner(s) come to the health facility for treatment.

4.3.5 Treatment recommendations

Eighty four percent of clients who were provided with medication were given instructions by health providers on how to take the medication. Clients were instructed to use condoms during treatment in order to protect against re-infection at 42% of visits at which medication was prescribed. Correct drug management of simulated clients will be presented in a separate format.

4.3.6 Condom provision

Service providers discussed any issue pertaining to condoms with clients at 31% of visits. Overall, 80% of clients who visited the facilities that were surveyed were provided with condoms. Clients were provided with condoms without having to request them at 69% of visits with providers that did discuss condoms with them. Most clients (55%) received 12 or fewer condoms; between 13 and 32 condoms were provided to the rest. The majority of clients (94%) were given male condoms only; 3% were given female condoms only, and 3% were given both male and female condoms.

Service providers provided condoms only when requested to do so by clients at 84% of all client visits. The majority of clients who requested condoms were given male condoms (94%). Five percent of clients who requested condoms were given both male and female condoms, and one percent was given only female condoms. Most clients (58%) received 12 or fewer condoms; between 14 and 124 condoms were provided the rest of the time. Clients who requested condoms were provided with them in the consulting room (as opposed to being told to access them from elsewhere in the facility) at 61% of visits.

Twenty nine percent of clients who were given female condoms and 5.2% of clients who were given male condoms by service providers received written instructions on how to use them. Seven percent of clients who were given male condoms received verbal instructions on their use. Service providers demonstrated the use of male condoms to 2.6% of clients to whom these were provided. The use of female condoms was demonstrated to 43% of clients to whom these were provided.

At 15% of visits service providers informed clients about the importance of consistent and correct condom use in order to prevent contracting HIV and other STIs. Service providers informed clients that condoms provided a high level of dual protection at 16% of visits. Details of client visits at which condoms were provided are shown in Table 33.

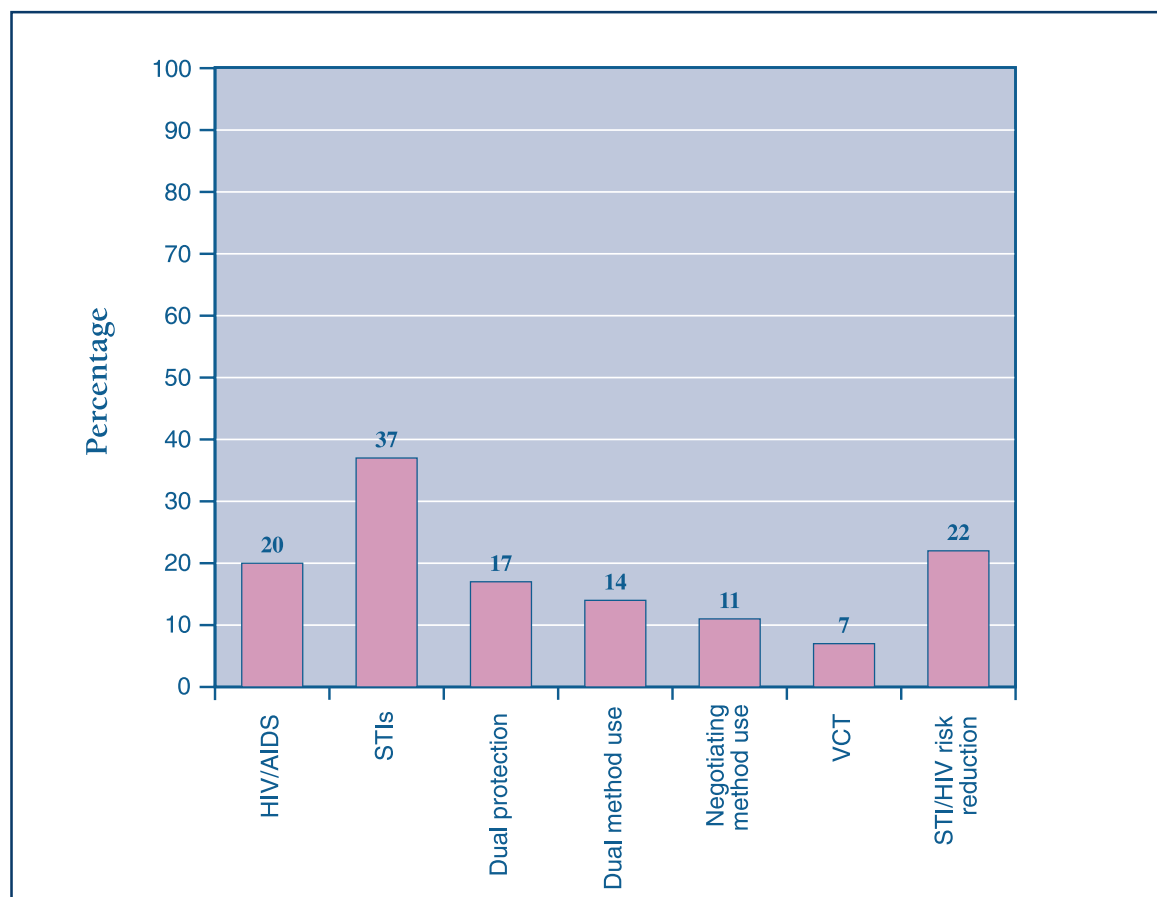
Table 33: Condom provision to male and female simulated clients

	Male Clients %	Female Clients %
Condom provision without client request	64	76
Condom provision following request by client	81	86
Total condom provision	74	84

4.3.7 Health education

The proportion of client visits at which various reproductive health issues were discussed by service providers are shown in Figure 3.

Figure 3: Proportion of visits at which reproductive health issues were discussed with clients



4.3.8 Quality of care

Eight clients (6%) were made to wait more than five hours before they saw a health provider. Clients were seen in a private room at 93% of visits. Service providers spent 15 minutes or less in consultation with the client at 82% of visits; between 16 and 30 minutes was spent with clients at 14% of visits. A maximum of one hour was spent with one client during this survey.

Clients reports of service providers attitudes (n=139 visits) are shown in Table 34. Most clients reported that the provider was 'understanding' (84% of visits), and 'helpful' (85% of visits).

Table 34: Simulated client reports of attitudes of service providers

Provider attitude towards clients	Percentage of client visits, %
Helpful	85
Understanding	84
Rude	9.4
Made client feel uncomfortable	8.8
Made client feel embarrassed	7.5
'Scolded ' client	6.6
Showed no interest in client	3.3

Key Informant Interviews

5.1 Background

Key findings are presented in this chapter from 64 interviews which were conducted with policy makers and representatives of STI, HIV and other reproductive health services, the private sector, non-government organisations (NGOs), service providers and other relevant stakeholders from national, provincial and local government.

5.2 Objective

The main objective of the interviews was to gain in-depth information about the strengths, weaknesses, challenges and constraints impacting on STI and HIV prevention and management services in South Africa. Information pertaining to policies, guidelines and protocols, availability of staff for management and treatment of STIs, training on STI prevention and management, condom logistics, VCT and PMTCT services, integration of services, communication and networking, high transmission areas and information, education and communication (IEC) materials was collected.

5.3 Methodology

5.3.1 Sampling strategy

Key informants were selected using a purposive sampling method i.e. deliberate non-random selection of a group of individuals with the ability to provide in-depth information pertaining to STI/HIV services. Informants were representatives from national and provincial government departments, from the private sector, non-government organisations and service providers. Local government informants were selected by convenience sampling. In addition, some interviews were conducted with individuals who were recommended by initial informants as sources of specific information.

5.3.2 Data collection

Unstructured interviews were conducted either face-to-face or telephonically (with those unable to participate in the former) by five trained interviewers in the language of the people interviewed. Responses were captured by tape-recordings and note-taking (face-to-face interviews) and through the use of recording telephones (telephonic interviews).

5.3.3 Sample

A total of 64 interviews were conducted with key informants at national, provincial, and local government levels.

National: Thirteen key informants were selected and interviewed at the national level. These were representatives from the STI and HIV directorate, the Maternal, Child and Women's Health (MCWH) directorate, Condom Logistics department, Health Monitoring and Evaluation department, Human Resources Development (HRD), non-government organisation co-ordination, traditional healer programme, the Road Freight Association, Department of Education (Life Skills and Youth programmes), South African Nursing Council, National Health Laboratory Services, and the South African Medical Association. Details of national informants are shown in Table 35.

Table 35: Designation and institution of national key informants

Designation	Directorate/Programme/Organisation
Deputy Director	STI and HIV
Logistics Advisor	Condom Logistics Management
Director	Health Monitoring and Evaluation
Programme Facilitator	Traditional Healers
Director	Human Resource Development
Consultant and Coordinator	Education: Life Skills
Assistant Director	Education: Youth Programme
Director	Maternal Child & Women's Health (MCHW)
Director	Non-government organisation co-ordination
Project Manager	Road Freight Association
Deputy Director	National Health Laboratory Services
Chairman	South African Medical Association (Western Cape branch)
Registrar	South African Nursing Council

Provincial: Although 58 provincial informants were originally selected for interview, nine participants could not be reached during the data collection period. Forty nine key informants from nine provinces were interviewed. These included representatives of provincial STI, HIV/AIDS, and MCWH programmes, pharmaceutical services, HRD departments, traditional healers and commercial sex worker liaison officers. Details of provincial key informant interviews are shown in Table 36.

Table 36: Provincial key informant interviews conducted, by province

Province	Department/Programme						
	STI	HIV/AIDS	MCWH	Pharmaceutical services	Commercial sex worker liaison *	Traditional healers	Human resources development
Mpumalanga	*	*	ND [†]	*		ND	*
Free State	*	*	*	*		*	*
Western Cape	*	*	*	*	*	*	ND
Limpopo	*	*	ND	*		*	ND
KwaZulu-Natal	*	*	*	*		*	*
Northern Cape	*	*	*	*		*	*
Eastern Cape	*	*	*	*	*	*	*
North West	ND	ND	*	*	*	*	ND
Gauteng	*	*	ND	*	*	*	*
Total	8	8	6	9	4	8	6

† ND: not done due to inability to contact participant

* Commercial sex worker liaison officers were not appointed in all the provinces at the time of this survey.

Local Authority: Two representatives of local health authorities, a medical officer of health and a chief nursing officer were interviewed.

5.3.4 Interview themes

Several interview themes were explored. At both national and provincial level these included policies and guidelines for STI treatment, STI monitoring and evaluation, training and staffing, STI treatment, PMTCT and VCT services, integration of services, male and female condom storage and distribution, communication and networking. In addition, high transmission areas and availability of IEC material were explored at provincial level. Details are presented in Table 37.

Table 37: Interview themes for key informants at national and provincial level

Themes	National	Provincial
Guidelines and protocols		
Protocols for STI management	X	X
Dissemination of guidelines and protocols to clinic level	X	X
Implementation of guidelines at service level		X
Guidelines on drugs for treatment of STIs	X	X
Challenges with drug management issues e.g. stock-outs	X	
VCT and PMTCT services		
Current situation and degree of implementation	X	X
Monitoring and evaluation of STIs		
Collection and processing of STI information and statistics	X	X
Existence of sentinel sites for monitoring STIs		X
Staffing		
Availability of staff at different levels for STI management		X
Policy related to staffing for STIs	X	X
Main staff turnover issues	X	X
Challenges pertaining to human resources	X	X
Training		
Existence of a training plan which includes STIs	X	X
Provincial training plans for STIs		X
Current STI training programme	X	X
Current provincial training programmes (cascading system, pool of trainers, records, status of training- integrated or vertical)	X	
Monitoring of STI training	X	X
Condom logistics		
Existence of condom policy and guidelines	X	X
Existence of condom logistics personnel		X
Condom distribution networks	X	X
Female condom programme	X	X
Condom stock-outs		X
Communication, networking, integration		
Co-ordination of activities between STI, HIV/AIDS, and MCWH departments	X	X
Links between the NDOH and NGOs involved in STI prevention	X	X
Integration of traditional healers in STI prevention and management	X	X
Referral between traditional healers and public health facilities		X
Links between NDOH & Department of Education	X	X
High Transmission Areas		
Information on high transmission areas in the province		X
Existence of NGOs working with core transmitters and their activities		X
Existence of programmes addressing core transmitter issues		X
IEC material		
Major provincial IEC programmes		X
National, provincial or NGO IEC programmes		X
Events, activities, programmes around STIs		X
Range, languages of available IEC material		X

5.3.5 Data analysis

Detailed transcriptions of each recording were made. These were then translated if necessary. Validation was done by re-transcription and re-translation. Qualitative analysis of data was performed using QSR NVivo (version 2.0) computer software.

5.3.6 Strengths and limitations

The advantage of using unstructured interviews for data collection is that complex issues can be probed, answers clarified, and in-depth information can be accessed once rapport has been established between interviewer and informant. A limitation of the methodology is the potential for interviewer bias.

5.4 Results

5.4.1 Guidelines and protocols

Findings from key informant interviews showed widespread knowledge and use of evidence-based national guidelines and protocols for management of STIs. All provincial informants indicated use of the national STI protocols. Provincial respondents from the Eastern Cape, Mpumalanga, Gauteng and KwaZulu-Natal reported adaptation of the national STI protocol to suit provincial conditions. In Mpumalanga, training on STIs and cervical cancer screening was reported to be based on provincial guidelines.

STI protocols and guidelines are disseminated systematically from national to provincial levels through meetings and workshops. Provinces further disseminate and cascade information to lower levels in a variety of ways including monthly meetings, STI group meetings, seminars and workshops. Some provinces cascade information first to the STI directorate, then to district managers, and finally to PHC facilities. In KwaZulu-Natal, the content of STI training includes protocol dissemination. In the Western Cape, dissemination is through monthly clinical programme meetings. In the Northern Cape, provincial STI coordinators cascade information to district coordinators who then disseminate information locally.

Monitoring and evaluation of guideline and protocol implementation is conducted in a variety of ways. Some provinces utilise the DISCA tool while others use the DHIS. Some provinces do not monitor the implementation of policies.

All provincial pharmaceutical services representatives that were interviewed reported using the essential drug list (EDL) for STI drug supply management, and 60% reported using the National Standard Guidelines in addition to the EDL. Only one province reported using the DHIS to manage STI drug supplies. Monitoring of drug supplies by using the DHIS was generally reported to be problematic as information did not reach provincial offices in time to prevent stock-outs at depots. Most STI drug stock-outs were reported to be due to problems with transportation of supplies to PHC facilities, and to staff shortages.

5.4.2 VCT and PMTCT services

VCT and PMTCT programmes were reported by both national and provincial informants to be a priority in the implementation of the South African HIV/AIDS Strategic plan, 2000-2005.⁷ All nine provinces had commenced VCT and PMTCT programme roll-out at the time of data collection. VCT and PMTCT training is integrated with STI training in provinces. Challenges experienced in implementation of VCT and PMTCT included shortages of trained staff, insufficient space to facilitate privacy during counselling, and staff having insufficient time for adequate counselling.

5.4.3 Monitoring and evaluation of STIs

Two systems for capturing STI data are used in South Africa; the National Health Information System (NHIS) and the DHIS. The latter was reported to be used in all provinces and facilitated the relaying of aggregated data sent to national levels. Some provincial STI managers reported inadequate communication between their programmes and provincial information system departments. This resulted in difficulties in accessing data and utilising it to inform planning.

Currently the only STI specific data that is being collected nationally is antenatal syphilis screening data which is collected in conjunction with the annual antenatal HIV surveillance programme. STI sentinel surveillance was reported to be ongoing in Gauteng; plans for expansion of this activity to other provinces are in place.

5.4.4 Staffing

Shortages of staff were highlighted as a key obstacle to progress in implementing the STI programme in all provinces. Many respondents reported that improved prevention and management of STIs was hindered by a lack of human resources. High attrition rates were largely attributed to emigration in pursuit of financially attractive overseas employment opportunities. Professional nurses and doctors were reported to be the main categories of staff that were leaving public sector employment, mostly from district level. One provincial respondent reported an average of 27% (with a maximum of 50%) attrition rate in districts.

High staff turn-over was reported to impact negatively across all aspects of STI service delivery including training, drug management, and counselling. With the availability of fewer and fewer staff members, remaining service providers had to take increasing responsibility for roles and functions of those who had left.

5.4.5 Training

The NDOH is responsible for the co-ordination of training of provincial STI coordinators and/or master trainers who in turn cascade training to the districts. In accordance with national policy, integrated training has replaced vertical training. A variety of mechanisms is used to cascade training e.g. through 'trainers of trainers', master and regional trainers.

In the Northern Cape, PHC professional nurses and two master trainers are responsible for training. The content of training courses includes home-based care, VCT, STIs and barrier methods. In the Free State training of professional nursing staff is carried out by a few dedicated trainers and NGOs. The Western Cape has regional trainers in each region and holds one or two STI training courses per annum. In Gauteng, on-site training at facilities is undertaken by an NGO and by a 'trainer of trainers' who is also a service provider. The trainer is taken out of service to undertake training when the need arises. In the Eastern Cape, STI training is facilitated by an NGO, *EQUITY*. In KwaZulu-Natal a dedicated provincial trainer and PHC trainers provide training to district co-ordinators.

Respondents indicated that monitoring and evaluation of training was not adequately undertaken in all provinces, and that a system for monitoring of training is currently being developed at the national level.

5.4.6 Condom logistics

The NDOH has developed guidelines for the distribution and storage of male and female condoms. Procurement and distribution of condoms to primary sites in all provinces is facilitated by the STI and HIV prevention directorate.

Respondents from all provinces indicated that they used the national guidelines and policy for condom storage and distribution; and that no provincial guidelines had been developed.

KwaZulu-Natal reported using the LMIS to monitor condom stocks and that no stock-outs occurred in the province. A decrease in male condom distribution from four million in 2000 to less than a million at the time of data collection was reported in KwaZulu-Natal. Poor distribution of male condoms was reported in the Free State. Free State and Northern Cape indicated that they did not keep stocks of male condoms as they constantly received supplies.

Seven provinces reported increasing demand for female condoms and plans for expanding the number of designated female condom sites. KwaZulu-Natal reported an increase in distribution of female condoms

from 11 000 in 2001 to 11 952 at the time of data collection (late 2002). Free State and Northern Cape respondents indicated that the demand for female condoms was high in rural areas. In general, acceptability of the female condom was reported to be relatively good.

The main problem pertaining to condoms that was highlighted by respondents was non-reporting and non-submission of statistics on condom distribution.

5.4.7 Collaboration, networking and integration

Integration of STI prevention and management with other sexual and reproductive health programmes and services (MCWH, HIV/AIDS, barrier methods, VCT, PMTCT and Youth) is widely recognised to be a key approach to improving the management of STI infections in South Africa.

Although the process of integration has commenced nationally, provincial respondents indicated that only four provinces (Northern Province, Gauteng, Eastern Cape, Northern Cape) had an integration policy, two provinces were in the process of developing a policy (KwaZulu-Natal and Free State), and three provinces (Mpumalanga, Western Cape, North West) had no policy at all at the time of data collection. The Western Cape reported not having an integration policy since integration had already occurred. In Mpumalanga, although no structured mechanism for integration existed, the process occurs informally.

The policy of integration and co-ordination of activities between STI, HIV/AIDS and MCWH national programmes was reported to be embraced by relevant programme managers; however, practical implementation of integrated services was deemed to be problematic.

A number of challenges and constraints to implementing integrated activities at both national and provincial levels were cited by key respondents. These included a shortage of human resources, the lack of structured mechanisms for integration, loss of skilled nurses, staff having multiple responsibilities, lack of privacy in some health facilities, inappropriate people trained, poor co-ordination of training, and high turnover of staff.

At national level NGOs are encouraged to assist the government in implementation of the five-year HIV/AIDS strategic plan, particularly with respect to the STI programme. Collaboration was reported in most provinces between the DOH and NGOs involved in STI and HIV prevention activities e.g. condom distribution, counselling, and home-based care. In the Northern Cape a strong relationship between the province and NGOs involved in the District AIDS council was reported. Informants in the Free State and Western Cape indicated collaboration between traditional healers and NGOs. Limpopo indicated that they had significant relationships with NGOs that assisted with integration of services and with the traditional healer programme. Informants from Gauteng and the Eastern Cape reported collaboration with NGOs on the provision of STI training.

Key informants from the NDOH reported that the STI and HIV directorate had engaged two traditional healers as national facilitators/coordinators in an attempt to improve collaboration with traditional healers in provinces. Specific activities on training of traditional healers on STI and TB prevention and management, and in home-based care are being implemented.

Six provinces (KwaZulu-Natal, Gauteng, Limpopo, Western Cape, Northern Cape, and Free State) reported varying levels of collaboration with traditional healers. A strong relationship with traditional healers was reported in Limpopo. Regular provincial forums and workshops involving traditional healers were reported to occur in the Northern Cape. Informants from the Eastern Cape reported having a provincial co-ordinator who was responsible for training and information-sharing with traditional healers.

In KwaZulu-Natal it was reported that collaboration with traditional healers was through a portfolio manager whose role was to strengthen links with traditional healers through activities such as provision of materials (e.g. disposable gloves), training in medical terminology, first-aid, home-based care, referral of STI and HIV clients to health facilities, and the TB programme *Directly Observed Treatment System* (DOTS). Healers are also taught about the importance of sterilising equipment such as razor blades and about protecting

themselves. Through numerous training sessions more than 8 000 traditional healers were reported to have been reached in KwaZulu-Natal.

Many informants reported that generally, traditional healers were willing to establish a working relationship with the DOH, there were, however, obstacles such as suspicion about the collaborative process that had to be overcome.

Key informants from the national Department of Education reported ongoing collaboration with the NDOH on a nationally co-ordinated life-skills programme which focuses on school-going youth. In addition, a programme focusing on “out-of-school” youth has recently commenced. This programme is implemented in collaboration with various NGOs (LoveLife, Planned Parenthood Association of South Africa, RHRU, the National Adolescence Friendly Clinic Initiative), and with faith and community-based organisations.

5.4.8 High transmission areas

Four provincial informants were questioned about their knowledge of high transmission areas. All four informants had knowledge of ‘hot spots’ at hotels, bars, truck-stops, streets and mines. All informants also had knowledge of NGOs working with commercial sex workers in the areas of peer-educator training, counselling, condom usage and condom distribution, safer sexual practices, personal safety and human rights. Some of these NGOs are funded by and through the DOH, others receive IEC material and condoms from DOH. One province reported links with the Department of Social Development to access social grants for children of sex workers when necessary.

5.4.9 IEC material

All provinces reported receiving IEC materials from the NDOH. In addition, most provinces developed their own materials in the form of pamphlets and posters. Materials are available mainly in English and relevant local languages. All provinces reported having a formal mechanism for distribution of IEC materials. Distribution was commonly reported to occur in conjunction with special events e.g. National STI week, World AIDS day.

Discussion

In the first ten years of democracy, the South African Department of Health has shown a clear commitment to STI/HIV prevention and control through the formulation of evidence-based policies and the development of appropriate national, provincial and district structures to support the implementation of these policies. However, a number of challenges still face the NDOH in the effective implementation of policies and programmes. The main challenge to the effective implementation of the STI/HIV programme lies in gearing resources in constrained settings. Additional challenges relate to the historical fragmentation of services resulting in the poor organisation and integration of HIV management within STI, TB and other specialty services, which frequently result in poor continuity of care at a provincial and district level.

6.1 Service Delivery

6.1.1 STI clients

Findings from this survey estimate the total number of new symptomatic STI clients who attended South African PHC facilities during July 2002 to be 170 215. The total number of cases treated as STIs at PHC facilities, reported to the District Health Information System (DHIS), for the same month was 146 237. Using averages of STI clients seen during July in the preceding two years (from the DHIS), our best estimate of the annual figure is 2,168 344 symptomatic STI clients treated at public sector PHC facilities in South Africa. Since about 50% of clients with symptomatic STIs may have been treated by other health service providers, mainly in the private sector,¹⁰ and up to 50% of all STIs can be asymptomatic,¹¹ it can be estimated that about 8,400 000 symptomatic and asymptomatic STI infections occurred in 2002 in South Africa, among a population (15 years or older) of about 30 million.

This survey found that 35% of symptomatic STIs occurred in male clients. Recent research has shown that fewer South African men than women seek care for STIs at public sector services.¹³ Provinces that showed a high proportion of utilisation of services by males were Mpumalanga (42%) and Free State (41%). Overall, the proportion of male STI clients utilising PHC services was 35%. Interventions targeted at men are likely to be more effective in reducing HIV transmission because male treatment algorithms are more sensitive and specific for STIs than those in women. In addition, men control male condom use and are more likely to have multiple sexual partners. Alternative strategies need to be tested for enhancing the provision of services for men. In six provinces over 10% of STI clients were under 18 years of age, hence the need to strengthen the role of the education sector in the prevention of STIs and HIV.

6.1.2 Human resources

Findings of this survey estimated the total number of nursing staff working in PHC facilities (including mobile and satellite clinics) in South Africa to be 29 653 in July, 2002. Of these, 56% were professional nurses who receive training in syndromic management of STIs. Given the estimated 170 215 STI clients attending PHC facilities during July 2002, the client load was approximately 5.7 STI clients per nurse provider per month. The province with the greatest number of nursing staff was the Eastern Cape.

Between 2000 and 2002, the number of professional nurses employed in the public sector decreased by about 4%.⁹ Significant challenges identified by both national and provincial key informants during this survey as impacting on management of the STI programme were staffing shortages, and the high turnover of staff. This was largely attributed to migration of health professionals to developed countries in pursuit of economic benefits, and to the loss of highly skilled staff to the private sector. In particular, high levels of staff trained in STI management had been lost.

6.1.3 STI diagnosis and treatment

Syndromic management for first line treatment of STIs is the current recommended policy in all provinces in South Africa, and has proven to be most feasible and cost-effective at PHC level. Syndromic management of STIs comprises a spectrum of activities including drug treatment and compliance, partner notification and treatment, behavioural counselling and condom promotion.

National STI treatment guidelines were introduced in 1998, and are currently being revised. Implementation of the revised guidelines will commence in 2004. Evidence from this survey suggests that about 50% of professional nurses at PHC facilities were 'ever trained' in syndromic management of STIs, and hence, in many instances the national guidelines are implemented with variable quality. As a result, there is wide variation in the standard of care that STI clients receive.

Effective management of STIs is compromised by a lack of trained staff, and hence inappropriate use of available drugs. During this survey, the most senior nurse provider at facilities was asked to report on drug treatment for three commonly presenting STI syndromes; Vaginal discharge, Urethral discharge, and Genital ulcers. Responses were assessed on correct adherence to the National protocol and/or an officially adopted Provincial protocol. The number of facilities that provided correct management for all three syndromes was below 50% in almost all provinces except Eastern Cape (50%) and Gauteng (51%). Knowledge of correct drug treatment for genital ulcers was found to be the weaker than for vaginal discharge and male urethral discharge. The number of STI clients attending PHC services that were hypothetically affected by incorrect drug treatment (incorrect drug, dosage, duration or frequency) for any STI syndrome in July 2002 was 94 000.

During this survey, STI syndromic management guidelines were reported to be available at most facilities. However, less than 25% of facilities had guidelines on emergency contraception, cervical cancer screening and dual protection. Findings from key informant interviews showed widespread knowledge and utilisation of evidence-based national guidelines and protocols for management of STIs; and that minor variations to the national protocols were made by some provinces. All provinces had processes in place to disseminate information around guidelines from the NDOH.

While the widespread introduction of the syndromic approach has been successful, there are a number of challenges still to be overcome. The high prevalence of unrecognised or asymptomatic infections in South Africa means that many people infected with STIs may not seek treatment at public health services. Strategies to increase recognition of symptoms and early treatment-seeking are therefore critical in reducing the duration of time an individual is infectious.

This survey showed that effective management of STIs is compromised by the lack of trained staff, and because of inadequate staff training at all levels. In addition, there is a general lack of capacity in terms of trained staff to provide specialist level referral services for the management of complicated STIs. The current STI training programme requires expansion beyond the training in syndromic case management that is provided for primary health care clinicians. Moreover, all training should include a component of support and supervision, so that processes learned during training are translated into sustained change within the service setting.

Within Health, as with most sectors in South Africa, the Department has limited technical capacity at provincial and district level to effectively implement the STI/HIV programme. There is, therefore, an urgent need for in-service training and transfer of skills to health care providers at all levels within the public sector to ensure that opportunities to provide prompt and effective treatment for STIs, are not missed because of inadequate staff training.

6.1.4 STI drug stock-outs

The percentage of PHC facilities that had any one of the essential STI drugs out of stock during July 2002 ranged from 2.4 (Western Cape) to 24% (Limpopo and the Eastern Cape). Drugs that were most commonly unavailable were ciprofloxacin and erythromycin. As many as 6% of PHC facilities nationally experienced ciprofloxacin stock-outs in the month preceding the survey.

Just over 10% of STI clients (n=15 970) that attended PHC facilities were potentially affected by stock-out of STI drugs during July 2002. The maximum potential number of STI clients who may have received sub-optimal treatment as a result of both incorrect drug treatment and drug stock-outs was 14 324.

6.1.5 Consultation

At only 4% of visits made by female simulated clients, health providers asked if they could perform an abdominal palpation. Requests to perform an internal examination were made at 10% of visits. At 29% of visits by female clients and at 26% of visits by male clients, health providers asked if the client had experienced previous episodes of discharge. Requests to perform an examination of genitals were made at 21% of visits by male clients. Providers discussed examination findings with male and female clients at only 23% of visits. Although health providers generally recognised that simulated clients had STI infections in most cases (drug treatment was provided to clients); there is considerable scope for improving the quality of medical history and clinical examination, especially in women. Emphasis should be given to training health providers in clinical examinations, particularly in pelvic examinations.

6.1.6 Risk assessment and counselling practices

Counselling should be a high priority in STI and FP services but is often neglected by providers. One of the major constraints cited by key informants was lack of time, as at least 15-20 minutes would be required for adequate counselling. Providers were observed to spend 15 minutes or less in consultation with simulated clients at 82% of visits. Of 139 simulated client visits, eight clients (6%) were made to wait more than five hours before they saw the health provider.

During simulated client consultations, advice on abstinence was given to 20% of clients, and 30% of clients were questioned about condom use. Instructions on condom use during treatment (in order to protect against re-infection) was provided at 42% of visits at which medication was prescribed. The risk of STI/HIV acquisition was discussed at 28% of visits. HIV/AIDS was discussed at 20% of visits, STIs at 37% of visits, and VCT at only 7% of visits. A suggestion that the client should have a HIV test was only made at 8.1% of visits. Clients were counselled on contraception by health providers at 7.7% of visits. Providers recommended a barrier method of contraception (i.e. a male or female condom) for future use at 33% of visits, mainly to younger clients. Use of dual protection was recommended at 10% of visits by simulated clients. These findings suggest that providers do not maximise opportunities for counselling about STI/HIV and pregnancy prevention.

Although most clients were given a private consultation (clients were seen in a private room at 93% of visits), provider-client consultations could be observed by others in 20% of facilities (predominantly in facilities with few consulting rooms); and could be overheard in 11% of facilities. Most clients reported that the provider was 'understanding' (84% of visits), and 'helpful' (85% of visits).

6.1.7 Partner notification

Recent sexual partners should be treated even if they are asymptomatic in order to prevent re-infection. Health providers asked if the client had a more than one sexual partner at only 15% of simulated client visits. Males were asked this question more frequently than females.

Survey findings showed that partner notification cards or slips were available in 65% of examination rooms; of these 51% were in local languages. Most facilities (79%) kept records of notification cards and slips issued. However, providers counselled clients about the need for treatment of partner(s) at only 32% of visits and partner notification slips or cards were provided at only 18% of visits.

The survey concludes that providers often failed to gather full reproductive health information from clients, and did not follow basic infection prevention practices. Client-provider interactions were usually limited to the initial reason for the client's visit, thus providers failed to take full advantage of the medical visit to provide STI services.

6.1.8 Syphilis screening

Screening for syphilis facilitates early detection and treatment of asymptomatic infections in antenatal services and is important for the secondary prevention of syphilis during pregnancy, and for control of congenital syphilis. Syphilis prevalence in pregnant women presenting at public sector ANC facilities in South Africa has increased between 2000 and 2002.⁴ Although findings of this survey confirmed the widespread availability of syphilis screening for ANC clients at PHC facilities, accurate clinical diagnoses of syphilis was found to be dependent on access to laboratory test results. Findings from this survey showed that nationally, only 4% of PHC facilities were able to get syphilis test results back to clients within one day. In most provinces at least 50% of facilities had a turn-around time of 3-4 days. Delays were attributed to unreliable transport and long distances involved, particularly in rural areas.

6.2 Programme Implementation

6.2.1 HIV services

South Africa now has an estimated 5.3 million adults and children living with HIV/AIDS, and the annual national antenatal surveillance has recorded an increase in sero-prevalence from 0.73% in 1990 to 24.8% in 2002.⁴ By 2005, it is expected that HIV/AIDS will cost South Africa 1% of the gross domestic product and account for a staggering 75% of its health budget.²²

As increasing numbers of people become infected with HIV, STI/HIV control programmes are not only faced with the challenge of preventing new HIV infections, but also with providing comprehensive care for individuals infected with HIV. An HIV prevalence of 40% in respondents with a history of STI(s) was reported in a recent national household survey.²¹ It is essential that prompt and effective treatment of STIs in those that are HIV-infected is initiated in order to prevent transmission of HIV from these clients. In the specific case of HIV prevention, testing for HIV is recommended in order to promote positive behaviour change.

In 2001, the NDOH initiated programmes for HIV voluntary counselling and testing (VCT), and for prevention of mother-to-child transmission (PMTCT). NDOH guidelines stipulate that in instances where health facilities lack capacity to provide pre- and post-HIV test counselling services, referral to a counselling agency or other appropriate facility should be arranged prior to HIV testing.

During July 2002, it is estimated that about 50 000 clients were tested for HIV at PHC facilities that offered HIV testing, but were not necessarily designated VCT or PMTCT sites. In addition, about 2 700 clients were referred for VCT by facilities that lacked capacity to provide this service (except in the Western Cape where

all PHC facilities offer HIV testing). According to the DHIS, the total number of clients attending any PHC service during July 2002 was 6,414 050. From this it may be calculated that about 0.8% of all PHC clients accessed HIV counselling and testing services at PHC facilities during this period.

Findings from this survey showed that almost one-third of all PHC facility staff were trained in HIV counselling (most of whom were professional nurses); and almost one-third of PHC facilities (mostly in the Eastern Cape and KwaZulu-Natal) had no nursing staff trained in HIV counselling.

Although about 69% of PHC facilities offered HIV testing; only 67% offered HIV counselling. Hence, about 2% of PHC facilities offered HIV testing without offering counselling. This was largely attributed to shortages of trained staff.

The survey showed that 53% of PHC facilities in South Africa were designated VCT sites. This is considerably higher than the number of facilities reported by the DOH at the end of 2002, and may be attributed to service providers assuming that facilities were designated VCT sites if counselling and testing services were offered. Of those facilities which reported offering VCT services during this survey, 82% actually tested anyone in July 2002. Through the expansion plans for VCT and PMTCT, the NDOH aims to have VCT services available at 80% of public health facilities by the end of the 2003/4 financial year.

During this survey it was estimated that about 29% of PHC facilities were PMTCT sites, and that about 4 000 referrals for PMTCT were made in July 2002. At this time, PMTCT roll-out had not commenced in many provinces, and, in addition, expansion of the programme in various provinces had not been officially documented.

According to key informants, VCT and PMTCT service roll-out was high on the agenda of all provinces and services were established to varying degrees. The key challenge (identified by most informants) to implementation of VCT and PMTCT services was a shortage of trained staff.

6.2.2 Integration of services

The NDOH policy of integration of STI prevention and management into broader sexual and reproductive health services (ANC, family planning, VCT and PMTCT), and the introduction of a comprehensive package of care is an effective approach to strengthening the STI/HIV prevention and management programme. Integration of services increases opportunities for screening and prevention of STIs since it facilitates access to sectors of the population at risk for STI/HIV who routinely utilise public sector services. In addition, integration reduces duplication of services, provides continuity of care, and makes maximum use of finite resources.

Integration of STI services with other reproductive health services was identified as high priority by all key informants. The ability to implement integration of services was reported to be often limited by staff issues, and by lack of capacity. This has resulted in varying levels of implementation of integration across the provinces. Inadequate training hinders the development of integrated services. Until recently, training has not been conducive to integration, and many service providers are constrained in the provision of integrated services by their training background. This has been seen by some key informants as a barrier to introducing integrated services. In-service training is therefore required, and here the challenges relate to the practical issues of finding time and resources, as staffing levels do not generally permit time off work for attendance at training courses. The evolution of integrated services clearly needs to take place in parallel with the training of service providers.

Evidence from this survey showed that there was a separate queue for family planning clients in 36% of facilities, and that family planning clients queued with all other clients at only 53% of facilities. Clients were observed to be treated in separate areas (e.g. STI, antenatal, contraception) in 43% of facilities.

6.2.3 Barrier methods

Promotion and provision of barrier methods, together with demonstration of their correct use is an essential part of the management of STI and HIV infected clients, and should therefore also be an integral part of antenatal and family planning services. Condoms should be easily accessible for all clients at every facility during and beyond service hours. A recent national household survey indicated that 90% of respondents indicated good accessibility to quality condoms.²³

The NDOH procures and distributes male condoms to primary sites in all provinces. The NDOH barrier methods programme utilises a Logistic Management Information System (LMIS) to facilitate a continuous supply of condoms on the basis of consumption. Key informants from all provinces reported using national guidelines for many areas of condom logistics including storage and distribution.

According to the NDOH, 358 million male condoms were distributed in 2002, and for 2003 the projected number was 425 million. Findings from this survey showed that, during July 2002, about 8,745 254 male condoms (approximately 100 million annually) were distributed through PHC facilities. In addition, it was found that there was significant secondary distribution of male condoms from PHC facilities to 'non-clinic sites' such as taverns, and that most facilities did not keep records of this secondary distribution.

Overall, 4% of PHC facilities reported male condom stock-outs during this survey; however no stock-outs were reported in three provinces (KwaZulu-Natal, North West, Gauteng).

The NDOH Female Condom Programme had introduced female condoms to 114 designated sites nationally at the time of this survey, however, 156 PHC facilities reported that they distributed the female condom. Since only 20% of these facilities were designated distribution sites, this indicates a considerable amount of additional distribution. Although only 12% of PHC nursing staff were trained in female condom provision at the time of the survey, training is ongoing.

The DOH procured 1.3 million female condoms in 2002. Findings of this survey showed that about 80 000 female condoms were distributed through PHC facilities during in July 2002. This is about 1% of the number of male condoms distributed during this period. Few stock-outs were reported by facilities; the majority of facilities reporting stock-outs were not part of the main programme of designated sites, and were reliant on an informal distribution network which was unable to provide a consistent supply. Key informants from seven provinces reported an increase in demand for female condoms, and increasing numbers of female condoms are distributed each year. However, the cost of female condoms is considerably higher than that of male condom, and is therefore a limiting factor.

6.2.4 Utilisation of services

From in-depth surveys it was found that most clients attended of PHC facilities for family planning services (64% of clients), followed by antenatal services (22%), and STI management services (9.6%). Utilisation may depend on various factors such as accessibility, acceptability and knowledge of services.

Services may be inaccessible to certain groups e.g. truck drivers, because of time or location, or they may be inaccessible because of perceived judgmental attitudes of health care providers, e.g. with young people. In these cases, innovative approaches to service delivery are required so that accessible services are provided to those at high risk. Some PHC facilities at truck-stops were observed to open from late afternoon to about 10:00 pm to facilitate access to services by truck-drivers during overnight stopovers.

Overall, less than half the facilities surveyed were observed to be open after normal working hours, and less than one-third opened at weekends. At almost one-fifth of facilities, all service providers took tea and lunch breaks at the same time, however, only very few of these facilities advertised the fact that the facility was closed during the breaks.

STI and VCT services were observed to be available daily (excluding at weekends) at the vast majority of the facilities surveyed. However, some facilities offered services on specific days or at certain times only.

The vast majority of facilities offering STI, VCT and cervical screening did not advertise these services.

The NDOH is committed to reducing the incidence, morbidity and mortality from cervical cancer in South Africa. Screening for cervical cancer has been offered at the primary level in public sector facilities since 1996. National guidelines for cervical cancer screening were launched in 2000, and a strategy for implementation of the programme is currently being developed. About half the PHC facilities that were surveyed reported offering cervical screening services on a daily basis; about one-third of facilities did not offer the service at all.

In South Africa, emergency contraception (EC), an effective contraceptive back-up to condom failure has been available free of charge at public sector health facilities since 1996. Emergency contraception services at PHC facilities were found to be utilised by a few clients (0.4%). Recent studies have shown that awareness of EC is low,²⁴ and that adolescent mothers generally lacked knowledge about contraceptive services (including EC).²⁵

6.2.5 Support and supervision

Overall, service providers at 90% of PHC facilities surveyed reported having an external district clinic supervisor, and over 60% of facilities reported supervisor visits every one to two months or more frequently. However, 20% of facilities reported visits only every 3-4 months or less often. Feedback on the outcomes of supervisor visits was given to staff about half the facilities. About one-third of facilities kept records of dates of supervisory visits, and only about 40% kept records of outcomes of supervisory visits.

6.2.6 Monitoring and evaluation

Monitoring and evaluation systems (and ultimately programme planning and implementation) depend critically on the quality of data. The validity of any estimates made from the data collected in any survey is limited by the reliability of the reporting systems that are in place on the ground, at each individual facility.

This survey showed that there are significant discrepancies and inconsistencies in record-keeping and collection of monitoring information in a large number of PHC facilities. Approximately 34% of the 962 PHC facilities surveyed were found to have provided discrepant or inconsistent data. These discrepancies and inconsistencies were in recording of key variables pertaining to details of numbers of STI clients seen, and for distribution of male condoms.

In many instances the information provided was derived from monthly statistics or by estimation, and not from registers, either because the interviewee had not consulted the register, or because incomplete or insufficient data was contained therein. Reporting of condom distribution for the DHIS was raised as a major challenge in some provinces, with an urgent need to ensure facilities reported correctly and consistently. In addition, many facilities do not routinely record the sex of STI clients or the number of STI clients that were under the age of 18 years. Two recent studies reported the quality of routine PHC data in South Africa to be inaccurate, incomplete and inadequate for a variety of reasons including lack of feedback and apathy.^{26,27}

The telephonic survey of PHC facilities represents one of the few instruments by which the quality of data reported under the national DHIS can be assessed. Reporting systems such as DHIS inherently produce results that are biased downwards (towards zero) for data that are derived from counts e.g. condoms distributed, STI clients seen, etc. This is because generally, no adjustment is made for facilities that do not send in reports, i.e. missing data are treated as zeros. In the telephonic survey, on the other hand, non-reporting facilities were replaced and weights were adjusted accordingly. The national aggregate count is therefore compensated for the missing value of the non-reporting facility. This may create a bias towards results representing the better managed facilities at the expense of less well managed ones. However this bias is likely to be much smaller, and not consistently in the same direction (downward). The results of this survey therefore, give an indication of the effect of under-reporting in the DHIS.

The importance of information collected and collated by the DHIS was emphasised by key informants. One of the key issues mentioned was the need to ensure that the programme was able to access and interpret data collected by the DHIS with an emphasis on utilisation of the information for planning purposes.

There has been a considerable amount of progress in monitoring and evaluation around STIs. The introduction of an effective STI sentinel surveillance programme commenced in 2003, and a process for training of sentinel sites is in place in all provinces. This will complement the annual HIV and syphilis sero-prevalence survey which is well established nationally, and will enhance the ability of the STI programme to effectively monitor the patterns of disease within the community, and to use this information as a management tool.

6.2.7 IEC Materials

The quality and accessibility of health services, as well as awareness of STI symptoms, signs and complications are key factors that influence treatment-seeking behaviour. Active health promotion through high impact interventions: mass media, multi media, theatre, peer education, in collaboration with community-based organisations and traditional healers should therefore form an active part of STI management and control at PHC facility level. Findings from this survey showed that materials on STIs were available at 81% of facilities, usually combined with HIV/AIDS information. Most of the available material was in English. Local languages (Tswana, Venda, Tsonga, Xhosa, Afrikaans, Sotho, and Zulu) were not commonly used.

Materials on cervical cancer screening, emergency contraception, dual protection and female condoms were not found to be commonly available at PHC facilities, however, key informants reported that there were established mechanisms for IEC distribution in all provinces, with targeted distribution around key events such as national STI week or world AIDS day.

There is an urgent need to develop a range of appropriate interventions to encourage early recognition of symptoms, early treatment-seeking behaviour, and risk reduction. Furthermore, by expanding availability of IEC materials into the community, there may be sustained behaviour change in terms of both treatment-seeking, as well and preventive behaviour.

6.2.8 Collaboration and networking

Several studies have indicated the benefits of integrating traditional health practitioners into the formal system of reproductive health care delivery.²⁸ The national STI programme has initiated a number of initiatives to train traditional medicine practitioners on principles of reproductive health care, and to facilitate referral to the orthodox health care system. At national level two traditional healers have been appointed to develop collaboration with local traditional healers. Key informants from six provinces reported that they were working with traditional healers. These relationships involved a number of activities, including training in aspects of STI treatment and referral, distribution of IEC materials, and information-sharing. KwaZulu-Natal reported a well established relationship with traditional healers which included training in sterile practices and provision of disposable gloves.

Key informants in some provinces reported that a number of strong collaborations with NGOs had been established; these covered a broad range of activities including home-based care, condom distribution, counselling and other programme support.



Recommendations

A number of interventions have been identified to strengthen STI/HIV management and prevention services in South African public sector PHC facilities. All interventions should be planned at provincial and district level to ensure conformance with local programme priorities, and where appropriate, should build on existing local partnerships to ensure sustainability. Key to the success of interventions is the implementation of standardised approaches, so that monitoring is simplified, and comparisons across districts and provinces can be made.

7.1 Accessibility and availability of services

- ◆ Develop structured mechanisms for the implementation of integration of STI, HIV, family planning and ANC services at provincial and local level in order to maximise accessibility to clients
- ◆ Maximise availability of STI services e.g. extended opening hours for PHC services should be considered so that clients can access services after work or over weekends
- ◆ Design interventions targeted at increasing utilisation of PHC services by males and by people under the age of 18 years
- ◆ Increase role of traditional medicine practitioners in client counselling and referral
- ◆ Design strategies to increase partner notification and treatment (and prevent re-infection), that include interventions combining provider training and patient education, and that take cognisance of socio-cultural and gender issues pertinent to communities
- ◆ Promote condoms for dual protection against STIs/HIV and unwanted pregnancies
- ◆ Develop mechanism for promotion and distribution of barrier methods to non-medical sites, and to high transmission areas e.g. commercial sex workers and clients, truck drivers
- ◆ Target groups at high risk of acquiring and transmitting STIs e.g. sex workers, truck drivers for peer-education, distribution of IEC materials
- ◆ Develop collaboration with NGOs and other stakeholders for provision of counselling services

7.2 Syphilis testing

- ◆ Implement procedures to routinely document turn-around time of laboratory results, set targets together with external laboratories, and monitor the implementation of targets
- ◆ Ensure regular transport to external laboratories, and establish lines of communication e.g. fax machines to receive results
- ◆ Explore utilisation of rapid diagnostics for syphilis testing that alleviate the need for transportation of specimens and results to and from external laboratories

7.3 Quality of data

- ◆ Introduce regular quality control of data recording on a sample of facilities to maintain and improve the flow of reliable data
- ◆ Develop and implement improved record-keeping systems and train service providers on record-keeping at service level

7.4 Monitoring and evaluation

- ◆ Conduct regular monitoring of key aspects of programme including drug treatment, barrier methods, and syphilis screening, particularly in rural communities
- ◆ Implement system for monitoring and evaluation of training at provincial level
- ◆ Develop logistics system to facilitate monitoring of drug supplies at provincial level

7.5 Training and development

Increase capacity of health care providers at all levels to deliver quality STI and HIV care by training in the following areas:

1. Clinical skills development, particularly in pelvic examinations
2. Detection, diagnosis and treatment of STI syndromes
3. Barrier methods and dual protection
4. Counselling on risk reduction, condom use, dual protection, partner notification and treatment, and VCT
5. Utilisation of health data for management at facility level
6. Training of antenatal, family planning, PMTCT and VCT staff in STI diagnosis and treatment to facilitate effective integration of services
7. Values clarification

7.6 Human resource management

- ◆ Improve health provider job satisfaction and working conditions by provision of non-financial incentives e.g. recognition, opportunities for career development
- ◆ Address issues of ethical recruitment with relevant parties in developed countries, and establish quota system to control migration of health professionals
- ◆ Improve support and supervision of facility staff by use of tools e.g. check lists

7.7 IEC and behaviour change communication materials

- ◆ Design interventions to encourage early treatment-seeking behaviour, completion of treatment compliance, correct and consistent condom use, and partner notification e.g. using multimedia approaches, mass-media campaigns
- ◆ Identify and promote use of IEC materials in a variety of innovative settings, e.g. health education audio-visual programmes in waiting areas of public sector facilities
- ◆ Develop relevant health IEC materials at a provincial level, for publication in local languages, and support and monitor distribution of materials at district level
- ◆ Develop non-medical networks for distribution of IEC materials; investigate mechanisms for distribution of material in conjunction with barrier methods





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