Department of Health
Republic of South Africa

An Evaluation of the Implementation of the *Choice on Termination of Pregnancy Act*

South Africa 2000

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by the National Department of Health

Reproductive Health Research Unit:

University of the Witwatersrand, Chris Hani-Baragwanath Hospital:

Kim Dickson-Tetteh

Heather Brown

Helen Rees

Tebogo Gumede

Luyanda Mavuya

Medical Research Council:

Rachel Jewkes (Gender and Health Group)

Jonathan Levin (Bio-statistics Unit)

Margaret Westaway (Health and Development Group)

REPRODUCTIVE HEALTH RESEARCH UNIT
RHRU
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University of the Witwatersrand, South Africa.

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Private Bag X 828
Cnr Struben and Andries Streets
Pretoria, 0001
Tel: (+27 12) 312 0774

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Editing: Gillian Rennie

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Foreword

The 1996 Choice on Termination of Pregnancy Act (Act 92 of 1996) is one of the most important pieces of legislation aimed at improving women's lives. By allowing all women the right to choose whether to terminate their pregnancies within certain specified parameters, South Africa has embarked on a journey to bring access to safe abortions to all women, in order to prevent morbidity and mortality associated with unsafe, illegal 'back street' abortions.

In 1999 the Department of Health commissioned the Reproductive Health Research Unit to conduct research into Incomplete Abortion in South Africa, following the implementation of the Choice on Termination Act in February 1997. A series of studies into the accessibility of termination of pregnancy facilities, the epidemiology of incomplete abortion and the reasons why some women were still resorting to unsafe, illegal abortions was conducted. The studies were conducted from September 1999 to June 2000 with a view of measuring the impact of the new policy around termination of pregnancy in South Africa.

The information collected in the studies will be instrumental in further informing strategies aimed at improving access to termination of pregnancy services for all South African women, and for instituting programmes aimed at reducing the incidence of unsafe, illegal abortions. In addition, an understanding of the reasons behind why some women resort to these illegal, unsafe abortions is critical in improving not only the access, but the quality of our service provision as well.

I am grateful to all those who contributed to the success of the evaluation of the implementation of the Choice on Termination of Pregnancy Act: 2000 and hereby place on record my gratitude for their efforts in making this important information available. I wish to express my thanks to the Reproductive Health Research Unit for conducting the study in partnership with the Medical Research Council. I would like to thank the Clusters Health Information, Evaluation and Research as well as Maternal, Child and Women's Health and Nutrition in the Department of Health for initiating and guiding this important study.The results come at a time when we enter the fifth year of the implementation of the Choice on Termination of Pregnancy Act, and will provide much needed information for future planning.

Special thanks go to the provincial Departments of Health for their contributions to the study, and the staff at the participating hospitals for contributing to the data collection and whose tireless efforts towards making abortions accessible and safe do not go unnoticed. Lastly, but not least, I would like to thank all the women who agreed to participate in the study, without whom the valuable lessons would not have been learnt.

Dr ME Tshabalala-Msimang
Minister of Health

February 2002

Acknowledgments

I wish to thank the Health Systems Research, Research Coordination and Epidemiology and Women's Health and Genetics Directorates for initiating and guiding this important study on the impact of the Choice on Termination of Pregnancy Act on incomplete abortions.

Many thanks go to the Reproductive Health Research Unit in partnership with the Medical Research Council for conducting this study. In particular I wish to thank all those involved for their dedicated efforts in the completion of this work.

Thanks also to the Henry J. Kaiser Family Foundation and the United Kingdom Department for International Development (DFID) for co-funding this study.

I am also grateful to all the provincial Maternal, Child and Women's Health coordinators and hospital staff, who willingly gave of their time to make this study a success.

Special thanks to all the women who agreed to participate in this study, without whom the study would not have been possible.

Dr A Ntsaluba
Director-General: Health

March 2002

Definition of Terms

Abortion

The WHO defines abortion as the induced or spontaneous loss of a pregnancy prior to the 22nd week of gestation or, if the gestation is not known, where the foetus weighs less than 500g.

Incomplete Abortion

Incomplete abortion refers to the clinical situation when only part of the products of conception have been expelled, the remainder being retained in the uterine cavity.

Unsafe Abortion

Termination of pregnancy (induced or spontaneous) either by persons lacking the necessary skills or in an environment lacking the minimum medical standards or both (WHO 1992).

Illegal Abortion

An abortion induced or performed outside the provisions of the Choice on Termination of Pregnancy Act (Act No 92 of 1996), outside of designated health service facilities, or by persons who are not registered to perform abortions.

General Introduction

The 1996 Choice on Termination of Pregnancy Act[1] of South Africa is one of the most liberal examples of abortion legislation in the world. The Act reflects both a desire to empower women in the country generally, and a recognition that illegal abortion has been widespread and caused significant mortality and morbidity. The passage of the legislation through parliament and the shape of debates in the popular media were significantly influenced by the findings of research on the epidemiology and hospital management of incomplete abortions, costs to the health sector of incomplete abortion management and research into women's experiences of illegal abortions which was undertaken in 1994.

In the first three years after the legislation was enacted services were established in the private and public sectors and approximately 40 000 legal terminations have been performed annually.[3] The ability of provinces to establish abortion services so quickly in a resource constrained environment has been substantially influenced by the promotion of low-cost technology: manual vacuum aspiration following cervical ripening with misoprostol under local anaesthesia.[4] There has been a national clinical training programme[5] and a values clarification programme aimed chiefly at securing participation of nursing staff in service.[6]

In 1999 the Department of Health commissioned an evaluation of progress in implementation of the Choice on Termination of Pregnancy Act and its health impact. Three studies were undertaken:

- The first was a national survey of TOP services to describe the distribution and accessibility of services for first and second trimester terminations of pregnancy.
- The second was a study of the epidemiology of incomplete abortion cases presenting to the public sector. This study reviewed the profile and medical condition of women admitted to hospitals with incomplete abortions. This report presented findings and drew comparisons where possible with the data from the 1994 National Incomplete Abortion Study.
- The third was a study of why women continue to resort to illegal abortions in a province such as Gauteng which has considerable public sector service provision.

General Introduction

Choice on Termination of Pregnancy Act

The Choice on Termination of Pregnancy Act (CTOP Act), implemented from February 1997, permits termination of pregnancy (TOP) upon the request of a woman up to and including 12 weeks' gestation, under certain defined circumstances from the 13th to the 20th week of gestation, and in very limited circumstances after the 20th week of pregnancy.[6] Previously termination of pregnancy in South Africa was available for a small group of indicators and required a lengthy process of application to the relevant authorities. Access to legal termination was therefore limited. Between 800 – 1 000 legal terminations were granted each year[7], representing about 40% of applications. The majority of women did not even attempt to access legal termination, resorting instead to illegal and often dangerous methods of abortion.

Survey of TOP services

The National Department of Health has the legal responsibility to designate services to perform terminations of pregnancy, but provincial and local health departments must apply for designation of hospitals. The approach to designation has varied among provinces. In some instances only facilities which had definite plans to offer services were designated, as was the case in the Northern Cape. Other provinces, such as KwaZulu-Natal, applied for the designation of all services that have the potential to render TOP services, and therefore requested designation for a large number of facilities. Services are designated in public and private sector hospitals and clinics to perform first and second trimester TOPs according to those institutions' capacity and level of care.

Despite the increase in the numbers of terminations performed under the 1996 Choice on Termination of Pregnancy Act, there has been concern that women's access to safe services remains restricted and unequal. In the first three months after the Act was passed, 60% of all legal abortions were performed in Gauteng province. A year later only one-third of the hospitals and clinics which were designated to provide abortions actually had the services in place. Of the 31 312 legal abortions performed in 1997, almost all were carried out in tertiary centres

located in urban areas. The survey of termination of pregnancy facilities was commissioned in order to identify where services were functioning in 1999, describe their activities and identify problems in access nationally.

Illegal abortion research

A further measure of the effectiveness of the legislation and service provision is provided by examination of the impact of the legislation on illegal abortion activity and associated morbidity. Unfortunately, the study of illegal abortions is extremely difficult because legal, social and cultural factors provide powerful incentives for women to conceal them. In order to research this sensitive problem the World Health Organisation (WHO) has recommended that the focus move from 'illegal' or 'induced' abortions to 'unsafe' abortions. This definition emphasises the effect of health services on women as the reasons for unsafe abortions include barriers to access to health services after miscarriage or induced abortion, as well as unsafe induction practices. One way of measuring the incidence of unsafe abortions is through looking at incomplete abortions. Incomplete abortions, whether induced or spontaneous, are common reasons for admission to gynaecological wards. It is expected that a 'normal' spontaneous incomplete abortion causes very little morbidity or medical complications. By identifying women with incomplete abortions who experience serious medical complications it is therefore possible to gain further insight into the numbers of illegal abortions. The 1994 study of incomplete abortions followed the methodology developed for a WHO multi-country study of unsafe abortions[8] (with certain modifications[9]). Comparison of the current study's findings with that of the 1994 study provides a measure of the impact of the legislation on unsafe abortion. Both studies also examine hospital management of cases. The 1994 study highlighted areas of unsatisfactory practice (both over and under treatment) and this study provided an opportunity to re-examine these areas.

Why are women still illegally aborting?

Even in Gauteng province there has been evidence that abortions are still being induced outside registered facilities.[10] In Kalafong Hospital, despite a busy first trimester abortion unit in the hospital, monitoring of the early impact of the new

legislation revealed that there was a decrease in the number of patients with complicated abortions, but no decrease in incomplete abortions.[10] This suggested that patients who previously induced illegally but now had legal treatment available to them were being replaced in numbers by patients inducing using safer methods, most probably misoprostol.

Review of the literature suggests several reasons why women should still be seeking illegal abortions. With limited public health facilities providing TOPs in urban areas, access and cost become major barriers to choice. Other barriers include lack of knowledge about the Act, lack of awareness concerning early pregnancy signs, fear of the procedure itself and its consequences, denial of the pregnancy, the stigma of openly seeking assistance, and preferences for traditional medicines.[11] Initial reluctance to implement the Act has now given way to acceptance and even enthusiasm by some staff involved in TOP procedures, while the judgemental attitude of other staff has been reported to continue to hamper implementation progress. The study of illegal abortions was undertaken to understand the relative importance of different barriers to using legal services and to gain an understanding of how women make decisions to induce in this way.

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Section 1

A survey of termination of pregnancy services

Executive Summary – Section 1

A survey of termination of pregnancy services

Introduction

This report presents the findings of a survey that was undertaken in 1999 with the objective of describing the availability and accessibility of services for termination of pregnancy two years after the enactment of the Choice on Termination of Pregnancy Act.

Methods

This was a cross-sectional study of services conducted between September and December 1999. Lists of services were provided by the departments of health in each province and each service was contacted telephonically to determine where they had performed TOP in the four weeks prior to the call (ie were functional), how many TOPs they had performed between June and August 1999, where they did second trimester terminations and what their waiting time was.

Results

Two hundred and ninety-two services were designated in the country and only 32% were functioning. In five provinces the private sector performed more than 20% of terminations, but in Mpumalanga, the Northern Cape and Northern Province there were no functioning private facilities. Overall 27% of facilities were in the private sector.

Mapping services available for TOP indicate that there are substantial parts of the country with no services at all. These include the major rural areas of the Karoo and most of the Northern Cape, most of the Northern Province, the Drakensberg in the Eastern Cape and KwaZulu-Natal, and northern and central KwaZulu-Natal.

Analysis of the proportion of the population of women in their reproductive years living within 0 – 50km (as the crow flies) of a TOP service indicates that only one province (Gauteng) has managed to achieve service provision where 90% or more of the population is within this distance of a first or second trimester service. Access to second trimester services is much poorer than that for first trimester TOPs. Only four provinces have succeeded in having 90% of their population within

100km of a second trimester service. In the Northern Cape over a third of the population is not within 100km of a first trimester TOP service and two-thirds are not within 100km of a second trimester service.

A measure of service activity is the number of terminations per month per 100 000 women in their reproductive years. This indicates considerable inequality in TOP service activity in the provinces. When compared to population, activity in Gauteng appears to be well above average (92.5 per 100 000 women) and that in the Northern Province by a long way the lowest (6.6 per 100 000 women). The other provinces cluster in two groups of very similar activity level: Mpumalanga (39.5 per 100 000 women), Western Cape (36.5 per 100 000 women) and the Free State (36.3 per 100 000 women) performing relatively better and KwaZulu-Natal (23.8 per 100 000 women), the Northern Cape (22.3 per 100 000 women), North West (19.4 per 100 000 women) and the Eastern Cape (18.7 per 100 000 women) performing far less well.

Almost half (48.5%) of the country's terminations are being performed in Gauteng province despite only 19.4% of women in their reproductive years living there. This also indicates considerable problems with service provision in other provinces. Waiting times were short for most services, but this may have been an artefact as many services do not have a waiting lists system. If women cannot be fitted into the available TOP slots they are being turned away. This is not a good indicator of unmet need for services.

Conclusions

Although in the first two years after the new legislation considerable efforts have been made to establish services, this study shows that there is gross inequality. There is very little service provision for women in rural areas and in certain provinces. Norms are needed for service provision with careful monitoring of service indicators. Considerable efforts need to be made to expand private sector service provision, especially at a primary care level with the involvement of general practitioners in legal TOP services.

Key recommendations

From the findings of this study it is recommended that:

1. Norms for service provision for first and second trimester termination of pregnancy should be set for all provinces. These should include the number of services, norms for the proportion of the female population of reproductive age who live within a certain distance of a service, and the capacity of services (measured by the average number of TOPs performed per month per 100 000 women).
2. There should be annual monitoring of the progress of each province in reaching the norms for TOP service provision.
3. Plans should be developed to enhance provision for TOPs at primary care level in both private and public sector facilities. This should include training midwives and general practitioners.
4. Provinces should develop plans for improving services based on an understanding of local circumstances and barriers to more widespread service provision.

Section 1

A survey of termination of pregnancy services

Aims and objectives

The Survey of Termination of Pregnancy (TOP) services investigates the availability of TOP services within the country. This report outlines the survey's findings.

The main objectives of the survey were:

1. To determine the number of designated TOP facilities in each province
2. To determine the proportion that are functioning and the throughput (average number of TOPs per month based on the three months before the telephone contact).
3. To determine the waiting time for TOPs in each facility (time from first contact with facility to procedure).
4. To determine impact of trimester status on the above.
5. To make recommendations for improvements to the TOP service provision throughout the country.

Methodology

The study was a cross-sectional survey of TOP services in South Africa. Between September and December 1999, all the reproductive health coordinators in the nine provincial departments of health were contacted telephonically and asked to provide a list of designated termination of pregnancy services in their provinces. This included termination of pregnancy services in both the public and private sectors. The provincial coordinators were asked to indicate which of the designated services were functional, ie which ones is had performed a termination of pregnancy in the four weeks prior to the inquiry. This information was then verified telephonically by interviewing a member of staff in charge of the TOP service in each facility. The staff member was asked to provide statistics of TOPs performed for the three months prior to the inquiry, ie for June, July and August of 1999. They were asked to subdivide this into first trimester and second trimester terminations. The staff also provided information on the waiting time to obtain an appointment for termination of pregnancy and waiting time for the procedure to be performed at each service. The data was all collected on a standard data capture sheet. The data was analysed using Epi Info.[6]

Section 1

Definition of terms

Certain definitions were used during the data collection to standardise the information collated:

1. **First trimester** – termination of pregnancy up to and including the 13th week of gestation.
2. **Second trimester** – termination of pregnancy from the 13th up to and including the 20th week of gestation.
3. **Designated TOP facility** – a facility that has been given permission by the Minister of Health to provide TOP services.
4. **Functional TOP facility** – a facility that actually provides TOP services. A service was deemed functional if it had performed at least one termination of pregnancy in the four weeks preceding the inquiry.
5. **Waiting time** – the time a woman has to wait from the date of first contact with the facility to the day arranged for the operative procedure. This is divided into two parts: from the time of the first contact until the first appointment and the time from first appointment to the operative procedure. The time recorded is the actual time pertaining on the day of the inquiry. Where TOPs were only performed or clinics held on certain days of the week an average waiting time is presented.

Results

Distribution of TOP Services

Table 1 and figure 1 illustrate the current status of TOP services in the country. In total there were 292 designated TOP services throughout the country. Table 1 shows that only about a third (32%) of these facilities were providing TOP services. The greatest number of facilities for TOP lay in the public sector (73%) while the private sector contributed just over a quarter (27%) of TOP provision. Gauteng had the most designated facilities (75), followed by KwaZulu-Natal (66), the Western Cape (59) and the Northern Province (36). The number of facilities designated in a province varied from 2 – 75, the mean number was 32.4 and median 22.

Section 1

In the process of data collection it was reported that TOP service provision was largely dependent on a core of committed providers. Even the facilities that were functional at the time of the study were vulnerable to be rendered 'non functional' at certain periods, depending on the presence of the committed providers. A few of the facilities denoted as not functioning in this study had been previously providing TOP services but may not have provided services in the month prior to the survey because a particular provider was on leave or absent for other reasons (illness, transfer to other duties).

The numbers of functioning services ranged from 2 – 33, the mean number was 10.2 and median 9. The picture here was different from that given by consideration of numbers of designated services alone. Gauteng province had the largest number of functioning TOP services (33), with the Western Cape in second place (14), followed by the Eastern Cape (10), North West Province (9), KwaZulu-Natal (8), Mpumalanga (6), Northern Province (5), Free State (5) and Northern Cape (2). Table 1 indicates that the proportion of designated TOP services which are functioning varied from 12% – 100%. The Northern Cape with the lowest total number of TOP services (2) had the highest proportion of services functioning. This indicates that proportion of designated services which are functioning is not a very useful indicator of TOP service provision.

Figure 1 shows the numbers of designated facilities, and of those that were actually functioning (ie providing TOP services) by province. Figures 2 and 3 show the geographical distribution of functioning first and second trimester TOP services around the country. These maps indicate that there were large parts of the country with no access to services, most notably the interior and northern part of the Western Cape, southern part of the Northern Province and north-west part of the Eastern Cape. This pattern is even more pronounced when facilities providing second trimester terminations are considered. The northern and mountainous parts of the Eastern Cape and KwaZulu-Natal are also without TOP services.

Table 1 indicates considerable inequality in provision of TOP facilities in the private sector from province to province. Mpumalanga, Northern Cape and the Northern Province did not have any private sector facilities performing TOPs and

the Eastern Cape and Free State only had one for the whole province. Gauteng province had the largest number (15), and proportion (45%) of private sector facilities providing TOP services. Apart from in the Western Cape, private sector facilities offer both early and late terminations.

Table 1: Current status of funtioning TOP services in South Africa

Province	No. of designated facilities	No. of functioning facilities (% of designated)	No. of functioning public facilities (% of total functioning)	No. of functioning private facilities (% of total functioning)
Eastern Cape	11	10 (91)	9 (90)	1 (10)
Free State	9	5 (56)	4 (80)	1 (20)
KwaZulu-Natal	66	8 (12)	6 (75)	2 (25)
Gauteng	75	33 (44)	18 (55)	15 (45)
Mpumalanga	22	6 (27)	6 (100)	0 (0)
Northern Cape	2	2 (100)	2 (100)	0 (0)
Northern Province	36	5 (14)	5 (100)	0 (0)
North West	12	9 (75)	7 (78)	2 (22)
Western Cape	59	14 (24)	10 (71)	4 (29)
TOTAL	**292**	**92 (32)**	**67 (73)**	**25 (27)**

Figure 1: Number of TOP facilities designated and functioning by province

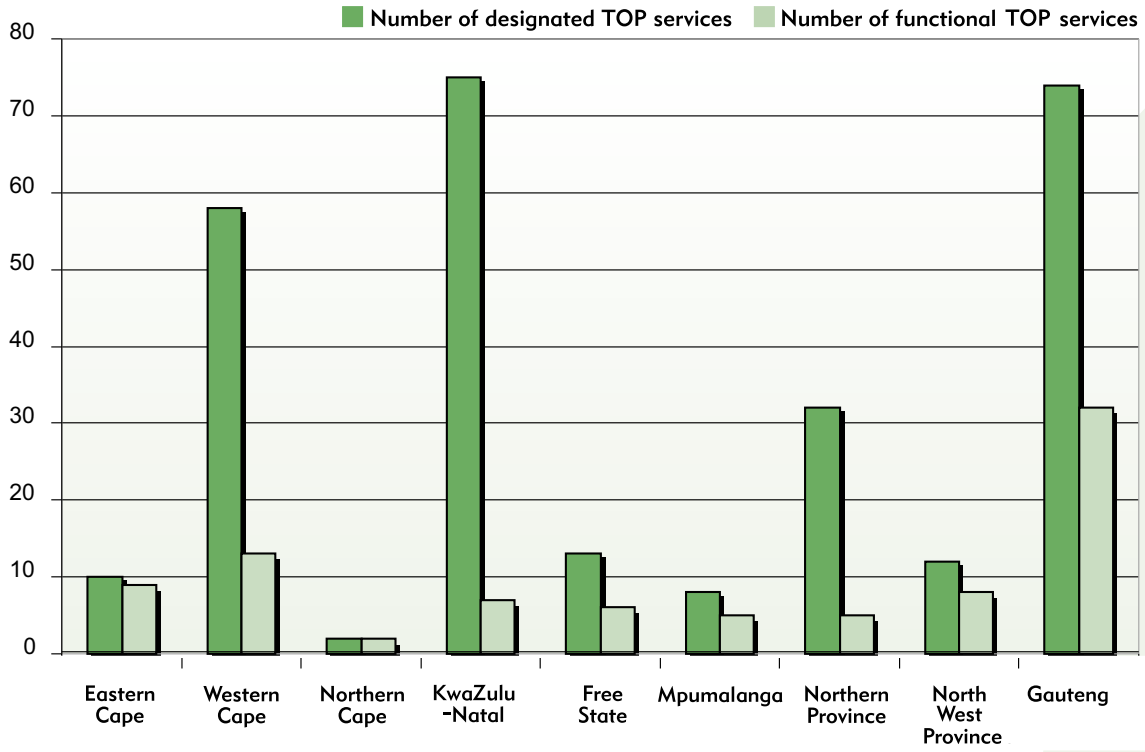


Figure 2: Distribution of health facilities undertaking Termination of Pregnancies (TOPs) in South Africa for the first trimester

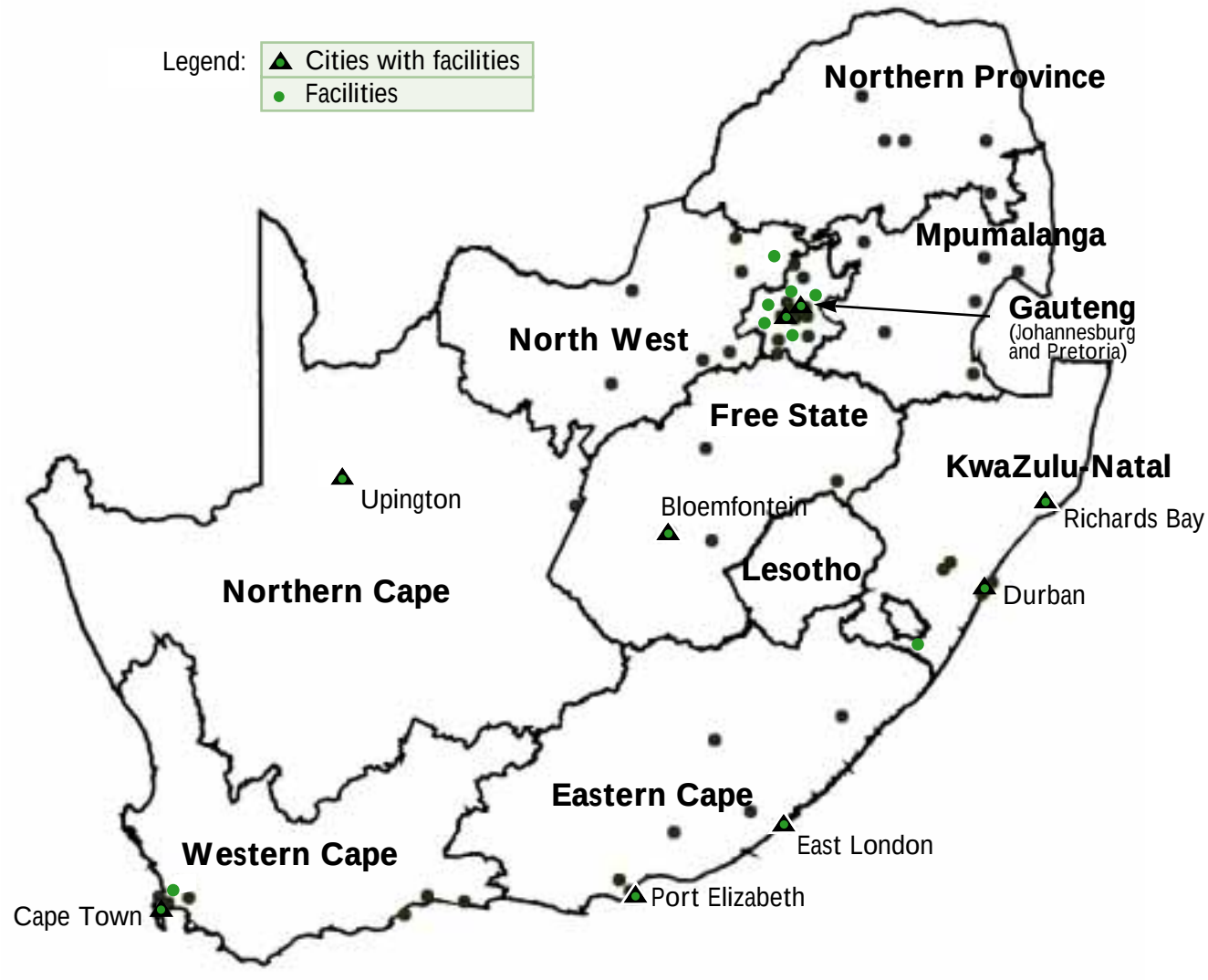


Figure 3: Distribution of health facilities undertaking Termination of Pregnancies (TOPs) in South Africa for the second trimester

Section 1

Access to TOP services

A further indicator of access to TOP services is the number of women in a reproductive age group living near a TOP service facility. This is based on the assumption that if you live near to a health facility you have access to the services offered and does not take into account transport routes. There is no convention for the maximum distance from a TOP service which is necessary to ensure access, so the proportion of the population living within 50km and 100km was considered. Tables 2 and 3 show, by province, the number of women of reproductive age who lived within 0 – 50km and 50 – 100km of TOP services providing first and second trimester TOPs. The tables also show the percentages of women of reproductive age who did not live within at least 50km and 100 km of a TOP service.

Access to first trimester TOP services was generally much better than access to second trimester TOP services. More women in all provinces lived within at least 50 and 100km of a facility offering first trimester TOP services than those offering second trimester TOP services.

Gauteng province clearly offered the best access to first trimester TOP services, with only 0.3% of women not living with 50 km distance of a first trimester facility. The Western Cape also offered reasonably good access with only 16.8% of women not living within 50km of a first trimester TOP service. In some provinces over a quarter of the women of the reproductive age group did not live within 50km of a TOP service, North West (27.2%), Mpumalanga (28.4%), and the Free State (28.5%). In KwaZulu-Natal and the Eastern Cape, over 40% of women did not live within 50km of a service (40.6% and 41.1% respectively). More than half of the women of reproductive age in the Northern Cape and Northern Province did not live within 50km of a TOP service (56.8% and 62.8% respectively).

Most women in all the provinces lived within at least 100km of a facility offering first trimester TOP services. All women in Gauteng province lived within at least 100 km of a first trimester TOP service. In the other provinces, except Northern Cape (38.5%), Northern Province (17.8%), and Kwa Zulu-Natal (16.0%), less than 10% of women lived further than 100km from a first trimester TOP service.

Access to second trimester TOP services was more limited than access to first trimester services. Gauteng province again offered the best access to services with only 1.6% of women not living within 50km of a second trimester TOP service. In the Western Cape 17.3% of women did not live within 50km of a second trimester service. In the other provinces between 29.2% and 71.1% of women in their reproductive years did not live within 50km of a second trimester service. In provinces such as the North West (61.9%) and the Northern Cape (71.1%) two thirds of women lived more than 50km from a second trimester TOP service.

Even though more women in all the provinces lived within 100km of a facility offering second trimester TOP services, access was still very restricted. Four provinces had a high proportion of their population living within 100km of a functioning second trimester TOP service. These were Gauteng (all women), Mpumalanga (98.9%), Free State (95.1%), and Western Cape (91.4%). In the other provinces, between 16.5 and 63.1% did not live within 100km of a second trimester TOP service.

Table 2: Access to facilities for the first trimester TOPs
(number of women living in each province within 0 – 50km and 50 – 100km of a facility providing first trimester TOPs and proportion who do not)

Province	Total 16-50 yr old females	Within 0-50km	% Not within 0-50km	Within 50-100km	% Not within 0-100km
Eastern Cape	1 541 476	906 878	41.1	514 866	7.6
Free State	702 486	502 283	28.5	167 717	4.6
KwaZulu-Natal	2 237 265	1 329 378	40.6	550 566	16.0
Gauteng	2 097 147	2 090 263	0.3	7 121	0
Mpumalanga	718 689	515 032	28.4	203 046	0.1
Northern Cape	215 261	92 982	56.8	39 422	38.5
Northern Province	1 182 998	440628	62.8	531 889	17.8
North West	866 619	631 209	27.2	207 729	3.2
Western Cape	1 102 618	917 714	16.8	91 566	8.5

Table 3: Access to facilities for the second trimester TOPs
(number of women living in each province within 0 – 50km and 50 – 100km of a facility providing second trimester TOPs and proportion who do not)

Province	Total 16-50 yr old females	Within 0-50km	% Not within 0-50km	Within 50-100km	% Not within 0-100km
Eastern Cape	1 541 476	800 435	48.1	486 905	16.5
Free State	702 486	489 090	30.4	179 241	4.9
KwaZulu-Natal	2 237 265	1 253 111	44.0	545 829	19.6
Gauteng	2 097 147	2 064 309	1.6	33 075	0
Mpumalanga	718 689	508 503	29.2	209575	1.1
Northern Cape	215 261	62 306	71.1	17 332	63.1
Northern Province	1 182 998	435 933	43.2	526 183	18.7
North West	866 619	330 304	61.9	244 066	33.2
Western Cape	1 102 618	911 991	17.3	96 354	8.6

Figure 4 shows the mean number of all terminations. early and late, per month in each province. The average number of terminations of pregnancy per month for the three-month study period nationwide was calculated to be 3 997; the majority (77.8%) were early terminations.

The results show that Gauteng was performing the majority (48.5%) of terminations in the country. Gauteng province performed an average of 1 939 terminations per month. Northern Cape province was performing the least number of terminations, contributing to only 1.2% of the number of monthly terminations. Northern Cape province only performed an average of 48 terminations per month. First trimester terminations constituted at least 75% of the terminations done in most provinces. The main exceptions were the Northern Province (48.1%), and the Northern Cape (50%).

Figure 4: Mean number of TOPs performed in each province per month

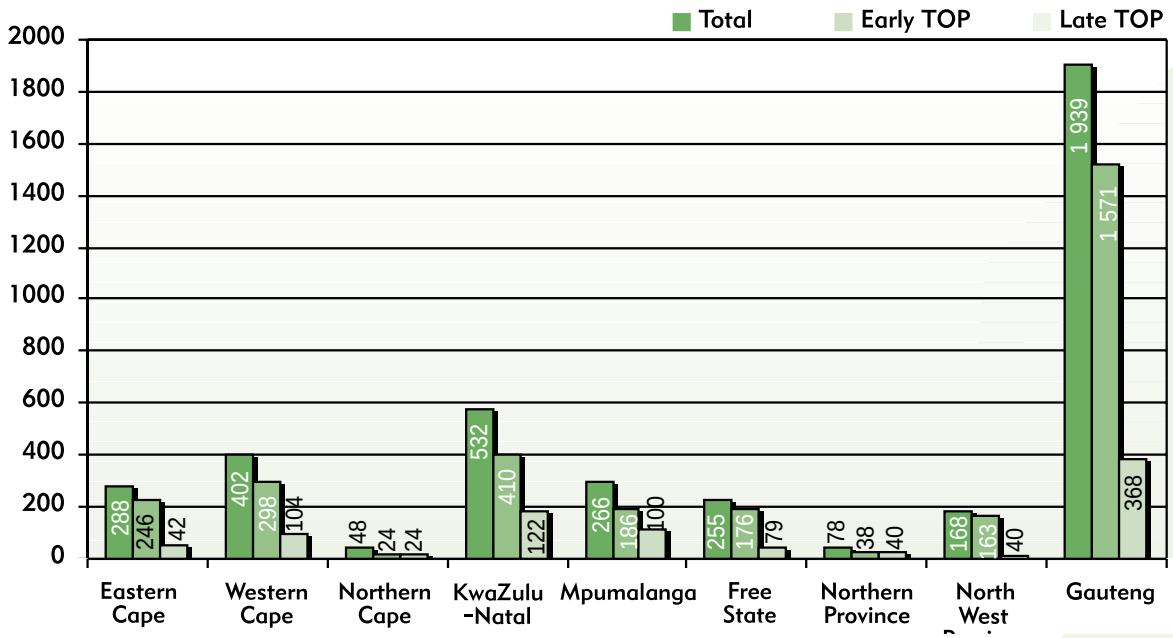
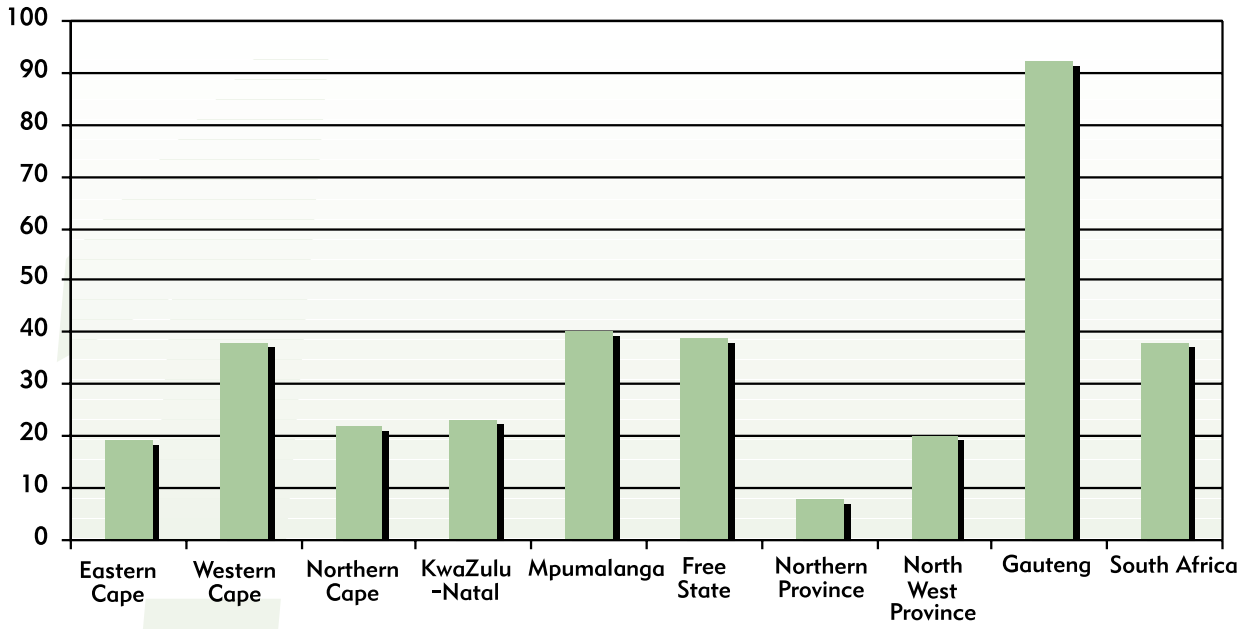


Figure 5 shows the number of terminations of pregnancy performed on average in a month per 100 000 women aged 16 – 50 years in each province. When compared to population, activity in Gauteng is seen to be well above average (92.5 per 100 000 women) and that in the Northern Province to be by a long way the lowest (6.6 per 100 000 women). The other provinces cluster in two groups of very similar activity level, Mpumalanga (39.5 per 100 000 women), Western Cape (36.5 per 100 000 women) and the Free State (36.3 per 100 000 women) performing relatively better and KwaZulu-Natal (23.8 per 100 000 women), the Northern Cape (22.3 per 100 000 women), North West (19.1 per 100 000 women) and the Eastern Cape (18.7 per 100 000 women) performing much less well.

Figure 5: Number of TOPs performed on average in a month per 100 000 women aged 16 – 50 years in each province



Client waiting times for TOP services

Most facilities (80%) had waiting times of less than seven days for early TOPs. Even for late TOPs, most services (75.9%) had a waiting time of less than seven days. Even though most facilities had standard waiting times, many facilities said that the waiting time was even shorter if the woman was nearer the end of the first trimester, and several would do the same day or next day procedures for women who had traveled long distances. Two hospitals indicated that a notion of 'merit' was used in determining whether women were eligible for second trimester terminations. The system of 'merit' was not based on the stipulations of the act and was applied subjectively by the providers. This is contrary to the stipulations of the Act.

The facilities with the longer waiting times were all in Gauteng, the Western Cape, and KwaZulu-Natal. The longest waiting times were found in Gauteng for women in the second trimester, where 50% of facilities providing second trimester TOPs had waiting times of over seven days for late TOPs, and 20% had waiting times of over 14 days. In KwaZulu-Natal 17% of facilities had waiting times of longer than seven days for second trimester TOPs. In thirty per cent of facilities in Gauteng and Western Cape, and 14% in KwaZulu-Natal facilities the waiting time was over 14 days. The functioning private sector facilities in all provinces offered the same day service.

Section 1

Provincial picture

Eastern Cape

The Eastern Cape had 11 designated services of which 10 (91%) were functional. There was one private designated service, which was functional. On average 288 terminations were performed per month, of which the majority (85.4%) were early terminations and the remainder were late. The private hospital provided a same day service for both early and late terminations. The public sector had an average waiting time of one to seven days, regardless of the gestation of the pregnancy. The province was among the bottom three provinces based on the number of designated services, but had the third largest number of functioning services. Unfortunately, this was insufficient to provide reasonable access to care and it again ranked among the bottom three provinces when judged on the proportion of the population not living within 50km of a service and the number of TOPs performed per 100 000 women.

Free State

The province had nine designated services of which five (56%) were functional. There was one private designated service, which was functional. On average 255 terminations were performed each month. The majority (69%) of these were early terminations. The private sector hospital performed early terminations only. In the public sector waiting times ranged from one to seven days due to early terminations being performed once weekly in four of the five services. Late terminations were usually done almost immediately. The private sector hospital offered a same day service. The province ranked among the bottom three based on numbers of designated and of functioning facilities. However, geographical access was somewhat better, and it ranked five and four respectively for the proportion of women living within 50km of a first and second trimester service. Overall it ranked fourth on the number of TOPs performed per 100 000 women.

KwaZulu-Natal

There were 66 designated services of which only eight (12%) were functional. Fourteen private facilities had been designated of which two were functional. On average 532 terminations were performed per month, the majority (77.1%) of these being early terminations. The private sector performed both early and late terminations. The waiting times in the public sector ranged from one to seven days for early terminations, and one to 15 days for late terminations. The private sector offered a same day service for both early and late terminations. The province ranked second on the number of designated facilities, but only fifth on the number functioning. The proportion of designated facilities which were functioning was the smallest of any province. It ranked sixth on distance from facilities and fifth on the number of TOPs per 100 000 women. It was part of the group of more poorly performing provinces when judged against this indicator of activity per population.

Gauteng

Gauteng had 75 designated services, 33 (44%) of which were functional. Gauteng had 15 designated private sector facilities and all of these provided TOP services. An average of 1 939 terminations were performed per month in Gauteng. The majority (81%) of the total number of terminations were early terminations. The private sector performed both early and late terminations, and contributed 21% of the early terminations and 58% of the late terminations performed. The private sector offered a same day service for TOPs. The waiting times in the public sector ranged from one to seven days for early terminations, and one to four weeks for late terminations. In performance Gauteng was top of the league of provinces for all important indicators of termination of pregnancy services. However, waiting times were a persisting concern.

Mpumalanga

There were 22 designated services of which six (27%) were functional. No private sector facilities had been designated or provided TOP services in this province. On average 286 terminations were performed per month, of which 65% were early

terminations and 35% late terminations. The waiting times ranged from a same day service to two weeks, depending on staff availability. Mpumalanga ranked fifth when judged on the number of designated services and sixth on the number functioning. It was fourth when judged against the proportion of women living between 0-50km of a first trimester facility and third for second trimester access. It had the second highest number of terminations performed per month per 100 000 women.

Northern Cape

This province had only two designated services, both of which were functional. There was no designated private facility in this province. On average there were only 48 terminations of pregnancy performed per month, of which half (50%) were early, and the other half were late terminations. At one service there was a same day service for early terminations, and a four-day waiting time for late terminations. At the other service there was a three to four day waiting time for both early and late terminations. The Northern Cape had the fewest designated and functioning facilities of any province. Geographical access for first trimester TOPs was the second worst of any province and for second trimester Northern Cape was the worst. However, when compared to the province's population, its TOP activity was not the lowest – in fact it ranked sixth.

Northern Province

There were 36 designated services of which five (14%) were functional. There was no designated private sector facility in this province. On average 78 terminations were performed per month, of which 48.7% were early terminations. The waiting times ranged from one to four days for early, and one to seven days for late terminations. This province ranked fourth based on the number of designated services, but was second to bottom on the number functioning. It had the poorest geographical access of any province to first trimester terminations but ranked fifth on access to second trimester ones. When comparing activity to the province's fairly large population, this province had by far the lowest level of termination of pregnancy activity.

North West

There were twelve designated services, of which nine (75%) were functional. The province had designated three private facilities and two of these were functional. On average 168 terminations were performed per month, and the majority of these (97%) were early terminations. The private sector only performed early terminations. The waiting times ranged from one to seven days in the public sector. All the facilities had set days for terminations to be done. The private sector offered a same day service. This province ranked sixth on the number of designated facilities and fifth on the number functioning. Geographical access to first trimester facilities was relatively good with a rank of three, but second trimester access was much poorer and the province was the second worst in this regard. Overall its position was seventh on activity per 100 000 women.

Western Cape

The province had 59 designated services, 14 (24%) of which were functional. There were 25 designated private facilities and four of these were functional. An average of 402 terminations were performed each month, of which 74.1% were early terminations. The private sector performed on average 135 early terminations per month; this contributed to 46% of all the early terminations done in the province. The private sector in this province did not perform late terminations. The waiting times in the public sector ranged from one to 14 days. The majority of the services had waiting times of one to seven days, and only two services had longer waiting times. All of the services had set days of the week on which terminations were performed, with the proviso that any urgent requests for termination were performed almost immediately. There was no waiting time for terminations in the private sector in this province. It ranked third on number of designated facilities, but second on number functioning. It had the second best access for first and second trimester terminations and ranked third on termination activity per 100 000 women.

Discussion

This study shows that considerable progress was made in the first couple of years after the enactment of the new Choice on Termination of Pregnancy Act in establishing services. However geographical distribution of services was still very unequal and for people living outside the largest urban centres, access was still very restricted. Women in Gauteng and the Western Cape had far greater access to TOP services than any of the other provinces.

The fact that only 32% of designated facilities were actually providing services indicates that there are many facilities with the potential for providing termination of pregnancy that do not do so. Furthermore, the very substantial inter-provincial differences in the number of designated services points to different approaches to the designation of services. This raises the likelihood that the number of facilities with the potential for providing TOP services nationwide that are not doing so is very much higher than suggested by the current figure for designated services. Having said this, this study has shown that the proportion of designated facilities that are functioning is not a very helpful indicator of TOP service provision in provinces and attention should rather be focused on geographical access and the ratio of terminations to women in the reproductive years.

The report highlights the important role of the private sector in TOP service provision but also the substantial geographical limitations on this service. In Gauteng (the province that performs the majority of TOPs) nearly half (45%) of functioning services are private facilities. In a few other provinces, such as the Western Cape (29%), KwaZulu-Natal (25%) and North West (22%), the private sector provides over one fifth of all TOP services. However, most provinces only have one or two facilities actually providing private sector services. The private sector also plays an important role in increasing access to second trimester termination – apart from in the Western Cape.

It is a problem and also surprising that there is no private service provision in many provinces and that where private provision is found it is mostly restricted to so few facilities. This may reflect conservatism in designating private hospitals, but also a failure to engage GPs in providing abortion care. All the designated facilities

in 1999 were hospitals; in no province were GPs in the private sector contributing formally to TOP service provision. This is an important weakness of services in view of the broad geographical distribution of GPs and the evidence from the study of illegal abortion in Gauteng (and anecdotes from elsewhere) that there is considerable willingness among GPs to be involved with TOPs – as they are currently assisting TOPs through prescription of misoprostol. It suggests that developing a legal, safe and meaningful role for GPs in abortion services should be a priority as part of extending access.

Mapping TOP services using geographical information system (GIS) technology very clearly illustrates the large parts of the country with no TOP service provision. This is also shown by the calculations of the proportion of the population who do not live within 50 or 100km of a service. This latter approach serves to highlight problems in access and inequality between provinces, but in the process of doing this it provides a conservative estimate of access problems. This is because it does not take into account actual travel routes to facilities or available modes of travel, both of which mean that actual travelling times and difficulties can be much more substantial than indicated merely by distance. Nonetheless the proportion of the population living within a certain distance of a facility is an indicator of service provision, which can be monitored. The Department of Health should consider agreeing targets for this with provinces and monitoring achievement of these targets annually using GIS technology.

Gauteng is the only province that performs a number of terminations which is quite disproportional to the percentage of women living in the province. Nineteen per cent of women aged 15 to 49 live in Gauteng, and yet Gauteng is performing 49% of all terminations nationwide. However, the data on waiting times suggests that the population of Gauteng is still receiving a sub-optimal service, undoubtedly because people are travelling from underserved neighbouring provinces for TOPs. This places strain on Gauteng services as well as being expensive and difficult for the women involved, and points to the need to improve services in neighbouring provinces. The chart of TOP activity per 100 000 women indicates that there are four provinces with activity commensurate with their female populations. These are Gauteng, Mpumalanga, the Western Cape and the Free State. The services in

the other provinces need to be improved and this indicator of TOP service provision needs to be monitored on a regular basis.

Each province should consider what the main local barriers are to provision of equitable TOP services. In some provinces the priority may be to increase the absolute number of services functioning, whereas in others it may be more important to increase the number of terminations performed by each service. In some services the barriers to provision may be staff and resources, whereas in others it may be the will of staff – either from frontline workers or management. In this case, provision of in-service training in the form of values clarification sessions and directives from the department may be necessary interventions. Each province needs to investigate the problems with its own services and develop appropriate solutions.

The findings on service waiting time, when taken at face value, suggest that in most provinces there is little unmet need for TOP services – otherwise this would be reflected in long waiting periods. This conclusion would be false. The unmet need for services is reflected in the significant proportion of women who are continuing to use illegal or self-induced methods (as shown in the survey of why women are illegally aborting). It is also clearly indicated by the fact that women in Gauteng are either having a lot of terminations or that many users of their services are not from this province. There is anecdotal information that waiting lists are only operated by most services over a period of 1 or 2 weeks. If the service spaces are all full then women are turned away rather than placed on a waiting list. This means that waiting lists are a poor indicator of unmet needs for terminations and should be interpreted with caution. Demand for services should be expected to increase if new services can be provided in underserved areas and if information campaigns around abortion rights are conducted, providing sufficiently high quality of care can be provided so that women are not put off from using the services for fear of the staff.

Conclusions

This survey has shown that passing the Choice on Termination of Pregnancy Act has resulted in considerable activity in establishing TOP services, but that access after two years remains highly unequal. More efforts need to be made to provide services to women in rural areas. Training of midwifes and GPs to provide TOP services needs to be intensified and more services need to be opened up at the primary care level.

Key recommendations:

From the findings of this study it is recommended that:

1. Norms for service provision for first and second trimester termination of pregnancy should be set for each province. These should include the number of services according to the proportion of the female population of reproductive age who live within a certain distance of a service, and the capacity of services (measured by the average number of TOPs performed per month per 100 000 women).
2. There should be annual monitoring of the progress of each province in reaching the norms for TOP service provision.
3. Plans should be developed to enhance provision for TOPs at primary care level in both private and public sector facilities. This should include training midwives and GPs.
4. Provinces should develop plans for improving services based on an understanding of local circumstances and barriers to more widespread service provision.

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Section 2

Epidemiology of Incomplete Abortions

Executive Summary – Section 2

Epidemiology of incomplete abortions

Introduction

The 1997 Choice on Termination of Pregnancy Act (CTOP) of South Africa is one of the most liberal examples of abortion legislation in the world. The Act reflects both a desire to empower women in the country generally, and a recognition that backstreet abortion has been widespread and causes significant mortality and morbidity. The passage of the legislation through Parliament and the shape of debates in the popular media were significantly influenced by the findings of a national study of the epidemiology of incomplete abortion that was undertaken in 1994. This study provided a description of the magnitude of the problem of unsafe abortion in the country. With certain modifications, the study broadly followed the methodology developed for a World Health Organisation multi-country study of unsafe abortion. It showed that approximately 45 000 incomplete abortions were admitted to public hospitals each year, and that 34% of these were unsafe abortions.

The Epidemiology of Incomplete Abortions Study reviewed the profile and medical condition of women being admitted to hospitals with incomplete abortions as a means of identifying women who had associated morbidity and therefore probably had an illegal or unsafe abortion. This report presents the findings, and draws comparisons where possible with the data from the 1994 National Incomplete Abortion Study.

Objectives

The aim of the study was to describe the epidemiology and hospital management of incomplete abortions (spontaneous and induced) within the public sector.

Methods

The design was a national multi-centre, prospective, descriptive study. Forty-seven public hospitals were sampled. Included in the sampling frame were all the public hospitals responsible for treating women with gynaecological problems in 2000 in the nine provinces of South Africa. The sample design was a stratified random one with stratification by province and hospital category (district, regional, tertiary).

Executive Summary – Section 2

The study subjects were all women of gestation under 22 weeks who presented with incomplete abortions during three weeks of data collection in 2000. The main outcome measures were the incidence of, morbidity associated with, and hospital management of incomplete abortion cases.

Results

The incidence of incomplete abortions was 380 per 100 000 women. The difference in the incidence rate (375 in 1994, 362 in 2000) and rate per 1 000 live births (42 in 1994, 44 in 2000) was not statistically significant between 1994 and 2000.

Clinical findings on admission

The number of patients with high morbidity had almost halved in 2000 (9.7% in 2000 compared to 16.5% in 1994). In total, just over a quarter (27.6%) of patients were in the medium or high morbidity categories.

Most of the cases in 2000 (90.1%) had no signs of infection on admission, significantly more than in 1994 (79.5%). Patients from Gauteng (21.1%), Northern Province (13.6%), North West Province (12.3%), and the Free State (17.8%) were much more likely to have offensive products per vagina than those from other provinces. Women over 30 years were significantly more likely to have offensive products than younger women. There was a significant reduction in the proportion of cases with genital injuries (0.6% in 2000 compared to 3.2 % in 1994). In 2000, in 0.4% of the cases Misoprostol was found in the vagina with no evidence of any other foreign body. This compares with 1.1% cases in 1994, in which a foreign body was found in the vagina.

Overall, there was a modest reduction in the proportion of cases in the second trimester (32.9% in 2000, 39.5% in 1994), but a substantial reduction in some provinces, eg Western Cape.

Hospital management of incomplete abortions

There was a significant increase in the use of manual vacuum aspiration for uterine

evacuation (from 1.5% in 1994 to 14.8% in 2000) and a reduction in the use of general anaesthetic (from 70.1% to 54.2%). This change in management was mostly in tertiary hospitals, and least visible in district hospitals.

The pattern of blood transfusion is, as might be expected, that women of higher severity and lower haemoglobin are likely to be transfused. The 1994 study highlighted some inappropriate use of blood transfusion. It is interesting to note that the proportion transfused decreased (from 13.4% in 1994 to 8.3% in 2000), although the difference is not statistically significant.

There has been a reduction in the proportion transfused at each haemoglobin level, with the most substantial shift being away from transfusion at a Hb of above 6.5. In 1994, 79.7% of women with Hb 6.6 – 8.5 were transfused, compared with 36.5% in 2000. Given concerns about transmission of blood-borne diseases, this shift to greater caution is welcome.

When compared with antibiotic use in 1994, there has been a non-significant reduction in the proportion of women given antibiotics. In 1994 it was found that roughly half of the women in both trimester categories were given antibiotics, whereas in 2000 the proportion of first trimester cases being given antibiotics was much lower (29.8%). When compared with the severity category, the pattern of use of antibiotics appears to be much less rational and suggests substantial underuse for medium (44.5%) and high (48%) severity cases. Furthermore, there is substantial use (15%) of expensive intravenous antibiotics for cases with no evidence of infection, ie in the low severity category. This is unnecessary and not cost-effective. If it is hospital policy to give antibiotics prior to evacuation, oral antibiotics should suffice. In 1994 concern was expressed that 15% of women with indicators of severe sepsis (high severity) received no antibiotics. In 2000 this proportion (52.1%) is even higher.

Conclusions

The Epidemiology of Incomplete Abortions Study has demonstrated an immediate impact of legislative reform in reducing morbidity from unsafe abortions. The modest size of the effect undoubtedly reflects the inadequacy of services in many

areas (as shown in the Survey of TOP Services Study) as well as a need for greater public education efforts around abortion rights. The findings on evacuation overall indicate a reduction in backstreet abortions.

The proportion of women receiving blood transfusions has reduced, while the use of antibiotics needs to be investigated.

The manual vacuum aspiration technology which has been introduced and promoted for legal terminations is being successfully introduced in the management of incomplete abortions, but mostly only in tertiary hospitals. The manual vacuum needs to be used in district hospitals and introduced in the medical school curriculum.

Key recommendations

From the findings of this study it is recommended that:

1. Further efforts need to be made to meet the current unmet need for legal terminations by improving accessibility of services through enhanced service provision in under-served areas. Second trimester abortion services in particular need to be strengthened.
2. Further efforts need to be made to meet the current unmet need for legal terminations by public information campaigns on abortion rights. These should target women of all ages, with particular emphasis on women over 30 years.
3. The trimester status of women having terminations of pregnancy be should monitored and research undertaken to better understand the determinants of second trimester incomplete abortions and reasons for inter-provincial and inter-hospital category differences.
4. Training in the use of manual vacuum aspiration must be introduced in all medical schools for management of incomplete abortion.
5. The barrier to use of manual vacuum aspiration in district hospitals must be investigated and either training or equipment be provided, as appropriate.
6. The use of antibiotics for the management of incomplete abortions needs to be investigated and clinical protocols need to be reviewed. Training in the rational use of antibiotics needs to be provided as appropriate, and drug supply ensured.

SECTION 2

Epidemiology of incomplete abortions

Aim and objectives

The aim of the study was to describe the epidemiology and hospital management of incomplete abortions (spontaneous and induced) within the public sector.

The specific objectives were:

1. To estimate the demographic profile of women having incomplete abortions in public sector hospitals.
2. To estimate the number of women with incomplete abortions who are admitted to public sector hospitals.
3. To estimate the rates of medical complications in women having incomplete abortions in public sector hospitals.
4. To estimate the number of women admitted to public sector hospitals who were assessed to have had an unsafe abortion procedure.
5. To determine the management of incomplete abortions in different hospital settings and provinces.
6. To compare the proportion of women admitted to public sector hospitals with abortion-related morbidity and mortality with the 1994 Incomplete Abortion Study.

Methodology

This hospital-based study collected descriptive data prospectively on all women presenting to selected public hospitals in South Africa with incomplete abortions under 22 weeks gestation. All the public hospitals in the nine provinces of South Africa responsible for treating women with gynaecological problems in 2000 were included in the sampling frame. The sample design was a stratified random one with stratification by province and hospital category (district, regional, tertiary). Within each stratum two hospitals were selected, with the sampling probability proportional to size. The total sample was 47 hospitals (five of the provinces had one or no hospital in the tertiary stratum): six each from Gauteng, Western Cape, Eastern

Cape and KwaZulu-Natal; five from Mpumalanga, Northern Province and Free State, and four hospitals from Northern Cape and North West province. A list of all the health services that participated in the project appears in Appendix 1. Data was collected from the hospitals over three consecutive weeks between April and August 2000. Women admitted with threatened abortions or with legal abortions were excluded from the study.

Ethics approval for the project was obtained initially from the Committee for Research on Human Subjects (Medical) of the University of the Witwatersrand. Once this approval had been granted, additional ethics approval was obtained from each of the nine provinces, and from the universities of Cape Town, Stellenbosch, Free State and Pretoria. After this, each health service was contacted and a key person identified who would assist with the data collection for the project. The key person was a clinician working in the gynaecology department, either a doctor or midwife. The researcher (a specialist obstetrician and gynaecologist) visited each health service and personally discussed the project with the clinician who had agreed to assist in the project, to ensure maximum participation in the project and hence better data collection.

Data collection

Data was collected over a three-week period at each hospital. Due to the process of obtaining ethics approval in each province and at the academic institutions, the data collection in all the provinces was staggered over five months. Data collection began in the Free State province on 17 April 2000, and ended in the Eastern Cape on 27 August 2000.

Data was collected by the clinician responsible for the study at each hospital by completing a data collection form (see Appendix 2) for each woman admitted with a diagnosis of incomplete, complete, missed or inevitable abortion during the study period. All women with a pregnancy greater than 22 weeks gestation, cases of ectopic pregnancy, and cases of threatened abortion were excluded from the study.

The data collection form was completed at the time of discharge of the patient using the patient's case notes. Information included the following:

1. Demographic data
2. Clinical signs and symptoms at admission, particularly evidence of sepsis
3. Medical management, particularly use of oxytocic agents and antibiotics
4. Surgical management, particularly method of evacuation of the products of conception
5. Anaesthetic management
6. Use of blood products
7. Complications
8. Evidence of the use of misoprostol from either the patient's history or from clinical findings
9. Final outcome

At the end of the three-week data collection period at each participating hospital, the facility was visited by the researcher or a research assistant. The admission records for the study period were checked by the researcher to ensure that for each case of incomplete abortion admitted during the study period, a data collection form had been completed. In cases where no data collection form had been completed, every attempt was made to find the missing information and complete a data collection form. This methodology was to ensure complete collection of data for the study period. Data could not be collected on five cases due to missing files (0.7% of the total).

Data analysis

Three clinical severity categories were used to analyse and interpret data. These were the same categories as those used for the 1994 study and had been developed by a reference group of gynaecologists. The categories and their definitions are:

Low severity

- a temperature below 37.3^{0}C, and
- no signs of infection, and
- no system or organ failure, and
- no suspicious findings on evacuation

Medium severity

- a temperature of 37.3 – 37.9^{0}C, and/or
- any sign of mild infection on admission (a tender uterus, offensive discharge or localised peritonitis).

High severity:

- a temperature of 38.0^{0}C or above, or
- pulse of 120 or above, or
- any sign of interference with the pregnancy, or
- any sign of organ failure or peritonitis or death

The strengths and limitations of these categories are discussed in detail elsewhere (Jewkes et al 1997). Where appropriate, calculations are based on population estimates for 1999 of 13 478 000 women aged 12 – 49 years, and 1 106 000 live births. The data was analysed using Stata 6 which takes into account the sampling

design. The data was compared with the findings of the previous study (Rees et al 1997), presented here with adjustment for weights. Statistical tests of significance have been carried out by merging the two data sets.

The main differences in methods between the 1994 and 2000 studies were in the duration of data collection and sampling of hospitals. In the former study, data was collected over two weeks and the sample included all hospitals over 500 beds in the country and a random sample of hospitals under 500 beds. There were 61 hospitals in the sample and 56 participated in the study.

The main differences in methodology between the two studies are summarised below:

Table 1: Comparison of 1994 and 2000 incomplete abortion research methodologies

	1994	2000
Sampling design	Stratified random sampling Stratified by number of hospital beds. Hospitals with > 500 beds, and those with < 500 beds.	Stratified random sampling Stratified by province, level of care (tertiary, regional, district)
Selection of hospitals	All hospitals with > 500 beds and a random sample of hospitals with < 500 beds	Hospitals in all nine provinces Two hospitals selected per level of care – tertiary, regional, or district
Sample size	61	47
Hospital response rate	92% – 56 hospitals participated in the study	100%
Duration of data collection	Two weeks in each hospital	Three weeks in each hospital

Section 2

Results

The response rate was 100% of hospitals sampled, although three had no cases of incomplete abortion. A total of 761 data capture sheets were returned from the 47 hospitals, three of these had no cases of incomplete abortion (either spontaneous miscarriages or illegally induced) during the study period.

Rates of Incomplete Abortion

Table 2 shows the number of women presenting with incomplete abortion to South Africa's public hospitals, the incidence of incomplete abortion and rate of incomplete abortions per 1 000 live births. These figures are compared with those from 1994.[2] No statistical test of significance has been carried out to compare the total number of incomplete abortions in 1994 and 2000 (nor to compare the rates). The use of different methodologies in the two years makes a formal test difficult to perform. However, from the large overlap in the confidence intervals we can conclude that the differences between the two years is not statistically significant.

Table 2: Rates of incomplete abortions: comparison of results of the 1994 and 2000 studies

Estimate (with 95% confidence limits)	1994 (n=803)	2000 (n=761)
Number of women per year admitted nationally to public hospitals with incomplete abortions (ICA)	44 686 (35 633 – 53 709)	49 653 (38 742 – 60 563)
Incidence of ICA per 100 000 women aged 12-49	375 (299 – 451)	362 (282 – 441)
ICA rate per 1 000 live births	42 (33 – 50)	44 (34 – 54)

Denominators from population figures of the Actuarial Society of South Africa

Demographic characteristics of women and clinical findings on admission

Table 3 shows the demographic characteristics of the women admitted with incomplete abortion and the clinical findings on admission, comparing the two studies. Since the 2000 sample was not self-weighting, weighted percentages are given throughout and used for comparisons. The actual numbers in each category are not given as these would not be meaningful in the cases of a non-self-weighting sample. The samples in 1994 and in 2000 were very similar in mean age, race groups and parity. Although not statistically significant, there was a modest reduction in the proportion of second trimester cases (39.5% in 1994, to 32.9% in 2000). In the 2000 study, a statistically significant increase in the proportion of cases with no signs of infection on admission is seen (79.5% to 90.1%) This is predominantly due to a reduction in cases with offensive discharge and a tender uterus. There was no change in the proportion with organ failure. Significant changes in findings on evacuation are shown. The proportion of women with evidence of interference has reduced significantly (4.5% to 0.6%), and those with offensive products on evacuation has also declined (12.6% to 9.4%). The severity categories provide a summary of the clinical picture and these show that the high severity group has decreased greatly (16.5% to 9.7%), with an increase in the low severity category (66.2% to 72.4%). These differences were not statistically significant. There was just one death, compared to three in the 1994 study. No woman admitted to having illegally induced her abortion, and only one had signs which indicated that she had definitely done so.

Table 3: Comparison of characteristics of women and clinical findings on admission between 1994 and 2000 studies

	1994 (n=803)	2000 (n=761)	p value
Mean age (SD)	27.8 (7.2)	27.0 (7.6)	0.213
Age range	14-49	13-48	–
Race	%	%	
African	86.1	83.4	0.5789
Coloured	10.6	14.4	
Indian	1.2	1.6	
White	2.1	0.6	
Parity			
Median	1	1	0.166
Range	0-8	0-11	
Interquartile range	1-2	0-2	
Trimester status	%	%	
12 weeks and under	60.5	67.1	0.4369
Over 12 weeks	39.5	32.9	
Signs of infection (not exclusive)			
None	79.5	90.1	0.0051
Offensive discharge	13.5	6.4	0.0041
Tender uterus	8.4	3.7	0.0794
Localised peritonitis	1.7	0.7	0.1863
Generalised peritonitis	0.1	0.1	0.8915
Septicaemic shock	0.3	0.2	0.6455
Tetanus	–	–	–
Signs of organ failure (not exclusive)			
None	95.6	97.1	0.4005
Disseminated intravascular coagulation	0.4	0.2	0.4440
(DIC)	0.1	0.2	0.5852
Respiratory distress	1.6	2.5	0.5754
Hypovolaemic shock	1.8	0.1	0.7808
Renal failure	–	0.2	–
Other			
Findings on evacuation			
Offensive products	12.6	9.4	0.2458
Mechanical or chemical injury to genitals	3.2	0.6	0.0020
Foreign body	1.3	0	0.0347
Evidence of misoprostol tablets	–	0.4	–
Severity categories			
Low	66.2	72.4	0.1059
Medium	17.3	17.9	
High	16.5	9.7	

Characteristics of women and clinical findings on admission by province

Table 4 shows provincial differences in the demographic characteristics of patients and clinical findings on admission in the 2000 study. Again the results are given in the form of weighted percentages to take into account the sampling design; the unweighted frequencies here could give misleading results.

The mean age of women presenting was similar in all provinces except the Eastern Cape and KwaZulu Natal where it was substantially younger. It is difficult to draw conclusions from inter-provincial differences in race of patients as this is influenced by many factors including provincial race breakdown, racial differences in patterns of public or private hospital use and the historical racial group served by sampled hospitals. The median parity of patients was very similar.

Very substantial differences in trimester status on admission are seen. In KwaZulu Natal, Mpumalanga and the Western Cape three quarters or more of patients were in the first trimester. In the Eastern Cape, Free State and Northern Cape the proportion was about 50% or less.

Whilst the great majority (90.1%) of patients had no signs of infection, the proportion with such signs was very much greater in the Eastern Cape (22.9%), than in the other provinces. The great majority (97.1%) of patients had no signs of organ failure, but there was a notable group (22.3%) in the North West province who were reported to have hypovolaemic shock. On evacuation, none of the patients were found to have foreign bodies in their vagina, cervix or uterus and only a small group (0.6%) had signs of mechanical or chemical injury which would have been indicative of home or back street interference in the pregnancy. A few patients (0.4%), mainly from the Free State (4.1%) and Northern Cape (2.4%) had evidence of having used misoprostol tablets. Patients from Gauteng (21.1%), the Northern Province (13.6%), North West (12.3%), and the Free State (17.8%), were much more likely to have offensive products than those from other provinces. Whilst in total just over a quarter of the patients were in the medium or high morbidity categories, the proportion was much higher in some provinces than others. Notable here are the North West with nearly half (45%) of all incomplete abortions in the medium or high severity category, followed by Gauteng (42%), the Free State (51.2%), and the Northern Province (31.3%).

Table 4: Characteristics of women and clinical findings on admission by province in 2000

Parameter	EC n=60	FS n=53	GP n=163	KZN n=130	MP n=72	NC n=16	NP n=73	NW n=62	WC n=132	TOTAL
Mean age	25.3	28.3	27.8	24.7	27.0	27.0	28.5	27.8	26.9	27.0
(SD)	(8.3)	(6.7)	(6.5)	(6.9)	(6.8)	(6.5)	(9.9)	(5.9)	(7.3)	(7.6)
Age range	15 - 42	16 - 48	16 - 45	14 - 45	13 - 45	20 - 37	14 - 48	18 - 42	16 - 46	13 - 48
Race	%	%	%	%	%	%	%	%	%	%
African	91.6	98.8	88.7	100	100	56.4	100	96.0	26.2	83.4
Coloured	8.4	0.6	2.9	0	0	43.6	0	0	70.6	14.4
Indian	0	0.6	6.6	0	0	0	0	2.0	2.0	1.6
White	0	0	1.8	0	0	0	0	2.0	1.2	0.6
Parity	1	1	1	1	1	1	1	1	1	1
Median range	0-4	0-6	0-10	0-11	0-8	0-3	0-9	0-6	0-10	0-11
Interquartile range	0-3	0-2	0-2	0-2	0-2	0-2	0-5	1-2	0-2	0-2
Trimester status	%	%	%	%	%	%	%	%	%	%
12 weeks & under	47.9	50.5	58.9	74.4	78.3	46.2	62.6	54.8	83.3	67.1
Over 12 weeks	52.1	49.5	41.1	25.6	21.7	53.8	37.4	45.2	16.7	32.9
Signs of infection	%	%	%	%	%	%	%	%	%	%
None	77.1	86.9	83.3	96.8	93.6	93.8	88.7	83.0	96.8	90.1
Offensive discharge	7.5	9.4	10.6	3.2	4.2	0	7.8	12.3	2.8	6.4
Tender uterus	22.5	0.6	9.1	0.6	0.5	0	0.2	10.1	0	3.7
Localised peritonitis	0	2.6	1.8	0.6	1.1	0	0	0	0.2	0.7
Generalised peritonitis	0	0	0	0	0	0	0	2.0	0	0.1
Septicaemic shock	0	0	0	0	0	6.2	0	2.0	0	0.2
Tetanus	–	–	–	–	–	–	–	–	–	–
Signs of organ failure	%	%	%	%	%	%	%	%	%	%
None	92.1	100	97.6	99.0	100	93.8	99.1	77.0	100	97.1
DIC	0	0	0.9	0.3	0	6.2	0	0	0	0.2
Respiratory distress	0	0	0	0.4	0	0	0	2.0	0	0.2
Hypovolaemic shock	7.9	0	0.9	1.0	0	6.2	0.3	22.3	0	2.5
Renal failure	0	0	0	0.3	0	6.2	0.2	0	0	0.1
Other	0	0	1.2	0	0	0	0.4	0	0	0.2
Findings on evacuation	%	%	%	%	%	%	%	%	%	%
Offensive products	0	17.8	21.1	4.2	4.7	6.2	13.16	12.3	3.0	9.4
Mechanical/chem injury	0	0	21.2	4.2	4.7	6.2	13.6	12.3	2.9	8.9
Foreign body	–	–	1.2	0.6	3.1	0	0	0	0.2	0.6
Evidence of misoprostol	0	4.1	0	0.3	0	2.4	0	0	0	0.4
Severity categories	%	%	%	%	%	%	%	%	%	%
Low	82.0	48.8	58.2	78.0	80.1	85.3	68.7	55.0	89.7	72.4
Medium	7.0	31.0	32.4	19.3	10.4	8.5	20.2	15.0	7.1	17.9
High	11.0	20.1	9.4	2.7	9.5	6.2	11.1	30.0	3.2	9.7

Characteristics of women and clinical findings on admission by hospital category

Table 5 shows the characteristics of women and clinical findings on admission by hospital category in the 2000 study. The mean age and parity of women presenting was similar for each category, but there were substantial racial differences with the proportion of African patients in district hospitals substantially higher (94.6%), and in regional hospitals substantially lower (69.9%) than the whole sample.

Tertiary hospitals were much more likely to see patients in the second trimester. There were no substantial differences between the patients seen in each category of hospital in signs of infection, signs of organ failure, findings on evacuation and severity category.

Table 5: Characteristics of women and clinical findings on admission by hospital category in the 2000 study

Parameter	Tertiary (n=313) %	Regional (n=335) %	District (n=113) %	Total (n=761) %
Mean age	27.3	27.9	26.8	27.0
(SD)	(6.5)	(7.2)	(8.2)	(7.6)
Age range	15-46	13-48	14-48	13-48
Race				
African	84.8	69.9	94.6	83.4
Coloured	11.6	26.0	5.4	14.4
Indian	1.9	3.2	0	1.6
White	1.7	1.0	0	0.6
Parity	1	1	1	1
Median range	0-10	0-11	0-9	0-11
Interquartile range	0-2	0-2	0-2	0-2
Trimester status				
12 weeks & under	58.2	65.4	71.8	67.1
Over 12 weeks	41.8	34.6	28.2	32.9
Signs of infection				
None	87.9	91.6	89.7	90.1
Offensive discharge	7.5	6.1	6.3	6.4
Tender uterus	4.6	3.3	3.8	3.7
Localised peritonitis	2.6	0.5	0.2	0.7
Generalised peritonitis	0	0.4	0	0.1
Septicaemic shock	0	0.5	0	0.2
Tetanus	0	0	0	0
Signs of organ failure				
None	97.4	95.3	98.6	97.1
DIC	1.1	0.2	0.0	0.2
Respiratory distress	0.4	0.4	0	0.2
Hypovolaemic shock	2.1	4.4	1.0	2.5
Renal failure	0.5	0.2	0	0.1
Other	0	0.2	0.4	0.2
Findings on evacuation				
Offensive products	7.1	10.0	9.7	9.4
Mechanical/chem injury	1.3	0.8	0.2	0.6
Foreign body	0	0	0	0
Evidence of misoprostol	0.3	0.1	0.7	0.4
Severity categories				
Low	68.0	71.9	74.4	72.4
Medium	21.8	18.2	16.3	17.9
High	10.2	9.9	9.3	9.7

Demographic characteristics and clinical findings on admission by age of women, 2000 study

Table 6 shows the demographic characteristics and clinical findings on admission by age of women in the 2000 study. The women have been divided into three groups to enable comparison with the findings of the previous study, these are up to 21 years, 21 – 30 years and over 30 years. The findings show an expected increase in parity with the increasing age of the women. There was no significant difference in racial group, trimester status, signs of infection on admission, or signs of organ failure by age. However there were very significant differences between the age groups in findings on evacuation and the proportion of cases in the low severity category. Women over thirty were much more likely to have offensive products and less likely to be in the low severity category.

Table 6: Demographic characteristics and clinical findings on admission by age of women, 2000 study

Parameter	Age<20 yrs (n=142) %	Age 21-30 (n=374) %	Age 31+ (n=244) %	Total (n=760*) %	p value** %
Race					
African	84.7	82.8	83.3	83.4	–
Coloured	14.0	14.8	14.1	14.4	
Indian	0.7	1.3	2.6	1.6	
White	0.6	1.2	0	0.6	
Parity	0	1	2	1	–
Median range	0-1	0-11	0-10	0-11	
Interquartile range	0-0	0-2	2-4	0-2	
Trimester status					
12 weeks & under	67.1	68.6	65.0	67.0	–
Over 12 weeks	32.9	31.4	35.0	33.0	
Signs of infection					
None	93.6	90.3	87.3	90.1	0.23
Offensive discharge	5.5	4.7	9.5	6.4	0.25
Tender uterus	2.3	3.9	4.6	3.7	0.53
Localised peritonitis	0.7	0.6	0.5	0.7	0.74
Generalised peritonitis	0	0.3	0	0.1	–
Septicaemic shock	0	0.5	0	0.2	–
Tetanus	0	0	0	0	
Signs of organ failure					
None	98.8	96.3	96.8	97.1	0.34
DIC	0	0.5	0	0.2	–
Respiratory distress	0	0.5	0	0.2	–
Hypovolaemic shock	1.2	3.2	2.6	2.5	0.41
Renal failure	0	0.3	0	0.1	–
Other	0	0.1	0.5	0.2	–
Findings on evacuation					
Offensive products	6.4	6.0	16.3	9.4	0.01
Mechanical/chem injury	0.8	0.5	0.7	0.6	–
Foreign body	0	0	0	0	–
Evidence of misoprostol	1.2	0.2	0	0.4	–
Severity categories					
Low	76.4	75.2	65.5	72.3	0.0087
Medium	15.0	11.8	28.5	18.4	–
High	8.6	13.0	6.0	9.7	–

* There was no age recorded for one woman. hence n=760

** P values have been calculated only when a difference was apparent which seemed as if it might have been statistically significant

Hospital management of incomplete abortions

Table 7 shows changes in hospital management of incomplete abortion. It shows a substantial shift towards use of simpler technology. The proportion receiving antibiotics has reduced substantially (43.6% in 1994 to 33.5% in 2000), and blood products (13.4% to 8.3%) although differences are not statistically significant. There has been a statistically significant change in uterine evacuation technology with an increase in the use of manual vacuum aspiration (1.5% in 1994 to 14.8% in 2000) and reduction in sharp curettage (from 97.5% in to 82.0%). The use of general anaesthesia has reduced (70.1% to 54.2% in 2000) and the use of sedation has markedly increased (23.7% to 33.8% in 2000). About a third (33.2%) of patients were given a medical abortifacient, with substantial use of misoprostol (19.9%) among those given an abortifacient.

Table 7: Changes in hospital management of incomplete abortion between 1994 and 2000

	1994 %	2000 %	p value
Antibiotics given	43.6	33.5	0.2384
Blood/blood products:	13.4	8.3	0.1
Packed cells	–	72.5	
Whole blood	–	27.5	
Evacuation of uterus	88.9	87.8	0.8179
Method of evacuation			
Sharp curettage	97.5	82.0	0.0045
Suction	–	2.5	
MVA	1.5	14.8	
Other/not specified	1.0	0.7	
Analgesia/anaesthesia used			
None	4.5	7.8	0.267
Local anaesthetic	1.1	3.9	
General	70.1	54.2	
Sedation anaesthetic	23.7	33.8	
Other	0.6	0.2	
Medical abortifacient used during treatment	–	33.2	–
Medical abortifacient			
Misoprostol	–	19.9	
Oxytocins	–	78.7	
Prostaglandins	–	1.1	
Other	–	0.3	

Table 8 shows the relationship between blood transfusion and haemoglobin level, trimester status and severity category. It shows that woman with lower haemoglobins were very much more likely to have a transfusion, however even at an Hb of less than 6,5 only two-thirds (64,7%) of women were transfused. Transfusion was more or likely in women in the second trimester but the difference between the proportion transfused in the two trimesters was not statistically significant.

Table 8: Relationship between blood transfusion and haemoglobin level, trimester status, and severity category, 2000 study

	% transfused	Test statistic Rao-Scott	P-value
Haemoglobin (g/dl)			
<6.5	64.7	F(2.6, 61.9) =106.11	<0.0001
6.6 – 8.5	36.5		
8.6 – 10.5	7.5		
>10.5	0.3		
Trimester status			
First (<12 wks)	5.8	F (1.24) =3.44	0.076
Second (13-21 wks)	13.0		
Severity status			
Low	4.4	F (1.3, 30.4) =10.80	0.0013
Medium	11.4		
High	32.1		

Table 9 shows the relationship between antibiotic usage, severity and trimester status. Antibiotic use was significantly more common (p = 0.015) in women in the second trimester. Use of intravenous antibiotics was more common in the second trimester cases. Use was not related to severity category. It is notable that 14% of patients in the lowest severity category received intravenous antibiotics and that over half of the patients in the moderate (55.5%) and severe (52.0%) categories received nothing.

Table 9: Relationship of antibiotic type and severity status and trimester status, 2000 study

	None	Oral	Intravenous	Suppository	Test statistic (Rao-Scott)
Trimester status					
First (<12 wks)	70.7	15.8	12.8	0.7	F (1.9.46.5)
Second (13-21 wks)	58.6	14.1	25.4	1.9	= 4.64
					P = 0.015
Severity status					
Low	71.8	13.1	14.7	0.4	F (2.9.70.7)
Medium	55.5	22.5	20.0	2.0	= 1.76
High	52.0	18.1	24.8	5.1	P = 0.16

Hospital management of incomplete abortion by province

In Table 10 the differences between the provinces are shown with regards to management of incomplete abortions (with the results given as weighted percentages). This shows substantial inter-provincial variations in the proportion of cases given antibiotics, from 10% in Mpumalanga (10.5%) and the Western Cape (11.7%) to nearly two-thirds in KwaZulu-Natal (64.2%) and the Eastern Cape (67.2%). Similarly large variations were found in the proportion of patients given blood and blood products. This ranged from none in the Western Cape to between 10 – 20% in the North West (10.8%), Northern Cape (18.5%), and Eastern Cape (21.3%) provinces.

The great majority of all patients (87.8%) had a uterine evacuation, except in the Eastern Cape where only about half (52.4%) of the patients had an evacuation. There were substantial inter-provincial differences in the method of evacuation. In the Western Cape a substantial number of cases had a manual vacuum aspiration (43.3%). This was also found in Gauteng (19.1%) Free State (9.3%)and Mpumalanga (9.1%) but less often. In the Northern Cape suction curettage was the most common method (60.8%), but this had very little use elsewhere. Anaesthesia and analgesia also varied considerably. General anaesthesia is more or less the norm in the Western Cape (88%) and Mpumalanga (89.6), whereas the majority of patients were given sedation in the North West (57.4%), Northern Province (54.4%) and KwaZulu-Natal (50.7%). Use of abortifacients was very common in KwaZulu-Natal (66%) and the Free State (61%), but infrequent in the Northern Province (12.3%), Eastern Cape (15.8%), Mpumalanga (19.4%), and (21.1%) Western Cape. In cases where an abortifacient was used, misoprostol was the most commonly used drug especially in Mpumalanga (81.9%), the Western Cape (66.3%), and Northern Cape (43.3%) provinces.

Table 10: Hospital management by province, 2000 study
(given as weighted percentages)

Parameter	EC	FS	GP	KZN	MP	NC	NP	NW	WC	TOTAL
Antibiotics given	67.2	24.2	37.8	64.2	10.5	18.0	27.9	27.6	11.9	33.5
Blood/blood products	21.3	22.9	7.1	7.6	4.2	18.5	8.6	10.8	0	8.3
Packed cells	93.3	55.2	100	100	63.6	66.7	26.7	62.6	–	72.5
Whole blood	6.7	44.8	0	0	36.4	33.3	73.3	37.4	–	27.5
Evacuation of uterus	52.4	79.8	93.1	87.6	96.4	85.3	85.5	85.7	97.6	87.8
Method of evacuation										
Sharp curettage	93.4	90.7	77.7	85.6	90.9	39.2	97.5	97.8	56.3	82.0
Suction	6.6	0	0	9.5	0	60.8	0	0	0.2	2.5
MVA	0	9.3	19.1	4.9	9.1	0	2.5	0	43.3	14.8
Other/not specified	0	0	2.9	0	0	0	0	2.2	0.2	0.7
Analgesia/anaesthesia										
None	46.7	0.7	3.2	15.2	5.4	36.2	2.5	0	0	7.9
Local anaesthetic	0	1.4	16.9	0	3.6	18.9	0	0	3.0	3.9
General	20.9	67.1	37.0	33.8	89.6	32.3	44.1	42.6	88.0	54.2
Sedation	32.5	30.8	42.0	50.7	1.4	12.6	53.4	57.4	8.9	33.8
Other	0	0	0.9	0.3	0	0	0	0	0	0.2
Abortifacient used	15.8	66.0	25.8	66.0	19.4	33.9	12.3	42.1	21.1	33.2
Misoprostol	17.1	6.2	24.5	3.9	81.9	43.3	3.0	12.7	66.3	19.9
Oxytocin	82.9	93.8	74.4	92.6	18.1	56.7	97.0	87.3	33.7	78.7
Prostaglandin	0	0	1.1	2.6	0	0	0	0	0	1.0
Other	0	0	0	0.9	0	0	0	0	0	0.3

Table 11 shows the differences between hospital categories with regards to the management of incomplete abortions, with results given as weighted percentages. The table suggests that antibiotics and blood products are less likely to be used in regional hospitals than in the other categories. When blood was given the choice of product differed very substantially between hospital categories, with tertiary hospitals almost exclusively using packed cells and district hospitals using very much more whole blood. Evacuation of the uterus was much less common in district hospitals and when performed it was almost exclusively by sharp curettage. Tertiary hospitals used the most varied methods of evacuation with substantial use of MVA (33%) and suction curettage (56.7%). Tertiary hospitals were much more likely than regional hospitals to offer no analgesia. Use of local anaesthesia was almost confined to tertiary hospitals and these hospitals were much less likely to use sedation. Abortifacients were most commonly (50%) used in tertiary hospitals. Misoprostol was mostly used in regional (32.4%) and, to a lesser extent tertiary (20.1%), settings.

Table 11: Hospital management by hospital type, 2000 study
(given as weighted percentages)

Parameter	Tertiary n=313	Regional n=335	District n=113	Total n=761
Antibiotics given	38.4	25.7	38.2	33.5
Blood/ blood products given	8.0	7.5	9.2	8.3
Type of blood products				
Packed cells	97.9	73.2	62.3	75.5
Whole blood	2.1	26.8	37.7	27.5
Evacuation of uterus	94.8	91.1	82.4	87.8
Method of evacuation				
Sharp curettage	56.7	77.0	97.5	81.9
Suction	9.8	1.9	0	2.5
MVA	33.0	21.2	1.0	14.8
Other/not specified	0.2	0	1.4	0.7
Analgesia/anaesthesia				
None	15.0	4.2	8.4	7.9
Local anaesthetic	20.8	0.8	0	3.9
General	41.2	58.1	55.9	54.2
Sedation	21.8	37.0	35.8	33.8
Other	1.2	0	0	0.2
Abortifacient used	50.0	26.9	32.5	33.2
Type of abortifacient				
Misoprostol	20.1	32.4	10.7	19.9
Oxytocin	79.4	66.6	87.1	78.7
Prostaglandin	0.5	0	2.2	1.1
Other	0	1.0	0	0.3

Discussion

The study has demonstrated an immediate impact of the legislative reform in reducing morbidity from incomplete abortions which may have been induced. The reduction in the proportion of cases in the most severe morbidity category must be assumed to reflect the impact of the legislation on unsafe induced abortions. The modest size of the effect undoubtedly reflects the inadequacy of services in many areas (as shown in the Survey of TOP Services), as well as a need for greater public education efforts around abortion rights as demonstrated by survey findings that only 53% of women aged 15 – 49 years know that abortions are available on request in the first trimester. This is partially related to the relatively short period of time since abortion was generally legalised but none-the-less highlights the need for further concerted efforts to improve knowledge and services.

The study shows that there has been no change in the incidence of incomplete abortion since 1994. However, there has been a significant reduction in the proportion of cases with signs of infection on admission, particularly among young women. The Confidential Enquiry into Maternal Deaths Report also showed that surprisingly few teenagers died as a result of abortion. This may be an indication that teenagers are more likely to access legal services, or that older woman are more likely to have knowledge of, and resort to, backstreet abortionists. There has also been a significant reduction in cases with evidence of interference on evacuation of the uterus. The findings on evacuation overall indicate a reduction in back street abortions. Only one woman had signs which indicated that she had definitely induced her abortion, and no one admitted to having done so. Misoprostol tablets were occasionally found in the vagina. A few of these were cases there they had been legally prescribed as part of abortion services, in others they were obtained from other sources. The proportion of patients using misoprostol could have been higher as the tablets can completely absorb or be flushed out with bleeding. The proportion of cases with offensive products, however, showed no change between the two years in Gauteng and the Northern Province, a slight reduction in North West and a substantial increase in the Free State. Some of the provinces (notably Gauteng and the Free State) which have a large number of women presenting with moderate to severe morbidity are among the provinces with the highest rates of legal terminations. This suggests that the relationship

between unsafe abortions or incomplete abortion morbidity, and access to services is complex and points towards a need for further development of services in provinces which have fairly high activity at present, coupled with public information about abortion rights.

The estimated annual number incomplete abortion cases in public hospitals was only a little higher than the annual number of legal terminations. If the 40 000 legal terminations each year reflected to a substantial degree women who would have previously aborted illegally and attended hospital with an incomplete abortion, a substantial reduction in incidence of incomplete abortions would have been expected, but this was not seen. The lack of change could be an artefact as confidence intervals are wide and completeness of ascertainment was greater in 2000. It is possible that miscarriages are more frequent or health seeking practices after miscarriage have changed with more women attending hospital, but there is no obvious explanation for either of these. Alternatively it is possible that the reduction in unsafe illegal abortions has been paralleled by an increase in safe illegal abortions through a black market in misoprostol.

The inter-provincial differences are very interesting and particularly so when compared with those found in the 1994 study. Very substantial differences in trimester status on admission were seen in both studies. Some caution is needed in making comparisons because the numbers of cases collected from some of the provinces were small, but a substantial reduction in the proportion of cases in the second trimester has been seen in the Western Cape (from 29% in 1994, to 17.1% in 2000), Free State (from 89% to revise 50%) and Mpumalanga (from 51% to 22%). In the Eastern Cape there has been a substantial shift in the opposite direction from 29% in 1994 to 52% in 2000. Trimester status is influenced by health seeking practice after first trimester miscarriage (including threshold for seeking medical treatment which is influenced by access to services) and availability of legal terminations of pregnancy, particularly in the second trimester. The change seen in the Western Cape is very likely to be due to legalisation of abortion as services for miscarriage have always been reasonably accessible.

The inter-provincial differences in the proportion of cases in the higher severity categories are most revealing. In 1994 the provinces with the fewest low severity patients were Gauteng, Mpumalanga, the Northern Province and Western Cape. In 2000 the Provinces were Gauteng, Free State, Northern Province and North West. This suggests that in these provinces there is considerable unmet need for legal abortion services. Although Gauteng and the Northern Province appear in both years, there has been some reduction in the proportion of high severity cases in each province. The high severity cases in the North West mostly came from one hospital, suggesting perhaps that there was one very dangerous back street abortionist operating in the community.

There have been substantial changes in medical management of incomplete abortions, with a trend towards simpler technologies with greater use of manual vacuum aspiration, less general anaesthetic use and some misoprostol use. Substantial changes have been observed in the medical management of cases with a trend towards lower technology. The 1994 study found that curettage under general anaesthetic was the practice for the overwhelming majority of cases. In 2000, manual vacuum aspiration has begun to be used in a substantial proportion of cases, reinforcing the suitability of the technology for use in these circumstances The trend towards lower technology indicates the substantial success of training efforts to change technology in abortion care. However, further technology transfer to district hospital level is needed as this simple technique is mostly being used in tertiary hospitals. Use of manual vacuum aspiration with paracervical block should be part of the curriculum of all medical schools for incomplete abortion management. The results also show that there is still little use of this method in many provinces. There is also an indication that cost benefits of the lower technology in the Western Cape are being eroded by the practice of giving general anaesthesia. A reduction in general anaesthesia was desirable, but the shift to use of sedation rather than local anaesthesia may not adequately meet patients need for pain relief during evacuation. It suggests demand for alternatives to general anaesthesia which is not yet met by widespread training in the use of the paracervical block.

The pattern of blood transfusion is, as might be expected, that women of higher severity and lower haemoglobin are more likely to be transfused. The study in 1994 highlighted some inappropriate use of blood transfusion. It is interesting to note that the proportion transfused has roughly halved (from 13.4% to 8.3%), although the difference is not statistically significant. There has been a reduction in the proportion transfused at each haemoglobin level, with the most substantial shift being away from transfusion at a HB of above 6.5. In 1994, 79.7% of women with HB 6.6 – 8.5 were transfused, compared with 36.5% in 2000. Given concerns about transmission of blood born diseases, this shift to greater caution is welcome.

When compared with antibiotic use in 1994, there has been a non-significant reduction in the proportion of women given antibiotics. In 1994 it was found that roughly half of women in both trimester categories were given them, whereas in 2000 the proportion of first trimester cases having them was much lower (29%). When compared with severity category, the pattern of use of antibiotics appears to be much less rational and suggests substantial under use for medium and high severity cases. Furthermore there is substantial use of expensive intravenous antibiotics for cases with no evidence of infection i.e. in the low severity category. This is unnecessary and not cost-effective. If it is hospital policy to give antibiotics prior to evacuation, oral ones should suffice. In 1994 concern was expressed that 15% of women with indicators of severe sepsis (high severity) received no antibiotics. In 2000 this proportion (52%) is even higher. The reasons for them not receiving antibiotics are unclear but this is highly inappropriate management. The extent to which this reflects lack of appropriate drugs or lack of clinical expertise should be investigated and remedied.

Conclusions

This study has demonstrated that the 1997 liberalisation of abortion legislation has had a positive impact on morbidity from incomplete abortion. This is very encouraging as the time elapsed is relatively short and the health sector has had considerable stress on its resources over this period with tight control on Government

spending and the burgeoning HIV epidemic. The findings suggest that further reductions in morbidity could be achieved with increased coverage and information in the community on abortion rights. The persisting evidence of substantial illegal abortion activity in Gauteng indicates that even though the province has more terminations per 100 women than any other province there is considerable unmet need for legal terminations.

The degree of accessibility achieved so far in the termination service might not have been possible without the use of low cost technology. This study has shown that the same technology is being successfully introduced into the management of incomplete abortions but that there is considerable scope for further adoption of the technology. In particular, a focus on district hospitals is needed. The study shows a welcome reduction in the proportion of women receiving blood transfusions, but also very worrying evidence of under-use of antibiotics. The extent to which this reflects a lack of drugs or a lack of clinical expertise should be urgently investigated and remedied. The findings of this study suggest that training in the use of manual vacuum aspiration with a paracervical block, and indications for antibiotics and misoprostol for incomplete abortion management, should be part of all medical school curriculae.

Key Recommendations

From the findings of this study it is recommended that:

1. Further efforts need to be made to meet the current unmet need for legal terminations by improving accessibility of services through enhanced service provision in under-served areas. Second trimester abortion services in particular need to be strengthened.
2. Further efforts need to be made to meet the current unmet need for legal terminations by public information campaigns on abortion rights. These should target women of all ages, with particular emphasis on women over 30 years.
3. The trimester status of women having terminations of pregnancy be should monitored and research undertaken to better understand the determinants of second trimester incomplete abortions and reasons for inter-provincial and inter-hospital category differences.
4. Training in the use of manual vacuum aspiration with paracervical block must be introduced in all medical schools for management of incomplete abortion.
5. The barrier to use of manual vacuum aspiration with paracervical block in district hospitals must be investigated and either training or equipment be provided, as appropriate.
6. The use of antibiotics for the management of incomplete abortions needs to be investigated and clinical protocols need to be reviewed. Training in the rational use of antibiotics needs to be provided as appropriate, and drug supply ensured.

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Section 3

Why are women still having illegal abortions in Gauteng?

Executive Summary – Section 3

Why are women still having illegal abortions in Gauteng?

Introduction

Since February 1997 South African women have been legally entitled to terminate a pregnancy up to 20 weeks. Although 40 000 women per year are making use of this facility, it has been apparent to medical services that a substantial group of them are still aborting using old methods.

In some parts of the country this may be explained by limited service provision, but this is not the case in Gauteng Province.

Objectives

To determine why women are having abortions outside designated services in a setting where there is substantial formal service provision, and to make recommendations to the Department of Health on ways of assisting women to use legal services.

Methods

A cross-sectional descriptive study of women attending four hospitals in Gauteng Province for incomplete abortion was used. Comparisons were made between women admitting to induced abortion and women believed to have had a spontaneous miscarriage on demographic characteristics, knowledge of the abortion law, social support and perceptions of legal services. Methods of induction of the abortion are described. Interviews were conducted with 151 women.

Results

Of the 151 women, 46 disclosed that they had induced, while 105 were most likely to have spontaneously miscarried. Women who induced were older and less well educated than women miscarrying spontaneously. They also had more children and were more likely to have a child under three years. Levels of knowledge of emergency contraception were much lower in the induced group.

Of the women inducing, 41% did so on their own using mostly Dutch medicines, laxatives, contraceptive pills and quinine. Of those seeking help, 46% contacted a

traditional healer or abortionist (who mostly gave medicine to induce abortion), 35% a doctor, nurse or pharmacist, and 19% were helped by mothers, sisters, husbands or boyfriends. Women consulting here were given misoprostol or Ovral, but in one case the woman had a surgical procedure where a 'hard needle' was inserted into her uterus by a general practitioner (GP). In some cases the doctors informed women of their rights to a formal termination of pregnancy but the women stated a preference for taking the tablets. Women paid their service providers between R70 – R300, but some used medical aid.

A full 55% of women did not use legal services because they did not know about the law, 17% feared rude staff, 15% did not know of a facility providing abortions, 7% feared their husbands or neighbours finding out, 4% found the waiting list to be too long and 2% were unable to access care because their pregnancy was too advanced.

Discussion and conclusions

Termination of pregnancy is still common outside legal services. Although the interviews were not conducted on randomly selected days, it is nonetheless an important finding that on the days when interviewing was undertaken in four Gauteng hospitals approximately a third of women attending with incomplete abortions had induced them.

Many of the women lacked knowledge of the 1997 Choice on Termination of Pregnancy Act or did not know of a place where they could get a termination. This points towards the need for public information campaigns informing women of their rights. Women inducing abortion had particularly low levels of knowledge of emergency contraception, pointing to the need for education on this too.

Other women did know that they were entitled to a legal termination in a formal facility but did not want to use these services because they feared staff rudeness or breaches in confidentiality. A very few of the women interviewed reported that they had tried but failed to use legal services because of waiting lists or their pregnancy being too advanced.

Many women expressed a preference for care from their GP. There is nothing

illegal about a GP prescribing misoprostol for abortion purposes, but this study suggests that some of the GPs who do this may not even realise it. Surgical terminations are illegal outside designated facilities, but GPs can apply for designation. In view of the clear preference of many women for care from a GP, the Department of Health should provide guidance to the profession on this, promote training for GPs on TOP, and promote applications from GPs for designation and training in manual vacuum aspiration techniques. Clearly, this service provision by GPs is accessible and acceptable to women.

It was also clear from the interviews that there is a substantial body of knowledge in Gauteng communities about how to induce abortion and there are still many informal service providers. Many women knew methods of induction themselves or had relatively easily gained information on how to do this or where to go for help. For them, using these backstreet methods or self-medicating was clearly a first line strategy; it is not known whether they would have sought help from a health facility if the traditional medicines, Dutch remedies, Ovral or laxatives had failed. The group of women who self-induce in this way may be dissuaded from doing so if the quality of services was improved so that women are protected from abuse by staff (who may often not be those actually providing the TOP services) and confidentiality was ensured. However, it seems likely that the process of pointing this group of women towards the formal medical sector will remain a challenge for some time to come.

Executive Summary – Section 3

Key recommendations

From the findings of this study it is recommended that:

1. A public information campaign be undertaken to increase levels of knowledge in communities about the Choice on Termination of Pregnancy Act; who is entitled to a termination and how to access services.
2. The quality of care in public health services be improved so that women can seek termination of pregnancy without fear of encountering harassment by staff.
3. Safe involvement of GPs in TOP be encouraged through promoting training in safe prescription of misoprostol with referral for uterine evacuation, medical methods of abortion and encourage training in surgical methods and designation of GP surgeries.
4. Further public education on emergency contraception is undertaken, and that its availability is ensured.

SECTION 3

Why are women still having illegal abortions in Gauteng?

Aim and objectives

The overall aim of the study was to find out why women are still aborting illegally. The specific objectives were to:

- describe how women are aborting, particularly the role of bio-medical methods outside designated services
- identify barriers to women seeking a legal termination of pregnancy
- identify reasons for the choice to induce outside a designated facility

Methodology

The study was a cross-sectional survey of women presenting to Gauteng public hospitals with incomplete abortions. Women were recruited from four hospitals: Chris Hani-Baragwanath, Kalafong, Leratong and Pholosong. These were chosen as they are found approximately in the south, north, west and east of the province.

Abortion is still stigmatised in South Africa and so it was anticipated that women who induced would try to conceal this. For this reason, the study recognised that it would not be possible to identify women who had induced an abortion without an interview in private with a sensitive interviewer. The process of interviewing women in this way would reveal who induced and who miscarried spontaneously, but it is time consuming and precludes easy identification of a representative sample to interview. It was therefore decided to identify a convenience sample and those disclosing miscarriage would form a comparison group against which to compare the characteristics of women who were illegally aborting. The researcher spent approximately three weeks (the days were not always consecutive) interviewing all consenting women who presented with incomplete abortions and were present on the days of the study. The sample size was determined pragmatically.

A questionnaire was completed by consenting women with the researcher in the language of their choice. It covered demographic characteristics, pregnancy history, contraception, knowledge of emergency contraception, circumstances of pregnancy loss, knowledge of Choice on Termination of Pregnancy (CTOP) Act, knowledge of services for legal TOPs and perceptions of these services and social support.

Most of the questions were closed, but women were also asked in open-ended questions to describe exactly what had happened and how they had terminated the pregnancy, as well as their reasons for choosing a self-induced abortion or had otherwise aborted outside designated services. Responses were recorded as verbatim notes.

The data was entered into an Epi-info database by two data entry clerks and exported to the statistical packages SPSS and Stata for statistical analysis. Descriptive statistics were used to summarise the data. The factors which distinguished between the two groups (those who induced versus those who spontaneously miscarried) were examined using a logistic discriminant analysis (Krzanowski, 1998, pp 358 – 359). This was done separately for the three groups of variables.

Results

A total of 151 women were interviewed, of whom 46 disclosed that they had induced the abortion and 105 were believed to have aborted spontaneously. Table 1 shows the demographic characteristics of the respondents, by abortion category. Women who induced their abortions were slightly older than those who had spontaneous miscarriages and they were less well educated. They had more children than women with spontaneous miscarriages, younger children and were more likely to have a child under three years. There were no differences in their marital status, employment and exposure to print media, television and radio. Logistic discriminant analysis of the factors in Table 1 showed that the only factor which discriminated between the two groups was education, with women who had secondary schooling (OR: 0.33, p = 0.015) and post-school education (OR: 0.28, p = 0.096) being less likely to be in the induced group (likelihood ratio model chi-square = 6.20, df = 2, p = 0.045). Table 2 shows the history of the current pregnancy by abortion category. Women who induced were less likely to have previously lost a pregnancy and much more likely to have had a previous unwanted pregnancy. In response to this, they were slightly more likely to have had a previous illegal abortion. When the index pregnancy was discovered, those inducing abortions were less likely to have felt that they wanted it. A far higher proportion of the spontaneous group had been trying to get pregnant and the majority were relatively early in pregnancy at the time of presentation.

The proportion of those who were not trying to get pregnant who were using contraception was relatively low, and similar in the two groups. The majority of contraceptive users were taking oral preparations. Knowledge of emergency contraception was low. The women spontaneously aborting were very much more likely to know about emergency contraception than those who induced. Logistic discriminant analysis of the factors in Table 2 showed that the two factors which discriminated between the two groups were wanting to be pregnant, with those wanting to be pregnant less likely to be in the induced group (OR: 0.18, p = 0.003); and knowledge of emergency contraception, with those who knew about emergency contraception being more likely to be in the spontaneous group (OR: 6.21, p = 0.094) (the likelihood ratio model chi-square = 15.07, df = 2, p = 0.005).

Table 1: Demographic and social characteristics of the women interviewed

Parameter	Induced (n = 46) %	Spontaneous (n = 105) %
Mean Age (SD)	28.0 (7.8)	26.9 (6.1)
Education		
Primary	28.3 (13)	11.4 (12)
Secondary	65.2 (30)	79.0 (83)
Post-school	6.5 (3)	9.5 (10)
Marital status		
Single	60.9 (28)	57.1 (60)*
Married/cohabiting	39.1 (18)	41.0 (43)
Divorced/separated/widowed	0	1.0 (1)
Employed	30.4 (14)	28.2 (29)
Read newspaper in past week	76.1 (35)	75.2 (79)
Listened to radio or watched TV in past week	87.0 (40)	92.4 (97)
With children	71.7 (33)	67.6 (71)
Number of children	1	1
Median range	0 – 9	0 – 6
Interquartile range	0 – 3	0 – 2
Age of youngest child (yrs)	5	6
Median range	2 – 13	1 – 19
Interquartile range	4 – 8	4 – 9
Has a child under 3 years[1]	0.9% (5)	2.8% (2)

* n = 104

Table 2: Pregnancy history, contraceptive use and attitudes towards the pregnancy

Parameter	Induced (n = 46) %	Spontaneous (n = 105) %
Previous pregnancy loss	10.9 (5)	21.9 (23)
Previous unwanted pregnancy	30.4 (14)	17.1 (18)
Response to previous unwanted pregnancy		
Had baby	69.2 (9)*	77.8 (14)
Abortion – illegal	15.4 (2)	0
Abortion – legal	7.7 (1)	22.2 (4)
Other	7.7 (1)	0
Number of periods missed		
1	60.9 (28)	51.4 (54)
2	26.1 (12)	19.4 (20)
3	6.5 (3)	10.5 (11)
4	2.2 (1)	2.9 (3)
None missed yet	4.3 (2)	16.2 (17)
Attitude to pregnancy when discovered		
Wanted pregnancy	23.9 (11)	58.3 (60)**
Did not want pregnancy	76.1 (35)	36.9 (38)
Not sure	0	4.9 (5)
Had been trying to get pregnant	21.7 (10)	56.2 (59)
Proportion of those not trying for pregnancy who were using contraception	38.9 (14)	39.5 (17)
Method of contraception		
Mini pill	14.3 (2)*	5.9 (1)
Combined pill	42.9 (5)	70.6 (12)
IUD	0	5.9 (1)
Injection	14.3 (2)	11.8 (2)
Condom	21.4 (3)	5.9 (1)
Other (rope and quinine)	7.1 (1)	0
Knowledge of emergency contraception	2.9 (1)	14.9 (10)

* n = 13, **n = 103

The women's experiences with the incomplete abortion are presented in Table 3. There were differences in women's presenting practices depending on abortion category. Women who had spontaneous miscarriages were more likely to attend earlier than those who induced, but a more substantial group delayed for more than five days after the onset of bleeding. Very few women reported having tried to stop the bleeding. Women in the induced group were more likely to have felt relief when bleeding started. Logistic discriminant analysis of the factors in Table 3 showed that the two factors which discriminated between the two groups were (a) feelings when noticing the bleeding, with the induced group much less likely to feel sad (OR: 0.062, $p < 0.001$) and less likely to feel indifferent (OR: 0.18, $p < 0.001$)); and (b) when the bleeding started with the induced group more likely to have started two to five days ago than the previous day (OR: 2.76, $p = 0.03$)(the likelihood ratio model chi-square = 28.93, df = 4, $p < 0.001$).

The majority of the induced group had taken a form of medicine to abort, with only a few (11%) using a surgical approach of inserting something into the uterus. The amount paid for TOP ranged from R6 to R500, with a median of R125. Forty one per cent of the women induced (19) did so on their own, although a third (6) of these also discussed it with a friend, acquaintance, boyfriend or husband. Of those who had help (26), traditional healers or abortionists were consulted by 12 women (46%). Seven of these women were helped in finding their healer by a relative, friend or their partner, or reported that the healer was their friend. Over a third (35%) saw a nurse, doctor or pharmacist. Two of the women, both consulting medical doctors, were told that they could have a legal TOP in a formal facility but both preferred not to use this option. Table 4 summarises the sources of help women had in inducing, the methods used and costs. The traditional healers consulted mostly gave women medication to drink, to douche or to precipitate emesis (ukugabha).

GPs who were involved usually gave women misoprostol. One doctor inserted a 'hard needle' into a woman's vagina and reportedly gave no information about what she was supposed to do once bleeding started. One woman tried hard to get a legal termination, visiting a doctor and two clinics before being referred to hospital. In each setting she was told they did not do terminations on women over 12

weeks and in hospital a nurse advised her to 'make a plan'. She ultimately had a backstreet abortion performed by a woman she was told about from someone she was chatting to in a taxi. Several women reported having been to a clinic for help and had either not been told about the Act or had not been effectively referred to a service which performed TOPs.

Table 3: Incomplete abortion history and induction method

Parameter	Induced (n = 46) %	Spontaneous (n = 105) %
Bleeding started:		
Previous day	35.6 (16)*	46.5% (47)**
2 – 5 days ago	48.9 (22)	28.7% (29)
More than 5 days ago	15.6 (7)	24.8% (25)
Reaction to bleeding		
Relieved	51.1 (23)*	14.4% (14)***
Sad	6.7 (3)	28.6% (28)
Not sure/confused	42.2 (19)	57.1% (56)
Tried to stop bleeding	13.0 (6)	9.1% (9)
Amount paid	R125	
Median range	R6 – R500	
Interquartile range	R25 – R300	
Discussed with anyone prior to aborting	23 (52.3%)	
Source of help with abortion		
Husband/Boyfriend	4.3% (2)	
Mother	2.2% (1)	
Sister	6.5% (3)	
Doctor	10.9% (5)	
Nurse	4.3% (2)	
Pharmacist	4.3% (2)	
Traditional healer & medicines	23.9% (11)	
No one	41.3% (19)	
Information not given	2.2% (1)	
Person helping mentioned abortion was legal	7.7% (2)	

* n = 45. ** n = 101, *** n = 98

Table 4: Induced abortions: source of help, methods and payment

Who was involved	What was taken	Cost
GP/Nurse	4 misoprostol	Medical aid
	4 misoprostol	
	Hard needle	R300.00
	10 Ovral (given by nurse)	
	"tablets to clean"	Medical aid
	4 misoprostol (nurse)	R250.00
	3 tablets in white box inserted per vagina (probably misoprostol)	Medical aid
Pharmacy	3 misoprostol	R150.00
	3 misoprostol	R 80.00
Healer, priest or abortionist	Traditional medicine	R150.00
	Traditional medicine	R 80.00
	Traditional medicine	R200.00
	Surgical means by local abortionist	R400.00 paid, R100.00 owed
	Dutch & traditional medicine from gogo (older woman) in neighbourhood	R300.00
	Traditional medicine from 'muti' shop	
	Dutch & traditional medicine	R 70.00
	Traditional medicine from priest to drink & douche	R100.00
	Inserted a 9cm stick inside	R300.00
	Glass of something that looked like dirty water, tasted like alcohol, given by sister	
	'Prevention pills' and traditional medicines	
Home remedies		
Oral contraceptives	Pills recommended by lady met in street	
	Packet of Triphasil	
	Packet of Ovral	
	10 oral contraceptives, vinegar, tartaric acid and laxatives	
	Contraceptive pills and misoprostol given by sister	
Dutch remedies	Dutch medicine (Haarlamans) and milk from sister	
	Dutch medicine from sister	
	6 tablets from mother, does not know the name	
	Vinegar, Dutch medicine, salt and sugar	
	Dutch medicine (Haarlamans) and milk	R25.00
	Essence of life & Brokoon	R10.00
	Dutch medicine (Haarlamans) mixed with milk	
	Dutch medicine	R15.00
	Dutch medicines	
Other tablets	2 tablets given by mother	
	Mixture of tablets, painkillers and flu medicine	
Surgical means	Pencil inserted into vagina by boyfriend	
Quinine	Two bottles of quinine	R 5.78
	Quinine (50ml)	R20.00
	Quinine and boiled Coke	R25.00
	Laxatives: 2 packets Brooklax (laxative)	
	Castor oil, two laxatives and Sta-Soft (fabric softener)	
Miscellaneous	Alwyn (transparent bitter stone) with olive oil	
	Cup of methylated spirits	

Table 5 shows the women's knowledge of the law on termination of pregnancy. Approximately half of the women knew abortion was legal; substantially more of the spontaneous group were aware of the law. Of those with knowledge of the law, only a small proportion in each group knew that abortion was available on request or to women arguing on the grounds of poverty. Women inducing abortion who knew of the law were more likely to have an idea of a duration of pregnancy up to which an abortion could be obtained but only one woman in each group had accurate information on this. In both groups less than a third of women knew of a facility where a woman could get a termination legally. The main reason given by women inducing for not using legal services when they knew of these was anticipating the staff being rude; being afraid of being found out was the second most commonly cited reason. More than one third of the women who knew the law were unwilling to use legal facilities due to anticipated staff rudeness. The main barriers to using legal services faced by women wanting to induce an abortion are shown in Figure 1.

Figure 1: Pie chart of main reasons why women did not abort in a legal facility

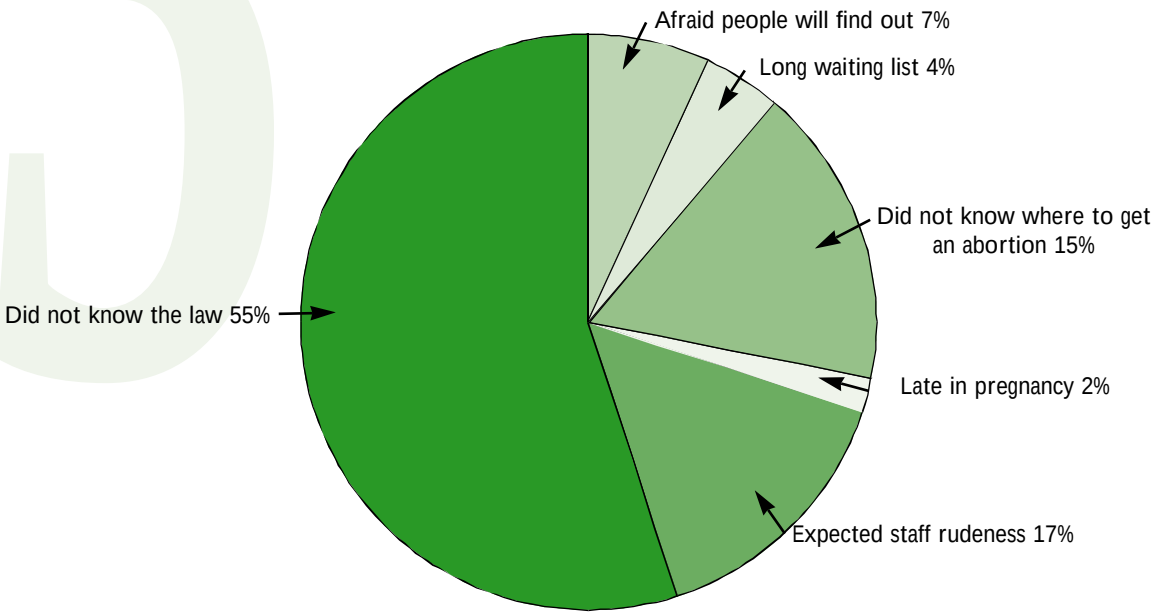

Table 5: Knowledge of termination of pregnancy law, facilities and main reasons for not using a legal facility

Parameter	Induced (n = 46) %		Spontaneous (n = 105) %	
The law allows abortion*				
Yes	45.7	(21)	56.2	(59)
No	8.7	(4)	1.9	(2)
Don't know	45.7	(21)	1.9	(2)
Conditions under which abortion is legal**				
Rape	28.5	(6)	32.2	(19)
Incest	4.8	(1)	6.8	(4)
Threat to health of woman	14.3	(3)	3.4	(2)
Threat to health of child	9.5	(2)	1.7	(1)
On request	81.0	(17)	67.8	(40)
Poverty		0	5.3	(9)
Proportion of women knowing abortion is available on request or for socio-economic reasons	37.0	(17)	42.9	(45)
Stage in pregnancy up to which abortion is legal				
2 months	9.5	(2)	6.8	(4)
3 months	33.3	(7)	23.7	(14)
4 months	9.5	(2)	6.8	(4)
5 months	4.8	(1)	1.7	(1)
Above 5 months		0	1.7	(1)
Unable to guess	42.9	(9)	59.3	(35)
Proportion of women who know a facility doing abortions legally	30.4	(14)	30.5	(32)
Main reason for not having a legal abortion				
Did not know law	54.3	(25)		
Did not know where to get one	15.2	(7)		
Too late in pregnancy	2.2	(1)		
Expected rude staff	17.4	(8)		
Waiting list too long	4.3	(2)		
Afraid people would find out	6.5	(3)		

* Chi-square = 4.49, df = 2, p = 0.106, ** Categories are not exclusive

Terminations in the community and barriers to legal services

Misoprostol from the doctor

'When I told my sister I was pregnant I was scared and she told me we must tell my mother. She took me to a doctor. The doctor gave me tablets (misoprostol) to drink and I was to go to see him the following day (Christmas Day). When I went to see him he was not available. I checked him again yesterday (Boxing Day) and then decided to come here because I was in pain.' (17-year-old)

'I am doing my first year at the university and the last thing I need is a child. I know there is a law but I have a medical aid so I used it. I went to a doctor and she gave me those tablets (misoprostol) to take orally. She said I can come to Bara to be cleaned because she does not have the equipment. It's easy and private at the doctor's rooms.' (22-year-old)

Misoprostol from the chemist

'I was afraid of the nurses at the hospital. Somebody who was also pregnant bought them (misoprostol) at the chemist. She advised me to also do the same. I went to the chemist and asked for Cytotec tablets and paid R150 for all three. I didn't go to hospital because I'm young and the nurses were going to look at me in a funny way. I was afraid they were going to insult me.' (17-year-old)

Dutch medicines are used for inducing

'I do not want a child. I heard from an old woman a long time ago that the Dutch medicines are used for inducing so I did it. I didn't want to tell anyone that I'm aborting.' (17-year-old)

Quinine has been used for year

'Quinine has been used for years and years and those bitches at hospital are always difficult to deal with. They think they know. They think they are better than us.' (34-year-old)

Help from the priest

'Our priest is a healer. He helps with all illnesses. When my mother found out [I was pregnant] from my sister she took me straight to him.' (20-year-old)

Forced to abort by boyfriend

'I want a baby with all my heart. My boyfriend said he doesn't have money for a child and that I'm trying to hold him down with a child. I told him again and again that I won't need his help but he said I want to trick him. We fought until I gave up. He inserted a pencil under me and said I will thank him. He poked until I started bleeding. I have never been in so much pain.' (33-year-old)

My friend was so traumatised

'The doctor said I couldn't carry a child [because I am sick] so I have to abort. He said we should go to the hospital for abortion but I refused because of a friend's experience. He agreed [I could] go to a sangoma who could do it. A friend of mine went to Bara to have a TOP. She was first told to make an appointment. As she was doing that, they interrogated her about her baby's rights and asked her if the father knows that she wants to kill the child. She did not go back to Bara because she was so traumatised. She then found out about this sangoma who does it well. I went to the same sangoma.' (28-year-old)

'Nurses think they are gods and they treat people as if they are dogs. A friend went to hospital for TOP and she was told she was even too old to have sex.'

'I know for a fact that the nurses are rude and cheeky. I wouldn't do that to myself. I know I did the right thing and therefore I didn't want to be told by them that I am doing the wrong thing. I wanted it to be quick and no one must know.'

Hospitals are a hassle

'When I told my sister, she said we should go to a traditional healer because I could not afford to have a baby now. I knew I could go to hospital but it's a hassle going there and I don't have money for Marie Stopes.' (23-year-old)

'I have a lot of children and I am not working. I didn't go to the hospital to avoid hassles and shouting.'

I was late

'I went to Chiawelo and was referred to Bara because I was late. When I got to Bara there was a long queue. I went back home then came again the following day in the morning. I thought they would do me immediately because I was late but they gave me an appointment to come back two weeks later. They said the register was full. I begged and begged but they refused. On my way out of Bara I met this lady and we chatted and she told me I could use contraceptive pills to abort. I did.' (41-year-old)

A friend told me about this gogo

'A friend told me about this gogo who helps with abortions. I went there and she gave me medication to apply to my stomach and to drink.'

Clinic didn't give information about sources of TOP

'I went to the clinic and told them and they said they could not help me. My husband then decided we have to do something. I took a whole packet of Triphasil.'

'I didn't know about Bara and I heard that this clinic is a same-day service. I didn't want to spend the night in the hospital. I was given four misoprostol, two to drink and two to insert and told to return after three days. I went back but the placenta was still inside and they could not take it out. I was referred to Bara.'

Self-induction

'I wanted to keep it secret and do it fast, but I failed.'

Clinic full

'I went to Bara for TOP but had a bad experience. I was told it was fully booked for the whole month and they [the nurses] kept asking me why I want to kill, I am a murderer. I went back to the traditional healer who gave me medicine to induce.'

People like gossiping

'People like gossiping. I know many people who work at the hospital. I didn't want anybody knowing what is happening.'

Table 6 describes the women's partner support with the pregnancy and pregnancy loss. Women having spontaneous miscarriages were significantly more likely to have told their partners of the pregnancy. The great majority of these fathers were happy about it. Many of the induced group's partners were also told about the pregnancy and were happy. Nonetheless a substantial minority instructed the woman to abort or became angry (31%). This is further poignantly illustrated by one of the narratives above. Several of the women also indicated that they had not told their partners about the pregnancy because they did not want them to interfere with their decision to terminate it. Many women told no one else of the pregnancy but, of those who did, mothers and sisters were more likely to have known. Women who induced were less likely to have told others of their pregnancy.

Table 6: Partner support with pregnancy and pregnancy loss

Parameter	Induced (n = 46) %		Spontaneous (n = 105) %	
Father knew of pregnancy*	65.9	(29)	83.8	(83)
Father's reaction				
Told to abort	24.1	(7)		(0)**
Denied paternity	3.4	(1)	1.3	(1)
Angry	6.9	(2)	3.8	(3)
Happy	62.1	(18)	84.8	(67)
Beat her		0	2.5	(2)
Left her		0	1.3	(1)
Other	3.4	(1)	6.3	(5)
Father knows of pregnancy loss	65.5	(19)	60.0	(48)
Others told of pregnancy				
Mother	22.2	(10)****	32.0	(31)***
Friend	8.9	(4)	16.5	(16)
Sister	8.9	(4)	3.1	(3)
Other relatives	2.2	(1)	5.2	(5)
No one	2.2	(1)	43.3	(42)
Other person knows of pregnancy loss				
Mother	50.0	(8)	54.3	(19)
Friend	12.5	(2)	25.7	(9)
Sibling	25.0	(4)	8.6	(3)
Other relatives	6.3	(1)	8.6	(3)
Other person	6.3	(1)	2.9	(1)

* Chi-square = 5.77, df = 1, p = 0.016, ** n = 79, *** n = 97, **** n = 45

Discussion

Women who had induced abortions were less well educated but otherwise similar to those miscarrying. The majority had not been trying deliberately to get pregnant but had not been using contraception. Those who were using contraception were most likely to be using oral products, indicating the greater potential for failure of this method. Levels of knowledge of emergency contraception were very low and significantly lower than in the women miscarrying. Many of the women's male partners were unsupportive, either getting angry or ordering the women to abort when they were told of the pregnancy. Others were not told of the pregnancy so they could not interfere with the woman's decision about termination. These factors contributed both to the occurrence of unwanted pregnancy and a perceived need to terminate the pregnancy.

This study was not based on a representative sample and many of the differences between the spontaneous and induced groups have failed to reach statistical significance at even a 10% level, probably because of the small sample size. However, it has provided important insights into induced abortion activity in the year 2000. The fact that a third of cases attending the hospitals on the days visited were induced suggests that there is still substantial abortion activity in South Africa's communities outside the framework of legal services. It is of note, although perhaps just a coincidence, that the proportion of women who induced in this study (30%) was very similar to the proportion of cases with moderate or severe morbidity in the study of the epidemiology of incomplete abortion (28%) (Brown et al, 2001).

Once a woman had decided to terminate the pregnancy, the most substantial barrier to use of designated services faced was lack of knowledge of the Choice on Termination of Pregnancy Act. The level of knowledge of this in the induced group was somewhat lower than those miscarrying and the general public in the country as a whole as demonstrated in the 1998 South Africa Demographic and Health Survey (SADHS); 53% knew of the legislation (Department of Health, 1999). However, it was substantially lower than the average level of knowledge for Gauteng; the 1998 SADHS found that 77,7% of women interviewed knew of the legislation

(Department of Health, forthcoming). Women's specific knowledge of the circumstances in which abortions could be obtained and which facilities provided services was even lower. These findings point to the need for a concerted public education campaign on rights to termination of pregnancy under the 1996 Act which specifically targets less educated and, on a national level, rural women.

Among those who knew of the law, the most important deterrent to using legal services was fear of staff rudeness based on previous personal experience or that of friends or reputation. This study's findings indicate that the attitudes and actions of these members of staff have a profound impact on both service users and potential service users. Developing strategies for providing TOP services in a manner which reduces women's exposure to hostile members of staff and taking disciplinary action against staff who impede women from accessing TOP services must be part of strategies for promoting access to legal services.

A small proportion of women tried to access legal services and either failed because their pregnancies were too advanced or found the delays before appointments to be unacceptable. While it is encouraging that this group of women represented such a small proportion of the total sample of women who induced, these are important barriers. They point to the need for services which do not perform second trimester terminations to have information on those which do so that women can be appropriately referred if they cannot be helped in one hospital or clinic. The findings also indicate the unacceptability of waiting for an appointment for TOP.

The range of methods used and sources of help were very similar to those described by Maforah et al (1997), who found that women used 'laxatives, enemas, Disprin, herbs, Aloe, Dutch remedies like Balsam Kopifa, Dettol and Super Rose Lotion'. In this study, as in Maforah et al (1997), the overwhelming majority of women used methods based on the ingestion of substances, rather than surgical methods. It is a matter of concern that one of the women who was induced through the age-old method of inserting an object through the cervix had this procedure done by a GP, who did not mention that legal services were available.

The study clearly indicates that there is considerable knowledge in the community of methods of induction, reflecting practices of abortion over generations. Some methods could be procured simply from shops while others required seeking particular traditional healers or a priest. The study has shed light on the rich information networks through which women could access information, often with support from mothers or sisters. The narratives also provided insights into networks of advice in townships which commonly centred on conversations with strangers in taxis or women met while walking. The challenge for the Department of Health is to develop the level of knowledge of legal services in these communication networks so that women can then discover how to access an abortion clinic in this way as well as a sangoma.

The health sector has been seen in this study to play a substantial role in induced abortions occurring outside designated facilities. Doctors were often selected deliberately by women, some of whom knew already or were told of legal services, because they were accessible, helpful, there was no wait and/or privacy was perceived to be better. The doctors who prescribed misoprostol and advised women to go for a surgical evacuation when the bleeding started were acting in a legal and professionally acceptable manner. Those performing surgical procedures in their surgeries, and nurses and pharmacists giving misoprostol were not. This study has shown that GPs are service providers of choice for termination of pregnancy for some women and that many are already helping women to abort. The Department of Health should build on the willingness of GPs to participate in terminations through informing them of their legal position, encouraging training in medical methods and actively encouraging GPs to have training in MVA techniques and abortion manage-ment, and have their surgeries designated. This would be of value in management of all incomplete abortions outside major urban centres.

Half of the women acted alone in inducing their abortion. Having decided that this was what they wanted to do, they acted upon their knowledge. Self-medication is a first-line treatment response of most people when faced with health problems in most cultures (Kleinman et al). The women's actions should perhaps be interpreted as another form of the self-medicating activities that are found for many health problems. It is quite possible that had these attempts failed (or had spon-

taneous miscarriages not coincided with these attempts), they would have made a concerted attempt to access a designated facility or consult a GP or sangoma. The extent to which these self-induced abortions are preventable through the provision of formal health services is probably limited. One implication of this is that the proportion of unsafe induced abortions which is preventable through legalisation and the provision of accessible health services in a country like South Africa with wide accessibility of reasonably safe methods of self-induction is probably less than would otherwise be anticipated.

Conclusions

This study has shown that many women are still inducing abortions outside designated facilities. The most substantial barrier to using legal services is lack of knowledge of the law and of facilities performing terminations. Among those who knew of their entitlement, perceptions of the quality of care of services was the most substantial barrier to their use and points to the need to improve services and eliminate harassment by staff of patients seeking termination of pregnancy. Many women visited nurses and doctors in the search for abortions and some chose the latter over designated services. This points to the need to build the role of GPs in TOP service provision through training in safe prescription of misoprostol with referral for uterine evacuation, medical methods of abortion, designation of facilities and MVA training. Many women self-induce and it seems likely that this is an inevitable part of women's health-seeking practice when faced with unwanted pregnancy.

Key recommendations

From the findings of this study it is recommended that:

1. A public information campaign be undertaken to increase levels of knowledge in communities about the Choice on Termination of Pregnancy Act: who is entitled to a termination and how to access services.
2. The quality of care in public health services be improved so that women can seek termination of pregnancy without fear of encountering harassment by staff.
3. The safe involvement of GPs in TOP be encouraged through promoting training in safe prescription of misoprostol with referral for uterine evacuation, medical methods of abortion, and encourage training in surgical methods and designation of GP surgeries.
4. Further public education on emergency contraception is undertaken, and its availability is ensured.

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Appendix 1

Appendix 1: List of Participating Hospitals

The National Incomplete Abortion Research: South Africa 2000: Epidemiology of Incomplete Abortions

Gauteng	Free State	KwaZulu-Natal
Central and Tertiary:	**Central and Tertiary:**	**Central and Tertiary:**
Chris Hani-Baragwanath	Universitas	King Edward
Kalafong		Prince Mshiyeni
Regional:	**Regional:**	**Regional:**
Pholosong	Pelonomi	Ladysmith
Kopanong	Boitumelo	Benedictine
District:	**District:**	**District:**
South Rand	Moroka	Eshowe
Germiston	Odendaalsrus	Itshelejuba
Gauteng total (6)	**Free State total (5)**	**KwaZulu-Natal total (6)**

Mpumalanga	North West Province	Northern Province
Central and Tertiary:	**Central and Tertiary:**	**Central and Tertiary:**
Witbank	None	Mankweng
Regional:	**Regional:**	**Regional:**
Philadelphia	Klerksdorp	Tshilidzini
Themba	Paul Kruger Memorial	Mapulaneng
District:	**District:**	**District:**
Middelburg	George Stegman	Malumulele
Groblersdal	Tshwaragano	Mecklenburg
Mpumalanga total (5)	**North West total (4)**	**Northern Province total (5)**

Western Cape	Northern Cape	Eastern Cape
Central and Tertiary:	**Central and Tertiary:**	**Central and Tertiary:**
Groote Schuur	None	Frere
Tygerberg		Port Elizabeth
Regional:	**Regional:**	**Regional:**
Hottentots Holland	Kimberley	Cecilia Makiwane
GF Jooste	Gordonia	Frontier
District:	**District:**	**District:**
Riversdale	Kakemas	Victoria EC
Swartland	De Aar	St Lucy's
Western Cape total (6)	**Northern Cape total (4)**	**Eastern Cape total (6)**

Appendix 2: Data Collection Forms

National Incomplete Abortion Research:
South Africa 2000: Epidemiology of Incomplete Abortions Study

For official use only

Study number ☐☐☐☐

Hospital category ☐

Province _____ ☐

Hospital number ☐☐

Hospital name:

_____

Data collection dates: from d d m m y y y y

to d d m m y y y y

Date of admission: d d m m y y y y

Date of discharge: d d m m y y y y

Hospital folder number: ☐☐☐☐☐☐☐☐☐☐☐☐

TO BE COMPLETED BY SURGEON PERFORMING EVACUATION

Appendix 2

1. Demographic Information

1.1 Age ☐☐

1.2 Race (circle most appropriate answer)

1. Black
2. Coloured
3. White
4. Asian

1.3 Pregnancy History

Parit ☐☐

Gravidity ☐☐

2. Clinical Picture on Admission

2.1 Best clinical estimation of gestation in weeks

2.2 At admission, the abortion was clinically (circle most appropriate answer)

1. Complete
2. Incomplete
3. Missed
4. Inevitable

Types of abortion to be included:

Complete:	Products of conception completely expelled
Incomplete:	Products of conception partially expelled
Missed:	Products of conception still in utero with evidence of fetal/pregnancy demise. Cervix still closed (< 22 weeks)
Inevitable:	Products of conception still in utero but occurrence of per vaginal bleeding and cervical dilation

NOTE: Do not include cases of threatened abortion or ectopic pregnancy

2.3 Clinical signs of infection at admission (circle all that apply)

1. No sign of infection
2. Offensive discharge
3. Tender uterus (endometritis)
4. Localised peritonitis
5. Generalised peritonitis
6. Septicaemic shock
7. Tetanus
8. Other, please specify_____

2.4 HIV status (circle most appropriate answer)

1. Positive
2. Negative
3. Not known

2.5 Clinical signs of AIDS

1. Yes 2. No

2.6 Vital signs on admission

1. Temperature (in ^{0}C) ☐☐
2. Pulse (beats per minute) ☐☐
3. Blood pressure on admission dBP ☐☐
   sBP ☐☐
4. Hb (g/dl) ☐☐

2.7 Clinical signs of system/organ failure at admission (circle all that apply)

1. No sign of organ failure
2. Coagulation defect (DIC)
3. Respiratory distress syndrome
4. Hypovolaemic shock
5. Renal failure
6. Liver failure
7. Other, please specify

Appendix 2

3. Initial Treatment

3.1 Medical treatment

3.1.1 Antibiotics given
1. Yes 2. No

3.1.2 If yes, please specify (circle all that apply)
1. Oral
2. Intravenous
3. Suppository

3.1.3 Blood/blood products given (If no, go to 3.2)
1. Yes 2. No
If yes, specify number of units of blood products given ☐☐

If yes, specify which product used (circle most appropriate answer)
1. Packed cells
2. Whole blood
3. Fresh frozen plasma
4. Platelet concentrate
5. Other

3.2 Surgical treatment

3.2.1 Evacuation of the uterus
1. Yes 2. No

3.2.2 Method of evacuation (circle most appropriate answer)
1. Metal or sharp curettage
2. Electro Vacuum/suction aspiration
3. Manual Vacuum aspiration (MVA)
4. Other

3.2.3 Anaesthesia used (circle most appropriate answer)
1. No anaesthesia used
2. Local anaesthetic
3. General anaesthetic
4. Sedation analgesia
5. Other

3.2.4 Was any medical abortifacient used during the treatment?
(if no, go to 3.3)
1. Yes 2. No

3.2.5 If Yes, please specify which abortifacient was used
(circle most appropriate answer)
1. misoprostol
2. oxytocins
3. prostoglandins
4. other

3.3 Findings at surgical evacuation

3.3.1 Were the products offensive?
1. Yes 2. No

3.3.2 Was there evidence of mechanical or chemical injury to vagina, cervix or vulva?
1. Yes 2. No
If yes, please describe the injury

_____

3.3.3 Was there evidence of a foreign body in vagina, cervix or uterus?
1. Yes 2. No
If yes, please describe the foreign body

_____

3.3.4 Were misoprostol tablets found in the vagina at time of evacuation?
(if no, go to 3.4)
1. Yes 2. No

Appendix 2

3.3.5 If yes, did the patient offer information as to where the misoprostol was obtained? (circle most appropriate answer)

1. Public health facility
2. GP
3. Friend
4. Not stated
5. Other, please specify _____

3.4 Rank of person who performed evacuation

1. Consultant
2. Registrar
3. Medical Officer
4. Intern
5. Medical student intern
6. Midwife
7. Other (specify) _____

TO BE COMPLETED BY ATTENDING DOCTOR AT TIME OF DISCHARGE OF THE PATIENT

4. Additional Treatment

4.1 Wards/sections admitted to during hospital stay (circle all that apply)

1. Short stay observation unit (casualty)
2. General ward
3. Gynaecology ward
4. Intensive care unit
5. High care unit
6. Other (specify) _____

4. 2 Clinical course during admission (circle all that apply)

1. No additional treatment
2. Intensive care/high care unit
3. Ventilated
4. Haemo-dialysis
5. Other, please specify _____

4.3 Surgery (circle all that apply)

1. No surgery
2. Re-evacuation
3. Colpotomy/drainage pus
4. Laparotomy for sepsis
5. Laparotomy for abdominal hysterectomy
6. Other, please specify _____

5. Outcome

5.1 What was the outcome for the woman? (circle most appropriate answer) ☐☐ ☐☐ ☐☐

1. Died
2. Discharged, state date of discharge
3. Referred, specify hospital _____
4. Still in hospital

5.1.1 If the patient died, state the primary and secondary causes of death

1. Primary cause of death _____
2. Secondary cause of death _____

5.2 Did the woman or any relation provide information that the abortion was induced?

1. Yes
2. No
3. Unknown

5.3 Was any evidence of misoprostol use prior to admission found?

1. Yes
2. No
3. Unknown

5.3.1 If yes, where was the misoprostol obtained?

1. Public health facility
2. GP
3. Friend
4. Not stated
5. Other, please specify _____

Appendix 2

Data form filled in by _____

Date _____

Code _____

For official use only

Severity category _____

Coder number _____