A Survey to assess Knowledge and Acceptability of Intrauterine Devices (IUD) among Family Planning Clients and Providers in the Family Planning Services in Cape Town

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DECLARATION

I, Shelsley van Zijl Student No. V2JSHE001, hereby declare that the work on which this thesis is based is my original work (except where acknowledgements indicate otherwise), and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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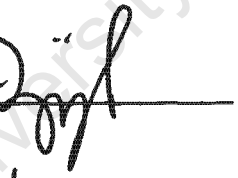
Signature: 

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral (drugs)
CBD	Central Business District
CDN	Contraceptive Development Network
CI	Confidence Interval
GCP	Good Clinical Practice
HIV	Human Immuno-deficiency Virus
HSG	Hysterosalpingography
IUD	Intrauterine Device
MEC	Medical Eligibility Criteria
MIRENA®	Levonorgestrel-releasing intrauterine system
PGWC	Provincial Government of the Western Cape
PID	Pelvic Inflammatory Disease
SADHS	South African Demographic and Health Survey
SDP	Service Delivery Point
STI	Sexually Transmitted Infection
UCT	University of Cape Town
UN	United Nations
UNPF	United Nations Population Fund
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

ABSTRACT

BACKGROUND

The IUD is a highly effective, reliable, and safe contraceptive method that is under-utilised in many countries due to persistent fears that it causes pelvic infection. Reliable evidence of the safety of this contraceptive method has not been enough to effect a change in use. The aim of this study was to assess the knowledge and acceptability of the IUD among clients and providers in the Family Planning services in Cape Town and to attempt to identify obstacles to use.

METHODS

A descriptive cross-sectional survey was conducted at eight Family Planning clinics in Cape Town. Two hundred and sixteen clients aged between 18 and 50 years, and 30 providers from the same clinics, were interviewed using structured questionnaires.

RESULTS

Awareness of the IUD among clients was low – 81 women (41%) had heard of this contraceptive method. Ever and current use were very low. Only 9 women (4%) had ever used an IUD and 3 women were still using this method. Both the women who were interested in using this method in the future (n=77; 36%) and the women who were ambivalent or not interested in future use (n=139; 64%) cited a lack of knowledge as an obstacle to use. Although most providers were aware of the availability of the IUD (n=26; 87%), their factual knowledge was limited. Infection (n=14; 47%) and increased menstrual bleeding (n=12; 40%)

were frequently mentioned as disadvantages. Referrals for and insertions of the IUD were low, and this method was often not discussed with women considering tubal ligation. Providers identified lack of client knowledge, myths and rumours among clients, lack of skilled providers to insert the device, and lack of promotion of the IUD, as significant obstacles to greater use of this method.

CONCLUSION

Although the IUD is available in the public sector services, it is not being utilized. Better education of both clients and providers is essential in order to improve accessibility and acceptability of this highly effective, and cost effective, contraceptive method.

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CHAPTER 1: INTRODUCTION

Intrauterine devices (IUD) are a particularly effective modern contraceptive option, but their use varies considerably throughout the world. The World Health Organization (WHO) estimates that approximately 156 million women worldwide use IUDs, of whom about 60 million are in China (Rivera and Best, 2002; Guillebaud, 2004).

According to United Nations (UN) statistics on contraceptive prevalence (i.e. the percentage of women of reproductive age, 15 to 49 years, in marital or consensual union, who are currently using contraception), the IUD seems to be a popular choice in some countries but in many other countries use is low (Table 1.1) (United Nations, 2003; Salem 2006).

Table 1.1: World-wide IUD use, 2003

Country	IUD use (%)	Country	IUD use (%)
Cuba	43.5%	Australia	4.9%
Vietnam	37.7%	Holland	3.6%
Israel	30%	Canada	2.9%
Finland	25.8%	Guatemala	2.2%
Norway	24.1%	El Salvador	1.5%
Jordan	23.6%	Brazil	1.1%
France	19.9%	India	1.6%
Mexico	14.1%	USA	0.7%
UK	6%		

Reference: World Contraceptive Use, United Nations, 2003

Apart from Northern Africa, where IUD use is as high as 35.5% in Egypt and 21.5% in Tunisia, overall use in Africa is low. This ranges from 0.1% in the Democratic Republic of Congo, 0.7% in Ghana, and 0.4 % in Tanzania, to 1.8% in South Africa, 1.3% in Botswana, and 2.7% in Kenya (United Nations, 2003).

The variation in the application of the IUD as a contraceptive method can, in part, be explained by experiences with the Dalkon Shield IUD in the USA. This device was introduced in 1971 and because of the smaller size was marketed specifically for use in nulliparous women (Westhoff, 1996). At the time of its entry to the contraceptive market, there were growing concerns about the risks of using hormonal contraception, and the Dalkon Shield immediately became a popular alternative (Zimmer, 1996). Within a year of its release it was being used by two thirds of the USA IUD market (Hubacher and Cheng, 2004). By the mid-1970s, however, the effectiveness of the Dalkon Shield was already being questioned. It seemed to be less effective at preventing pregnancy than had been reported, and when the method failed, the pregnancies often ended in septic spontaneous miscarriages and occasionally in client deaths (Westhoff, 1996; Zimmer, 1996). The device was withdrawn from the IUD market by 1975, but the litigation that arose out of these events was ongoing into the 1980s, resulting in bankruptcy of the company that had manufactured the Dalkon Shield, and in litigation against the manufacturers of several other IUDs (Zimmer, 1996). This effectively destroyed the IUD market in the USA and the prevalence of IUD

use decreased from 9.3% in 1976 to 7.1% in 1982 and 2% by 1988 (Hubacher and Cheng, 2004).

There are several reasons why the Dalkon Shield resulted in these incidents. Firstly, the device was designed with a multifilament tail, which appeared to act as a wick to aid the movement of bacteria from the vagina into the uterus, and therefore increased the risk of pelvic infection (Mishell, 1998; Guillebaud, 2004). Secondly, the insertion technique of the Dalkon Shield differed from the other IUDs because of the physical design and this was thought to introduce bacteria into the uterus (Hubacher and Cheng, 2004). Finally, the Dalkon Shield was marketed for use in young, nulliparous women who may have been at a greater risk of sexually transmitted infections (STIs) and pelvic inflammatory disease (PID) (Westhoff, 1996; Hubacher and Cheng, 2004).

Since the advent, and withdrawal, of the Dalkon Shield, much research and literature on IUDs has addressed the risk of infection with IUD use, generating considerable confusion and concern about the safety of this method (Grimes, 2000; Hubacher and Cheng, 2004). Despite controversies during the 1980's and 1990's about this association, it is now clear that IUDs are safe and are not a significant risk for PID or infertility (Haseltine and Stewart, 1996; Grimes, 2000). STIs, specifically chlamydia and gonorrhoea, are independent risk factors for PID and infertility, regardless of IUD use, and if they are present (and untreated) at

the time that an IUD is inserted, the risk of PID is increased in these women (Grimes, 2000).

Studies in Mexico, Britain, New Zealand, and Norway, have indicated that the IUD can safely be used in nulliparous women and does not increase the risk of infertility through tubal occlusion (Grimes, 2001; Hubacher et al, 2001). Evidence from studies in Kenya suggests that IUD use is safe in carefully selected women who are HIV positive (Sinei et al, 1998; Morrison et al, 2001; WHO Medical Eligibility Criteria for Contraception, 2004).

With failure rates as low as those for tubal ligation (2.2% failure rate for the CuT380A copper-containing IUD cumulative over 12 years compared to 1.9% for tubal ligation cumulative over 10 years), the IUD rivals tubal ligation as a highly effective contraceptive method (Mishell, 1998). In addition, the immediate reversibility of the IUD is an advantage in a setting such as the USA where 20% of women who have a tubal ligation under 30 years of age regret their decision (Hillis et al, 1999).

Despite this evidence, misperceptions about the safety of the IUD continue, with resultant low IUD use (Salem, 2006). Studies in Australia, the USA, and El Salvador indicate that fear of litigation, lack of adequate skill and experience in inserting the device, and a persistent belief that the IUD causes infection, have been significant reasons why providers do not discuss or recommend the IUD to

women (Weisberg et al, 1994; Katz et al, 2002; Stanwood et al, 2002; Espey et al, 2003). In Guatemala, Ghana, and El Salvador, service delivery issues have contributed to the low use of IUDs. Factors such as a lack of adequate equipment and devices, and time constraints when counselling contraceptive clients, influence whether providers discuss IUDs as a contraceptive option or not (Katz et al, 2002; Brambila and Taracena, 2003; Gyapong et al, 2003). Surveys in other African countries have revealed that healthcare providers create additional barriers by applying non-evidence based eligibility criteria that restrict access to this contraceptive method (Miller et al, 1998).

Given the evidence for the IUD as a safe, highly effective, and cost effective contraceptive option, Bangladesh, Nepal, and developing countries in Africa and South America have recently shown a renewed interest in the potential of this method, and have started addressing barriers to the greater use of the IUD, including policy and service delivery constraints (Salem, 2006). Perceptions of the IUD among potential clients are, however, also a significant factor that contributes to low uptake of this method. Women are either not aware of the IUD or, if they are, they have negative perceptions that are based on misinformation or their experience of side effects such as heavy menstrual bleeding (Salem, 2006).

Reports from Ghana, Guatemala, the USA, West Germany, and El Salvador have indicated that, while women lack knowledge of the IUD and have concerns about side effects, fear of using the IUD and negative attitudes towards it seem

to be influenced more by rumours and myths rather than by personal experience. For example, concerns that the IUD can cause cancer, that it can get lost in a woman's body, or that, if a pregnancy occurs, the baby will be harmed by the IUD, impact negatively on the acceptability of this method (Forrest, 1996; Oddens, 1999; Katz et al, 2002; Brambila and Taracena, 2003; Gyapong et al, 2003; Gilliam et al, 2004; Asker et al, 2006). In contrast, most women who use an IUD, particularly in the USA where use is very low, are highly satisfied with it because of the effectiveness of the method, the low level of action required from the user, and the reversibility compared to tubal ligation (Forrest 1996; Rivera and Best, 2002).

In South Africa, there is almost no information about the perceptions and attitudes of family planning clients and providers about IUDs. Anecdotal evidence suggests that providers discourage IUD use because of service-related issues and misperceptions regarding safety. Knowledge and use of the IUD in South Africa is low, and preliminary results of the 2003 South African Demographic and Health Surveys (SADHS) indicate that use has decreased since 1998 (Department of Health, 2003).

International contraceptive studies conducted in Cape Town by the Contraceptive Development Network (CDN), although not exclusively investigating IUDs, have contributed information about contraceptive use in Cape Town. One of the more recent surveys, a multi-centre study on the acceptability of amenorrhoea

associated with contraception, found that current use of IUDs among the women who were surveyed in public sector Family Planning Clinics in Cape Town was zero (Glasier et al, 2003). This decline in the use of the IUD seems to be consistent with trends in other African countries e.g. Ghana and Kenya, where use of the IUD declined between the mid-1980s and the mid-1990s (Gyapong et al, 2003). Since these trends have coincided with the emergence of conflicting research evidence in the 1980s associating the IUD with pelvic infection, it may be assumed that in a region such as Southern Africa where there is a high prevalence of STIs, infertility, and HIV, healthcare providers remain reluctant to promote this method (Gyapong et al, 2003).

In addition, National Family Planning Services have historically been fraught with racially biased policies that have impacted on the quality and access of contraceptive services for women in South Africa, and in 2001 the Department of Health published revised National Contraception Policy Guidelines which were based on the WHO Medical Eligibility Criteria for Contraceptive Use (Department of Health, 2001). The intent is to strive for the provision of high-quality contraceptive services by enabling all people to exercise their contraceptive choice safely and freely (Department of Health, 2001).

In the light of this policy and in view of limited health care resources in the public health sector, the relative cost-effectiveness of the copper IUDs and the evidence of the safety and effectiveness of modern IUDs compel us to explore the

potential of the IUD in the provision of contraceptive services in South Africa (Trussell, 1995; Salem, 2006). In addition, the levonorgestrel-releasing intrauterine system (Mirena®) provides an attractive alternative for women who desire long-term, reversible contraception but are unsuited to use of a copper IUD. This method combines the benefits of copper intrauterine devices with those of hormonal contraception, has the added advantage of decreasing menstrual bleeding, and, through the local effect on the endometrium and cervical mucus, may also reduce the risk of infection and protect against endometrial cancer (Keller, 1996; Diaz et al, 2000).

The aim of this study was to determine the knowledge and acceptability of the intrauterine device as a contraceptive method among family planning clients and providers in the Family Planning Services in Cape Town.

The objectives were:

- To determine the socio-demographic, reproductive health, and contraceptive characteristics of the women surveyed
- To determine the knowledge of family planning clients and providers about the IUD
- To determine the acceptability of the IUD to family planning clients and providers
- To determine current practice i.e. the choice of IUDs by family planning clients, and recommendation and insertion of IUDs by providers
- To identify obstacles to the use of the IUD

CHAPTER 2: LITERATURE REVIEW

As a result of experiences with the Dalkon Shield in the early 1970s, concern that the IUD causes infection has dominated the opinions of health carers offering family planning services. Although concern about the potential side effects of copper IUDs i.e. increased menstrual bleeding and increased dysmenorrhoea, and the belief that it acts as an abortifacient, have also limited use, fear of PID has remained a significant deterrent to recommendation of this contraceptive method (Mishell, 1998). Research on the IUD since the late 1970s has concentrated on confirming and establishing the risk of pelvic infection in the presence of an IUD (Hubacher and Cheng, 2004).

Many of the earlier studies found an association between IUD use and PID, with the relative risk of PID ranging between 2 and 9. During the 1980s the results from several large cohort and case-control studies challenged this association (Burkman, 1996). Two publications from the Women's Health Study in the USA, the largest case-control study at that time, indicated that the risk of PID was related to insertion, was much greater with the Dalkon Shield device than other IUDs, and was low for women in mutually monogamous relationships (Burkman, 1981; Lee et al, 1988). These results contributed to growing concerns that methodological errors and bias, caused by the selection of inappropriate controls, poor diagnostic criteria, and by not controlling for confounding variables, were largely responsible for the apparent association between IUD use and PID (Burkman, 1996).

Re-analysis of the data from the Oxford Family Planning Association Study, a large cohort study of women in England and Scotland between 1968 and 1974, was a case in point. The original results in 1981 had indicated a relative risk of 10.5 of admission with acute PID with IUD use (95% CI: 5.4 – 32) (Vessey et al, 1981). When the analysis of the data was adjusted to control for confounding factors (e.g. oral contraceptive use, smoking) the relative risk of PID with use of a copper IUD decreased to 1.8 (95% CI: 0.8-4.0) (Buchan et al, 1990).

In 1992, confirmation that use of an IUD did not cause PID was provided by a review of the data from a series of international, multicentre IUD clinical trials conducted by the WHO (Farley et al, 1992). Possibly the most significant of their findings was that the risk of PID was strongly related to insertion of the device. This risk was more than six times higher during the first 20 days after insertion (adjusted rate ratio of 6.36 per 1000 women-years) and then decreased and remained low during eight years of follow-up (adjusted rate ratio of 1.00 per 1000 women-years after 20 days) (Farley et al, 1992).

These researchers also found that PID rates were lower among women who had IUDs inserted in the later part of the study, varied according to geographical region, and were in inverse relationship to the age and parity of the women. Their explanations for these findings were that over time, women were more carefully selected for IUD use, as awareness of the STI-PID relationship improved. There were geographical variations in the prevalence of STIs, and younger women had

a higher risk of STIs than older, multiparous women due to their differing sexual behaviour (Farley et al, 1992).

The evidence from the WHO trials was important for several reasons. First was the fact that these studies were prospective randomized controlled trials which allow for randomization of confounding factors, minimisation of selection bias, and the analysis of temporal cause-and-effect relationships between exposure (e.g. IUD use) and outcome (e.g. PID). The WHO data allowed analysis of observations that had been noted in other studies but, because of methodological limitations, had not been analysed previously (Burkman, 1996). Secondly, the data had been collected from diverse settings - Europe, Asia, the Americas, China and Africa – and were "*the most comprehensive available for temporal, geographical, and follow-up trends in the risk of PID among IUD users*" (Farley et al, 1992).

Based on the logic of a causal association between the IUD and pelvic infection, it has been assumed that the IUD could potentially cause tubal infertility in women, and nulliparity has often been presented as a contra-indication to IUD use (Grimes, 2001). Similarly, in the current climate of high HIV prevalence in Africa, IUD use has been discouraged in HIV positive women for fear of a greater infection risk in immune-compromised women (Gyapong et al, 2003). Evidence which has been emerging over the last decade does not support either of these assumptions.

The results from an unmatched case-control study in Mexico between 1997 and 1999, investigating the risk of tubal infertility in nulligravid women using copper IUDs, indicated that there was no significant association between IUD use and infertility caused by tubal occlusion, but there was an association between the presence of Chlamydia antibodies and PID (Hubacher et al, 2001). The inherent biases of this type of study design were managed in several ways. The selection of two groups of controls - women with primary infertility not caused by tubal occlusion, and pregnant (fertile) women – allowed the researchers to stratify their analysis and examine several different relationships between IUD use and infertility. Diagnostic bias was reduced by visually diagnosing tubal occlusion with hyterosalpingography (HSG) and recording results on a standardised form adapted from the recommendations of the American Society of Reproductive Medicine, and blinding of radiologists to the IUD history and risk factor information of the participants. Collecting information on risk factors for STIs and testing all the women for chlamydia antibodies allowed them to control for confounding by this variable, and although antibody tests do not conclusively prove temporality i.e. that the chlamydia infection preceded the tubal damage, this is the most likely conclusion, based on clinical knowledge of the causal relationship between STIs and pelvic infection (Hubacher et al, 2001).

Some of the evidence suggesting that use of an IUD might be safe in carefully selected HIV positive women with access to adequate health care comes from two studies conducted in Nairobi, Kenya. The first (Sinei et al, 1998) was a short-

term cohort study over four months, and the second was a two-year follow-up study of the same cohort of women (Morrison et al, 2001). Although the length of follow-up of the first study was adequate for detecting short term complications of interest (e.g. removals, expulsions), it was inadequate to detect differences in complications that resulted from a deterioration in immune status (only 9% had a CD4 count <200 at the time of this study) (Sinei et al, 1998), hence the follow-up by Morrison and colleagues (2001). Both studies had similar results, with no increased risk of overall complications in HIV positive women: adjusted odds ratio of 0.8(95% CI: 0.38-1.68) (Sinei et al, 1998) and adjusted hazard ratio of 0.98 (95% CI: 0.59-1.60)) (Morrison et al, 2001). In the later study there was a non-significant association between IUD use and infection-related complications after five months for HIV positive women, with a hazard ratio of 1.8 (95% CI: 0.8-4.4). The strength of these studies lay in their prospective design, the matching of controls by site and enrolment dates, and high and similar follow-up rates in both groups. Diagnostic bias was reduced by blinding physicians to HIV status (Sinei et al, 1998; Morrison et al, 2001).

The evidence on IUD use and pelvic infection and infertility, dating back to 1969, has been reviewed by Grimes (2000) in a comprehensive systematic review that included all available publications and was not restricted to English. He gave priority to randomised controlled trials but also included analytic studies and case-series studies, and used a standard system (United States Preventive Services Task Force rating system) to grade the evidence and his

recommendations and conclusions (Grimes, 2000). The review was structured around a series of clinical questions about the relationship between IUDs and infection, addressing the role of the device itself in causing infection, the role of the tailstring, the role of STIs and HIV in increasing the risk of infection, the relationship between the IUD and infertility, and the role of the Mirena®). Based on the evidence, he concluded that the lowest risk of PID with use of an IUD is in women who have no cervical infections/STI, and in settings of high STI prevalence a single dose of doxycycline could lower the risk of PID after insertion (Grimes, 2000).

On the basis of evolving evidence about the IUD, the WHO published revised Medical Eligibility Criteria for contraceptive use (MEC) in 2004. These evidence-based guidelines were first published in 1996, and have an unambiguous and easy-to-use system for classifying recommendations concerning who can use a contraceptive method and under what circumstances. The expert working group for the 2003/2004 Medical Eligibility Criteria based their revisions on systematic reviews of research that had been published in peer-reviewed journals between 1996 and August 2003 drawn from several large databases (MEDLINE, PREMEDLINE, POPLINE and others) (Rinehart, 2004).

There were some significant changes regarding the IUD in the 2004 recommendations. The first was that most women with an HIV infection could start using an IUD even if they have AIDS, on condition they were well and using

antiretroviral medication (ARVs) (Category 2). In addition, an IUD need not be removed if a woman developed HIV or AIDS, but she needed to be monitored closely (Category 2). These changes were based on evidence that the IUD does not increase a woman's chance of acquiring HIV, and on limited evidence that complications of IUD use are not more common in women with HIV compared to women without HIV and that IUDs do not increase HIV transmission to sexual partners (Rinehart, 2004). Evidence indicating that there was no difference in the clinical course of PID whether an IUD was left in situ or removed, led to a Category 2 classification for an IUD to be left in situ in the event of an STI or PID, as long as the infection was treated successfully (Rinehart, 2004).

In view of good quality medical evidence to indicate that the IUD is a safe and effective contraceptive method, and that it is the most cost-effective over a five-year period, several organizations have been trying to improve the image of the IUD and promote greater use of this method (Trussell et al, 1995; Haseltine and Stewart, 1996; Rivera and Best, 2002). A number of developing countries have also shown a renewed interest in expanding the use of the IUD in their contraceptive programmes (Salem, 2006). Research on trends of IUD use, the acceptability of this method to service providers and family planning clients, and obstacles to use, has been emerging over the last decade and a half (Salem, 2006). In comparison to the evidence on the IUD and infection, this evidence is limited and of variable quality, but several common themes have been identified.

Three surveys conducted among providers illustrate the effect of attitudes and perceptions on use of the IUD. The first was conducted in Australia among urban and rural GPs in private practice (Weisberg et al, 1994), the second among specialist Obstetrician-Gynaecologists in private practice in the USA (Stanwood et al, 2002), and the third among women's health care providers (specialists and general doctors, and midwives) in a public sector Navajo Indian health service in the USA (Espey et al, 2003).

These were all postal surveys, and the reliability of the results was affected by selection techniques, and response rates, which potentially introduced bias in their results. The studies had varying response rates - 50% (Stanwood et al, 2002), 65% (Weisberg et al, 1994), and 75% (Espey et al, 2003). Although an attempt was made to select respondents randomly, Stanwood et al were the only group of researchers that examined whether differences between respondents and non-respondents had introduced a selection bias (Stanwood et al, 2002).

Despite each survey having slightly different objectives, all found that attitudes to the IUD were generally positive but that this did not translate into recommendation of this method or high levels of IUD insertion. Stanwood et al (2002) found that 98% (n=398) of their respondents had a positive attitude to IUDs but of the 80% (n=325) who had inserted an IUD in the last year, 79% (n=257) inserted 10 or less. Similarly, respondents in the study by Espey and colleagues (2003) had good knowledge about the IUD, and 65% (n=70) had

inserted an IUD within the last year, but only 17% (n=18) had inserted more than 10. In the survey by Weisberg et al (1994) only 20.6% (n=27) of GPs who had previously inserted IUDs (n=90; 68.7%) were still inserting them at the time of the survey.

Practices regarding discussion and recommendation of this method were also similar in all three studies. Fifty percent of respondents (n=65) in the survey by Weisberg and colleagues (1994) indicated that they always discussed the IUD with clients, 6% (n=8) never discussed it, and 29% (n=38) only discussed it if directly asked about it. Results from the survey by Espey et al (2003) were very similar. Eighty-four percent of respondents (n=341) in the private practice survey by Stanwood and colleagues (2002) did not offer or insert an IUD for women who were not monogamous, 81% (n=329) restricted access for women with a history of PID, and two thirds did not recommend it to nulliparous women and women with a history of STIs.

Some of the reasons presented by the providers for not recommending or inserting the IUD included fear of litigation and the high cost of indemnity insurance, too few requests from women, and concerns about the risk of infection and about side effects. Other reasons included a lack of experience with inserting IUDs, and a belief that the IUD acted as an abortifacient (Weisberg et al, 1994; Stanwood et al, 2002; Espey et al, 2003). From these surveys, it seems that belief in the link between IUD and infection and fear of litigation in the event of

complications with IUD use has persisted into the 2000s despite evidence to the contrary, and knowledge does not appear to be enough to change practice.

Research in Family Planning services in Africa suggests that there is an additional element restricting access to contraception. Providers appear to apply their personal moral standards and attitudes about appropriate contraceptive use to clients, and, regardless of official policies and guidelines, apply eligibility criteria for contraceptive use (Miller et al, 1998). Miller and colleagues (1998) have reviewed how providers in five countries (Botswana, Burkina Faso, Kenya, Senegal, and Zanzibar) restrict access by selective application of criteria relating to marital status, spousal consent, parity, and age. From the results of the review it was evident that providers applied restrictions that were not consistent with service protocols, and the extent to which this occurred varied between countries and between criteria. The strong Muslim culture of Zanzibar seemed to influence access to contraception at all levels, with the implication that marriage was a basic requirement for any form of contraceptive use (Miller et al, 1998).

In all five countries between 10% (Botswana: n=29) and 33% (Zanzibar: n=63) of providers required that women have spousal consent to use an IUD, and in Zanzibar 83% (n=159) of providers required a woman to be married before being eligible for an IUD. In Burkina Faso, Zanzibar, and Kenya policy required that women had proven their fertility by having either one or two children before using an IUD. This criterion was most strictly applied in Kenya (n=362; 93%) and ranged between 48% (n=327) in Burkina Faso and 60% (n=160) in Botswana.

Age limits were also applied to IUDs, with a minimum of 19 years and a maximum of 40 years being required for insertion of an IUD (Miller et al, 1998).

The data for this review came from national Situation Analysis studies conducted between 1989 and 1998, with the support of the Population Council and USAID. These were comprehensive assessments of the quality of family planning services in each country, using a representative sample of service delivery points (SDP), and included a complete inventory of equipment and supplies at the SDPs, service statistics for the previous year, interviews with all the service providers at each SDP, observations of interactions between service providers and clients, and interviews with the clients (Miller et al, 1998). There does not, however, appear to have been a specific examination of the providers' motivation for applying these restrictions which would be essential in order to understand and eliminate this barrier to use.

Research on the acceptability of the IUD to family planning clients is also limited and is often integrated with general contraceptive research. Much of this research has, appropriately, been qualitative in nature, using focus groups and in-depth interviews for data collection. In some of the cross-sectional analytic surveys, representativeness was improved by using a population-based rather than a clinic-based sample, and by including past and current users and non-users of the IUD. In an effort to improve the validity of their data, some studies have used method triangulation or have combined quantitative and qualitative

methods, but the socio-cultural environments within which this research has been conducted vary considerably and limit generalisability of the results.

Despite this, several themes have consistently been identified as barriers to use: a lack of knowledge and misconceptions about IUDs, negative perceptions based on myths and hearsay rather than personal experience, fears related to infection and side effects, and inadequate or inappropriate counselling about the method from health care professionals (Petta et al, 1994; Oddens, 1995; Forrest, 1996; Gilliam et al, 2004; Asker et al, 2006).

In a review of two studies conducted in the USA in 1991 and 1995, Forrest (1996) found that knowledge of the IUD among women from lower income groups was low, and that many women obtained information about this method from non-medical sources such as family, friends, television and other media advertising, and their perceptions were based on hearsay rather than personal experience. In addition, the contraceptive characteristics most highly valued by clients - safety (91%), ease/convenience of use (86%), and effectiveness (86%) - were least likely to be associated with the IUD (Forrest, 1996).

In a study in West Germany, Oddens (1995) assessed women's satisfaction with five commonly used contraceptive methods, including the IUD. Twenty-three percent (n=342) of the 1466 respondents were past and current users of an IUD. Among these women, 59% (n=201) were satisfied with the IUD (less than

satisfaction with oral contraceptives and sterilization). Concerns about method failure were low, but there were concerns about health risks from IUD use. Up to 65% of these women associated the IUD with an increase in their menstrual bleeding, and more painful and prolonged menstruation, but women reported that the IUD had a positive effect on sex life and no effect on mood (Oddens, 1995).

In an effort to identify risk factors for discontinuation of IUD use due to personal (versus clinical) reasons, Petta et al (1994) conducted a pilot study using data from international randomized clinical IUD trials conducted in fourteen countries in North, Central, and South America, Africa, Asia, the East Indies, and Europe (1985-1989), and examined reasons for discontinuing IUD use. The most common personal reason for discontinuation was to plan pregnancy (n=28; 31.8%), and the second most common reason was because the husband or family were against use of the IUD (n=23; 26.1%). The results from this study indicated that having no formal education and residence in a rural area were both significantly associated with discontinuations due to personal reasons, but the researchers were not able to establish any other risk factors.

A qualitative study by Gilliam and colleagues (2004), aimed at understanding barriers to contraceptive use in Latino adolescents in the USA, identified a significant concern about contraceptive side effects (either from personal experience or hearsay), and this was given as one of the main reasons for not using, discontinuing or switching methods. The IUD was mentioned as a popular

alternative choice for women who were having problems with hormonal contraception. Misconceptions about various methods were based mostly on rumour and myth and second hand information from friends and family, and this information was given greater importance than information from medical professionals. For example, some women believed that, in the event of pregnancy with an IUD in situ, the IUD could cause harm to the fetus (see table 2.1, page 33) (Gilliam et al, 2004).

A qualitative study among British women in Birmingham (Asker et al, 2006) investigated perceptions and beliefs among non-users of IUDs which created barriers to use. Themes relating to a lack of factual information and to concerns about side effects and infection, were consistent with what had been identified from other studies, but concerns about the insertion procedure and the belief that lack of control over the method meant that it was less reliable than other methods, were new themes (Asker et al, 2006).

In Ghana (Gyapong et al, 2003), Guatemala (Brambila and Taracena, 2003), and El Salvador (Katz et al, 2002), comprehensive national surveys on IUD availability, use, and acceptability have been conducted in randomly selected urban and rural clinics. Apart from the survey in El Salvador, which only used qualitative techniques, a combination of quantitative and qualitative methods was employed and both the providers and clients of family planning services were included. The quantitative analyses have used data from demographic surveys

and service statistics, and the qualitative analyses have used data obtained from in-depth interviews, focus group discussions, and simulated client visits. The combination of data collection methods provided a wider range of information and perspectives, and the simulated client visits were a unique form of data collection. These were conducted in order to evaluate the information obtained during the provider interviews, and involved training (usually) two researchers to imitate typical clients who then visited each of the selected clinics for a family planning consultation during which they enacted a predetermined case scenario (Katz et al, 2002).

All three surveys produced similar results. Among the clients, Katz and colleagues (2002) found that IUD users had positive opinions and non-users had negative opinions about the IUD. Fear was the most common reason for negative opinions, and this was predominantly based on rumours and myths about the IUD or the non-specific belief that the IUD was "dangerous" or "harmful" (Katz et al, 2002).

In Ghana, a lack of knowledge about the IUD, concern about side effects, and rumours and myths about the IUD prevented women from choosing to use this method. A particularly interesting concern among the clients was that the IUD caused weight loss and "ugliness", implying that in this setting the weight gain that is often mentioned by clients as an unwanted side effect of contraceptive use, is socially valued (Gyapong et al, 2003).

Table 2.1 Fears, myths and rumours about the IUD

Katz et al, 2002	**Providers**
	It can move and get lost within the body
	It can fall and will be in the baby's head
	One's partner can feel the IUD/discomfort
	It can fall out
	It causes cancer
	It causes abortion
	Clients
	It is "dangerous"/"harmful"
	It causes cancer
	It becomes embedded in the uterus
	One can get pregnant and the baby will be born with the IUD
Brambila and Taracena, 2003	**Clients**
	It can get stuck on the unborn child's head, face or body
	It causes cancer
	It becomes embedded within the tissue of the uterus
	It can cause an abortion
	It is uncomfortable during sexual intercourse
	It gets lost within the body
	It sterilizes women
	It moves or is expulled when performing rigorous exercise
	It provokes weight loss or weight gain
	It provokes chronic pain
	It causes infections or serious illness
Gyapong et al, 2003	**Clients**
	Fear of the design and the "metal" it contains: the "wire" could rust and be harmful
	It can cause serious illness e.g. heart disease or heart attack
	It can lead to abdominal distension
	It can cause infertility
	It causes offensive discharge
	It can cause irritation of the genital area
	It can lead to painful intercourse
	It can shift (become displaced), resulting in pregnancy
	If pregnancy results with the IUD in place the baby may be born with it
	It can burn the womb
Gilliam et al, 2004	**Clients**
	It can choke the fetus
	One can become pregnant with an IUD in place
	It can prevent future pregnancies
	It will lead to infections
Asker et al, 2006	**Clients**
	It causes weight loss which could lead to pregnancy
	One can become pregnant with IUD in place and it becomes embedded in the embryo/gets stuck to the baby's head
	The coil can become wrapped around the baby's neck
	Men can feel it during intercourse

Family Planning clients in Guatemala were not aware that the IUD was available at clinics and the once-off cost to clients of purchasing an IUD was a deterrent to use (Brambila and Taracena, 2003). These clients also lacked information, were misinformed and had concerns based on myths and rumours about the IUD, for

example that it could get lost within the body, and that it could become embedded within the tissue of the uterus (Brambila and Taracena, 2003).

The simulated interviews in El Slavador and Guatemala indicated that, despite providers' positive attitudes towards this method and their assertion that they did discuss the IUD with clients, this method was not routinely discussed and preference was given to the injectable progestogens and oral contraceptive pills. Some of the reasons offered for this were the limited supply of devices, the lack of trained personnel to insert the device, and lack of time to discuss all methods during contraceptive counselling (Katz et al, 2002; Brambila and Taracena, 2003). In contrast, almost all the providers in Ghana spontaneously mentioned the IUD, but use was discouraged among nulliparous women and adolescents, which was consistent with the Ghana National Reproductive Health Service Protocol (Gyapong et al, 2003). Despite the availability of supplies and equipment at services in Ghana, providers indicated that a lack of family planning specialists and concerns about causing harm during insertion created obstacles to IUD use (Gyapong et al, 2003).

The benefit of using simulated client visits in these surveys lay in the potential for confirming the providers' subjective reports of their practices, and indicated that information varied depending on who was being interviewed (Katz et al, 2002). A lack of transparency towards providers about the use of this data collection method may have been negatively perceived as an attempt to entrap them, and

none of the researchers have mentioned how this was managed. In addition, the source of the quantitative data in the Ghana and Guatemala surveys needs to be viewed with caution. Service statistics are notoriously incomplete and unreliable, and it is not clear how this was managed or what effect it could have had on their results. Drawing data from several different sources, as was done in these studies, requires careful attention to the comparability of the statistics since definitions of the variables of interest may have differed between sources.

The situation regarding IUD use in South Africa is under-investigated. Statistics indicate that use is very low, but reasons for this have not been researched. Some of the most recent information on contraceptive use in South Africa comes from the South African Demographic and Health Surveys (SADHS) of 1998 and 2003. The 1998 survey was the first of its kind conducted after the political changes of 1994, and was extensive, with high response rates (above 90% of the sampled households). A stratified, population-based sample of women between 15 and 49 years provided a nationally representative sample, and the survey was significant for the fact that, for the first time in South Africa's history, comprehensive and reliable data were collected for all population groups and for both the rural and urban population. The survey was repeated in 2003 and a preliminary report of the results was released (Department of Health, 1998, 2003).

The results of the 1998 survey indicated that, although knowledge of modern contraceptive methods was high (almost all women (97%) had heard of at least one modern method), and use was also high (over 80% of married women, 20-44 years, had used a modern contraceptive method), this varied considerably between methods, between rural and urban women, and between provinces (the Western Cape Province had the highest contraceptive prevalence at 74%) (Department of Health, 1998). There were also differences between ethnic groups in terms of methods used, with the injectable progestogens used predominantly by coloured and black women, and the oral contraceptive pills used by white and Indian women (Department of Health, 1998).

IUD use had decreased over time and this method was no longer available in some clinics because of a lack of trained staff to insert the device. Ever-use (among all women) was 8.5% and current use was 1.9%. The private sector, despite being used by a small proportion of women, was the source of devices for almost half (46%) of IUD users (Department of Health, 1998). Preliminary results from the 2003 survey indicate that while patterns of contraceptive use appear to be unchanged, there has been a decline in both knowledge and use of the IUD since 1998. In 2003, knowledge of the IUD was 40.3%, ever-use was 3.8%, and current use was 0.6% (Department of Health, 2003).

Several international multi-centre contraceptive studies, conducted over the last decade by the Edinburgh-based Contraceptive Development Network (CDN),

have used Cape Town as one of the study centres and also provide statistics on IUD use. These studies have been surveys of the acceptability of new contraceptive methods to family planning clients e.g. a once-a-month pill for women, and male hormonal contraception in the form of pills, injections or implants (Glasier et al, 1999; Martin et al, 2000; Glasier et al, 2000), and one study examined the impact of antenatal contraceptive advice on contraceptive use during the first year after childbirth (Smith et al, 2002). The results indicate that IUD use at the time of the surveys (i.e. current use) has been between 5% (in 1999) and 1% (in 2003).

Another of the CDN studies, a cross-sectional questionnaire survey by Glasier and colleagues in 2003, which explored the attitudes of clients and providers towards contraception-induced amenorrhoea, found that current use of the IUD in Cape Town was zero and the injectable contraceptive (Depo Provera) was the most commonly used method. An interesting outcome of this survey was that, although white or coloured women in Cape Town were significantly more likely than black women to say they disliked menstruating, the majority of black clients (n=41;60%) had used a contraceptive method that resulted in amenorrhoea. In addition, providers felt that clients wanted to menstruate while using contraception yet more than half were willing to recommend a method that stopped menstruation (Glasier et al, 2003).

Finally, after the change of Government in 1994, the Directorate: Maternal, Child and Women's Health, together with the Reproductive Health Research Unit and with guidance from the WHO and United Nations Population Fund (UNPF), initiated a consultative process to transform the national Family Planning policies (Department of Health, 2001). The WHO MEC guidelines were used as a departure point and specific recognition was given to the historical bias in the development and provision of services until 1994: "*Issues of human rights, service provision, provider training were addressed, in order to improve the sexual and reproductive health of all people in South Africa, and to enable all people to exercise their contraceptive choice safely and freely*" (Department of Health, 2001). Within this revised contraceptive policy (National Contraception Policy Guidelines), the IUD is mentioned as part of the method mix available to women in this country, despite the evidence from the SADHS that use has declined and is much lower than other methods. In the light of both this policy and the statistics from the SADHS the scene is set to explore the trends of IUD use and the factors that inhibit greater use, in order to improve access to high quality contraceptive services for all women in this country.

CHAPTER 3: METHODOLOGY

Study Design

A descriptive cross-sectional survey was undertaken. The population for this survey was facility-based i.e. women attending Reproductive Health or Family Planning services in the Cape Town Metropole and health care personnel who were providing Reproductive Health Services in the same facilities. The intent was to select clinics that had previously been part of contraceptive surveys conducted in Cape Town by the CDN and the University of Cape Town (UCT) Department of Obstetrics and Gynaecology. It was intended that these clinics would provide a sample representative of the larger ethnic/cultural groups in Cape Town.

Reproductive Health Services in Cape Town are provided by both the Health Department of the Provincial Government of the Western Cape (PGWC) and the municipalities in the greater metropolitan area. Some restructuring in the health services in the Western Cape has taken place since the last CDN contraceptive surveys and as a result we were unable to survey all the same clinics, either because these clinics had been discontinued or because access was not obtained from the relevant authority.

Of the clinics included in the survey, 7 were PGWC clinics and one was a City of Cape Town Municipal clinic. The following clinics were included:

- Greenpoint Community Health Centre (PGWC)

- Robbie Nurock Community Health Centre (PGWC)
- Cape Town Station Reproductive Health Centre (PGWC)
- Dorp Street Reproductive Health Centre (PGWC)
- Nyanga Junction Reproductive Health Centre (PGWC)
- Mitchells Plein Community Health Centre (PGWC)
- Retreat Clinic (City of Cape Town)
- Groote Schuur Family Planning Clinic (PGWC)

The first four clinics were situated within the Cape Town CBD, the next three were situated in townships on the Cape Flats, and the last was situated in the Outpatient Department of Groote Schuur Hospital, a tertiary health care facility in a suburb close to the CBD.

The type of services offered at each clinic varied. The Reproductive Health Centres exclusively provided contraceptive services and other reproductive health care e.g. Pap smears, STI services, voluntary counselling and testing (VCT) for HIV. The Community Health Centres offered comprehensive primary health care services e.g. the same services offered by the Reproductive Health Centres, as well as immunisation and well baby care, general care for chronic diseases and other minor ailments, dispensing of medication, and some emergency care.

Sample

Calculation of the client sample size was based on statistics of reproductive health visits to public sector clinics in the greater Cape Town area (provided by the Provincial Government of the Western Cape Reproductive Health programme), and on estimations of IUD knowledge (50%), ever-use (10%) and current use (2%) from the 1998 SADHS, and an acceptable margin of error of 5% (Department of Health, 1998). A sample size of 200 family planning clients provided 80% power to estimate the proportion of women who had knowledge of the IUD, 95% power to estimate the proportion of women who had ever used an IUD, and 99% power to estimate the proportion of women who were currently using an IUD.

Women between 18 and 50 years inclusive, attending a clinic for family planning advice at the time of data collection, were recruited to participate in the survey. Convenience sampling was used to recruit a group of 216 women. This was done in two ways, depending on the organisational flow of the clinics and on what would be least disruptive to service delivery. In some of the clinics it was possible for women to be directed to the interviewers by the service providers once their consultation was over. In other clinics women were recruited from the waiting areas while they were waiting to be seen by the service providers. The sample included women using contraception who were attending for any reproductive health care – contraception follow-up or counselling, Pap smears,

pregnancy testing – and in one clinic women attending the Well Mother and Baby clinic were also included if they were using contraception.

Formal sample size and power calculations were not done for the provider survey. Based on an estimation of the average number of family planning providers in each facility, and on the size of provider samples used in the CDN studies, it was decided to sample all providers working at the same facilities that clients were recruited from. This was expected to yield a sample of approximately 50 providers.

A non-random sample of 30 providers was collected. Doctors and nurses actively involved in providing reproductive health services were recruited. All the providers at each clinic were included and no-one declined to participate. This was, in reality, less than expected and we were unable to achieve the planned sample size of 50 providers.

There were no doctors providing reproductive (and specifically contraceptive) services at any of the clinics in the community, except at the Groote Schuur Family Planning Clinic, which has a Family Planning doctor who runs the service and three part-time Family Planning doctors. These doctors and the doctors that were rotating through the registrar training programme in the Department of Obstetrics and Gynaecology at Groote Schuur, at the time of the survey, were used for sampling this category of service providers.

Based on population figures from the 2001 national census, the client sample was representative of women (aged 20 to 49 years) from the larger ethnic groups in Cape Town. Coloured women and black women are proportionally the largest groups in this age category in Cape Town (approximately 46% and 34% respectively), and in our sample coloured and black women made up 46% each of the total participants (Western Cape Provincial Government, 2006).

Survey instruments

Two questionnaires were designed for the data collection: one for the family planning clients and one for the service providers. These were based on questionnaires that had been used in the CDN surveys, and on information obtained from the literature on IUD use (Glasier et al, 1999; Glasier et al, 2000; Martin et al, 2000; Katz et al, 2002; Smith et al, 2002; Brambila and Taracena, 2003; Espey et al, 2003; Glasier et al, 2003).

Both questionnaires were piloted before implementation. For this, twenty women (black, coloured, and white) attending the ultrasound department at the Groote Schuur Hospital Maternity Centre were sampled. Some of these women were pregnant but most were having ultrasound examinations for gynaecological reasons. Five service providers (three nurses and two doctors) for the pilot study were sampled from the Department of Obstetrics and Gynaecology at Groote Schuur. Written consent was obtained from all the participants. Some minor adjustments were made to both questionnaires after the pilot study to achieve

additional clarity in the questions asked. The questionnaires were then translated into Afrikaans and Xhosa, and back translated to ensure accuracy of the translations. (The questionnaires, consent, and information forms are included in Appendix A).

The questionnaire for family planning clients included questions on demographic characteristics, reproductive health, knowledge and use of contraception, and knowledge and attitudes towards IUDs. Clients' knowledge of IUDs was assessed by asking questions on past and current use, self-assessed levels of knowledge, effectiveness and safety, indications and contra-indications for use, and advantages and disadvantages compared to other methods. Attitudes towards the IUD were measured by asking clients whether they would like to use this method in the future and what their reasons for a positive or a negative response were. They were also asked to rate the acceptability of various contraceptive characteristics of IUDs as another measure of their attitudes.

The questionnaire for providers included some questions on demographic characteristics, providers' practices, knowledge and attitudes towards IUDs, and obstacles to greater use of this method. Provider practices were assessed by asking questions relating to the volume of clients seen, the availability and use of all methods at their clinic and specifically the IUD, and their contraceptive counselling practices. Providers were asked to self-assess their knowledge of IUDs, and further questions relating to indications and contra-indications for use,

advantages and disadvantages, comparative effectiveness, and infection risks were asked. Attitudes to the IUD were assessed by asking questions relating to criteria that influenced recommendation of the IUD to clients. A single open-ended question accessed their opinion on the reasons for the low use of IUDs in Cape Town, in an attempt to identify possible barriers to use.

Data collection and management

Data were collected over a period of five months (November 2006 to March 2007) by three interviewers: the principal investigator (Registered Nurse), a Xhosa-speaking Registered Nurse with prior experience of questionnaire surveys, and a second Registered Nurse working in the Reproductive Medicine research unit of the Department of Obstetrics and Gynaecology who has been involved with previous CDN contraceptive surveys. Prior to commencing the data collection the interviewers were given information on the administration of the questionnaire. Each question was discussed and a memorandum drawn up in order to ensure a uniform understanding of the questions and consistency in responses to questions from the clients and providers during the interviews.

The interviewers were instructed not to give any explanation regarding the IUD during the interviews but to address any queries only on completion of the questionnaire. They were also not to prompt any answers. The questions were read to the participants (clients and providers) and their spontaneous answers were recorded on the questionnaire. Based on previous experience from the

CDN contraceptive surveys it was decided not to use self-administered questionnaires, since many of the women attending the public sector clinics are functionally illiterate, and reluctant to participate if asked to complete a questionnaire themselves.

At recruitment, the purpose of the survey was explained to all participants and an information leaflet was supplied with a contact number if they had any further queries regarding the study. Written consent was obtained from all participants. Questionnaires were anonymised and no identifying details were included on the questionnaires or in the database. All participants were given the option of completing the questionnaire in the language of their choice. If this were not possible they were not recruited into the study.

All questionnaires were reviewed and checked for completion and accuracy by the principal investigator. Most of the questions had pre-coded answers, and the open-ended questions were coded before the data were entered into databases using Microsoft Excel spreadsheets. The electronic data were randomly checked for accuracy by a second person– one in every ten entries was checked.

Statistical Analysis

Data for 216 clients and 30 providers were analysed. Eleven clients were excluded from the analysis because they failed to meet the minimum age requirement (18 years). The data were analysed using STATA 8.0 statistical

package. Proportions were calculated to describe socio-demographic and reproductive characteristics, knowledge and acceptability of the IUD, and current practices and barriers to use. Associations between respondent characteristics and specific variables of interest e.g. education and knowledge of the IUD, were calculated using chi-squared tests.

Ethical Considerations

The study was performed in accordance with GCP Principles and the Declaration of Helsinki. Consent to conduct the study was granted by the Research Ethics Committee of the Faculty of Health Sciences at the University of Cape Town (REC Reference: 207/2006)(Appendix B), and written permission was given by the relevant authorities (PGWC and City of Cape Town) allowing the researchers access to the clients and providers in the clinics surveyed. Written consent was obtained from all participants and, in order to maintain their confidentiality, no personal identifying details were recorded.

CHAPTER 4: RESULTS

CLIENTS

A non-random sample of 227 family planning clients was recruited from eight Reproductive Health and Family Planning clinics in the Cape Town Metropole. The sample included 99 black women, 100 coloured women, 2 Indian women, 5 white women, and 10 women who either chose not to categorize themselves or felt that they did not fit any category. Eleven women were subsequently excluded because they did not meet the age criteria, leaving a sample size of 216 women.

Thirty-seven women declined to participate in the survey for two reasons - time constraints (n=33) and unavailability of the Xhosa speaking interviewer to conduct the interview (n=3). One woman cited her lack of knowledge about IUDs as a reason for not wanting to participate.

A non-random sample of 30 providers was collected from the same facilities that the client sample was drawn from. At each clinic, all those involved in providing family planning services were interviewed. None declined to participate.

Table 4.1: Number of eligible participants per clinic

Facility Name	Number of client participants N=216	Number of provider participants N=30
Green Point Community Health Centre (PGWC)	30	5
Robbie Nurock Community Health Centre (PGWC)	29	3
Cape Town Station Reproductive Health Centre (PGWC)	28	3
Dorp Street Reproductive Health Centre (PGWC)	30	1
Nyanga Junction Reproductive Health Centre (PGWC)	30	1
Mitchells Plein Community Health Centre (PGWC)	30	5
Groote Schuur Family Planning Clinic (PGWC)	14	9
Retreat Clinic (City of Cape Town)	25	3
Total	**216**	**30**

Socio-demographic characteristics

Socio-demographic characteristics are presented in Table 4.2. The majority of clients were between 20 and 39 years of age, and single (including divorced and widowed women). Most had some formal education, but less than half had completed their secondary education, and approximately a third was unemployed.

Table 4.2: Socio-demographic characteristics: clients

Characteristics	n(%)
Age categories	
< 20	13 (6)
20-29	118 (55)
30-39	59 (27)
40-50	26 (12)
Marital status	
Single (including divorced, widowed)	117 (54)
Married (including co-habiting)	99 (46)
Highest level of education	
Primary	16 (7)
Secondary: incomplete	75 (35)
Secondary: complete	89 (41)
Tertiary: Post-matric certificates	15 (7)
Tertiary: Degree/Diploma	21(10)
Employment	
Employed	131 (61)
Unemployed	67 (31)
Student/Scholar	18 (8)
Religious affiliation	
Christian	184 (85)
Muslim	29 (14)
Other	3 (1)
Ethnic group	
Black	99 (46)
Coloured	100 (46)
Indian	2 (1)
White	5 (2)
Unclassified	10 (5)

Reproductive characteristics

Sixty-six clients (31%) had contraception-induced amenorrhoea and were unable to comment on their menstrual pattern.

Table 4.3: Reproductive characteristics: clients

Characteristics	n(%)
Frequency of menstruation	
Regular	115 (53)
Irregular	35 (16)
Amenorrhoea	66 (31)
Duration of menstruation	
Up to 7 days	127 (59)
More than 7 days	16 (7)
Variable	7 (3)
Amenorrhoea	66 (31)
Volume of menstruation	
Heavy	40 (18)
Moderate	85 (39)
Light	25 (12)
Amenorrhoea	66 (31)
Menstrual problems	
No	89 (41)
Yes	61 (28)
Amenorrhoea	66 (31)
Gravidity	
Nulligravida	41 (19)
Multigravida	172 (80)
Grand-multigravida	3 (1)
Living children	
Nulliparous	41 (19)
None	8 (4)
Multiparous	167 (77)
Grand-multiparous	-
Miscarriages	
One - three	23 (11)
N/A	193 (89)
Termination of Pregnancy (TOP)	
One - three	16 (7)
N/A	200 (93)
Intention to have (more) children	
Yes	96 (44.5)
No	96 (44.5)
Don't know	24 (11)

Based on their menstrual characteristics – regular menses, menses lasting up to seven days, moderate or light menstrual flow, and no problems during menses - approximately half the women would be considered suitable for the use of an IUD (Table 4.3). The majority of clients had experienced at least one pregnancy, and only 41 women (19%) were nulligravida. A small discrepancy between gravidity and the number of living children was accounted for by miscarriages (n=23),

termination of pregnancy (n=16), and fetal or infant deaths (n=6). The participants were divided in their desire for future fertility. Equal numbers indicated that they did or did not want (more) children in the future, and 24 (11%) were ambivalent about future fertility.

Contraceptive knowledge and practices

Women were initially asked to list the methods of contraception that they had heard of and then to mention all those they had ever used. The data are presented in Table 4.4.

Table 4.4: Contraceptive knowledge and use: clients

Contraceptive method	Awareness n (%)	Ever use n (%)	Current use n (%)
Female sterilization	34 (16)	3 (1)	7 (3)
Male sterilization	4 (2)	-	-
Intrauterine device	88 (41)	9 (4)	3 (1)
Combined oral contraceptive pill	183 (85)	85 (39)	28 (13)
Progestogen-only pill	13 (6)	7 (3)	2 (1)
Emergency contraception	23 (11)	3 (1)	-
Injectable progestogens	201 (93)	184 (85)	148 (69)
Male condom	113 (52)	42 (19)	11 (5)
Female condom	39 (18)	1 (0.5)	-
Spermicides	1 (0.5)	-	-
Diaphragm	1 (0.5)	-	-
Hormone implants	6 (3)	-	-
Natural methods	10 (5)	-	-
Other	6 (3)	-	-
None	-	-	17 (8)

Awareness of the IUD and ever-use was low among these clients. Eighty-eight women (41%) had heard of the IUD, and only 9 (4%) had ever used this method. The methods that were mentioned most by clients, both with regard to awareness and ever-use, were the injectable progestogens, combined oral contraceptive pills, and male condoms. Awareness and use of all other methods was low. Current use of the IUD was very low: only 3 women (1%) had an IUD.

The most common method currently being used was injectable progestogens (n=148; 69%).

Women were asked about the reasons for the choice of their current contraceptive method (Table 4.5). Some respondents gave more than one reason for their choice, but lack of reliability in taking the combined oral contraceptive pill (n=41; 19%) and recommendation of the method by a service provider (n=41; 19%) were the most frequently mentioned reasons. Only five women were using condoms for dual protection against pregnancy and STIs. On the whole, clients were happy with their current method, including those not using contraception.

Table 4.5: Contraceptive choice: clients

Characteristics	n(%)
Reasons for method choice*	
Forgetting the pill	41 (19)
Recommended by friend/family member	8 (4)
Other methods had side effects	29 (14)
Recommended by Doctor/Sister	41 (19)
Protection against pregnancy	14 (6)
Convenience	14 (6)
Efficacy in preventing pregnancy	7 (3)
Dual protection	5 (2)
Other	64 (31)
Satisfaction with current method	
Very happy	72 (33)
Happy	92 (43)
Neutral	29 (13.5)
Unhappy	15 (7)
Very unhappy	7 (3)
N/A	1 (0.5)

*Some clients gave more than one answer

Awareness and knowledge about the IUD

Knowledge about the IUD was assessed in two ways – by asking about awareness of the method, and by assessing factual knowledge.

Awareness of the IUD was low and detailed knowledge was limited and often inaccurate (Table 4.6). One hundred and seventeen participants (54%) said they knew nothing about the IUD, and the remainder (n=96; 45%) felt they knew only a little about it. Only three women, two of whom had previously used an IUD, said they knew "a lot" about the method. Awareness of the Mirena® was very limited. Five women had heard of it, and 213 (99%) said they knew nothing about it.

Table 4.6: Knowledge about IUDs: clients

Characteristics	n(%)
Self-assessed level of knowledge about IUDs	
Nothing	117 (54)
A little	96 (45)
A lot	3 (1)
Knowledge of contraceptive action: IUD*	
Don't know	128 (59)
Device/Object inserted into vagina/uterus	56 (26)
Spermicidal	3 (1)
Other	30 (14)
Knowledge of levonorgestrel-releasing IUS (Mirena®)	
Yes	5 (2)
No	211 (98)
Self-assessed level of knowledge about Mirena®	
Nothing	213 (99)
A little	3 (1)
Knowledge of contraceptive action: Mirena®	
Don't know	214 (99)
Device/Object inserted into vagina/uterus	2 (1)

*Some clients gave more than one answer

In addition, 128 participants (59%) were unable to explain the method of action of the IUD. Three mentioned that it was spermicidal, and 56 (26%) mentioned only that it was a device or object inserted into the vagina or uterus. The rest gave vague descriptions unrelated to the specific method of action and some simply

said that the IUD prevented pregnancy. Of the two participants who offered an explanation for the method of action of the Mirena®, both only said that it was a device or object inserted into the vagina or uterus.

Factual knowledge of the effectiveness of the IUD, of indications and contra-indications for use, and of advantages and disadvantages, was low and consistent with the participants' own assessment of their level of knowledge about the IUD.

Table 4.7: Knowledge of the effectiveness of the IUD: clients

Effectiveness comparative to other methods (N=216)	IUD Better n(%)	IUD Same n(%)	IUD Worse n(%)	Don't know n(%)
Injectable contraceptive	54 (25)	28 (13)	12 (6)	122 (56)
Sterilization (woman)	70 (32)	17 (8)	27 (13)	102 (47)
Oral contraceptive	97 (45)	17 (8)	10 (5)	92 (42)
Male Condom	97 (45)	10 (5)	17 (8)	92 (42)

Almost half were unable to make a comparison regarding the effectiveness of the IUD relative to four other contraceptive methods (Table 4.7). Despite citing low levels of knowledge, 97 participants (45%) indicated accurately that the IUD was more effective than the combined oral contraceptives and male condoms, but there was greater uncertainty whether the IUD was more effective than injectable progestogens and sterilization.

When asked about indications for use of an IUD, participants offered an opinion despite their professed lack of knowledge of this method (Table 4.8).

Table 4.8: Knowledge of indications for IUD use: clients

Indications for use (N=216)	Yes n(%)	No n(%)	Sometimes n(%)	Don't know n(%)
Unmarried women	134 (62)	15 (7)	10 (5)	57 (26)
Nulliparous women	105 (48.5)	47 (21.5)	6 (3)	58 (27)
Young women (under 30 years of age)	114 (53)	31 (14)	9 (4)	62 (29)
Women with multiple sexual partners	116 (54)	27 (12.5)	5 (2)	68 (31.5)
HIV positive women	97 (45)	34 (16)	4 (2)	81 (37)
Heavy menstrual bleeding, dysmenorrhoea	62 (29)	61 (28)	2 (1)	91 (42)

Participants agreed that the IUD was suitable for use by unmarried women (n=134; 62%), by women younger than 30 years of age (n=114; 53%), and by women with multiple sexual partners (n=116; 54%). Fewer agreed that women with an HIV positive status could use an IUD (n=97; 45%).

There was a lack of knowledge regarding contra-indications to use of an IUD (Table 4.9). One hundred and eighty-one (84%) participants were unsure if there were reasons for avoiding use.

Table 4.9: Knowledge of contra-indications for IUD use: clients

Characteristics	n(%)
Knowledge of contra-indications to use of an IUD	
Yes	11 (5)
No	24 (11)
Don't know	181 (84)
Reasons for avoiding use	
N/A	204 (94)
Client has menstrual problems	1 (0.5)
HIV positive status	1 (0.5)
Other	10 (5)

Knowledge of the advantages and disadvantages of IUDs relative to other contraceptive methods was also low (Table 4.10). Only 72 participants (33%) indicated that they knew of any advantages and 38 (17%) knew of any disadvantages. Of the former, 21 women (29%) mentioned the convenience of

fewer visits to the clinic, 18 (25%) mentioned the IUD's long-term efficacy, and 21 (29%) failed to mention any of the clinical characteristics as advantages.

Table 4.10: Knowledge of advantages and disadvantages (IUD and Mirena®): clients

Advantages and Disadvantages	**n(%)**
Knowledge of advantages of the IUD	
Yes	72 (33)
No	9 (4)
Don't know	135 (63)
Advantages mentioned*	**N=72/216 (33%)**
Highly effective/Almost effective as T/L	2 (3)
Long-term effect	18 (25)
Immediately reversible	3 (4)
Convenience e.g. fewer clinic visits	21 (29)
Not user dependent	14 (19)
Non-hormonal method/ No hormonal side effects	4 (6)
Other	21 (29)
Knowledge of disadvantages of the IUD	
Yes	38 (17)
No	19 (9)
Don't know	159 (74)
Disadvantages mentioned*	**N=38/216 (18%)**
Increased menstrual bleeding/pain	2 (5)
Infection	6 (16)
Pregnant with device in situ	12 (32)
Unnoticed expulsion	6 (16)
Other	24 (63)
Knowledge of advantages of the Mirena® compared to the copper IUD	
Yes	4 (2)
No	6 (3)
Don't know	206 (95)
Advantages mentioned*	**N=4/216 (0.5%)**
Decreased menstrual bleeding or amenorrhoea	1 (25)
No increase in menstrual pain	1 (25)
Other	3 (75)
Knowledge of disadvantages of the Mirena® compared to the copper IUD	
Yes	1 (0.5)
No	2 (1)
Don't know	213 (99)
Disadvantages mentioned*	**N=1/216 (0.5%)**
Cost: expensive	1 (100)
Not available in public sector facilities	1 (100)

*Some clients gave more than one answer

Among those who mentioned any disadvantages, the greatest concern related to method failure. Twelve women (32%) cited pregnancy with an IUD in situ as a disadvantage. There appeared to be little concern about possible side effects of the IUD, with only two women mentioning increased menstrual bleeding and pain

as a disadvantage. Knowledge of the advantages and disadvantages of the Mirena® relative to copper IUDs was almost non-existent.

Acceptability of the IUD

In order to assess the acceptability of the IUD to participants, they were asked about reasons for their choice and discontinuation of an IUD, and their reasons for an interest (or lack of interest) in using this method in the future. They were also asked to respond to statements regarding several key contraceptive characteristics of the IUD.

Table 4.11: Ever-use and current use of IUDs

Characteristics	**n(%)**
Ever-use of an IUD	
Yes	9 (4)
No	207 (96)
Current use of an IUD	
Yes	3 (1)
No	6 (3)
N/A	207 (96)
Reasons for choice of an IUD*	**N=9/216 (4%)**
Recommended by Doctor/Sister/Counsellor	2 (22)
Convenience: fewer visits to the clinic	3 (33)
Not wanting to use hormonal methods	2 (22)
Fewer side effects	2 (22)
Independent of user compliance	1 (11)
Other	1 (11)
Reasons for discontinuation of an IUD*	**N=6/216 (3%)**
Heavy menstrual bleeding	2 (33)
Dysmenorrhoea	1 (17)
Method failure i.e. pregnancy	2 (33)
Other	2 (33)

*Some clients gave more than one answer

Table 4.11 illustrates ever and current use of an IUD, and reasons for choosing or discontinuing this method. Choice of this method appears to be based on characteristics other than contraceptive effectiveness, while the reasons for discontinuation appear to be due to side effects and method failure rather than to myths, rumours, or misinformation about the IUD.

Participants who had never used an IUD previously were asked if they had an interest in using this method in the future (Table 4.12). Seventy-seven women (36%) expressed an interest in future use and 71 (33%) were ambivalent. The few women who were sterilized were included with the group of women who said they had no interest in future use.

Table 4.12: Interest in future use of an IUD

Characteristics	n(%)
Interest in using IUD in the future	
Yes	77 (36)
No	59 (27)
Don't know	71 (33)
N/A: past or current use	9 (4)
Reasons for interest in future use*	**N=77/216 (36%)**
Highly effective	7 (9)
Long-term effect	42 (55)
No desire for sterilization	11 (14)
Other	27 (35)
Reasons for lack of interest in future use	**N=139/216 (64%)[¶]**
Safety concerns: causes infection	8 (6)
Concern that it causes diseases e.g. cancer	1 (1)
Migration of device within the body	2 (2)
Harm to the fetus if pregnancy results	2 (2)
Fear that partner will feel it during intercourse	2 (2)
Lack of knowledge	68 (52)
Discomfort if device is permanently in situ	9 (7)
Averse to the idea of device being inserted into uterus	8 (6)
Other	30 (23)

*Some clients gave more than one answer
[¶] Includes past and current IUD users

The primary reason for an interest in using an IUD was the long-term contraceptive effect of this method, mentioned by 42 (55%) of these women. Those participants, who were ambivalent or not interested, commonly mentioned a lack of knowledge about the method as a deterrent to use. Seven of these women made reference to some of the myths and rumours about the IUD e.g. migration of device within the body.

Despite very limited knowledge of the IUD and Mirena®, clients were asked to indicate the acceptability of the contraceptive characteristics and potential side effects of both methods (Table 4.13).

Table 4.13: Acceptability of the contraceptive characteristics of the IUD and Mirena®

Characteristics (N=216)	Very acceptable n(%)	Quite acceptable n(%)	Unacceptable n(%)	Very unacceptable n(%)
Almost as effective as sterilization but reversible	132 (61)	64 (30)	14 (6)	6 (3)
Long-term effect, up to 10 years	146 (67)	54 (25)	10 (5)	6 (3)
Non-hormonal action	138 (64)	58 (27)	14 (6)	6 (3)
Mirena® contains hormones	49 (23)	55 (25)	94 (44)	18 (8)
IUD may cause increased menstrual bleeding	7 (3)	15 (7)	112 (52)	82 (38)
IUD may cause increased dysmenorrhoea	3 (1)	10 (5)	107 (50)	96 (44)
Mirena® decreases menstrual bleeding	76 (35)	86 (40)	43 (20)	11 (5)
Mirena® may cause amenorrhoea	47 (22)	40 (19)	76 (35)	53 (24)

There appeared to be a positive response to the characteristics of the IUD (effectiveness, long-term efficacy, non-hormonal action), but a negative response to the potential side effects (increased menstrual bleeding, increased dysmenorrhoea). Although the non-hormonal action of the IUD was acceptable to 196 clients (91%), only 112 (52%) found the hormonal component of the Mirena® unacceptable. A decrease in menstrual bleeding associated with use of the Mirena® was acceptable to 162 participants (75%), but 129 (59%) indicated that amenorrhoea was unacceptable to them.

Barriers to IUD use: client perspectives

Possible barriers to greater use of the IUD as contraception lie in both the client (demand) and provision (supply) side of Family Planning services. In order to assess these, the 77 clients who had expressed an interest in future use of an IUD were asked to indicate obstacles to current use of this method (Table 4.14).

Table 4.14: Barriers to IUD use: client perspectives

Reasons preventing current use of an IUD despite an interest in future use*	**N=77/216 (36%)**
Lack of knowledge	59 (77)
Use discouraged by a service provider	1 (1)
Lack of availability at the service: requires referral elsewhere for insertion	3 (4)
Concerns about the side effects and health risks	1 (1)
Other	12 (16)
IUD use ever recommended	**N=216 (%)**
Yes	33 (15)
No	179 (83)
Can't remember	4 (2)
IUD use ever discouraged	**N=216 (%)**
Yes	16 (8)
No	197 (91)
Can't remember	3 (1)
Reasons why use was discouraged*	**N=16/216 (7%)**
Age: too young	2 (13)
Nulliparity: difficult to insert	2 (13)
Potential for method failure	8 (50)
Other	6 (36)

*Some clients gave more than one answer; non-response from two clients

The most common answer from these women was that they lacked knowledge or information about the method (n=59; 77%). Participants were asked to recall if the IUD had ever been recommended to them. Their responses indicated clearly that the IUD was not being recommended but it was also not specifically being discouraged. This suggests that service providers are rarely discussing the IUD during contraceptive and sterilisation counselling.

Analysis of associations

An analysis of associations between the socio-demographic characteristics of the clients and three outcome variables - awareness of the IUD, ever-use of the IUD, and interest in future use of the IUD – was performed. The number of women currently using an IUD was very low (n=3) and it was not possible to analyze an association between participant characteristics and this variable.

Age was associated with awareness of the IUD (Table 4.15), and older women (40-50 years) were more likely to know about this method than younger women (χ^2=14.5762, P=0.002). A tertiary education (degree/diploma) was significantly associated with IUD awareness (χ^2 = 9.9257; P = 0.042), and being unemployed, a student, or a learner, was associated with a lack of awareness (χ^2 = 16.1049; P = 0.007). Coloured and white women were more likely than black and Indian women to know about the IUD (χ^2 = 20.3842, P = 0.000).

Table 4.15: Socio-demographic characteristics associated with awareness of the IUD

Characteristic	Aware n(%)	Not Aware n(%)	P-value
Age categories			
< 20	2(15)	11(85)	0.002
20-29	41(35)	77(65)	
30-39	27(46)	32(54)	
40-50	18(69)	8(31)	
Marital status			
Single	35(35)	66(65)	0.421
Married	38(44)	48(56)	
Divorced	7(54)	6(46)	
Widow	1(33)	2(67)	
Co-habiting	7(54)	6(46)	
Highest level of education			
Primary	3(19)	13(81)	0.042
Secondary: incomplete	31(41)	44(59)	
Secondary: complete	38(43)	51(57)	
Tertiary: post-matric certificates	3(20)	12(80)	
Tertiary: Diploma/Degree	13(62)	8(38)	
Employment			
Unemployed	19(28)	48(72)	0.007
Employed	65(50)	64(50)	
Student	3(20)	12(80)	
Scholar	0(0)	3(100)	
Other	1(100)	0(0)	
Religious affiliation			
Christian	64(38)	103(62)	0.134
Catholic	10(62.5)	6(37.5)	
Muslim	11(38)	18(62)	
Other	3(75)	1(25)	
Ethnic group			
Black	25(25)	74(75)	0.000
Coloured	54(54)	46(46)	
Indian	1(50)	1(50)	
White	4(80)	1(20)	
Other	4(40)	6(60)	

Significant associations were also found between an interest in future use of an IUD and age, and ethnic group (Table 4.16). Younger women (<40 years), and black and coloured women, were more likely to be interested in using this method (χ^2 = 30.3218; P = 0.000 and χ^2 = 21.2552; P = 0.047 respectively). However, the number of white and Indian participants was small and their lack of interest must be interpreted with caution.

Table 4.16: Socio-demographic characteristics associated with an interest in future use of an IUD

Characteristic	Interest n(%)	No interest n(%)	P-value
Age categories			
< 20	10(77)	3(23)	0.000
20-29	99(80)	23(20)	
30-39	35(60)	24(40)	
40-50	8(31)	18(69)	
Marital status			
Single	76(75)	25(25)	0.094
Married	53(62)	33(38)	
Divorced	8(62)	5(38)	
Widow	1(33)	2(67)	
Co-habiting	10(77)	3(23)	
Highest level of education			
Primary	10(62.5)	6(37.5)	0.358
Secondary: incomplete	47(63)	28(37)	
Secondary: complete	68(76)	21(24)	
Tertiary: post-matric certificates	11(73)	4(27)	
Tertiary: Diploma/Degree	12(57)	9(43)	
Employment			
Unemployed	48(72)	19(28)	0.358
Employed	86(65)	45(35)	
Student	11(73)	4(27)	
Scholar	3(100)	0(0)	
Other	1(100)	0(0)	
Religious affiliation			
Christian	118(71)	49(29)	0.109
Catholic	11(69)	5(31)	
Muslim	18(62)	11(38)	
Other	1(25)	3(75)	
Ethnic group			
Black	73(74)	26(26)	0.047
Coloured	65(65)	35(35)	
Indian	1(50)	1(50)	
White	1(20)	4(80)	
Other	8(80)	2(20)	

No significant associations were found between socio-demographic characteristics and ever-use of an IUD (Table 4.17).

Table 4.17: Socio-demographic characteristics associated with ever-use of the IUD

Characteristic	Used previously n(%)	Never used n(%)	P-value
Age categories			
< 20	0(0)	13(100)	0.642
20-29	4(3)	114(97)	
30-39	3(5)	56(95)	
40-50	2(8)	24(92)	
Marital status			
Single	3(3)	98(97)	0.505
Married	6(7)	80(93)	
Divorced	0(0)	13(100)	
Widow	0(0)	3(100)	
Co-habiting	0(0)	13(100)	
Highest level of education			
Primary	0(0)	16(100)	0.475
Secondary: incomplete	4(5)	71(95)	
Secondary: complete	2(2)	98(98)	
Tertiary: post-matric certificates	1(7)	14(93)	
Tertiary: Diploma/Degree	2(10)	19(90)	
Employment			
Unemployed	1(1.5)	66(98.5)	0.637
Employed	8(6)	121(94)	
Student	0(0)	15(100)	
Scholar	0(0)	3(100)	
Other	0(0)	1(100)	
Religious affiliation			
Christian	6(4)	161(96)	0.286
Catholic	0(0)	16(100)	
Muslim	3(10)	26(90)	
Other	0(0)	4(100)	
Ethnic group			
Black	2(2)	97(98)	0.249
Coloured	2(5)	95(95)	
Indian	0(0)	2(100)	
White	1(20)	4(80)	
Other	1(10)	9(90)	

The only significant association for three reproductive characteristics – gravidity, number of living children, and desire for future fertility – was with an interest in future use of an IUD (Table 4.18). Clients who had less than four pregnancies (χ^2 = 33.6767; P = 0.014) and less than four live children (χ^2 = 39.7449; P = 0.002) were more likely to express an interest in future use, and there was a significant interest in future use among all women regardless of their desire for future fertility (χ^2 = 22.0932; P = 0.001).

Table 4.18: Reproductive characteristics associated with an interest in future use of an IUD

Characteristic	Interest n(%)	No interest n(%)	P-value
Gravidity			
Nulligravida	27(66)	14(34)	0.014
One	55(89)	7(11)	
Two	41(65)	22(35)	
Three	17(61)	11(39)	
Four	6(40)	9(60)	
Five	2(50)	2(50)	
> Five	0(0)	3(100)	
Living children (Parity)			
Nulliparous	27(66)	14(34)	0.002
None	7(87.5)	1(12.5)	
One	57(89)	7(11)	
Two	40(59)	28(41)	
Three	13(65)	7(35)	
Four	3(25)	9(75)	
Five	1(33)	2(67)	
> Five	0(0)	0(0)	
Intention to have (more) children			
Yes	80(83)	16(17)	0.001
No	52(54)	44(46)	
Don't know	16(67)	8(33)	

There were no significant associations between these reproductive characteristics and awareness of the IUD (Table 4.19) or ever-use of the IUD (Table 4.20).

Table 4.19: Reproductive characteristics associated with awareness of the IUD

Characteristic	Aware n(%)	Not aware n(%)	P-value
Gravidity			
Nulligravida	18(44)	23(56)	0.498
One	19(31)	43(69)	
Two	27(43)	36(57)	
Three	14(50)	14(50)	
Four	8(53)	7(47)	
Five	1(25)	3(75)	
> Five	1(33)	2(67)	
Living children (Parity)			
Nulliparous	17(41)	24(59)	0.909
None	3(37)	5(63)	
One	24(37)	40(63)	
Two	27(40)	41(60)	
Three	11(55)	9(45)	
Four	5(42)	7(58)	
Five	1(33)	2(67)	
> Five			
Intention to have (more) children			
Yes	32(33)	64(67)	0.120
No	46(48)	50(52)	
Don't know	10(42)	14(58)	

Table 4.20: Reproductive characteristics associated with ever-use of the IUD

Characteristic	Used previously n(%)	Never used n(%)	P-value
Gravidity			
Nulligravida	1(2)	40(98)	0.294
One	0(0)	62(100)	
Two	4(6)	59(94)	
Three	3(11)	25(89)	
Four	1(7)	14(93)	
Five	0(0)	4(100)	
> Five	0(0)	3(100)	
Living children (Parity)			
Nulliparous	1(2)	40(98)	0.275
None	0(0)	8(100)	
One	0(0)	64(100)	
Two	5(7)	63(93)	
Three	2(10)	18(90)	
Four	1(8)	11(92)	
Five	0(0)	3(100)	
> Five	0(0)	0(0)	
Intention to have (more) children			
Yes	1(1)	95(99)	0.096
No	7(7)	89(93)	
Don't know	1(4)	23(96)	

PROVIDERS

Socio-demographic characteristics

The socio-demographic characteristics of the providers are illustrated in Table 4.21. Two-thirds (n=20; 67%) of the service providers were nurses, and 26 (87%) were women.

Table 4.21: Socio-demographic characteristics: providers

Characteristic	n(%)
Professional category	
Doctors (Obstetric and Gynaecology Registrars, Family Planning Doctor)	7 (23)
Nurses (Registered Nurse, Enrolled Nurse, Enrolled Nurse Assistant)	20 (67)
Other (Health Educator)	3 (10)
Sex	
Female	26 (87)
Male	4 (13)
Age categories	
30-39	10 (33)
40-49	9 (30)
50-59	8 (27)
60-69	3 (10)
Marital status	
Single (including divorced, widowed)	10 (34)
Married (including co-habiting)	20 (66)
Number of children	
None	3 (10)
One - Five	27 (90)
> Five	-
Religious affiliation	
Christian	21 (70)
Muslim	4 (13)
Jewish	3 (10)
Other	2 (7)
Ethnic group	
Black	7 (23)
Coloured	13 (44)
Indian	1 (3)
White	6 (20)
Other	3 (10)

Awareness of contraceptive availability and use

Knowledge of contraceptive availability was high (Table 4.22), and twenty-six providers (87%) mentioned that the IUD was available through their service. Twenty-one providers (70%) indicated that female condoms were available, but fewer mentioned the availability of emergency contraception (n=16; 53%).

Awareness of patterns of contraceptive use is also illustrated in Table 4.22. Five providers, all at Groote Schuur clinic, mentioned the IUD as the third most common method used.

Table 4.22: Knowledge of contraceptive availability: providers

Characteristics	n(%)
Methods available	
Female sterilization	24 (80)
Male sterilization	18 (60)
Intrauterine device	26 (87)
Combined oral contraceptive pill	30 (100)
Progestogen-only pill	17 (57)
Emergency Contraception	16 (53)
Injectable progestogens	29 (97)
Male condom	25 (83)
Female condom	21 (70)
Spermicides	-
Diaphragm	4 (13)
Hormonal Implants	3 (10)
Other	3 (10)
Methods most commonly used (in order)	
First: Injectable contraceptives	24 (80)
Second: Oral contraceptives	25 (83)
Third: Condoms	10 (33)

Knowledge about the IUD

Providers were asked to assess their level of knowledge about the IUD (Table 4.23). Only one provider felt she had excellent knowledge of IUDs, and only half (n=15) was aware of the Mirena®.

Table 4.23: Knowledge of IUDs: providers

Characteristic	n(%)
Self-assessment of level of knowledge	
Excellent	1 (3)
Good	19 (63)
Fair	8 (27)
Poor	2 (7)
Awareness of types of intrauterine contraception	
Copper IUDs	14 (47)
Copper IUD and Levonorgestrel-releasing intrauterine system (Mirena®)	15 (50)
Other	1 (3)

Knowledge of indications for use was limited (Table 4.24). Although most providers were aware that pregnancy, a current STI, and high risk of STIs were contra-indications to use, only 19 (63%) thought it could be used by nulliparous women or for emergency contraception, and 15 (50%) that it could be used by HIV positive women.

Table 4.24: Knowledge of indications for IUD use: providers

Indications for use (N=216)	Yes n(%)	No n(%)	Sometimes n(%)	Don't know n(%)
HIV positive status	15 (50)	9 (30)	2 (7)	4 (13)
Current STI	2 (7)	25 (83)	2 (7)	1 (3)
High risk of STI	-	24 (80)	5 (17)	1 (3)
Previous history of PID	6 (20)	20 (67)	3 (10)	1 (3)
Previous ectopic pregnancy	10 (33)	13 (43)	3 (10)	4 (13)
Nulliparous women	19 (63)	6 (20)	5 (17)	-
Pregnancy	-	29 (97)	-	1 (3)
After a TOP or miscarriage	18 (60)	11 (37)	-	1 (3)
Immediately post-partum	6 (20)	19 (63)	2 (7)	3 (10)
Emergency contraception	19 (63)	9 (30)	1 (3)	1 (3)

When asked to compare effectiveness, three-quarters of the providers (n=23; 76%) considered the IUD more effective than combined oral contraceptives and male condoms, but there was less certainty with regard to the injectable progestogens and tubal ligation (Table 4.25).

Table 4.25: Knowledge of effectiveness of IUDs: providers

Effectiveness comparative to other methods (N=216)	IUD Better n(%)	IUD Same n(%)	IUD Worse n(%)	Don't know n(%)
Sterilization	11 (37)	11 (37)	7 (23)	1 (3)
Injectable progestogens	16 (54)	6 (20)	7 (23)	1 (3)
Combined oral contraceptive pill	23 (76)	2 (7)	5 (17)	-
Male condom	23 (76)	2 (7)	5 (17)	-
Emergency contraception	20 (66)	5 (17)	5 (17)	-
Natural methods	26 (87)	1 (3)	3 (10)	-

All providers were able to mention at least one advantage or disadvantage of the IUD without prompting (Table 4.26). The contraceptive characteristics of this method were most frequently quoted as advantages, specifically that the IUD is a reversible contraceptive. Several other non-medical benefits were mentioned, such as lack of dependence on client compliance and convenience for the client as fewer clinic visits were required. Only two providers mentioned cost-effectiveness as an advantage.

Table 4.26: Knowledge of advantages and disadvantages (IUD and Mirena®): providers

Characteristic	n(%)
Advantages of IUDs*	
Very effective	9 (30)
Long-term method	11 (37)
Immediately reversible	12 (40)
Non-hormonal method	10 (33)
Relatively cost effective method	2 (7)
Not dependent on user compliance	19 (63)
Convenience: requires little attention; requires fewer clinic visits	10 (33)
Fewer/no side effects	6 (20)
Other	14 (47)
Disadvantages of IUDs*	
May cause increased menstrual bleeding	12 (40)
May cause increased menstrual pain and backache	9 (30)
Provider dependent: must be inserted by a trained provider	3 (10)
Unnoticed expulsion	9 (30)
Pregnancy with the device in situ	3 (10)
Ectopic pregnancy	1 (3)
Vaginal or pelvic infection	14 (47)
Displacement/Embedded in uterine tissue	5 (17)
None	6 (20)
Other	11 (37)
Advantages of Mirena® compared to copper IUDs*	
Don't know	17 (57)
Decreased menstrual bleeding or amenorrhoea	6 (20)
Can be used for treatment of bleeding disorders	5 (17)
None	1 (3)
Other	6 (20)
Disadvantages of Mirena® compared to copper IUDs*	
Don't know	15 (50)
Cost	8 (27)
Poor accessibility/availability	1 (3)
None	3 (10)
Other	7 (23)

*Some providers gave more than one answer

Side effects and infection were most frequently mentioned as disadvantages. There was also concern about the potential for unnoticed expulsion of the device resulting in method failure. Providers had limited knowledge of the advantages and disadvantages of the Mirena® compared to copper IUDs.

Knowledge of the association between use of an IUD and risk of infection was also limited. All but one of the providers agreed that the IUD does not cause infertility, but fewer agreed that the IUD did not cause infection (n=19; 63%), and could be used by nulliparous women (n=21; 70%) (Table 4.27).

Table 4.27: Knowledge of association between IUD use and infection: providers

Characteristic	n(%)
The IUD causes pelvic infection in women	
Yes	8 (27)
No	19 (63)
Don't know	3 (10)
The IUD causes infertility in women	
Yes	1 (3)
No	29 (97)
All IUDs cause increased menstrual bleeding and pain	
Yes	8 (27)
No	20 (66)
Don't know	2 (7)
The IUD should not be used in nulliparous women	
Yes	9 (30)
No	21 (70)

Only half knew that the period of greatest risk for infection was within the first three weeks after insertion (Table 4.28). Five providers still believed that the risk increased the longer the IUD was in situ, and 7 said there was no risk at all. Knowledge about the need to exclude the presence of STIs at the time of insertion of the device was similar. Just over half (n=17; 57%) stated that endocervical swabs should be done routinely, and approximately two-thirds

(n=21; 70%) stated that it was unnecessary to give prophylactic antibiotics routinely after insertion.

Knowledge regarding the duration of use of an IUD appeared to be out-of-date. Less than half (n=12; 40%) knew that an IUD could be left in situ for 5 to 10 years, depending on the type of device, with the same number saying that all IUDs could only be used for five years. Even less knew how long a Mirena® could remain in situ.

Table 4.28: Knowledge of IUD use and infection risk: providers

Characteristic	n(%)
Period of greatest risk of infection	
Within 3 weeks	15 (50)
1-3 months	1 (3)
1 year	2 (7)
The longer it is in situ	5 (17)
No risk	7 (23)
Routine endocervical swabs for STIs prior to IUD insertion	
Yes	17 (57)
No	7 (23)
Only if she has symptoms of an infection	3 (10)
Don't know	3 (10)
Routine antibiotics after IUD insertion	
Yes	1 (3)
No	21 (70)
Only if she has an infection	8 (27)
Duration of use	
Copper IUD:	
1 year	-
5 years	12 (40)
10 years	1 (3)
5 to 10 years depending on the device	12 (40)
Don't know	5 (17)
Mirena®:	
1 year	-
5 years	10 (33)
10 years	4 (13)
Don't know	16 (54)

Acceptability of the IUD

The acceptability of the IUD to providers would, in part, be reflected by their contraceptive counselling and practice, and this was assessed by estimating referrals for and insertions of IUDs, and their recommendations for contraceptive methods (Table 4.29). Referrals and insertions were both low. Twenty-seven providers (90%) had referred less than 10 clients for IUDs in the previous year, and only four had inserted more than 10 during the same period.

Table 4.29: Providers practice: counselling and referral for IUDs

Characteristics	n(%)
Number of clients seen by provider per week	
Less than 10	11 (37)
10 – 25	8 (27)
26 – 50	2 (7)
51 – 75	1 (3)
76 – 100	1 (3)
> 100	7 (23)
Number of women referred for insertions: last 12 months	
None	9 (30)
1 - 10	18 (60)
11- 25	2 (7)
26- 50	-
> 50	1 (3)
Number of IUDs inserted: last 12 months	
Copper:	
None	23 (77)
1 - 10	3 (10)
11 - 25	2 (7)
26 - 50	1 (3)
> 50	1 (3)
Mirena®:	
None	27 (90)
1 - 10	2 (7)
11 - 25	1 (3)
IUD discussed during contraceptive counselling	
Yes	14 (47)
Only if I think she is suitable for it	7 (23)
Only if she asks about it	2 (7)
No	7 (23)
IUD discussed during sterilization counselling	
Yes	13 (43)
Only if I think she is suitable for it	4 (14)
No	13 (43)

In addition, the IUD was not being widely recommended or discussed with clients. Fourteen providers (47%) indicated that they always discussed the IUD during contraceptive counselling, and only 13 (43%) always discussed this method during counselling for sterilisation.

Table 4.30: Factors influencing recommendation of the IUD

Characteristics	n(%)
Factors positively influencing recommendation*	
Family complete/ Ambivalent towards tubal ligation/ Too young for tubal ligation	12 (40)
Desires long-term contraception	2 (7)
Client request	4 (13)
Non-compliant with other methods	8 (27)
Multiparous	2 (7)
Stable, monogamous relationship	2 (7)
Side effects from other methods	14 (47)
Contraindications to hormonal contraception	1 (3)
Other	18 (60)
Factors negatively influencing recommendation*	
Nulliparous	4 (13)
High risk of STIs	11 (37)
Lack of interest in the method	1 (3)
Positive HIV status	5 (17)
History of PID/STIs	15 (50)
Poor menstrual history	9 (20)
Uterine bleeding disorders	2 (7)
Service related issues e.g. availability	1 (3)
Providers lack insertion skills/experience	1 (3)
None	3 (10)
Other	13 (43)
Client factors influencing recommendation	
Age	
Yes	24 (80)
No	6 (20)
Parity	
Yes	25 (83)
No	5 (17)
Marital status	
Yes	10 (33)
No	20 (67)
Consent of partner	
Yes	4 (13)
No	26 (87)
Past medical history	
Yes	28 (93)
No	2 (7)
Menstrual history	
Yes	29 (97)
No	1 (3)

*Some providers gave more than one answer

Acceptability was also assessed by asking providers to indicate factors that positively and negatively influenced their decision to recommend an IUD to a client (Table 4.30). Concern about infection was one of the primary reasons for not recommending this method, with a history of infection and a high risk of STIs frequently mentioned as negative influences.

Only two providers mentioned service-related factors and lack of skill in inserting IUDs as deterrents. When asked about the influence of specific client factors on recommendation, marital status and partner consent were not important influences, but a client's age, parity, menstrual and medical history did have an effect on recommendation of the IUD.

Barriers to IUD use: provider perspectives

Finally, in an attempt to identify barriers to use of the IUD, providers were asked to state what they felt the obstacles were to greater use of the IUD in Cape Town (Table 4.31). Four broad categories were identified: service-related factors, provider-related factors, client-related factors, and concerns about side effects. The reasons that stood out prominently were clients' lack of knowledge of this method and the existence of myths and rumours about the IUD among clients, the lack of skilled providers to insert the device, and lack of promotion of this method by providers

Table 4.31: Barriers to IUD use: provider perspectives

Barriers identified*	n(%)
Service-related factors:	
Lack of availability of devices	6 (20)
Lack of skilled providers/lack of providers	15 (50)
Time constraints	4 (13)
IUDs are not promoted by providers	18 (60)
Provider-related factors:	
Providers personal attitudes influence IUD promotion	3 (10)
Providers lack up-to-date knowledge	3 (10)
Providers concerned about infection, infertility, ectopic pregnancy	5 (17)
Providers concerned about high STI prevalence	3 (10)
Client-related factors:	
Clients concerned about infection	3 (10)
Clients concerned about insertion	6 (20)
Clients lack knowledge of IUDs	15 (50)
Myths and rumours among clients	15 (50)
Lack of client interest	4 (13)
Side effects:	
Clients/Providers concerned about side effects	5 (17)
Other	9 (30)

*Some providers gave more than one answer

Analysis of associations

A very limited analysis of associations was performed for the providers, since the sample was smaller than anticipated and a power calculation had not been done. The analysis included only one characteristic (the professional category of the providers) and three outcome variables (knowledge of IUDs, knowledge of infection risks, and recommendation of IUDs).

The analysis revealed no significant associations (Table 4.32 – Table 4.35), except between professional category and referral of women for insertion of an IUD (Table 4.36). Family Planning doctors were more likely to have referred

more than 10 women for insertion of an IUD in the previous twelve months than any other professional category (χ^2 = 28.3778; P = 0.028).

Table 4.32: Professional category and association with self-assessed knowledge of IUDs

Professional category	Excellent n(%)	Good n(%)	Fair n(%)	Poor n(%)	P-value
Obstetric and Gynaecology Registrar	0(0)	2(50)	1(25)	1(25)	0.144
Family Planning Doctor	1(33)	2(67)	0(0)	0(0)	
Registered Nurse	0(0)	10(67)	5(33)	0(0)	
Enrolled Nurse/Enrolled Nurse Assistant	0(0)	2(40)	2(40)	1(20)	
Other	0(0)	3(100)	0(0)	0(0)	

Table 4.33: Professional category and association with knowledge of infection risk (IUD causes pelvic infection in women)

Professional category	Yes n(%)	No n(%)	Don't know n(%)	P-value
Obstetric and Gynaecology Registrar	0(0)	4(100)	0(0)	0.329
Family Planning Doctor	0(0)	3(100)	0(0)	
Registered Nurse	4(27)	8(53)	3(20)	
Enrolled Nurse/Enrolled Nurse Assistant	3(60)	2(40)	0(0)	
Other	1(33)	2(67)	0(0)	

Table 4.34: Professional category and association with knowledge of infection risk (risk of infection after insertion)

Professional category	≤ 3 weeks n(%)	> 3 weeks n(%)	P-value
Obstetric and Gynaecology Registrar	3(75)	1(25)	0.052
Family Planning Doctor	2(67)	1(33)	
Registered Nurse	8(53)	7(47)	
Enrolled Nurse/Enrolled Nurse Assistant	1(20)	4(80)	
Other	1(33)	2(67)	

Table 4.35: Professional category and association with recommendation of IUDs during sterilization counselling

Professional category	Yes n(%)	Sometimes n(%)	No n(%)	P-value
Obstetric and Gynaecology Registrar	3(75)	1(25)	0(0)	0.263
Family Planning Doctor	2(67)	1(33)	0(0)	
Registered Nurse	4(26)	1(7)	10(67)	
Enrolled Nurse/Enrolled Nurse Assistant	2(67)	0(0)	1(33)	
Other	0(0)	0(0)	0(0)	

Table 4.36: Professional category and association with recommendation of IUDs (referrals for insertion in previous 12 months)

Professional category	≤ 10 Referrals n(%)	> 10 Referrals n(%)	P-value
Obstetric and Gynaecology Registrar	4(100)	0(0)	0.028
Family Planning Doctor	0(0)	3(100)	
Registered Nurse	12(80)	3(20)	
Enrolled Nurse/Enrolled Nurse Assistant	4(80)	1(20)	
Other	3(100)	0(0)	

CHAPTER 5: DISCUSSION

The results of our survey indicate clearly that clients lacked awareness and knowledge of the IUD, and that low use in the group studied was largely attributable to this lack of knowledge, rather than to myths, rumours and fears about the method. Since our study had 80% power to estimate the proportion of women who had knowledge of the IUD, it is likely that these results are an accurate reflection of their knowledge and attitudes.

Our study also had 95% power to estimate the proportion of women who had previously used an IUD and 99% power to estimate the proportion of current IUD users, and it was not surprising, therefore, to find that IUD use (ever and current) was very low. These findings are consistent with figures of past and current IUD use from the 1998 SADHS, and the preliminary report of the 2003 SADHS, which has shown a downward trend in both awareness and use of the IUD since 1998 (Department of Health, 1998 and 2003). In addition, a survey conducted by the CDN in Cape Town in 2003, part of a multi-centre study on the attitudes of Family Planning clients towards contraception-induced amenorrhoea, found that none of the 201 participants were using an IUD at the time of the survey (Glasier et al, 2003).

International research on contraceptive and IUD use has consistently identified lack of knowledge, misinformation, and rumours and myths about the IUD as deterrents to use, and inadequate contraceptive counselling by service providers

seems to have sustained this (Forrest, 1996; Katz et al, 2002; Brambila and Taracena, 2003; Gyapong et al, 2003; Gilliam et al, 2004; Asker et al, 2006). Despite the diversity of socio-economic and cultural settings of these studies, the themes around IUD use appear to be universal, and could also be expected to apply to the South African setting.

This appears to be the case in our study as both the women who were interested in using an IUD, and those who were ambivalent or not interested in using one, stated their lack of information as the reason for not accessing this contraceptive option. In addition, when women were asked to indicate whether the IUD had ever been recommended or discouraged, by far the majority of women responded negatively to both questions. In short, they were not discouraged from use but no positive reinforcement was offered. While recall is never a perfect measure, this suggests that the IUD is rarely being discussed with clients, and could partially explain the "information vacuum" that was apparent among this group of family planning clients.

Lack of factual knowledge was considerable, and many women admitted to knowing almost nothing about the IUD – 117 (54%) knew nothing, and 96 (45%) knew a little. Despite this, participants still attempted to speculate about indications for use, and appeared to be in favour of its use for most categories of women. There was no apparent bias against use by young, unmarried, nulliparous women, nor for women at greater risk of STIs, in whom IUD use is

contra-indicated. This apparent lack of concern about use of the IUD in these women is interesting for two reasons. Firstly, it seems to confirm a general lack of knowledge about the IUD, and specifically of concerns about the association between the IUD and pelvic infection. Secondly, it suggests that lack of knowledge was no barrier to having an opinion and these women were using non-medical, subjective criteria to assess eligibility for IUD use. It is possible that eligibility was based merely on the fact that the IUD is a contraceptive, and on the desirability of avoiding pregnancy in the specific categories of women that they were asked to comment on.

Several studies have also identified rumours and myths about the IUD as deterrents to use, for example that it causes diseases such as cancer, that it can cause harm to the fetus if the user falls pregnant with it in situ, that the male partner will feel the strings during intercourse, and that it can migrate or get lost in the body (Katz et al, 2002; Brambila and Taracena, 2003; Gyapong et al, 2003; Gilliam et al, 2004).

The existence of these myths and rumours about the IUD was not obvious among our sample of clients. This may partly be due to the methodology that was used. Most of the studies referenced above were either qualitative in nature, or used a combination of quantitative and qualitative methods, whereas our study was quantitative, with very few open-ended questions. While this does not exclude the possibility of eliciting such information, qualitative methods are more

effective for this, and despite specific questions in the questionnaire being designed for this purpose, very few participants mentioned any of these myths.

The relative absence of myths and rumours about the IUD in this sample of women may also be a consequence of the very low use of this method. If the IUD is not being used much, then there are few women with experience of the method and therefore less opportunity to discuss or share personal experiences and perspectives about the IUD. If a lack of promotion of the method – whether by service providers or through health advertising – is added to this, a vacuum of information about the IUD may be the result with a resultant impact on potential users.

In 1996 Forrest reviewed data from two national surveys of American women's perceptions and attitudes about the IUD and demonstrated that the contraceptive characteristics most valued by women were not necessarily characteristics of their current method, and this gap was greatest for the characteristics that were most highly valued – safety, convenience, and effectiveness. In addition, these characteristics were unlikely to be associated with the IUD. A national survey by Oddens (1995) of West German women's satisfaction with contraception found that their concerns related to side effects of the IUD (greater menstrual bleeding and increased dysmenorrhoea) rather than contraceptive safety and effectiveness.

The results from our survey are consistent with these studies. Despite a lack of factual knowledge about the IUD, women found some of the contraceptive characteristics of the IUD acceptable (effectiveness, long-term efficacy, non-hormonal), but the potential side effects were unacceptable (increased menstrual bleeding, dysmenorrhoea). This suggests that a positive attitude towards the IUD would be undermined by the side effects. The gap between highly valued contraceptive characteristics and the characteristics of a client's current method, as described by Forrest (1996), was also noted in our survey – except in reverse i.e. a contraceptive characteristic not valued by clients (amenorrhoea) was a potential characteristic of their current method (injectable contraceptives). More than half the participants in our study indicated that the amenorrhoea associated with use of the Mirena® would be unacceptable to them, yet at least two-thirds were using injectable contraceptives and a third were experiencing amenorrhoea as a result. This finding was also inconsistent with the study by Glasier et al (2003) which demonstrated that, except for black women in Cape Town and Nigeria, more than half the women in their multicentre survey disliked having periods. Despite the black women's preference for monthly menses, however, more than half of all the participants in Cape Town were willing to consider using a contraceptive method that would result in amenorrhoea (Glasier et al, 2003).

It is also surprising, given our result of the unacceptability of amenorrhoea, that only a small proportion of women (n=22; 10%) indicated dissatisfaction with their current contraceptive method. The reasons for method satisfaction (or

dissatisfaction) were not captured, and consequently it is difficult to comment on this discrepancy. It is possible that clients felt inhibited about revealing any dissatisfaction and rather over-stated their satisfaction. Alternatively, they were not satisfied with their current method but suspicious of change, even if the outcome were similar.

Based on the socio-demographic and reproductive characteristics of the participants, specifically their age, parity, and menstrual characteristics, approximately half the women in this survey were potentially eligible for an IUD. In addition, just over half (n=120; 55.5%) either did not desire future fertility or were unsure of their desire for future fertility. These women represent a group of family planning clients who would potentially be interested in using an IUD to prevent or delay further fertility. If the group of women who attributed their ambivalence about future use to a lack of knowledge (n=68) were combined with the group of women who were interested but not using it due to a lack of knowledge (n=59), this would also mean that just over half of this sample (n=127; 59%) were potential users of IUDs, considerably more than the current use that was recorded. Although nulliparity is not an exclusion criterion for IUD use, some research has shown that service providers apply gravidity and/or parity requirements as eligibility criteria (Miller et al, 1998). If allowance is made for a bias against nulliparous women, it would still mean that the majority of the women in this sample should potentially have been considered eligible to use an IUD for contraception and should have been offered this alternative.

There is clearly a gap between this theoretical proportion of women who could be using an IUD and the proportion of women who are. This study has identified lack of knowledge as one major reason for this gap. A second reason could be the high level of method satisfaction recorded among this sample of clients. Without more information about the criteria that the women in our survey were using to assess their method satisfaction, it is difficult to comment on the effect that this has on IUD use.

The attitudes of family planning service providers towards the IUD and their recommendation of this contraceptive method have predominantly been influenced by concern about the relationship between IUD use, pelvic infection, and infertility, and about side effects of the method (Farley et al, 1992; Burkman, 1996; Mishell, 1998; Grimes, 2000; Hubacher et al, 2001; Morrison et al, 2001; Rivera and Best, 2002; Guillebaud, 2004; Hubacher and Cheng, 2004). Fear of litigation arising from complications of IUD use has prevented promotion of this method, and, with declining use, has come a decrease in experience and confidence in inserting the device (Weisberg et al, 1994; Katz et al, 2002; Stanwood et al, 2002; Brambila and Taracena, 2003; Espey et al, 2003; Gyapong et al, 2003). Since use of this method has remained low, despite evolving evidence of the safety and effectiveness of modern IUDs, one assumption is that providers have not kept up-to-date with this evidence, and outdated beliefs have prevented providers from promoting use (WHO, 2004; Salem, 2006).

In our study, it would seem that recent research and recommendations regarding the use of the IUD have had little impact on knowledge or practice. Results from the provider data indicate that factual knowledge about the IUD was limited, and not adequate for counselling clients appropriately. A superficial impression that providers were knowledgeable about the association between the IUD and infection and infertility was not supported by their detailed knowledge. Providers were clear that the presence or high risk of STIs, and a history of PID, were contra-indications to IUD use, which is consistent with evidence-based recommendations and suggests knowledge of the relationship between STIs and PID. There was, however, limited knowledge of the need to exclude STIs before insertion of an IUD, and of the period of greatest risk for infection after insertion. In addition, vaginal or pelvic infections were still the most commonly mentioned disadvantage of the IUD. This suggests a persistent belief that the IUD plays a role in causing infection, and that knowledge is based on a non-specific fear of infection in the presence of an IUD rather than on an understanding that risk of infection is related to the presence of STIs (specifically Chlamydia and gonorrhoea) during instrumentation of the cervix (Grimes, 2000; Guillebaud, 2004).

Similarly, although almost all providers (n=29) agreed that the IUD does not cause infertility, fear of this outcome was apparent in a bias against nulliparous women using this method. This was also noted among providers in the IUD survey in Ghana (Gyapong et al, 2003). Concern about the potential side effects

of the IUD - increased menstrual bleeding and dysmenorrhoea – also appears to have endured. After infection, these factors were most commonly mentioned as disadvantages of the method, which was consistent with findings from the survey in Guatemala (Brambila and Taracena, 2003).

Knowledge of the effectiveness of the IUD, in comparison to several other methods, was also limited. Providers' assessments of effectiveness seemed to correspond to patterns of contraceptive use that have been identified by the 1998 and 2003 SADHS. While most providers were certain that the IUD was more effective than oral contraceptives and condoms, they were less certain about it's effectiveness compared to injectable contraceptives and tubal ligation, which are the methods most commonly used by clients in the public sector services (Department of Health, 1998, 2003). Only half (n=16) rated the IUD as more effective than the injectable contraceptives, and a third (n=11) that it was equivalent to tubal ligation. It would seem that frequency of use of a particular method, rather than proven efficacy, was used as a basis for evaluating effectiveness. It is possible that factors such as the need for client compliance with the method, reversibility comparative to tubal ligation, and unnoticed explusion resulting in method failure, may have influenced their assessment (Wildemeersch, 2001).

Findings from the studies by Katz et al (2002) and Miller et al (1998) have indicated that service providers use different, personal criteria for recommending

the IUD to clients, and that these criteria are often applied more restrictively than official policies and guidelines about IUD use allow. A quote by one doctor illustrates this clearly: "*Well, personally speaking, I would be more stringent with the IUD. I do not agree much with using it*" (Katz et al, 2002). While providers may be exposed to new information during in-service training about contraception, during medical specialist training, or by personally up-dating their knowledge, this information may not be enough to override personal beliefs about the IUD that have been shaped by personal experience, by vicarious experiences of friends, family or clients, by socio-cultural attitudes and norms about sexuality and fertility, and by personal preferences for a particular type of contraception (Miller et al, 1998; Katz, 2002; Salem, 2006).

In our study, very few providers acknowledged that these types of reasons influenced their contraceptive counselling, but two did mention their own positive and negative experiences with the IUD as an influence, and another was influenced by her perception that a tubal ligation was more appropriate for women over 45 years and consequently did not offer the IUD to women in this age group. Most providers also indicated that they considered a client's age and parity before recommending this method, possibly implying a reluctance to recommend the IUD to younger and nulliparous women.

In contrast to other studies, concerns about litigation arising from complications of IUD use (specifically infection) and confidence about insertion skills were not

directly measured. Despite opportunities in the interviews to raise these specific issues, no-one mentioned the former issue, and the latter was expressed as a lack of skilled providers available to insert the IUD rather than a lack of confidence in one's own skill.

The lack of concern about litigation issues in this survey was also found in the study by Espey et al (2003), and could be explained in two ways. Firstly, our survey was similar to theirs in that it took place within public health services, where liability for medico-legal issues rests with the governing authority rather than the individual health care provider. Consequently, providers in the public services might feel relatively protected from direct legal action, compared to their colleagues in the private sector services (Espey et al, 2003). Secondly, the providers in our study were predominantly nurses, unlike some of the other studies, which exclusively interviewed doctors (Weisberg et al, 1994; Stanwood et al, 2002). Although some registered nurses are trained to insert IUDs, this is not presently the norm in the public sector services in South Africa, where their role is largely to counsel and then refer clients to a trained provider, usually a doctor, for insertion of the device. Since they are removed from the responsibility of actually inserting the device, it is possible that this results in a lack of concern about liability for any complications that might arise.

A measure of knowledge and attitudes is how they are translated into practice, and one would assume that good factual knowledge and positive attitudes of the

IUD would translate into greater numbers of clients accepting this method of contraception, and that the reverse would also be true. However, some research shows that, despite a positive attitude to the IUD, providers still do not recommend or insert it (Stanwood et al, 2002; Espey et al, 2003). In our survey, almost half (n=14; 47%) of the providers said that they always discussed the IUD during contraceptive counselling and 13 (43%) said they always discussed it during sterilization counselling, yet referral and insertion practices were both low, and the client data has suggested that the IUD is seldom discussed during contraceptive counselling. A discrepancy between the providers' professed counselling practices and uptake of the method by clients, partially reflected by referrals and insertions, may be due to two reasons. The first is that providers were over-estimating their counselling practices, and the second is that clients were declining this method despite counselling about it.

Research has identified other service-related factors such as a lack of infrastructure, equipment, and devices, a lack of trained personnel to do insertions, and outdated policies, as obstacles to greater use of the IUD (Salem, 2006). The providers in our survey were asked for their opinion on what the barriers were to greater use of the IUD in Cape Town. A lack of skilled providers to insert the IUD was perceived to be a greater barrier than a lack of availability of devices and time constraints for counselling and insertion, and appears to be consistent with the findings of the 1998 SADHS which indicated that IUD services

were no longer offered in some clinics due to a lack of trained providers to insert the device (Department of Health, 1998).

Providers identified a lack of knowledge among clients, and myths and rumours about the IUD, as another obstacle to use. Findings from the client data certainly confirm the providers' perceptions that clients lack information about the IUD, but the perception that myths and rumours are a deterrent to use was not supported by the client data. A lack of active promotion of the method by providers or by the health services and manufacturers of the IUD was identified as another significant obstacle to use. Very few providers identified their lack of knowledge and personal attitudes as creating a barrier to use, despite indications of ambivalent attitudes and lack of knowledge among the providers in this sample. Similarly, although the provider data has indicated a concern about infection and side effects with IUD use, very few providers identified this as a barrier to use.

In view of the benefits that the Mirena® has over the copper IUDs, specifically the reduction of menstrual bleeding, both the clients and providers were asked about their awareness and knowledge of this intrauterine contraceptive. Almost none of the clients had heard of it or knew anything about it, and only half of the providers were aware of it and knew of some of its advantages and disadvantages. This lack of knowledge was not surprising since the Mirena® is not available for contraceptive use in the public sector services. While it is available through the private sector services and has been widely utilized, the

cost has also limited availability in the public sector for the treatment of uterine bleeding disorders.

Our survey has several limitations. The first is that it was cross-sectional in design, and while this offers an opportunity to identify knowledge and attitudes at the time of the survey, it is not possible to establish what the cause-and-effect relationships were i.e. whether a lack of knowledge and negative experiences and attitudes have resulted in low use and poor promotion of the IUD, or whether a lack of experience, because of low use, has resulted in negative attitudes and a vacuum of knowledge. In addition, we were relying on providers' and clients' recall of their contraceptive use and practices, which is not a precise measure and may have led to under- or over-estimation of variables such as recommendation of the IUD (Stanwood et al; 2002).

This study used quantitative rather than qualitative methodology, which may have been less effective for identifying provider and client attitudes and perceptions towards the IUD. For example, other studies have identified myths and rumours among clients as an obstacle to IUD use, and, while the providers in our survey agreed with this, the existence of these myths and rumours was not obvious from the client data. It is possible that qualitative techniques would have been better able to elicit these, if in fact they do exist. While our quantitative information is valuable and useful for comparison with other surveys that provide

information on IUD use in South Africa (e.g. SADHS, CDN), the addition of qualitative techniques would have strengthened our observations.

Another limitation of our study was the size of the provider sample. Power and sample size calculations were not performed for the providers and, although all those who were working at the facilities were included, this group was smaller than planned – thirty as opposed to fifty providers. The investigators were reluctant to recruit providers from clinics that had not been used for client recruitment. Consequently, although some of our results seem to be consistent with those from other studies, the sample was perhaps too small to provide adequate data for an effective analysis of associations between variables, and conclusions from the data have limited generalisability.

Similarly, the number of clients who had previously used or were currently using an IUD was very small, with the result that information from these women concerning their reasons for choosing or discontinuing the method is unreliable and of limited value for generalising to the larger community of family planning clients.

Within this small sample of providers, the professional training of the respondents varied from the level of a health promoter to a family planning doctor. This large variation in levels of training – and therefore knowledge and experience – could have contributed to some of the inconsistencies of knowledge that were noted.

Without enough representatives from each category of provider there was not enough data to clearly reveal any true trends in knowledge.

All of the providers at all of the clinics agreed to be interviewed, eliminating the possibility of selection bias in recruitment. It is possible, however, that an information bias was introduced by including the doctors at the Groote Schuur Family Planning clinic in the provider sample. None of the other clinics had a resident family planning doctor, and all the doctors at Groote Schuur clinic were family planning practitioners or doctors in their Obstetrics and Gynaecology specialist training. Being located at a tertiary service where IUDs are being inserted, or being involved in a registrar teaching programme, implies that these providers were more likely to have up-to-date knowledge of the IUD and more positive attitudes towards it than non-specialist doctors working in community clinics and not directly involved with family planning services.

Unlike the providers, it is possible that there was some selection bias in the recruitment of the clients. Non-random convenience sampling was used, as we had to consider the organizational flow of the clinics in order to avoid disruption of services. In some clinics staff would recruit clients and refer them to the interviewers, although not requested to do so, and may have sometimes been selectively referring women who had expressed an interest in hearing more about the IUD or who were currently using it. It is possible that these women

would have expressed a more positive attitude than women who were not interested in or had never used an IUD.

Finally, this survey was only conducted in clinics in the public sector services. According to the 1998 SADHS, almost half of the women using an IUD at that time were accessing this method from a private sector service (Department of Health, 1998). By implication there are more women in the private sector who are using an IUD, often a Mirena®, than in the public sector. It is possible that by including women and providers from private sector services, our results would have been different e.g. greater ever and current use of the IUD. These women may be more knowledgeable about the IUD and both clients and providers may or may not have more positive attitudes towards this contraceptive method.

CHAPTER 6: CONCLUSION

This study has assessed the knowledge and acceptability of the intrauterine device to clients and providers at family planning services in Cape Town and attempted to identify obstacles to use. The results, particularly for the clients, were not unexpected, and seem to confirm the results of previous surveys in our unit of a lack of knowledge among clients and reluctance by service providers to recommend this contraceptive method.

The limited knowledge among providers in this study is concerning since it implies that clients are inadequately counselled about the IUD, and while many women would be suitable to use this method and may want to use it, it is not being recommended to them. Instead of being offered as a primary contraceptive option, the IUD appears to be used only as an alternative in the event of complications with other (hormonal) methods. Unfortunately, the Mirena®, which combines the benefits of non-hormonal and hormonal contraceptives without the undesired side effects of the copper IUDs, is not available for contraception in the public sector, effectively making this method inaccessible for many women.

The advantages of the IUD (efficacy, long-term effect, reversibility) make it an attractive alternative to tubal ligation, particularly in younger women. Women considering a tubal ligation should be adequately counselled about this option.

This study has provided valuable information about IUD use in Cape Town, and expanding the survey to include clients and providers in the private sector services would add another aspect to this information. The use of qualitative methods to examine the attitudes of clients and providers in more detail might provide further insight into the personal factors that inhibit recommendation and use of the method, and would be useful for planning health promotion and provider training.

Finally, the IUD is a highly effective contraceptive method and is available, but not utilized, in the public sector family planning services. Better education of both clients and providers is essential in order to improve accessibility and acceptability of this method. The IUD needs to be promoted and clients made aware of the availability of this option, and providers need opportunities to up-date their knowledge and skills in order to deliver an effective service.

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APPENDIX A

A Survey to assess Knowledge and Acceptability of Intrauterine Devices (IUD) among Family Planning Clients and Providers in the Family Planning services in Cape Town

QUESTIONNAIRE: CLIENTS

(ENGLISH)

STUDY NUMBER:_____

CLINIC: _____

DATE OF INTERVIEW:_____

QUESTIONNAIRE: INTRAUTERINE DEVICES: CLIENTS

1. Age

1 = < 20 2 = 20 – 29 3 = 30 – 39 4 = 40 – 50 ☐

2. Marital Status

1 = Single 2 = Married 3 = Divorced 4 = Widow
5 = Co-habiting ☐

3. Highest standard passed (include tertiary level)_____ ☐

3.1 Number of years of formal education _____ ☐

4. Occupation _____ ☐

5. Religious affiliation

1 = Christian 2 = Catholic 3 = Muslim 4 = Hindu
5 = Jewish 6 = Agnostic/Atheist 7 = Other ☐

6. Ethnic origin

1= African 2 = Coloured 3 = Indian
4 = White 5 = Other ☐

7. How often do you get your period?

1 = Once a month 2 = More than once a month
3 = Less than once a month 4 = Once every couple of months
5 = Irregular; never know when to expect it 6 = Not having periods
7 = Don't know ☐

8. How many days do you bleed when you have your period?

1 = Less than 5 days 2 = 5 to 7 days 3 = More than 7 days
4 = Varies with each period 5 = Don't know 6 = N/A ☐

9. In general, would you say that your periods are

1 = Heavy 2 = Normal 3 = Light 4 = N/A ☐

10. Do you have any problems with your period?

1 = N/A 2 = None 3 = Irregular 4 = Heavy

5 = Painful 6 = Long 7 = Other _____ ☐

11. How many times have you been pregnant?

1 = Never 2 = Once 3 = Twice 4 = Three times

5 = Four times 6 = Five times 7 = More than five times ☐

12. How many of your children are alive now? _____ ☐

13. Have you ever had any miscarriages?

1 = Yes 2 = No ☐

13.1 If yes, how many? _____ ☐

14. Have you ever had any abortions (TOP)?

1 = Yes 2 = No ☐

14.1 If yes, how many? _____ ☐

15. Are you planning to have children or do you plan to have more children in the future?

1 = Yes 2 = No 3 = Don't know ☐

16. Please mention the Family Planning methods you have heard about, and the methods you have used before:

1 = Mentioned **2 = Not mentioned**

Method	**Heard about**	**Used**
16.1Female sterilization/Tubal Ligation/TL	☐	☐
16.2 Male sterilization/Vasectomy	☐	☐
16.3 Intrauterine device/IUD/Loop	☐	☐
16.4 Pill/Oral contraceptive	☐	☐
16.5 Mini-pill/Progestogen-only pill	☐	☐
16.6 Emergency Contraception/EC/Morning-after Pill	☐	☐
16.7 Injection/Depo Provera/Nur-Isterate	☐	☐
16.8 Male condom	☐	☐
16.9 Female condom	☐	☐
16.10 Spermicides/Jelly	☐	☐
16.11 Diaphragm/Cap	☐	☐
16.12 Hormone implants	☐	☐
16.13 Natural methods: Rhythm/Withdrawal/Abstinence	☐	☐
16. 14 Other _____	☐	☐

17. What is the main method of family planning you are using now?

_____ ☐

18. Why did you choose this method?

_____

_____

_____

_____ ☐

19. How satisfied are you with your present method?

1 = Very happy 2 =Happy 3 = Neutral

4 = Unhappy 5 = Very unhappy 6 = N/A ☐

20. How much do you know about the loop/copper intrauterine device (IUD)?

1 = Nothing 2 = A little 3 = A lot ☐

21. Can you explain how the loop (IUD) works?

_____

_____

_____

_____ ☐

22. Have you heard about the hormonal intrauterine system (IUS) (Mirena®)

1 = Yes 2 = No ☐

23. How much do you know about the IUS (Mirena®)?

1 = Nothing 2 = A little 3 = A lot ☐

24. Can you explain how the IUS works?

_____

_____

_____

_____ ☐

25. If someone used the method strictly according to instructions, how well do you think the loop (IUD) works if you compare it to these methods?

25.1 Injection

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

25.2 Sterilization (woman)

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

25.3 Pills

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

25.4 Condoms

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

26. Answer yes, no, sometimes, or don't know to the following question:

Which of the following women can use a loop (IUD)

26.1 Unmarried women

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

26.2 A woman without any children

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

26.3 Young women (under 30 years of age)

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

26.4 Women who have many sexual partners

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

26.5 HIV positive women

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

26.6 Women who have pain and heavy bleeding during periods

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

27. Have you personally ever used a loop (IUD) before?

1 = Yes 2 = No ☐

If the answer is no, please go to question 31

28. If you answered yes to question 27, why did you choose to use the loop (IUD)?

_____

_____

_____

_____ ☐

29. Are you still using it?

1 = Yes 2 = No 3 = N/A ☐

30. If you answered no to question 29, why did you stop using the loop (IUD)?

1 = N/A

2 = Too much bleeding during periods

3 = Too much pain during periods

4 = It came out by itself

5 = I fell pregnant while using it

6 = I was worried about getting an infection while using it

7 = I wanted to have another baby

8 = My partner didn't want me to use it any more

9 = I wanted to try something else

10 = Other _____ ☐

Please answer the following questions even if you haven't personally used a loop (IUD) before:

31. Compared to other methods of contraception, are there any advantages to using a loop (IUD)?

1 = Yes 2 = No 3 = Don't know ☐

31.1 If yes, what are they?

_____

_____

_____ ☐

32. Compared to other methods of contraception, are there any disadvantages to using a loop (IUD)?

1 = Yes 2 = No 3 = Don't know ☐

32.1 If yes, what are they?

_____

_____

_____ ☐

33. Does the hormonal IUS (Mirena®) have any advantages compared to other loops (IUDs)?

1 = Yes 2 = No 3 = Don't know ☐

33.1 If yes, what are they?

_____

_____

_____ ☐

34. Does the hormonal IUS (Mirena®) have any disadvantages compared to other loops (IUDs)?

1 = Yes 2 = No 3 = Don't know ☐

34.1 If yes, what are they?

_____

_____

_____ ☐

35. Do you know of any reasons why a woman should <u>not</u> use a loop (IUD)?

1 = Yes 2 = No 3 = Don't know ☐

35.1 If yes, what are they?

_____

_____

_____ ☐

36. Has anyone ever suggested to you that a loop (IUD) would be a suitable method for you to use?

1 = Yes 2 = No 3 = Can't remember ☐

37. Has anyone ever suggested that the loop (IUD) is not a suitable method for you?

1 = Yes 2 = No 3 = Can't remember ☐

Reason:

_____

_____ ☐

38. If you haven't used a loop (IUD) before, do you think you would ever like to use one in the future?

1 = Yes 2 = No 3 = Don't know ☐

39. If your answer to question 38 is yes, for what reason would you like to use a loop (IUD)?

1 = N/A

2 = It works very well

3 = It works for a long time

4 = I don't want to have a sterilization

5 = I don't want to use hormones

6 = Once it's in I can forget about it

7 = No-one will know that I am using Family Planning

8 = Other _____ ☐

40. If your answer to question 38 is yes, what is stopping you from using it?

1 = N/A

2 = I don't know enough about it

3 = The doctor/sister/advisor said it wasn't right for me

4 = They don't have it here at this clinic; it has to be put in somewhere else

5 = I have worries about the side effects and health risks

6 = Other _____ ☐

41. If your answer to question 38 is no/don't know, what is the reason for this?

1 = N/A

2 = It's not safe: causes infection

3 = It causes infertility

4 = It causes diseases like cancer

5 = It causes abortions

6 = It can move to other places in my body

7 = If you fall pregnant with it, it will cause harm to the baby

8 = I'm afraid that my husband will feel it when we have intercourse

9 = Other _____ ☐

Please choose an answer for each of the following statements:

42. For me the fact that the loop (IUD) works as well as sterilization but isn't permanent is:

1 = Very important 2 = Quite important

3 = Not very important 4 = Not important at all ☐

43. For me the fact that the loop (IUD) protects against pregnancy for 5 to 10 years is:

1 = Very important 2 = Quite important

3 = Not very important 4 = Not important at all ☐

44. The fact that the copper loop (IUD) doesn't affect my hormones is:

1 = Very acceptable 2 = Quite acceptable

3 = Unacceptable 4 = Very unacceptable ☐

45. The fact that the IUS/Mirena® contains hormones is:

1 = Very acceptable 2 = Quite acceptable

3 = Unacceptable 4 = Very unacceptable ☐

46. If the loop (IUD) caused heavier bleeding during my periods I would find this:

1 = Very acceptable 2 = Quite acceptable

3 = Unacceptable 4 = Very unacceptable ☐

47. If the loop (IUD) caused more pain during my periods I would find this:

1 = Very acceptable 2 = Quite acceptable

3 = Unacceptable 4 = Very unacceptable ☐

48. If the IUS/Mirena® decreased the bleeding during my periods I would find this:

1 = Very acceptable 2 = Quite acceptable

3 = Unacceptable 4 = Very unacceptable ☐

49. If the IUS/Mirena® stopped the bleeding during my periods I would find this:

1 = Very acceptable 2 = Quite acceptable

3 = Unacceptable 4 = Very unacceptable ☐

A Survey to assess Knowledge and Acceptability of Intrauterine Devices (IUD) among Family Planning Clients and Providers in the Family Planning services in Cape Town

QUESTIONNAIRE: PROVIDERS

(ENGLISH)

STUDY NUMBER: _____

CLINIC: _____

DATE OF INTERVIEW: _____

QUESTIONNAIRE: INTRAUTERINE DEVICES: PROVIDERS

1. Professional category

1 = O+G Specialist 2 = FP Specialist 3 = GP
4 = RN 5 = EN/ENA 6 = Other ☐

2. Sex

1 = Female 2 = Male ☐

3. Age

1 = < 20 2 = 20 – 29 3 = 30 – 39 4 = 40 – 49
5 = 50 – 59 6 = 60 – 69 7 = ≥ 70 ☐

4. Marital Status

1= Single 2 = Married 3 = Divorced
4 = Widow/er 5 = Co-habiting ☐

5. No. of Children

1 = None 2 = One 3 = Two 4 = Three
5 = Four 6 = Five 7 = More than five ☐

6. Religious Affiliation

1 = Christian 2 = Catholic 3 = Muslim 4 = Hindu
5 = Jewish 6 = Agnostic/Atheist 7 = Other ☐

7. Ethnic group

1 = African 2 = Coloured 3 = Indian
4 = White 5 = Other ☐

8. On average, how many clients do you personally see each week for contraception or contraceptive advice?

1 = Less than 10 2 =10 – 25 3 = 26 – 50
4 = 51 – 75 5 = 76 – 100 6 = More than 100 ☐

9. Which methods of contraception are available for use at your clinic/practice or for which you can refer a client to another service site?

1 = Mentioned **2 = Not mentioned**

9.1 Female sterilization ☐

9.2 Male sterilization ☐

9.3 Intrauterine device (IUD) ☐

9.4 Combined oral contraceptive ☐

9.5 Progestogen-only oral contraceptive (mini-pill) ☐

9.6 Post-coital/Emergency Contraception (EC) ☐

9.7 Injectable contraceptive/Depo Provera/Nur-Isterate ☐

9.8 Male condom ☐

9.9 Female condom ☐

9.10 Spermicides ☐

9.11 Diaphragm ☐

9.12 Hormone implants ☐

9.13 Other:_____ ☐

10. List, in order, the three most commonly used methods of contraception in the clinic where you work?

10.1 (1st) _____ ☐

10.2 (2nd) _____ ☐

10.3 (3rd) _____ ☐

11. How would you rate your knowledge of IUDs?

1 = Excellent 2 = Good 3 = Fair 4 = Poor ☐

12. What types of intrauterine contraception do you know of?

_____

_____

_____

13. Please answer yes, no, sometimes or don't know to the following questions:

The IUD may be used in the following situations

13.1 HIV Positive women

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.2 Current sexually transmitted infection (STI)

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.3 High risk of STI

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.4 Previous history of pelvic inflammatory disease (PID)

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.5 Previous ectopic pregnancy

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.6 Nulliparous women

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.7 Pregnancy

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.8 After an abortion or miscarriage

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.9 Immediately post-partum

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

13.10 Emergency contraception

1 = Yes 2 = No 3 = Sometimes 4 = Don't know ☐

14. Excluding client factors, rate the effectiveness of the IUD in comparison to the following methods:

14.1 Sterilization

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

14.2 Injectable

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

14.3 Pill

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

14.4 Condom

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

14.5 Emergency Contraceptive Pill

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

14.6 Natural methods

1 = Better 2 = Same 3 = Worse 4 = Don't know ☐

15. Please answer yes, no or don't know to the following statements:

15.1 The IUD causes pelvic infection in women

1 = Yes 2 = No 3 = Don't know ☐

15.2 The IUD causes infertility in women

1 = Yes 2 = No 3 = Don't know ☐

15.3 All IUDs cause increased menstrual bleeding and pain

1 = Yes 2 = No 3 = Don't know ☐

15.4 The IUD should not be used in nulliparous women

1 = Yes 2 = No 3 = Don't know ☐

16. When is the risk of infection greatest after insertion of an IUD?

1 = Within 3 weeks 2 = 1-3 months 3 = 1 year

4 = The longer it is in situ 5 = No risk ☐

17. How long can a copper IUD be left in situ?

1 = 1 year 2 = 5 years 3 = 10 years

4 = 5 to 10 years, depending on the type of device

5 = Don't know ☐

18. How long can a progestogen-releasing IUS (Mirena®) be left in situ?

1 = 1 year 2 = 5 years 3 = 10 years 4 = Don't know ☐

19. Compared to other methods of contraception, what are the advantages of using an IUD?

_____

_____

_____

_____ ☐

20. Compared to other methods of contraception, what are the disadvantages of using an IUD?

_____

_____

_____

_____ ☐

21. What are the advantages of the progestogen-releasing IUS (Mirena®) compared to the copper IUD?

_____

_____

_____

_____ ☐

22. What are the disadvantages of the progestogen-releasing IUS (Mirena®) compared to the copper IUD?

_____

_____

_____

_____ ☐

23. Do you think an endocervical swab for STIs should routinely be done prior to inserting an IUD?

1 = Yes 2 = No 3 = Only if she has symptoms of an infection

4 = Don't know ☐

24. Do you think a woman should receive antibiotics routinely if she has had an IUD inserted?

1 = Yes 2 = No 3 = Only if she has an infection

4 = Don't know ☐

25. How many women have you referred for insertion of an IUD in the last 12 months?

1 = 0 2 = 1-10 3 = 11-25 4 = 26-50 5 = >50 ☐

26. How many IUDs have you inserted in the last 12 months?

26.1 Copper

1 = 0 2 = 1-10 3 = 11-25 4 = 26-50

5 = >50 6 = N/A ☐

26.2 Progestogen-releasing IUS (Mirena®)

1 = 0 2 = 1-10 3 = 11-25 4 = 26-50

5 = >50 6 = N/A ☐

27. Do you discuss the IUD with every woman who is being counselled for contraception?

1 = Yes 2 = Only if I think she is suitable for it

3 = Only if she asks about it 4 = No ☐

28. Do you discuss the IUD with every woman who is being counselled for sterilization?

1 = Yes 2 = Only if I think she is suitable for it

3 = Only if she asks about it 4 = No ☐

29. What factors positively influence your decision to recommend an IUD?

_____ ☐

30. What factors negatively influence your decision to recommend an IUD?

_____ ☐

31. Which of these client factors guide your decision to recommend an IUD?

31.1 Age

1 = Yes 2 = No ☐

31.2 Parity

1 = Yes 2 = No ☐

31.3 Marital status

1 = Yes 2 = No ☐

31.4 Consent of partner

1 = Yes 2 = No ☐

31.5 Past medical history

1 = Yes 2 = No ☐

31.6 Menstrual history

1 = Yes 2 = No ☐

32. What do you think the reasons are for the low use of IUDs in Cape Town?

A Survey to assess Knowledge and Acceptability of Intrauterine Devices (IUD) among Family Planning Clients and Providers in the Family Planning services in Cape Town

CLIENTS

I, _____, have read the *information* leaflet and agree to answer the questionnaire.

I understand that the purpose of this survey is to assess the knowledge and acceptability of intrauterine devices (IUD) to women attending Family Planning Services.

I understand that answering the questionnaire is voluntary, and that any information I provide will be kept anonymous. I understand that my care will not be influenced in any way if I choose not to participate.

I understand that a final report of this study may be shared with the managers of the Family Planning Services to assist them in improving the service, and will be presented at research meetings and in scientific publications.

I have had the study explained to me in a language of my choice and I have been given the opportunity to ask questions about the study.

SIGNATURE: _____

DATE: _____

INVESTIGATOR: _____

WITNESS: _____

A Survey to assess Knowledge and Acceptability of Intrauterine Devices (IUD) among Family Planning Clients and Providers in the Family Planning services in Cape Town

PROVIDERS

I, _____, have read the information leaflet and agree to answer the questionnaire.

I understand that the purpose of this survey is to assess the knowledge and acceptability of intrauterine devices (IUD) to health personnel providing contraceptive services.

I understand that answering the questionnaire is voluntary, and that any information I provide will be kept anonymous. I understand that my work will not be influenced in any way by my answers.

I understand that a final report of the study may be shared with the managers of the Family Planning Services to assist them in improving the service, and will be presented at research meetings and published in scientific publications.

SIGNATURE: _____

DATE: _____

INVESTIGATOR: _____

WITNESS: _____

INFORMATION LEAFLET

A Survey to assess Knowledge and Acceptability of Intrauterine Devices (IUD) among Family Planning Clients and Providers in the Family Planning services in Cape Town

The Department of Obstetrics and Gynaecology at the University of Cape Town is conducting a questionnaire survey to find out what women and health personnel in Cape Town know about the IUD (commonly known as "the loop").
Health surveys show that use is low in South Africa and we hope that by gathering information about the IUD we will identify reasons for the low use.

Participation in this survey is voluntary and we would appreciate it if you would assist us by taking the time to complete this questionnaire. There are no direct benefits or disadvantages in participating, but it is hoped that the information obtained will help us to improve the services we provide.

The questionnaires will be kept anonymous and no identifying personal details will be included in our database. Although the information that we obtain from your answers will be shared with interested parties e.g. the Department of Health, they will not be able to link the information to you.

If you have any questions, please contact the following person:

Dr Mushi Matjila
Department of Obstetrics and Gynaecology
Groote Schuur/ University of Cape Town

(021) 404 6026

Thank you for your help.

APPENDIX B

UNIVERSITY OF CAPE TOWN

Health Sciences Faculty
Research Ethics Committee
Room E53-24 Groote Schuur Hospital Old Main Building
Observatory 7925
Telephone [021] 406 6338 • Facsimile [021] 406 6411
e-mail: preaward@curie.uct..ac.za

15 June 2006

REC REF: 207/2006

Sr S van Zijl
Obstetrics & Gynaecology
GSH

Dear Sr van Zijl

A SURVEY TO ASSESS KNOWLEDGE AND ACCEPTABILITY OF INTRAUTERINE DEVICES (IUD) AMONG FAMILY PLANNING CLIENTS AND PROVIDERS IN THE FAMILY PLANNING SERVICES IN CAPE TOWN.

Thank you for submitting your study to the Research Ethics Committee for review.

It is a pleasure to inform you that the Ethics Committee has formally approved the above-mentioned study on the 13 June 2006.

Please quote the REC. REF in all your correspondence.

Yours sincerely

DR M BLOCKMAN
CHAIRPERSON