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**A BRIEF INTERVENTION TO PROMOTE IUD USE AMONG WOMEN
IN CAPE TOWN**

by

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Declaration

I, Phumelele Regina Trasada (TRSPHU001), hereby declare that the work in this dissertation is based on my original work (except where acknowledgements indicate otherwise) and has not, in whole or in part, been submitted towards another degree, at this University or elsewhere.

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Abstract

While the Copper T intrauterine device (IUD) is one of the most used methods of contraception around the world, only 1% of women in sub-Saharan Africa use this method. The IUD is a safe and highly effective form of long-acting contraception that provides protection for up to 10 years and has a low risk of pregnancy (less than 1% during the first year of use). The IUD is highly beneficial in that it can provide protection for women who want to delay or space childbearing and unlike methods such as the injectable or oral contraceptive, does not require users to make numerous visits to their health care facility or obtain a further supply. The IUD is free in the public sector in South Africa, but remains an unpopular choice among women. The purpose of this study was to test the effectiveness of a brief counselling intervention on the uptake of the IUD among women in Cape Town, South Africa.

Part A of this dissertation (**Protocol**) is comprised of a proposal that was accepted by the University of Cape Town (UCT) Human Research Ethics Committee (HREC) and the Provincial Government of the Western Cape (PGWC). It describes the study background and methods.

Part B (**Literature Review**) presents the current state of IUD use in sub-Saharan Africa as well as the level of unmet need for contraception in the region. It illustrates the effectiveness of the IUD and gives a summary of interventions related to IUD uptake. It also discusses the need for increased use of the long acting and permanent methods in sub-Saharan Africa.

Part C (**Article**) presents the results as a journal article. The incidence of the primary outcome was lower than expected. Five percent of women assigned to the control group went to family planning to make an appointment for IUD insertion, while 4% of those in the intervention group made an IUD insertion appointment. Knowledge of the IUD was not high with only 46% of women having heard of the method. After being given a description of the IUD, 36% of women said they would consider using the IUD. Twenty-seven percent of women stated that they would be interested in receiving an IUD that day. The method was not often mentioned to clients as only 16% reported having discussed the IUD with a health provider. Chi-squared analysis identified characteristics which were related to a participant

being aware of the IUD. In this regard, being older and having higher gravidity were both significantly associated factors.

The results suggest that IUD is a method that women are interested in learning more about and potentially using. It is clear that a more intensive and comprehensive campaign is needed in order to increase demand for the IUD in South Africa.

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Abbreviations and Acronyms

ART	Antiretroviral Therapy
CHC	Community Health Centre
DMPA	Depot medroxyprogesterone acetate
IUD	Intrauterine Device
LAPM	Long Acting or Permanent Methods
LARC	Long-Acting and Reversible Contraception
PID	Pelvic Inflammatory Disease
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate

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Part A: Protocol

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Background

The Copper T IUD is a safe and effective method for long-term reversible contraception (LARC) [1-3]. More than 100 million women around the world use the IUD, making it the most utilized method of contraception after sterilisation [2,4]. The IUD offers protection against pregnancy for up to 10 years and has a less than 1% risk of pregnancy in the first year of use [5]. The IUD is advantageous in that it can provide short-term protection to women who want to space their pregnancies, does not require further visits for resupply and requires little to no maintenance on the part of the user. It is also a suitable method for women who do not desire any more children, but are not prepared for a more permanent method [6].

Despite this, less than 1% of women in sub-Saharan Africa use the IUD making it one of the areas of the world with the lowest usage [6-7]. While contraception including the intrauterine device is free in the public sector in South Africa and South Africa reports the highest use of contraception among sub-Saharan African countries, the IUD remains an underutilised choice [8]. Two previous studies in Cape Town show levels of IUD use at 5% and 0% respectively [10-11].

Service delivery challenges, safety concerns and misconceptions about the IUD are just some of the barriers that continue to limit IUD use in many developing countries. One of the most common reasons for low implementation of the IUD is concern about pelvic inflammatory disease (PID) [12]. However, previous studies have not confirmed this belief stating that the absolute risk of PID is quite low [2,13]. Studies have also shown the IUD to be safe for use in HIV positive women with no significant effects on incidence of PID, HIV progression or overall complications [4,14-15]. Studies done among Kenyan and Zambian women confirmed that there was a low risk of PID among HIV positive women and showed the IUD to be a safe and effective method [4,16-17]. Subsequently, WHO medical eligibility criteria have been changed to include recommendations for IUD use among HIV positive women

[18]. Further barriers include apprehension about rumored side effects like weight loss or excessive bleeding and myths about the IUD getting lost in the body or embedded in the uterus [6,19]. There is also low knowledge of the IUD among South African women, with a previous study reporting that only 41% of participants had heard of the IUD and only 4% had ever used it [9].

Even in the face of these barriers, South African women have shown an interest in using the IUD. In a survey conducted in the Eastern and Western Cape, 89% of participants stated that they thought there was a benefit to the IUD and after being given a description of the IUD, 74% reported that they would consider using it [7]. Given the acknowledged barriers and potential interest in IUDs, little is known about how to promote IUD use. Furthermore, there is a lack of evidenced-based strategies that can be implemented at the individual level.

Previous studies in India and Honduras that used educational materials and training to promote IUDs showed significant increases in IUD demand as well as knowledge regarding the key aspects of the IUD [20-21]. In India, IUD insertions increased from 212 to 247 per month and 46 to 106 per month in urban and rural areas respectively, while in Honduras, IUD insertions in the intervention group went from a monthly average of 1.12 to 2.0 [20-21]. In the United States, an educational intervention among adolescent girls showed an increase in the proportion of participants who had a positive attitude toward the IUD (14.7% to 53.8%) [22]. However, there is no data on interventions to promote IUD use within South African populations. Thus, the purpose of this study is to develop and test an intervention to promote the IUD and increase its use among women in Cape Town, South Africa.

Specific Aims

The specific aims of this study are to:

1. Develop a brief counselling intervention to increase IUD awareness and demand among women of reproductive age attending the Gugulethu Community Health Centre (CHC).
2. Pilot test the effectiveness of the brief counselling intervention in increasing demand for IUDs.

Hypothesis

Women who receive both the brief counselling intervention in addition to the standard IUD educational pamphlet will make more appointments for IUD insertions compared to those who only receive the standard IUD educational pamphlet.

Methodology

Study Design

This randomised intervention study will recruit 100 reproductive-aged women (18-45 years) from the Gugulethu CHC.

Recruitment and Enrolment

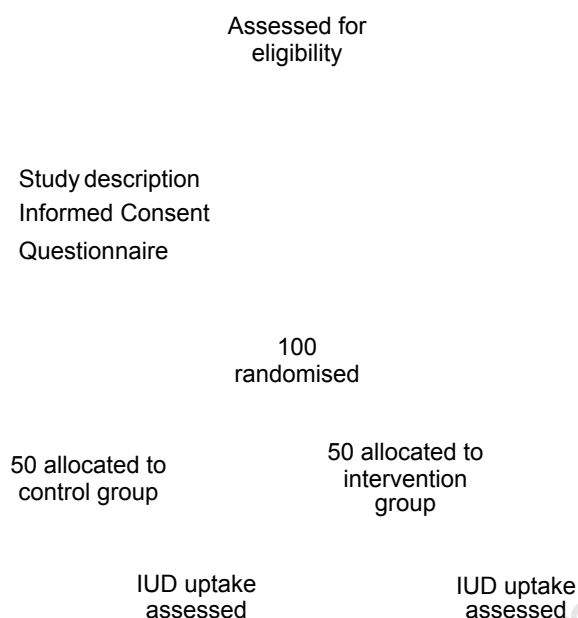


Figure 1: Trial Flowchart

Participants will be recruited from different waiting room populations at the Gugulethu CHC. Women will be identified as potential participants either by referral from a health care provider, or by health educators working in the waiting room areas. Upon completion of their health care visits, doctors will ask a potential participant if they are interested in learning more about family planning options. Potential participants will be women who are not pregnant and are in need of a long-acting method. Alternatively, potential participants will be approached by health educators and asked the same. Interested participants will be screened according to the eligibility criteria. If eligible, they will be referred to study staff for a study description, informed consent and baseline questionnaire completion. Participants will then be randomised to either the control or intervention group. Those in the control group will receive only an educational pamphlet about the IUD and information about where to obtain

an IUD. Those in the intervention group will receive the educational pamphlet as well as a brief counselling session about the IUD.

The primary outcome of the study is IUD demand, which will be measured by how many women from the control and intervention group undergo IUD insertion. Accessing records in Family Planning will capture these insertions. The secondary outcome is number of IUD appointments.

Inclusion criteria

Participants will be non-pregnant, English or Xhosa speaking women attending the Gugulethu CHC aged 18-45 years who are able to understand and give informed consent.

Participants cannot currently be using the IUD, must not be sterilised and interested in a long-acting method of contraception.

Rationale for Inclusion Criteria

-18-45 years of age: This is the reproduction age range, thus long-acting contraception is an appropriate consideration.

-Not pregnant: Currently pregnant women will not be eligible for IUD use.

-Not planning on conceiving for the next two years: The IUD is most appropriate for women who want to space their children and/or delay childbearing.

-Not sterilised: Women who are sterilised would not be in need of any contraceptive method.

-Currently using the IUD: Women who are currently using the IUD would not be eligible for IUD insertion.

-Speak English or Xhosa: The majority of patients attending this site speak Xhosa as a home language.

-Able to give informed consent: All participants must be able to understand the risks, benefits and study procedure.

Sample size

A sample of 100 women will be recruited from the Gugulethu CHC. The required sample size was calculated expecting at least a 30% absolute increase in uptake of the IUD (between 30% and 60% for the control and intervention group respectively), the primary outcome measure, with a precision of 5% and 80% power. A previous study, which had an intervention at the community level, reported an absolute increase of approximately 25% [18]. As this is an individual intervention and there is no previous data for South African populations, we estimated 30%.

Study Instruments

Baseline Questionnaire: All participants will be administered a questionnaire lasting approximately 30 minutes. The information collected via the questionnaire will include socio-demographic and economic information, reproductive health history, current knowledge of and attitudes toward the IUD and interest in IUD use. The questionnaires will be administered in either English or Xhosa.

IUD Uptake: The amount of women in the experimental and control groups who choose to use the IUD will be obtained from records kept by Family Planning. Participants will be followed up after 1 month via medical record and family planning register review.

Pamphlet: All participants will be given an educational pamphlet about the IUD, which will explain the characteristics, advantages and disadvantages of the method as well as address common myths and/or perceptions regarding the IUD.

Counselling: Women assigned to the intervention group will receive 5-10 minutes of counselling regarding the IUD. The counselling will include information about effectiveness, benefits, effects on fertility, effects on menstruation and clarification on myths and rumours about the IUD. Counselling will also include a display of the IUD and a demonstration of the insertion and removal process.

Data Management and Analysis

All data will be managed and stored in Microsoft Excel with double data entry. Data will be analyzed using Stata v10.0 (Stata Corporation, USA). Descriptive statistics will be computed and comparisons between participant characteristics and IUD uptake will be made with chi-square and t-tests.

Ethics

Potential Risks

The intervention itself poses no physical risks to participants. However, participants who choose to undergo IUD insertion may experience side effects such as physical discomfort and/or changes in their menstrual cycle. These side effects are not related to participation in the study, but rather are part of receiving the family planning modality recommended by the study. All side effects of IUD use are explained in the educational pamphlet. Participants will be given the contact information for Family Planning services and advised that they may return to Family Planning at anytime if they experience any adverse effects from IUD

insertion. Some participants may find discussing family planning or reproductive health history uncomfortable.

Potential Benefits

All participants will receive information on family planning and contraception as a direct benefit. The results of this study will be used to inform future plans to promote IUD use and generate demand for contraceptive services.

Informed Consent

After confirming their interest in taking part in the study, an explanation of the purpose of the study, study description and risks and benefits will be given to the participants by the study investigator or fieldworker. Patients will be informed that participation is voluntary and that declining study entry will not compromise their ability to receive care. The informed consent form will also include a clause that grants study staff the permission to access routine health care records for each participant.

Afterwards, informed consent will be obtained from each participant who agrees to take part in the study. Then, they will be assigned a participant ID number and proceed to begin the questionnaire. Written consent will be available in both English and Xhosa. Study staff will conduct verbal consent for participants with low literacy with confirmation gained to ensure that participants understand all risks, benefits and study procedures.

Privacy and confidentiality

Participants will be informed that for outcome measurement their names and folder numbers must be recorded on the questionnaire. Participant ID numbers assigned during the informed consent process will be used for data analysis and no names will be included in the

publication of the study. To maintain confidentiality, all interviews will be conducted in a private room. Study staff will reiterate that all information shared via the questionnaire or during counselling will be kept strictly confidential. All participant files will be kept in a locked cabinet when not being accessed by study staff.

Remuneration

Participants will receive no remuneration for participating in the study.

Timeline

It is anticipated that approximately 5 participants can be recruited per day, thus the study will take approximately 4 weeks to conduct. IUD uptake will be measured after 1 month.

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Part B: Literature Review

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Introduction

While South Africa reports the highest use of contraception in sub-Saharan Africa, it, like many other countries in the region, faces a high unmet need for contraception. In sub-Saharan Africa alone, there are approximately 14 million unintended pregnancies every year [1]. Statistics from the Demographic and Health Surveys (DHS) show that the majority of countries report levels of unmet contraceptive need exceeding 20% and some even 30% [2]. Approximately 25 million women in sub-Saharan Africa have no access to modern means of contraception [2]. Contrast these figures to those of Asia and Latin America where 48% and 63% of women, respectively, use a modern method of contraception and based on such comparisons it is clear that well functioning and comprehensive family planning programs are needed in sub-Saharan Africa. Moreover, the total fertility rate (TFR) of the region is more than twice that of Asia and Latin America, with some countries having an average TFR of six births per woman [2].

As it is in many other regions of the world, family planning in sub-Saharan Africa is fraught with cultural implications. There is a high value placed on having children and on having large families in order to pool resources [3]. Talking about family planning can also be difficult so women often prefer more covert methods of contraception such as the injectable [4]. Furthermore, many countries in the region practice a traditional method of spacing births, which makes non-permanent methods more favourable [4-5]. Of the modern methods of contraception used, approximately 25.7% of sub-Saharan African women report using the injectable [3].

Besides being discreet, methods like the injectable may also be seen as more practical. There are fewer concerns about adherence and it does not require much training in contrast to a method like sterilisation. It has also been argued that the demand for long

acting or permanent methods (LAPMs) such as the IUD, sterilisation and implants has been underestimated in regions such as sub-Saharan Africa. This has resulted in little consideration being given to these methods as crucial elements of family planning programmes [6-7].

Previous research shows that sub-Saharan Africa has the lowest level of IUD usage globally, with reports putting it at approximately 1% [8]. However, in the context of sub-Saharan Africa contraceptive needs, the IUD would be a great method as it is inexpensive, long lasting but not permanent and discreet. The fact that it requires training on the part of the health worker continues to be a barrier to its implementation. Furthermore, surveys have shown that in South Africa, myths and rumors surrounding the IUD also contribute to its underutilisation [8].

Adding more LAPMs like the IUD to contraceptive choices would likely increase the overall uptake of contraception. This has proved to be the case in several studies where more contraceptive method options increased overall contraceptive uptake [9-11]. There have also been concerns about a possible link between injectable contraception and increased risk of HIV acquisition or transmission [12]. As the Copper T IUD is non-hormonal, it could be a valuable contraceptive option for HIV positive women if the link is proven to be true. Moreover, the safety of oral contraceptives among HIV positive women on antiretroviral therapy (ART) is also uncertain. These concerns are heightened in a region like sub-Saharan Africa where an estimated 14 million HIV positive women live [13].

The IUD is a potentially valuable contraceptive option to women in sub-Saharan and more specifically South Africa. It is a safe, effective, inexpensive and reliable form of

reversible contraception. This paper will review the effectiveness of the IUD, barriers to IUD use, interventions to promote IUD use, IUD use among HIV positive women and the case for investing in LAPMs in sub-Saharan Africa.

Search Strategy

The following terms were utilised to search for appropriate literature on the study topic. All studies which had the following terms were explored. The references used in those studies were further explored to reach those studies relevant to the literature review objectives.

The following terms were used to search for studies which met the objectives of the literature:

- IUD and Africa, intrauterine device and Africa
- IUD and intervention, intrauterine device and intervention
- IUD and barriers, intrauterine device and barriers
- IUD and HIV, intrauterine device and HIV
- IUD and effectiveness, intrauterine device and effectiveness, efficacy
- Long acting permanent methods and sub-Saharan Africa, LAPM and sub-Saharan Africa
- Search engines: PubMed, EbscoHost, ScienceDirect, JSTOR, Google and Google scholar

Criteria for considering studies to promote the IUD in sub-Saharan Africa

Types of studies

Studies considered were randomized trials and before and after studies which compared an intervention with the current standard of care. Studies must have taken place in sub-Saharan Africa and measured the effect of interventions to increase IUD uptake.

Types of participants

Participants of reproductive age were eligible.

Types of Interventions

Interventions chosen aimed to improve contraceptive use and included counseling and information provided via educational materials, radio, tv and other media. Studies which measured IUD uptake as an outcome were included.

Effectiveness of the IUD

Both the copper T IUD and the levonorgestrol IUD are highly effective methods for preventing pregnancy with estimates of the copper T ranging from 0.6 to 0.8 pregnancies per 100 woman-years [14], and 0.2 per 100 woman-years for the Mirena [14]. Studies have found the IUD to be more effective than the contraceptive pill, transdermal patch, vaginal ring or DMPA. For example, a cohort study of 7,486 women from the United States, found that long-acting reversible contraception or LARC (IUDs and implants) had a contraceptive failure rate of 0.27 per 100 participant-years compared to 4.55 among women using the pills, patch or ring ($p < .001$) [15]. Similarly, a Cochrane review of women from Zambia, Brazil, Guatemala, Vietnam and Egypt, found the copper T was more effective at preventing pregnancy than depot progestogens (risk ratio (RR) 0.47; 95% confidence interval (CI) 0.26 to 0.85) [16]. In fact, the IUD (both copper and hormonal) has been shown to be the most effective female contraceptive method after tubal ligation [17].

Studies have shown the Copper T IUD to be very efficacious with regards to pregnancy prevention. A study found that in the first year of use, less than one woman per 100

became pregnant and in a comparative study, 2.1 women per 100 became pregnant during the first ten years of use [18]. In a systematic review, the TCu380A or TCu380S IUD was found to be the most effective of all the copper framed intrauterine devices [19]. The Copper T IUD is approved for up to 10 years of use, but studies suggest that it may be effective for even longer [20]. In a study assessing the effectiveness of the TCu380A IUD over 10 years of use, the authors observed no pregnancies in 366 woman-years of observation. Furthermore, the study found that the IUD did not lose its effectiveness after 10 years of use [21].

Barriers to promoting the IUD in sub-Saharan Africa

There are various barriers which have inhibited the wide-spread use of the IUD in sub-Saharan Africa. Barriers such as safety concerns, myths regarding the IUD and provider training are often reported as factors that continue to limit the use of the IUD in developing countries.

Risk of Pelvic Inflammatory Disease (PID)

One of the barriers to IUD use among women is the belief that it can cause PID. Earlier research suggested this causal association, but it has since been disproved [22]. Previous designs of the IUD, most notably the Dalkon Shield, contained multifilament strings which were implicated in the higher rates of PID seen among IUD users [23]. The copper T IUD, on the other hand, does not have braided strings and therefore there is no increased risk (aside from the immediate post-insertion period) of PID following insertion [16].

PID occurs when pathogenic microorganisms come up from the cervix and enter the endometrium and the fallopian tubes, causing an inflammatory response [24]. PID can also be caused by the presence of sexually transmitted infections (STIs), most notably chlamydia and gonorrhoea [25]. Therefore, there are concerns that women with a STI, who are already at increased risk for PID will further increase their risk of developing PID with the insertion of an IUD which could transport already present sexually transmitted microorganisms from the endocervical canal into the uterine cavity [26].

However, some studies have shown that STI prevalence can be overestimated. A study conducted in the West African region found the prevalence of chlamydia and gonorrhoea to be much lower than the reported range of some East and Southern African countries. This perception that clients were at high risk for PID because of STIs has left some family planning programs under-providing the IUD because of incorrect beliefs [27].

Studies have shown that users are most at risk of PID 20 days after IUD insertion [28]. A study found that in the early insertion period, the absolute risk of PID is approximately 1% [29]. After the first 20 days, the risk of PID is quite small at 1.6 per 1000 women years, except in cases of an untreated STI [30].

While having a STI increases one's risk of PID if using an IUD, there is little evidence that HIV infection increases that risk [28]. In a Kenyan study of IUD use among HIV positive and negative women, the incidence of PID was minimal in both groups with rates of 1.4% in HIV infected women compared to 0.2% in non-infected women. The difference was not statistically significant between HIV-positive and negative women [31]. Another Kenyan study had a similar finding with PID rates of 2.0% in HIV positive women and 0.4% in HIV negative women [32].

Rumors and Myths about the IUD

One of the most pervasive reasons for low level IUD use is the clients' lack of knowledge about the method. Many women are unaware of the method or lack knowledge about the effectiveness, benefits, side effects and costs of the IUD. Women also hear many myths and rumors about the IUD which might dissuade them from using it.

Misconceptions and myths about the IUD are rampant in family planning settings around the world. Not only do clients hold incorrect beliefs about the IUD, but providers do as well. One common myth is that the IUD can move around to other parts of the body from the uterus [33-34]. Another rumour is you can become pregnant using the IUD and the baby will be born with the IUD embedded in its body [33, 35]. The IUD has also been associated with causing cancer, but there is no evidence to suggest this is true. It is also a common belief that the IUD can fall out easily or become expelled easily [33]. Some believe that the IUD can become lodged in the cervix, uterus or penis [35]. Another common misconception is that the IUD can cause abortions by preventing implantation of the embryo [33, 36]. This belief has prevented many women from getting an IUD and providers from suggesting the method. A common myth among providers is that the IUD increases the risk of an ectopic pregnancy. However, the IUD is so effective that women using it are actually at a decreased risk compared to women using no contraception [36]. While women who don't use the IUD tend to view the method negatively, users of the method often report satisfaction with the method [33]. Furthermore, providers can play an important role in dispelling myths and rumors about the IUD in order to increase its utilization among women.

Health System Barriers

In many developing countries, providers often lack the skills, training and resources needed to insert IUDs. If the IUD is to be promoted and used by more women, obstacles in the health system must be addressed. Some barriers include postponed initiation of contraception, incorrect contraindications, misinformation, and the accessibility and cost of contraceptive methods [37].

A study in Zambia found that barriers to IUD use included lack of demand or interest on the part of users, lack of skilled and trained providers, lack of a consistent supply of materials and equipment and possible health worker bias in that providers may favor short-acting methods which are quicker to provide [38]. These service delivery challenges may influence whether a provider even discusses the IUD with a client [39]. Providers can also be misinformed about who is eligible to use the IUD, believing that it is contraindicated for nulliparous and HIV positive women [8]. Moreover, a recurring belief that the IUD can lead to infection further limits its use as well as worries of litigation due to incorrect insertion [39].

Provider limitations are another barrier in providing the IUD to women. These barriers include lack of knowledge or comfort with different types of contraception, lack of experience with various methods and little to no time to discuss or counsel patients about certain methods [40]. There is also a lack of equipment to train providers to insert the IUD as well as a lack of trainers to teach the skills to other providers. Furthermore, many providers lack confidence in their skills, which suggests that in order for them to maintain their competency, more extensive training is needed [41]. Some providers have reported

that while they are trained to insert IUDs, they do not have enough practical experience doing so [33]. There is also a lack of knowledge among providers. For instance, some providers did not know that the IUD was not to be inserted in the presence of a STI or they did not know the length of use for the IUD. There are also programmatic barriers in that in many cases only doctors and nurses can insert the IUD. This leaves out auxiliary and paramedical providers from providing the method. Also in some instances, the IUD is only offered during the six-week postpartum period and not to other postpartum or post-abortion clients [41].

Interventions to promote the IUD in sub-Saharan Africa

There have been various interventions throughout sub-Saharan Africa to try and increase uptake of the IUD among women. I evaluated the effect of a selection of interventions to increase uptake of the copper IUD. I included one randomised trial and four before and after studies of interventions, which measured use and uptake of the copper IUD as an outcome. Largely, the studies included in this review could be divided into two types of interventions: interventions using a “supply-demand-advocacy” model and community-based contraceptive counselling. Table 1 summarises the included studies.

Supply-Demand-Advocacy Interventions

Three studies reported the impact of the Supply-Demand-Advocacy model on the uptake of the IUD. The term “supply and demand” refers to a mixture of interventions that include provider training, the provision of high standard products and the development of tools and job aids. Moreover, it also includes an array of communication activities to

inform relevant parties and potential clients about the IUD, its effectiveness, benefits, side effects and where to find IUD services. Advocacy refers to involving vital stakeholders in supporting IUD efforts. An increase in IUD uptake was observed in all three studies. In a project done in the Kisii District, Nyanza Province of western Kenya among 13 service sites, IUD insertions rose from 58 at the start of the intervention to 484 at the end of the two-year intervention period. Prior to the intervention, only 0.5% of women used the IUD. Furthermore, a year after the intervention ended, IUD insertions rates were still high at 453 insertions [42]. Another project done in the Amhara region of Ethiopia over three hospitals and ten health centers saw IUD insertions go from 182, the highest they had ever been before the intervention, to 338 over a nine-month period of the intervention taking place [43]. Prior to the intervention taking place, only 0.2% of women used the IUD. Lastly, a project done in the Suguiri District of Guinea at the provincial hospital and six health centers saw an increase of 37 IUD clients in the two years before the intervention to 700 during the period of one-year period of the intervention [44].

Table 1: Selection of studies reporting on IUD interventions in sub-Saharan Africa

Author	Year	Setting	Design	Intervention
Taylor ⁴³	2008	Ethiopia	Before and after	Approximately 780 community-based reproductive health agents across three hospitals and ten health centres were trained to include the IUD in their family planning services. The training included an upgrade in provider's clinical skills as well as improving safety and infection control protocol. A communications campaign was also launched, which included radio ads, billboards and posters. To support health facilities offering IUD services, door signs, leaflets and technical booklets on the IUD were made.
Taylor ⁴²	2008	Kenya	Before and after	A performance assessment was conducted at 13 service sites in the Kisii District. Training was provided to improve technical skills in inserting and removing the IUD as well as counselling skills. In addition, two providers from each site were selected to train and manage community-based distribution agents for referrals. Furthermore, all 13 sites were equipped with two IUD kits and sterilization equipment if necessary. The programme also included communications activities, which produced advertisements, radio spots, a weekly talk show and print materials to educate and inform potential users about the IUD.
Taylor ⁴⁴	2008	Guinea	Before and after	IUD services at 13 sites were upgraded by providing training on IUD insertion and removal, improving counselling skills and infection control. Trained health care providers were encouraged to share their newly acquired skills with others in order to increase IUD knowledge and skills among other providers. Using mass media such as radio and various print materials such as brochures and posters an IUD demand campaign was created. The programme also held meetings with key stakeholders in order to gather support for the IUD and family planning services.
Wesson et al. ⁴⁵	2008	Kenya	Randomised trial	This intervention tested the use of an outreach intervention called 'detailing' to family planning providers and community-based distribution (CBD) agents to promote the IUD. 'Detailing' was explained as having a role model visit various facilities that provide family planning to "educate, motivate, and facilitate" a particular outcome, which in this study was promotion of the IUD .One district nurse or deputy per district

				<p>was trained as a ‘detailer’. Detailers visited family planning providers and CBD agents twice to educate and motivate them about the IUD. The study sites were 45 public sector rural health facilities in 5 districts that currently had family planning programmes. The detailers held group discussions with the family planning providers and CBD agents to discuss issues related to the IUD such as barriers to its use, effectiveness and side effects as well as myths and rumors about the method. Detailers also gave providers and agents educational pamphlets about family planning and the IUD as well as promotional products. The health clinics were randomised to receive the intervention for only providers, only CBD agents, for both or no intervention at all.</p>
Neukom et al. ³⁸	2011	Zambia	Before and after	<p>18 midwives were employed and trained to be dedicated providers of long-acting reversible contraception (LARC). The midwives spent their time at existing public sector clinics providing and promoting LARC to clients. Their work supplemented that of the current staff by increasing the length of time that LARC was available as educating the existing staff about LARC. The midwives conducted talks on LARC to women waiting in the clinic waiting rooms, offering same day services if needed. Two LARC options were provided to clients: a subdermal levonorgestrel implant or the Copper T IUD. The women did not pay for services, were told to return for removal at any time and were given a card with information about the LARC option they chose. Furthermore, the midwives used comments from new clients to educate other women about LARC.</p>

Community-based contraceptive counselling

Two studies evaluated the impact of contraceptive counselling by trained community workers on the uptake of the IUD. A greater increase in the uptake of the IUD was observed in the Zambian than in the Kenyan study. In the Zambian study, 287 clients received either an IUD or an implant at baseline. After 14 months of the intervention, 33,609 women had chosen to use LARC with 22,079 choosing the implant and 11,530 choosing the IUD [38]. In the Kenyan randomised trial, there was a small increase in IUD uptake in one arm of the intervention, but not in the other two [45]. The study found that IUD promotion by both CBD agents and providers made a small increase in IUD uptake compared to no promotion. IUD promotion by only CBD agents or providers did not produce a similar outcome.

IUD Use for HIV positive women

An estimated 23.5 million people in sub-Saharan Africa have HIV, with women accounting for nearly 58% of them [46]. In studies of HIV positive women, nearly 70% were sexually active with variable use of contraception and numerous reports of unplanned pregnancies [30]. Various studies have suggested that systemic hormonal contraception use may increase HIV transmission from HIV positive females to their male partners and quicken HIV progression among users [47,48,49,50,51]. Furthermore, this concern has particularly focused on those who use DMPA which is very popular in Southern Africa. These findings have only highlighted the need for safe and effective long-acting reversible contraceptive methods for HIV infected women.

Recent evidence suggests that IUDs are safe for use in HIV positive women. Two cohort studies in Kenya both found low overall complication rates following insertion of the IUD in HIV positive women. In the first study, overall complications were diagnosed in 14.7% of

HIV positive women and 14.8% of HIV negative women, while in the second study it was 7.6% of HIV positive women and 7.9% of HIV negative women. Both studies conclude that HIV does not appear to increase the risk of IUD-related complications. [31-32]. Another study found that the IUD use does not increase cervical shedding of HIV, thus it does not seem to increase the risk of transmission to an HIV negative partner [52]. This evidence spurred the WHO to change its guidelines for IUD use among HIV positive women [53]. Previously, guidelines put IUD use by HIV positive women in Category 3 which states “A condition where the theoretical or proven risks usually outweigh the advantages of using the method.” Now it has been moved to Category 2 which describes “A condition where the advantages of using the method generally outweigh the theoretical or proven risks [54].” In addition, a randomised control trial done in Zambia among HIV positive women found that women who took hormonal contraception were more likely to become pregnant than women who used the IUD. Moreover, clinical disease progression was more likely to occur among those using hormonal contraception than those using the IUD [55].

Further studies have found that not only is the IUD a beneficial contraceptive method, it is one that HIV positive women are interested in using. A cross-sectional survey done in South Africa found that 86% of women interviewed were interested in future IUD use even though only 37% of women were aware of the method [56]. Another cross-sectional study done in South Africa found that a significantly greater proportion of HIV positive women found the IUD favourable than HIV negative clients (79.3% vs.68.9%, $p=.001$). Women from both groups were interested in the IUD despite very few of them being told about the method by a provider (7.8% vs. 10.0%). More than half of the participants (both HIV positive and negative) lacked knowledge about the effectiveness of the IUD, eligibility for IUD use and side effects of using the IUD [57]. Most of women were using injectable contraceptives, suggesting that being in favour of LAPMs does not necessarily translate to use of them. The

lack of knowledge that women have about LAPMs may also be prohibiting them from using them. These studies suggests that even with low levels of IUD awareness, HIV positive women still display an interest in using the IUD.

Investing in LAPMs in sub-Saharan Africa

There is a recognized gap between the need for LAPMs in developing countries and the provision of LAPM services. Particularly in sub-Saharan Africa, LAPMs are still a missing component of many family planning programmes. If barriers to their availability can be surpassed, LAPMs can augment family planning services in many important ways.

As stated previously, there is a high unmet need for contraception in sub-Saharan Africa. An estimated 25% of women and couples in sub-Saharan Africa who wish to space their childbearing or limit their births are not using any contraceptive method [58]. The reasons to invest in LAPM are undeniable. In sub-Saharan Africa alone, there are approximately 14 million unintended pregnancies every year, mostly due to the use and failure of short-term contraceptive methods like the oral contraceptive or injectable [1]. When women use family planning options like LAPMs to space and limit their pregnancies, unintended pregnancy rates will decrease.

IUDs especially are one of the most cost-effective contraceptive methods on the market. A study that did an economic analysis of contraceptives for women found that the least costly methods were the hormonal IUD and the copper T IUD [17]. While the total cost of an actual IUD is high, its initial costs amortize over time as it a long-term contraceptive method with a very high effectiveness rate [17]. Another economic analysis study found that while having high initial costs, LARC methods were more cost-effective than combined oral contraceptives. They also prevented more unintended pregnancies and resulted in net-cost savings [59]. Not only are IUDs cost-effective, they can add to life expectancy. A decision

analysis study found switching from progestin injectables to the copper T IUD would lower incident HIV diagnoses while maintaining or increasing life expectancy [60].

LAPMs are a highly beneficial option for women who want to delay childbearing, space births or have decided that they do not desire any more children. While many misconceptions abound about who can and cannot use LAPMs almost all women are eligible. LAPMs can be used by adolescents and older women, nulliparous women and those who have had children and by HIV positive women. One of the major advantages of LAPMs is that they require little maintenance once initiated. They do not require ongoing resupply, thus putting less of a burden on the health system.

The use of LAPMs in sub-Saharan Africa is low. Of those who are using contraception, fewer than 5% are using a LAPM [54]. The IUD is particularly underutilized as very few users of contraception employ this method [8,61]. In some cases, the low use of LAPMs is due to limited access. As LAPMs are methods that can only be given by a health care provider, the health care system is the only entry point for accessing LAPM. The structure of the health system and the practices and perceptions of the provider can have influence over a client's access to LAPM. Eligibility criteria which specify what kind of client can use LAPMs is also often a barrier to access as providers may deny LAPMs to clients based on old or incorrect restrictions. Furthermore, providers may not offer a client comprehensive information about the available contraceptive methods, leading the client to make an uninformed choice.

While these challenges to providing LAPM exist, they certainly can be overcome. Providing women with comprehensive contraceptive choices is critical. Family planning is not only a human right, but a benefit to public health. Improving LAPM services will not only meet the needs of women and couples, but contribute to more sustainable family planning programmes.

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Part C: Article ⁺

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⁺ The article meets the requirements set out in the Instructions for Authors of Contraception, an official journal of the Association of Reproductive Health Professionals and the Society of Family Planning. An extract of these instructions is appended in G. For readability purposes, figures and tables are inserted in the text rather than appended as required by the Journal, and spacing and justification match the other parts of the dissertation. Furthermore, references are made to supplementary material in the appendices.

Title

Brief counselling intervention to promote IUD use among women in Cape Town: a randomised trial

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Abstract

Background: The Copper T intrauterine device (IUD) is a safe and effective form of contraception that is not used widely in South Africa due to barriers such as lack of demand. This study tested the effectiveness of an intervention to increase the demand for IUDs.

Study Design: A brief randomised counselling intervention was conducted among 110 clients at 1 community health centre in Cape Town.

Results: The mean age of participants was 30 years. Seventy-one percent of clients were HIV positive and 61% had used a modern contraceptive method in the past 12 months. Forty-six percent of clients had heard of the IUD and after being given a description of the IUD, 36% said they would consider using it. Only 16% of clients had a health care provider discuss the IUD with them and before the interview, 27% said they would be interested in receiving an IUD that day. Five percent of the 56 women assigned to the control group went to family planning to make an appointment for IUD insertion, while 4% of the 54 women in the intervention group made an IUD insertion appointment ($p=.68$). No participants had the IUD inserted over the 1-month follow-up period.

Conclusions: These data suggest that counselling alone is not enough to increase IUD uptake. These study results suggest that a more intensive intervention is needed to see an increase in IUD use among women in South Africa.

Introduction

The Copper T intrauterine device is one of the most popular methods of contraception around the world. It protects over 100 million women and comes only second in popularity to sterilisation [1-2]. The IUD is one of the most effective forms of contraception, offering protection against pregnancy for up to 10 years, with a less than 1% of risk of pregnancy during the first year of use [3]. The IUD is beneficial for many reasons among which is that it does not require multiple visits to a health care provider, requires little to no care on the part of the woman and can provide short-term protection for women who wish to space their childbearing. Furthermore, it is a long acting reversible contraceptive method, making it ideal for women who are not ready for a more permanent option such as sterilisation [4].

Even though among sub-Saharan countries South Africa has the highest use of contraception, the IUD continues to be the least chosen method [5]. Globally, South Africa is one of the countries with the lowest levels of usage, with reports of less than 1% of women using the IUD [4,6]. In Cape Town, two previous studies have shown levels of IUD use to be at 5% and 0% correspondingly [7]. IUD promotion is especially important in light of the new South African National Contraception Policy and Guidelines. The new guidelines include the expansion of contraceptive choice and the reintroduction of available, but underutilised methods such as the IUD [8].

Pervasive rumors and myths about the IUD, safety concerns and a lack of trained providers are just some of the barriers that continue to hinder IUD use in many developing countries [1,15]. Research suggests that the same barriers are commonly reported across different study populations and countries. Safety concerns about the IUD include the risk of developing pelvic inflammatory disease (PID) in both HIV-negative and positive women and the risk of increased blood loss in HIV positive women [12]. Additional concerns for IUD use

in HIV-positive women include the risk of female-to-male HIV transmission [2]. Studies have shown that not only is the risk of PID minimal, but that the IUD is a safe and effective choice for HIV positive women [1-2, 9-13]. Myths about the IUD, such as it being able to travel throughout the body or become embedded in the uterus are another frequently cited barrier to IUD use [4, 14]. Lastly, lack of knowledge of the IUD is often mentioned as a hindrance to IUD uptake as many women remain unaware of the method [7].

Despite these barriers, South African women have shown interest in the IUD. In a survey done in the Eastern and Western Cape, 89% of clients reported that they thought there was a benefit to the IUD and after being given a description of the IUD, 74% stated that they would consider using it [6]. While there has been a plethora of research done regarding barriers to IUD use, relatively little work has been done on IUD promotion. Furthermore, there is a lack of data on how to promote IUD use among the South African population. A Zambian study found that hiring dedicated providers of long-acting reversible contraception (LARC) significantly increased IUD uptake among women. Over a 14-month period, 33,069 women received LARC with 11,530 of those receiving the IUD [15]. A cohort study of Rwandan and Zambian women found that fertility-based counseling among HIV-discordant couples increased the use of LARC (IUD and implants) [16]. Of the 365 Rwandan women counseled, 30 chose the IUD while of the 528 Zambian women counseled, 38 chose the IUD [16]. Other interventions to promote the IUD have had varied effect [17-19]. The varying successes and designs of these interventions make it difficult to determine what approach will work best. This study evaluated a brief counselling intervention in order to inform strategies for increasing IUD use in South Africa.

Materials and Methods

A randomized controlled trial was conducted to test the impact of a counseling intervention on IUD uptake among 110 women attending a public clinic in Gugulethu, Cape Town.

Setting

A counselling intervention was conducted at the Gugulethu Community Health Centre located in the urban Nyanga district of Cape Town between November and December 2012. The district has an approximate population of 350,000 with the majority of people being unemployed and living in informal dwellings. The facility provides a range of primary health care services, including an antiretroviral therapy clinic and family planning [20]. The majority of clients attending the family planning clinic use the injectable, condom or oral contraceptive pill. At the time of the study, IUD services at the family planning clinic were available by appointment only. One provider runs the family planning clinic.

Participants and Procedures

Eligible participants were women between 18 and 45 years of age who were not pregnant, sterilised or currently using the IUD, were able to provide written informed consent and who did not currently desire childbearing (see Appendix A). Participants who were currently using contraception were eligible, including those with an unmet need for contraception.

Participants were recruited from the waiting areas of the ARV clinic and family planning clinic.

Convenience sampling was used to recruit women from the waiting room areas of the clinic. Potential clients were approached by study staff in clinic waiting rooms and asked for interest in study participation. Interested women were brought to a private room to further discuss the study and give written informed consent. Following consent, all participants were administered a baseline questionnaire in their preferred language by a trained interviewer.

Following the questionnaire, all clients were given an educational pamphlet about the IUD in either English or isiXhosa and a study participant card. Participants were followed-up after one month.

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 332/2012) and the Provincial Government of the Western Cape (RP 145/2012) which permitted access to the clinic (see Appendix E and F).

Intervention

Those randomised to the intervention group received an educational IUD pamphlet plus five to ten minutes of counselling regarding the IUD. The counselling included information about the effectiveness of the IUD as well the benefits, side effects and clarification of misconceptions or rumors about the device (see Appendix B). The counselling also included information about who could and could not use the IUD as well as information about the insertion procedure. Unlike the control group, clients in the intervention group were shown both the IUD and the insertion process during counselling and were allowed to touch the device. Furthermore, clients were able to ask questions about the device during counselling. The counselling was developed from current literature about the IUD as well as consultation with health care providers in the reproductive health field. The counselling was piloted before implementation. An experienced counsellor who underwent training about the IUD by the principal investigator administered the counselling. The counselling was administered in the participant's preferred language, either isiXhosa or English. The staff giving the counselling was not the same staff interacting with the control group.

Control

Those randomised to the control group received the current standard of care which is an educational IUD pamphlet. The pamphlet explained what the IUD is, benefits and side effects of using the IUD and the IUD's effect on fertility (see Appendix C).

Measures

A questionnaire was administered to all clients in their preferred language by a trained interviewer after informed consent was given (see Appendix D). The questionnaire was piloted before use and assessed by the principal investigator for accuracy and completion. The study instrument assessed sociodemographic and economic information, reproductive health history, the client's knowledge and attitude toward the IUD and health locus of control. Locus of control was considered as a potential predictor of future IUD use. Locus of control is a general construct which alludes to "the degree to which persons expect that a reinforcement or an outcome of their behavior is contingent on their own behavior or personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable" [21]. The Multidimensional Health Locus of Control scale was used to measure clients' beliefs in their ability to control health outcomes or behaviors [22]. Participants were asked to rate how much they agree with a certain statement using a 6-point Likert scale. Two constructs were measured with the scale, internal health locus of control and chance health locus of control. Internal health locus of control measures how much control a client believes she has over her own health or health behaviors and chance locus of control measures how much a client believes her health is due to chance or fate. The analysis measured external locus of control with questions such as "If it's meant to be, I will become pregnant" and internal locus of control with questions such as "I am in control of whether or not I become pregnant", with responses ranging from strongly disagree to strongly agree. Studies in Brazil and the United States have examined the association between locus of

control and knowledge and use of contraception [23-24]. Participants were also asked to rate how much they agree with certain statements regarding contraceptive characteristics using a 3-point likert scale.

Randomisation

For allocation of the participants, a computer-generated list of random numbers was used. The numbers were then put into opaque envelopes and sealed. Following the questionnaire, the interviewer randomised clients to either the control or intervention group by sealed envelope allocation.

Outcomes

The primary outcome of interest was having an IUD inserted and the secondary outcome of interest was making an IUD insertion appointment. Participant follow-up happened after one month. IUD insertions were measured by review of daily family planning registers and folder review of family planning clients. IUD appointments were ascertained by looking at the IUD appointment diary kept by the family planning provider.

Sample size

To detect at least a 30% absolute increase in uptake of the IUD (between 30% and 60% for the control and intervention groups respectively) with a precision of 5% and 80% power, a sample size of 100 participants was necessary. Prior research which conducted an intervention at the community level reported an absolute increase of approximately 25%. [19] However, as there is no data for an intervention within the South African population we estimated 30%.

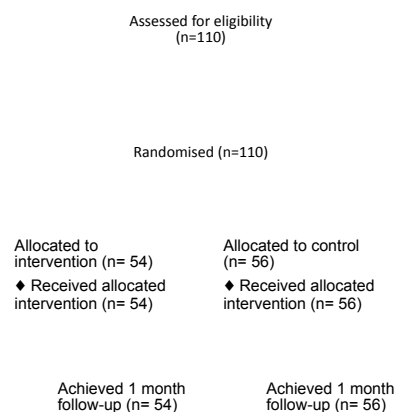
Statistical Analysis

All data were entered into Microsoft Excel and double data entry was performed. Data were analysed using Stata 10 (Stata, College Station, TX, USA). Descriptive statistics were calculated for select demographic and reproductive health characteristics and were compared between the control and intervention groups. The significance of any differences between these two groups was assessed by chi-square and t-tests. Bivariate associations between participant characteristics and these variables were described using t-tests for means and chi-square tests or Fisher's exact test for proportions as appropriate. Select demographic and reproductive health variables were used to assess significant bivariate relationships with being aware of the IUD, having made an IUD appointment and locus of control. The number of IUD appointments made within each group was compared using relative risk and 95% confidence intervals.

Results

Between November and December 2012, 110 women participated in the trial. Of the 110 women, a total of 56 were assigned randomly to the control arm while 54 were assigned to the intervention arm (Figure 1). There were no losses or exclusions after randomisation.

Figure 1: Flow diagram of educational pamphlet versus educational pamphlet plus counselling for IUD promotion intervention



The mean age of participants was 30 years. Participants were slightly older in the control group (mean: 30.7 years) than in the intervention group (mean: 29.8 years) (Table 1). The median years of education were 11 years. The majority of participants were unemployed (62%) and almost all participants (91%) spoke isiXhosa as their primary language. Nearly half of the participants (45%) lived in an informal dwelling or shack. The mean gravidity was 1.8 (Table 1). Women in the control group had a higher mean number of pregnancies (1.9) than women in the intervention group (1.6). Over half the participants (58%) had experienced an unwanted pregnancy. The majority of participants (71%) were HIV positive with over half (64%) taking antiretroviral therapy. Most women reported that they were currently in a sexual relationship (79%).

Nearly half the participants (48%) had discussed family planning with their partner or husband, while the majority (61%) had used a modern contraceptive method in the past 12 months (Table 1). The most commonly used methods were the male condom (56%), the 3-month injectable (40%), the 2-month injectable (26%) and the oral contraceptive pill (6%) (Table 1). There were no significant differences between the intervention and control groups.

Table 1: Sociodemographic, health, reproductive and contraceptive characteristics of clients

Variable	Total N = 110	Control N = 56	Intervention N = 54	P-value
Mean age in years (SD)	30.3 (7.3)	30.7 (6.8)	29.8 (7.8)	.54
Native language, n (%)				.86
IsiXhosa	100 (90.9)	52 (92.9)	48 (88.9)	
Currently unemployed, n (%)	68 (61.8)	36 (64.3)	32 (59.3)	.66
Median years of schooling (SD)	11 (2.0)	11 (1.5)	11 (2.4)	.15
Type of home, n (%)				
Informal dwelling/shack	49 (44.6)	29 (51.2)	20 (37.0)	.10

Mean gravidity (SD)	1.8 (1.3)	1.9 (1.3)	1.6 (1.3)	.19
Previous pregnancy unintended, n (%)	64 (58.2)	34 (60.7)	30 (55.6)	.17
HIV positive, n (%)	78 (70.9)	44 (78.6)	34 (63.0)	.26
Taking antiretrovirals (ART), n (%)	70 (63.6)	42 (75.0)	28 (51.9)	.03
Currently in a sexual relationship, n (%)	87 (79.1)	44 (78.6)	43 (79.6)	.89
Discussed family planning with partner/husband, n (%)	53 (48.2)	23 (41.1)	30 (55.6)	.20
Used modern contraceptive method in the past 12 months, n (%)	67 (60.9)	33 (58.9)	34 (63.0)	.67
Type of method, n (%)				
2- month injectable	28 (25.5)	14 (25.0)	14 (25.9)	.91
3-month injectable	44 (40.0)	23 (41.1)	21 (38.9)	.72
Oral contraceptive pill	6 (5.5)	4 (7.1)	2 (3.7)	.64
Male condom	62 (56.4)	30 (53.6)	32 (59.3)	.81

Awareness and Attitude toward the IUD

Approximately 46% of participants had ever heard of the IUD and after being given a brief description, 36% said they would consider using the IUD (Table 2). Twenty-one percent of participants knew someone who used an IUD, while only 16 % had ever had a health care provider discuss the IUD with them. Approximately a quarter of participants (27%) were interested in receiving an IUD that day.

Table 2: Client awareness and attitude toward the IUD

Variable	Total N = 110	Control N = 56	Intervention N = 54	P-value
Ever heard of the IUD, n (%)	50 (45.5)	23 (41.1)	27 (50.0)	.44
Would consider using the IUD, n (%)				.63
No	39 (35.5)	21 (37.5)	18 (33.3)	
Yes	39 (35.5)	21 (37.5)	18 (33.3)	
Maybe	32 (29.0)	14 (25.0)	18 (33.3)	
Knows someone who uses an IUD, n (%)	23 (20.9)	9 (16.1)	14 (25.9)	.20
Health care provider has ever discussed IUD with client, n (%)	17 (15.5)	9 (16.1)	8 (14.8)	.86
Interested in receiving an IUD today, n (%)				.61
No	56 (50.9)	28 (50.0)	28 (51.9)	
Yes	30 (27.3)	18 (32.1)	12 (22.2)	
Maybe	22 (20.0)	9 (16.1)	13 (24.1)	
Nonresponse	2 (1.8)	1 (1.8)	1 (1.8)	

Health locus of control

There were no significant differences at baseline between external and internal locus of control (Table 3).^{A,B}

Table 3: Perceived control of fertility

Variable	Total N = 110	Control N = 56	Intervention N = 54	P-value
Mean Internal Health Locus of Control (SD)	30.0 (6.1)	29.4 (6.6)	30.6 (5.5)	.30
It is my own behaviour which determines when or if I become pregnant	4.4 (1.9)	4.2 (1.9)	4.6 (1.9)	.34
I am in control of whether or not I become pregnant	4.8 (2.0)	4.9 (1.6)	4.6 (2.4)	.41
If I become pregnant accidentally, it is my own fault	4.8 (1.8)	4.7 (1.9)	4.9 (1.6)	.57
Whether or not I become pregnant depends on if I use contraception	5.2 (1.4)	5.1 (1.4)	5.4 (1.4)	.43
If I take contraception, I can avoid becoming pregnant	5.5 (1.4)	5.4 (1.4)	5.6 (1.3)	.45
If I take contraception, I can prevent pregnancy	5.4 (1.7)	5.1 (2.1)	5.6 (.97)	.08
Mean External Health Locus of Control (SD)	19.1 (7.1)	19.1 (7.6)	19.1 (6.6)	.99
Often I feel like no matter what I do, if I am going to become pregnant, I will become pregnant	3.3 (2.1)	3.3 (2.1)	3.2 (2.1)	.77
It seems that whether or not I become pregnant is great influenced by chance	3.3 (1.9)	3.3 (1.9)	3.3 (2.0)	.83
When it comes to whether or not I become pregnant, I just have to let nature run its course	2.5 (1.9)	2.8 (2.0)	2.3 (1.8)	.18
Whether or not I become pregnant is largely a matter of good fortune	2.9 (1.9)	2.9 (1.9)	3.0 (2.0)	.71
Even if I take contraception, it's easy to become pregnant	4.5 (1.9)	4.4 (1.9)	4.6 (1.8)	.45
If it's meant to be, I will become pregnant	2.6 (2.0)	2.7 (2.0)	2.6 (2.1)	.88

Factors associated with awareness of the IUD

Half of the women in the intervention group had heard of the IUD while 41% of those in the control group had heard of the IUD (Table 4). Older women were significantly more likely to know about the IUD ($p=.002$) as well as women with higher gravidity ($p=.03$). There were no significant differences in regards to unintended pregnancy, sexual relationship status and modern contraceptive use in the past 12 months between those who were aware and not

^A *Strongly disagree* indicates a rating of 1 on a scale of 1-6.

^B *Strongly agree* indicates a rating of 6 on a scale of 1-6.

aware of the IUD.

Table 4: Characteristics associated with awareness of the IUD

Variable	Aware of IUD	Not aware of IUD	p-value
Control, n (%)	23 (41.8)	32 (58.2)	.44
Intervention, n (%)	27 (50.0)	27 (50.0)	
Mean age in years (SD)	32.6 (7.2)	28.2 (6.9)	.002
Mean gravidity (SD)	2.1 (1.3)	1.6 (1.3)	.03
Previous pregnancy unintended, n (%)	13 (54.2)	11 (45.8)	.20
Currently in a sexual relationship, n (%)	37 (43.0)	49 (57.0)	.25
Used modern contraceptive method in the past 12 months, n (%)	29 (43.3)	38 (56.7)	.49

Of the 56 women assigned to the control group, 3 (5%) made an appointment for IUD insertion while 2 (4%) of the 54 women assigned to the intervention group made an appointment (RR = .69, 95% CI: .12-3.98, p=.68) (Table 5). Of the women who had not used contraception in the past 12 months, none of those in the intervention group made an IUD appointment, while 2 (9%) of those in the control group did. No clients completed the outcome of interest during the 1-month follow-up period.

Table 5: Characteristics associated with making an IUD appointment

Variable	IUD appointment	No IUD appointment	p-value
Control, n (%)	3 (5.4)	53 (94.6)	1.0
Intervention, n (%)	2 (3.7)	52 (96.3)	
Mean age in years (SD)	26.6 (4.7)	30.4 (7.4)	.88
Mean gravidity (SD)	1.6 (1.3)	1.8 (1.3)	.71
Previous pregnancy unintended, n (%)	1 (20.0)	24 (22.9)	1.0
Currently in a sexual relationship, n (%)	4 (80.0)	83 (79.1)	1.0
Used modern contraceptive method in the past 12 months, n (%)	3 (60.0)	64 (61.0)	1.0
Not used modern contraception in the past 12 months (Control), n (%)	2 (8.7)	21 (91.3)	.49
Not used modern contraception in the past 12 months (Intervention), n (%)	0 (0.0)	20 (100.0)	
Ever heard of the IUD, n (%)	4 (80.0)	46 (44.2)	.22
Would consider using the IUD, n	3 (60.0)	36 (34.3)	.62

(%)			
Health care provider has ever discussed IUD with client, n (%)	2 (40.0)	15 (14.3)	.17
Interested in receiving an IUD today, n (%)	2 (40.0)	28 (26.7)	.85
Contraceptive characteristics which are important to participants, Mean (SD)			
Effective at preventing pregnancy	3.0 (0.0)	2.8 (.92)	.70
Effective at preventing HIV/STIs	2.4 (.89)	2.4 (.87)	.98
Undetectable by male partner	1.6 (.89)	1.9 (.89)	.46
Not necessary to remember daily or with sexual activity	1.4 (.89)	2.3 (.84)	.01
Last for a long time without requiring a medical visit	2.6 (.55)	2.6 (.71)	.91
Does not require a medical provider to receive	1.8 (1.1)	2.2 (.91)	.30
Is "natural"/does not contain hormones	1.4 (.89)	2.3 (.84)	.02
Does not change menstrual bleeding patterns	2.4 (.89)	2.4 (.84)	.96
Causes menses to stop	2.4 (.89)	2.2 (.89)	.66
Does not cause weight-related side-effects	2.6 (.89)	2.4 (.84)	.54
Does not interact with ART	3.0 (0.0)	2.8 (.54)	.42
Does not cause mood changes	2.0 (1.0)	2.3 (.85)	.34
Contraceptive characteristics which are problematic for participants, Mean (SD)			
No effect on preventing STIs	2.6 (.89)	2.2 (.93)	.37
Male partner aware of method	1.0 (0.0)	1.24 (.96)	.58
Must remember to use at every sex act or take daily	1.8 (.92)	1.9 (.91)	.89
Requires an injection	1.6 (.89)	1.6 (.82)	.90
Requires a physician/medical provider to provide	1.6 (.89)	1.8 (.91)	.65
Lasts for months or longer	1.0 (0.0)	1.4 (.75)	.26
May interact with HIV infection or ART	3.0 (0.0)	2.6 (.75)	.25
Causes irregular menstrual bleeding	3.0 (0.0)	2.5 (.76)	.14
Causes menstrual bleeding to stop	2.0 (1.0)	2.3 (.87)	.49
May cause mood changes	2.6 (.55)	2.3 (1.1)	.56

After being read a list of contraceptive characteristics, women were asked to rate their importance using a 3-point Likert scale. Women who reported that it was somewhat important for a contraceptive method to "not be necessary to remember daily or with sexual activity" were significantly more likely not to make an IUD appointment ($p=.01$). Clients

who rated "is natural/does not contain hormones" as somewhat important were also more likely to not make an IUD appointment ($p=.02$) (Table 5). Furthermore, women who moderately agreed with the statement "It seems that whether or not I become pregnant is greatly influenced by chance" were more likely to make an IUD appointment ($p=.03$) (Table 6).

Table 6: Fertility characteristics associated with making an IUD appointment

Variable	IUD appointment	No IUD appointment	p-value
Mean Internal Health Locus of Control (SD)	33.0 (2.0)	29.9 (6.2)	.27
It is my own behaviour which determines when or if I become pregnant	4.4 (2.1)	4.4 (1.9)	.99
I am in control of whether or not I become pregnant	5.8 (.45)	4.7 (2.0)	.24
If I become pregnant accidentally, it is my own fault	5.0 (2.2)	4.8 (1.8)	.79
Whether or not I become pregnant depends on if I use contraception	6.0 (0.0)	5.2 (1.4)	.22
If I take contraception, I can avoid becoming pregnant	5.8 (.45)	5.5 (1.4)	.61
If I take contraception, I can prevent pregnancy	6.0 (0.0)	5.3 (1.7)	.38
Mean External Health Locus of Control (SD)	18.2 (5.1)	19.2 (7.2)	.77
Often I feel like no matter what I do, if I am going to become pregnant, I will become pregnant	3.0 (2.7)	3.3(2.1)	.76
It seems that whether or not I become pregnant is greatly influenced by chance	5.2 (1.8)	3.2 (1.9)	.03
When it comes to whether or not I become pregnant, I just have to let nature run its course	1.4 (.89)	2.6 (1.9)	.18
Whether or not I become pregnant is largely a matter of good fortune	2.2 (1.8)	3.0 (2.0)	.38
Even if I take contraception, it's easy to become pregnant	4.4 (2.3)	4.5 (1.9)	.90
If it's meant to be, I will become pregnant	2.0 (1.4)	2.7 (2.1)	.47

Discussion

This is one of the first studies to test the effect of a brief counselling intervention to increase IUD use among potential users in South Africa. Among clients in this study, the incidence of

IUD uptake was lower than expected. The number of IUD insertion appointments made was low in both the intervention and control groups. In addition, the IUD was a relatively unknown method among the participants. Few participants had ever discussed the IUD with a health care provider or knew someone who used the IUD. The results of this study suggest that a brief counselling intervention may not be sufficient to increase the demand for the IUD.

After counselling, no participants from either the control or intervention group had the IUD inserted. These results are similar to those of another study done in Cape Town [25].

Although women said they found discussing the IUD to be informative, it did not make any difference in the level of IUD uptake post-intervention. It was recognized at the start of the study that it may be hard to show an effect on contraceptive use among the women as the study took place in the Western Cape, which has the second highest rate of contraceptive use among the provinces in South Africa [26]. Among the participants, a high percentage of women in both the intervention (59%) and control (63%) groups had used a modern method of contraception in the past 12 months. As some of the women may have been currently using a method, counselling may not have been enough of a motivation for them to switch to the IUD. Furthermore, while only 60% of women in both groups were using contraception, 80% of them were in sexual relationships. The 20% of women with unmet need could be described as less intentional or as having a more ambivalent feeling towards pregnancy [27]. A recent survey study found that women who less intentional about pregnancy or “okay either way” were often not taking contraception or not taking it on a regular basis [27].

Approximately half the participants in our study were aware of the IUD. This is more than the level found by the 2003 SADHS which stated that 39.7% of women were aware of the IUD [28]. Older women were more likely to be aware of the IUD before the start of the study. These results are similar to findings of a study in the United States with two age cohorts

where the older cohort of women was more likely to know about the IUD [29]. This may be because over time they have been exposed to more contraceptive options than their younger peers. Women with higher gravidity were also more likely to be aware of the IUD. This may possibly be because women in Cape Town are seen postpartum and then referred to family planning after each delivery, therefore they may have been counselled more extensively about contraception [25]. This may also be due to the fact that IUD is generally offered to women who have had children. Only a third of participants reported that they would consider using the method. This could be due to misconceptions and rumours that clients have heard about the IUD, similar to clients in studies from Ghana and El Salvador [4,14]. However, despite low levels of awareness, after being given a description of the IUD women were receptive to using the method, which is similar to findings in other South African studies [6-7].

Approximately a quarter of participants stated that they would be interested in receiving an IUD that day. These results suggest that the IUD is an acceptable method of contraception for some of the women who were sampled. However, acceptability of a method does not always directly translate to use as evidenced in this study. When it comes to contraceptive decision making, a woman's choice is likely influenced by a variety of factors which include health care provider recommendations, family recommendations and cost [30-31]. It can also be influenced by previous method use and the desire for a method which one can start immediately [32]. Lastly, one's social network and partnership status can also have an impact on contraceptive choice [33-34]. This indicates that for a woman, choosing a contraceptive method is a complex decision that goes beyond liking a particular option. The affirmative responses we received in response to IUD usage may not be an accurate representation of actual potential use.

Study Limitations

This study had several limitations. The study was underpowered as it had a small sample size of only 110 participants. The results suggest that our estimation was incorrect and we should have chosen a smaller effect size, thus giving us a larger sample size. The results may not be generalizable to all South African women of reproductive age because participants were enrolled through convenience sampling at one public sector Cape Town clinic. However, those women recruited from the family planning clinic could potentially become users of the IUD because they by definition are sexually active and seeking contraception. Our questionnaire also did not explore any negative or positive perceptions that the women had about the IUD. Qualitative research is needed to better understand women's feeling about the method. In addition, no health care providers were interviewed during the intervention and no data was collected on the number of women who declined to participate and the reasons for refusal. At the time of the study, the family planning sister was not certified to insert IUDs alone and needed to be supervised by a trained superior. This may have served as a hindrance for clients as they would have to make two visits to have the IUD inserted. Having to make two visits for IUD insertion has been shown to be a barrier in increasing IUD use [35]. As the IUD was not made immediately available, its used may have been curtailed as evidenced by the thirty women willing to receive an IUD on the day of the intervention versus the five who actually made an appointment. Furthermore, the short duration of the study may have also not given women enough time to switch from their current contraception to the IUD. While data was collected on contraception use in the past 12 months, no data was collected on current contraceptive use which may have explained why IUD uptake was low. The literature also suggests that motivations for switching from one method to another may be different from motivations for moving from not using contraception to using it [36].

A study of oral contraception discontinuation and switching in developing countries found that, on average, 35% of women switched to another method due to dissatisfaction within a three month period [37].

The short duration of the intervention may also have been a reason for low IUD uptake. Of the five women who made an IUD appointment, none of them returned for insertion. A retrospective review study showed that the median time between order and insertion was 43 days, with actual time ranging from 1 to 392 days [35]. Furthermore, we did not know the distance that participants lived from the clinic and the same study showed that women who lived further from the clinic were less likely to return for IUD insertion [35].

Another limitation is we were not able to determine the reason for the IUD not being inserted. It's possible the women changed their decision, chose another contraceptive method or went to another clinic to receive services.

Recommendations

Interventions that are low cost and can be integrated into the existing family planning programme should be attempted. The involvement of relevant stakeholders such as government officials, health care providers and community leaders early on in the process of implementing an intervention is crucial. They can help to identify the particular needs of a community and guarantee that interventions are targeted accordingly. At the time of the intervention, only one provider was available to insert IUDs. A more successful intervention might involve multiple providers who are trained to counsel women about the IUD as well as do insertions. Furthermore, an effective intervention would involve the development of Information, Education and Communication (IEC) materials, which would include print materials and other media such as radio and television.

Evaluating community attitudes and barriers that hinder the use of LARC is important if a communications campaign is going to be effective at addressing these barriers. This could be

accomplished by in-depth studies or small focus group discussions that can provide insight into community beliefs and attitudes. Piloting campaign materials will help show which messages are most appropriate and welcomed by both stakeholders and the community. Pretesting materials can also garner invaluable insights from members of the target audience.

Conclusion

The IUD is a safe and highly effective form of contraception, but is one of the least known methods among potential clients and one of the least counselled methods among providers in the study. The data suggest that simply being counselled about the IUD is not enough to increase uptake and that a more comprehensive and intensive campaign is needed in order to see an increase in IUD use. Future initiatives must focus on increasing women's awareness about the method as well as the number of providers trained to insert the IUD. Programs should introduce the IUD as a contraceptive option in a variety of situations such as during the postpartum period or after a miscarriage or abortion. Providers' ability to promote and deliver a range of contraceptive options must be strengthened if the IUD is to be used by women in South Africa.

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University of Cape Town

Appendix A

Informed Consent

Informed Consent

Purpose of research

We are from the School of Public Health at the University of Cape Town. We are collecting information about family planning needs of women attending the Gugulethu Community Health Centre and specifically, whether they would be interested in using the intrauterine device (IUD/loop). This research is being done as part of a Master in Public Health degree at the University of Cape Town and is not part of clinical care.

Your participation in this study is voluntary. Whether or not you decide to participate in this study will not affect your right to, or experience of treatment and care at this or any other clinic now or in the future.

If you decide to participate:

- This will involve you answering questions put to you by the interviewer, for about 30 minutes.
- You will be randomised to receive either an educational pamphlet about the IUD or the educational pamphlet and 5 -10 minutes of one-on-one counselling about the IUD. Randomisation means the selection of the IUD will be by chance, like tossing a coin or rolling dice.
- All of the information that you provide will be kept completely private and confidential and will only be viewed and used by the researchers on this project. We will write down your name, but it will not be used in any published materials. Health care providers and other people at this clinic will not see this information.
- You give researchers permission to access your health care records.
- You have the right to decide not to participate in the study. If you do participate, you have the right to refuse to answer any specific questions, or to end the interview at any time without penalty.
- The information you provide may help us to improve family planning services for women in the Cape Town area.

Risks and Benefits

Your participation in this study will not involve any risks to you. However, if you choose to undergo IUD insertion, you may experience side effects such as physical discomfort and/or changes in your menstrual cycle. You will receive information on family planning and contraception as a direct benefit for participating in this study. You will not receive any remuneration for taking part in this study.

What happens at the end of the study?

At the end of the study we will analyse the data collected from all the study participants. Information that we collected from you will be compared to others who took part in the study. The results will be published for a dissertation and may be reported in scientific journals. We also may wish to contact you in the future to discuss your participation in this study. Please initial below if you give permission for future contact.

_____ (initial) I give permission to be contacted in the future for information relating to this study.

If there is anything that is unclear or if you need further information, please ask us and we will provide it. Do you have any questions?

Additional Information

If you have any questions or are hurt while taking part in this research study, you should contact:

Principal Investigator

Phumelele Trasada
School of Public Health and Family Medicine,
Faculty of Health Sciences,
University of Cape Town (UCT)
Tel: +27 21 444 2758
Email: Phumelele.Trasada@uct.ac.za

If you have any questions about your rights as a study participant, you should contact:

Professor Marc Blockman
Chairperson, FHS Human Ethics
Department of Medicine
University of Cape Town (UCT)
Tel: +27 21 406-6496
Email: Marc.Blockman@uct.ac.za

Participant volunteer declaration

I have understood that the purpose of the study is to investigate family planning, and to understand specifically the interest of women in using the IUD in order to inform health care improvement.

I have read the above information, or it has been read to me. I have had the opportunity to ask questions about it, and any questions that I have asked, have been answered to my satisfaction. I consent voluntarily to participate in this study and understand that I have the right to withdraw from the study at any time without in any way affecting my position as an attendee at this or any other clinic now or in the future.

Please indicate your consent with your signature, or a tick if you would prefer.

Signature of participant [tick optional] Date

Signature of independent witness [for participants who give verbal consent] Date

Signature of Interviewer Date

Appendix B

Counselling Strategy

Brief Intervention to promote IUD use among women in Cape Town

Counselling Guide

University of Cape Town

The Six-Step Counselling Model (GATHER)

When introducing a client to a contraceptive method, client-centred counselling is one of the most effective ways to ensure successful and continuing contraceptive use. Your role as a counsellor is very important as the client is relying on you to give the correct information and may base their decision to use contraception on what you say. With that in mind, the six steps in the counselling process “**GATHER**”, should be taken into consideration.

Greet: **Greet the** client in a friendly, helpful, and respectful manner

Ask = Ask the client their name and if they have ever heard of the IUD or loop before today

Tell = Tell client about the IUD/loop

Help = Help client to understand the important facts about the IUD/loop

Explain = Explain to the client how to use the IUD/loop

Remind = Remind: Remind the client that if she wishes to have the IUD inserted or has any questions about contraception, she must make a follow-up visit to Family Planning.

Counselling the Client

- 1) Greet the client. Tell her your name and explain that you are going to spend the next 10 minutes telling her about the IUD or loop.
- 2) **Ask** the client for her name and tell her that she can ask questions at any time.
- 3) **Tell** the client what the IUD/loop is. – “The IUD is a small, flexible, plastic and copper device placed in the womb. Most IUDs have 1 or 2 thin strings that hang from the cervix into the vagina (show client the IUD). The IUD provides protection against for pregnancy for 10-12 years.
- 4) Next, **Tell** the client about the effectiveness of the IUD – “The IUD is a highly effective and safe form of contraception. In the first year of use, there are less than 6 pregnancies for every 1000 women. The only contraceptive more effective than the IUD is sterilisation. However, the IUD is reversible, unlike sterilisation which is a permanent method.”
- 5) **Tell** the client how the IUD works – “The plastic and copper device prevents the sperm and the egg from meeting, therefore preventing pregnancy. This also means that the IUD does not cause abortions.”
- 6) **Tell** the client that the IUD can be used for most women. This includes HIV positive women, with AIDS who are on ARVs (as long as they are well) and women who have never had children. Explain that the IUD cannot be used by women with the following:
 - Women with a current STI infection (Chlamydia or Gonorrhoea).
The IUD can be inserted after the infection is treated
 - Women with unusual vaginal bleeding
 - Women who are pregnant – The sister will always check before inserting the IUD

- Women with genital or pelvic infections
 - Women with a high risk of STIs
- 7) **Help** the client understand the important facts about the IUD – “Many women have a variety of concerns when deciding what method of family planning is best for them. Here are some important facts that you should know about the IUD:
- Once the IUD is removed, your fertility will return immediately. In other words, you can start trying for a baby as soon as the IUD is taken out.
 - Using the IUD will not interfere with your sex drive or your mood.
 - Your partner cannot feel the IUD during sex. This is because it is inserted very high into the womb.
 - The IUD does not contain any medication or hormones.
 - Because the IUD does not contain any hormones, it will not cause weight gain or loss, a bloated or distended stomach or sore breasts.
 - Once the IUD is inserted, you do not have to do anything else. Unlike the pill or injectable, you don’t have to come back to the clinic every 2 or 3 months.
 - The IUD **CANNOT** move around in the body. It cannot move into the heart, brain or throat. This is because the womb only has one opening which is through the vagina.
- 8) **Explain** the side effects of the IUD – “Sometimes the IUD can cause side effects. You may experience longer or heavier periods and you may have more cramps during your period. Remember, not all women experience these side effects and they usually go away after the first few months.”
- 9) **Explain** how the IUD is inserted – “The IUD will be inserted by a trained nurse in family planning. It takes about 10 to 15 minutes. I am going to explain the IUD insertion process to you now:
- First, the sister will give you some Brufen to help make the insertion less sore. This is not an operation, so you do not need an anesthetic.
 - Next, the sister will use an instrument called a speculum to open the vagina. She will look in your vagina to make sure everything looks healthy.
 - Then the sister will insert the IUD into the womb. You may feel some cramping or discomfort during this part. (Insert the IUD into the uterine model and show the client how the IUD looks once inserted)
 - After the IUD is inserted, the sister will cut the strings leaving about 3 cm hanging outside of the cervix
 - Afterwards, the sister will give you the following information: The name and type of IUD that was inserted, the date of insertion and the date when you should have it removed and the date for your six week check up.
 - You will rest for a few minutes, but you may return to work or school afterwards. You do not need to take leave from work.
- 10) **Remind** the client that the IUD does not protect against STIs or HIV, so she must use a condom during sex. Also tell her that if she does not get her period, she should return to family planning for a pregnancy test.
- 11) **Remind** the client that if she wishes to have the IUD inserted, she must visit Family Planning and that she should bring her study card with her.

Common Myths and Rumors about the IUD

Rumors are **unconfirmed stories** that are **transferred** from one person to another **by word of mouth** while a **misconception** is a **mistaken interpretation of ideas or information**. If a misconception is imbued with elaborate details and becomes a fanciful story, then it acquires the characteristics of a rumor.

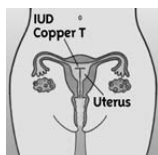
Methods for Counteracting Rumors and Misinformation

1. When a client mentions with a rumor, **always listen politely. Don't laugh.**
2. **Define** what a rumor or misconception is.
3. **Find out where the rumor came from**
4. **Explain the facts.**
5. **Use strong scientific facts** about family planning methods to counteract misinformation.
6. Always **tell the truth**. Never try to hide side effects or problems that might occur with various methods.
7. **Clarify information** with the use of demonstrations and visual aids.

Rumor/Myth	Facts
The IUD might travel inside a woman's body to her heart or her brain.	There is no opening from the womb to the other organs of the body. If the IUD is accidentally expelled or comes out, it comes out of the vagina, which is the only opening to the womb.
The thread of the IUD can trap the penis during intercourse.	The strings of the IUD are soft and flexible (let client feel the strings) and cling to the walls of the vagina and are rarely felt during intercourse. If the string is felt, it can be cut very short. The IUD cannot trap the penis, because it is located within the womb and the penis is positioned in the vagina during intercourse.
A woman who was wearing an IUD became pregnant. The IUD became embedded in the baby's forehead.	The baby is very well protected by the sac filled with amniotic fluid inside the mother's womb. If a woman gets pregnant with an IUD in place, the health provider should remove the IUD immediately due to the risk of infection. If for some reason the IUD is left in place during a pregnancy, it is usually expelled with the placenta or with the baby at birth.
The copper on the IUD can rust in the	Once in place, if there are no problems,

uterus after prolonged use	the IUD can remain in place up to 10 years. The IUD is made up of materials that cannot rust or rot; it simply loses its effectiveness as a contraceptive after 10 years.
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Counselling Strategy



Intrauterine Device IUD

- Provides long-term protection against pregnancy for up to 10-12 years.
- Is a small, flexible, plastic and copper device placed in the womb. Most IUDs have 1 or 2 thin strings that hang from the cervix into the vagina.
- A trained provider will insert and remove the IUD.
- Safe for a woman with HIV or with AIDS who is clinically well on antiretroviral (ARV) therapy.
- Not advised for a woman at very high risk of having a sexually transmitted infection (STI).
- If you have a current STI (Chlamydia or Gonorrhoea) you must be treated before an IUD can be inserted

Effectiveness for pregnancy prevention: The pregnancy rate is:

- In first year of use — less than 6 pregnancies per 1000 women
- This is similar to female sterilisation, but the IUD is reversible

How the method works:

- The plastic and copper device helps prevent the sperm and egg from meeting.
- Therefore it does not cause abortions

Important facts:

- Immediate return to fertility after IUD is removed
- Does not interfere with sex drive
- Your partner cannot feel the IUD during sex
- Does not contain any medication or hormones
- Will not cause weight gain/loss, fluid retention or breast tenderness
- Does not require you to do anything once the IUD is inserted
- The IUD **CANNOT** move around in the body

Method not advised if you:

- Are pregnant or think you might be pregnant. The sister will always check before inserting the device.

- Have unusual vaginal bleeding.
- Have genital or pelvic infections.

Side effects:

- Typically causes longer and heavier bleeding and more cramps or pain during monthly bleeding.
- Side effects usually lessen after the first several months.

Other benefits:

- You will be offered a PAP smear if indicated
- You will have a gynecological examination

How to use (include demo):

- The provider inserts the IUD into your uterus through your vagina and cervix
- You do not need an anaesthetic. This is not an operation
- The IUD is inserted in the clinic
- You do not have to take leave from work
- S/he cuts the strings on the IUD, leaving about 3 cm hanging out of the cervix
- You will feel some discomfort or cramping during the procedure, this is normal.
- After the procedure you will get the following information from your provider:
 - Type of IUD you have
 - Date of insertion
 - Date when IUD will need to be removed or replaced
- You will be given a date for a check-up 6 weeks after insertion of the device

REMEMBER:

- Does not protect against STIs, including HIV
- Use condoms (male or female) if you feel at risk of STIs, including HIV
- If you miss a period you must have a pregnancy test

Appendix C

IUD Pamphlet (English and isiXhosa)

**All you need to know
about the
Intrauterine Device
'IUD' or 'loop'**



What is an IUD?

An IUD is an intrauterine device. It is a new and improved version of 'the loop' that was used a few years ago.

This is a small, plastic device which is inserted into a woman's womb. The IUD changes the environment in the womb so that a male's sperm and a female's eggs can no longer meet – therefore preventing pregnancy.

What are the benefits of using an IUD?

It can be used by any woman of reproductive age (14 years and older) and can be used while breastfeeding.

It can also be used by women who are HIV positive.

It can easily be put in place by a nurse or doctor. The procedure only takes a few minutes and the IUD can stay in place and be effective for 10 years.

It starts working straight after insertion.

If you decide for any reason that you would like to have the IUD removed, this can be done at any time by a doctor or nurse.

Once an IUD has been inserted, periods are usually regular and users do not gain weight or have changes in mood.

Neither a woman nor her partner will be able to feel an IUD during intercourse.

They are convenient as you don't have to remember to take a pill every day or go to the clinic every 2 or 3 months for the injection.

What precautions must I take if I use an IUD?

Although an IUD prevents pregnancy, it does not protect a woman from sexually transmitted infections (STIs), including HIV. A male or female condom must be used to prevent these infections.

Are there any side-effects when using an IUD?

You may have light spotting or bleeding – this is most common at first and stops with time.

Not often, you may have heavier or prolonged periods and cramping during the first few months after insertion, but usually periods return to normal.

Can the IUD move around to other parts of my body?

No. It is not possible for the IUD to move to other parts of your body as the womb only has one opening into the birth canal (vagina).

Can I lose the IUD?

This is not likely. If this happens, it usually happens in the first months after insertion.

How to check that the IUD is in place?

With 2 fingers you can feel the strings from the IUD coming out of the mouth of the womb, where they hang into the vagina.

What if I want to become pregnant?

If you would like to become pregnant, you can have the IUD removed by the doctor or the nurse at the clinic. Once the IUD is removed you will be able to become pregnant.

**You can get more information
about the IUD at your nearest clinic**

IUDs services are provided at the following clinics:

Gugulethu CHC – Family Planning	021 637 1280
Nyanga Junction	021 692 3913
Nyanga CDC	021 380 8031
Mitchell’s Plain CHC	021 391 5161
Heideveld CDC	021 637 6686
Cross Road CHC	021 385 0260
Hanover Park CHC	021 692 4972



**Konke ofanelwe kukwazi
malunga noluhlobo
locwangciso nzala i-
'loop okanye' i-'IUD'**



Yintoni i-IUD?

Luhlobo olutsha noluphucukileyo iloop nobelusetyenziswa kwiminyaka nje embalwa edlulileyo.

Yinto nje apha encinane eyenziwe ngeplastiki ethi ifakwe iyokuhlala kwisibeleko somntu obhinqileyo.

I IUD le iye itshintshe imo esibelekweni, imo leyo yokudibana kweqanda lomntu obhinqileyo kunye nembewu yendoda, kutsho kungenzeki ukukhulelwa kulowo obhinqileyo.

Zeziphi inzuzo zokusebenzisa i-IUD?

Ingasetyenziswa nangubani na obhinqileyo osefikisa (iminyaka 14 nangaphezulu) kwaye noncancisayo umntu uyayisebenzisa.

Ingasetyenziswa nalibhinqa elinesifo sika gawulayo.

Ifakeka lula ngumongikazi okanye u gqirha.

Yonke lento ithabatha imizuzwana nje kwaye i IUD ingahlala ikukhusele ithuba leminyaka elishumi.

Iqalisa ukusebenza kwangoko igqitywa kufakwa.

Ukuba unqwenela nangasiphi na isizathu ukuyikhupha i IUD, lonto ingenziwa nanini na ngumongikazi okanye u gqirha.

Ngexa ifakiwe i IUD, uyaya exesheni njengesiqhelo, kwaye akukho kutyeba okanye isimo sakho asitshintshi.

Wena okanye iqabane lakho anikwazi ukuphazamiseka yi loop xa nisabelana ngesondo.

Alukho uxanduva lokukhumbula ukuthabatha ipilisi rhoqo okanye uye ekliniki kwinyanga ezimbini okanye ntathu uyokufumana isitofu.

Zeziphi izinto endinokuzithathela ingqalelo xa ndisebenzisa i-IUD?

Nangona i IUD ikhusela ukungakhulelwa ayikukhuseli kwizifo zokwabelana ngesondo(STI'S), kwanentsholongwane kagawulayo.

Makusetyenziswe iikhondoms zababhinqileyo nezamadoda ukukhusela ezizifo.

Ingaba ikhona na imiphumela xa usebenzisa i-IUD?

Unganamaqabaza nje egazi okanye igazi nje.

Idla ngokwenzeka xa uqala kwaye iye iphele kungekabi phi.

Ungaya ngamandla exesheni okanye uthabathe ixesha elide kunesiqhelo kunye nesiluma kwinyanga zokuqala ifakiwe, kodwa ethubeni uye ubuyele kwisimo sesiqhelo sokuya exesheni.

Ingaba i-IUD ingawatyhutyha na amanye amalungu omzimba?

Hayi, ayinakwenzeka lonto ngoba kaloku isibeleko sinendawo enye evulekileyo ukuya kwilungu lobumama.

Ndingaphulukana na ne IUD?

Ayiqhelekanga lonto, ukuba yenzekile kungaba yenzeka kwezinyanga zokuqala isandul u kufakwa.

Uyijonga njani ukuba isahleli kakuhle i-IUD?

Ngeminwe nje emibini ungayiva lamisonto ye IUD ithe gqi ngaphandle komlomo wesibeleko, apho ijinga khona kwilungu lobumama ngaphakathi.

Ukuba ndifuna ukukhulelwa ke ngoku?

Ukuba ufuna ukukhulelwa yiza kwiziko lezempilo apho iyakuthi ikhutshwe ngugqirha okanye umongikazi.

Xa ithe yakhutshwa i IUD ungakwazi ukukhulelwa msinyane.

You can get more information about the IUD at your nearest clinic

IUDs services are provided at the following clinics:

Gugulethu CHC – Family Planning	021 637 1280
Nyanga Junction	021 692 3913
Nyanga CDC	021 380 8031
Mitchell's Plain CHC	021 391 5161
Heideveld CDC	021 637 6686
Cross Road CHC	021 385 0260
Hanover Park CHC	021 692 4972



CITY OF CAPE TOWN | ULINGCHI SIBIKHAPA | SIDA KAAPSTAD

THIS CITY WORKS FOR YOU

Appendix D

Baseline Questionnaire

BRIEF INTERVENTION TO PROMOTE IUD USE AMONG WOMEN IN CAPE TOWN

BASELINE QUESTIONNAIRE

Thank you for agreeing to participate in this interview. As I explained earlier, we are conducting a study to find out how to increase the use of the intrauterine device, or the IUD/loop, among women in Cape Town. In this interview, I will ask you about yourself, your background, your history of pregnancies, contraceptive use and your sexual history.

Everything we talk about is confidential. If there are any questions that you feel uncomfortable answering, feel free to tell me to skip those. If at anytime you don't want to continue with the interview, please let me know.

This interview will take about ½ hour. We really appreciate you agreeing to be part of this study and sharing personal information that may contribute to improving family planning for women in the Cape Town area.

INTERVIEWER INSTRUCTIONS

WRITE THE PARTICIPANT'S STUDY IDENTIFICATION NUMBER ON THE TOP RIGHT CORNER OF EACH PAGE OF THE INTERVIEW – EITHER BEFORE YOU START OR AFTER YOU COMPLETE THE INTERVIEW. THIS IS IMPORTANT IN THE EVENT THAT PAGES BECOME DETACHED.

PLEASE WRITE THE PARTICIPANT'S NAME IN **CLEAR BLOCK CAPITAL LETTERS**. IF THE PARTICIPANT HAS A FOLDER, PLEASE BE SURE TO PLACE A STICKER IN THE "PARTICIPANT STICKER" BOX. IF THEY ONLY HAVE THEIR CLINIC CARD, PLEASE WRITE DOWN THE FOLDER NUMBER.

University of Cape Town

#	Item	Answer Key
A	Participant Name	_____ Surname Name
B	Participant Phone Number	_____
C	Participant Sticker (Folder Number)	_____ Folder Number
D	Study ID Number	____ _
E	Enrolment Site	1 = Gugulethu CHC 2 = Hannan Crusaid
F	Date	____ / ____ / ____ Day Month Year
G	Interviewer	_____ Surname Name
H	<u>Interviewer:</u> Does the participant meet the study eligibility criteria?	0 = No 1 = Yes
I	<u>Interviewer:</u> Has the participant completed the informed consent process?	0 = No 1 = Yes
Socio-demographic Information		
1	How old are you?	Age in years: _____
2	What is the primary language you speak at home?	1 = IsiXhosa 2 = IsiZulu 3 = Afrikaans 4 = English 5 = Other (specify): _____
3	Are you working full-time, working part-time, studying or not working at all?	1 = Full-time – Specify type of work: _____ 2 = Part-time – Specify type of work: _____ 3 = Studying 4 = Not working
4	What is the highest level of schooling or education that you have completed? <i>IF P RESPONDS IN “STANDARD” CONVERT TO GRADE = STANDARD + 2</i>	Grade : _____ Post Secondary (explain): _____
5	Including yourself, how many people live in your household?	Number of people: _____

6	Do you have electricity in your house?	0 = No 1 = Yes
7	Do you have a toilet in your house?	0 = No 1 = Yes
8	What kind of home do you live in? <i>READ CHOICES</i>	1 = Shack/informal dwelling 2 = Home ownership 3 = Flat/council home 4 = Other - specify: _____
9	How many times have you been pregnant? <u>Interviewer:</u> If the answer is 0 SKIP to Question 13	Enter Number: _____ -9 = Refused
10	How many of your pregnancies ended in a live birth i.e. the baby was born alive?	Enter Number: _____ -9 = Refused
11	Were you trying to become pregnant when you had your last child?	0 = No 1 = Yes
12	Have you ever had a TOP, or termination of pregnancy, sometimes called an abortion?	0 = No 1 = Yes -9 = Refused
13	Do you intend to have any or more children in the future? <u>Interviewer:</u> If the answer is No SKIP to Question 15	0 = No 1 = Yes 2 = Don't know/Not sure -9 = Refused
14	How many more children do you intend to have?	Enter Number: _____
Medical History		
Now I would like to ask you some questions about your medical history		
15	Have you ever been tested for HIV? <u>Interviewer:</u> If the answer is No or Refused SKIP to Question 18	0 = No 1 = Yes - 9 = Refused
16	What is your HIV status? <u>Interviewer:</u> If the answer is Negative or Don't know or Refused SKIP to Question 18	0 = Negative 1 = Positive 2 = Don't know -9 = Refused
17	Are you on antiretroviral drugs (ARVs)?	0 = No 1 = Yes -9 = Refuse to answer
18	Have you ever had a Pap smear? A Pap smear is a test to detect abnormal cancer cells in the mouth of the womb that may lead to cancer. When performing this test the doctor or nurse places an instrument called a speculum (spoon) in the woman's vagina so that he/she can see the mouth of the womb and the test is done.	0 = No 1 = Yes 2 = Don't know/Not sure - 9 = Refused
19	Within the last 3 months, have you been told you have an STI?	0 = No 1 = Yes -9 = Refused

20	Do you have bleeding between menstrual periods that is unusual for you or bleeding after having sex?	0 = No 1 = Yes -9 = Refused																											
Sexual activity and Contraceptive History																													
Now I would like to ask you some questions about your past sexual activity and contraceptive use																													
21	How old were you when you first had sexual (vaginal) intercourse?	Age in years: _____																											
22	How many sexual partners have you had in the past year?	Enter Number: _____																											
23	Are you currently in a sexual relationship? <u>Interviewer:</u> If the answer is No SKIP to Question 28	0 = No 1 = Yes -9 = Refused																											
24	How would you describe this relationship? <i>READ CHOICES</i>	1 = Married 2 = Not married, living together 3 = Girlfriend/boyfriend (not living together) 4 = Other specify: _____																											
25	Have you ever discussed family planning or contraception with your partner or husband? <u>Interviewer:</u> If the answer is No SKIP to Question 27	0 = No 1 = Yes																											
26	How does your partner or husband feel about family planning or using contraception? <i>READ CHOICES</i>	1 = Negative 2 = Neutral 3 = Positive 4 = Don't know																											
27	Does your partner or husband have more, less or the same amount of education that you do?	1 = Less 2 = More 3 = Same 4 = Don't know																											
28	Have you ever used a contraceptive method? <u>Interviewer:</u> If the answer is No SKIP to Question 32	0 = No 1 = Yes																											
29	What contraceptive method(s) have you used? <i>READ CHOICES</i> a. Oral contraceptive pill b. 2-month injectable c. 3-month injectable d. IUD/loop e. Male sterilisation f. Female condom g. Male condom h. Diaphragm i. Other method – specify: _____	<table border="0"> <thead> <tr> <th></th> <th>No</th> <th>Yes</th> </tr> </thead> <tbody> <tr> <td>a.</td> <td>0</td> <td>1</td> </tr> <tr> <td>b.</td> <td>0</td> <td>1</td> </tr> <tr> <td>c.</td> <td>0</td> <td>1</td> </tr> <tr> <td>d.</td> <td>0</td> <td>1</td> </tr> <tr> <td>e.</td> <td>0</td> <td>1</td> </tr> <tr> <td>f.</td> <td>0</td> <td>1</td> </tr> <tr> <td>g.</td> <td>0</td> <td>1</td> </tr> <tr> <td>h.</td> <td>0</td> <td>1</td> </tr> </tbody> </table>		No	Yes	a.	0	1	b.	0	1	c.	0	1	d.	0	1	e.	0	1	f.	0	1	g.	0	1	h.	0	1
	No	Yes																											
a.	0	1																											
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e.	0	1																											
f.	0	1																											
g.	0	1																											
h.	0	1																											
30	Have you used a contraceptive method in the past 12 months? <u>Interviewer:</u> If the answer is No SKIP to Question 32	0 = No 1 = Yes																											

31	<p>What contraceptive method(s) have you used?</p> <p><i>READ CHOICES</i></p> <p>a. Oral contraceptive pill b. 2-month injectable c. 3-month injectable d. IUD/loop e. Male sterilisation f. Female condom g. Male condom h. Diaphragm i. Other method – specify: _____</p>	No	Yes
<p>Health Locus of Control</p> <p>I'm going to read to you a list of belief statements about pregnancy with which you may agree or disagree. For each statement there is a scale which ranges from strongly disagree (1) to strongly agree (6). For each item we would like you to choose the number that represents how much you agree or disagree with that statement. This is a measure of your personal beliefs and there are no right or wrong answers.</p> <p><u>INTERVIEWER:</u> Please make sure that EVERY ITEM is answered and that you circle ONLY ONE number per item.</p>			
32	<p>It is my own behaviour which determines when or if I become pregnant.</p> <p><i>[READ CHOICES AND SHOW CARD]</i></p>	<p>1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree</p>	
33	<p>Often I feel that no matter what I do, if I am going to become pregnant, I will become pregnant.</p> <p><i>[READ CHOICES AND SHOW CARD]</i></p>	<p>1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree</p>	
34	<p>It seems that whether or not I become pregnant is greatly influenced by chance.</p> <p><i>[READ CHOICES AND SHOW CARD]</i></p>	<p>1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree</p>	
35	<p>I am in control of whether or not I become pregnant.</p> <p><i>[READ CHOICES AND SHOW CARD]</i></p>	<p>1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree</p>	
36	<p>If I become pregnant accidentally, it is my own fault.</p> <p><i>[READ CHOICES AND SHOW CARD]</i></p>	<p>1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree</p>	

37	When it comes to whether or not I become pregnant, I just have to let nature run its course. <i>[READ CHOICES AND SHOW CARD]</i>	1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree
38	Whether or not I become pregnant is largely a matter of good fortune. <i>[READ CHOICES AND SHOW CARD]</i>	1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree
39	Whether or not I become pregnant depends on if I use contraception. <i>[READ CHOICES AND SHOW CARD]</i>	1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree
40	If I take contraception, I can avoid becoming pregnant. <i>[READ CHOICES AND SHOW CARD]</i>	1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree
41	Even if I take contraception, it's easy to become pregnant. <i>[READ CHOICES AND SHOW CARD]</i>	1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree
42	If it's meant to be, I will become pregnant. <i>[READ CHOICES AND SHOW CARD]</i>	1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree
43	If I take contraception, I can prevent pregnancy. <i>[READ CHOICES AND SHOW CARD]</i>	1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Slightly agree 5 = Moderately agree 6 = Strongly agree
<p>Contraceptive Preferences Each item below is a statement about contraception with which you may agree or disagree. Beside each statement is a scale which ranges from not important (1) to very important (3). For each item we would like you to choose the number that represents how you feel about each statement. This is a measure of your personal beliefs and there are no right or wrong answers.</p>		
44	The following characteristics of a contraceptive are important to me:	

	a. Effective at preventing pregnancy <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	b. Effective at preventing HIV/STIs <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	c. Undetectable by male partner <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	d. Not necessary to remember daily or with sexual activity <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	e. Lasts for a long time without requiring a medical visit <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	f. Does not require a medical provider to receive <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	g. Is “natural”/does not contain hormones <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	h. Does not change menstrual bleeding patterns <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	i. Causes menses to stop <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	j. Does not cause weight-related side-effects <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	k. Does not interact with ART <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
	l. Does not cause mood changes <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not important 2 = Somewhat important 3= Very important
45	If a contraceptive had the following characteristics, it would be a problem for me:	
	a. No effect on preventing HIV/STIs <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	b. Male partner aware of method <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	c. Must remember to use at every sex act or take daily <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem

	d. Requires an injection <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	e. Requires a physician/medical provider to provide <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	f. Lasts for months or longer <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	g. May interact with HIV infection or ART <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	h. Causes irregular menstrual bleeding <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	i. Causes menstrual bleeding to stop <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
	j. May cause mood changes <i>[READ CHOICES AND SHOW CARD]</i>	1 = Not a problem 2 = Somewhat a problem 3= Very much a problem
46	Have you ever heard of the IUD or loop?	0 = No 1 = Yes
Participant awareness and attitude toward the IUD		
<i>An IUD or loop is a small T-shaped plastic and copper device that is inserted into the womb. It protects against pregnancy for 10 to 12 years. The IUD may be removed if future childbearing is desired with immediate return of fertility. IUD insertion and removal can be done easily within a clinic. The most common side-effect associated with IUD use is change in menstrual bleeding.</i>		
47	Is the IUD/loop a method you would ever consider using?	0 = No 1 = Yes 2= Maybe
48	Do you know anyone who uses or has used an IUD/loop? <i>Interviewer: If the answer is No SKIP to Question 50</i>	0 = No 1 = Yes
49	Who do you know that has used or uses an IUD? (e.g. Sister, Friend, Aunt, Mother)	Specify: _____
50	Has a medical provider ever discussed or offered an IUD to you? <i>Interviewer: If the answer is No SKIP to Question 52</i>	0 = No 1 = Yes
51	Which type of provider? <i>READ CHOICES AND CIRCLE ALL THAT APPLY</i>	1= Sister/Nurse 2 = Doctor 3 = Other Specify: _____
52	If you could, would you be interested in receiving an IUD today?	0 = No 1 = Yes 2 = Maybe

This is the end of the questionnaire. Again, I want to thank you for taking the time to complete this interview.

IUD uptake – Follow Up Measures

53	Did the participant go to Family Planning to make an appointment for IUD insertion?	0 = No 1 = Yes
54	Did the participant get the IUD inserted?	0 = No 1 = Yes ____ / ____ / ____ Day Month Year
55	Did the participant go to Family Planning to get information about the IUD or other contraception?	0 = No 1 = Yes ____ / ____ / ____ Day Month Year

University of Cape Town

Appendix E

UCT Ethics Approval Letter



22 August 2012

HREC REF: 332/2012

Ms P Trasada
c/o A/ Prof L Myer
CIDER
School of Public Health & Family Medicine
Falmouth Building
FHS

Dear Ms Trasada

PROJECT TITLE: BRIEF INTERVENTION TO PROMOTE IUD USE AMONG WOMEN IN CAPE TOWN

Thank you for addressing the issues raised by the Human Research Ethics Committee.

It is a pleasure to inform you that the HREC has **formally approved** the above mentioned study.

Approval is granted for one year till the 28 August 2013.

Please submit a progress form, using the standardised Annual Report Form, if the study continues beyond the approval period. Please submit a Standard Closure form, if the study is completed within the approval period.

Please include a statement in the informed consent form that there will be no remuneration for taking part in the study.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please quote the REC. REF in all your correspondence.

Yours sincerely

PP *TuBurgess*
PROFESSOR M BLOCKMAN
CHAIRPERSON, HSF HUMAN ETHICS

Federal Wide Assurance Number: FWA00001637.

sAriefdien

Institutional Review Board (IRB) number: IRB00001938

This serves to confirm that the University of Cape Town Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP) and Declaration of Helsinki guidelines.

The Research Ethics Committee granting this approval is in compliance with the ICH Harmonised Tripartite Guidelines E6: Note for Guidance on Good Clinical Practice (CPMP/ICH/135/95) and FDA Code Federal Regulation Part 50, 56 and 312.

Hrec/ref:152/2012

10/08/2012

sAriefdien

Appendix F

PGWC Ethics Approval Letter



STRATEGY & HEALTH SUPPORT

healthres@qgwa.gov.za
tel: +27 21 483 9907; fax: +27 21 483 9595
1st Floor, Nonon Rose house, 8 Riebeek Street, Cape Town, 8001
www.cape.gov.za

REFERENCE: RP 145/2012
ENQUIRIES: Ms Charlene Roderick

University of Cape Town
School of Public Health and Family Medicine
Falmouth Building
CIDER, 5.53
Observatory
7925

For attention: Phumelele Trasada, Landon Myer, Greg Petro and Petrus Steyn

Re Brief Intervention to Promote IUD Use Among Women in Cape Town

Thank you for submitting your proposal to undertake the above mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following people to assist you with any further enquiries.

Gugulethu CHC Katy Murie Contact No. 021 633 0020

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final report within six months of completion of research. This can be submitted to the provincial Research Co-ordinator (healthres@qgwa.gov.za).
3. The reference number above should be quoted in all future correspondence.

Yours sincerely

DR NT Naledi

DIRECTOR: HEALTH IMPACT ASSESSMENT

DATE: 6/12/2012

CC DR G PEREZ DIRECTOR: KLIPFONTIEN\ MITCHELLS PLAIN

Appendix G

Contraception: Instructions to Authors

Editorial Policies

Contraception invites concise reports of original research in the experimental and clinical aspects of all areas of contraception. The purpose of this journal is to provide a medium for the rapid communication of advances and new knowledge in this important field. The Editor anticipates receiving manuscripts from workers in the following areas of research: chemistry, biochemistry, physiology, endocrinology, biology, the medical sciences, and demography. Publication of original papers within 90 days of manuscript receipt is planned. Authors will be advised of disposition of the manuscript within 30 days of receipt.

Manuscript Submission Process ONLINE

All manuscripts must be submitted electronically through the Elsevier Editorial System website (www.ees.elsevier.com/contraception). Select: "New Manuscript". Author guidance is provided for creating and uploading all files and data. The system automatically generates an electronic (PDF) proof, which is then sent to the Editor-in-Chief and to designated reviewers. All correspondence about submitted manuscripts also will be handled by e-mail through the EES.

The requirement for manuscripts submitted to *Contraception* conform to the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" established by the International Committee of Medical Journal Editors and published in *Annals of Internal Medicine* 1988; 108:258-65.

Trial and research guidelines. The following guidelines must be adhered to when formulating the study. Upon submission of the manuscript, authors are to indicate the type of trial/research used on the Author Checklist.

- **Randomized controlled trials.** Authors are to consult the CONSORT statement. (Moher D, Schulz KF, Altman D, for the CONSORT Group. The CONSORT Statement: Revised recommendations for improving the quality of reports of parallel-group randomized trials. *JAMA* 2001;285:1987-91) A flow-chart as a figure must be submitted with the manuscript. www.consort-statement.org
- **Meta-analysis and systematic reviews of randomized controlled trials.** Authors are to consult the QUOROM statement. (Moher D, Cook DJ, Eastwood S, Olkin I, Rennie D, Stroup DF. Improving the quality of reports of meta-analyses of randomized controlled trials: the QUOROM statement. *Quality of Reporting of Meta-Analyses*. *Lancet* 1999;354:1896-900.) www.thelancet.com
- **Meta-analysis and systematic review of observational studies.** Authors are to consult the MOOSE guidelines. (Stroup DF, Berlin JA, Morton SC, et. al., for the Meta-analysis of Observational Studies in Epidemiology (MOOSE) group. Meta-

analysis of observational studies in epidemiology: A proposal for reporting. JAMA 2000;283:2008-12." www.jama.ama-assn.org

- **Diagnostic tests.** Authors are to consult the STARD Initiative. (Bossuyt, PM, Reitsma, JB, Bruns, DE, et. al. Towards complete and accurate reporting of studies of diagnostic accuracy: The STARD Initiative. Clin Chem 2003;49:1-6.) www.clinchem.org

Previous publication. If a report by the same author(s) has been previously published in any medium that deals in any respect whatever with the same patients, same animals, same laboratory experiments, or same data, in part or in full, as those reported in the manuscript being submitted, two reprints of the article or two copies of the manuscript, be it a full-length report or an abstract, must be submitted with the manuscript. The author(s) should inform the Editor of the circumstances, similarities, and differences of the reports. This requirement also applies to the submission of a manuscript in which a few different patients, animals laboratory experiments, or data were added to those reported in a previous publication or in a submitted or accepted manuscript. Articles previously published in another language will not be considered.

Human and animal experimentation. It is assumed by the Editor that manuscripts emanating from a particular institution are submitted with the approval of the requisite authority. Human experimentation that requires local institutional approval must have this approval before the experiment is started and approval must be so indicated in the Methods section of the submitted manuscript. Reports of experiments on animals must state in the Methods section of the manuscript that the guidelines for the care and use of the animals approved by the local institution were followed. The species of nonhuman animals must be named in the title, abstract, and key words of the manuscript.

Authorship. For manuscripts with two or more authors, each author must qualify by having participated actively and sufficiently in the study that is being performed and reported. The inclusion of each author in the authorship list of a report is based only (1) on substantial contributions to (a) concept and design, or analysis and interpretation of data and (b) drafting the manuscript or revising it critically for important intellectual content; and (2) on final approval by each author of the version of the manuscript. Conditions 1 (a and b) and 2 must both be met. Others contributing to the work should be recognized separately in an Acknowledgment. In the covering letter that accompanies the submitted manuscript, it must be confirmed that all authors fulfilled both conditions.

Preparation of Manuscripts. The electronic manuscript, tables, and figures must be submitted to the Journal at www.ees.elsevier.com/contraception. Submit figures online in a separate file in EPS, JPEG, or TIFF format (minimum 300 dpi). Figures should not be embedded in the manuscript document. If a figure has been previously published, by you or by others, obtain permission and acknowledge fully in the figure legend. **Remove all patient identifying marks** (Protection of Patients' Rights to Privacy).

Manuscripts must be typed double-spaced. Also include five or six keywords and a short running title.

A manuscript length of 5-9 pages, including tables, figures, and references is suggested. Where warranted, longer papers may be accepted.

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Text. The text of the article should include the following: ABSTRACT (approximately 150 words), INTRODUCTION, MATERIALS and METHODS, RESULTS, DISCUSSION, and ACKNOWLEDGMENT/FOOTNOTES (this is where the author name and address for reprint requests should be listed).

Figures. All figures (photographs, drawings, diagrams, charts) should be clear, easily legible and cited consecutively by Arabic numerals in the text (Figure 1, Figure 2, etc.). Legends should contain sufficient detail to permit figure interpretation without reference to the text. Units should be indicated in the figures. The cost of color reproduction in the print journal is \$400 for the first figure on a page. The cost for each additional color figure on the page is \$150. Multi-part figures are considered one figure. All color figures will appear on the web site (www.contraceptionjournal.org) at no cost to the authors.

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References are numbered consecutively in the order in which they appear in the text. Citations should be on the line of text enclosed in brackets and the period or comma should follow the reference at the end of the sentence.

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Journal article, up to six authors:

List all authors when six or fewer.

Baskett TF, Allen AC, Gray JH, Young DC, Young LM. Fetal biophysical profile and perinatal death. *Obstet Gynecol* 1987;70:357-60.

Journal article, more than six authors:

List only the first three and add "et al." when seven or more.

Pollack MM, Getson PR, Ruttimann UE, et al. Efficacy of intensive care. *JAMA* 1987;258:1481-6.

Books:

Pritchard JA, MacDonald PC, Gant NF. *Williams obstetrics*. 17th ed. Norwalk, CT: Appleton-Century-Crofts, 1985.

Chapter in a book:

Roberts ADG, Denholm RB. Changes in cervical collagen with age. In: Chamberlain G, editor. *Contemporary obstetrics and gynaecology*. London: Butterworths, 1988. p. 259-71.

Edited book:

Creasy RK, Resnik R, editors. *Maternal fetal medicine*. Philadelphia: WB Saunders, 1984.

Contribution to a previously cited book:

Stirrat GM. *Aids to obstetrics and gynecology*. 2nd ed.² 3-31.

Book with a volume number:

Lees DH, Singer A. Abdominal operations for benign conditions. *Chicago: Year Book*, 1978: 1-288. (Lees DH, Singer A. *Color atlas of gynecological surgery*; vol 2).

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Any questions regarding contributions to *Contraception* should be directed to Shirley Davenport in the editorial office: **Telephone:** (661)259-9566; **E-mail:** dmishell@yahoo.com

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