

Access to postpartum tubal ligation services in Cape Town, South Africa – an observational study

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Abstract

Background:

Many women receiving antenatal care in public health services in Cape Town choose bilateral tubal ligation as their preferred method of postpartum contraception during their antenatal course. If the sterilization does not occur immediately, these women are discharged on an alternative form of contraception and ideally an interval date for bilateral tubal ligation is arranged. We aimed to assess the access to tubal ligation services in the Metro West area of Cape Town, South Africa, in women who request permanent contraception following delivery, looking specifically at the number of women requesting bilateral tubal ligation who receive the procedure intrapartum, immediately postpartum or as an interval procedure. Other objectives included determining the reproductive outcomes if bilateral tubal ligation was not performed, investigating the alternative forms of contraception provided and to study the demographics of the population requesting bilateral tubal ligation as a form of contraception.

Methods:

The study was conducted as a cross sectional observational study collecting data over a period of 3 months, from June 2019 – August 2019. Maternity Case Records for deliveries between June 2019 and August 2019 from 4 facilities were reviewed. The facilities, representing all levels of care, included: Vanguard MOU, Wesfleur Hospital (District Hospital), New Somerset Hospital (Regional Hospital), Groote Schuur Hospital (Tertiary Hospital).

Results:

There were 260 women who requested tubal ligation as their choice of contraception. Only 50% of women received a tubal ligation. Of the 131 tubal ligations performed, 2 were interval sterilizations. Ninety-one percent of the tubal ligations (120/131) were done at the time of caesarean section. Of the 129 women who received alternative forms of contraception 13 women had recurrent pregnancies.

Conclusions:

The study suggests that only 50% of women requesting tubal ligation as form of contraception actually end up receiving the procedure. Alternative forms of contraception are widely used and relied upon, but not without risks of recurrent pregnancies. Interval tubal ligation is not easily accessed by those women who were referred for the procedure.

Background

Women's health is a topic which is receiving much interest worldwide. Reproductive health and contraception makes up part of women's health. Availability of and access to contraception is a global matter of importance.

The Millennium Development Goals (MDG's) set in 2000 included universal access to sexual and reproductive health, highlighting its importance [1][2]. Progress made towards reaching the MDG was assessed in 2015. Results showed that contraception use among women in Sub-Saharan Africa in the age group 15–49 years more than doubled from 1990, yet an unmet need for contraception remained in 24% of these women [3].

In response to what was deemed a lack of sufficient progress towards the MDG, the Sustainable Development Goals were set in place in 2015 – which included universal access to sexual and reproductive health [4].

The South African government made a pledge at the Family Planning London Summit in 2012 to prioritize the need to strengthen family planning services. The aim would be that the full range of family planning services would be made available to patients at public health facilities [5].

The contraceptive use of South African women specifically was last studied and published in 2003 in the South Africa Demographic and Health Survey. The most used form of contraceptive was the injectables – 53% of all women using contraception at the time were using injectables [6]. At the time only 7.3% of all South African women aged 15–49 years had tubal ligation or sterilization as their contraceptive method.

Data derived from the 2012 South African National HIV Prevalence, Incidence and Behaviour Survey showed that 8.1% of South African women of child bearing age were sterilized [7].

Contraceptive Prevalence Rate (CPR) is defined as the percentage of women of childbearing age using any form of contraception at a given point in time [8]. The CPR in South Africa in 2010 was 63.7%. In comparison the CPR for the whole of the African continent was much lower, at 30.9%. South African CPR, in turn, was much lower compared to upper-middle-income countries like Brazil (79.5%) or Russia (78.6%) [9][5].

The unmet need for family planning is defined as the proportion of women who are fecund who want to terminate or postpone child bearing, but who are not using a contraceptive method [10]. Estimated data from low-middle-income countries, which include South Africa, showed that in 2019, out of 923 million women of reproductive age in these countries who want to avoid having a pregnancy, 218 million have an unmet need for modern contraception—that is, they want to avoid a pregnancy but are not using a modern method. The proportion of women with unmet need for contraception in 2012 was 53% in Africa and 17% in Southern Africa [11].

An unmet need for contraception leads to unintended pregnancies. The South African National HIV Prevalence, Incidence and Behaviour Survey published in 2012 showed that around 50% of pregnancies at the time were unplanned. The rate of unintended pregnancies in women above the age of 35 years was 44.9% [12]. Unintended pregnancies have a negative effect on the health, social and economic systems of countries [13].

Adequate family planning, like sterilization can directly reduce the maternal mortality rate. Preventing unplanned pregnancies reduces the risk of early pregnancy complications and unsafe abortions [14]. Thirteen percent of the annual global maternal mortality results from complications of unsafe abortions [15]. Studies from Bangladesh show that maternal deaths can be reduced by 26% if grandmultiparous women of advanced maternal age were sterilized [16].

In order to decrease maternal mortality and reduce unintended pregnancies, barriers to the uptake of sterilization should be addressed. Ongoing counselling and education prevent misinformation, misconceptions and fear of side-effects as a cause for poor uptake of family planning [17]. Sterilization includes bilateral tubal ligation and vasectomy. It is an option for couples who have completed their family and want permanent contraception.

Current barriers to these forms of contraception may include accessing services. Patients should have adequate access to tubal ligation services. This includes adequate information on where to access these services and referral to relevant facilities [18]. Training more health care providers and having more health care facilities provide sterilization services will increase the uptake thereof [19][6].

The Cairo Declaration on population development issued in 1994 states that all barriers preventing access to family planning services should be addressed and removed while recognising international human rights [20]. The 1995 Beijing Declaration and Platform for Action aim to promote gender equality and women's rights. The human rights of women include their freedom to decide responsibly on matters relating to their sexuality and reproductive health, free from discrimination, violence and coercion [21]. Patients should not be coerced into signing consent for a sterilisation. India and other countries like South Africa, Namibia and Chile have been abusing forced sterilisation as form of population control and prevention of HIV transmission [22][23]. Informed consent should be obtained – the patient must be given accurate, adequate and understandable information. The person taking consent should be open to questions and further explanation of the procedure. The patient should feel free to make a voluntary choice which includes refusal of treatment [24].

Some women receiving antenatal care in Metro West choose bilateral tubal ligation as form of contraception during their pregnancy. Not all of these women receive their tubal ligation. Different levels of health care facilities offer different methods of immediate postpartum contraception. Primary health care facilities like Midwife Obstetric Units do not have the staff or infrastructure to offer immediate postpartum tubal ligation services. Patients requesting bilateral tubal ligation who deliver at primary health care facilities should be referred to secondary level centres for their interval sterilization. Immediate postpartum tubal ligation can be performed at secondary level facilities either at the time of caesarean delivery or as postpartum procedure prior to discharge. If the sterilization does not occur immediately, these women are discharged on an alternative form of contraceptive and ideally an interval bilateral tubal ligation date is given.

In the Metro West area of Cape Town, there is currently no data available on:

- how many women receive the requested bilateral tubal ligation;
- the number of women who have recurrent pregnancies if the bilateral tubal ligation was not done and;
- the alternative forms of contraception women received if bilateral tubal ligation was not performed.

The aim of this study is to assess the access to tubal ligation services in the Western Sub-District of the Metro West in women who request permanent contraception following delivery. The Metro West is a large urban area around Cape Town with a population of 4,801,000. The annual delivery data from Metro West reports 3500 deliveries at GSH, 6400 at NSH, 1800 at WFH and 1300 at VGMOU.

The objectives included:

1. assessing the demographics of the population requesting bilateral tubal ligation as form of contraception;
2. determining the number of women requesting bilateral tubal ligation who receive the procedure intrapartum, immediately postpartum or as an interval procedure;
3. determining the reproductive outcomes if bilateral tubal ligation was not performed, including early pregnancy complication or termination of pregnancy;
4. and investigating alternative forms of contraception provided.

Methods

The study was conducted as a cross sectional observational study collecting data from June 2019 – August 2019. Maternity Case Records for deliveries between June 2019 and August 2019 from 4 facilities were reviewed. The facilities include: Vanguard MOU, Wesfleur Hospital (District Hospital), New Somerset Hospital (Regional Hospital), Groote Schuur Hospital (Tertiary Hospital). These facilities were chosen in order to represent different levels of care. These facilities serve a large area of the Metro West district and include high- and low risk pregnancies. Maternity Case Records of women who delivered at the four designated sites between June 2019 and August 2019 were reviewed. Only women who selected tubal ligation as form of contraception were included in the study. We used a convenient sample size over a period of 3 months. The data collected for the duration of three months gave us an adequate sample size. The annual delivery data from Metro West reports 3500 deliveries at GSH, 6400 at NSH, 1800 at WFH and 1300 at VGMOU. This amounts to an estimated total of 3250 deliveries in 3 months at the facilities represented in this study.

From clinical experience about 5 percent of women request tubal ligation during their antenatal care. This will give us a sample size of 160. The discharge page of the MCR indicated whether the patient received her primary form of contraception at the time of discharge. The hospital numbers of women who did not receive a tubal ligation immediately post-delivery were collected. These numbers were then inserted into Clinicom (the Western Cape Department of Health provincial patient data management system) to detect

whether the patient visited any health care centre in the Western Cape to receive an interval tubal ligation, evacuation of the uterus or termination of pregnancy. Clinicom can be accessed at any governmental health care facility in the Western Cape. Specific codes are allocated to specific procedures. Hospital numbers of the study population were entered into the Clinicom system and correlated with these specific codes. The hospital numbers were also inserted into LabTrack (NHLs) to see whether a cascade of booking bloods (Hb, Rhesus, RPR) were collected after the date of discharge – which likely indicates a recurrent pregnancy.

Inclusion criteria: Women who requested Tubal Ligation as choice of contraception in their Maternity Case Record (page 10 of MCR) for deliveries between June 2019 and August 2019 at facilities – VGMOU, WFH, NSH, GSH. Exclusion criteria: Women not requesting Tubal Ligation as contraception in their MCR for deliveries between June 2019 and August 2019.

Results

The study population included women between 25 – 46 years with a mean age of 34 years. Almost half the population (49.6% 129/260) were women of advanced maternal age (≥ 35 years). The women included in the study had between 0 – 9 children, with the mean parity of 2. Twenty-seven women (10.3%) were grandmultiparous (≥ 5 children).

Of the 260 women included in the study, 129 women received a tubal ligation at the time of discharge. Two women received interval sterilizations.

Table 1

Demographics	
Age ¹ (mean)	34 (25 – 46)
Gravidity (mean)	4.2 (2 – 11)
Parity ² (mean)	1. (0 – 9)

1. <35 years (131 of 260) ; ≥ 35 years (129 of 260)

2. <5 children (233 of 260) ; ≥ 5 children (27 of 260)

Fifty-seven percent of women who received a tubal ligation were of advanced maternal age (74/129) and 10% were grandmultiparous (14/129). The only tubal ligation done at GSH after a normal vaginal delivery was for a 39 years old grandmultiparous woman.

Fifty-nine percent (16/27) of grandmultiparous women delivered vaginally. Of these 16 women, only 3 (18.7%) received a tubal ligation. The remaining 11 grandmultiparous women who delivered via caesarean section all received a tubal ligation.

Alternative methods of contraception were used in 115(87%) of the remaining 131 women. Injectables were the most common form of alternative contraception (83 of 115), followed by Implanon (18 of 115) and IUCD (10 of 115). Sixteen women were discharged without contraception. Of the group of women who received alternative forms of contraception or no contraception 13 (9.9%) women had recurrent pregnancies with the following outcomes: 6 deliveries, 2 miscarriages requiring an evacuation of the uterus, 2 ectopic pregnancies and 3 terminations of pregnancy.

Nine of 115 (7.83%) women who delivered vaginally received their tubal ligation at the time of discharge. Forty-eight of 59 (81.3%) women who had emergency caesarean sections received a tubal ligation while 72 of 86 (83.7%) women who had elective caesarean sections received a tubal ligation.

Discussion

Only half the women who requested tubal ligation as their choice of contraception received the procedure.

The mode of delivery plays a role in whether a tubal ligation is done – less than 10% of women who had normal vaginal deliveries received a tubal ligation while 82% of women who delivered via caesarean section received a tubal ligation as requested.

Vanguard MOU was included in the study to demonstrate that not all facilities have the infrastructure to provide postpartum tubal ligations. This facility only manages vaginal deliveries and has no theatre facilities on site. None of the women who delivered at this facility received a tubal ligation.

While the other facilities included in the study do offer tubal ligation services, only 9 women of 102 who had normal vaginal deliveries at these facilities (WFH, NSH, GSH) received a tubal ligation. This may be due to limited theatre time as 58% of deliveries at these facilities are via caesarean section.

Of the 9 women who received a tubal ligation following a normal vaginal delivery, 4 (44%) were of advanced maternal age and 3 (33%) were grandmultiparous. Fifty-nine percent (16/27) of grandmultiparous women delivered vaginally, and subsequently the majority of these women (13 of 16) did not receive a tubal ligation while we feel that these are the women who should be prioritized for tubal ligations.

Alternative forms of contraception were used in 44% (115/131) of women. Injectables were still the most common form of contraception (72%), followed by Implanon (15.6%) and IUCD (8.6%).

Limitations of the study include the fact that this is not a representation of all the facilities in Metro West. Women who did not receive a tubal ligation at the time of delivery might have migrated to other provinces in the country. Interval sterilizations might have been received in other provinces or even in private health care facilities. Covid lockdowns may have affected the access to interval sterilizations, however lockdown only came into effect in March 2020.

Conclusions

The study shows that there are barriers to access to tubal ligation services in Metro West. The majority of women who deliver via normal vaginal deliveries do not receive a tubal ligation at the time of delivery. Alternative methods of contraception are being offered and the uptake of alternative methods is acceptable. Interval sterilizations are seldom accessed.

Abbreviations

CPR Contraceptive Prevalence Rate

GSH Groote Schuur Hospital

Hb Haemoglobin

MCR Maternity Case Record

MDG Millennium Development Goals

MOU Midwife Obstetric Unit

NHLS National Health Laboratory System

NSH New Somerset Hospital

RPR Rapid Plasma Reagin

VGMOU Vanguard Midwife Obstetric Unit

WFH Wesfleur Hospital

Declarations

Ethics approval and consent to participate

Ethics approval was granted by University of Cape Town, Faculty of Health Sciences, Human Research Ethics Committee.

Reference number: HREC REF 485/2021

Consent for publication

Not applicable

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests in this section.

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No funding was given for this study.

Authors' contributions

MP and GP were responsible for the conception and design of the study. MV was responsible for data collection, interpretation and drafting of the work. GP was involved in the interpretation of the data. MP and GP revised and approved the final manuscript.

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Figures

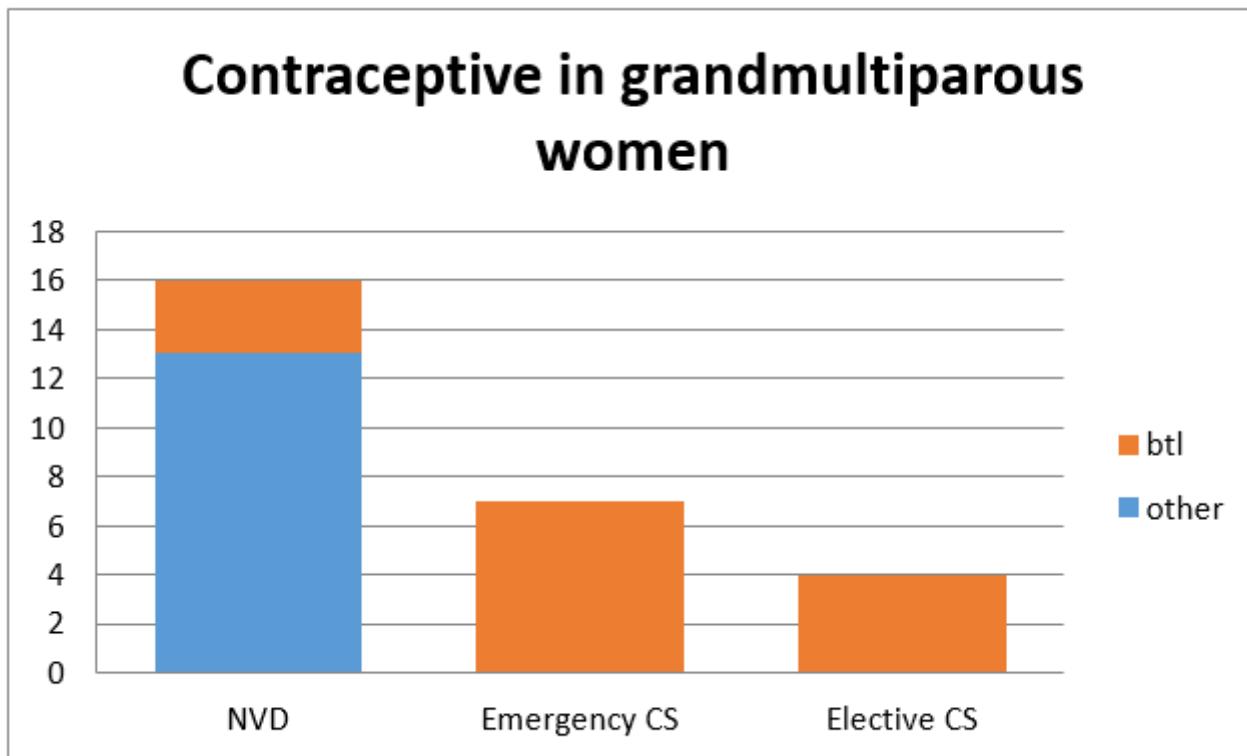


Figure 1

Legend not included with this version.

Contraceptive on discharge

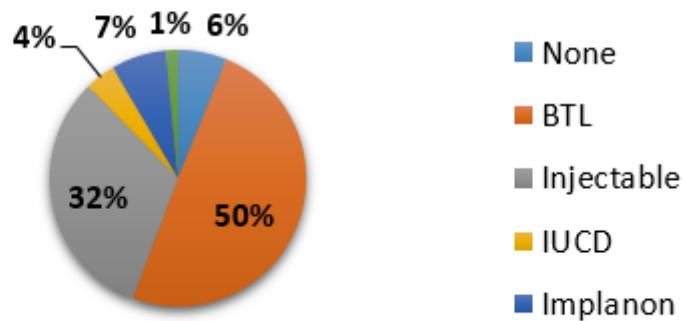


Figure 2

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Breakdown of contraceptive per mode of delivery

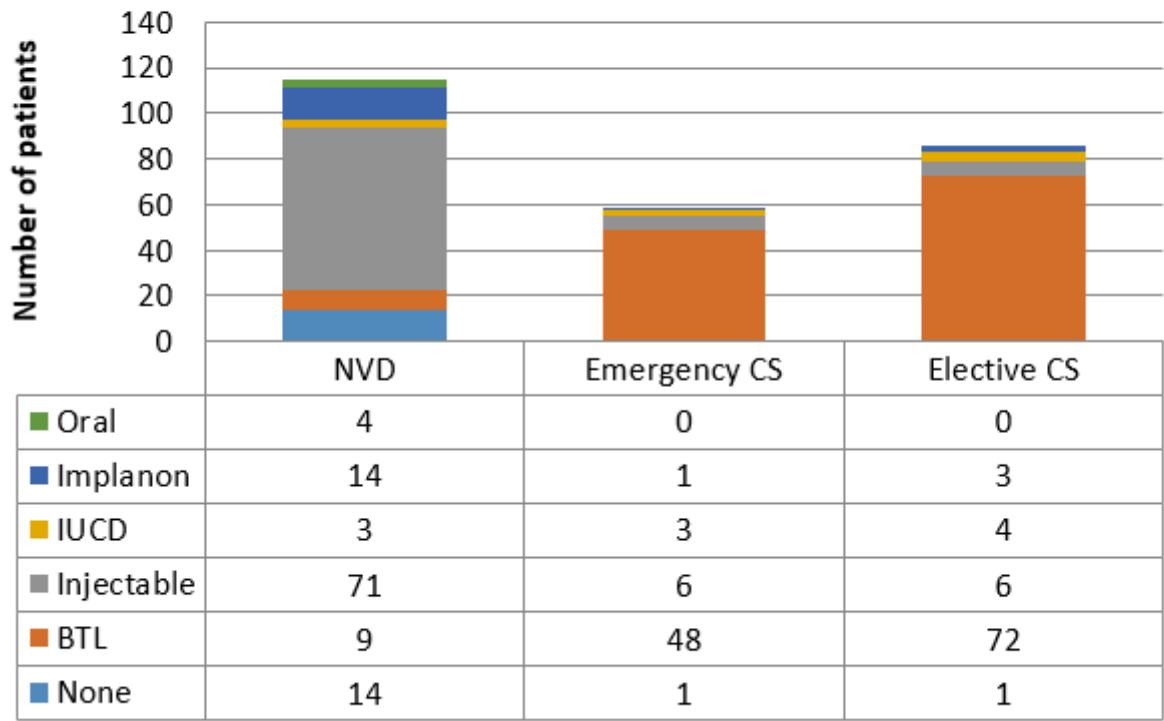


Figure 3

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