

TASK SHARING SURGICAL METHODS OF CONTRACEPTION: A CASE STUDY OF CLINICAL OFFICERS IN UGANDA

Best Practices, Challenges and Recommendations for Scale-Up



By

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List of Acronyms

ANC	Antenatal Care
CLIC	Marie Stopes' Clinical Information System
CME	Continuous Medical Education
DHO	District Health Officer
FP	Family Planning
HMIS	Health Management Information System
HSSP	Health Sector Strategic Plan
IEC	Information, Education and Communication
IUCD	Intra-Uterine Contraceptive Device
KII	Key Informant Interview
MMR	Maternal Mortality Rate
MSI	Marie Stopes International
MSU	Marie Stopes Uganda
NGO	Non-Governmental Organisation
OPD	Out-Patient Department
PHC	Primary Health Care
PPP	Public Private Partnership
SRHR	Sexual Reproductive Health and Rights
SOPs	Standard Operating Procedures
ToR	Terms of Reference
WHO	World Health Organisation

Executive Summary

Background

Access to family planning services still remains a big challenge in Uganda. Over the past four years, Marie Stopes has piloted task sharing of surgical contraception using clinical officers. Data accruing from the pilot suggests that the intervention is safe, acceptable, and highly satisfactory. Strategies are underway to scale up the intervention to reach most parts of the country. However, evidence based data supporting scalability is limited.

Objective

The overall objective of this assessment was to document the feasibility and scalability of surgical methods of contraception to clinical officers in Uganda. The specific objectives were: (1) To describe the experiences and challenges of clinical officers involved in provision of surgical methods of family planning; (2) To identify recommendations and perspectives on task sharing from other stakeholders in the health sector; (3) To assess the resource and capacity requirements for implementing task sharing in health facilities in Uganda; (4) To develop an implementation strategy necessary for effective scale-up of task sharing into the national health systems; (5) To recommend necessary updates to the current MoH Policy Guidelines and Service Standards for SRHR; and (6) To develop implementation guidelines for scaling up task sharing of surgical methods of contraception.

Methods

The study employed mixed methods of data collection including data extraction and desk reviews, observations, key informants and in-depth interviews. The data were collected by a team of six researchers (two investigators and four trained research assistants) in the months of September and October 2015. The team visited 4 regional referral hospitals (Arua, Fort Portal, Lira and Mbale), 7 Health centre IVs, 8 Health centre IIIs, 7MSU clinics, 4 RHU facilities, and 1 UHMG facility. In the health facilities, the team conducted interviews with facility in-charges, Clinical officers (COs) and administered a data extraction checklist. The aim of administering the in-charge interviews and data extraction checklist was primarily to explore capacity and resource requirement for task sharing in surgical contraception. To describe the experiences and challenges faced by clinical officers engaged in task sharing surgical contraception, the team conducted in-depth interviews with 12 practicing COs in various districts in the country. The team also conducted key informant interviews with 4 DHOs (or Assistant DHOs) housing the regional referral hospitals and 12 different regional

and national level stakeholders including Obstetricians and gynaecologists, hospital directors, representatives of professional bodies, and heads of government departments or civil society entities with a stake in reproductive health and rights to garner their perspectives and recommendations on task sharing. Collected data were managed with *Atlas/ti version 7*, a qualitative data management software and was analyzed using a template analysis technique following an inductive approach.

Results

Experiences of COs in conducting bilateral tubal ligation and vasectomies

On average, clinical officers had two-to-three years' experience of conducting bilateral tubal ligation. Considering the number of tubal ligation operations performed, clinical officers in the central region reported more numbers performed compared to other regions. Three of them reported that they had each conducted over 150 BTL operations. In the western region, the clinical officer reported that he had performed over 100 BTLs operations. Clinical officer in the northern region reported the lowest number of BTL operations particularly the West Nile sub-region reporting the least number of BTLs conducted. Overall, very few clinical officers performed vasectomies.

Competence and confidence in performing BTLs

On a scale of 1-5 where 1 was poor and 5 was very good, all (practicing) clinical officers rated themselves highly with either a score of 4=good or 5=very good. All rated themselves highly with either a score of 4=good or 5=very good. Reasons for the higher rating were mainly attributed to long term experience performing BTL and successful procedures conducted with minimal or no complications. Other reasons mentioned included, self-motivation, adequate training, support supervision and an enabling working environment. All Clinical officers interviewed felt confident in performing BTLs except two who said that sometimes they felt nervous especially when the procedure proves complicated and yet they are not legally protected.

Counselling (Counselling men for vasectomy is very hard)

All clinical officers interviewed reported that they were involved in counselling their clients for surgical contraception. However, those involved in performing vasectomies reported that counselling men for the procedure was very challenging. Clinical officers in the north and west Nile sub-regions faced more difficulties compared to clinical officers in the central, western and Soroti sub-region.

Surgical procedure

Clinical officers described BTL as a blind procedure with a skin incision of 3-5cm followed by the use of forceps to identify the tubes. They described the process of identifying these tubes as a non-straight forward procedure. They noted that unlike other procedures that are guided, BTL is not. Moreover, the use of uterine elevators has been discouraged because they are characterized by excessive discomfort for the patient. COs admit that it is possible to miss the tubes and to pick other organs especially the intestines if somebody is not competent enough. Although clinical officers described BTL as a blind procedure, all of them reported that they have been successful in conducting the surgeries with minimal complications. Those who reported complications said they were able to successfully contain them. The difficulties encountered included: unexpected longer duration of conducting the procedure, pain and discomfort, underlying physical conditions such as infection, adhesion, fibrosis and excessive body fat.

Perspectives and recommendations on task sharing surgical contraception to Clinical Officers

The concept of task sharing was unanimously supported by a cross section of stakeholders in the health sector save for two who were strongly opposed to the idea of using clinical officers to conduct vasectomies and BTLs. Reasons for and against task sharing surgical contraception are highlighted in the illustrative force field-analytical diagram (Figure 1).

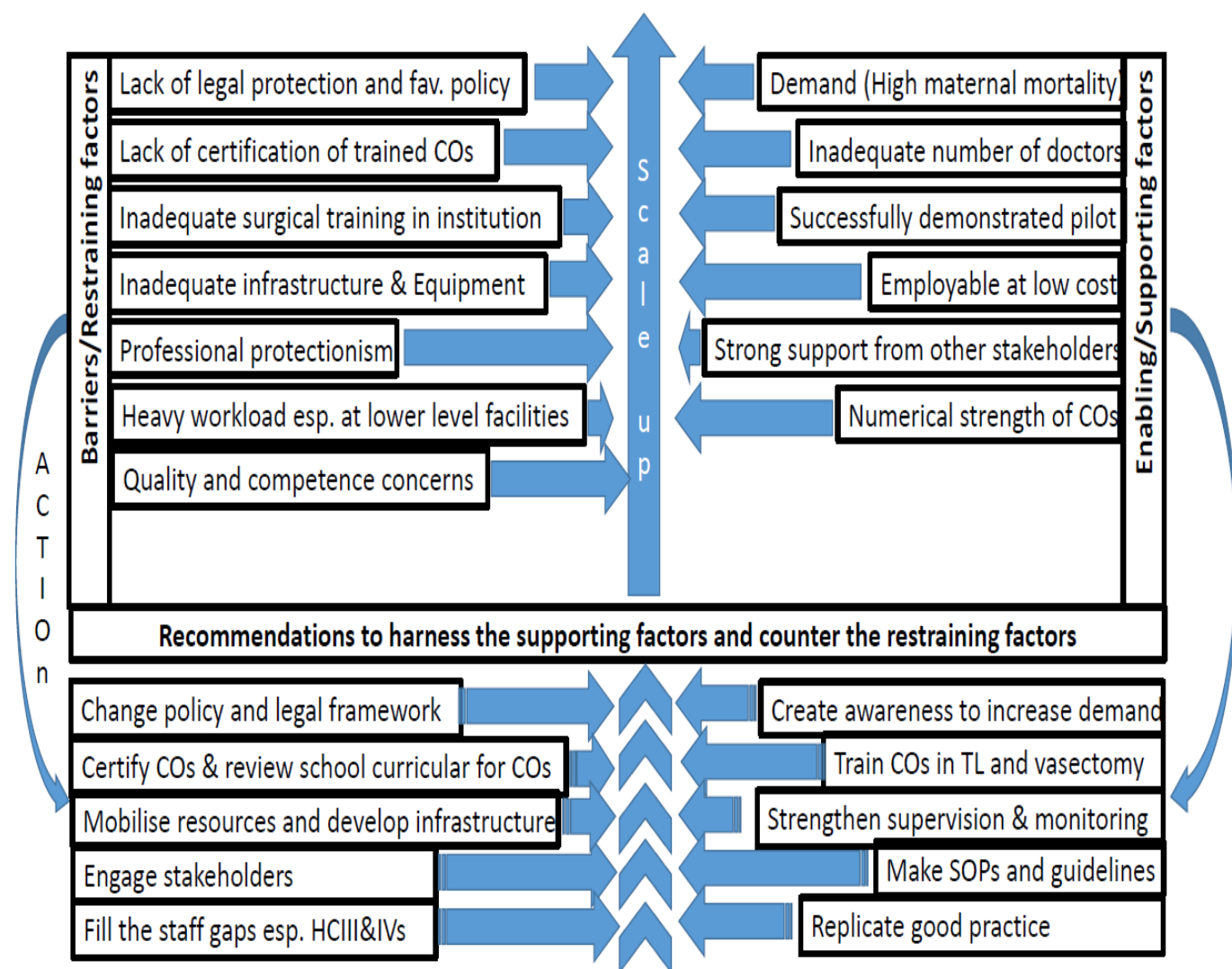


Figure 1: Force field analysis - Restraining, supporting factors and recommendation for scale up strategy

Positive perspectives on scaling up surgical contraception

Using COs to provide BTL would increase access to services and address a public Health need

Practicing COs said that their involvement in surgical contraception is greatly contributing to the reduction of the unmet need for surgical contraception. They reported that prior to their involvement in BTL and vasectomies; access to surgical contraceptives was limited. They lament that doctors who are mandated to conduct BTL and vasectomy were not readily available. This finding was separately supported by other stakeholders in the health sector who alluded that the people in need of surgical contraceptive services are in communities where there are mainly mid-level and lower level health cadres. In addition, they noted that COs had numerical strength compared to their MO counterparts and that they had a wider geographical spread and low attrition rates. Consequently, informants affirmed that task sharing surgical

contraception would increase access and uptake of permanent methods of family planning among those who need the services.

Attraction and retention of medical officers to lower health facilities is a challenge

Key informants also said that the government still remains with a very big challenge of attracting and retaining MOs in rural districts and health facilities. One of the informants intimated that even when salaries were significantly increased, “*two-a-half fold (from one million to two million five hundred thousand)*” the government has failed to attract MOs to rural settings.

Using COs to conduct BTL would ensure efficient utilization of human resource

Key informants noted that human resources for health remains a huge challenge in Uganda, yet the demand for health services is high. , They felt that innovative strategies such as task sharing can reduce this gap. For example, some said that COs have registered great success in conducting medical male circumcision in the country. They further reiterated that where medical officers are available especially at HCIVs, they are usually taken up by other administrative and urgent clinical responsibilities. Moreover, clinical officers were affordable, easier to attract and retain.

Using COs to conduct BTL has been demonstrated as feasible

Key informants also mentioned that evidence from MSU operational research on task sharing surgical contraception has demonstrated that clinical officers when trained are competently conducting the procedures with hardly any complications.

Restraining factors

In spite of the overwhelming support, stakeholders raised pertinent concerns which they felt should be considered during scale up. The concerns relate to workload, gaps in curricular and training in clinical officers’ schools, inadequate infrastructure and equipment, and gaps in the current policy and legal framework on task sharing.

Workload

Respondents were concerned about the understaffing and the overwhelming workload especially in government facilities. Additional task would worsen the situation. For example, they said that when you visit some of the HCIVs and IIIs in the country, some COs attend to a very huge clientele. Stepping off to perform a BTL would mean keeping many patients waiting.

Training, curriculum and complications concerns

Vasectomies and tubal ligation were described as unusual procedures. Respondents raised concerns about the fewer number of people who normally take up permanent methods of surgical contraception. They reiterated that when the numbers are very few, the trainees might not have adequate hands on/practical training. Another concern related to complications and was closely attributed to inadequate training in anatomy in institutions of learning for clinical officers.

Inadequate infrastructure and equipment

Respondents revealed that most health facilities lacked the necessary infrastructure and equipment to provide surgical FP services. For example, key informants believed that some facilities have poor and substandard theatres while others reported that their facilities don't have space for surgical procedures. They said that maintaining sterility in such situations is difficult and consequently leads to complications. They also pointed out the lack of alternative source of power in the event of a blackout.

Policy gaps

Respondents conveyed that the current legal and policy environment prohibits clinical officers from conducting surgical procedures such as BTL and vasectomy. They emphasized that without a favourable policy and legal frameworks, COs can't provide surgical FP services even though they are knowledgeable. They added that COs who go ahead to provide these services are at risk of losing their license to practice in case of any complication that may arise during surgical FP procedures.

Recommendations

To address some of the challenges highlighted and harness the opportunities, a number of recommendations were made.

Provide COs with adequate training

The study participants recommended that for a successful task sharing, the implementing team should build the capacity of COs through an extensive and thorough training and mentorship program inclusive of CMEs. According to the key informants, only certified trainers should conduct the training of COs. In addition, they suggested that this training program should take between 4 to 6 months and comprise of the theory and practical component with support supervision in class and theatres respectively.

Review curriculum for clinical schools

Almost all respondents reported that the current training institutions have a training gap. The training is more theoretical than practical. In response to such gaps, key informants proposed that curriculum for training institutions [clinical schools] should be reviewed and more practical aspects of BTL and vasectomy incorporated. Moreover, they felt that introducing the training into COs curriculum would be cost effective and sustainable in due course than the short term training modules that largely depend on donor support. Besides, the informants recommended that introduction of the courses into the curriculum would require orienting the tutors as well especially their abilities to train the practical aspects.

Improve staffing and Remuneration

Participants noted that COs in facilities are already overloaded with work. The situation was described as worse in lower health facilities. Respondents said that some HCIIIs even don't have a single clinical officer. Therefore, for a successful scale up of the task sharing program, key informants recommended that MoH should improve on staffing of health facilities. In addition, they noted that consideration in terms of improving remuneration for those currently involved should be considered. Because of lack of additional incentives, some COs were reportedly out of practice yet they had undergone training.

Strengthen supervision systems

Support supervision was strongly recommended at scale for the task sharing program. Respondents said that COs should be supervised at all levels, during training and practice to ensure that the SOPs for task sharing are strictly adhered to. Respondents also noted that another tier which should be harnessed in training and supervision at the regional referral hospitals. They said that the regional referral hospitals have expertise and capacity which may not be available at the sub district and district health levels.

Change the policy and legal framework to protect clinical officers

One of the recommendations for the scale up was the need to change the policy related to the practice of clinical officer in providing surgical FP methods. Most respondents suggested that such changes in policy should put into consideration issues related to litigation. It was felt that the clinical officers should be legally permitted to do such operation but also be legally protected should any complication arise. Key informants said that there is need to change the penal code that bars clinical officers from conducting surgical contraception.

Mobilize resources required for effective task sharing intervention and engage stakeholders

Mobilization and advocacy came up strongly as some of the key elements required for scaling up surgical contraception. Participants reported that a successful scale up of the task sharing program requires a multi sectorial or holistic approach. Key informants strongly recommended that relevant stakeholders should be engaged and involved in the planning and implementation of the scale up of the task sharing program, citing example of other programs such as safe male circumcision (SMC) and HIV control that benefited enormously from public-private partnerships. Participants were of the view that a partnerships approach would lower the cost of operation making the task sharing cost effective.

Conduct monitoring and evaluation of the task sharing program

Respondents strongly recommended that for a successful implementation of the task sharing program, monitoring and evaluation should be a key component of the program. According to key informants, this M&E system should be linked to the HMIS and should capture information on; number of surgical procedures performed, resources used and arising complications. They felt that these indicators can be used to assess the task sharing program and the capacity of the trained COs. Respondents noted that the evaluation should be performed quarterly and with routine data collection. They believed that by conducting monitoring and evaluation, the implementation team will ensure quality assurance.

Conclusions and recommendations

Task sharing is fundamental in increasing access to surgical contraceptive services in Uganda. However, the current policies and legal framework for task sharing remain hazy. Whereas the Uganda National Policy Guidelines and Service Standards for Sexual and Reproductive Health do not provide for clinical officers to provide surgical contraception, the addendum to the same policy states otherwise. However, in spite of the unclear policies on task sharing, there is overwhelming support for task sharing surgical contraception to clinical officers in Uganda. Moreover, results from the MSU operational research and from the current study demonstrate that COs when trained appropriately ably perform the procedures. Therefore, based on the large data derived from interviews, secondary data and literature reviewed, we make the following recommendations to scale up task sharing surgical contraception to clinical officers in Uganda.

- The MoH should harmonise the current policy documents on task sharing surgical contraception. Specifically, the Uganda National guidelines and service standards on sexual and reproductive health and rights should be revised and provision made for task

sharing surgical contraception to clinical officers in Uganda. Moreover, the legal barriers that bars COs from performing surgical contraception should be revised.

- All clinical officers interested in performing surgical contraception should first be trained and certified prior to performing surgical contraception. In the short term we recommend that the current MSU task sharing training model (which is based on the Ministry of Health training of health cadres in long acting and permanent methods of family planning) should be replicated to train interested clinical officers in practice.
- Review curricular for clinical schools and train students to perform surgical contraception. As a sustainable measure, we recommend that the process of reviewing curriculum for clinical schools should be initiated with urgency so that clinical school students are adequately trained in anatomy and surgery in order to competently perform surgical contraception prior to their graduation.
- Health Centre IVs and Health Centre IIIs should be sufficiently equipped with a functional theatre, equipment and necessary medicine, short of which they shouldn't be authorised to task share surgical contraception.
- Fill the staffing gaps at all levels to ensure that additional responsibility of task sharing surgical contraception doesn't overwhelm and overshadow routine clinical responsibilities. For example, a facility with one clinical officer shouldn't be allowed to task share surgical contraception.
- Strengthen support supervision and mentorship of trained and practicing COs to build confidence of practitioners and safety of clients.
- Strengthen the referral system to track and ensure that any complication arising out of the task sharing strategy is attended to in a timely manner.
- Strengthen monitoring and evaluation and ensure that service data is captured, analysed to inform programme progression during scale up

Introduction

Access to family planning services still remains a big challenge in Uganda. According to the Uganda Demographic and Health Survey Report [1], only 26% of married women are using a modern contraceptive method, predominantly short-term methods such as injectables and the oral contraceptive pill. The discontinuation rate is high (43% discontinued at 12 months), resulting into one of the highest total fertility rates worldwide at 6.2 (urban: 3.8; rural: 6.8). Additionally, 21% of married women have unmet need for child spacing and 14% for limiting births [1]. Access to quality family planning services in Uganda is limited, particularly for long-acting reversible contraceptives and permanent family planning methods. The problem is exacerbated by the shortage of human resources for health [2,3]. While a wide range of modern, effective methods of contraception exist, inadequate numbers of providers to supply them exist, particularly in rural areas [2,3]. The most effective forms of contraception, the long-acting and permanent methods [intrauterine device (IUD), implant, female or male sterilization] are particularly inaccessible due to the health worker shortage. As a result, the prevalence of surgical contraception among married and unmarried women is very low (8.3% and 1.4% respectively) and unmet need for contraceptives remains high at 29.9 %, (PAMA 2015). Task sharing, where clinical officers are trained to provide surgical procedures provides an opportunity for increasing access to long-term contraceptive methods [4].

Study rationale

Family planning is an inexpensive and cost-effective intervention for contributing to reproductive health choices, averting unsafe abortion and reducing related morbidities and mortalities. The provision and expansion of family planning (FP) services is a public health need and a national development priority for many countries across sub-Saharan Africa, including Uganda. Many of these countries are constrained in meeting the demands of the health services because of shortages of medical personnel, especially in rural areas. The continuing brain drain of trained medical workers has exacerbated this situation. For instance, Uganda has an estimated ratio of 1 doctor, nurse or midwife per 1,818 people [5]. These health workers are also inequitably distributed between rural and urban areas, as well as between public and private facilities. At the same time, access to family planning services is low and yet the demand has increased. In order to increase access to FP services, scaling-up training and redeployment of existing health providers, including community-based and mid-level health workers, is of critical importance [6]. To that effect, the concept of “task sharing” is

being advocated for as a best buy to mitigate the shortage of skilled Human Resources for Health in the resource limited settings [7,8].

According to the consensus report by the WHO, task sharing has the potential to positively affect health outcomes [6]. However, good management, support, supervision and political commitment are needed for a successful task sharing program [6]. The term “task sharing” refers to a partnership in which different levels of providers do similar work, rather than having less credentialed providers take over all provision of service [9]. The key assumption of task sharing is that, given adequate training and supervision, lower level health workers can provide services with adequate competency and quality. The concept of task sharing is not new and has been applied for decades in family planning programs where tasks are shared between doctors and nurses or between nurses and community health workers.

Task sharing was conceived as a mechanism to efficiently and effectively utilize the existing health work force to deliver the needed health services. The World Health Organization provided global recommendations and guidelines to help countries to implement task sharing. They include; adopting task sharing as a public health initiative, creating an enabling regulatory environment for implementation, ensuring quality of care, ensuring sustainability, and the organization of clinical care services [10].

Task sharing therefore requires standardized protocols that include simplified clinical guidelines, recording and reporting systems, and monitoring and evaluation. Definition of the scope of work is also required to allow cadres to carry out job functions normally performed by higher level cadres, and to avoid untrained workforce delivering care outside their scope with associated complications, costs and legal implications. This facilitates delegation of interventions to lower level health worker cadres and ensures that quality of care is not compromised while it improves access, increases coverage and geographical equity [11].

Task sharing in Uganda

The majority of task sharing in Uganda takes place without an enabling policy, regulations, or legal protection to those who undertake the additional tasks. Nevertheless, task sharing in the country has been going on for a long time with positive results registered especially in the treatment of malaria, HIV/AIDS and in the provision of family planning services [12,13]. Since 2011, Marie Stopes Uganda has implemented an operational research on task sharing program that involves use of clinical officers to provide surgical methods of contraception including vasectomy and tubal ligation.

The policy environment for task sharing sexual and reproductive health service

The 2001 National Policy Guidelines and Service Standards for Reproductive Health Services recognizes and promises that in order to increase the method mix and promote informed choice, all methods of family planning, both temporary and permanent, will be provided and made available in the country. Moreover, the Health Sector Strategic Plan III 2010/11-2014/15, acknowledges the critical role of human resource in health and the need for skills mix if quality basic package Family Planning are to be delivered [5]. In spite of these enabling policies that aim to increase access to FP services to those in need, the human resource gap remains a challenge and a deterrent. Only medical officers (MOs) are trained to the required level of competence and are allowed to perform permanent methods of family planning. But most unfortunately, they remain scarce especially in rural areas of the country where these services are most needed. On the other hand, midlevel healthcare providers are widely available in the rural settings but they lack competence and are not authorised to provide permanent family planning services. As a result, there remains a huge gap between the demand for permanent FP services, service provision and the legal framework.

Safety, efficacy and acceptability of task sharing surgical contraception

It is vital to determine the safety, effectiveness and acceptability of task sharing surgical contraceptive methods such as tubal ligation before advocating for and deciding to scale up. Tubal ligation is a pelvic surgery that requires a provider who is capable of managing potentially life-threatening complications [14]. Also, studies have showed that, although all contraceptive providers must be competent in administering informed consent and counselling, these skills are especially important for permanent methods. Health workers may also be biased against permanent contraceptive methods and that women may not clearly understand that such measures are irreversible.

Several studies have been conducted on task sharing of tubal ligation with cadres other than physicians. Studies that compared the safety of tubal ligation procedures conducted by midwives and physicians reported no differences in the rates of wound infection [15,16]. However, longer operating times have been reported for midwives than physicians [17]. Midwives have also reported more difficulties than physicians in conducting tubal ligation surgeries. However, in a study in Thailand in which 20 midwives conducted 3549 tubal ligations, a doctors assistance was only needed 0.5% of the times [17]. In Uganda, Gordon-Maclean and colleagues conducted a clinical audit to assess the safety and acceptability

associated with TL performed by MSU trained clinical officers in the rural setting. The study concluded that task sharing of TL to clinical officers was safe, and highly acceptable to women [18]. Among the 518 women studied, major adverse events were reregistered in only 1.5% of the women. The majority of women who underwent tubal ligation reported a good/very good experience at the facility (range, 94%-99%) and would recommend the health services to a friend (range, 93%-98%) [18].

The Ministry of Health Family Planning Costed Implementation Plan, 2015–2020, highlights task sharing as a priority intervention towards improving Uganda’s FP indicators. Task sharing surgical contraceptive methods with COs is fundamental in increasing access to rural and underserved populations of Uganda. However, evidence based data supporting scalability is limited. The purpose of this study was therefore to generate evidence based data on feasibility of scaling up surgical contraception in Uganda in order to inform policy and strategies for scale up.

Objectives

Main objective

To assess the feasibility and best approach to scaling up the task sharing for provision of surgical methods of contraception to clinical officers in Uganda.

Specific objectives

1. To describe the experiences and challenges of clinical officers involved in provision of surgical methods of family planning.
2. To identify recommendations and perspectives on task sharing from other stakeholders in the health sector.
3. To assess the resource and capacity requirements for implementing task sharing in health facilities in Uganda.
4. To develop an implementation strategy necessary for effective scale-up of task sharing into the national health systems.
5. To recommend necessary updates to the current MoH Policy Guidelines and Service Standards for SRHR.

6. To develop implementation guidelines for scaling up task sharing of surgical methods of contraception.

Methodology

Study design

This was an observational cross sectional survey that used mixed methods of data collection including a review of documents, data extraction, observation, semi-structured key informant and in-depth interviews. Data and methodological triangulations was critical to ensure that the assessment objectives are fully addressed.

Documents review and data extraction

Using a synthesis and distillation approach, a list of both local and international documents (published and grey) as well as service data were identified, reviewed and analyzed. The documents included policy and strategic documents, standard operating procedure guidelines for FP, research and evaluation reports of family planning, documentation related to FP and SRH service statistics, and FP logistics related data. Documents review and data extraction partly contributed to addressing objectives; 3 (To determine the resources and capacity required to support inception and implementation of task sharing scale up), 4 (To describe the implementation processes necessary for effective scale-up of task sharing into the national health systems), 5 (To propose changes to the current MoH Policy Guidelines and Service Standards for SRHR) and 6 (To propose implementation guidelines for scaling up task sharing). The list of documents reviewed are listed in annex 2.

Interviews

To understand the experiences, lessons and challenges of clinical officers involved in provision of surgical methods of family planning (Objective 1), we conducted in-depth interviews with purposively selected clinical officers engaged in surgical contraception. Non-practicing COs were also interviewed to explore their opinion and willingness to task share surgical contraception. In addition, we conducted key informant interviews with a range of national level and district level stakeholders including in-charges of health facilities to generate their views and opinion on task sharing surgical contraception (objective 2) and to generate additional data on capacity and resource requirement for task sharing surgical contraception (Objective 3). In total, 63 interviews were conducted comprising of chairpersons of professional bodies, head of institutions, departments/units of governments and civil society

organizations, directors/in-charges of health facilities, and DHOs/Assistant DHOs. Annex 1 presents a detailed list of key personnel and entities included in the study.

Sampling and data collection

The key study entities were purposively sampled in order to be inclusive of various levels of the health system and the different regions of the country. The data were collected by graduate research assistants with extensive experience in conducting observational cross sectional mixed methods studies under the supervision of the lead investigators. The research assistants were trained in the technical aspects of semi-structured interviewing, the substantive aspects of the interviewing protocol, and on ethical issues including approaching participants and administering informed consent. The training was concluded with mock interviews in the field setting and with a final feedback meeting where key concerns were discussed and resolved. All interviews were tape-recorded using digital recorders. For 10% of the interviews, the lead investigators reviewed the audiotapes and interview notes to monitor and supervise the administration of the interview protocol. The audit check that Maclean and colleagues refers to as “spot checking” helped to save on time and provided the researchers with time and opportunity to discuss any questions with the transcriptionist from the onset [19].

Ethical consideration

The study protocol was approved by the Makerere University School of Public Health Higher Degrees Research and Ethics Committee (MakSPH-HDREC) and the Uganda National Council for Science and Technology (UNCST). Written informed consent was obtained from each participant. The consent forms elaborated on potential risks, potential benefits and the assurance of confidentiality.

Data management and analysis

Audio data was transcribed verbatim, cleaned and subsequently entered into a data management software, *Atlas/ti version 7*. The lead investigators read through each transcript to check for data completeness, quality and content. Following a template analysis and an inductive approach, initial codes and basic themes related to the study (e.g., experiences, competencies, challenges, strength and areas for improvement etc.) were marked using free coding options in Atlas ti. For each theme, the notes were pooled using code families in Atlas ti to enable pile sorting for further analysis. The piles were re-analysed to form a complete codebook with data sorted into themes, subthemes and exemplars for each construct. Further

analysis included examining patterns and differences across regions, health facility type and ownership. Quantifiable data from facility checklists were entered and analysed with SPSS version 22 to generate descriptive statistics.

Limitations

We were able to collect sufficient information to address the assessment objectives. However not all key informants and in-depth interviewees were available to be interviewed. In addition, reports on family planning were characterised by missing data.

Findings

Experience and challenges of clinical officers involved in provision of surgical methods of family planning

We conducted 12 in-depth interviews with trained and experienced clinical officers to explore their experiences in conducting BTL and vasectomies. Clinical officers were drawn from all the regions of Uganda, as represented by the districts of Kampala, Wakiso, Gulu, Kabale, Soroti, Lira, Fort Portal and Arua. Seven were working at MSU sites and two were working elsewhere. Four COs were currently engaged in conducting both bilateral tubal ligation and vasectomies.

Training

Majority of the COs reported that they were trained in BTL but not vasectomies. Those who reportedly conducted vasectomies when asked how they got started; they indicated that it was out of curiosity and interest but not in a formal training. They narrated that they observed vasectomies being conducted and felt that the procedures were simpler to perform than BTLs. Consequently, they tried and overtime they gained competence and started conducting vasectomies.

“...and with VAS [Vasectomy], we didn’t have a formal training, but when we were with Marie Stopes, there were doctors whom we were working with; and that was an on-job-training; when you see a procedure being done and you have the interest of doing it, then you also go in and later on I picked up and I am doing it also alone without any guidance” (CO 1).

In another related but divergent argument, one clinical officer reiterated that opportunities for practical training in vasectomy were very low in northern Uganda. He said that men in the

region do not readily accept vasectomies therefore limiting the practical or hands on training opportunities for vasectomies in the region. As a result, this clinical officer does not conduct vasectomies in his practice.

“Vasectomy! I don’t conduct because during the training we didn’t conduct one and even the practice was done this side and many men in Northern Uganda don’t accept vasectomy. Throughout the training I didn’t get any man” (CO 2).

Meanwhile with bilateral tubal ligation, all practicing clinical officers reported that they received formal training offered by Marie Stopes in collaboration with the Ministry of Health. Some clinical officers also reported that they received additional training from other organisations including UNFPA, RHU, MSH/Strides and AVSC international. The formal training comprised of two-to-three weeks of theoretical training and two-to-three months of clinical practical/hands on training in a field attachment. Most were trained in 2011, 2012 and 2013. These clinical officers described their training as a privilege; it was sufficient and gratifying.

“...it is a privilege because I went through training and when I came back to the facility, I was able to perform those procedures and meet mothers’ need because there are mothers out there who need the service. So to me, it is a great experience”. (CO 3).

“The training I received was okay because I really got time; 3 months in the field observing and doing these procedures so the time I went to the centre to work alone I had hands-on. Monday to Friday we were going to the field and finding women. Not every day ...but at least a week couldn’t get done without conducting any” (CO 4).

During the training clinical officers were given orientations on what to do and what they cannot do in relation to conducting a bilateral tubal ligation. Notably, they were told not to conduct bilateral tubal ligation on obese women and women with a history of caesarean section.

“...when we were trained we were told not to operate on women who had undergone C-section because there are chances of injuring the bladder, you may fail to suture and the woman dies of bleeding that’s if you are in an outreach so we were cautioned not to do BTL on women who have undergone C-section.... if you find an obese woman, don’t attempt” (CO 4).

Field experiences in conducting bilateral tubal ligation and vasectomies

On average, clinical officers had two-to-three years' experience of conducting bilateral tubal ligation. Considering the number of tubal ligation operations performed, clinical officers in the central region reported more numbers performed compared to other regions. Three of them reported that they had each conducted over 150 BTL operations. In the western region, the clinical officer reported that he had performed over 100 BTLs operations. Clinical officer in the northern region reported the lowest number of BTL operations particularly the West Nile sub-region reporting the least number of BTLs conducted. Overall, very few clinical officers performed vasectomies. Moreover, most vasectomies were conducted by clinical officers from Kampala and Western Uganda. The clinical officers in Lira reported they did not conduct any vasectomies while the clinical officers from West Nile reported conducting only 15 vasectomies. In Soroti, the clinical officer said he had conducted over 100 BTLs and a few vasectomies. In Soroti, as in other parts of Uganda most BTLs were conducted in the outreach settings rather than the clinic setting.

Competence and confidence in performing BTLs

On a scale of 1-5 where 1 was poor and 5 was very good, practicing clinical officers were asked to rate their competencies in performing BTLs. All of them rated themselves highly with either a score of 4=good or 5=very good. Reasons for the higher rating were mainly attributed to long term experience performing BTL and successful procedures conducted with minimal or no complications. Other reasons mentioned included, self-motivation, adequate training, support supervision and an enabling working environment. All Clinical officers interviewed felt confident in performing BTLs except two who indicated that sometimes they felt nervous especially when the procedure proves complicated and yet they are not legally protected.

Counselling (Counselling men for vasectomy is very hard)

All clinical officers interviewed reported that they were involved in counselling their clients for surgical contraception. Majority said that they did not have difficulties counselling women for BTL. However, those involved in performing vasectomies reported that counselling men for the procedure was very challenging. The data suggests regional variations. Again, clinical officers in the north and west Nile sub-regions faced more difficulties compared to clinical officers in the central, western and Soroti sub-region.

“Being a voluntary procedure you give them time but still very few turn up for the procedure” (CO 4).

“Counselling men for vasectomy is still hard and their participation is still very low” (CO 5).

With regard to BTLs, clinical officers reported that women who declined to consent attributed their refusals to: failure to discuss their decision with their spouses; failure to conceive again in the event that they divorced and re-married; and loss of menstrual cycles. Clinical officers said that during counselling, they address mothers’ fears and other pertinent concerns.

“There are those who think that after having a BTL they will never menstruate which isn’t true, so we counsel them that menstruation doesn’t come from the tubes” (CO 2)

All clinical officers stated that mothers seeking BTL are clearly counselled that the method is permanent and irreversible. For those who express willingness, they proceed with the consent process. For those who consent, they stated that they perform pre-operative screening for certain conditions (HIV, epilepsy, marital issues, etc.), perform the procedure, and offer post-operative counselling on precautionary measures and advise them on actions to ensure faster healing of the wounds and prevention of infections.

“...you also tell her that the method is permanent, it’s not reversible. You tell her that if she passes out urine with blood or any bleeding through the virgina, that’s not okay if she came for the procedure when she isn’t in her menstrual periods. Then you also caution her that if she goes back and she feels too much pain because the pain doesn’t have to be that much ...” (CO 4).

Nevertheless, some COs noted that some of their clients never tell the truth during counselling, others fail to follow the instructions and others have non-supportive husbands.

“Some mothers here in the North don’t listen, you work on them today and tomorrow they will be in the garden. Even there some men who can’t do without sex, so they go and have sex and the woman starts complaining of pain” (CO 2).

Surgical procedure

BTL is a blind procedure

Clinical officers described BTL as a blind procedure. During the operation, they make an incision 3-5cm wide following which they apply forceps and attempt to identify the tubes. They described the process of identifying these tubes as a non-straight forward process. They noted that unlike other procedures that are guided, for example with endoscopy, BTL is not. Moreover, they never use uterine elevators which they think is characterized by excessive discomfort on the side of the patient. They indicated that it is possible to miss the tubes and to pick other organs especially the intestines if somebody is not competent enough. One of the clinical officers interviewed reported that some of his colleagues have had challenges.

“As I told you that this is a blind procedure, you can’t see it is hidden” (CO 1).

Although clinical officers described BTL as a blind procedure, all of them reported that they have been successful in conducting the surgeries with minimal complications especially at the initial stages of the training.

“All the BTLs I have conducted have been successful with no complications registered... my procedures have been successful” (CO 5).

“I have never worked on a mother that gets complications or goes on to die” (CO 6)

Those who reported complications said they were able to successfully contain them. The difficulties encountered included: longer duration of conducting the procedure, pain and discomfort, underlying physical conditions such as infection, adhesion, fibrosis and excessive body fat and weight. No experiences of infections and sepsis after the procedure were reported among all clinical officers interviewed.

Prolonged procedure time

Some clinical officers noted that they performed the procedure of BTL longer than they had anticipated. Reasons for the prolonged procedure were mainly attributed to difficulties in identifying and picking the fallopian tubes. They noted that in a few cases, they would identify one tube but subsequently failed or took long to identify the second tube. They explained that the second tube has a tendency to shrink as a result of a physiological response.

“You may expect to do an operation may be in 20 minutes, but it may take longer. It is usually easier to get the first tube. The second tube becomes difficult to identify and this may be attributed to tissue reaction, making the search for the second tube last longer than planned” (CO 1).

Occasionally, the procedure becomes extremely difficult and may take unnecessarily too long and presenting with other complications such as hematoma (tissue bleeding) and inflammation of other vital organs. Under difficult complications of this nature, clinical officers report that they would terminate the surgery, close the wound and provide antibiotic prophylaxis to the mothers.

“When we notice that the procedure is a bit prolonged and we have attempted so much and it is not successful, then we close the wound and give an antibiotic” (CO 1)

Underlying conditions and complications encountered

Besides, some COs also noted that they unexpectedly encountered abnormal tissues during surgery. The abnormalities reported included tissue adhesion, infections, cysts and fibroids.

“Sometimes you find people having infections in the tubes, others it’s difficult to locate the tubes, others may over bleed during the procedure especially those who have ever had C-section, and they have adhesions” (CO 2).

“And sometimes, one or two conditions where I did not get a complete surgery and when I also called in the medical officer to help, he could not. The issue was that there were pre-existing conditions. I think there were fibroids and they had covered the tubes and couldn’t be accessed. Sometimes you find cysts, you find them along tubes and other organs” (CO 1).

Although MSU discourages clinical officers from conducting BTLs among women with a history of caesarean section and those with excessive weight, some clinical officers have conducted the procedures among such groups of mothers. Among those who reportedly conducting the operations, some successfully performed the procedures but others encountered some challenges. Both groups described the procedures as challenging. As a result, those who couldn’t succeed reported that they terminated the procedure, counselled the women and

advised them to take up other methods. Meanwhile, some never try as was recommended during their training.

“Women who have undergone C-section you will not find the peritoneum that’s why we don’t conduct BTL for women who have undergone C-section. I don’t do BTL for women who have undergone C-section because I don’t want risking” (CO 4).

Injury to the gut

Out of the nine practicing clinical officers interviewed, only one reported that he had ever perforated the gut. He said that this happened only once when he was still new in practice. However, he said that he had been taught how to repair the perforation in case it happened. When he perforated the gut, he was able to notice the injury, repaired it and made a close follow up to the mother to assess for any complication. Luckily enough he did not register further complications.

“I was new and I was trying to open the inner layer (peritoneum) using forceps and blade but the forceps had grabbed the gut as well. I noticed the injury but repaired well, and finished all the rest of the procedures. Then I kept on calling the mother over a few days” (CO 5).

Excessive pain

Clinical officers reported that most clients experience some pain during these procedures – because the anaesthesia is localized. It works on the anterior abdominal wall but not the tubes. Therefore, when the tubes are being hooked for ligation, the women experience some pain. Although the pain is expected to be minimal, some clinical officers reported that some of their patients have experienced excessive pain.

“Local anaesthesia, it works but then there are times when the procedure goes beyond what we expect, it may not work and then the patient may scream saying leave me! leave me! ... But, there are some situations where I feel there should be some sort of short acting general anaesthesia so that it is easier to manoeuvre. Otherwise the expression of pain makes you the surgeon uncomfortable” (CO 1)

To alleviate the discomfort and the unnecessary pain that the patient experience during the procedure, one of the COs was of the view that general short acting anaesthesia should be considered especially to act on the internal organs. The COs noted that although MSU recommends the verbal engagement with the mothers, sometimes it has failed necessitating other innovative strategies. For example, re-assuring the client that the pain would soon be over may be good enough but emphasize that the procedure of BTL requires thorough counselling.

Referral

The clinical officers noted that they have a well-coordinated referral system and especially the support office is very helpful in case of any emergencies. Although no referral experiences were reported, clinical officers said that in-case of any emergency they would refer mothers to the nearest hospital and also notify their support office.

Clients follow-up

All COs indicated that they followed up their clients mainly through the use of mobile phones technology. Clinical officers and mothers' exchange telephone numbers to allow mothers to call in case they have any concerns. On the other hand, centres also call their patients to assess their healing progression. For those who were attended to at the static clinic centres, they recall mothers to come for re-examination. Whereas those mothers that were attended to in the outreach clinic are appropriately advised on what precautions to undertake.

System supervision

COs noted that the supervision mechanism to assess their performance is very strong. They said that primarily, MSU conducts routine quarterly supervisory visits to their centres and outreach sites. Moreover, each centre is assigned an immediate supervisor (in principle a medical officer) who provides mentorship and continuous support to the clinical officers. In addition, COs reported that they receive external quality assurance assessors who normally visit them annually. Among these include the ministry of health.

“They (MOH, MSU) come to see if you still have the skills or you’re following the right protocol from consent, counselling and preparing to conduct the procedure- from when the procedure starts to when it ends” (CO 6).

Other non-procedural related challenges

Lack of legal protection and certificate of practice

Practicing clinical officers noted that they lacked legal protection to practice BTL and vasectomies outside MSU clinics. Therefore, clinical officers' mandate to conduct BTL and vasectomy is limited to the word of mouth. Moreover, on completion of the BTL training, clinical officers were not awarded any certification. Therefore, clinical officers that are offering BTL and vasectomies are not adequately protected by the laws. Moreover, clinical officers do not have any proof that they are competent enough to conduct BTL or vasectomy. As a result, those who left MSU have abandoned performing BTL rendering their training redundant. They reported that COs are only authorized by MoH to perform BTL at MSU and not elsewhere.

“If a patient came up there in the hospital and wanted a vasectomy or whatever, I don't have the mandate, I don't have the certification, I am not allowed to do it ... and the medical officers, of course you know they are very few in these hospitals of ours and since they are few especially with the upcountry ...they may not do these other operations” (CO 1).

However, those operating under MSU operational research felt secure and protected.

“We're at least assured of 100% protection because Marie stopes contacted MoH before we started training and they told us that in case we get any issue, we just have to call support office right away” (CO 2).

To overcome the fears, clinical officers recommend that they should be awarded certificates on successful completion of the training and further be legally allowed to perform these procedures.

Contribution to a public health need

COs tangibly and passionately meeting the needs for permanent methods (BTL and Vasectomy)

Practicing COs said that their involvement in surgical contraception is greatly contributing to the reduction of the unmet need for surgical contraception. They reported that prior to their involvement in BTL and vasectomies; access to surgical contraceptives was limited. Prior to their training and participation in conducting BTL, the procedures needed the services of Doctors who were not readily available most of the times.

“Personally I have always been passionate about this. We're very few who do this [conduct BTL and vasectomy] and I am very passionate about it.

When we had just started with the training, it seemed like a challenge but I have always been passionate about it. I am not at the same level with ordinary clinical officers. If someone comes..., I won't say you wait for the doctor to come, or come on Saturday. ... I feel good if I fulfil someone's need" (CO 3).

"Within my reach, access has increased and it has made services easily available and access to those in need. Like I had told you, in 'Blue star', these people don't offer such services, so when they have a client, they call me and I assist them. It has increased accessibility previously it was difficult to access these services" (CO 4)

Clinical officers provide technical support to facilities with less capacity to provide surgical contraception

About three clinical officers reported that they have been very instrumental in supporting other facilities that lack the competences for conducting BTLs. Indeed, one of the clinical officers who no longer works for MSU reported that MSU on several occasions have called on him to support MSU task sharing program.

Recommendations to scale up – perspectives of practicing clinical officers

Legally permit clinical officers to conduct surgical contraception

Practicing COs noted that scaling up surgical contraception is long overdue in Uganda. They made reference to some of their colleagues in neighbouring countries such as Tanzania and Mozambique where clinical officers were authorised to conduct BTL and other procedures including C-sections. They also noted that their involvement in BTL and vasectomy over the past 2-4 years has demonstrated that clinical officers are competent and capable of performing surgical contraception.

Training

Concerning training, clinical officers felt that the training they received for conducting BTLs was adequate. However, some felt that the training should in addition orient them on how to deal with surgical emergencies for example, dealing with complications of perforated gut and previous caesarean scars.

“Clinical officers should be trained on how to manage these emergencies for example if I am doing BTL and I cut a woman’s intestine they shouldn’t ask me to refer because you imagine the time you take. You can do the training and you don’t cut someone’s gut but when you’re alone it may happen. Then also women who have had previous scars in the 3 months you may not get anyone with previous scars so they should train us in those things also. I think they should also allow clinical officers to conduct these procedures even if they are in government health facilities, it shouldn’t only stop in Marie stopes” (CO 4).

Clinical assistants (Nurses and midwives) should also be oriented

Some clinical officers said that the training should not be limited to COs alone. They recommended that their assistants (nurses and midwives) should be oriented as well. They said that this is important especially because these surgeries are conducted by a team [including the nurse or midwives as assistants].

Create awareness for the services to increase uptake

Clinical officers noted that very few people were aware about the provision of permanent methods of contraception. Moreover, for those who might be aware of the services, they may not know the locations where the services are provided. Therefore, mass sensitization and community education about the benefits and availability of BTL and vasectomy should be stepped up.

Monitor performance

Clinical officers recommended that at scale, performance monitoring should be mainstreamed to ensure that services are offered to acceptable standards.

“Monitoring, you have to do assessment. It’s not all about doing the training and people go and do their own things, they need to keep on monitoring. And also you need to follow up these women because someone may get a problem and decide to go to another setting” (CO 4).

Provide certification at the end of training

COs recommended there should be a mechanism to certify, after training, that they are trained and competent to perform BTL and Vasectomies. In addition, when they are certified, they are legally protected in case of any eventualities while conducting these operations.

“After the training, when people have qualified and they are competent, you should provide them with certificates. This will show that they have gone through the training but otherwise unless someone sees you conducting the procedure he may never know that you are capable of conducting BTL/vasectomy. They should provide certificates, in case anything legal comes up, you have where to begin from” (CO 8).

Perspectives and recommendations on task sharing from other stakeholders in the health sector.

Several stakeholders were interviewed to generate their opinion and recommendations on using clinical officers to conduct surgical contraception particularly bi-lateral tubal ligation and vasectomy. These included representatives from: professional councils (medical and dental practitioner council, the allied health council, the nurses and midwifery council) and association of obstetricians and gynaecologists of Uganda; Civil society organizations (Reproductive Health Uganda, Marie Stopes Uganda, Population Secretariat, and Uganda Health Marketing Group), Ministry of Health; Ministry of Public Service; four regional referral hospitals; four health centre IVs and four Health Centre IIIs.

The concept of task sharing was unanimously supported save for two informants who were strongly opposed to the idea of using clinical officers to conduct vasectomies and BTLs. Reasons for those who strongly opposed task sharing are imbedded in the challenges section below. Meanwhile, those in support of task sharing had the following reasons.

Using COs to provide BTL would increase access to services and uptake of permanent FP methods

Most key informants were of the view that involving clinical officers in BTL and Vasectomy would increase accessibility. They alluded that the people in need of these services are in communities where there are mainly mid-level and lower level health cadres. In addition, the informants noted that COs had numerical strength compared to their MO counterparts. As such, they have a wider geographical spread and have low attrition rates compared to MOs. Consequently, informants indicated that task sharing surgical contraception would increase access and uptake of permanent methods of family planning among those who need them.

COs are scattered all over the country, they are within the clients who need BTLs and vasectomy and they are the ones who are always dealing with various health challenges compared to medical officers whom in a district if you're very lucky you may find only one so it's really timely to have such an intervention" [P1].

I think they could address demand because sometimes when some clients for instance come for such a demand, most of the time / sometimes we refer them to Marie Stopes or to Hospitals." [P2]

I think it is something good, other countries have done it and it is not being done in bad faith, it is ensuring that if someone comes to a facility and needs this service, can they be able to walk away with the service? [P3].

Attraction and retention of medical officers to lower health facilities is a challenge

Key informants also said that the government still remains with a very big challenge of attracting and retaining MOs in rural districts and health facilities. One of the informants related that even when salaries were significantly increased, the government has failed to attract MOs to rural settings.

...even when salaries for Medical Officers have been increased by two-a-half fold (from one million to two million five hundred thousand) this policy has failed in attraction and retention of medical officers to health centres of level IV [P4].

Using COs to conduct BTL would ensure efficient utilization of human resource

Some key informants noted that human resources for health remains a huge challenge in the country, yet the demand for health services is high. To reduce the gap, they felt that innovative strategies especially task sharing would be the way forward. For example, some noted that COs have registered great success in conducting medical male circumcision in the country. Some also noted that in Mulago hospital, midwives are reportedly performing BTLs. They further reiterated that where medical officers are available especially at HCIVs, they are usually taken up by other administrative and urgent clinical responsibilities.

My opinion is based on the fact that we don't have adequate qualified people to deliver the kind of health package that the country deserves. So if we share tasks, and especially that particular task you are proposing to share, if you have already trained health workers, so it is okay if it is one thing that is going to improve not only the quality but also the outreach of the services, so that whoever needs the service can access it [P3].

"Clinical Officers can perform Bilateral Tubal Ligation if trained and this has the advantage of bringing services nearer to the people. It will avoid lining up for services since most clients do not want to line up and waste time. If trained, then they can undertake this work at the clinical level. Clinical Officers will address the demands, since at the moment such clients are referred to Marie Stopes or to the hospital. The numbers/consumptions for BTL are likely to increase over time" [P5].

Previously it has been a domain of mainly doctors and we don't have enough doctors to go round, and so there are many missed opportunities [P5].

COs are more affordable compared to MOs

Key informants also reported that the cost of employing a clinical officer is far much lower compared to the cost of employing a medical officer. For instance, some said MOs are paid three or more times compared to a CO.

I think also affordability; when you look at administration affording a Doctor compared to a Clinical Officer, a Doctor cannot work in a clinic, it is rare..... you cannot afford him for a whole week but you can have a Clinical Officer, I have seen them in private clinics, somebody can have them the whole day, that one for a doctor is really hard [P6].

Clinical officers possess basic medical education

A section of the respondents said that during clinical training, clinical officers receive basic medical education in minor surgery, anatomy and physiology of the human body. They asserted that the basic training provides clinical officers with competencies that when strengthened with the necessary skills, supervision and equipment could render COs competent in performing BTLs.

I think that, clinical officers, with the right training, right supervision and right equipment, they can really perform. Generally, of course some of them might get a few itches here and there but on the whole, I think they can perform it (BTL) [P5].

To me, as long as a clinical officer is trained, you've built his capacity, and he's well supervised, he is provided with the right equipment, I would say, why not? [P7].

Challenges and dissenting views – perspectives of other stakeholders

Key informants also highlighted a number of challenges which are pertinent for scalability of surgical contraception. The issues were related to.

Workload

One anticipated challenge of task sharing that was commonly reported concerned the already overwhelmed clinical officer cadres in government facilities. They added that health facilities have limited human resource. Respondents said that when you visit some of the HCIVs and

IIIs in the country, some COs attend to a very huge clientele. Stepping off to perform a BTL would mean keeping many patients waiting.

I hope you have ever been at a HC IV and you know what happens – the work load. Now when you say let COs go to theatres and start conducting BTL and vasectomy. He is leaving his work then he goes to theatre, for me I am looking to what he's supposed to do and then he goes to do other tasks. Even when there's one person who needs BTL but there are a thousand other people who need his services at that particular time whom he needs to see and clerk but now he goes to theatre to see that one person who needs a BTL. Is it fair? [P8].

Competence and complications concerns

Some key informants also said that complications could arise from the task sharing since COs don't undergo an extensive training on the anatomy and surgical procedures while in medical schools. Informants felt that a short course on performing tubal ligation and vasectomy wouldn't be enough to bring them to the level of medical doctors who have undergone many years of training. They further alluded that COs may not know how to identify tubes, uterus and the fundus and that these would lead to accidents and injuries or they may cut the intestines leading to the death of the client. One of the participants noted that although the best surgeon can make mistakes, involving COs in the surgical procedures can lead to more complications. According to the key informants, complications range from back pain, acute lower abdominal pains to chronic abdominal pains which may result to the client undergoing a total abdominal hysterectomy or vasectomy as the only solution. They however asserted that if COs can undergo an extensive and thorough training these complications could be minimized.

...if it can happen to those who have a higher training, because it's not just a matter of basics... A clinical officer may have the basic training of one or two weeks and actually the hands on skill...but when it comes to the nitty gritty, anything can happen. So what I'm emphasizing is actually the issue of quality assurance because you know, you don't want to have mothers doing BTL but at the end of the day, they end up with chronic lower abdominal pain and end up with maybe doctors suggesting that they should have total abdominal...because that chronic lower abdominal pain is probably associated with a person who has done a tubal ligation [P9].

However, there were also concerns that professional protectionism and control could play against task sharing which they described as 'inverted coma of professionalism'.

... of course there is that inverted coma of professionalism and quality. They (MOs) might feel they don't want to... they feel that the other people are not competent enough to offer the quality of care, but there is also the issue of the fear to lose power and control over certain things. People like to be in charge. "I'm the one in charge of this, without me this can't go on..." [P5].

Training and curriculum concerns

Key informants described performance of vasectomies and tubal ligation as unusual procedures. That since few people uptake the procedures, they were concerned that this would be a challenge with regard to the practical training of the CO. Therefore, they said that for a successful training, there will be a need for a rigorous mobilization of the population to encourage them uptake the services. Moreover, they said that the rigor of training should commensurate to that of medical doctors. Otherwise, some respondents had reservations.

....it is going to require a lot of mobilization for the communities because you know... it is not like the usual family planning commodities. It is going to need women who agree to have tubal ligation and a number of men who agree to have vasectomy to give all the trainees a chance to practice" [P3].

I'm not saying that this is not relevant, the task sharing is actually very vital but my worry is as a professional... in the medical field, I'm just looking at the training for clinical officers is actually not like the training of the medical doctor. They have the basics of medicine but when it comes to anatomy, it's actually a big issue, [P9].

Concerns surrounding curriculum and inadequacies at basic training and practice resulted in some vehemently opposing task sharing.

That is not what clinical officers are trained to do. It would even be better to train the nursing officers since they are always helping the doctors to perform such procedures in the theatres as opposed to clinical officers [P10].

My opinion I am very sorry it's negative because it's not in their curriculum. It's not yet in their scope of practice [P8].

BTLs and vasectomies not priority needs

Some key informants also felt that BTLs and vasectomies were not priority needs for Uganda. Instead, other needs were thought to be more pressing. Nevertheless, it was suggested that if the need is real, then it should be incorporated into the COs curriculum.

The best they will do if it's a need for Ugandans which I think it's not because it's not a priority for Ugandans as far as I am concerned, there are far many other needs. COs can cover other areas/priorities with needs other than vasectomy and BTL. If there's that need and its critical, let them put it in their curriculum, they study it and then they assist on it and they are supervised [P8].

Inadequate infrastructure and equipment

The respondents revealed that most health facilities were not up to standard and lacked necessary infrastructure and equipment to provide surgical FP services. For example, key informants believed that some facilities have poor and substandard theatres while others reported that their facilities don't have space for surgical procedures. They said that maintaining sterility in such situations is difficult and consequently leads to complications. Additionally, most health facilities don't have an alternative source of power, therefore when there is no electricity, surgical procedures are halted.

.... you may find they don't have enough things to use... they are not even sterilizing, they use the instruments on the different clients, because here once you have done a procedure you don't have to use the same instrument, you have to have a variety of them and they have to be sterile [P11].

Policy gaps

Respondents complained of existing unfavourable policies that don't allow COs to practice surgical FP procedures. They emphasized that without policy and legal frameworks that protect their practice, COs can't provide surgical FP services even though they are knowledgeable. They added that COs who go ahead to provide these services are at risk of losing their license to practice in case of any complication that may arise during surgical FP procedures.

Recommendations for scale up

Stakeholders who participated in this study mentioned a number of recommendations that could ensure a successful scale up of the task sharing program in Uganda.

1 Improve staffing and Remuneration

Although majority of informants expressed willingness to support surgical contraception to COs, concerns regarding understaffing and workloads were raised. Participants noted that COs in facilities are already overwhelmed. The situation was described as worse in lower health facilities. Respondents said that some HCIIIs even don't have a single clinical officer. Therefore, for a successful scale up of the task sharing program, key informants recommended that MoH should improve on staffing of health facilities. They added that this should be done preferably before scale up commences. In addition, they noted that consideration in terms of improving remuneration for those currently involved should be considered. Because of lack of additional incentives, some COs were reportedly out of practice yet they had undergone training.

2 Provide COs with adequate training

The study participants recommended that for a successful task sharing, the implementing team should build the capacity of COs through an extensive and thorough training and mentorship program inclusive of CMEs. According to the key informants, only certified trainers should conduct the training of COs. In addition, they suggested that this training program should take between 4 to 6 months and comprise of the theory component and practical component with support supervision in class and theatres respectively. In selection of trainees, they recommended that COs with basic knowledge in surgical procedures and with interest in conducting BTL should be considered.

3 Strengthen supervision systems

Support supervision was strongly recommended at scale for the task sharing program. Respondents said that COs should be supervised at all levels, during training and practice to ensure that the SOPs for task sharing are strictly adhered to. They noted that vasectomy and BTL are rather major surgeries. When asked about the institutional changes required for the task sharing program, some respondents suggested that a supervisory team headed by a medical Doctor should be instituted. They made reference to the Health sub district (HSD) team that is led by a medical officer which they suggested that it would appropriately provide supervision at the sub-district. They recommended that supervision of the task sharing should be made a continuous process.

.....and even when they're trained, they need supervision. Supervision is really very important; you just don't take things for granted...there must be a supervisory team/department to oversee activities [P1].

Respondents also noted that another tier which should be harnessed in training and supervision are the regional referral hospitals. They noted that regional referral hospitals have expertise and capacity which may not be available at the sub district and district health system.

In this area of training and supervision, regional hospitals should take the mantle on, they can supervise the DHMT but remember there some districts which don't have adequate health facilities so we can't base supervision at districts but I think regions can because most RRH have obstetricians who can conduct the training and supervision [P12].

Additionally, key informants stressed the need for referral systems with hotlines where the supervising team can be reached if complications arise due to task sharing.

4 Improve Infrastructure

Many respondents felt that it was necessary to improve the infrastructure to ensure proper scale up of task sharing. Specifically, HCIIIs were noted to lack operational theatres. Respondents noted that infrastructure improvement is especially important for provision of surgical services and infection control.

These public health facilities are basically in shambles. We need to have some good infrastructure that won't expose mothers to danger so whatever agency that is supporting the program should make sure that much as they are building the capacity of COs, they should think about the infrastructure because we don't want to expose mothers to danger. You know having a nice building without good consumables say sterilizers it will cause things like sepsis which we see going on in these government health facilities [P1].

5 Review curriculum for clinical schools

Almost all respondents reported that the current training institutions have a training gap. The training is more theoretical than practical. In response to such gaps, key informants proposed that curriculum for training institutions [clinical schools] should be reviewed and more practical aspects of BTL and vasectomy incorporated.

The second one is through training institutions because they channel out students every year so through training these COs will know what their mandate is and what they're supposed to do in those other areas of practice [P13].

Many respondents felt that introducing the training into COs curriculum would be cost effective and sustainable in due course than the short training modules that largely depend on donor support. Besides, the informants recommended that introduction of the courses into the curriculum would require orienting the tutors as well especially their abilities to train the practical aspects.

One of course is the training school, we still have the old tutors, tutors have to be orientated so that they put emphasis and appreciate task sharing so that when it comes to reproductive health real practical issues are discussed. There's a tendency of doing more theories but I think there should be more practical exposure as far as reproductive health is concerned. And also tutors have to be empowered with skills. It's not very easy to teach something you haven't practiced yourself or you don't know. [P13].

Of course it should go the right way, Marie Stopes should advise Ministry of Education to review the curriculum and put it [COs conducting BTL and vasectomy] there. Instead of saying they're giving packages of 2 weeks for something that is important like that. Because they can have adverse effects...that person [CO] is going to go out thinking that he knows but he's not going to be supervised, he's going to work alone and there you know there's danger. This person will be at a HC IV, who will supervise him and for him whoever comes for BTL he just takes to theatre [P8].

.....the curriculum for those who are still in school and not yet in service as clinical officers, their curriculum should integrate that particular aspect [P3].

6 Change the policy and legal framework to protect clinical officers

One of the recommendations for the scale up was the need to change the policy related to the practice of clinical officer in providing surgical FP methods. Almost all respondents suggested that such changes in policy should put into consideration issues related to litigation. It was felt that the clinical officers should be legally permitted to do such operation but also be legally protected should any complication arise. This is because currently clinical officers are not allowed to perform major surgeries including procedures like BTL and Vasectomy. Other important issues that should be considered during policy change are; providing resources such as personnel and supplies, and infrastructure necessary for a successful scale up. This would

be one way of showing commitment by the government whose effect would translate into sustainability of the programs.

7 Make guidelines to be followed by COs

Study participants recommended that in addition to the training offered to the COs, guidelines should be drafted and adhered to by COs in order to minimize risks and complications. Stakeholder believed that these guidelines if followed would ensure quality control and consequentially minimize complications. They emphasized that these guidelines should comprise of roles to be played by COs, selection of eligible clients for example restricting obese women and those who have had caesarean/ abdominal operations, step by step process such as counselling, pre-operative examination, procedure, infection control and post operation treatment, emergency actions to take in case of complications and data capture.

8 Mobilize resources required for effective task sharing intervention

For the success of the scale up, mobilization and advocacy came up strongly as some of the important requirements for the effective involvement of clinical officers. It was reported that political leaders and other key stakeholders should be mobilized for the scale up program to be successful.

We have seen health services breaking down because these politicians when they see a program working well they start owning. Political interference is normally a hindrance. If government is willing to take up a program and policy makers, you normally speak the same language and that's certainly a sign of success [P1].

In addition, the relevancy of other opinion leaders, relevant professional bodies, and community based organizations were highlighted. Asked about the institutions best suited to take on task sharing; development organizations were considered relevant especially on advocacy issues by the virtue of their work. Most of these organizations are advocacy oriented and have gained trust in communities within which they operate

9 Engage stakeholders in the implementation of task sharing

A successful scale up of the task sharing requires a multi sectorial or holistic approach. Key informants strongly recommended that key stakeholders should be engaged and involved in the planning and implementation of the scale up of the task sharing program, citing example of other programs such as CMC and HIV control that benefited enormously from public-private

partnerships. According to the study participants, the following stakeholders would be important if considered; NGOs such as Marie Stopes, RHU, GIZ, PACE, UNFP and USAID, policy makers, academic institutions, medical associations. They added that these should work hand in hand with the VHTs, DHOs and the MoH. They further noted that, these kinds of partnerships would lower the cost of operation making the task sharing cost effective. Some organizations visited during this study expressed willingness to support implementation of the task sharing program, with the RHU representative hinting that they are already re-aligning their structures to provide surgical FP services too.

I am talking like on behalf of RHU, it's trying to re-align itself and I believe that's where its moving towards where our people are equipped and also trained and able to carry these procedures especially ...tubal ligation and vasectomy, I think that's where the organization is also moving towards, so if such an intervention comes I think it will align well in what they are also looking at [6].

On the other hand, key informants also stressed that sensitizing the community to increase demand for services is as important as improving service delivery. Involving politicians, local leaders, expert clients, religious leaders and cultural leaders in the sensitization of their communities would play a fundamental role in mobilizing the community for the services. One study participant gave an examples of a religious leader who received the surgical FP services and went on to tell the community to follow his example.

10 Conduct monitoring and evaluation of the task sharing program

Respondents strongly recommended that for a successful implementation of the task sharing program, monitoring and evaluation should be a key component of the program. A monitoring and evaluation system should be employed to capture and store information. According to key informants, this M&E system should be linked to the HMIS and should capture information on; number of surgical procedures performed, resources used and arising complications. They felt that these indicators can be used to assess the task sharing program and the capacity of the trained COs. When asked about the frequency of the M&E, respondents noted that the evaluation should be performed quarterly and with routine data collection. They believed that by conducting monitoring and evaluation, the implementation team will ensure quality assurance.

Resource and capacity requirements for implementing task sharing in health facilities in Uganda.

To assess the resource and capacity requirements for implementing task sharing in health facilities in Uganda, we conducted interviews with the facility in-charges, clinical officers, and administered a data extraction checklist to 27 facilities including 4 regional hospitals, 7 HCIVs, 8 HCIIIs, 7 MSU facilities and 1 RHU facility. The key resources assessed included staffing, infrastructure, equipment, medicines & contraceptive commodities, management & supervision, utilities, transport, salaries & incentives.

Equipment, contraceptive commodities and infrastructural requirements

Table 1 and Table 2 illustrate the number of available equipment, infrastructure and contraceptive commodities for FP by facility level.

Table 1: Number of equipment and contraceptive commodities for family planning						
Variable	Total N (%)	Hospital=4 N (%)	HCIV=7 N (%)	HCIII=8 N (%)	MSU=7 N (%)	RHU=1; N (%)
Sterilizers available for FP services						
0	2 (8.3)	0 (0)	0 (0)	2 (33.3)	0 (0)	0 (0)
≥1	22 (91.7)	4 (100)	6 (100)	4 (66.7)	7 (100)	1 (100)
Examination tables						
0	2 (8.3)	1 (25)	0 (0)	1 (16.7)	0 (0)	0 (0)
≥1	22 (91.7)	3 (75)	6 (100)	5 (83.3)	7 (100)	1 (100)
Minilap Kits						
0	18 (66.7)	3 (75)	7 (100)	8 (100)	0 (0)	0 (0)
≥1	9 (33.3)	1 (25)	0 (0)	0 (0)	7 (100)	1 (100)
Operational theatre						
0	11 (40.7)	0 (0)	3 (42.9)	8 (100)	0 (0)	0 (0)
≥1	16 (59.3)	4 (100)	4 (57.1)	0 (0)	7 (100)	1 (100)
Recovery room						
0	14 (51.9)	2 (50)	4 (57.1)	8 (100)	0 (0)	0 (0)
≥1	13 (48.1)	2 (50)	3 (42.9)	0 (0)	7 (100)	1 (100)
Sitting space for all clients						
No	13 (58.3)	2 (50)	2 (28.6)	3 (37.5)	0 (0)	1 (100)
Yes	11 (41.7)	2 (50)	5 (71.4)	5 (62.5)	7 (100)	0 (0)

*Some facilities had missing data

Equipment

All health facilities except two HCIIIs had at least one functioning sterilizer. One hospital and one HCIII did not have an examination table. Three Hospitals and all HCIIIs & IVs lacked mini laparotomy kits for performing BTLs; unlike MSU and RHU facilities. Overall, the private health providers (MSU & RHU) were better equipped for surgical contraception. The scarcity of equipment at HCIIIs & IVs was also supported by the qualitative data. Providers

recommended that the facilities should be equipped for scale up to take root at these levels.

We also need equipment to conduct the surgery...We have only one steriliser that is used for dental services and if that one goes down we will not be able to sterilise equipment so we need at least one more [F1].

I think equipment for carrying out the operation are also needed...For equipment... in fact we don't have completely because we have just even built our theatre [F2].

We have some equipment but some of them we don't have them like the minilap kits – that is why our doctor does not conduct BTL [F3].

Health facilities may not have enough equipment unless more are added- if they happen to get many clients [F4].

Table 2: Available family planning methods at facilities						
Variable	Total N (%)	Hospital=4 N (%)	HCIV=7 N (%)	HCIH=8 N (%)	MSU=7 N (%)	RHU=1; N (%)
Pills						
No	6 (24)	1 (25)	3 (42.9)	2 (33.3)	0 (0)	0 (0)
Yes	19 (76)	3 (75)	4 (57.1)	4 (66.7)	7 (100)	1 (100)
Condoms						
No	2 (8)	0 (0)	0 (0)	0 (0)	2 (33.3)	0 (0)
Yes	22 (92)	4 (100)	7 (100)	7 (100)	4 (66.7)	1 (100)
IUDS						
No	7 (26.9)	0 (0)	2 (33.3)	5 (62.5)	0 (0)	0 (0)
Yes	19 (73.1)	4 (100)	4 (66.7)	3 (37.5)	7 (100)	1 (100)
Injectable						
No	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Yes	25 (100)	4 (100)	(57.1)	7 (100)	6 (100)	1 (100)
Female sterilization (BTL)						
No	13 (58.3)	1 (33.3)	5 (100)	8 (100)	0 (100)	0 (0)
Yes	11 (41.7)	2 (66.7)	0 (0)	0 (0)	7 (100)	1 (100)

Family planning commodities

A range of family planning methods were provided at the various healthcare delivery facilities. Pills were provided in all health facilities apart from one hospital, three HCIVs and 2 HCIHs. Reasons for lack of these services at these facilities were attributed to mainly stock outs. All facilities had condoms except two MSU facilities. According to one of the in-charges at an

MSU facility, they received a batch of expired condoms. The batch was returned and by the time of the study, they had not received a new consignment. All hospitals, MSU and the RHU facility provided intra-uterine devices. More than half of the HCIIIs and a third of HCIVs were not providing IUDs. It was interesting to observe that all (100%) health facilities were providing injectable FP. BTLs were performed at all MSU facilities, one hospital and none of the HCIIIs and IVs performed BTLs. From the qualitative interviews at HCIIIs and HCIVs, respondents reported that BTLs were only performed by MSU whenever they visited their sites for an outreach activity.

Infrastructure

As shown in table 1, slightly more than half (59.3%) of the facilities had at least one operational theatre. None of the HCIIIs had an operational theatre unlike the hospitals, RHU and MSU facilities. Asked about the infrastructural resources available, one of the referral hospitals director said;

And the good thing with the referral hospital is that we are having many theatres...the main operating theatre has got two operating spaces...the emergence OBs theatre has got one operating space...we have a minor theatre in out-patient...we also have a theatre in private ward. So all those are available spaces... the IVs [HCIVs] have got an operating theatre, they can sterilize, they can do all those things and that would be also a very good working team at the HCIV [P12].

Only 48.1% of the facilities had recovery rooms. All HCIIIs had no recovery rooms. On the other hand, all private facilities (MSU&RHU) had recovery rooms and less than 50% of HCIVs had recovery rooms. On a more positive note, all facilities had waiting area for FP clients. We also assessed adequacy of storage facilities for family planning commodities. Figure 2 illustrates the findings of the assessment.

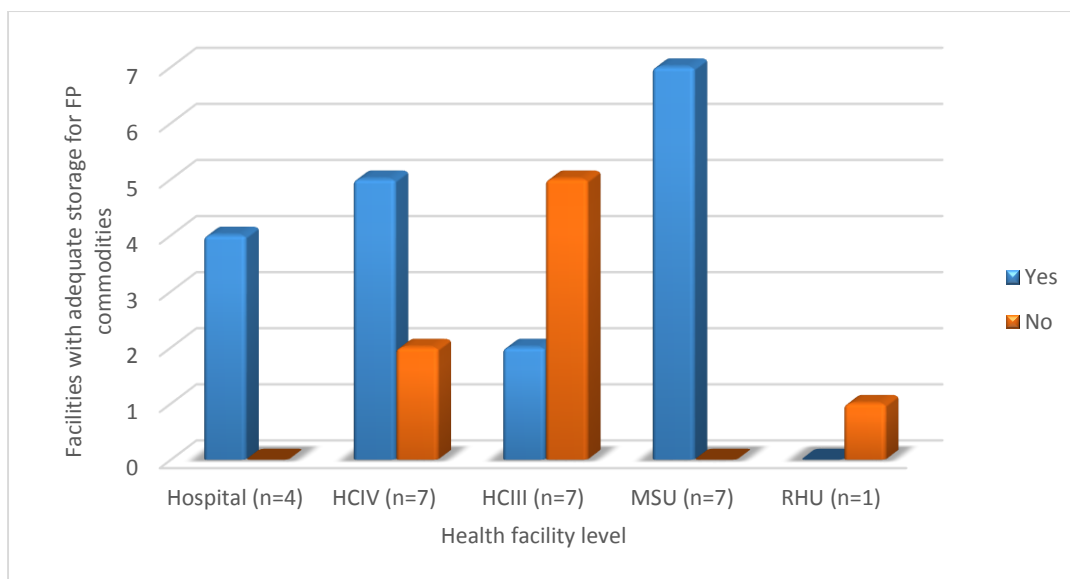


Figure 2: Adequacy of storage facilities for family planning

Medicines

Basic medicines and supplies required for performing BTLs and Vasectomy were reported to be available in many facilities. Almost all respondents reported that these medicines for BTL and Vasectomy are not different from those usually given for regular operations. Most facilities reportedly had at least some medicines including pain killers, and antibiotics which were regarded as most important for surgical procedures.

“Then may be some antibiotics which are available, we do have enough [F5].

Yeah, the medicine is enough” [F6].

However, at the Health HCIIIs, qualitative interviews revealed that anaesthetic drugs required for the procedures were lacking. Moreover, stock out concerns were pointed out.

“You will notice that some of the drugs we use like lignocaine and ...spinal anaesthesia for women, these drugs are costly and they may not continuously be supplied at HC IIIs, they will only be supplied in hospitals and HC IVs” [F1].

“The medicine supplies are not constantly being supplied. And when they are being supplied, they are very little. Because after 3 months, one month, you find the drugs are there in the health facility, the other month, the drugs are not there, especially the strong antibiotics” [F7].

like here they bring medicine and it only lasts for 1 month yet it’s supposed to last for 3 months. The population is high compared to the medicine that they bring [F8].

Staffing

As expected, most doctors were at the regional referral hospitals compared to the lower

facilities. Each regional referral hospital had at least one obstetrics and gynaecology specialist. The qualitative informants at these facilities indicated that at the regional referral hospital, the human resources required to support scale up of surgical contraception was available. They reported that they would suitably provide training, mentorship and support supervision. The obstetricians at the regional referrals expressed willingness to support the scale up process.

I think at the regional referral hospital, we would be working as supervisors, because we have the man power, because for us, we have the Obstetrician and the gynaecologist who would actually participate in training and supervising...the capacity is there, and the desire is there. It should be working; we are of the view that we are the ones to do the supervising, the training of the HCIVs, and ... do supervising and mentorship of all what they are doing [P12].

To ensure a streamlined and well monitored supervision process that ensures quality at scale, respondents noted that there is a need to designate an officer responsible for quality performance, progress reviews and other supervisory tasks. The respondents noted that this would best be done by an Obstetrics and Gynaecology specialist.

At the HCIV, data reveal that most of the facilities visited have at least one MO. The MOs at HCIVs were considered suitable and that they would in addition to the specialist at regional referral hospitals provide training to clinical officers for surgical contraception. However, they noted that these MOs should also be trained to be able to perform the mentorship and training role.

at the HCIVs, the medical officers if they are trained well, they would be the ones to train clinical officers and so they would also form a team which would be also working there at the health sub-district [P12].

A regional variation in the number of medical and clinical officers at HCIVs were noted. Kabarole district had the highest staffing level, with most HCIVs in the district having 2 medical officers compared to other regions with 1 medical officer or none at each of the HCIVs visited.

because, they (HCIVs) have those two doctors, they have I think 3 clinical officers, then they have a senior clinical officer and 2 junior clinical officer. So, actually, you have like 5 people at the HCIVs, who, if trained, can be able to do those procedures [P12].

Yes, we have it since we have enough clinicians and a doctor. In human resource we are okay [F2].

Where a medical officer is one, the responsibility may already be overwhelming to add additional tasks. However, given that their routine duty is at the same facility, MOs at HCIVs might be helpful in mentorship and supervision. At the HCIII however, greater challenges are likely in scaling up task sharing. Most HCIIIs have one CO who is already overburdened with the number of clients they receive per day as well as by the administrative responsibilities.

personally I am a clinical officer but you will find that I have many tasks like diagnose patients, oversee administratively, make work plans, make monthly returns, hold counselling sessions/behaviour change talks... [F1].

To understand whether clinical officers were performing bilateral tubal ligation at the various health facilities, we asked “Does a clinical officer provide tubal ligation at this facility?” The results are illustrated in figure 1.

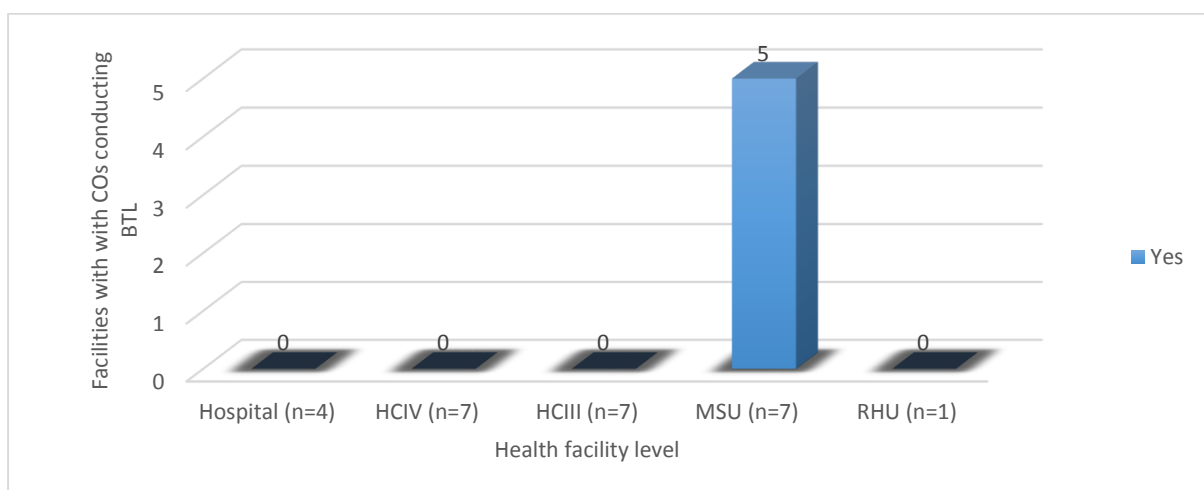


Figure 3: Health facilities with COs performing BTL

Of the 27 health facilities, only five reportedly had clinical officers performing BTLs at the sites and all were MSU facilities.

The respondents noted the need to recruit more human resource.

the facility has the capacity to handle in terms of equipment and space but as for now in terms of availability of health workers, we're still lacking [F4].

at the moment, the challenges we have at the health facility is the few number of staff. Many people are going back to school in addition to the few number of staff. So you find that the same person is handling so many things [F9].

These findings suggest a need for additional staff. At HCIIIs where there is only a single clinical officer, introducing an additional task is not advisable. Instead, we recommend recruitment of a new CO to take on the additional task. However, if this is not feasible, then we would recommend that the current MSU outreach model to these facilities be sustained. But trained COs from higher level facilities should be allowed to perform these procedures in the outreach. At the HCIVs, most have more than one CO, one of the two should be identified and trained in conducting the procedures. An additional staffing requirement identified from the qualitative interviews was the need for counsellors.

Financial resources and incentives

The need for financial resources was also observed. The financial resource requirement relates to incentives, salaries and administrative costs required for scale up. Foremost, informants noted that additional responsibility should come along with additional incentives.

This is extra work on top of what they have been doing...You have to cost for every program and you also have to know that these COs aren't going to work for free [F10].

Then they should also provide us with allowances for that because BTL and vasectomy isn't part of our job description [F8].

Yes, you should add some something on my salary, some little allowances. Because remember I am now doing something which was supposed to be done by MOs, so I am reducing the workload [F11].

I will be doing somebody else's job which has to be taken in to consideration in terms of salary [F3].

Yes, and some incentives for those who will perform the procedures [F12].

They noted that if you are going to recruit personnel, you will need to provide them salaries. Others were of the view that even if you don't recruit, you may need to revise the salary cap

for COs because of the additional responsibilities. Besides salaries and incentives, informants reported that there will be costs incurred for administrative and other activities such as mobilization targeting various stake holders.

Transport

Respondents also noted the need for transport at scale. They report that they will need transport for follow up of clients.

Currently there is no transport such that we can follow them up to know how they are doing in the community [F7].

Then other challenges are transport...if they bring such services, will they provide us with transport? [F6].

You also have to look at the transport the person uses, for example, I stay in Mbale but if I work in Sironko, when I move I will reach the next day, if I didn't book patients for that day and I didn't sterilize the equipment, I will tell these patients, let us meet next time [F13].

Implementation processes necessary for effective scale-up of task sharing into the national health systems

Policy and legislation:

Implementation of task sharing into the national health system should be guided by explicit policies and guidelines at the operational level for implementation and monitoring. Legislations to guide and legally protect clinical officers who provide surgical contraceptive services is fundamental. For example, task sharing may require changes to some laws, especially in cases where health workers have to perform surgical procedures.

- The government of Uganda through its ministry of health should develop and implement a health policy that outlines the implementation of a task sharing program where clinical officers are trained and enabled to provide voluntary surgical contraceptive methods such as tubal ligation.
- The health policy document should comprise of key responsibilities of each player (clinical officers, health facilities, district health offices, NGOs, medical associations, academic institutions) involved in the task sharing program.
- Furthermore, in developing a task sharing policy and guidelines, the MOH should pay attention to potential barriers, such as resistance from health professionals, low salaries, and poor working conditions. There is need for political commitment at the highest level for task sharing, with the Minister of Health being highly supportive of the programme.
- In addition, the MoH should hold consultative meeting with key stakeholders, including regulatory councils and professional associations. For example, the MoH should engage Ministry of Education and training academic institutions in discussions on how to implement task sharing by teaching new skills and plan a curriculum development to support sharing of tasks with different cadres such as clinical officers.

Realign and Mobilize Resources

For scaling up to be successful, resources should be mobilized for operating the task sharing program on an expanded scale. The task sharing programme will rely solely on the MoH mobilizing resources i.e. human, institutional and financial resources.

Staffing and Human Resource Capacity Building

- An assessment should be conducted of existing registered clinical officers in Uganda not currently engaged in providing surgical contraceptives services.
- Thereafter a robust, proven and thorough training program, certified by the government, should be implemented to enable clinical officers to acquire skills and knowledge/competence to perform surgical contraceptives with minimum or no supervision.
- In addition, the MoH should conduct CMEs once a year to continuously build the capacity of clinical officers.

Management systems

This includes the instituting of action plans, coordinating mechanisms and governance procedures for the scaling-up activity and for operating at scale. A sector-wide approach should be used to strengthen the entire health system; including capacity management.

- The MOH should collaborate with a range of stakeholders to ensure that the task shifting policy and operational guidelines establish quality of care and supervision mechanisms i.e. MoH should dispense Institutional guidelines and standard operating procedures.
- For a sustainable and safe implementation of the task sharing programme, there should be a District/ Regional level supervision flow to support the health team performing the surgical contraceptive services.
- MoH through the DHO should support the health facilities and conduct regular supportive supervision at least every three months.

Dissemination and Advocacy

- MoH should ensure that the task sharing programme of surgical contraception is communicated, transferred and otherwise promoted to the health facilities and other stakeholders. Approaches can include training, technical assistance, policy dialogues or peer exchanges; utilizing interpersonal, mass media and other channels. Advocacy should be done at all levels.
- Furthermore, successful examples of task sharing within Uganda should be documented and disseminated to the health workforce and health facilities across the country and in the region.
- Furthermore, strategies on how to best engage teams of health workers and community members in delivering and advocating for interventions at primary, secondary and tertiary levels should be implemented. For example, one of the most common

facilitating factors for task sharing is the demand for the health services and the commitment of the medical professionals to serve their patients.

Monitoring and Evaluation:

The Government of Uganda through its MoH should track the impact of introducing the task sharing programme into the national health system and to make adjustments if the results differ from what was intended.

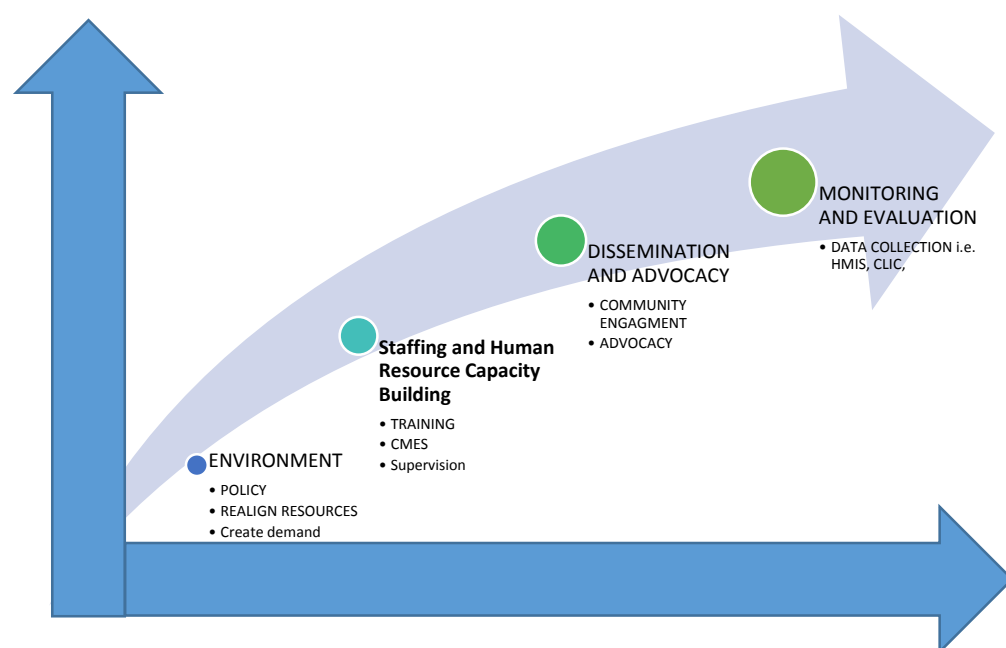
Referral system

For task sharing to work well, there must be a functional referral chain.

- The MoH should strengthen the national referral system and set up a national referral center to handle emergency cases; complications from the surgical procedure.
- Guidelines of referral systems should be given to the implementation team, whereby HCIII and HCIV should refer complications to higher level health facilities in the district.

Data collection

MoH should strengthen data collection systems of the task sharing programme and streamline it into the Health Management Information Systems (HMIS).



Necessary updates to the current MoH Policy Guidelines and Service Standards for SRHR.

The proposed policy change to the 2001 Policy guidelines and service standards document that allows COs to provide surgical contraceptive services is already provided for in the 2006 draft policy guidelines and services standards for SRHR (Table 1). This change is also visible in the 2010 Policy Guidelines and Service Delivery Standards for Community Based Provision of Injectable Contraception in Uganda, an Addendum to the 2006 Uganda National Policy Guidelines and Service Standards for Sexual and Reproductive Health and Rights. The amendment is highlighted in chapter 3 (family planning and contraceptive service delivery), Table 1 which illustrates family planning provision by cadre of staff. The amendment recognise clinical officers among the cadres designated to conduct bilateral tubal ligation and vasectomy. The drawback is that the amended 2006 MoH policy guidelines and service standards for SRHR remains in a draft form and is un-published. We therefore recommend that the 2006 policy should formally be passed and published for public consumption.

Table 1 Family Planning Service Provision by Cadre of staff

Family Planning Service Provision by Cadre of staff							
Type of Service	Social Marketing	Community Health Worker	Nursing Assistants	Nurse	Midwife	Clinical Officer	Doctor
Counselling	✓	✓	✓	✓	✓	✓	✓
Home visits	✓	✓	✓	✓	✓	✓	
Health Education talks	✓	✓	✓	✓	✓	✓	✓
Print media messages	✓	✓	✓	✓	✓	✓	✓
Electronic media messages	✓	✓		✓	✓	✓	✓
Combined Oral contraceptives	✓	✓	✓	✓	✓	✓	✓
Progesterone only Pill	✓	✓	✓	✓	✓	✓	✓
Condoms	✓	✓	✓	✓	✓	✓	✓
Depo provera inj.				✓	✓	✓	✓

Noristerat inj				✓	✓	✓	✓
Intra uterine Device				✓	✓	✓	✓
Foam tablets	✓	✓	✓	✓	✓	✓	✓
Creams/ jellys	✓	✓	✓	✓	✓	✓	✓
Diaphragms				✓	✓	✓	✓
Bilateral tubal ligation					✓	✓	✓
Vasectomy					✓	✓	✓
Implant insertion				✓	✓	✓	✓
Emergency contraception	✓	✓	✓	✓	✓	✓	✓
Supervision of lower cadres				✓	✓	✓	✓
Periodic abstinence methods	✓	✓	✓	✓	✓	✓	✓
LAM	✓	✓	✓	✓	✓	✓	✓

Source: *National Policy Guidelines for Sexual and Reproductive Health and Rights 2006, Reproductive Health Division, Department of Community Health, Ministry of Health. Page 23*

In addition to the amendment to the current MoH policy guidelines and service standards for sexual and reproductive health and rights 2006, legal barriers should be removed to allow COs to conduct BTLs and vasectomies. The amendment would ensure that clinical officers practicing these procedures are legally protected from undue civil litigations as a result of performing the procedures.

Implementation guidelines necessary for scaling up task sharing of surgical methods of contraception

I. **Delivery outlets:**

In line with the MoH health policies, services will continue to be provided through government, non-governmental, and private sector facilities, units, and outlets. The following being the recognized outlets of surgical contraceptive service provision:

- Facility based outlets such as hospitals, health center IVs and IIIs.
- Outreach services including mobile clinics and camps.
- Private sector facility such as clinics.

All facilities providing surgical procedures should be rehabilitated and remodeled to enhance safety and quality provision of services.

- The facility should comprise of a sterile and private theatre room, a waiting room and the clinical officer's room.
- An important consideration will be to make them friendly to both women and men.

II. **Who can provide surgical contraceptive services?**

Long term/voluntary surgical contraceptive services namely, tubal ligation and vasectomy can be performed by doctors, and Clinical Officers with certified training in surgical contraception. Clinical officers should receive further training on performing surgical FP methods with routine support supervision.

III. **Service Delivery:**

Surgical contraceptive services should be client friendly, safe, easily accepted and utilized by the community. Implementing partners should promote, advocate use of and ensure availability of clinical officers and supplies to provide surgical contraceptives in the community.

IV. **Training:**

The purpose is to build the capacity of Clinical officers with the required knowledge, skills and attitudes to provide surgical contraceptive services at health facility level. Training is a critical requirement in ensuring the delivery of quality surgical services at health facility level thereby addressing some of the issues that affect the uptake of this contraceptive; such as limited access to the preferred method by many women in Uganda. It is fundamental to

orient Clinical officers to provide these services while at the same time maintaining safety and quality.

- Training should be spearheaded by the MoH.
- Trainers should be approved and authorized by MoH and should work in coordination with the DHOs in both training and support supervision.

V. Monitoring and Supervision:

Effective monitoring and supervision are important components in the provision of sustainable quality surgical methods of contraceptive services. Monitoring and supervision of surgical contraceptive service delivery should be strengthened within the existing systems for example; data on task sharing program should be captured under the HMIS. Furthermore, an evaluation should be conducted every six months to assess the progress of the task sharing program.

VI. Quality Assurance:

Quality assurance is an inbuilt system for setting and monitoring the implementation of standards and practices of surgical long term contraceptive service delivery. It should ensure safety of the client, service providers and the community. Surgical contraceptive services at the lower health facility level should be integrated in the Quality Management Plan to ensure quality service delivery.

VII. Quality of Care:

The performance of Clinical officers is central to the delivery of quality surgical contraceptive services; promotes professionalism and attract clientele. The surgical procedure should ensure clients' safety at all times. For example, COs should uphold informed choice on surgical contraceptives by health educating, counselling and receiving informed consent by a couple before proceeding with the operation.

VIII. Logistics Management:

A sound logistics system ensures the smooth distribution of contraceptive commodities and other supplies so that each service delivery point has sufficient stock to meet clients' needs. This includes surgical contraceptives supplies. Implementers should institute a well-run logistics system, which will ensure that all supplies are in good condition, timely and costs

are controlled by eliminating overstocks, spoilage, pilferage and other kinds of waste. This system requires strong coordination between MoH, NMS and DHOs.

Conclusions and Recommendations

Task sharing is fundamental in increasing access to surgical contraceptive services in Uganda. However, the current policies and legal framework for task sharing remain hazy. Whereas the Uganda National Policy Guidelines and Service Standards for Sexual and Reproductive Health do not provide for clinical officers to provide surgical contraception, the addendum to the same policy on injectables states otherwise. However, in spite of the unclear policies on task sharing, there is overwhelming support for task sharing surgical contraception to clinical officers in Uganda. Moreover, results from the MSU operational research and from the current study demonstrate that COs when trained appropriately ably perform the procedures. Therefore, based on the large data derived from interviews, secondary data and literature reviewed, we make the following recommendations to scale up task sharing surgical contraception to clinical officers in Uganda.

- The MoH should harmonise the current policy documents on task sharing surgical contraception. Specifically, the Uganda National guidelines and service standards on sexual and reproductive health and rights should be revised and provision made for task sharing surgical contraception to clinical officers in Uganda. Moreover, the legal barriers that bar COs from performing surgical contraception should be revised.
- All clinical officers interested in performing surgical contraception should first be trained and certified prior to performing surgical contraception. In the short term we recommend that the current MSU task sharing training model (which is based on the Ministry of Health training of health cadres in long acting and permanent methods of family planning) should be replicated to train interested clinical officers in practice.
- Review curricular for clinical schools and train students to perform surgical contraception. As a long term and sustainable recommendation, we recommend that the process of reviewing curriculum for clinical schools should be initiated with urgency so that clinical school students are adequately trained in anatomy and surgery in order to competently perform surgical contraception prior to their graduation.
- Health Centre IVs and Health Centre IIIs should be sufficiently equipped with a functional theatre, equipment and necessary medicine, sort of which they shouldn't be authorised to task share surgical contraception.
- Fill the staffing gaps at all levels to ensure that additional responsibility of task sharing surgical contraception doesn't overwhelm and overshadow current responsibilities. For

example, a facility with one clinical officer shouldn't be allowed to task share surgical contraception.

- Strengthen support supervision and mentorship of trained and practicing COs to build confidence of practitioners and safety of clients.
- Strengthen the referral system to track and ensure that any complication arising out of the task sharing strategy is attended to in a timely manner.
- Strengthen monitoring and evaluation and ensure that service data is captured, analysed to inform programme progression during scale up.

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Annexes

Annex 1: List of participating entities and resource persons interviewed

National level

- Chairperson Medical and Dental Practitioners Council
- Chairperson, Association of Obstetricians and gynaecologists Uganda
- Chairperson, Allied health Professionals' council
- Chairperson, midwives and nurses' council
- Head of Family Health Department, Population secretariat
- Director Quality Assurance Management and Training, Marie Stopes International Uganda
- Director of programs, Reproductive Health Uganda
- Deputy Chairperson, Health Service Commission
- Management Information Systems Officer, Marie Stopes Uganda (Headquarters)
- Coordinator, Uganda Family Planning Consortium

Lira District

- District Health Officer
- In-charge Family planning department- Lira Regional Referral hospital
- Two Clinical officers- Lira Regional Referral hospital
- Two Clinical officers- Mariestopes Clinic Lira
- In-charge- Mariestopes Clinic Lira
- In-charge- Reproductive Health Uganda Lira branch
- Clinical officer- Amachi Health Centre IV
- In-Charge- Anyangatir Health Centre III
- Clinical Officer- Barakwo Health Centre III
- In-charge- Ogur Health Centre IV
- Clinical Officer- Ogur Health Centre IV

Mbale District

- Assistant District Health Officer in charge of maternal health
- Two Clinical officers- Marie Stopes clinic Mbale
- In-charge- Marie Stopes clinic Mbale
- In-charge- Reproductive Health Uganda Mbale branch

- In Charge, Family planning department- Senior Nursing Officer- Mbale Regional Referral hospital
- Two Clinical officers- Mbale Regional Referral hospital
- Clinical officer- Nakaloke Health Centre III
- In-charge- Namatala Health centre IV
- Clinical officer- Namatala Health centre IV
- In-charge- Mbale prisons Health Centre III
- Clinical Officer- Mbale prisons Health Centre III
- Clinical Officer- Bufumbo Health Centre IV

Arua

- Assistant District Health Officer in-charge of maternal health
- Clinical officer- Adumi Health Centre IV
- In-charge- Adumi Health Centre IV
- Clinical officer- Oli Health Centre IV
- In-charge- Oli Health Centre IV
- Clinical officer- Marie Stopes Clinic Arua
- Officials- Reproductive Health Uganda Arua branch
- Business Manager- Uganda Health Marketing Group Arua Branch
- Gynaecologist- Arua Regional Referral Hospital
- Nursing Officer (Theatre)- Arua Regional Referral Hospital
- In-charge- Aroi Health Centre III

Fort portal

- Assistant District Health Officer in charge of maternal health
- Clinical Officer- Bukuku Health Centre IV
- Clinical Officer- Kigombya Health Centre III
- In-charge- Reproductive Health Uganda Fort portal branch
- Clinical officer- Kabambi Health Centre III
- Senior clinical officer- Kabarole Regional referral hospital
- Director- Kabarole Regional referral hospital
- Clinical officer- Marie Stopes clinic
- In-charge- Marie Stopes clinic

Gulu

- Clinical officer- Marie Stopes clinic

Kabale

- Senior clinical officer- Kabale regional referral hospital

Kampala

- Two Clinical officers- Marie Stopes clinic Kavule
- Clinical officer- Marie Stopes clinic Bweyogerere

Wakiso

- Clinical officers- Private practice Wakiso district
- Clinical officer- Marie Stopes clinic Namuwongo
- In-charge- Marie Stopes clinic Namuwongo

Soroti

- Clinical officer- Marie Stopes Clinic

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