Department of Health

No-Scalpel Vasectomy

A Skills Training Course for Vasectomy Providers and Assistants

Participant's Handbook

FOREWORD

The Department of Health, with its commitment to the delivery of quality care in family planning services, is strengthening the training system for the acquisition of knowledge and skills. In line with this commitment, the Training Manual on No-scalpel Vasectomy (NSV) has been revised with the goal of establishing a training system that will aid in the implementation of a national standardized training for health workers all over the country. With the revised training manual on NSV, service provision on NSV is expected to improve in terms of performance and quality. The revised manual will serve as a reference for the conduct of training in voluntary surgical contraception, particularly in male sterilization. The revised manual adapts up-to-date and evidence-based information on vasectomy and provision of services.

The manual contains topics and components that are important in teaching and learning the standardized NSV technique. The topics include counseling, voluntary decision making and informed consent, the surgical procedure, local anesthesia, infection prevention, postoperative recovery, and complication management. The overall objective of the manual is to build the competence of health service providers on male sterilization by NSV in terms of their knowledge, skills, and attitudes.

I encourage the dissemination and use of this manual by health service providers in the implementation of training and expansion of VSC services to increase the number of competent NSV providers across the country.

ENRIQUE T. ONA, MD
Secretary of Health

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  - Ms. Jesica Supan, PHO FP Coordinator Nueva Ecija
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We also recognize and acknowledge the Engender Health Module entitled No Scalpel Vasectomy Curriculum, Trainers Manual, 2nd Edition, which served as reference in the development of this manual.

ACRONYMS

AO	Administrative Order
BTL	Bilateral tubal ligation
BHW	Barangay health worker
CCT	Conditional cash transfer
CHD	Center for Health and Development
CHT	Community health teams
COCs	Combined oral contraceptives
DOH	Department of Health
FP	Family planning
GIDA	Geographically isolated and disadvantaged area
HLD	High-level disinfection
IUD	Intrauterine device
LCE	Local chief executive
LAPM	Long acting and permanent method
LAHRC	Long acting hormonal reversible contraceptives
LGU	Local government unit
MNCHN	Maternal and newborn and child health and nutrition
MDGs	Millennium development goals
MEC	Medical Eligibility Criteria
MLLA	Mini-laparotomy under local anesthesia
NHTS	National Household Targeted Survey
NBB	No balance billing
NSV	No-scalpel vasectomy
PHO	Provincial health office
PHIC	Philippines Health Insurance Corporation
STIs	Sexually transmitted infections
VAWC	Violence against women and children
VSC	Voluntary surgical contraception
WHO	World Health Organization

TABLE OF CONTENTS

	TOPIC	PAGE
FOREWORD		i
ACKNOWLEDGMENT		ii
ACRONYMS		iv
TRAINING DESIGN		vi
PROGRAM OF ACTIVITIES		xi
1	INTRODUCTION TO VASECTOMY	1
2	ANATOMY AND PHYSIOLOGY OF THE MALE GENITO-URINARY SYSTEM	6
3	COUNSELING AND INFORMED CONSENT	16
4	PREVASECTOMY EVALUATION	29
5	INFECTION PREVENTION	38
6	THE SURGICAL PROCEDURE OF NO-SCALPEL VASECTOMY	63
7	POSTVASECTOMY CARE	93
8	MANAGEMENT OF COMPLICATIONS	98
9	MANAGEMENT OF QUALITY VSC SERVICES, INCLUDING VASECTOMY	106
ACTION PLANNING		115
ANNEXES		117
	NSV KNOWLEDGE ASSESSMENT TEST	118
	ANSWERS: NSV KNOWLEDGE ASSESSMENT TEST	121
	FAMILY PLANNING SERVICE RECORD	124
	NSV CLINICAL SKILLS CHECKLIST	127
	MODEL INFORMED CONSENT FORM FOR VASECTOMY	131
	MODEL PREOPERATIVE EVALUATION SURGICAL RECORD	133
	SAMPLE NO-SCALPEL VASECTOMY SURGICAL/OPERATING ROOM RECORD	134
	SAMPLE: MALE VOLUNTARY SURGICAL CONTRACEPTION REFERRAL FORM	136
	SAMPLE VASECTOMY LEAFLET	137
	GOVERNMENT ISSUANCES PERTAINING TO VASECTOMY/VSC	140
REFERENCES		164

NO-SCALPEL VASECTOMY (NSV) TRAINING DESIGN

Course Description

This three-day competency-based skills training course on NSV is designed to train prospective NSV surgeons and assistants to perform NSV. This course provides the information necessary to offer safe and effective NSV services and may require extensive practice time. Participants are expected to bring skills, knowledge, and self-motivation to the training. The course consists of two parts: a two-day didactics and a one-day supervised practicum.

Goals:

- To provide the latest and evidence-based information on NSV
- To provide the knowledge, skills, and attitude in performing NSV
- To provide the knowledge and skills needed to prevent, recognize, and manage complications related to NSV
- To provide the knowledge and skills necessary to integrate NSV into their existing service delivery system

Specific Objectives

At the end of the three-day course, the trainee will be able to

- Carry out method-specific counseling, including the application of the principles of informed choice and voluntarism for VSC
- Perform client assessment based on the World Health Organization (WHO) standards (Medical Eligibility Criteria [MEC] and applicability of laboratory and other ancillary procedures)
- Perform the standardized NSV, including infection prevention and use of anesthesia
- Recognize and manage complications related to NSV
- Provide routine follow-up
- Develop an action plan on the integration of NSV into medical practice

Training/Learning Methods

- Illustrated lectures
- Individual and group exercises
- Case studies
- Demonstration and return demonstration
- Simulated practice on scrotal model (or other alternatives)
- Guided Clinical and surgical activities (Practicum)

Training Materials

- Training curriculum consisting of
  - NSV Trainers' Manual
  - NSV Participants' Handbook
  - Manual containing PowerPoint presentations for each module
- NSV videos produced by the Cooperative Movement for Encouraging No-scalpel Vasectomy (CMEN) or the WHO
- NSV instruments, including ringed clamp (extra-cutaneous ringed forceps) and dissecting
- forceps (especially designed for NSV by Dr. Li Shunqiang)
- Scrotal model
- NSV supplies, including suture material and a syringe with a 25- or 27-gauge needle, along with NSV instruments (straight scissors, sterile gloves, antiseptic solution, adhesive tape, etc.)
- Other training aids, including audiovisual equipment, condoms, penis model, flipchart paper, tape, and markers

NSV TRAINERS' MANUAL
Trainer's Notes, Options, Tips, and Activities

- The first two pages of each module contain introductory information with essential details about the following:
  - How to present the content of the module
  - Estimated time needed for the training based on the module
  - Training supplies
  - Advance preparation
  - Purpose and objectives of the module

NSV PARTICIPANTS' HANDBOOK

The NSV participants' handbook includes all essential course information. The distribution of this handbook minimizes the need for participants to take notes and allows them to concentrate on the course. The handbook can also be used for advanced reading of the course contents.

TRAINERS

The trainers of the course must be

- Proficient in providing training (Prior certification in Training of Trainers Course on Voluntary Surgical Contraception is an added advantage.)
- Proficient in performing NSV

This curriculum contains information that will guide and assist the trainer in workshops and in decision making to enhance the learning experience. However, the trainer must have full knowledge of adult learning concepts, experience with various training methods and techniques, and the ability to adapt materials depending on the needs of the participants.

The trainer for this course may or may not be affiliated with the site where the training is conducted or with the institution sponsoring the training. **The trainer should strictly follow the clinical content of the course, including standards and guidelines regarding certification, training follow-up/monitoring/evaluation, and supervision.**

TRAINING SITE

Whenever possible, skills training for NSV should be conducted at the location where the

participants work to increase the likelihood that the participants will use the skills immediately after training. However, the trainer should find as many opportunities as possible to have participants from various institutions or locations discuss how they can apply what they have learned at their own site.

TRAINEES' SELECTION CRITERIA

Trainees for this course should be doctors of medicine with experience in performing minor surgery. They should be family planning (FP) supporters who are interested and committed to learning about and providing NSV. Assistants who will be trained to work with the surgeons are either nurses or another doctor in the facility.

NSV is performed to conscious clients under local anesthesia; hence, the trainees should demonstrate empathy and sensitivity toward clients and any doubts that clients may have about the procedure.

The trainer should give priority to individuals from institutions that are committed to providing NSV and have an existing demand for NSV services. Without client demand and institutional commitment, the participants will not be able to use newly learned skills. Furthermore, each sponsoring institution should be able to provide the space, equipment, and operating time needed for NSV services.

Assessment of the knowledge and experience levels of the participants is necessary before the training commences. A trainer who is sending application forms or information about the course to potential participants will find the following questions useful:

- What experience do you have in performing surgery?
- Have you had any training in vasectomy?
- Do you currently provide vasectomy services?
- What experience and training have you had in providing FP services?
- What is your educational background?

METHODS OF EVALUATION

Trainee

- Attendance
- NSV Knowledge Assessment Test (Pretest and Post-test)
- These tests are designed to be given at the beginning and at the end of the workshop.
- NSV Surgical Skills Checklist.
  The performance of the trainees will be evaluated using the NSV Surgical Skills Checklist because the course is competency based. Trainees can only begin supervised surgical practice when the trainer has considered their performance on the scrotal model (or alternative practice model) satisfactory based on the NSV Surgical Skills Checklist.

COURSE

Course evaluation completed by the trainees

DURATION

The course will be conducted in the selected training facility for three days (two days of didactics and one day of practicum). Trainees should ensure that enough clients are available for learning. For trainees not connected with the training facility or unable to demonstrate competency because of lack of case loads, an NSV Day will be arranged or scheduled in their site of practice.

SUGGESTED COURSE COMPOSITION

- 1:8 trainer/trainee (includes assistants) ratio during the didactics
- 1:1 trainer/trainee (surgeons only) ratio during the practicum

CLIENT SELECTION AND CLIENT RIGHTS

Client's Consent to be Training Subjects

As with any medical service, the rights of the client are paramount and should be considered at all times throughout the training course. All clients must be adequately counseled and must provide an informed and voluntary decision to undergo vasectomy. Each client's permission must be obtained before a participant in this training observes, assists with, or performs any aspect of care related to vasectomy.

Clients who agree to participate in the training should be informed in advance that they will receive care from a vasectomy trainer or from a participant under the direct supervision of a qualified trainer.

Clients are within their rights to refuse care from a participant. A client who refuses to grant permission and who appears uncomfortable with receiving services from a participant or with the presence of participants during the procedure should not be denied services nor should the procedure be postponed. If a client refuses to be operated on by a participant, the trainer or a qualified member of the training center should perform the procedure.

CONFIDENTIALITY

The client's right to confidential medical care must be observed. However, participants may need to discuss the specifics of a particular case during training sessions. Discussions about clients must be confined to rooms that afford the required degree of privacy. Hallways, corridors, waiting areas, and other public areas are not appropriate venues for discussing clients.

EVALUATION

Evaluation is an important part of the training. Evaluation involves giving feedback to participants about what they have learned and helps trainers determine effective training strategies. Each module contains several tools and activities for evaluation. For example, a self-assessment is included at the end of most modules. The trainer can use this instrument in several ways:

- At the beginning and end of the module, have individuals respond in writing to the questions.
- At the beginning and end of the module, have the group respond orally as each question is read aloud.
- Throughout the workshop, note which questions participants found difficult to answer.
- At the end of the last module that contains a self-assessment (Module 10), have participants review these questions. Use the assessments as part of a final group review.

A trainer who adapts this curriculum must include appropriate evaluation options to

- Assess participants' needs and abilities before training by
  - Using the knowledge assessment test as a written pretest

- Presenting the questions from the test to the participants for discussion
- Using the knowledge assessment test as a verbal pretest
- Asking all participants about their experience with vasectomy and ask specific questions related to their knowledge and skill levels

◆ Assess participants' progress during training by
- Using the NSV Clinical Skills Checklist in every module where it is appropriate
- Using the module's self-assessment
- Observing participants during practice sessions
- Asking questions to groups of participants or to individual participants
- Presenting case studies or situations for discussion

◆ Assess cumulative knowledge and skills at the end of training by
- Using the knowledge assessment test as a written or verbal post-test
- Carrying out a final skills observation
- Asking questions to test knowledge and comprehension

◆ Assess the outcomes or results of the course after training by
- Carrying out a follow-up of the applications of the knowledge and skills taught during the training

An end-of-training evaluation is also necessary to have an overview of the process and results. Trainers should check if the institution they are working with has a preferred form. Trainers may have a form they have used before or may prefer to design one specifically for this course.

POST-TRAINING FOLLOW-UP/MONITORING/EVALUATION

A post-training follow-up is conducted 2, 3, and 12 months after the training (Level 3 per HRBD Guidelines on PTE) to assess the performance of the trainee, to assist the trainee in resolving problems on setting up and integrating his/her learned skills to his/her health service delivery system, and to evaluate the impact of the training program. The frequency of post-training follow-up depends on the needs of the trainee and of his/her facility toward successful integration of quality NSV services.

After three to five years of training (Level 4), the participant would undergo post-training evaluation to determine the effect of the training program on the health situation of the country.

CERTIFICATION

A Certificate of Training is given after the trainee has satisfactorily completed the requirements of the course (complete attendance, passing score in the post-test, and satisfactory skills ratings in the NSV Surgical Skills checklist).

A Certificate of Competency is given after the trainee has successfully integrated NSV into his/her professional practice (performing NSV independently and competently) as observed during the post-training monitoring. The Certificate of Competency may be given to the trainee during the training period if performance of NSV has been demonstrated competently.

The institution is responsible for providing the certification to ensure that the participant meets all the necessary requirements of competency in this procedure.

PROGRAM OF ACTIVITIES

TIME	ACTIVITIES
DAY 1	
8:00-8:30 AM	Registration
8:30-8:45 AM	Opening Program Invocation National Anthem Welcome Remarks
8:45-9:30 AM	Introduction to the Course Introduction of Participants and Trainers Pre-test Leveling of Expectations and Norms Course Objectives and Mechanics
9:30-10:15 AM	Session 1: Introduction to Vasectomy
10:15-10:30 AM	Morning Break
10:30 AM-12:00 NN	- Session 2: Anatomy and Physiology of the Male Genito-urinary System - Concept of Fertility and Joint fertility
12:00-1:00 PM	LUNCH
1:00-3:15 PM	Session 3: Counseling and Informed Consent
3:15-3:30 PM	Afternoon Break
3:30-4:30 PM	Session 4: Prevasectomy Evaluation WHO Medical Eligibility Criteria
4:30-5:30 PM	Session 5: Infection Prevention
DAY 2	
8:00 AM-12:00 NN	- Session 6: Surgical Procedure of Performing NSV - Practice on Scrotal ModelViewing of Training Video
12:00-1:00 PM	LUNCH

1:00–2:00 PM	Session 7: Postvasectomy Care
2:00–4:00 PM	– Session 8: Management of Complications
4:00–5:00 PM	– Session 9: Management of NSV Services – Action Planning
DAY 3 PRACTICUM	
8:00 AM–5:00 PM	Demonstration and Return Demonstration of NSV Surgical Skills using Surgical Performance Checklist with Coaching
5:00–5:30 PM	Closing Program Post-test Course Evaluation Closing Remarks

Session I

INTRODUCTION TO VASECTOMY

OVERVIEW

VSC is currently the most widely used contraceptive method in both developing and developed countries. This procedure accounts for nearly half of all contraceptive use.

Vasectomy is safer, simpler, less expensive, and just as effective as female sterilization, yet the number of female sterilization users exceeds the number of vasectomy users by five to one. The 2011 Family Health Survey showed an unmet need of 19%, with 8.8% on limiting and 10.5% for spacing birth. Although bilateral tubal ligation (BTL; 9%) is second to pills (16%) among the most commonly used FP methods, vasectomy rates remain very low at less than 1%.

For many years, the blame for the underutilization of vasectomy has been placed on men, who were believed to be reluctant to take responsibility for FP. However, evidence suggests otherwise: the principal reason is not the men's resistance to the method or their unwillingness to take responsibility but rather the failure of health professionals to make information and services available and accessible to men.

This failure has often been the result of health professionals' lack of knowledge, misinformation, and personal dislike of vasectomy or untested presumptions about what men thought and wanted.

As men lack full access to information and services, they can neither make informed decisions nor take an active part in FP, which they have otherwise been willing to do.

This session contains basic information on vasectomy to enable service providers to provide accurate, evidence-based information on vasectomy, especially NSV, which is the standard procedure approved by the Department of Health (DOH).

LEARNING OBJECTIVES

At the end of this session, the participant will be able to:

1. Discuss basic information on vasectomy
   - What it is
   - Mechanism of action
   - Effectiveness
   - Advantages and disadvantages
   - Possible side effects
   - Warning signs of complications
2. Provide evidence-based facts to address myths and misconceptions about vasectomy

NARRATIVE

VASECTOMY

Description

- Vasectomy is known as male sterilization, as it provides permanent contraception for men who decide to no longer have any more children.
- Vasectomy is a safe, simple, and quick surgical procedure. The procedure can be performed in a clinic or office with appropriate infection prevention practices.
- The procedure involves tying and cutting a segment of the two vas that carry the sperm.
- NSV involves a small puncture on the scrotum (not using a scalpel) to reach the vas.
- The NSV technique was developed by Dr. Li Shunqiang, who performed the first NSV at the Shunqiang Clinic in 1974.
- After the introduction of NSV as an alternative technique for the vasectomy procedure, several vasectomy surgeons became interested in the procedure and trained under Dr. Li.
- NSV is now the global technique of choice.

Mechanism of Action

- The service provider punctures the man's scrotum and then ties and cuts the two vas. The vas carries the sperm from the testicles.
- Semen is still produced and can be found in the tubes after the vas are blocked.
- With the two vas blocked, no sperm will be contained in the semen.
- The man continues to have erections and ejaculate semen.

Effectiveness

- Vasectomy is 99.9% effective for correct use, but the rate is slightly lower with typical use at 99.8%.
- Vasectomy is more effective when used correctly. Correct usage entails the use of condoms or his woman partner using another effective FP method (e.g., pills or injectables) consistently for at least three months after the procedure and after a semen check showing no sperm has been performed.

Advantages

- Very effective
- Permanent. A single decision leads to lifelong, safe, and effective FP.
- Nothing to remember except to use condoms or another effective method for at least three months after the procedure
- No interference with sex and does not affect the man's ability to have sex
- Increased sexual enjoyment because the concern over pregnancy is eliminated
- No supplies to get, and no repeated clinic visits required
- No known long-term side effects or health risks
- Compared with BTL, vasectomy has the following advantages:
  - More effective
  - Safer
  - Easier to perform
  - Less expensive
  - Can be tested for effectiveness at any time
  - Less likely to result in ectopic pregnancy should it occur in the man's partner

Disadvantages

- Requires minor surgery by a specially trained health care provider
- Not immediately effective. The couple should use another effective FP method for at least three months after the procedure.
- Must be considered as permanent. Reversal surgery is difficult and expensive, may not be available in some areas, and has the possibility to fail. Men who may want to have more children in the future should choose a different method.
- Does not protect against STIs including HIV/AIDS

Possible Side Effects

- NSV is likely to produce tenderness, discomfort, and slight swelling during the first two to three days after the procedure.
- These symptoms are normal and may not require medication.
- Client may return to normal activities and sexual intercourse with temporary contraception after two to three days.

Warning Signs

Several problems affect men's satisfaction with vasectomy. Therefore, the service provider must attend to clients complaining of the following warning signs of complications and refer such clients to a facility or health service provider who can assess and manage the complaint.
These warning signs are:

- Fever

- Blood or pus oozing from the incision
- Strong pain or swelling

Common Fears of Vasectomy

- Fear of surgery
- Fear of pain
- Loss of masculinity or libido
- Limited activity
- Weight loss or weight gain
- Getting prostate/testicular cancer

Addressing the Fear of Surgery

- Recognize that fear exists.
- Recognize that vasectomy could be the best solution to address their personal or family situations.
- Short-term fear is offset by long-term benefits.
- Balance anxiety with knowledge and understanding that the procedure is widely used, accepted as safe and simple, and requires less time.
- Vasectomy is inexpensive.

Addressing the Fear of Pain

- The vasectomy procedure includes a local anesthetic and regional vasal block that numbs the area.
- After the anesthesia wears off, mild discomfort may be felt but can be relieved with pain medication, application of ice pack, and the use of an athletic supporter.
- Some men report chronic pain or discomfort, but surgery is not required to relieve the pain.

Addressing the Fear of Losing Masculinity or Libido

- Vasectomy only involves the cutting of the vas deferens that prevents the sperm from joining the semen.
- The testicles and its functions are not affected at all.
- The testicles continue to produce sperms and male hormones that maintain the male characteristics.
- The procedure does not affect sexual drive. Clients continue to have erections and ejaculations or engage in intercourse as before.

Addressing the Fear of Limited Activity

- Clients are advised to rest and avoid strenuous activities or heavy lifting for only one week.
- Most clients feel completely normal in one week and can work as hard as before.

Addressing the Fear of Losing or Gaining Weight

- Clients will neither gain nor lose weight after vasectomy.
- Vasectomy does not cause a man to grow fat or become weak.

Addressing the Fear of Getting Prostatic/Testicular Cancer

- Evidence from large, well-designed studies shows that vasectomy does not increase the risk of cancer of the testicles (testicular cancer) or prostate (prostatic cancer).

SESSION II

ANATOMY AND PHYSIOLOGY OF THE MALE GENITO-URINARY SYSTEM

OVERVIEW

This session provides basic information on the anatomy and physiology of the male genito-urinary system as well as on the concept of fertility and joint fertility as they relate to vasectomy. The knowledge gained from this session will help service providers further understand vasectomy as a procedure and enable them to perform vasectomy safely as an FP method and to reduce misconceptions about the method.

LEARNING OBJECTIVES

At the end of the session, the participant will be able to:

1. Describe the external and internal organs and the parts of the male genito-urinary system
2. Explain the physiology of the male genito-urinary system
3. Explain the changes in the physiology of the male genito-urinary system after vasectomy
4. Explain the effects of vasectomy
5. Explain the concept of fertility and joint fertility

NARRATIVE

EXTERNAL ORGANS OF THE MALE GENITO-URINARY SYSTEM (Figure 1)

The penis is the male organ for copulation. It is made up of spongy erectile tissues. When a man becomes sexually excited, the penis becomes erect; it stiffens and grows both in width and in length. An erect penis is approximately 5 inches to 7 inches long and approximately an inch or an inch-and-a-half in diameter.

The scrotum, the only other visible external male reproductive organ, is divided into two sacs (scrotal sacs). Each sac contains one testis.

During vasectomy, a puncture is made in the scrotum to allow access to the vasa (ductus) deferentia. The opening is made midway between the base of the penis and the top of the testes on the median raphe. This puncture site is chosen because of easy access to the vasa through the scrotal sac and the avoidance of risks of injury to the epididymides and the testicles.

The scrotal sac is the pair of wrinkled skin pouches that contain and protect the testes or testicles. The scrotum controls the temperature of the testicles. The normal temperature is approximately 6 °C lower than the body temperature, which is ideal for sperm production.

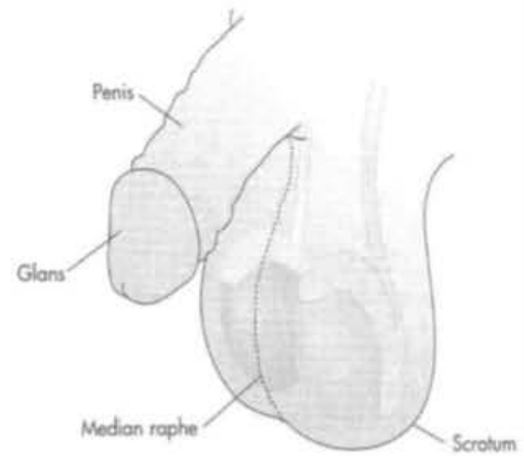
THE MALE INTERNAL REPRODUCTIVE ANATOMY

- A man is fertile everyday from puberty (ages 8 to 12) and for the rest of his life.
- The testes are the pair of male sex glands that produce sperm and testosterone.
- Sperms are the male sex cells.
- Testosterone is the major male hormone responsible for the development of sperm and secondary male sex characteristics.
- Normal sperm analysis: count, 60 million/mL; motility, 60%; morphology, 30% or more of normal morphology; volume, 1 mL to 6 mL per ejaculation; ph, 7.2 to 7.8; liquefaction, less than 20 minutes.
- Once sperms are produced, they travel to the epididymis, where they start to mature. The epididymis is a small tube at the base of the testes.
- When a man ejaculates, sperms leave the epididymis and travel through a pair of tubes called the vas deferens, also known as sperm ducts.
- The vas deferens enables the passage of sperm to the seminal vesicles, the glands that

produce a fluid that enters the vas deferens to nourish the sperm.

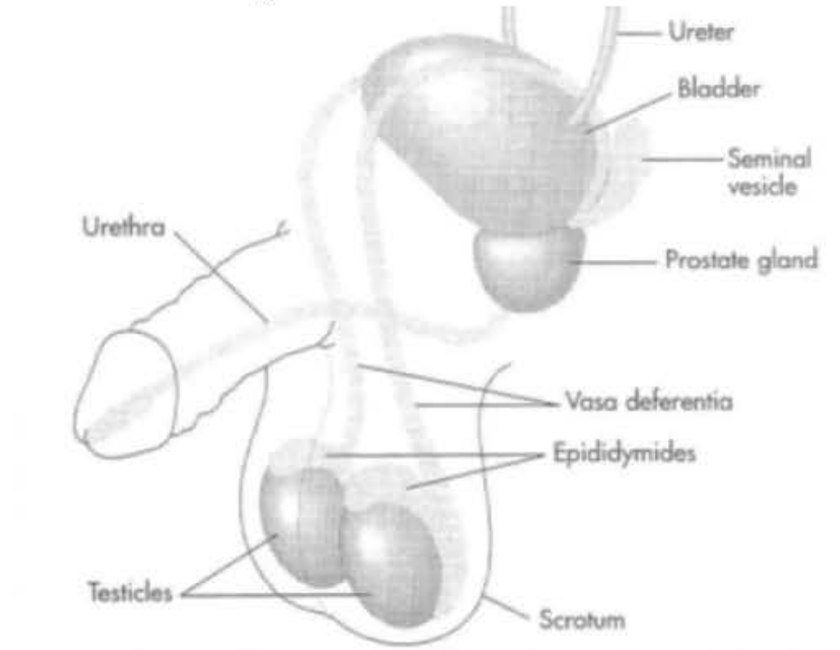
- The vasa deferentia are the tubes that are cut during vasectomy.
- After the fluid from the seminal vesicles mixes with the sperm, this mixture continues to travel through the vas deferens to the prostate gland, which is situated at the base of the urinary bladder and surrounds part of the urethra. This gland produces a thin, milky, and alkaline fluid that forms part of the semen.
- Semen with sperms travels out of the man's body through the urethra, the tube that runs through the center of the penis. In males, the passageway for urine and that for sperm are the same. A man cannot urinate and release semen simultaneously.
- Before the semen leaves the man's reproductive system, the Cowper's gland releases a small amount of fluid. This fluid further makes the seminal fluid alkaline so that sperms are not destroyed as they pass through urethra during ejaculation.

Figure 1–1. External Male Organs



INTERNAL ORGANS OF THE MALE GENITO–URINARY SYSTEM

Figure 1–2. Internal Male Organs



As shown in Figure 1–2, the male internal reproductive organs are made up of three groups: **the testes, the ducts, and the accessory glands.**

The testes (also called testicles or male gonads) produce sperm and the male sex hormone testosterone. After vasectomy, the testes continue to produce both sperms and hormones.

The second group of organs is a series of connected ducts: the **epididymides**, the **vasa deferentia** (vas deferens), and the **urethra**. The two epididymides (which begin at and are connected to the testes) are each connected to one of the vasa deferentia. At the prostate, the epididymides come together and are connected to the urethra and the accessory glands. The epididymides and vasa deferentia carry sperm to mix with secretions from the accessory glands. The urethra carries the sperm and seminal fluid out of the body during ejaculation. The urethra also carries urine.

The vas begins at the epididymis and ends at the base of the prostate, where it is joined by the **seminal vesicle**. The vas and seminal vesicle ducts form the ejaculatory duct. The ejaculatory duct opens into the urethra to enable the passage of sperm and seminal fluid during ejaculation. When using the three–finger technique of the NSV procedure, the vas can be easily felt by rolling the spermatic cord between the thumb and the third finger.

The third group of internal organs is called the accessory glands, which includes the **seminal vesicles**, the **prostate**, and the **bulbo–urethral glands** (not shown in Figure 1–2). These glands secrete the seminal fluid that carries the sperm through the urethra during ejaculation.

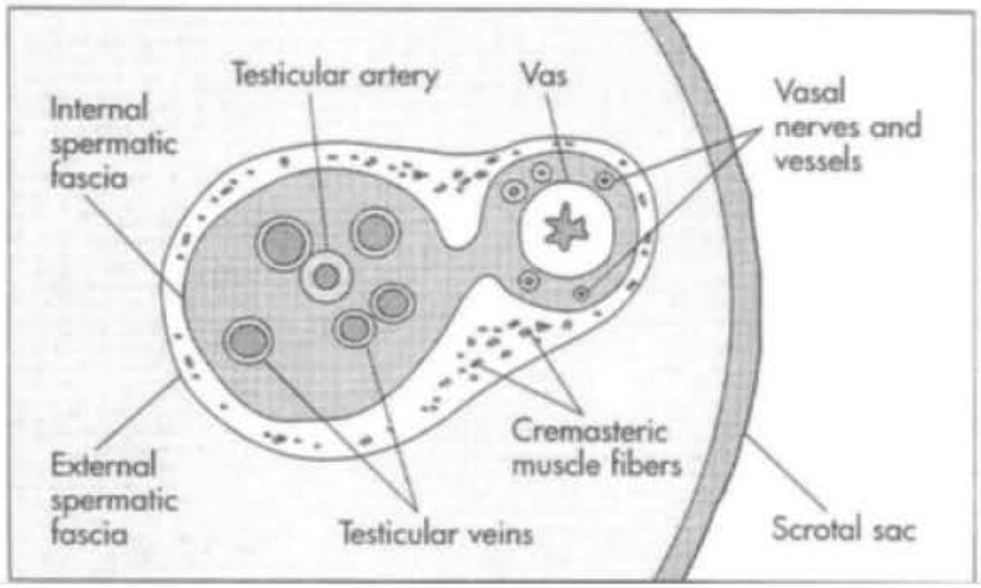
SPERMATIC CORD

One of the first steps in vasectomy is to identify the vas deferens so that it can be anesthetized and occluded. During NSV and during the injection of a local anesthetic, care should be taken to avoid the testicular artery and veins located within the internal spermatic fascia (see Figure 1–3).

The vas deferens is located within the spermatic cord. It can easily be palpated and differentiated from other structures in the cord (spermatic fascia, arteries, and veins), as it is a firm, thick structure within the spermatic cord.

The vas is approximately 35 cm long and 2 mm to 3 mm in diameter. The small diameter of the lumen of the vas presents the main challenge to vasectomy reversal. Without microsurgical techniques, the success of vasectomy reversal is low (pregnancy rates range from 15% to 30%). Even when microsurgical techniques are used, success is limited (the success rate of microsurgical techniques is between 50% and 60%).

Figure 1–3. Cross Section of the Spermatic Cord



PHYSIOLOGICAL CHANGES AFTER VASECTOMY

Aside from achieving the desired change in fertility, the male sexual and reproductive physiology remains unaffected after vasectomy. The nerves involved in erection are not involved in vasectomy. Seminal fluid, which forms the largest part of the ejaculatory fluid, continues to be produced. The client will not notice any reduction in the amount of ejaculatory fluid.

Sperm production continues despite the blockage of the passage of sperm through the reproductive system. These sperms are absorbed into the tissue and tubes of the epididymis. Sometimes, sperm blockage causes pressure to build up in the epididymis and its tubes, causing these structures to distend and eventually rupture. Ruptures are usually asymptomatic and not problematic. The sperm granulomas that can form at the site of the rupture do not usually require treatment. Although some vasectomists believe that this build-up can be avoided by leaving the testicular end of the vas open, the effect of this open-ended technique on failure rates has not been adequately studied.

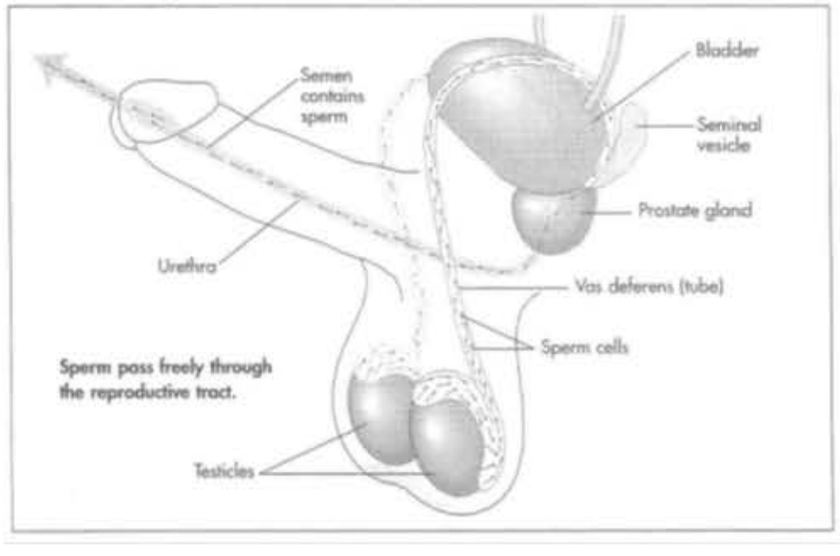
Vasectomy causes a breakdown in the blood-testes barrier that results in increased levels of serum antisperm antibodies in most men who have had a vasectomy. If a man has a vasectomy reversal, the presence of these antibodies can make pregnancy impossible, even if the vasa are successfully reconnected. However, sperm antibodies have no known effect on general health.

EXPLAINING THE EFFECTS OF VASECTOMY TO CLIENTS

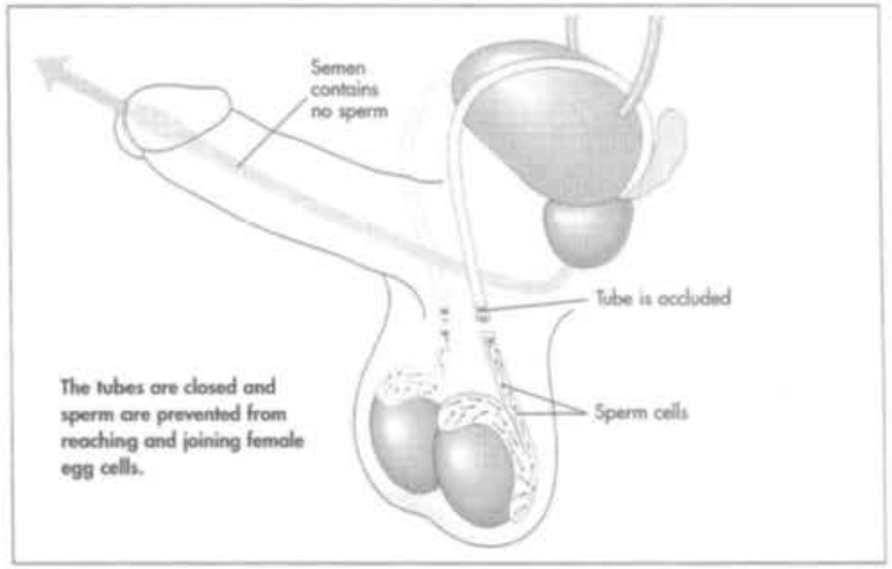
During prevasectomy counseling, vasectomy must be explained to the client using a language that he can easily understand. Diagrams like those in Figure 1–4 should be used as an aid to the explanation. Clients should be shown where the small opening for NSV will be made, explaining that the puncture is not into the penis or testes. The location of sperm production must be pointed out, and the cutting of the tube that carries the sperm (the vas deferens) for sperm blockage must be explained. The client must be assured that his sexual desire will not be affected, and that he will still be able to have an erection. The client should also be shown that seminal fluid will still pass through the urethra, and that he will still be able to ejaculate normally. The change is that the seminal fluid ejaculated will have no sperms because of the vasectomy.

Figure 1–4. Effects of Vasectomy on the Male Anatomy

a. Before Vasectomy



b. After Vasectomy



LONG-TERM HEALTH EFFECTS

To date, no studies indicate that vasectomy causes any long-term health problems. Studies that raised concerns about the relationship between vasectomy and cardiovascular disease, testicular cancer, and prostate cancer have not been substantiated by recent published studies.
Some health personnel and clients may have been misinformed about the long-term health effects of vasectomy. FP providers must therefore correct myths and rumors held by colleagues and clients.

CONCEPT OF FERTILITY AND JOINT FERTILITY

Fertility is the capacity of the woman to conceive and bear a child and the capacity of a man to have a woman conceive.

When we refer to joint fertility, we focus on both male and female fertility not separately but in a joint or combined perspective. Joint fertility involves contributions from both the male (sperm) and the female (egg), resulting in the conception of a child.

Male Fertility

- After reaching puberty, males are always fertile and are able to make females pregnant at any time.
- Male fertility ends at death.

Female Fertility

- Unlike males, female fertility is very limited.
- After puberty, females are fertile only on one day within a menstrual cycle, which is during ovulation. On other days, females are infertile.

- Fertilization occurs when sperm cells are available to fertilize the ovum at the time of ovulation.
- Female fertility ends at menopause, which occurs at 50 years of age (on average).

Joint or Combined fertility

- This perspective highlights the united and equal contribution of the male and female in the decision and ability to have a child.

PUBERTY

Puberty refers to the process of physical changes by which a child's body becomes an adult body capable of reproduction. In a strict sense, this process refers to the bodily changes induced by sexual maturation. Puberty is initiated by hormone signals from the brain to the gonads (the ovaries and testes). In response, the gonads produce a variety of hormones that stimulate the growth, function, or transformation of brain, bones, muscle, skin, breasts, and reproductive organs. During puberty, major differences in size, shape, composition, and function develop in many body structures and systems. The most obvious changes are referred to as secondary sex characteristics.

Signs of Puberty

In Females

Girls begin the process of puberty approximately one to two years earlier than boys do. The process begins at the age of 9 to 14 years.

- Breast Development
  The first physical sign of puberty in females is usually a firm, tender lump under the center of the areola(e) of one or both breasts, occurring on average at approximately 10.5 years of age. Within 6 to 12 months, the swelling begins on both sides, softens, and can be felt and seen extending beyond the edges of the areolae. By another 12 months, the breasts approach a mature size and shape, with the areolae and papillae forming a secondary mound. In most young women, this mound disappears into the contour of the mature breast.

- Pubic Hair
  Pubic hair is often the second obvious change in female puberty. Pubic hairs are usually visible first along the labia. Within another 6 to 12 months, the hairs become too numerous to count and appear on the pubic mound as well. Later, the pubic hairs densely fill the "pubic triangle" and spread to the thighs and sometimes upward toward the navel as abdominal hair.

- Vagina, Uterus, Ovaries
  The mucosal surface of the vagina also changes in response to increasing levels of estrogen; it becomes thick and dull pink in color (in contrast to the brighter red of the pre-pubertal vaginal mucosa). Whitish secretions (physiologic leukorrhea) are a normal effect of estrogen as well. In the two years following the development of the breast, the uterus and ovaries increase in size, and follicles in the ovaries reach large sizes. The ovaries usually contain small follicular cysts visible by ultrasound.

- Menstruation and Fertility
  The first menstrual bleeding is referred to as menarche, and it typically occurs approximately two years after the first signs of breast development. The average age of menarche is

approximately 11.75 years. Menses (menstrual periods) are not always regular and monthly in the first two years after menarche. Ovulation is necessary for fertility but may or may not accompany the earliest menses. In post-menarchal girls, approximately 80% of the cycles are anovulatory in the first year after menarche (approximately 13 years), 50% in the third (approximately 15 years), and 10% in the sixth year (approximately 18 years).

During this period, the lower half of the pelvis and the hips widen (providing a large birth canal) also because of the rising levels of estrogen. Fat tissue increases to a greater percentage of the body composition of females than of males, especially in the typical female distribution of breasts, hips, buttocks, thighs, upper arms, and pubis.

Progressive differences in fat distribution as well as sex differences in local skeletal growth contribute to the typical female body shape by the end of puberty. At age 10, the average girl has 6% more body fat than the average boy, but by the end of puberty, the average difference is nearly 50%.

- Body Odor and Acne
  Rising levels of androgens can change the fatty acid composition of perspiration, resulting in an "adult" body odor. This condition often precedes breast and pubic hair development by one or more years. Another androgen effect is increased secretion of oil (sebum) from the skin. This change increases the susceptibility to acne, a characteristic affliction of puberty that greatly varies in severity.

In Males

Boys begin the process of puberty at approximately 10 to 17 years old. The following are the physical changes during puberty:

- Testicular size, Function, and Fertility
  These factors are the first physical manifestations of puberty in males. The testes start producing testosterone and sperms. Sperm can be detected in the morning urine of most boys after the first year of pubertal changes (and occasionally earlier). Potential fertility is reached at approximately 13 years of age in boys, but full fertility will not be gained until 14 to 16 years of age, although some go through the process very quickly, reaching full fertility only one year later.

- Pubic Hair
  For boys, pubic hair often appears shortly after the genitalia begin to grow. The pubic hairs are usually first visible at the dorsal (abdominal) base of the penis. After another 6 to 12 months, the hairs become too many to count; they become dense to fill the "pubic triangle" and spread to the thighs and upward toward the navel as part of the developing abdominal hair.

- Body and Facial Hair
  In the months and years following the appearance of pubic hair, other areas of the skin that respond to androgens (testosterone) undergo heavy hair growth in roughly the following sequence: underarm (axillary) hair, peri-anal hair, upper lip hair, sideburn (pre-auricular) hair, peri-areolar hair, and the rest of the beard area. Arm, leg, chest, abdominal, and back hair become heavy very gradually. The amount of body hair among adult men is wide ranging, and significant differences in timing and quantity of hair growth are observed among different ethnic groups. Chest hair may appear during puberty or years after. Not all men have chest hair.

- Voice Change
  Under the influence of androgens, the voice box or larynx grows in both sexes. This growth is far more prominent in boys than in girls. It causes the male voice to drop and deepen, sometimes abruptly but rarely "overnight," by approximately one octave. Full adult pitch is attained at an average age of approximately 15 years.

- Male Musculature and Body Shape
  By the end of puberty, adult men have heavier bones and nearly twice as much skeletal muscle.

- Body Odor and Acne
  Rising levels of androgens can change the fatty acid composition of perspiration, resulting in an "adult" body odor. Another androgen effect is the increased secretion of oil (sebum) from the skin and the resultant variable amounts of acne. Acne cannot be prevented or diminished easily, but it typically fully diminishes at the end of puberty.

SESSION III

COUNSELING AND INFORMED CONSENT

OVERVIEW

Counseling serves an important function in providing quality FP services. Through counseling, providers help clients make and implement their own decisions or choices about reproductive health and FP.

Good counseling minimizes the risk of regret or dissatisfaction from vasectomy and therefore facilitates great client satisfaction. This consideration is particularly important for clients choosing a permanent method of contraception.

This session provides an overview of counseling so that service providers become aware of its importance and provision.

OBJECTIVES

At the end of the session, the participants will be able to:

1. Explain FP counseling
2. Enumerate the rights of clients
3. Discuss FP counseling for vasectomy
4. Describe the steps in counseling clients for vasectomy
5. Explain "informed consent"
6. Identify clients at risk for regretting vasectomy
7. Demonstrate proper use of the guide for "Verifying Informed Consent"
8. Instruct clients on the use of the condom

NARRATIVE

DEFINITION AND RATIONALE

FP Counseling

- Involves two-way communication between counselors and clients
- Provides clients with their rights
- Helps clients make voluntary, informed decisions and actions made by couples/individuals regarding fertility and contraception
- Provides information that clients can apply to their individual needs and circumstances
- Helps clients use the contraceptive method of their choice

The purpose of FP counseling is to ensure that clients make a free and informed decision about reproduction and contraception. The client makes the decision after receiving unbiased, complete information about the available choices and after considering how such choices relate to his needs and circumstances.

Figure 3-1. Rights of the Client

All clients have the right to:

- Clear information
- Access to services
- Their choice of family planning method
- Safe services
- Privacy and confidentiality
- Dignity, comfort, and free expression of opinion
- Continuity of service

Adapted from: "The Rights of the Client," a poster created by the International Planned Parenthood Federation.

BENEFITS OF COUNSELING

- Helps ensure informed, voluntary, and well-considered decisions
- Increases client satisfaction
- Contributes to higher rates of contraceptive continuation
- Increases the likelihood that the client will use the method correctly
- Improves the quality of the FP program
- Enhances the reputation of the FP program and its staff

COUNSELING POTENTIAL VASECTOMY CLIENTS

Vasectomy counseling is particularly critical for the following reasons:

- Vasectomy is a surgical method.
- Vasectomy is intended to be a permanent method.

RESPONSIBILITIES OF THE FP COUNSELOR

Considering the permanence of the effects of vasectomy and the need to minimize regret and dissatisfaction, the counselor is responsible for the following:

- To assess the client's knowledge of FP alternatives and to provide any missing information
- To help the client arrive at an understanding of his needs and circumstances as they relate to children and FP
- To help the client come to an independent decision about which choice is right for him

While performing these responsibilities, the counselor treats the client respectfully and encourages him to talk about his worries, fears, interests, and needs. The counselor spends as much time listening to clients as talking to them. The counselor remains neutral about the client's choice. Each client has the right to choose whether to use a contraceptive method. A decision to have another child, after having considered all the possible choices, is as valid an outcome of counseling as a decision to have a vasectomy.

Regardless of whether the vasectomist or another staff member is responsible for counseling vasectomy clients, a number of steps must be followed to help ensure the most appropriate and effective counseling session possible. These steps are discussed in detail on the following pages.

Table 3-1. Steps in Providing Counseling for Family Planning Clients including Vasectomy Clients

STEP 1	Preparation for Counseling. A respectful counselor, an appropriate setting, and adequate supplies are the basics needed for a successful counseling session.
STEP 2	Beginning of Counseling Session. The counselor puts the client at ease, treats him with respect, and makes him feel welcome at the health facility.
STEP 3	Providing Information to the Client. The client should know that he is free to choose a different contraceptive method and to decide against having a vasectomy at any time before the procedure.
STEP 4	Assessing the Client's Decision to Have a Vasectomy. As vasectomy is intended to be a permanent method, the counselor must determine whether a client's decision to have a vasectomy is a sound one.
STEP 5	Counseling the Client about the Vasectomy Procedure. The counselor ensures that the client has and understands all the basic information about the procedure.

STEPS IN PROVIDING COUNSELING FOR FAMILY PLANNING CLIENTS INCLUDING VASECTOMY CLIENTS

Step 1: Preparation for Counseling

Ask yourself the following questions:

Emotional Climate

- Can I give the client my full attention without being interrupted?
- Can I provide a comfortable atmosphere for the client?

Setting

- Does the setting encourage discussion and provide privacy?
- Is the counseling area tidy and free of distraction?
- Are there comfortable chairs for the client or couple and for me?

Materials

- Do I have the necessary forms (client record, informed consent)?
- Do I have visual aids (flipcharts, brochures, posters, samples of methods, etc.)?
- Do I have materials that remind me of the characteristics, benefits, and risks of the various methods?

Step 2: Start of Counseling Session

Getting started

- Begin by putting the client at ease. Introduce yourself.
- Ask the client why he has come to see you: For information about vasectomy? For vasectomy services? To discuss a problem with his vasectomy? To discuss other contraceptive methods?
- If you scheduled the counseling appointment, explain why. Explain the purpose of the counseling session.

Gathering information from the client

- Personal data (age, marital status, and the age, number, and gender of his children)
- Previous experience with contraceptive methods
- Health status

Assess what the client knows about:

- The human reproductive system
- The availability of temporary contraceptive methods
- The benefits, risks, and side effects of temporary and permanent contraceptive methods

Step 3: Providing Information to the Client

- Tailor information to suit the client's knowledge and family planning goals.
- Provide accurate, unbiased information.
- Correct misunderstandings.
- Fill in gaps in the client's knowledge of:
  - The human reproductive system
  - The benefits, risks, and side effects of temporary and permanent methods
  - The benefits and risks of not using contraception
- Encourage the client to ask questions and to provide feedback to ensure that he and his partner understand all the information.
- If appropriate, explain what the client can do to prevent the transmission of sexually transmitted diseases, including AIDS.
- Discuss fees the client may have to pay for the various methods.

Step 4: Assessing the Client's Decision to Have a Vasectomy

When a client expresses an interest in vasectomy:

- Ensure that the client understands that the method involves surgery and is intended to be permanent.
- Assess the client's decision and feelings. Psychologically prepare the client for ending his fertility. Use probing questions such as:
  - When did you decide to have no more children?
  - Why do you want to end your fertility (completed family size, economic reasons, health reasons, etc.)?
  - How did you first learn about vasectomy (partner, nurse, doctor, friend, field worker, etc.)?
  - How long have you been considering vasectomy?
  - What does your partner think?
  - Do you know anyone who has had a vasectomy?
  - How would you feel if your circumstances changed after the vasectomy (divorce, remarriage, death of child or partner, etc.)?
  -
- Ask yourself: "Is the client making a well-considered decision?"

If the client decides not to use contraception:

- Ensure that the client understands the risk of pregnancy to his partner. The client should also understand the health risks associated with pregnancy.
- Tell the client to return if he or his partner has a change of mind.
- Advise the client about other services, such as prenatal and maternity care.

If the client decides to use a temporary method:

- Screen for appropriateness (health precautions, ability to use the method effectively, etc.).
- Explain and demonstrate the method in detail: how to use it; the risks, benefits, danger signals; what to do if a problem arises; and whom to contact to discontinue the method.
- Prepare the client and his partner for any inconveniences and any common side effects of the method.
- Explain how to obtain the supplies needed for the method.
- Tell the client and his partner about any fees they are expected to pay for the method.
- Provide the method, or refer the client or his partner to an appropriate provider.
- Schedule a follow-up visit if appropriate.

Figure 3-2. Assessing the Client's Decision to Have a Vasectomy

Client is Making a Sound Decision:	Warning Signals:
◆ Client is a mature individual. ◆ Client has achieved or exceeded desired family size. ◆ Client has support from partner. ◆ Client has stable marriage. ◆ Client has realistic expectations. ◆ Client is free from stress. ◆ Client is confident on the decision. ◆ Client has well-established desire to end fertility. ◆ Client is well informed.	◆ Client is young. ◆ Client has few children. ◆ Client is feeling pressured in the decision. ◆ Client has an unstable marriage. ◆ Client has unrealistic expectations. ◆ Client's partner does not agree. ◆ Client is under temporary stress. ◆ Client has unresolved conflicts. ◆ Client decision is based on economic inducement. ◆ Client has excessive interest for reversal.

If the client's partner has not accompanied him to the counseling session, briefly cover the information noted here, and schedule an appointment for the client and his partner to receive counseling together.

If you believe the client is at risk of dissatisfaction or regret after vasectomy:

- Explain that the client has characteristics that make dissatisfaction or regret likely.
- Discuss these characteristics with the client. For instance: "We've learned that men in your situation who have had a vasectomy sometimes change their minds about the choice after the operation is done. This is because..."
- Ask the client to spend more time considering the decision. Discuss the temporary methods he can use in the meantime.

Possible Outcomes

- The client agrees to reconsider and may or may not use temporary contraception in the meantime. Schedule another appointment.
- The client may change his mind and decide to use a temporary method or no method.
- The client may persist in the request. If so, consult your colleagues or supervisor.
- Consider referring the client to a more knowledgeable or experienced counselor.

Step 5: Counseling the Client about the Vasectomy Procedure

If you believe that the client's decision for vasectomy is informed, voluntary, and well considered, follow these eight steps:

1. Using simple language, explain in detail the benefits, risks, and side effects of vasectomy. Ensure that the client also understands that vasectomy does not provide protection against STDs, including HIV infection.
2. Psychologically prepare the client for surgery by describing what to expect during the procedure and possible postoperative effects. Use diagrams to describe the surgical procedure (see Figure 3-4).
3. Ensure that the client has been provided with oral and written preoperative instructions. Tell the client about any fees he is expected to pay.
4. Advise the client to use temporary contraception before and after surgery. If needed, provide condom instructions (see Figure 4-4).
5. Ask the client if he has any questions.
6. Complete informed consent procedures. Ensure that the client understands the six points of informed consent listed below and knows what he is signing. Encourage the client to ask questions. The six points of informed consent are:
    - The knowledge of the availability of temporary methods
    - The understanding that vasectomy is a surgical procedure
    - An understanding of the benefits and risks of vasectomy, including the small risk of failure
    - The understanding that vasectomy is intended to be permanent
    - The understanding that if the vasectomy is successful, the client will have no more children
    - Knowledge of the option to decide against the procedure at any time before the operation

7. Obtain the client's signature or mark. If the client is illiterate, obtain a witness's signature attesting that the client has signed the informed consent form.
8. Schedule an appointment for medical screening and surgery.

Remember: The goal of counseling is for a client to make an informed, voluntary, well-considered decision.

INFORMED CONSENT

Informed consent is a client's agreement to use a contraceptive method or to undergo a medical procedure voluntarily and in full possession and understanding of the relevant benefits and risks. For vasectomy, the client gives informed consent after being counseled and signs a consent form before the procedure is performed.

Consent is voluntary when it is given of the client's own free will and is not obtained by means of special inducement, force, fraud, deceit, duress, or other forms of coercion or misrepresentation. The fact that a client has signed an informed consent form does not guarantee informed consent.

Model Informed Consent Form for Vasectomy*

I, _____, the undersigned, request that a vasectomy be performed on my person. I make this request of my own free will, without having been forced or given any special inducement. I understand the following:

1. There are temporary contraceptive methods available to me and my partner.
2. The procedure to be performed on me is a surgical procedure, the details of which have been explained to me.
3. This surgical procedure involves risks in addition to benefits, all of which have
4. been explained to me. Among the risks is the possibility that the procedure may fail.
5. If the procedure is successful, I will be unable to have any more children.
6. The effect of the procedure should be considered permanent.
7. The procedure does not protect me or my partner from infection with sexually transmitted infections, including HIV/AIDS.
8. I can decide against the procedure at any time before the operation is performed (without losing the right to medical, health, or other services or benefits).

–

_____ _____
(Signature or mark of client) *(Date)*

_____ _____
(Signature of attending doctor or delegated assistant) *(Date)*

If the client cannot read, a witness of the client's choosing (male or female) and who speaks the same language as the client must sign the following declaration:
I, the undersigned, attest that the client has affixed his thumbprint or mark in my presence.

_____ _____
(Signature or mark of witness) *(Date)*

* Adapt this form for use in your facility.

Figure 3–3. Assessing a Client's Decision for Vasectomy

A Surgeon's Guide for Final Assessment

Note: Ensure that the client has signed an informed consent form before conducting this assessment.

Ask the client these questions:	STOP	CAUTION	GO
	Should not have surgery now	*Needs more counseling*	*Signs of a sound decision*
WHO made the decision for sterilization?	Someone else	Client decided, but partner objects	Client and partner (or client, if single)
WHEN did the client decide not to have more children?	Now	Recently	Some time ago
WHY did the client choose permanent contraception?	Pressure from someone else	Has heard permanent method can be reversed	Wants no more children
HOW did the client decide?	While upset or under stress	Without enough consideration or information	After consideration and full information
WHAT does the client know about vasectomy?	Does not know that it: – Is permanent – Is a surgical method – Will mean that he cannot have more children	Has misunderstandings about contraceptive methods	Understands that it: – Is permanent – Is a surgical method – Will mean that he cannot have more children
WHAT does the client know about other contraceptive methods?	Would prefer another method if available	Has little knowledge of other methods or their availability	Knows of other methods, but prefers permanent contraception

How to Use This Guide

Part of the surgeon's responsibility for clients about to undergo surgery for permanent contraception is to verify that the client has made an informed and voluntary decision for the procedure. This simple aid can help the surgeon verify a client's readiness for permanent contraception before the operation. The assessment should be made before starting any part of the procedure.

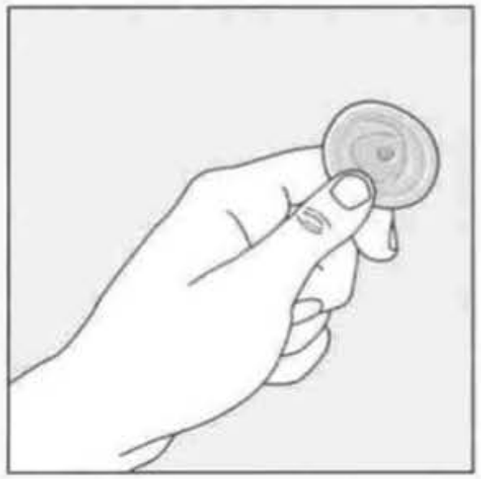
Use of this guide does not substitute for client counseling, which should come much earlier. Furthermore, good judgment is needed when using this guide (or any other) and when interpreting the results. For example, if all of the client's answers fall in the GO category, but he is unduly nervous, and his agitation does not appear to be related to a fear of surgery, the surgeon or another staff member should take time to determine what is causing his anxiety before performing the procedure.

CONDOM INSTRUCTIONS

The infertility effect of vasectomy does not happen immediately after the procedure. The client or his partner needs to use another effective contraceptive for at least three months and after a sperm-free semen examination. A common choice of back-up method is the condom. For this reason, all vasectomy clients should be provided with instructions and practice on the correct use of condoms for use immediately after the vasectomy. Although providers often mistakenly assume that all men know how to use condoms correctly, incorrect use is common and is a major cause of condom failure.

Figure 3–4. Instructions for Condom Use

A. Before Intercourse



1. Carefully open the package so the condom does not tear. (Do not use teeth or a sharp object to open the package). Do not unroll the condom before putting it on.

2. If you are not circumcised, pull back the foreskin. Put the condom on the end of the hard penis. *Note:* If the condom is initially placed on the penis backwards, do not turn it around. Throw it away, and start with a new one.

3. While pinching the tip of the condom to squeeze out air, roll on the condom until it reaches the base of the penis.

4. Check to make sure there is space at the tip, and that the condom is not broken. With the condom on, insert the penis for intercourse.

B. After Intercourse

5. After ejaculation, hold onto the condom at the base of the penis. Keeping the condom on, pull the penis out before it gets soft.

6. Slide the condom off without spilling the liquid (semen) inside. Dispose of the used condom.

Remember:

- Do not use grease, oils, lotions, or petroleum jelly (Vaseline) to make the condom slippery. These substances can make the condom break. Use only jelly or cream that does not contain oil.
- Use a new condom each time you have sex.
- Use a condom only once.
- Store condoms in a cool, dry place.
- Do not use a condom that may be old or damaged.
- Do not use a condom if:
  - The package is broken
  - The condom is brittle or dried out
  - The color is uneven or has changed
  - The condom is unusually sticky

SESSION IV

PREVASECTOMY EVALUATION

OVERVIEW

Assessing a client's suitability to undergo vasectomy is another component of quality care. Careful prevasectomy evaluation reduces the risk of complications, which will adversely affect the acceptability of the procedure.

This module provides the information necessary for service providers to physically evaluate whether a client is a good candidate for vasectomy.

OBJECTIVES

At the end of the session, the participants will be able to:

1. Explain prevasectomy assessment in terms of its rationale, timing, and components
2. Describe the elements of medical history that should be part of a prevasectomy assessment
3. Discuss the steps in performing genital examination and the potential abnormalities that may be detected during the examination
4. Explain the reasons behind recommendations for categorizing certain conditions as precautions for vasectomy

NARRATIVE

PREVASECTOMY ASSESSMENT

Rationale

- Determine the client's fitness for vasectomy.
- Determine the existence of any conditions that are precautions to vasectomy.
- Evaluate whether the client has made an informed choice.

Timing

Prevasectomy assessment can be done:

- The day the vasectomy is to be performed
- A few days before vasectomy
- On the same day as prevasectomy counseling

Components

The prevasectomy medical history and physical examination are discussed in detail in Table 4-1. The essential components of the examination are:

- Medical history
- Genital examination

Medical History and Physical Examination

The following table lists the required and recommended components of a pre-vasectomy medical history and physical examination and explains the reason why each component is included.

	COMPONENT	REASON
MEDICAL HISTORY	Existence of bleeding disorders	Could indicate the potential for hemorrhage
	Previous scrotal or inguinal surgery or trauma	Scarring or adhesions that could complicate a vasectomy procedure may exist.
	Current or past genito-urinary infections, including STIs	Past infections could have caused scarring and adhesions. Current infection could lead to acute postvasectomy infection.
	History of sexual impairment	Could indicate pre-existing psychological or physiological problems that could later be incorrectly attributed to the vasectomy.
	Current and recent medications	Could indicate medical problems that the vasectomist should be aware of before surgery
	Allergy to medications	Can help prevent complications by determining whether the client has ever had an allergic reaction to any of the medications or antiseptics used before, during, or after surgery
PHYSICAL EXAM	Heart* (auscultation, pulse, and blood pressure)	Can rule out hypertension, heart murmurs, and other cardiovascular diseases that the vasectomist should be aware of before surgery
	Lungs* (auscultation and respiratory rate)	Can rule out infections and other lung disease that the vasectomist should be aware of before surgery
	Abdomen* (palpation)	Can rule out the presence of infections, organ enlargements, or masses that the vasectomist should be aware of before surgery
	Genitals	Can rule out the presence of infections or masses that the vasectomist should be aware of before surgery

** Recommended but not essential*

Genital Examination

After examining the client's heart, lungs, and abdomen, a genital examination must be performed. Before beginning the examination, tell the client about what you are going to do and why you will be doing it. Assure him that he would not feel any pain. During the genital examination, you will conduct a penile and scrotal examination.

Unless you observe lesions, gloves are unnecessary during a genital examination, but you should wash your hands thoroughly before and after the examination.

Penile Examination

Visual Inspection

Visually inspect the penis. Note any lesions or scarring. Gently lift the penis and examine the underside as well. Examine the urethral opening. Note and assess any abnormalities, such as discharge, reddening, or irritation.

Potential abnormalities include rash, cyst, discharge, and skin cancer (rare).

Scrotal Examination

Visual Inspection

Visually inspect the scrotal skin. Lift the scrotum to examine the posterior side. Observe the color, size, and contour. Note and assess any swelling or masses.

Potential abnormalities include rash, cyst, poorly developed scrotum (possible cryptorchidism), and swelling (possible inguinal hernia, torsion of spermatic cord, strangulated inguinal hernia).

Palpation

Palpate the scrotum to examine the testes, epididymis, spermatic cord, and the vas deferens.

Potential abnormalities include varicocele, epididymitis, and undescended testis.

1. Palpation of the Testes and Epididymis

First, between your thumb and first two fingers, palpate each testis and epididymis (see Figure 4–1). Avoid putting pressure on the testis, as this would be painful. Note the size, shape, and consistency of each testis and epididymis. Note any nodules or tenderness.
Potential abnormalities include painless nodules in the testes, which may indicate testicular cancer. Nodules in the epididymis may indicate an epididymal cyst (seminoma).

Figure 4–1
Palpation of the Testes and Epididymis

2. Palpation of the Spermatic Cord and Vas Deferens

Using the three-finger technique (see No-Scalpel Vasectomy: An Illustrated Guide for Surgeons, page 19), palpate each spermatic cord and its vas deferens (see Figure 5–2). Move your thumb and fingers along its length. Note any nodules or swellings.

Potential abnormalities include thickened vas (suggests chronic infection), tortuous veins (suggests varicocele), and cyst in cord (suggests hydrocele).

Figure 4–2
Palpation of the Spermatic Cord and Vas Deferens

VASECTOMY PRECAUTIONS

Table 4–2 lists the physical conditions that indicate a precaution to performing a vasectomy. If you do not have sufficient clinical experience in diagnosing these conditions, refer the client to a more experienced physician. For a more comprehensive list of conditions with WHO recommendations, a summarized list of the WHO MEC is included in this module.

Table 4–2. Vasectomy Precautions

Precaution	Reason	Recommendation
Local infection: • Scrotal skin infection • Balanitis • Active STI	Increases the risk of postoperative infection. In addition, surgery at or near the site of an infected lesion can result in wound infection, epididymitis, testicular infection, or sepsis if the organisms gain entry to other tissues or to the bloodstream during surgery.	Treat the infection. Delay the vasectomy until the infection is resolved. Counsel the client about the interim methods of contraception. Counsel clients with STIs about the risk of transmission to others and about preventing future infections. Counsel clients about the need to use condoms.
Systemic infection (including bacteremia, malaria, or yellow fever) or gastroenteritis	Increases the risk of postoperative infection	Treat the infection, or refer the client and delay the procedure. Counsel the client about interim methods of contraception.

Previous scrotal surgery	Possible adhesions to cord structures make it difficult to separate structures. NSV may be difficult to perform if skin is thickened from previous surgery.	Assess the extent of adhesions; if the adhesions will not interfere with vasectomy, perform the procedure. Take additional care when infiltrating the local anesthetic, and pay careful attention to hemostasis.
Intrascrotal mass	May indicate an underlying disease that could affect the health of the client or complicate the procedure	Diagnose the mass, treat abnormal findings, or refer the client for treatment. If findings do not interfere with vasectomy, perform the procedure. If unable to perform vasectomy, counsel about interim contraceptive methods.
Inability to locate, isolate, or move the vas	May make it difficult to access the vas through the puncture site	If the vas cannot be accessed through the puncture site, the client will need to have an incision over the vas.
Large varicocele	Vas may be difficult or impossible to locate. Repairing the varicocele and performing vasectomy in a single procedure may decrease the risk of complications.	If you are experienced in concurrent procedure, repair the varicocele, and perform the vasectomy through the varicocele repair incision. Otherwise, delay the vasectomy, refer the client to a facility with appropriate staff, and counsel the client about interim methods of contraception. If small, a varicocele can usually be isolated from the vas and will not interfere with NSV.
Large hydrocele	Vas may be difficult or impossible to locate. Repairing the hydrocele and performing vasectomy in a single procedure may decrease the risk of complications.	If you are experienced in concurrent procedure, repair the hydrocele and perform the vasectomy through the hydrocele repair incision. If not, delay the vasectomy, refer the client to a facility with appropriate staff, and counsel the client about interim methods of contraception. If small, a hydrocele usually does not interfere with NSV.

Precaution	Reason	Recommendation
Cryptorchidism	When cryptorchidism persists into adulthood, the risk of infertility is very high if the disease is bilateral. Unless fertility has been demonstrated (by pregnancy in the partner or by semen analysis), vasectomy is not needed. If the cryptorchidism is unilateral, the undescended testicle is likely to be nonfunctioning.	If the client has bilateral cryptorchidism and fertility has been demonstrated, extensive surgery will be required to locate the vas. If the cryptorchidism is unilateral and fertility has been demonstrated, you can perform vasectomy on the normal side. If semen examination shows a persistent presence of sperm, more extensive surgery may be required to locate the other vas. Counsel the client on interim methods of contraception until further surgery can be performed.
Inguinal hernia	During herniorrhaphy, the vas is exposed in the inguinal canal and can be ligated.	An experienced surgeon can perform vasectomy concurrently with hernia repair. Counsel the client about interim methods of contraception until treatment is possible.
Coagulation disorders: hemophilia	Bleeding disorders increase the risk of postoperative hematoma formation, which consequently increases the risk of infection. A severe bleeding disorder could result in hemorrhage.	Evaluate before performing vasectomy. If the client has a significant bleeding disorder that cannot be corrected before surgery, do not perform the procedure. If the procedure cannot be performed because of an irresolvable bleeding disorder, counsel the client about alternative contraceptive methods.
Diabetes	Diabetics have an increased likelihood of acquiring post-operative wound infections. If signs of infection appear, treat aggressively with antibiotics.	Correct hyperglycemia before vasectomy, and perform vasectomy only with local anesthesia. Monitor the client closely postoperatively for signs of infection.

World Health Organization (WHO) Eligibility Criteria for Vasectomy Procedures*

Introduction

Considering the irreversibility or permanence of sterilization procedures, special care must be taken to assure a voluntary informed choice of the method by the client. Particular attention must also be given in the case of young people, men who have not yet been fathers, and clients with mental health problems, including depressive conditions. The national laws and existing norms for the delivery of sterilization procedures must be considered in the decision process.

There is no medical condition that would absolutely restrict a person's eligibility for sterilization. Some conditions and circumstances indicate that certain precautions should be taken.

The classification of the conditions into the different categories is based on an in-depth review of the epidemiological and clinical evidence relevant to medical eligibility. The programmatic implications of these updated medical criteria are still to be addressed, taking into account the various levels of service delivery. However, for the particular case of sterilization procedures, the following category definitions were developed.

Definitions

A (Accept): There is no medical reason to deny sterilization to a person with this condition.

C (Caution): The procedure is normally conducted in a routine setting, but with extra preparation and precautions.

D (Delay): The procedure is delayed until the condition is evaluated and/or corrected. Alternative temporary methods of contraception should be provided.

S (Special): The procedure should be undertaken in a setting with an experienced surgeon and staff, equipment needed to provide general anesthesia, and other back-up medical support. For these conditions, the capacity to decide on the most appropriate procedure and anesthesia regimen is also needed. Alternative temporary methods of contraception should be provided if referral is required or there is otherwise any delay.

*Adapted from: WHO, 2000.

Sterilization does not protect against sexually transmited infections (STIs) or HIV. If there is risk of STIs/HIV, the correct and consistent use of condoms is recommended, either alone or with another contraceptive method. Male latex condoms are proven to protect against STIs/HIV.

Male Sterilization

Condition	Category	Rationale/Comments
Local infections		There is an increased risk of postoperative infection (Gohn & Bornside, 1989).
Scrotal skin infection	D	
Active STI	D	
Balanitis	D	
Epididymitis or orchitis	D	
Previous scrotal injury	C	
Systemic infection or gastroenteritis	D	There is an increased risk of postoperative infection (Gohn & Bornside, 1989).
Large varicocele	C	The vas may be difficult or impossible to locate; a single procedure to repair varicocele and perform a vasectomy decreases the risk of complications.
Large hydrocele	C	The vas may be difficult or impossible to locate; a single procedure decreases the risk of complications.
Filariasis; elephantiasis	D	The scrotum may be involved in severe elephantiasis, making it impossible to palpate the cord structure and testis.
Intrascrotal mass	D	This may indicate an underlying disease.

SESSION V

INFECTION PREVENTION

OVERVIEW

The use of appropriate infection prevention techniques during the provision of vasectomy services is crucial to the safety of both clients and service providers. This session provides the information necessary for participants to perform or supervise the infection prevention procedures used in providing NSV services.

LEARNING OBJECTIVES

At the end of the session, the participants will be able to:

1. Identify who are at risk of infections in the health care facility
2. Explain how infections are transmitted among clients, health care workers, and the community via the health care setting
3. Discuss standard precautions and the recommended practices to ensure infection prevention
4. Demonstrate the appropriate infection prevention procedures to follow before, during, and after vasectomy

NARRATIVE

IMPORTANCE OF INFECTION PREVENTION

Without proper precautions, health facilities can cause the spread of infections and diseases. When providing health services, the transmission of infections must be prevented at all times. Over the past few decades, the world has seen increased outbreaks of diseases that were once better controlled. Moreover, previously unidentified infectious agents that can cause incurable diseases, such as HIV and hepatitis C, have become a significant cause of illness and death in many parts of the world.

Although we do not often think about this issue, health care facilities are ideal settings for transmission of disease because of the following reasons:

- Invasive procedures, which have the potential to introduce microorganisms into parts of the body where they can cause infections, are performed routinely.
- Service providers and other staff are constantly exposed to potentially infectious materials as part of their work.
- Many people seeking health care services are already sick and may be more susceptible to infections.
- Some of the people seeking services have infections that can be transmitted to others.
- Services are sometimes provided to many clients in a limited physical space, often within a short period.

With appropriate infection prevention practices, the following can be achieved:

- Prevent postprocedure infection, including surgical-site infections
- Provide high-quality, safe services
- Prevent infections in service providers and other staff
- Protect the community from infections that originate in health care facilities
- Prevent the spread of antibiotic-resistant microorganisms
- Reduce the costs of health care services because prevention is cheaper than treatment

Infection prevention practices protect not only clients but also clinic staff and the community. We must remember that all clinic staff who have contact with blood and body fluids—from the physicians to the cleaners—are at risk of infection. Most infections can be prevented if infection prevention procedures are followed.

HOW INFECTIONS ARE TRANSMITTED

Infections are caused by microorganisms. Microorganisms are everywhere—on the skin, in the air, and in people, animals, plants, soil, and water.

Some microorganisms are normally present on the skin and the respiratory, intestinal, and genital tracts. These microorganisms are called normal flora. Other microorganisms are normally not found on or in the human body and are usually associated with disease. These microorganisms are known as pathogens. All microorganisms, including normal flora, can cause infection or disease.

Infections are transmitted when normal flora are introduced into an area of the body where they are not normally found or when pathogens are introduced into the body. The infectious agent survives, grows, and/or multiplies in the reservoir and then leaves the reservoir through a place of exit by a mode of transmission. The infectious agent then enters the susceptible host through a place of entry. The components of the disease transmission cycle are shown in Figure 5-1 and are discussed as follows:

- Infectious agent: Microorganisms that can cause infection or disease. The infectious agent can be bacteria, viruses, fungi, or parasites.
- Reservoir: The place where the agent survives grows and/or multiplies. People, animal, plants, soil, air, water, solution, instruments, and other items used in clinic procedure can serve as reservoirs for potentially infectious microorganisms.
- Place of exit: The route by which the infectious agent leaves the reservoir. The infectious agent can leave the reservoir through the blood stream, broken skin, mucous membrane, gastrointestinal tract, or placenta by means of blood, excretion, secretion, or droplets that come from other places.
- Mode of transmission: Infections are transmitted in four ways:
  - Contact: Direct transfer of microorganisms through touch (staphylococcus), sexual intercourse (gonorrhea, HIV), fecal/oral transmission (hepatitis A, shigella), or droplets (Influenza, TB)
  - Vehicle: Material that serves as a means of transfer of the microorganisms. The vehicle can be food (salmonella), blood (HIV, HBV), water (cholera, shigella), or instruments and other items used during clinical procedures (HBV, HIV, pseudomonas).
  - Airborne: Some microorganisms can be carried by air currents (measles, TB).
  - Vector: Invertebrate animals can transmit the microorganisms (mosquito: malaria and yellow fever; flea: plague).
- Place of entry: The route through which the infectious agent moves into the susceptible host. The infectious agent can enter the susceptible host through the blood stream, broken skin, mucous membranes, respiratory tract, genitourinary tract, and gastrointestinal tract.
- Susceptible host: A person who can become infected by the infectious agent. For the purpose of this training, the susceptible host includes clients, service providers, and members of the community.

We must remember that the mode of transmission is the easiest point at which to break the disease- transmission cycle in a health care facility. This goal can be accomplished by following appropriate infection prevention practices, such as handwashing, practicing correct aseptic techniques, correctly processing instruments and other items for reuse, and correctly disposing medical waste.

Figure 5-1. Disease Transmission Cycle

RISKS OF INFECTION

Infection prevention is everybody's business. Just as everyone who works at a health care facility is at risk of infection, every health care worker has a role to play in practicing appropriate infection prevention. For infection prevention to be effective, each staff member must do his or her part.

Infection transmission can be transmitted among clients, staff, and the community as follows:

Risk to Staff

Service providers are at significant risk of infection because they are exposed to potentially infectious blood and other body fluids on a daily basis. Staff members who process instruments and other items, clean up after procedures, clean operating theaters and procedure rooms, and dispose waste are particularly at risk. Client-to-health care worker transmission can occur through exposure to infectious blood and other body fluids. This exposure can occur in the following instances:

- When a health care worker's skin is pierced or cut by contaminated needles or sharp instruments
- When fluids are splashed on the mucous membranes of the health care worker (e.g., eyes, nose, or mouth)
- Through broken skin attributed to cuts, scratches, rashes, acne, chapped skin, or fungal infections

Risk to Clients

Clients are at risk of postprocedure infection when, for example, service providers do not wash their hands between clients and procedures, when they do not adequately prepare clients before a clinical procedure, and when used instruments and other items are not cleaned and processed correctly.

Risks to the Community

The community is also at risk of infection in the following instances:

- Medical waste, including contaminated dressings, tissue, needles, syringes, and sharps (needles and scalpel blades), is improperly discarded.
- Health care workers do not wash their hands before leaving the facility and then touch family members or household items.
- Health care workers wear contaminated clothing from the facility to their home. Some infections can be spread by the staff to their family members or others in the community.

POTENTIAL INFECTIONS ASSOCIATED WITH VASECTOMY

Some of the more serious infections that could be associated with vasectomy are tetanus, gangrene, scrotal sepsis, intra-abdominal sepsis, HIV infection, and HBV infection.

Stopping Transmission of Infections

As health professionals, we cannot provide health care services without conducting procedures that put clients and staff at some risk of exposure to potentially infectious materials, but we can prevent transmission in many cases. The only way to prevent infections is to stop the transmission of microorganisms.

Standard precautions are based on the assumption that every person in the facility is potentially infectious. As many people with blood-borne viral infections (e.g., hepatitis B [HBV] or C [HCV], HIV) do not feel or look ill, we must consistently apply standard precautions regardless of the (known or unknown) health status of those who are providing or receiving care.

When applied consistently, standard precautions act as protective barriers between microorganisms and individuals and are considered as a highly effective means of preventing the spread of infection.

The following actions help to form such barriers, as well as provide the means for implementing the standard precautions:

- Washing of hands is the most important procedure for preventing cross-contamination (person to person or contaminated object to person).

- Wear gloves (on both hands) before touching anything, e.g., wet broken skin, mucous membranes, blood or other body fluids (secretions and excretions), soiled instruments, and contaminated waste materials, and before performing invasive procedures.
- Use physical barriers (protective goggles, face masks, and aprons) if splashes and spills of blood or other body fluids are possible (e.g., when cleaning instruments and other items).
- Use antiseptic agents for cleansing skin or mucous membranes before surgery, cleaning wounds, or for hand rubs or surgical hand scrubs with an alcohol-based antiseptic product.
- Use safe work practices such as not recapping or bending needles, safely passing sharp instruments, and suturing (when appropriate) with blunt needles.
- Process instruments, gloves, and other items after use by first decontaminating and thoroughly cleaning them and then either sterilizing or high-level disinfecting them using recommended procedures. Again, in the context of IUD services, HLD is the recommended method of final processing.
- Safely dispose infectious waste materials to protect those who handle them and prevent injury or spread of infection to the community.

Wash Hands
Handwashing is one of the most important infection prevention measures.

When to Wash Hands:

- Immediately after arrival at work
- Before examining a client
- After examining a client
- Before putting on gloves for clinical procedures
- After touching any object that might be contaminated with blood or other body fluids
- After removing gloves (gloves may contain small holes or tears)
- After using the toilet or latrine
- Before leaving work at the end of the day

Things to Use When Washing:

- Regular soap; antimicrobial soap can be used, but is not necessary for routine handwashing.
- Running water
- Clean towel

Do Not Use:

- Shared towels (can easily be contaminated)
- A basin of standing water; microorganisms can multiply in standing water, even if an antiseptic is added.

Three Kinds of Handwashing

Three kinds of handwashing are used in clinical settings.

1. Routine Handwashing (handwashing with plain soap and running water; Figure 5–2)
   - Removes transient microorganisms and soil.
   - Is appropriate in most situations when hands should be washed, including immediately after arrival at service site, before and after contact with a client, after handling specimens or potentially contaminated items, after using the toilet or latrine, and before leaving service site.
   - For most activities, routine handwashing for 10 to 15 seconds is sufficient. Antiseptic is not necessary.
2. Surgical Hand Scrub (handwashing with an antiseptic and running water)
   - Removes transient microorganisms and soil and kills or inhibits the growth of resident microorganisms. Some antiseptics continue to kill and inhibit the growth of resident microorganisms for several hours after hands are washed.

When performing surgical hand scrub, use the following:

- Antiseptic agents (chlorhexidine gluconate, an iodophor, or hexachlorophene). If antiseptics are unavailable, use soap and water, then rinse with an ethyl or isopropyl alcohol and glycerine solution (2 mL glycerine in 100 mL of 60% to 90% alcohol); rub hands until dry.
- A small stick or a brush for cleaning under the nails.
- A soft brush, cloth, or sponge on all surfaces of the hands and forearms.

Perform hand scrub in the following instances:

- Before NSV
- Between each NSV

In high-volume settings, skin may become irritated from frequent scrubbing. To prevent skin irritation while reducing the number of microorganisms on the hands, use 3 mL to 5 mL of alcohol-glycerine solution between clients, then scrub every hour or after every four clients (whichever comes first).

The following are the steps in performing a hand scrub:

a. Put on a clean short-sleeved shirt or a scrub shirt.

b. Ensure that fingernails are short and clean.

c. Begin scrubbing at the fingertips and work down to the elbow.

d. While washing, keep hands up above elbows.

e. Dry hands and forearms with a sterile towel or air-dry.

Figure 5–2. Routine Handwashing

3. Alcohol Hand Rub
   - Kills or inhibits the growth of both transient and resident microorganisms but does not remove microorganisms or soil.
   - Can be used when handwashing with soap and when running water is not possible or practical (such as when running water is not available).
   - Rinse hands twice with 3% to 5% alcohol glycerine solution (use 100 mL of 60% to 90% ethyl or isopropyl alcohol mixed with 2 mL to 3 mL glycerine); rub hands until dry.

Remember to use soap or detergent when washing hands; water alone does not effectively remove protein, oil, grease, and dirt. After handwashing, rinse hand under running water to wash away microorganisms and soil.

Microorganisms grow and multiply in moisture and standing water. Therefore,

- Keep bar soap on a soap rack or in a dish that allows drainage. Leaving soap in a pool of water will result in the increased growth of microorganisms.
- Avoid dipping or washing hands in a basin containing standing water, even if an antiseptic solution is added. Microorganisms and soil will not be washed away, and the water can easily become contaminated from repeated use.
- Use small bars of soap, if available, or cut large ones into small pieces to reduce the likelihood of contamination.
- After handwashing, dry hands with a clean towel or air-dry; use an individual towel or handkerchief to dry hands because shared towels can become contaminated quickly.

Use of Gloves

Gloves provide a barrier against potentially infectious microorganisms in blood, other body fluids, and medical waste, thus lowering the risk of transmitting infection to both health care workers and clients. Just as hands must be washed before and after contact with each client, a separate pair of gloves must be used for each client.

Three Kinds of Gloves

Gloves come in three kinds:

1. Surgical gloves
   - Sterile or high-level disinfected surgical gloves should be worn during the vasectomy procedure.
   - Disposable, sterile surgical gloves are recommended for use whenever possible because of the difficulty in properly processing reusable gloves.

2. Single-use examination gloves
   - These gloves should be worn for all procedures in which contact with mucous membrane occurs. The purpose of wearing gloves is to reduce the risk of exposing the service provider to blood or other body fluids (such as when drawing blood or working in a laboratory).
   - These latex or vinyl gloves are clean but not sterile.
   - These gloves should be discarded after use.

3. Utility gloves
   - These thick rubber gloves should be worn for handling contaminated instruments and other items, handling medical or hazardous chemical wastes and linen, performing housekeeping activities, and cleaning contaminated surfaces.
   - These gloves are reusable after cleaning.

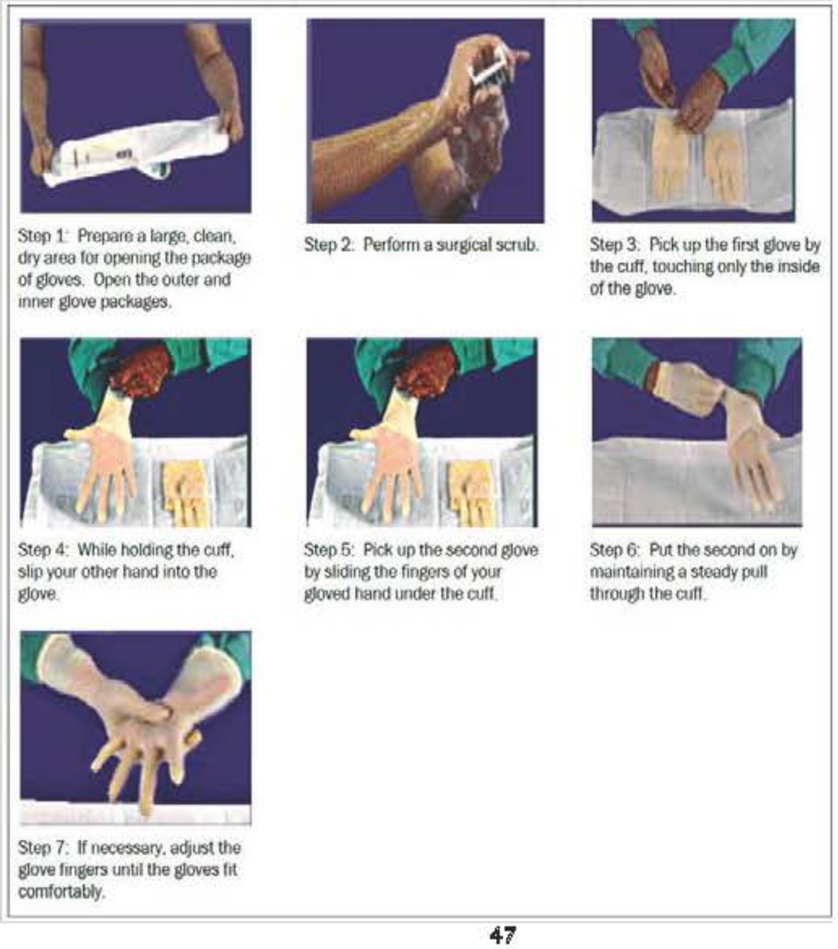
How to Wear Surgical Gloves

Prior to putting on gloves, the vasectomist and his or her assistant must thoroughly scrub their hands with soap and water or antiseptic agents, such as hexachlorophene, chlorhexidine, gluconate, or an iodophor. A small stick or a brush should be used to clean under the fingernails, and a soft brush, cloth, or sponge should be used on all surfaces of the hands and forearms. For facilities where surgical scrubbing is accomplished with soap and water only, ethyl alcohol and glycerin rinse (2 mL glycerin in 100 mL alcohol) should then be used, rubbing the hands together until dry.

Ideally, the vasectomist and his or her assistant should scrub thoroughly between procedures. In high-volume settings, this practice may not be feasible because the skin cannot tolerate the irritation caused by frequent scrubbing. In such settings, surgical staff should do a three-minute scrub every hour or after every four or five cases (whichever comes first) to prevent recolonization of the skin by microorganisms. Using 3 mL to 5 mL of the alcohol-glycerin mixture and rubbing the hands together until dry is an effective way of reducing the number of bacteria on the hands between every case. Gloves must be changed between cases and when they are torn. Staff should wash their hands after removing their torn gloves.

Figure 5-3 illustrates the steps for wearing surgical gloves, whereas Figure 5-4 shows the procedure for removing gloves.

Figure 5-3. Steps for Wearing Surgical Gloves


Step 1: Prepare a large, clean, dry area for opening the package of gloves. Open the outer and inner glove packages.

Step 2: Perform a surgical scrub.

Step 3: Pick up the first glove by the cuff, touching only the inside of the glove.

Step 4: While holding the cuff, slip your other hand into the glove.

Step 5: Pick up the second glove by sliding the fingers of your gloved hand under the cuff.

Step 6: Put the second on by maintaining a steady pull through the cuff.

Step 7: If necessary, adjust the glove fingers until the gloves fit comfortably.

Figure 5–4 Steps for Removing Surgical Gloves

Step 1: Rinse gloved hands in a basin of decontamination solution to remove blood.

Step 2: Grasp one of the gloves near the cuff and pull it off partway. The glove will turn inside out.

Step 3: With the first glove still over the finger, grasp the second glove near the cuff.

Step 4: Pull off the first glove, being careful to touch only the inside surface of the glove.

Step 5: If the gloves are disposable or are not intact, dispose of them immediately.

Step 6: Wash hands immediately after gloves are removed since the gloves may contain tiny holes.

Remember the following:

- As you remove the gloves, avoid allowing the outside surface of gloves to come in contact with your skin because the outer surface will have been contaminated with blood and other body fluids.
- Remove used gloves before touching anything. Countertops, pens, and pencils are frequently contaminated because health care workers touch them while wearing used gloves.

Surgical Attire for Vasectomy

- Sterile or high-level disinfected gloves must be used for vasectomy.
- Cap, eye wear, mask, and gown should be worn, if available, but vasectomy can be performed safely without wearing a cap, mask, and sterile gown.

Proper Use of Antiseptics and Disinfectants

Antiseptics vs. Disinfectants

Antiseptics are chemical agents used to reduce the number of microorganisms on skin and mucous membranes without causing damage or irritation. In addition to removing or killing microorganisms, antiseptics may also prevent the growth and development of microorganisms, depending on the type of antiseptic and microorganism. Antiseptics are not meant to be used on inanimate objects, such as instruments and surfaces. In addition, items such as pickup forceps, scissors, scalpel blades, and suture needles should never be left soaking in an antiseptic solution.

Disinfectants are chemical agents used to kill microorganisms on inanimate objects, such as instruments and surfaces. Disinfectants are not meant to be used on skin or mucous membranes.

Antiseptics

Antiseptics are used for the following:

- Surgical hand scrub

- Skin, cervical, or vaginal preparation prior to a clinical procedure
- Handwashing in high-risk situations, such as prior to an invasive procedure or contact with a client with high risk of infection (e.g., newborns or immunosuppressed clients)

The following are some common antiseptics:

1. Alcohol (60% to 90% ethyl or isopropyl)
   - *Antimicrobial spectrum:* good broad-spectrum activity
   - *Advantages:* moderate inactivation by blood or other organic material
   - *Disadvantages:* has a drying effect on skin; cannot be used on mucous membranes; not good for use as a cleaning agent; not for use on broken skin

2. Chlorhexidine gluconate with cetrimide (Savlon®)
   - *Antimicrobial spectrum:* good broad-spectrum activity but minimal effect on tuberculosis and fungi
   - *Advantages:* has good, persistent effect, i.e., remains active for at least six hours; activity not affected by blood or other organic material
   - *Disadvantages:* activity can be reduced by hard water, hand creams, and natural soaps
   - *Comments:* recommended antiseptic for surgical hand scrubbing and client preparation in reproductive healthcare services; may cause irritation if used in the genital area, vagina, or cervix.
   - *Caution:* The concentration of chlorhexidine in products with the name Savlon may vary from one country to another. Savlon products containing at least 4% chlorhexidine are appropriate for use as antiseptics.

3. Aqueous iodine preparations or iodine and alcohol (e.g., tincture of iodine)
   - *Antimicrobial spectrum:* good broad-spectrum activity
   - *Advantages:* fast-acting
   - *Disadvantages:* can cause skin irritation; activity markedly affected by blood or other organic material
   - *Comments:* too irritating for routine use in surgical hand scrub or for use on mucous membranes; must be allowed to dry then removed from the skin without alcohol because of the potential to cause skin irritation

4. Iodophors (solutions that contain iodine in a complex form; povidone iodine, Betadine®)
   - *Antimicrobial spectrum:* good broad-spectrum activity
   - *Advantages:* less irritating than iodine; can be used on mucous membranes
   - *Disadvantages:* activity moderately affected by blood or other organic materials
   - *Comments:* recommended antiseptic for surgical hand scrubbing and client preparation in reproductive health care services; effective 1 minute to 2 minutes after application; use of full strength for most preparations; not to be diluted prior to use

Note that mercury-containing compounds should NOT be used because they are highly toxic, cause blisters, and cause central nervous system disturbances, such as numbness, speech impairment, and deafness, or death when inhaled. Such compounds can also be absorbed through the skin and can cause birth defects if a pregnant woman is exposed to small doses.

Table 5-1 presents a comparison of the efficacy of commonly used antiseptics that can be used for NSV.

Table 5-1. Antiseptics for Use in NSV

ANTISEPTIC	USE			COMMENTS
	Surgical Hand Scrub	Skin reparations	Mucous embranes	
Alcohols (60% to 90% ethyl or isopropyl)	yes	yes	no	Must dry completely to be effective
Chlorhexidine gluconate* (4%) (Hibitane, Hibiscrub)	yes	yes	yes	Has good persistent effect
Hexachlorophene (3%) (pHisoHex)	yes	no	no	Rebound growth of bacteria may occur.
Aqueous iodine preparations (3%) or iodine and alcohol	no	yes	no	Allow to dry, then remove with alcohol.
Iodophors* (I:2,500) (Betadine)	yes	yes	yes	Effective 1 minute to 2 minutes after application
Chlorhexidine with cetrimide (4%) (Savlon)	yes	yes	yes	Do not use to store instruments or other items.
Alcohols (60 to 90% ethyl or isopropyl)	yes	yes	no	Must dry completely to be effective
Chlorhexidine gluconate* (4%) (Hibitane, Hibiscrub)	yes	yes	yes	Has good persistent effect

* These agents are recommended for use in surgical scrubs and as client prep solutions before NSV. Iodophors (e.g., Betadine should be the first choice if available.)

ADAPTED FROM: World Federation of Health Agencies for the Advancement of Voluntary Surgical Contraception, 1995, *Safe and Voluntary Surgical Contraception*, New York: AVSC International.

Disinfectants

1. High-level disinfectants - kill almost all bacteria, viruses, and fungi, except bacterial endospores that cause gangrene and tetanus. Some high-level disinfectants are also chemical sterilants and will destroy endospores given sufficient time. Examples include Cidex® and chlorine solution.

High-level disinfectants are used for the following:

- Processing instruments and other items that come in contact with broken skin or intact mucous membranes
- When sterilization is unavailable, used for processing instruments and other items that come in contact with the bloodstream or tissues under the skin

Only two solutions are available in most low-resource settings that are suitable for the high-level disinfection of instruments and other items:

a. Chlorine Solution

- Cheapest effective disinfectant
- Fast-acting and effective against a broad range of microorganisms
- Usually used in concentrations of 0.5% solution
- Can be used for decontamination (10 minutes) and HLD (20 minutes) of instruments and other items, as well as disinfection of surfaces
- Available in liquid (sodium hypochlorite), powder (calcium hypochlorite), and tablet (sodium dichloroisocyanurate) form

Precautions:

- Can be corrosive to metals with prolonged contact (more than 20 minutes) and irritating to the skin, eyes, and respiratory tract
- Should be changed daily or more frequently because potency can be lost rapidly over time or after exposure to sunlight.
- Must be discarded after 24 hours

b. Glutaraldehyde - Cidex®

- The most commonly used disinfectant for processing medical equipment such as laparoscopes, which cannot be heat sterilized
- Dilution varies; follow manufacturer's instructions for dilution.
- Can be used for HLD by soaking for 20 minutes or for sterilization by soaking for 10 hours (follow manufacturer's instructions)
- Not corrosive to instruments and other items

Precautions:

- Leaves a residue, so instruments and other items must be rinsed thoroughly with boiled water after HLD and with sterile water after sterilization.
- Solution should be changed every 14 or 28 days (may vary depending on product; follow manufacturer's instructions). The solution should be changed even before the recommended time if cloudy or visibly dirty.
- Irritating to the skin, eyes, and respiratory tract. Wear gloves, prepare in a well-ventilated space, and limit exposure to the chemical when handling glutaraldehyde.

1. Low-level disinfectants - kill most bacteria and some viruses and fungi but do not kill tuberculosis-causing organisms and bacterial endospores, which cause such diseases as tetanus and gangrene. Examples of these are Phenyl and Lysol.

Low-level disinfectants are used to clean surfaces (such as floors and countertops). They should not be used to process instruments and other items.

Low-level disinfectants, such as phenols or carbolic acid (Phenol®, Lysol®), and quaternary ammonium compounds, such as benzalkonium chloride (Zephiran®), are suitable for use in disinfecting walls, floors, and furnishings. However, most products have few (if any) advantages over using chlorine/detergent solutions, which are less expensive and often more readily available. These low-level disinfectants should be used when chlorine compounds are unavailable.

Remember that disinfectants are harsh chemicals that can damage tissues; they kill a broader range of microorganisms more effectively than antiseptics. Considering the potential for tissue damage, disinfectants should never be used on skin or mucous membranes.

Protecting Antiseptics and Disinfectants from Contamination

Although antiseptics and disinfectants are effective in killing microorganisms, their abilities are limited. As a result, antiseptics and disinfectants can easily become contaminated. Using contaminated antiseptics and disinfectants can cause infections.

Antiseptics and disinfectants can become contaminated when:

- Left for several days in an open container for repeated use
- Water used to dilute the solution is contaminated
- Containers in which antiseptics or disinfectants are placed are contaminated
- Microorganisms from the provider's skin or a contaminated instrument or other items come in contact with the solutions during use, such as when removing cotton balls from a solution for skin preparation
- The area where solutions are prepared or used is unclean

To prevent contamination, perform the following:

- Pour solutions into smaller containers for use during service delivery to avoid contaminating the stock container.
- Pour the amount of antiseptic needed for one client into a small bowl prior to the start of the procedure. Discard any remaining solution at the end of the procedure.
- Avoid soaking gauze, cotton wool, or cotton balls in solutions.
- Always pour solutions out of the container without touching the rim or the solution itself with your hand, a cotton swab, or gauze because the entire bottle of solution can be contaminated in such cases.
- Store antiseptics and disinfectants in a cool, dark area. Avoid storing antiseptics and disinfectants in direct sunlight or in excessive heat, as this may reduce their strength.

SURGICAL SITE PREPARATION

- Clean the operative site with soap and water if the client has not already done so that day.
- Trim hair at the operative site, if necessary. Avoid shaving the client, as this increases the risk of postoperative infection.
- If shaving of the surgical site is a must,
  - use antimicrobial soap and water or shave dry or

  - shave immediately before the procedure in the operating theatre or in the procedure room.
- Use dry, high-level disinfected or sterile forceps to hold antiseptic-soaked cotton. The antiseptic should be at room temperature. Do not leave cotton soaking in antiseptic for prolonged periods of time or for use on multiple clients.
- Apply solution in a circular motion starting from the incision site and working outward.
- Do not permit excess antiseptic to pool underneath the client.
- After preparing the surgical site, cover the area with a sterile surgical drape.

USING SAFE WORK PRACTICES

Multidose Vials

Local anesthetic is often available in multidose vials. If used incorrectly, these vials can be a source of cross-infection between clients.

- Never use a needle that has been used on a client to draw up solution from a multidose vial (unless the entire contents of vial will be used on the same client).
- Changing the needle but using the same syringe is not a safe practice.
- Do not leave a needle in a multidose vial between uses.

Figure 5-5. Multidose Vial – do not leave needle in the rubber stopper of the vial

Maintaining a Safe Environment in the Vasectomy Procedure Room

- Limit entry of unauthorized individuals to surgical room.
- Close doors and curtains during the procedure.
- Each day, clean the floor with a damp mop (water only) and wipe counters and table tops with a damp rag (water only) before any procedures begin.
- After each case, wipe down the procedure table, the floor around the table, the instrument stands, and other potentially contaminated areas (such as light switches and counter tops) with 0.5% chlorine solution.
- At the end of the day, repeat the above procedure with a disinfectant cleaning solution that contains both a disinfectant (chlorine) and a detergent (soap).
- Thoroughly clean the procedure room at least once a week. Use a disinfectant cleaning solution to scrub the walls, floors, and equipment. Wash from the top to bottom so that debris that falls on the floor will be cleaned up last.

Handling Sharps

In health care settings, injuries from needles and other sharp items are the most common cause of infections from blood-borne pathogens. Therefore, sharps must be handled with care and disposed properly after use. Below is the list of instances when health care providers can be injured by sharps:

- When health care workers recap, bend, or break hypodermic needles
- When health care workers are struck by a person carrying unprotected sharps
- When sharps show up in unexpected places, such as between linens
- During procedures in which health care workers use many sharps, cannot see their hands, or are working in a small, confined space (such as during gynecologic procedures)
- When health care providers handle and dispose waste that contains used sharps
- When clients move suddenly during injections

Giving Injections

- To prevent injuries when giving injections, the following recommendations are considered:
- Always warn the client before giving an injection.
- Always use new or properly processed needle and syringe for every injection.
- Follow the following steps for giving injections:
  a. Wash injection site with soap and water if the area is visibly dirty.
  b. Swab the area with antiseptic (alcohol solution) in circular motion starting from the intended injection site going outward.
  c. Allow the alcohol to dry for better efficacy.
  d. Inform client that you are about to inject.

Recapping Needles

- Whenever possible, dispose needles immediately without recapping them
- If recapping is necessary, follow the "one-hand technique."
  a. Place the cap on a flat surface and remove hand from the cap.
  b. With one hand, hold the syringe and use the needle to scoop up the cup.
  c. When the cap covers the needle completely, use the other hand to secure the cap on the needle hub. Be careful to hold the cap at the bottom only (near the hub).

Processing of Instruments and Other Items Used in Vasectomy

The pages that follow give detailed information on the three steps for processing instruments and reusable supplies used in NSV.

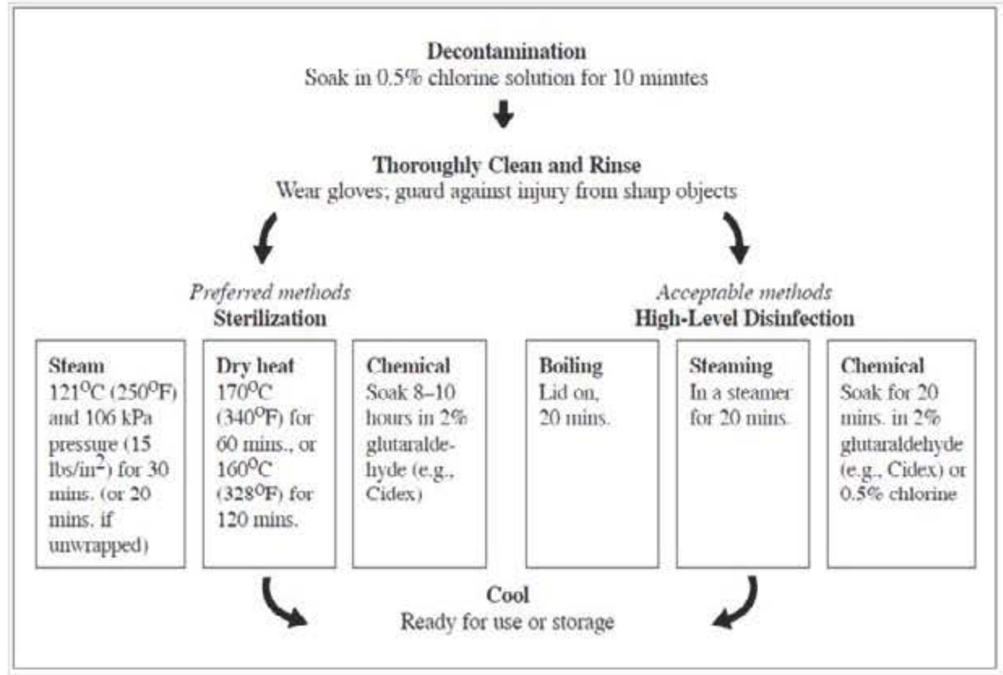
Step 1. **Decontamination.** Reduces the risk of hepatitis B (HBV) and HIV transmission to staff and makes instruments and supplies safer for handling during cleaning.

Step 2. **Cleaning.** Cleaning with detergent and water removes blood and tissue and improves the quality of subsequent HLD or sterilization.

Step 3. **Sterilization.** Sterilization using dry heat, steam, or chemical solutions destroys all microorganisms, including endospores.
OR
HLD. HLD through boiling or using chemicals destroys all microorganisms, with the exception of some endospores.

Step 4. **Storage of processed items.** Proper storage of processed items maintains sterility/disinfection until it is ready for use.

Figure 5-6. Steps of Instrument Processing



ADAPTED FROM: Tietjen, L., Cronin, W., and McIntosh N. 1992. *Infection Prevention for Family Planning Service Programs,* A Problem-Solving Reference Manual. Durant, OK: Essential Medical Information Systems, Inc.

Step 1: Decontamination

The first step in handling dirty instruments, decontamination using a 0.5% chlorine solution, reduces the risk of HBV and HIV infection. Chlorine rapidly inactivates both HBV and HIV, making the instruments safer for staff to handle during cleaning.

Note: Wear utility gloves when handling chlorine, used surgical instruments, and other items for decontamination.

a. Immediately after use, decontaminate surgical instruments, reusable gloves, and other items by placing them in a plastic bucket containing a solution of 0.5% chlorine for 10 minutes. A bucket containing this solution should be kept in the procedure room so that used items can be placed directly into the bucket.
b. After 10 minutes, remove items from the chlorine solution and rinse with water or clean immediately. Excessive soaking in the solution can damage instruments.
c. Prepare a new chlorine solution at the beginning of each day.

Figure 5-7. Preparing a 0.5% Chlorine Solution

Step 2: Cleaning

Cleaning by scrubbing with detergent and water is a crucial step in processing instruments and other items. Cleaning significantly reduces the number of microorganisms and endospores on instruments and equipment.

Before equipment is sterilized or high-level disinfected, a thorough mechanical cleaning is necessary to remove blood and organic materials. HLD and sterilization are ineffective unless instruments have first been cleaned.

Remember the following:

- Wear utility gloves when cleaning instruments.
- Scrub instruments vigorously with a soft brush in detergent and water to remove all blood, tissue, and other residue completely.
- Rinse instruments thoroughly with water after scrubbing. Detergent may interfere with further processing.
- Allow items to air-dry (items to be high-level disinfected by boiling can be directly placed in the water).

Step 3: Sterilization or HLD

Sterilization

To be effective, sterilization must be preceded by careful cleaning and thorough rinsing. Sterilization eliminates all microorganisms (bacteria, viruses, fungi, and parasites), including bacterial endospores, from instruments and other items.

- Sterilization is the method recommended for items that come in contact with the bloodstream or tissues beneath the skin (such as reusable needles, syringes, and surgical instruments).
- Jointed instruments, such as ringed clamps and dissecting forceps, should be opened or unlocked during sterilization.
- Sterilization uses steam (autoclaving), dry heat (oven), or chemical solutions.

Steam Sterilization

- If items are to be wrapped before steam sterilization, use two layers of paper wrap or two layers of cotton fabric (do not use canvas).
- Items or packs should be arranged to allow free circulation of steam.
- Sterilize items at 121 °C (250 °F) and 106 kPa pressure (15 lbs/in2). Duration should be 30 minutes for wrapped items and 20 minutes for unwrapped items.

Note: Do not begin timing until the steam sterilizer reaches the desired temperature and pressure.

- Allow packs or items to dry before removing them from the steam sterilizer. Allow items to cool before storage or use.
- The steam sterilizer itself should be checked with each use to ensure that it is functioning properly. If repairs are necessary (for example, if gauges and seals are broken), repairs should be made before the machine is used for sterilization.

Dry-Heat Sterilization

- Items can be wrapped in foil or double-layered cotton fabric before dry-heat sterilization.
- Sterilize items at 170 °C (340 °F) for 60 minutes, 160 °C (320 °F) for 120 minutes, or at 150 °C for 2½ hours or at 140 °C for 3 hours.

Note: Do not begin timing until the oven reaches the desired temperature.

- Dry heat can dull sharp instruments and needles. These items should not be sterilized at temperatures higher than 160 °C.
- Items should be allowed to cool before they are removed from the oven.
- Items should then be used immediately or stored in a sterile covered container.

Chemical Sterilization

Soak items in a 2% glutaraldehyde solution (Cidex) for 8 to 10 hours.

- All items must be completely submerged.

- Do not add or remove any items once timing has begun.
- Rinse with sterile water. Do not use boiled water; boiling does not reliably inactivate spores.
- Place instruments on a sterile surface, and air-dry before use or storage.
- Use items immediately, wrap items in sterile paper or cloth, or place items in a covered sterile container.

HLD

If sterilization is unavailable, HLD is the only acceptable alternative for preparing instruments for use in vasectomy. HLD is effective in eliminating all microorganisms, except for some bacterial endospores. HLD should always be preceded by decontamination. To be effective, HLD must be preceded by careful cleaning and thorough rinsing.

- HLD has three methods: boiling, steaming, and chemical HLD.
- After either HLD procedure, items that are not used immediately should be air-dried and stored in a covered, washable high-level disinfected container (for up to one week).
- Jointed instruments, such as ringed clamps and dissecting forceps, should be opened or unlocked during HLD.

Boiling

- Completely immerse items in water. Cover and boil for 20 minutes (start timing when the water begins to boil).
- All items must be completely covered during boiling (place items that float in a weighted, porous bag). Do not add anything to the pot after the water begins to boil.
- Place instruments on a sterile surface and air-dry before use or storage.

Steaming

- This process can be performed together with HLD by boiling or by placing water in the bottom tray of the steamer.
- Place gloves and instruments in tray(s) with holes (up to three trays) and stack them on top of the bottom tray.
- Place the lid on the top tray, and bring the water to boil.
- When steam comes out between the trays, the water is boiling. Reduce the heat, but maintain water at a rolling boil.
- Steam the gloves or instruments for 20 minutes.
- Remove each tray of gloves or instruments, shake off excess water, and place the tray on a second tray that does not have holes.
- Use the gloves or instruments immediately or dry and store in a HLD container.

Chemical HLD

Cover all items with correct dilution of disinfectant [2% glutaraldehyde (Cidex) solution or a 0.5% chlorine solution].

- Soak items for 20 minutes or as per manufacturer's instructions.
- Nothing should be added to or removed from the chemical solution once timing has begun. After soaking items, rinse them with boiled water.

- Place instruments in a high-level disinfected container and air-dry before use or storage.

Step 4: Storage of Processed Items

Proper storage of HLD or sterilized items is as important as the HLD or sterilization process itself.

- Items should be stored dry.
- Do not store pick-up forceps in a bottle filled with antiseptic solution; microorganisms will multiply in standing water even if an antiseptic has been added.
- HLD or sterilize used pick-up forceps each day and store them dry in a high-level disinfected or sterile bottle.
- Wrapped items must be considered contaminated when:
  - The package is torn or damaged
  - The wrapping is wet
  - The expiration date is exceeded
- Wrapped items can be used for up to one week. Wrapped items sealed in plastic can be used for up to one month.
- Unwrapped items must be used immediately or stored in a covered sterile or HLD container (for up to one week).
- If possible, store processed items in an enclosed cabinet.

Table 5–2. Processing of Vasectomy Instruments

* To reduce the risk of exposure to infectious material, machine washing is recommended, if possible.

Table 5–2. Continued

WASTE DISPOSAL

If not disposed properly, contaminated waste is a potential source of infection for both staff and the local community.

- Always wear utility gloves when handling and transporting waste, and wash both the gloves and your hands afterwards.
- Always dispose contaminated waste properly; never simply throw waste outside or leave it in an open pit.
- Always keep a container close to any area where needles or other sharps are used (so that staff would not have to carry these items a long distance before disposal).
- Always keep waste containers in the operating and cleaning areas.

Waste Containers

- Use washable, leak–proof containers.
- For needles and other sharps, use a puncture resistant, lidded container made of metal, heavy cardboard or heavy, rigid plastic. Plastic bottles, emptied of antiseptics or other solutions, can be used for this purpose if they are clearly labeled.
- If a container is reusable, disinfect it with a 0.5% chlorine solution after each use.

Liquid Waste

- If possible, pour waste down a utility drain or into a flushable toilet or a latrine.
- If you cannot pour waste down a drain, latrine, or toilet, bury it in a pit.
- Always be careful when disposing of liquid waste. Do not allow the liquid to splash while you are pouring it.

Solid Waste

- Burn contaminated solid waste. Burning kills microorganisms and is therefore the best method for disposing contaminated solids.
- Burn waste in an incinerator or steel drum as opposed to "open burning."
- If you cannot burn it, bury solid waste in a pit.

Needles and Other Sharps

- Do not bend, break, or clip needles before disposal.
- If possible, do not recap used needles. Most needle-stick injuries occur while replacing needle caps. If recapping is necessary, use the "one-handed" method as follows:
  a. Place the cap on a hard, flat surface. Do not hold it.
  b. Hold the syringe and use the needle to "scoop up" the cap.
  c. When the cap covers the needle completely, carefully secure it on the needle.

Unless you are using a large industrial incinerator, burying containers for needles and other sharps is best. In a drum or small incinerator, burning may not destroy these items, and they may later cause injuries that could lead to serious infections. However, if no other options are available, burning needles and plastic syringes in a drum or small incinerator by themselves (without paper or other waste) will destroy HIV and HBV and will result in a mass of melted plastic that hardens with the needles and other sharps inside.

SESSION VI

SURGICAL PROCEDURE OF NO-SCALPEL VASECTOMY

OVERVIEW

Vasectomy has always been considered a safe and effective easy-to-perform method of contraception for men. Over the years, experts have found ways to make the procedure simpler and more effective than the traditional form. In 1974, Dr. Li Shunqiang developed the NSV technique. NSV is a refined approach for isolating and delivering the vas that requires unique surgical skills. This session provides a detailed description of each step of the approach that will enable the physician to perform NSV.

LEARNING OBJECTIVES

At the end of the session, the participants will be able to:

1. Describe the requirements on facility, instruments, and supplies for the provision of vasectomy services
2. Enumerate chronologically the steps for performing NSV
3. Explain the rationale of each step for performing NSV
4. Perform NSV in accordance with DOH standards

NARRATIVE

FACILITY REQUIREMENTS FOR VASECTOMY SERVICES

Vasectomy can be performed in almost any facility. It is an outpatient procedure that can be performed in an office or clinic. Providing high-quality services involves a few minimum requirements:

- A waiting area with a toilet. The waiting area may also serve as a recovery area after surgery.
- A private space for counseling.
- An examination room for preoperative assessment and follow-up examination.
- A clean room for surgery equipped with a comfortable, clean table for the client and a good light source.

The temperature of the room is critical because it affects the cremasteric and dartos muscles. The room must be warm, even though a cooler temperature may be more comfortable for the surgeon. A warm room facilitates the following by relaxing the scrotum:

- Manipulation of the vas
- Fixation of the vas under the median raphe of the scrotum
- Isolation of the vas from the relaxed spermatic cord
- Reduction of operating time
- Reduction of complications

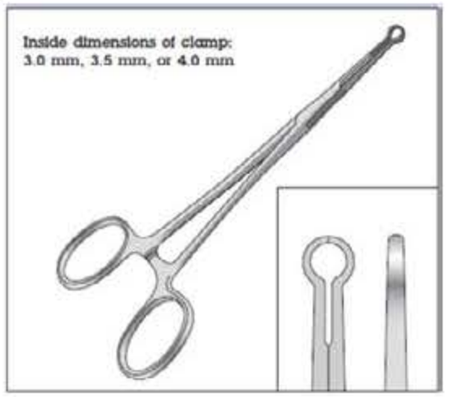
The temperature of the operating room should be at least 20 °C to 25 °C. If additional warmth is needed to relax the scrotum, a heat lamp or warm towels may be used.

INSTRUMENTS AND SUPPLIES

NSV requires two instruments designed by Dr. Li Sunqiang: the ringed clamp and the dissecting forceps.

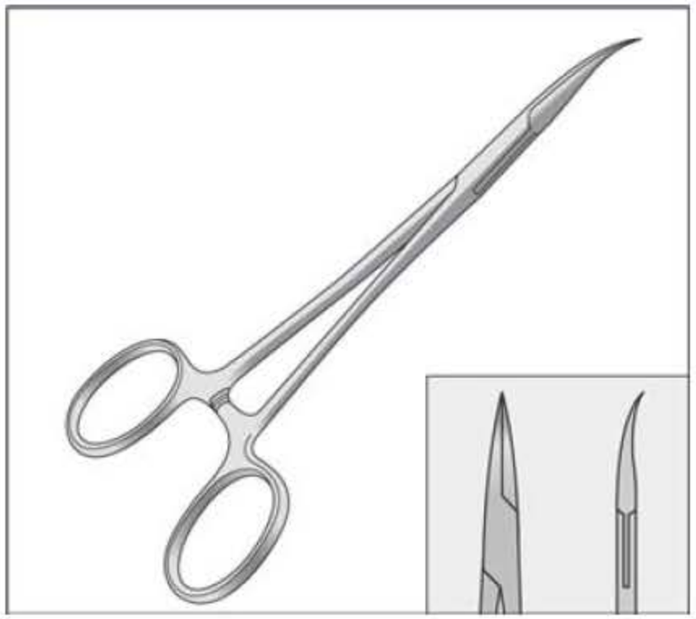
Commonly called the ringed clamp, the extracutaneous ringed forcep (Figure 6-1) is a type of clamp used to fix the vas deferens. The ringed tip of this instrument is used to encircle and grasp the vas without injuring the skin. The clamp grasps the vas extracutaneously and directly.

Figure 6-1. Ringed Clamp



The *dissecting forceps* (Figure 6-2) is similar to a curved mosquito hemostat, except that the tips are sharply pointed. This tool is used to puncture the scrotal skin, to spread the tissues, to dissect the sheath, and to deliver the vas deferens. The dissecting forceps can also be used to grasp the vas while a ligature or cautery is applied for occlusion. As the instrument is a modified hemostat, it can be used to control bleeding.

Figure 6-2. Dissecting Forceps



Additional instruments and supplies needed for NSV are the following:

- A 10 cc syringe with a 1 ½-inch, 25- or 27-gauge needle (U.S. system). These tools are used to infiltrate the local anesthetic, both for the skin wheal and the vasal block anesthesia.
- Straight scissors, to cut the vasa deferentia and ligatures.
- Supplies for vasal occlusion (e.g., ligature material).

Table 6-1 presents a complete list of instruments and supplies needed for NSV.

Table 6-1. Instruments and supplies needed for NSV

Instruments
• Ringed clamp
• Dissecting forceps
• Straight scissors
Supplies
• Adhesive tape and gauze for positioning the penis away from the surgical field (optional)
• Scissors for clipping any scrotal hair that would interfere with the procedure
• Soap and water or antiseptic agents for the surgical scrub *(see page 13)*
• Alcohol rinse (recommended if plain soap is used for the surgical scrub)
• Sterile gloves
• Nonirritating antiseptic solution for cleaning the operative area *(see page 12)*
• Sterile drapes
• 10-cc syringe with a 1½-inch, 25- or 27-gauge needle (U.S. system)
• 1% or 2% lidocaine without epinephrine[a]
• Supplies for vasal occlusion according to the surgeon's preference (examples: a cautery unit; chromic catgut or nonabsorbable silk or cotton for ligation)
• Sterile gauze
• Adhesive tape or Band-Aid for dressing the wound
• Scrotal support for the man to wear after the procedure (optional)

ANESTHESIA

Lidocaine (10 cc 1% or 5 cc 2%) without epinephrine is the anesthesia of choice for NSV. Epinephrine is not recommended because it contracts the blood vessels and results in less apparent bleeding during the surgery. All bleeding during surgery must be detected and controlled to prevent hematomas from forming after the client leaves the facility. If the lidocaine does not contain epinephrine, small bleeding sites are more likely to be detected and controlled during surgery.

The maximum individual dose of lidocaine without epinephrine should not exceed 4.5 mg/kg of body weight. This amount equates to 30 cc 1% or 15 cc 2% lidocaine without epinephrine.

PERFORMING NO-SCALPEL VASECTOMY

Verifying Informed Consent

Before any vasectomy is performed, the client must receive appropriate information and counseling and give his informed consent. Before performing the procedure, check again with the client to be sure he wants no more children and wishes to proceed with the sterilization procedure.

Reviewing Client's History and Physical Examination Findings

The preoperative history and examination may be done on the day of surgery or a few days before. A medical history should be taken. The preoperative physical examination includes examination of the local operative area and other examinations and tests as indicated. Laboratory tests are usually not necessary, but if any clinical abnormality is suspected, laboratory facilities must be accessed. In this case, a referral may be necessary if such examination is not available in the facility. Local skin infections or reproductive tract infections must be treated before vasectomy is performed.

The following are conditions requiring delay or special precautions:

- Local infection (e.g., scrotal skin infection, active STI, balanitis, epididymitis, or orchitis)
- Previous scrotal surgery
- Large varicocele or hydrocele
- Filariasis; elephantiasis
- Local pathological conditions (e.g., intrascrotal mass, cryptorchidism, or inguinal hernia)
- Bleeding disorders
- Diabetes
- AIDS (HIV-positive status without AIDS is not a concern.)

Check the WHO MEC for Male Sterilization on Session 4.

Preparing the Client for Surgery

Before surgery, instruct the client to wash his genital area thoroughly with soap and water. During surgery, he wears clean clothing or a surgical gown. The client lies comfortably in a supine position on the table, possibly with a small pillow under his head.

Securing the Penis

To make the operation easier, position the penis away from the operative field. The surgical drape is usually adequate for securing the penis and keeping it away from the operative field.

Cleaning the Surgical Site

Shaving the surgical site is not recommended, as doing so produces small nicks and breaks in the skin where bacteria can grow and multiply and thus increases the risk of postprocedure infection. If the scrotal hair is obstructing the small operative area, clip it while the client lies on the table. However, if the site must be shaved, use antimicrobial soap and water, or shave dry; and shave immediately before the procedure while the client is on the table.

Before cleaning the area, examine the scrotal area. Palpate the scrotum and vas to assess the thickness of the scrotal skin and the diameter of the vas. Gently wash the scrotum with a warm antiseptic solution (either povidone–iodine or chlorhexidine). Be sure to cleanse the area under the scrotum where your fingers will be placed. Scrub the pubic area, the penis, and the upper thighs as well. In hot climates, solutions at room temperature are usually adequate. In cool climates, warming the antiseptic solution may be necessary.

Ensuring Asepsis

NSV is a minor surgical procedure that requires aseptic procedures to prevent infection.

- Perform hand scrubbing as previously described.
- Wear a clean shirt or apron. A sterile gown, cap, and mask are optional.
- Wear sterile surgical gloves. Change gloves between each case. If scrubbing is not feasible between cases, scrub for three minutes every hour or at least after every four or five cases (whichever comes first) to prevent recolonization of the skin.
- Cover the prepared area with a sterile fenestrated drape, and lift the scrotum through the drape's small window. A set of towels can be used as an alternative to the drape. The window should be small enough to allow only the scrotum to be isolated.
- Cover a small instrument table with a sterile drape.

Administering the Local Anesthetic

Preparing the Anesthetic

Prepare a syringe with 100 mg (10 cc 1% or 5 cc of 2%) lidocaine without epinephrine.

Isolating the Right Vas: The Three–Finger Technique

a. If you are right–handed, stand on the client's right side (if you are left–handed, stand on the client's left side).

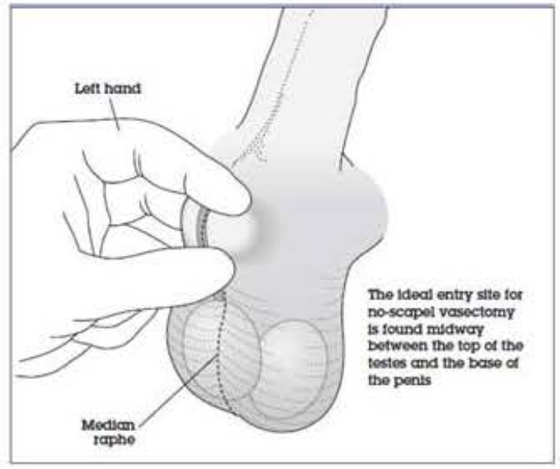
b. Place your left thumb approximately midway between the testis and the base of the penis on the median raphe.

c. With the middle finger of your left hand under the scrotum, palpate the vas and sweep it toward the raphe beneath your thumb.

d. Hold the vas in position between the thumb and middle finger while placing your index finger on top of the scrotum slightly above the thumb (Figure 6–3). Note that your fingers should be perpendicular to the vas. You will have created a "window" between your thumb and index finger through which you will make the puncture. Upward pressure from the middle finger combined with downward pressure exerted by the index finger creates a bend in the vas for easy entry.

e. Maintain the three–finger hold as you anesthetize the right side.

Figure 6–3. The Three–finger Technique



Raising the skin wheal

a. The needle entry site is at the midline, over the vas deferens midway between the thumb and index finger. Use only the tip of the needle to raise a superficial skin wheal, 1 cm to 1 ½ cm in diameter (Figure 6–4).

b. To raise the skin wheal, hold the syringe at approximately 5– to 15–degree angle (Figure 6–5), with the needle bevel facing up.

c. Inject lidocaine into the dermis and subcutaneous tissues; 0.5 cc is usually adequate.

Figure 6–4. Raising the Skin Wheal

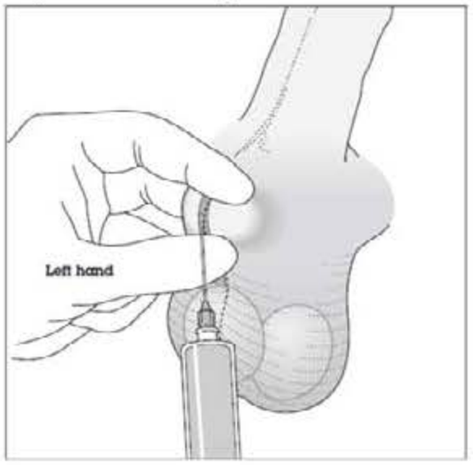
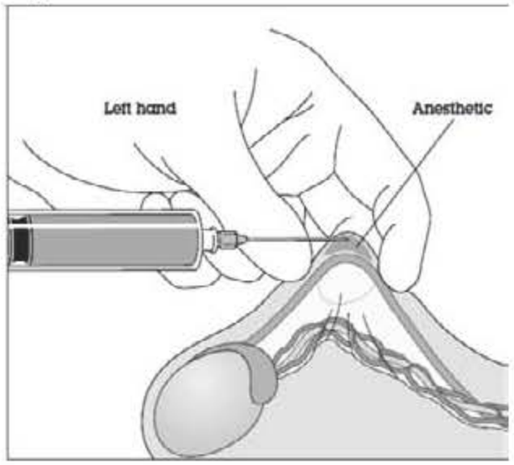


Figure 6–5. Side View of the Skin Wheal



Avoid two pitfalls when raising the skin wheal:

- Do not inject the lidocaine too deeply. At this point in the procedure, you are anesthetizing the scrotal skin. In the next step, you will create a vasal block that will anesthetize deeper tissues.
- Do not inject more than 1 cc of lidocaine to avoid swelling around the vas at the puncture site. A persistent wheal will prevent the ringed clamp from closing properly around the vas.

Creating the Vasal Block: Right Vas

a. After creating the superficial skin wheal, advance the needle parallel to the vas within the external spermatic fascial sheath toward the inguinal ring (Figure 6–6).

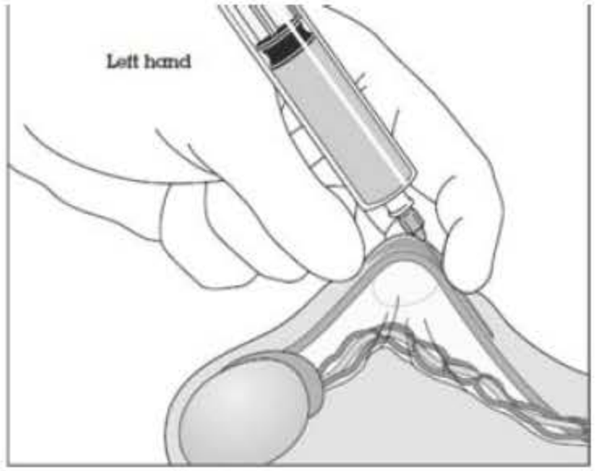
b. Advance the full-length of the needle without releasing any of the anesthetic.

c. Gently aspirate to ascertain that the needle is not in a blood vessel.

d. Slowly inject 2 cc to 5 cc (depending on concentration) of lidocaine within the external spermatic fascial sheath around the right vas deferens.
HINT: When the needle is in proper position and the injection is performed inside the external spermatic fascia, no resistance to the injection will occur.

e. Remove the needle from the right sheath; do not inject lidocaine while withdrawing the needle.

Figure 6–6. Advancing the Needle



Isolating the Left Vas: The Three-Finger Technique

HINT: To hold the client's left vas in the three-finger grip while standing on his right side, you will be more comfortable if you take a step toward the client's head and turn a bit to face his feet. To approach the vas in this lateral position, reach across the client's abdomen with your left hand.

a. Place your thumb in the upper third of the scrotum while the index finger is in the middle third. This step is different from the three-finger hold on the right side.

b. As with the right side, position the middle finger beneath the scrotum to identify the vas and sweep it to the puncture site. At this point, the thumb is superior to the index finger (Figure 6–7).

Figure 6–7. Isolating the Left Vas: The Three-Finger Technique

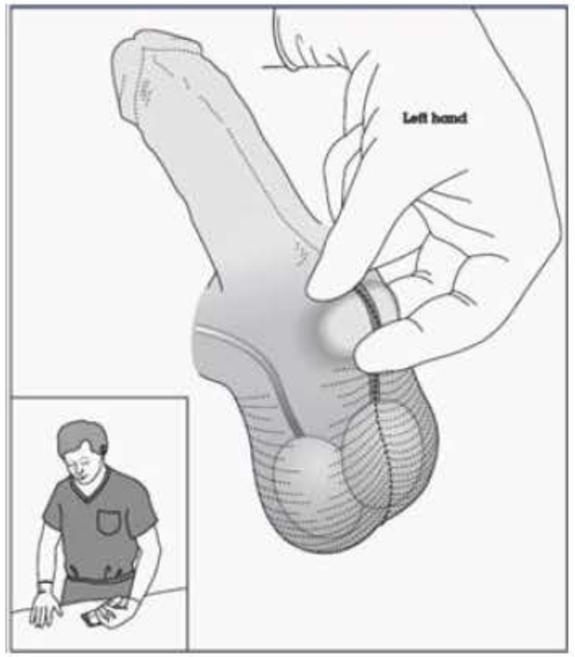
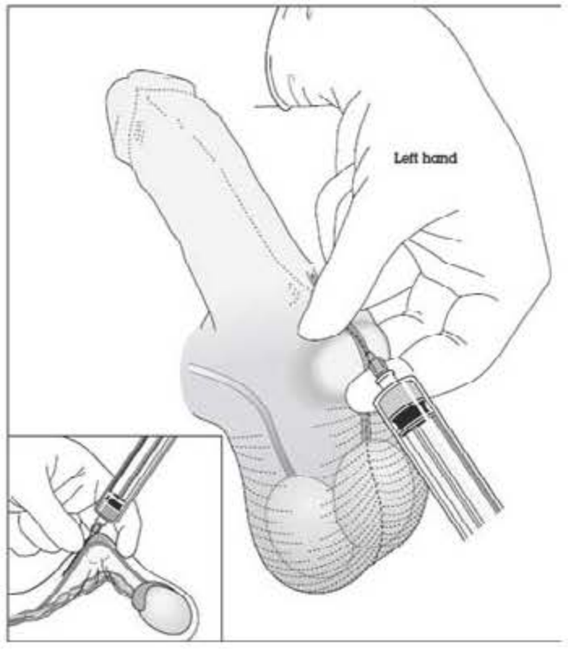


Figure 6–8. Anesthesia Technique: Deep Infiltration



Creating the Vasal Block: Left Vas

a. Reintroduce the needle through the same hole previously used; a second skin wheal is not needed.

b. Advance the needle parallel to the left vas into the external spermatic fascia (Figure 6–8).

c. As with the right vas, inject 2 cc to 5 cc of lidocaine within the external spermatic fascial sheath around the left vas deferens.

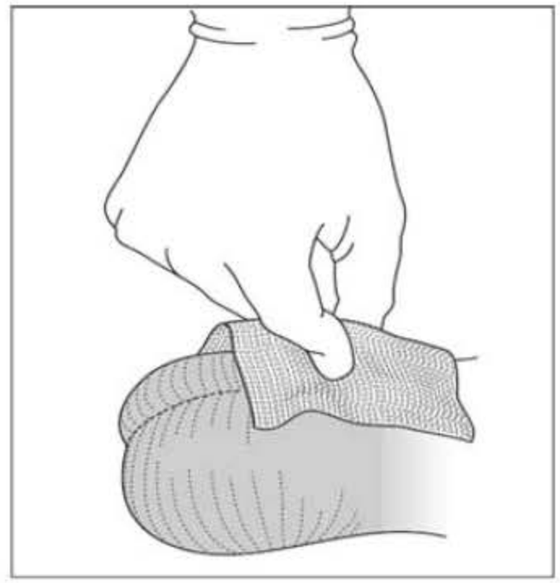
Pinching the Skin Wheal

After removing the needle, gently pinch the skin wheal between the thumb and index finger for a few seconds to reduce its size and to soften and thin the local tissues (Figure 6–9).

Remember a persistent wheal will prevent the ringed clamp from closing properly around the vas; gentle compression will reduce the size of the wheal.

If the client still feels pain when the surgical procedure begins, repeat the vassal block on the painful side. Do not raise another skin wheal.

Figure 6–9. Pinching the Skin Wheal



Surgical Approach and Occlusion of the Vas

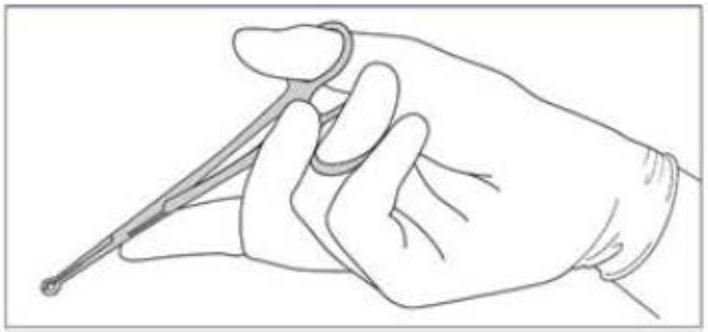
Holding the ringed clamp

The following are important points to remember when holding the ringed clamp:

- For the greatest control and accuracy, hold the ringed clamp with the palm facing up and the wrist extended (Figure 6–10).
- Apply the clamp at a 90-degree angle perpendicular to the vas (Figure 6–11 a); the palm-up hand position facilitates this procedure.
- Hold the shaft of the ringed clamp in line with the axis of the vas, that is, parallel to and directly over the vas (Figure 6–11c).

Failure to follow these points may result in the clamp not fixing the vas completely or grasping too much skin. The ringed clamp must encircle the entire vas.

Figure 6–10. Holding the Ringed Clamp (Palm Up)



Applying the Ringed Clamp to the Scrotal Skin and Underlying Right Vas: The Tight-Skin Technique

a. Using the three-finger technique, tightly stretch the skin overlying the vas where the needle entered for anesthesia infiltration. The skin should be as thin as possible.

b. Apply the ringed clamp with the shaft at a 90-degree angle perpendicular to the vas (Figure 6-11a).

c. Open the ringed clamp, and press the tips onto the skin immediately overlying the vas (Figure 6-12).

d. Apply upward pressure with the middle finger underneath the scrotum to resist the downward push of the ringed clamp and to press the vas from below into the ring.

e. Slowly and gently close the clamp around the vas, up to the first click-stop. Note that the cantilevered feature of the ringed clamp that is manufactured in China is specially designed to prevent damage to the scrotal skin even when the clamp is locked tightly.

Avoid two pitfalls when applying the ringed clamp:

- Be sure to elevate the middle finger underneath the scrotum. Otherwise, the finger will give way under the downward pressure of the ringed clamp, and you will have difficulty stabilizing the vas.
- Do not grab too much skin with the ringed clamp. If you do, you will have difficulty dissecting and delivering the vas, and slight bleeding may occur. The skin should be stretched out over the vas just before the ringed clamp is applied. If you grab too much skin, stabilize the vas with your left hand, then loosen the clamp slightly without entirely releasing it. Use the fingers of the left hand to ease some of the skin away from the clamp's hold while retaining the clamp's grasp on the vas.

Figure 6–11. Grasping the Vas with the Ringed Clamp (extracutaneously)

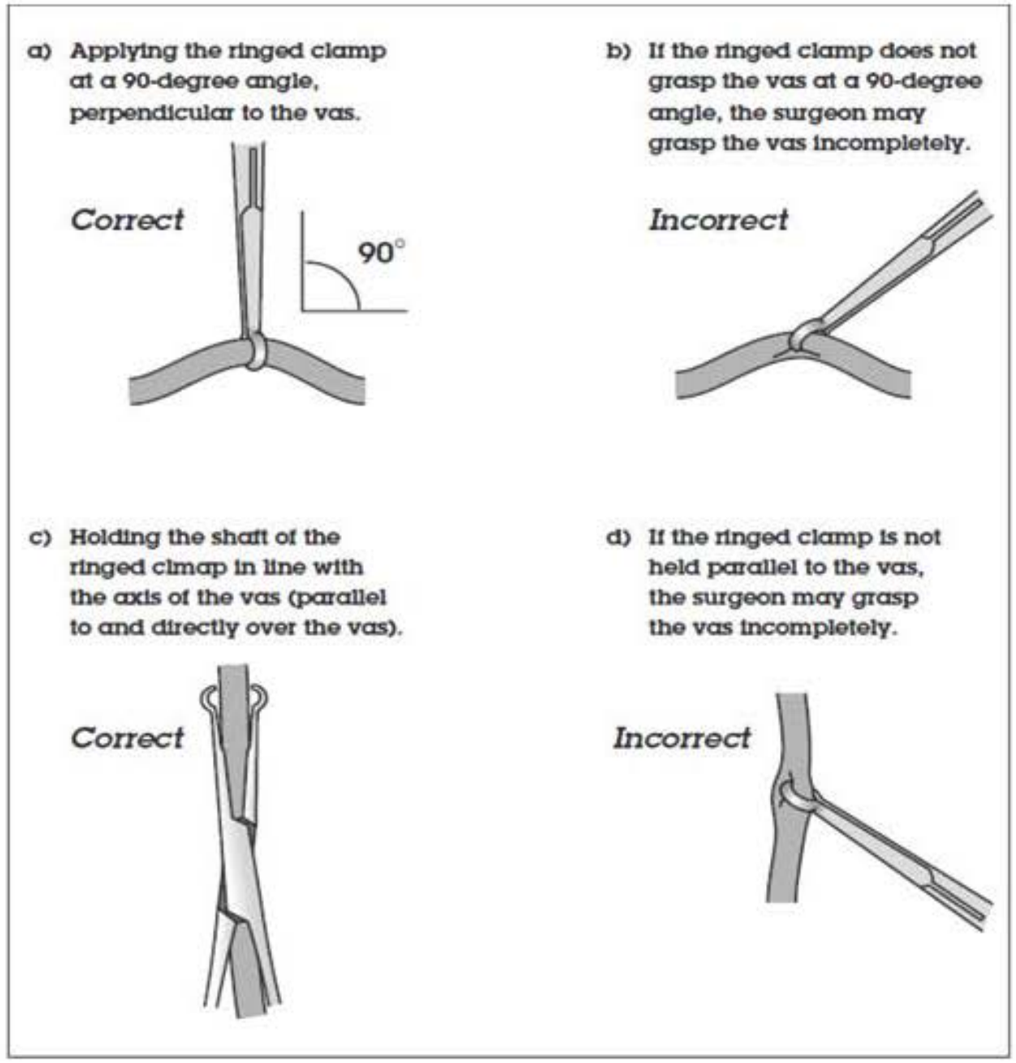
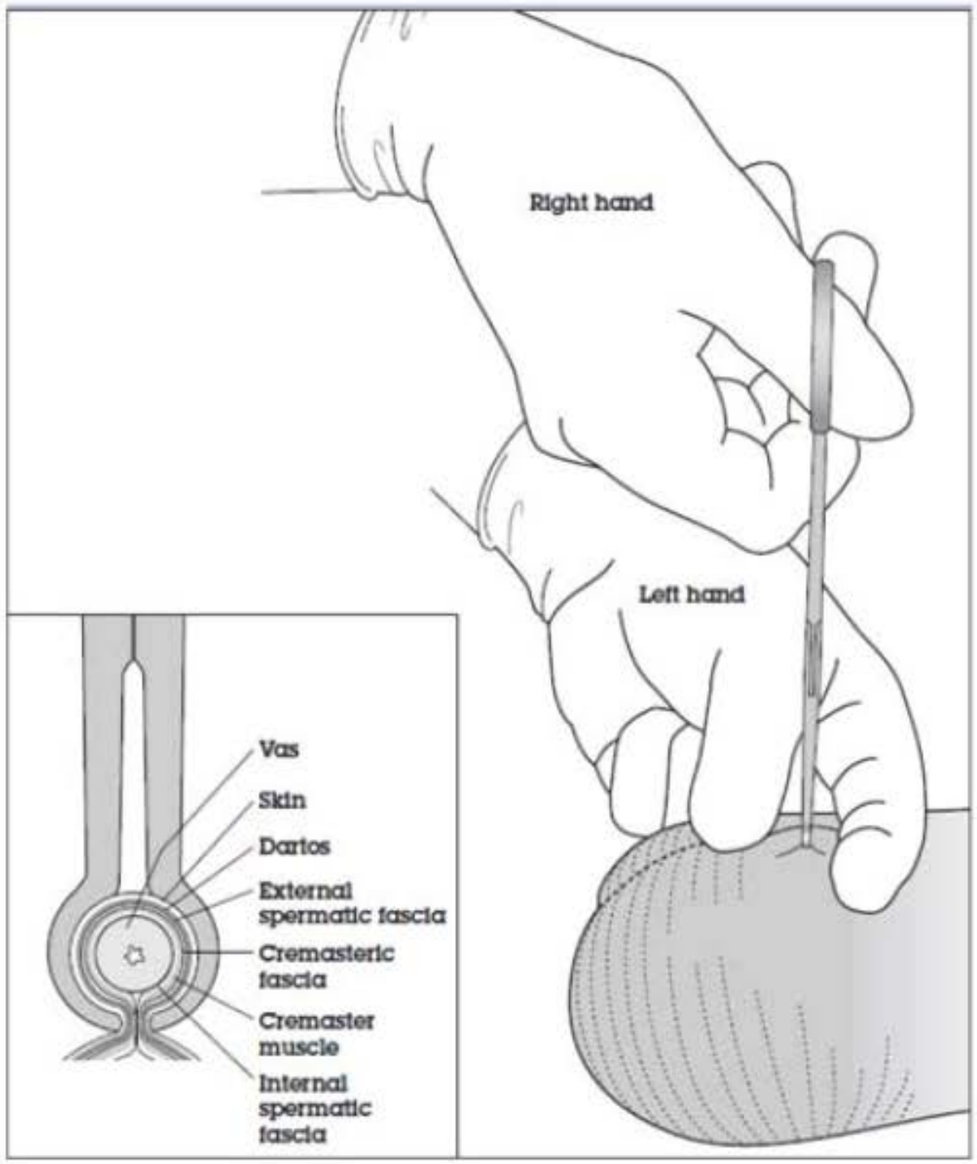


Figure 6–12. Pressing the Tips of the Ringed Clamp onto the Scrotal Skin Overlying the Right Vas



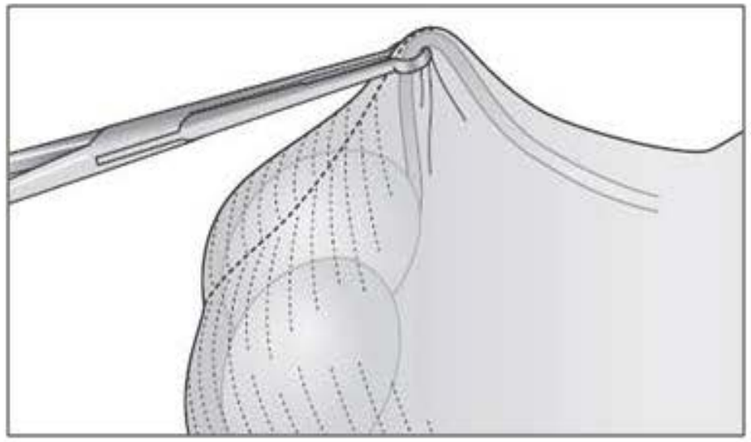
Elevating the Underlying Right Vas

a. While the ringed clamp is still grasping the scrotal skin and the underlying right vas, transfer the instrument to your left hand.

b. Then, lower the handles of the ringed clamp, causing a bend in the vas (Figure 6-13). This motion elevates the vas.

c. Continue to keep the shaft of the clamp in line with the longitudinal axis of the vas.

Figure 6–13. Lowering the Handles of the Ringed Clamp to Elevate the Vas



Puncturing the Scrotal Skin

a. The skin should be punctured in the previously anesthetized spot, midway between the top of the testes and the base of the penis. With the left index finger, press downward lightly to tighten the scrotal skin just ahead of the tips of the ringed clamp and over the anesthetized area (Figure 6-14).

b. Hold the dissecting forceps in the right hand, points curved downward, in preparation for puncturing the vas. Hold the instrument so that the closed tips of the forceps and the vas are at a 45-degree angle.

c. Open the dissecting forceps and using the medial blade of the forceps, pierce the scrotal skin just superior to the upper edge of the ringed clamp where the vas is most prominent (Figure 6-15). The result should be a puncture of the midline of the vas, preferably at the point where the needle entered for anesthetic infiltration. When making the puncture, do not slowly push the dissecting forceps forward. Instead, use a quick, sharp, single movement to make a clear puncture of the skin down into the vas. Advance the medial blade of the forceps into the vas lumen.

The following pitfalls must be avoided when puncturing the scrotal skin:

- Be sure to penetrate the anterior wall of the vas with the dissecting forceps. Intact overlying fascia will prevent elevation of the vas out of the puncture wound.
- If puncturing is too deep, transaction of the vas might occur, and the vas artery may be transected; bleeding will follow.
- Be sure to puncture the vas just superior to the upper edge of the ringed clamp. If the puncture is made in the tissue that is grasped by the ringed clamp, you will not be able to spread the tissues adequately.

Figure 6-14. Tightening the Scrotal Skin

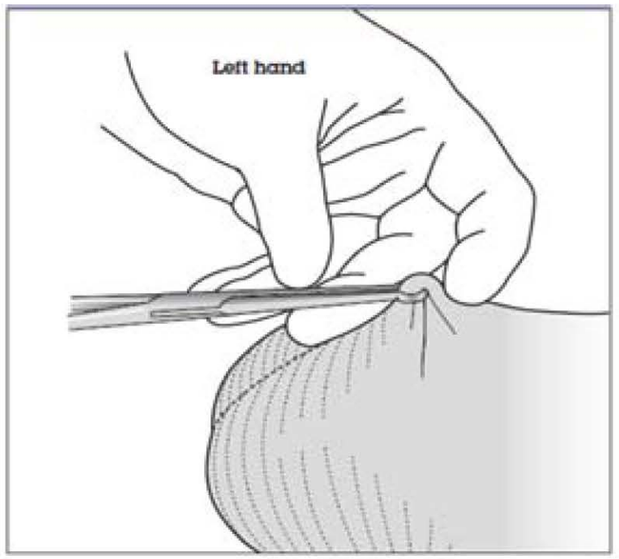
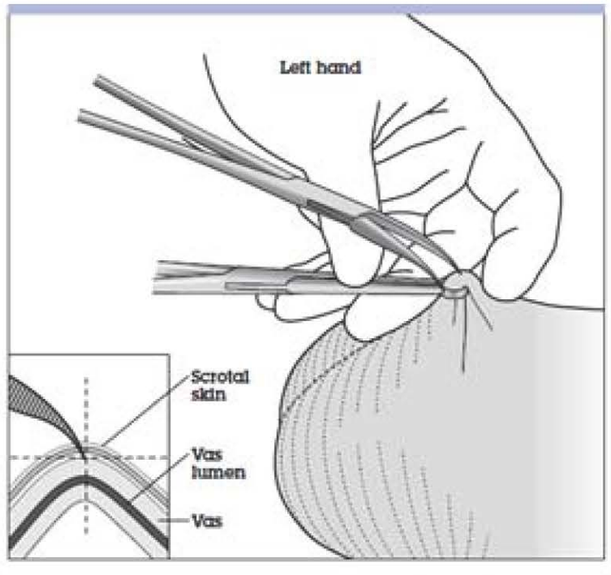


Figure 6-15. Piercing the Skin with the Medial Blade of the Dissecting Forceps



Spreading the Tissues

a. After making the puncture, withdraw the medial blade of the dissecting forceps. Close the tips of the forceps.

b. At the same 45-degree angle as before, insert both tips of the forceps in the same puncture hole, in the same line, and at the same depth as when you made the puncture with the single blade (Figure 6-16). The ringed clamp remains in place and locked while the skin punctured.

c. Gently open the tips of the dissecting forceps transversely across the vas to create a skin opening twice the diameter of the vas (Figure 6-17).

d. In one motion, spread all layers of tissue from the skin to the vas deferens. The tips of the forceps should penetrate deeply enough to expose bare the vas wall. No harm is done if you enter the lumen. Be careful to keep the closed blades of the dissecting forceps parallel to the vas.

e. The skin and vas sheath will remain open after the tissues are spread. By contrast, the opening in the vas will close after spreading; as it closes, the puncture site in the vas may look like a longitudinal groove. The stretched opening in the skin and sheath, which should be twice the diameter of the vas, will enable you to lift out a loop of the vas. The ringed clamp remains in place and locked while the tissues are spread.

The following two pitfalls must be avoided when spreading the tissues:

- If you fail to open the blades of the forceps transversely at a right angle to the vas, one blade could slip out of the puncture site. An unnecessary skin tear may result.
- Be sure to apply appropriate counterforce to prevent the dissecting forceps from slipping out of the puncture hole. Maintain depth of puncture, but do not push down further than the original puncture.

Figure 6-16. Inserting Both Tips of the Dissecting Forceps into the Puncture Site

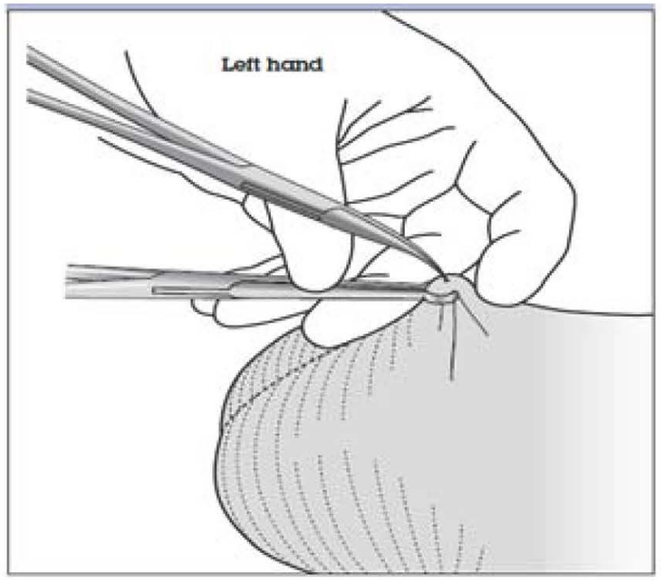
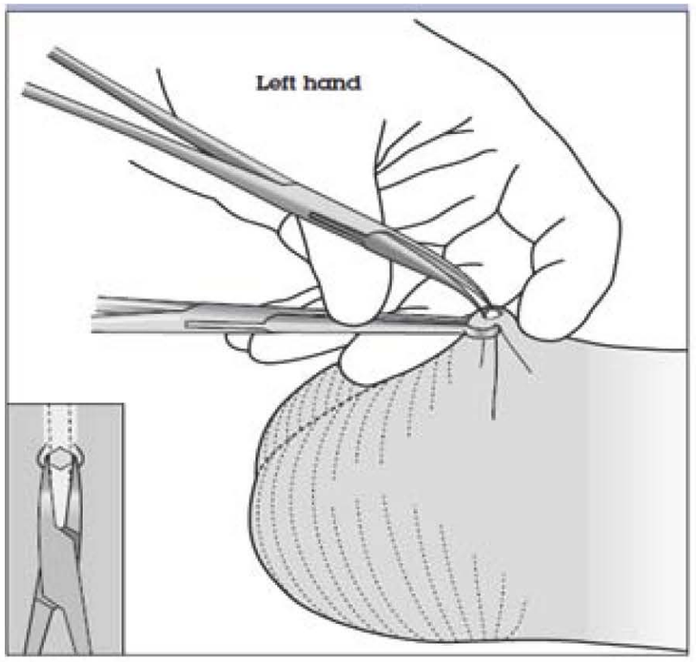


Figure 6-17. Spreading the Tissues



Delivering and Elevating the Right Vas

a. Remove the dissecting forceps from the puncture hole.

b. With the tip of the lateral blade of the dissecting forceps facing downward, pierce the wall of the vas deferens at a 45-degree angle (Figure 6-18). Use of the lateral blade enables the surgeon to rotate his or her wrist more easily.

c. With the lateral blade skewering the vas and the ringed clamp still grasping the scrotal skin, rotate the handle of the dissecting forceps clockwise 180 degrees so the tips face upward to deliver a loop of the vas deferens (Figure 6-19 and 6-20).

d. As you rotate the dissecting with the right hand, slowly release the ringed clamp with the left hand, thus allowing the forceps to elevate the vas through the puncture hole (Figure 6-21). At the beginning of the rotation, your hand will be palm-side down; after rotation, it will be palm-side up.

e. If the vas is difficult to deliver, more extensive spreading of the sheath may be required.

Figure 6-18. Piercing the Wall of the Vas

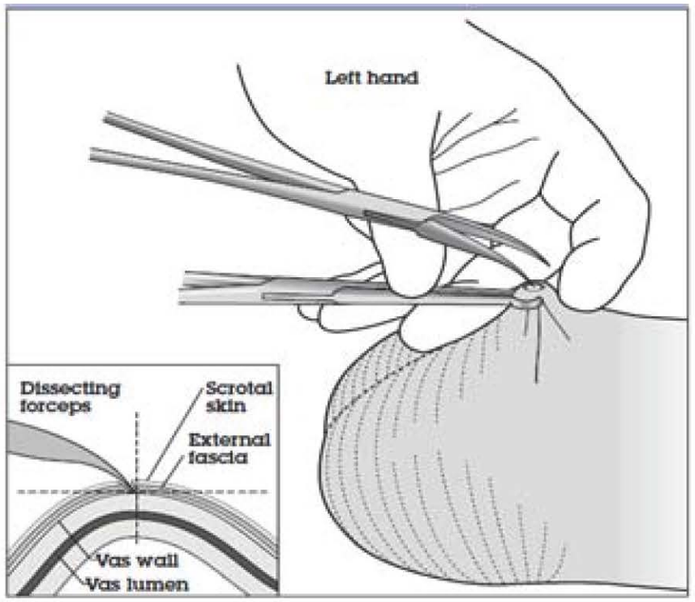


Figure 6-19. Rotation of the Dissecting Forceps, Part 1

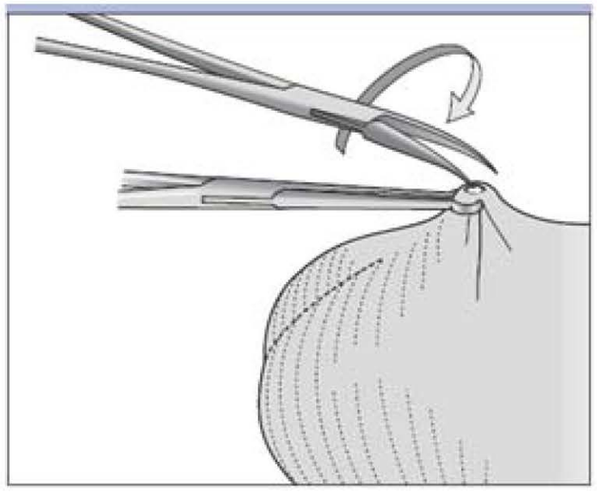


Figure 6–20. Rotation of the Dissecting Forceps, Part 2

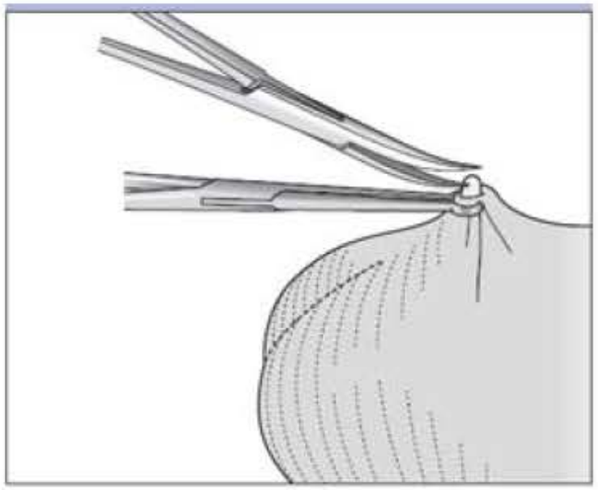
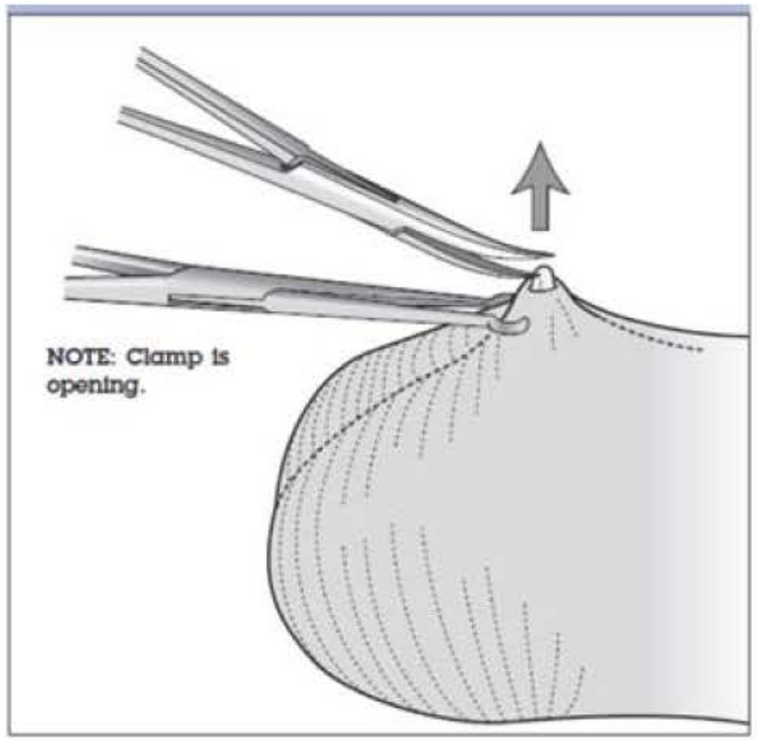


Figure 6–21. Releasing the Ringed Clamp Before Elevating the Vas with the Dissecting Forceps—Ringed Clamp Open but In Place



Watch out for two pitfalls while delivering the vas:

- Do not attempt to deliver the vas while the ringed clamp is locked. If you do, the vas may be severed.
- If fascial tissue is caught between the tips of the dissecting forceps, you will not be able to rotate and elevate the vas.

Grasping the Vas with the Ringed Clamp

a. Once a loop of the vas has been delivered, gently close the dissecting forceps on the vas to prevent its slipping back into the scrotum while the ringed clamp is removed from the skin.

b. Grasp a partial thickness of the loop of the vas with the ringed clamp.

c. After you have grasped a partial thickness of the vas, release the dissecting forceps.

Figure 6–22. Grasping a Partial Thickness of the Elevated Vas

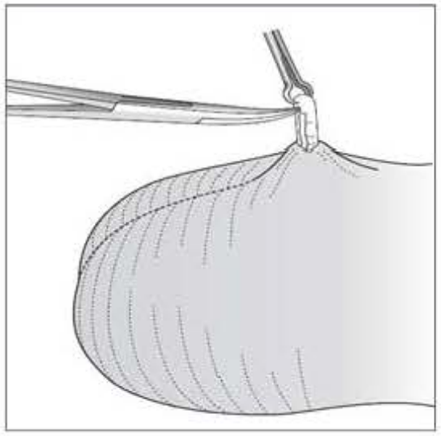
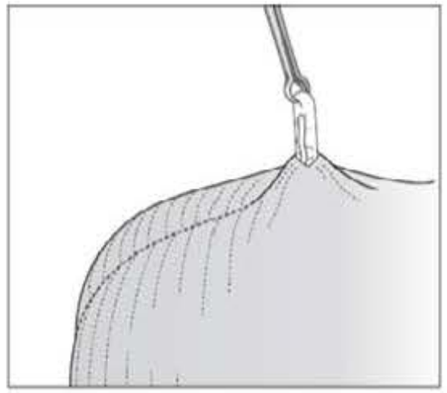


Figure 6–23. Grasping a Partial Thickness of the Elevated Vas at the Crest of the Loop (with only the ringed clamp attached)



The following pitfalls must be avoided when grasping the vas with the ringed clamp:

- Be careful not to release the dissecting forceps until you have grasped a portion of the loop of vas with the ringed clamp (Figure 6-22). This procedure will prevent the vas from slipping back into the scrotum.
- Avoid damaging the vas artery by grasping the vas at the crest of the loop (Figure 6-23). Grasping elsewhere leads to asymmetrical stripping of the sheath from the vas.
- Grasp only a partial thickness of the vas. If the ringed clamp is placed around the entire circumference of the vas, the vas could slip back into the scrotum when it is divided.

Puncturing and Stripping the Sheath

a. With one tip of the dissecting forceps (tips facing up), gently puncture the vas sheath just below the vas, taking care not to injure the vas artery (Figure 6-24). Then, remove the tip.

b. Close the tips of the dissecting forceps. Insert both tips (tips facing to the side) into the punctured sheath (Figure 6-25).

c. Gently open the dissecting forceps (Figure 6-26). Strip the sheath and surrounding tissue downward for at least a 1 cm length of the vas. This motion is longitudinal, not transverse.

d. Be careful to avoid blood vessels. Tie bleeders immediately. When checking for bleeding, pay particular attention to the abdominal segment of the vas, which is where bleeding from the vas artery could occur and result in hematoma formation.

Figure 6-24. Puncturing the Sheath with One Tip of the Dissecting Forceps

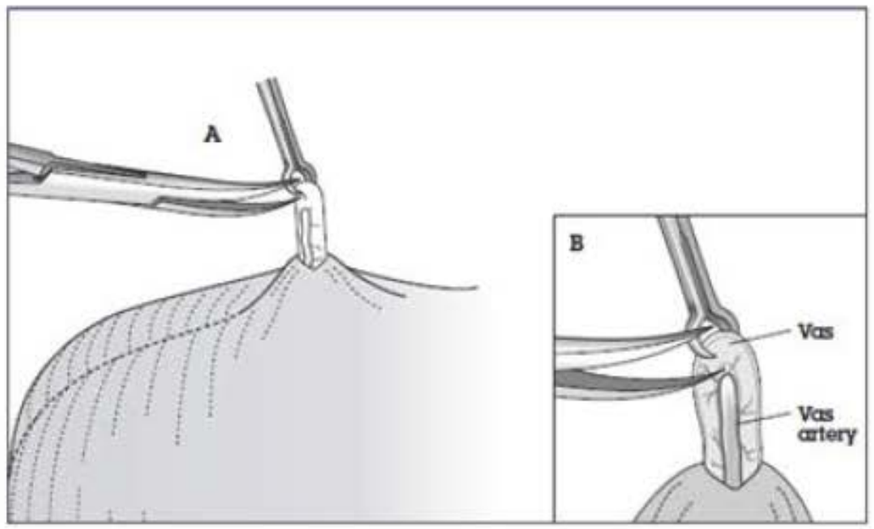


Figure 6-25. Inserting Both Tips of the Dissecting Forceps into the Punctured Sheath (tips facing to the side)

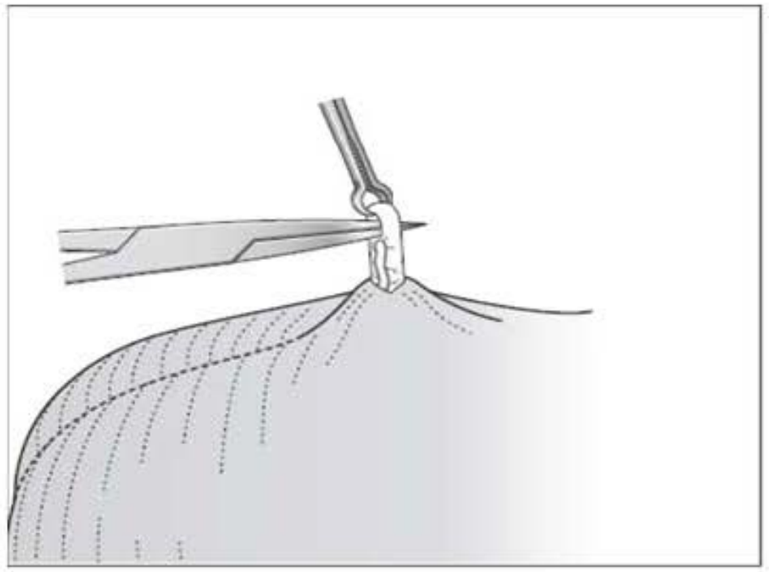
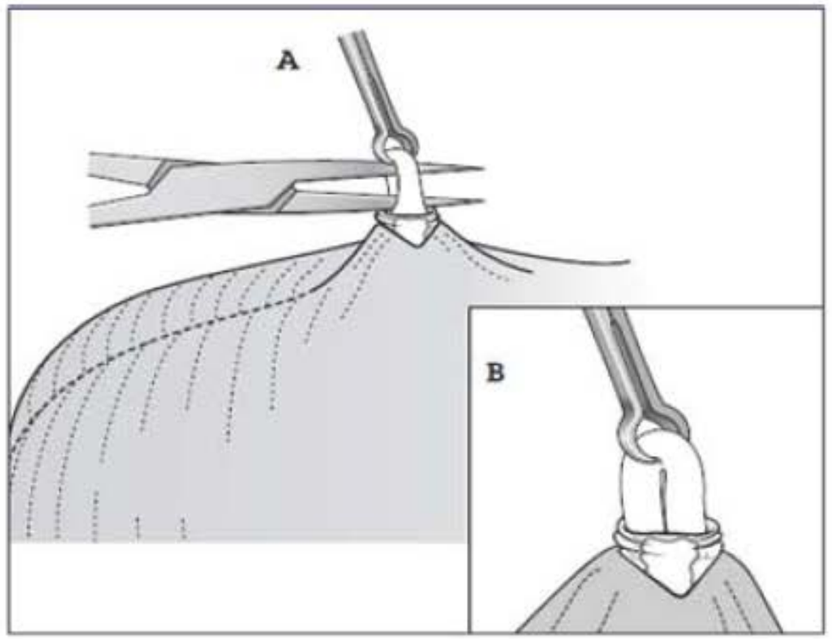


Figure 6-26. Opening the Dissecting Forceps to Strip the Sheath



Ligating and Excising the Right Vas

The chosen method for occluding the vas is ligation with excision and fascial interposition. Fascial interposition improves the effectiveness of vasectomy when used with ligation and excision of the vas. Fascial interposition places a tissue barrier between the two cut ends of the vas. The stump of the prostatic (proximal) end is outside the fascial sheath. When the vasectomy is completed, the stump of the testicular (distal) end is inside the fascial sheath.

a. Before beginning ligation, make certain that all sheath and vassal vessels have been stripped away from the segment of the vas to be occluded.

b. Ligate the isolated vas at two points about 1.5 cm or more apart using two separate ligatures, first ligating the prostatic end of the vas and then the testicular end.

c. After ligating the prostatic end, cut one end of the ligature, leaving a single uncut end of about 5 cm to 7 cm in length (Figure 6–27b). In this way, the prostatic end will be identified. The single uncut end of the ligature will be used to retrieve the vas to facilitate fascial interposition.

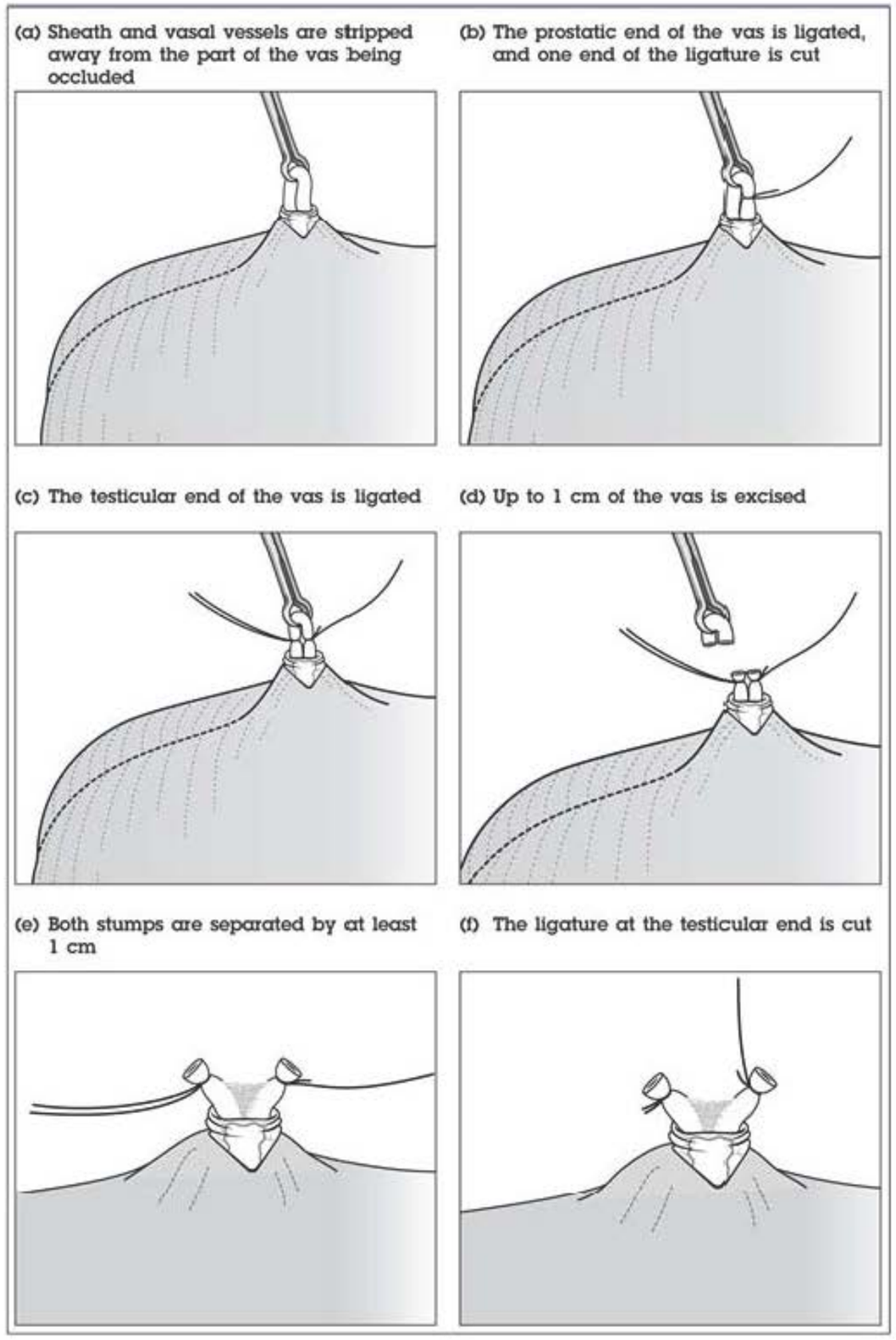
d. Ligate the testicular end and leave both ends of the ligature about 5 cm to 7 cm in length. When excising the section of vas, leave an adequate stump at each end of the vas (approximately 3 mm) to ensure that the ligature does not slip off later.

e. Excise up to 1 cm of the vas. When excision is completed, assure that both stumps are not too close by pulling both ligatures.

f. Separate both stumps by at least 1 cm (Figure 6–27e). Inspect for bleeding, and control it when it is present. Before the ligature of the testicular end is trimmed, hemostasis must be assured.

g. After assuring that both stumps are separated, cut the ligature at the testicular end.

Figure 6–27. Steps in Performing Vasectomy by Ligation with Excision



Creating Fascial Interposition

a. Allow both ends of the vas to drop back into the scrotum by gently pinching and pulling up on the scrotum with the thumb and index finger until the prostatic end is felt passing through the fingers.

b. Start the fascial interposition technique by very gently pulling the uncut ligature of the prostatic end through the puncture wound (Figure 6–28c). As the vas appears, it should be covered with the fascial sheath, which is seen as a translucent membrane covering the stump of the cut vas. If the translucent membrane (the fascial sheath) is not seen covering the vas, the vas should be dropped back into the scrotum and gently pulled out again.

c. Carefully grasp and hold tight the fascial membrane. Using the tip of the dissecting forceps (Figure 6–28d), tie the fascial membrane about 2 mm or 3 mm below the previous tie of the prostatic end (Figure 6–28e). Then, cut both ends of the ligature.

d. Allow the stump of the prostatic end to drop back into the scrotum by gently pinching the scrotum so that the stump falls back to its original position.

e. After assuring by palpation with the thumb and middle finger that the prostatic end is in the correct position, pull the single ligature just enough to see that the stump of the testicular end is inside the fascial sheath.

Make sure not to tie the fascia with the vas while ligating to occlude the vas. If the fascia is tied with the vas during ligation, then fascial interposition will be difficult and may not even be possible to perform.

Figure 6–28. Steps in Completing Vasectomy by Fascial Interposition

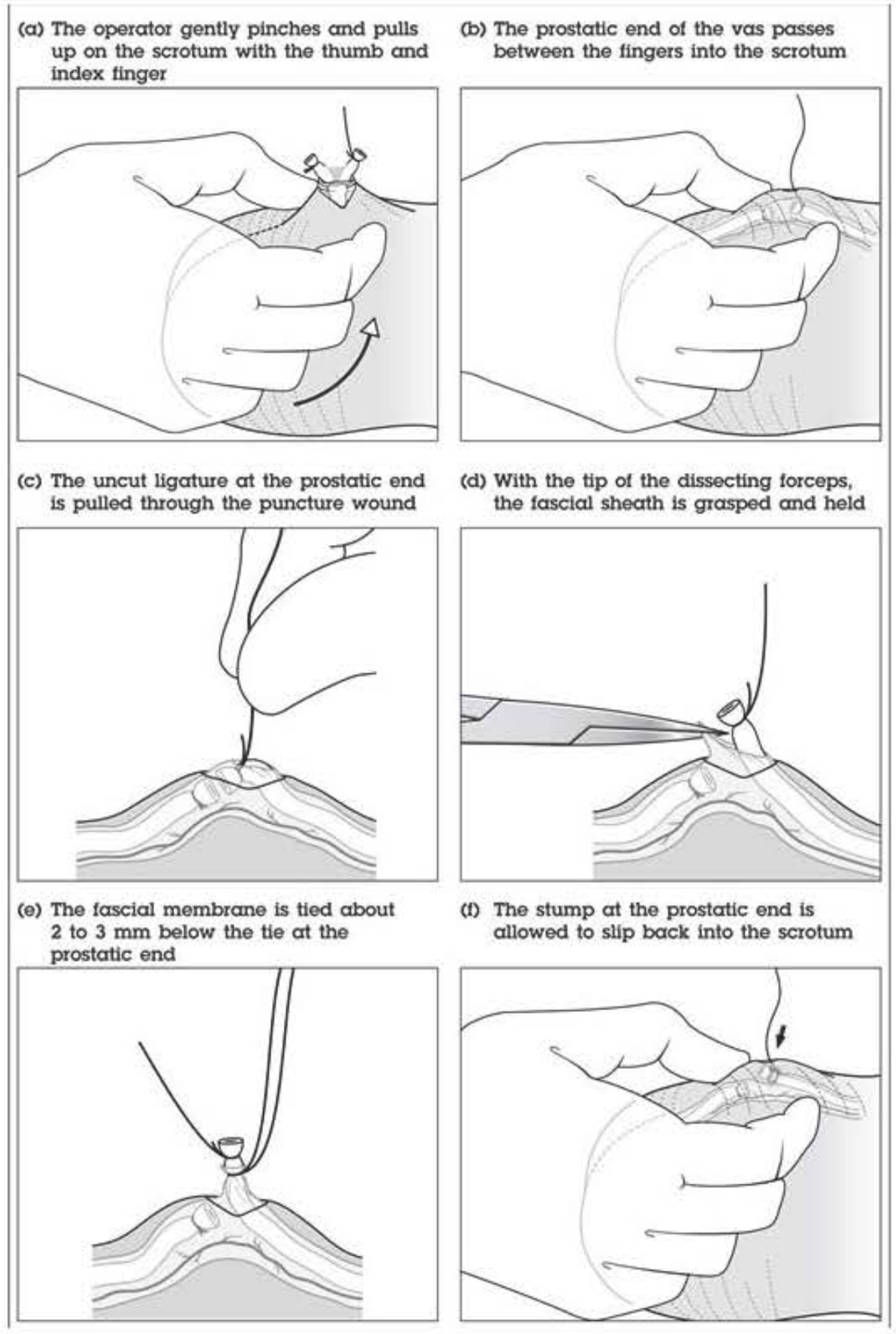
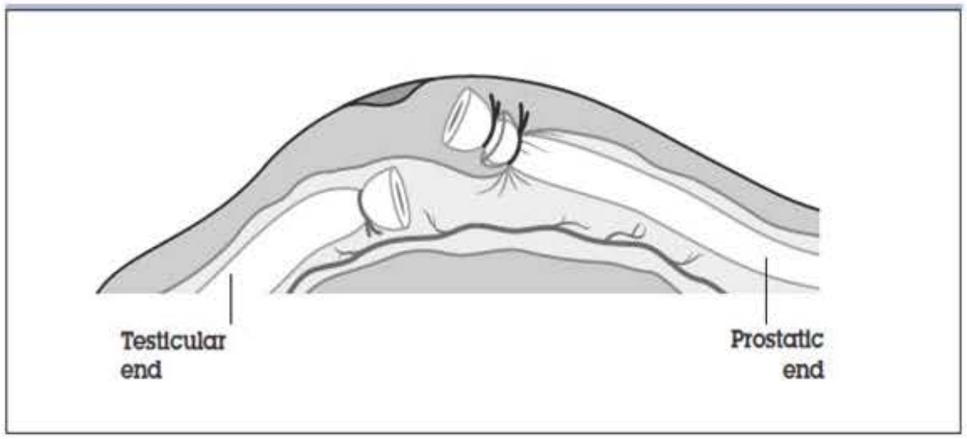


Figure 6–29. Completed Fascial Interposition (with the stump of the prostatic end outside the fascial sheath and the stump of the testicular end inside the fascial sheath)



Isolating the Left Vas before Occlusion

a. Adjust the left hand to grasp the left vas deferens, using the three–finger technique.

b. Place the middle finger below the scrotum, with the thumb and index fingers above the scrotum; position the vas directly under the previously opened puncture site. See Figure 6–30.

Figure 6–30. Isolating the Left Vas Before Occlusion

Applying the Ringed Clamp to the Scrotal Skin and Underlying Left Vas

a. Still using the three–finger technique, tightly stretch the skin overlying the vas so that it is as thin as possible.

b. Open the ringed clamp and press the tips onto the vas through the puncture site. Lock the clamp around the vas and overlying sheath (Figure 6–30). As with the right vas, use the "palm–up" approach to ensure that the instrument is applied perpendicular to the vas (90 degrees).

Occasionally, the sheath and underlying vas cannot be fixed with the clamp because of local edema. Insertion of the clamp into the scrotum to probe the vas increases the risk of both trauma and infection. Having the vas directly under the puncture hole then inserting the ringed clamp into the scrotal tissue to deliver the vas with its sheath diminishes trauma and infection.

Delivering, Elevating, and Occluding the Left Vas

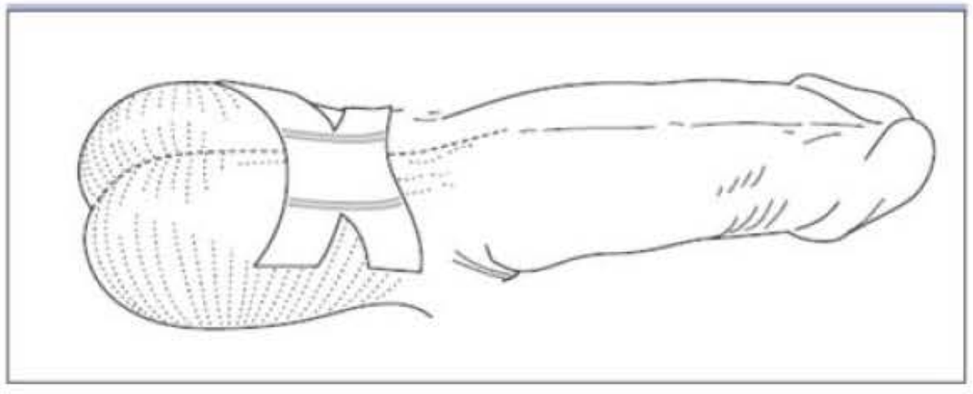
Follow the steps described for delivering, elevating, and occluding the right vas.

Dressing the Wound

a. After both vasa have been occluded and returned to the scrotum, pinch the puncture site tightly for a minute. Inspect for bleeding. If bleeding is present, hemostasis must be achieved. No skin sutures are necessary.

b. Swab the small wound with antiseptic solution. A sterile gauze dressing can be held in place with a scrotal supporter or tape, or a Band–Aid can be used to cover the small wound. Note that the width of each end of the tape has been divided in half, thus allowing the tape to fit better on the round scrotum.

Figure 6–31. Dressing the Wound



POSTOPERATIVE CARE AND INSTRUCTIONS

Men who have undergone vasectomy may leave the health facility after resting for 30 minutes.

Explain to the client in simple language how to care for the wound, what side effects to expect, what to do if complications occur, where to go for emergency care, and when and where to return for a follow-up visit. Tell him that minor pain and bruising are to be expected and do not require medical attention. The client should seek medical attention if he has fever, if blood or pus oozes from the puncture site, or if he experiences excessive pain or swelling. Give him a brief, simply written summary of instructions.

The client must be informed of the low likelihood of vasectomy failure. He may resume normal activities and sexual intercourse with temporary contraception within two or three days if he feels comfortable. The client or his partner will need to use another method of contraception during the first 12 weeks following vasectomy to avoid an unplanned pregnancy. Every client should be offered the opportunity to have a semen examination after 12 weeks. Ideally, one or two sperm-free semen specimens should be obtained from the client to be reasonably sure that the operation has been a success.

SESSION VII

POSTVASECTOMY CARE

OVERVIEW

Identifying and preventing complications while the client is in the facility are important considerations during the immediate postvasectomy period. Therefore, proper physical assessment and sound service provision protocols are followed prior to client discharge.

This session provides the required knowledge and skills in providing postvasectomy care and instructions.

LEARNING OBJECTIVES

At the end of the session, the participants will be able to:

1. Explain the components of postvasectomy care in terms of
   - when to discharge the client
   - providing instructions to the client
2. Discuss the procedure of postvasectomy semen examination and follow-up based on the semen examination findings

NARRATIVE

IMMEDIATE POSTVASECTOMY CARE

Most men feel physically comfortable immediately after vasectomy and are in a medically stable condition. Clear and complete information on home care should be given to each client before leaving the clinic to prevent complications. Information on postvasectomy care can be given to the client before the procedure by the NSV provider or an assistant. If information on postvasectomy care is given to the client before the procedure, verify that the client understands the instructions and has a written copy of them after the procedure.

A man who has undergone vasectomy may leave the health facility after he has rested, has been re-examined for signs of bleeding, and has the capacity to walk comfortably. Complete the following steps before a client leaves your facility after a vasectomy.

1. Using language that the client understands, go through the sample written instructions (Figure 7-1).
   - How to care for the wound
   - What side effects to look for
   - What to do if complications occur
   - Where to go for emergency care
   - When and where to go for emergency care
   - When and where to go for a follow-up visit
2. Ask the client if he has any questions or concerns.
3. Provide the client with clearly written instructions on postvasectomy care. Provide written instructions to both literate and illiterate clients. Suggest to illiterate clients that they have a friend or family member read the instructions to them if they have any questions.
4. Invite the client to return to the clinic if he has any questions or concerns after he leaves.
5. If semen analysis is available, schedule a follow-up appointment for the client.
6. If practical, follow-up by contacting the client the day or evening after surgery.

Figure 7-1. Sample Written Instructions

Note: Adapt these instructions for use in your facility.

Written Postvasectomy Instructions for Clients*

- Rest at home until the day after surgery. You may resume your normal activities after one or two days. Avoid work and strenuous exercise for at least 48 hours after vasectomy to help the wound heal.
- You may bathe on the day after surgery, but do not let the wound get wet.
- Do not pull or scratch the wound while it is healing.
- Wear a snug undergarment or scrotal support for at least two days after surgery to make you comfortable.
- Keep the bandage on for three days after the operation. Wash the wound with soap and water after removing the bandage.
- You may have sex with your partner as soon as it is comfortable with you, which is usually two or three days after the operation. Remember that vasectomy does not work immediately, and that you can still get your partner pregnant. Use condoms, or ask your partner to use another family planning method until you have had 20 ejaculations or until 12 weeks after the vasectomy, whichever comes first.
- Vasectomy does not protect you or your partner from STDs, including HIV, which causes AIDS. You can reduce your risk of STDs by using condoms or practicing abstinence, safe sex, or monogamy.**
- You may notice some blood or blood clots in your ejaculate after the first few times you have sex. You may also experience some pain. The blood and pain are not points of concern unless they occur more than a few times. If pain during ejaculation persists after the first few times, you should consult your doctors.
- You may experience a slight pain, bruising, or swelling around the wound. A small amount of pain, bruising, or swelling that does not get worse is normal. Take the medication provided (or recommended) by the doctor. Be sure to follow the instructions given to you. An ice pack may help relieve the pain, bruising, or swelling. If the swelling worsens, contact your provider or facility.
- Return to the clinic or call your doctor
  - if you have a fever within one week of surgery,
  - if any bleeding or pus appears in the wound,
  - if pain or swelling around the wound gets worse or does not go away,
  - if your partner misses a period or thinks she is pregnant (This is very important because it may indicate that the operation has failed, and that your partner is pregnant.), or
  - if you have any questions or concerns.
- If semen analysis is available: After 12 weeks, return to the clinic for a semen analysis to make sure that the vasectomy was successful. You may collect a semen sample by masturbating into a clean container or from a condom used during intercourse. Collect the sample the day of the follow-up visit and bring it with you to your appointment.

Clinic address: _____ Phone: _____

Your follow-up appointment is:*

Day and Date: _____

Time: _____

Place: _____

* If semen analysis is not available, no follow-up visit is required.
* The only difference between instructions provided to NSV clients and those provided to clients who have incisional vasectomy is that NSV clients do not need a one-week follow-up visit for removal of stitches.
** Make sure that clients understand the meaning of the terms STIs, abstinence, safe sex, and monogamy.

SEMEN EXAMINATION

Postvasectomy semen examination is a simpler procedure than a complete semen analysis because the only concern is to determine the presence or absence of sperm.

Procedure for Semen Examination

1. Ask the client to return 12 weeks after the vasectomy. Ask him to collect and bring a semen sample on the day of the follow-up visit.
2. At room temperature, wait for the semen to liquefy. If the sample remains coagulated, break it up by drawing it up and down in a hypodermic needle and syringe slowly three or four times. Be careful not to introduce air bubbles into the semen. Once the specimen forms droplets, you can treat it as a normal sample.
3. Gently swirl the container to mix the semen. Mixing the semen ensures that the small sample you took is representative of the entire semen sample. Using a clean pipette, place a small drop onto a glass slide and place a cover slip on top. Wait for one minute to allow the specimen to spread evenly.
4. Using a microscope, initially view and focus the specimen under the 10x objective and then switch to the high power (40x) objective. Check the entire slide for the presence of sperm. No sperm should be present in the 12-week-old specimen.

FOLLOW-UP

- If no sperm is found, note the result in the client's record. Inform him that back-up contraception is no longer necessary, and that no further follow-up is needed.
- If sperm cells are seen, note in the client's record the number of sperm cells seen upon scanning the entire slide under high power. Instruct the client to continue using back-up contraception and to return after another four weeks. If the number of sperm cells increases

at the subsequent follow-up, vasectomy failure may have occurred. Another semen analysis with the use of back-up contraception for four more weeks is recommended. If sperm cells are still found, inform the client of the need for a second procedure.

SESSION VIII

MANAGEMENT OF COMPLICATIONS

OVERVIEW

Serious complications related to vasectomy, especially to NSV, are rare. Nevertheless, the service provider must know how to identify and manage potential complications resulting from NSV. Most complications from vasectomy can be prevented.

This session provides the service provider information on the prevention, recognition, and management of potential complications resulting from NSV.

LEARNING OBJECTIVES

At the end of the session, the participants will be able to:

1. Differentiate side effects from complications
2. State potential vasectomy complications and ways by which these side effects can be prevented
3. Discuss potential intra-operative vasectomy complications as to
   - Symptoms
   - Etiology/causes
   - Prevention
4. Explain the requirements for efficient, emergency management of intra-operative complications
5. Discuss potential postoperative vasectomy-related complications as to
   - Symptoms
   - Etiology/causes
   - Prevention
   - Treatment/management

NARRATIVE

OVERVIEW OF COMPLICATIONS

Serious complications related to NSV are very rare. The most commonly reported complications are small hematomas and skin infections, which occur in fewer than 3% of cases. The management of most potential complications is similar to that for other types of minor surgery.

SIDE EFFECTS AND COMPLICATIONS

A *side effect* is a consequence of a procedure, contraceptive method, or medication other than that intended. A side effect does not require exceptional intervention, but it may require attention and management. Side effects of vasectomy are anticipated consequences, such as soreness, swelling, and bruising, of the surgery. These consequences do not require exceptional intervention, but you may need to reassure the client about them.

A complication is an unexpected condition that requires intervention or management beyond what was planned or what is normally provided during routine postoperative care.

Potential Complications of Vasectomy

- Potential intraoperative complications include vasovagal reaction (neurocardiogenic syncope), lidocaine toxicity, and injury to the testicular artery.
- Potential postoperative complications include bleeding, hematoma, infection, sperm granuloma, chronic testicular pain, infectious and congestive epididymitis, pregnancy of the client's partner, and vasectomy failure.

Prevention of Vasectomy-related Complications

Most vasectomy-related complications can be prevented by

- Carefully screening clients
- Following proper infection prevention procedures
- Using a gentle surgical technique
- Achieving hemostasis during surgery
- Ensuring that clients understand instructions for postvasectomy care
- Verifying that clients understand the need for postvasectomy contraception

Table 8-1 summarizes the management of potential intra-operative complications of NSV.

Table 8-1. Potential Intra-operative Complications of Vasectomy

	Vasovagal Reaction (Neurocardiogenic Syncope)	Lidocaine Toxicity	Injury to Testicular Artery
Symptoms	Fainting, nausea, weakness, lightheadedness, sweating, decrease in blood pressure, pallor, initial increase then decrease in heart rate, cold, clammy hands, restlessness	Numbness of tongue and mouth, lightheadedness, tinnitus, visual disturbances, slurred speech, respiratory distress/arrest, myocardial distress/arrest, myocardial depression, arrhythmia, cardiac arrest, convulsion, coma	Bleeding in fascia around the vas
Treatment	Reassurance, raise feet, lower head, atropine if PR less than 40, administer oxygen	Discontinue use of drug, general supportive measures, maintain airway and respiration, provide oxygen, administer diazepam or thiopental for convulsion, administer vasopressor (norepinephrine or dopamine) for hypotension	Perform cautery of ligation to control bleeding.
Etiology	Painful procedure, anxious client	Overdose of lidocaine, intravenous injection	Injury to blood vessels when stripping the fascia from the vas
Prevention	Gentle surgical technique, effective anesthetic block, advanced explanation of procedure to client, reassurance of client during procedure	Do not administer a dose >30 mL of 1% or >15 mL of 2% solution.	Strip the fascia from the vas carefully.

	Infection	Sperm Granuloma
Symptoms	Pus and swelling at the incision site or in the scrotum Fever	Pain at the testicular end of the vas or tail of the epididymis Nodule felt during palpation
Treatment	Superficial infections: clean and apply local antiseptic and clean dressing Underlying tissue infection: antibiotics and wound care Abscess: antibiotics, drainage, and wound care Cellulitis or fascitis: debridement, antibiotics, and wound care.	Asymptomatic: no intervention Pain: administer nonsteroidal analgesics Persistent pain: evacuate the cyst; cut and seal the vas ¼ inch towards the testis. Do not excise the granuloma. Rarely, chronic pain warrants an epididymectomy
Prevention	Observance of proper infection prevention procedure Recognition of bleeding Client should keep the wound dry after the vasectomy	Unknown

Etiology	Failure to follow infection prevention procedures Unrecognized or untreated hematomas Improper postoperative care of the wound	Occlusion of vas leads to accumulation of sperm
	Chronic testicular pain (rare)	Infectious and congestive epididymitis
Symptoms	Chronic unilateral or bilateral pain in the scrotum without palpable abnormality Swelling (sometimes) Pain during intercourse or strenuous activity	Fever (if caused by infection) Scrotal pain Swelling Induration
Treatment	Nonsteroidal analgesics Pain may gradually subside spontaneously.	Bed rest, scrotal elevation, ice packs Nonsteroidal analgesics Antibiotics
Prevention	Unknown	Infectious epididymitis: – Follow infection prevention procedures; screen clients for STDs. Congestive epididymitis: – Pressure on epididymis resulting from sperm blockage
Etiology	Possibly caused by neuroma or a perineural irritation	Infectious epididymitis: failure to follow IP procedures; sexually transmitted pathogens Congestive epididymitis: pressure on epididymis resulting from sperm blockage

	Pregnancy of the Client's Partner	Vasectomy Failure
Symptoms	Client's partner is pregnant.	Semen analysis shows sperm.
Treatment	Determine the reason for pregnancy: – Estimate the date of conception – Ask if the couple had unprotected intercourse 12 weeks or 3 months after vasectomy. – Ask partner if she had intercourse with another man. – Request for sperm analysis – Refer couple for further counseling or prenatal care.	– Explain to the couple how the failure could have occurred. – Offer to repeat the vasectomy procedure.
Prevention	Instruct client to use back-up contraception before vasectomy and during the three-month postoperative period. For vasectomy failure: Careful surgical technique	Careful surgical technique
Etiology	Pregnancy before the vasectomy Partner's sexual activity with a man other than the client Unprotected intercourse at any time up to 3 months after vasectomy Vasectomy failure	Failure to occlude the vas during the procedure Spontaneous recanalization

Emergency Management of Intra-operative Complications

Complications become serious if

- Staff members fail to recognize signs of an overdose.
- Monitoring staff members are distracted by other duties.
- Staff members lack knowledge of emergency measures.
- Emergency equipment is unavailable or does not function.
- Emergency medications are unavailable.
- Staff members lack training in the use of emergency drugs.
- Staff members are unclear about their roles and responsibilities in emergency care.

Staff Preparation for Emergencies

All staff members must be trained to effectively manage emergencies, and sites must have a predetermined plan in place who will be in charge should an emergency arise. Although the vasectomist is in charge in most circumstances, the staff members should also know who is in charge when the vasectomist is not present. All staff members must be skilled in administering intravenous fluids and drugs. They must understand which drugs may be used, how to administer them, and what their expected actions are. They must be knowledgeable of the use and availability of all emergency equipment. The person monitoring the client in the operating and recovery rooms must be capable of detecting early signs of complications and must be able to take initial emergency action. Emergency care supplies and drugs must be kept in an accessible place known to all staff members.

Emergency Equipment and Supplies

The equipment listed below must be available for emergency use in the operating and recovery rooms. All emergency equipment must be immediately available, ready to use, and in good condition. A battery-operated light source should be available for back-up or for focused illumination of the operative site.

- Syringes and needles
- Butterfly set
- Intravenous infusion set
- Adhesives
- Ambubag
- Oral airways (2 sizes)
- Oxygen tank
- Face mask or tube
- Stethoscope
- Sphygmomanometer
- Gauze pieces
- Kidney tray
- Blanket
- Flashlight

Emergency Drugs

The drugs listed below must be available in the operating and recovery rooms. The staff members should be well informed about the drugs, their use, dose, strength and route of administration, signs of toxicity, and treatment of overdose. The following emergency drugs are recommended:

- Atropine
- Epinephrine
- Norepinephrine
- Beta-blocker
- Diazepam
- Corticosteroids (dexamethasone or hydrocortisone)
- Aminophylline
- Furosemide
- Dopamine
- Dextrose 5%
- Dextrose 5% in normal saline

SESSION IX

MANAGEMENT OF QUALITY VSC SERVICES, INCLUDING VASECTOMY

OVERVIEW

Managers of VSC services are responsible for making safe, voluntary sterilization services available to the largest possible numbers of potential acceptors in their communities. As VSC is a surgical procedure and a permanent method of contraception, managers must ensure that VSC services are provided under conditions that minimize the possible risks and must verify that the client's decision to undergo the operation is voluntary.

This session discusses the principles and guidelines in managing VSC services to support trained service providers in continuously and sustainably providing effective and efficient VSC services.

LEARNING OBJECTIVES

1. At the end of the session, participants will be able to:
2. Explain the responsibilities of NSV service managers/providers in integrating vasectomy services into their facility's health care system
3. Describe the basic programming considerations in developing and managing vasectomy services
4. Describe the characteristics of a successful vasectomy program
5. Develop an action plan that includes the creation of mobile teams for the integration of vasectomy services into their health care system
6. State how potential complications related to vasectomy can be prevented
7. Identify and manage common complications

NARRATIVE

NSV SERVICE MANAGER/PROVIDER'S MANDATE

Managers or providers of vasectomy services are responsible for making safe, voluntary sterilization services available to the largest possible number of potential users by using affordable methods with long-term sustainability. NSV managers or providers must also ensure that sterilization is provided under conditions that minimize the risks associated with elective surgery.

Sterilization directly and permanently ends reproduction. Therefore, clients requesting this service must be given full information about its intended effects and consequences. Managers must ensure that services are offered without inducement or coercion and that meticulous attention is given to medical safety.

To provide high-quality services, managers must

- Ensure that all clients make voluntary, fully informed, and well-considered decisions.
- Ensure the medical safety and effectiveness of all clinical and surgical procedures.

To ensure well utilization and success of high-quality services, managers must

- Establish services that are responsive to the needs, preferences, and behavior of clients and the community.
- Make services widely available and easily accessible to all potential clients.
- Plan and manage services to ensure their efficiency and cost-effectiveness.
- Strive for long-term viability and sustainability of services.

GENERAL PROGRAMMING CONSIDERATIONS

The information provided here is meant to describe some of the basic programming considerations for developing and managing vasectomy services; it is not meant to be an exhaustive explanation. Refer to Figure 9-1.

Location of Services

With very little additional investment, vasectomy can be performed on a continuous, year-round basis in nearly all permanent health care facilities, including hospitals, multipurpose health care centers and clinics, specialized FP clinics, and treatment rooms of private physicians.

Although vasectomy programs can be integrated into existing health services, they may have to compete with urgent curative and emergency services. In addition, overworked personnel may not have sufficient time for vasectomy programs. Programs organized in specialized FP clinics can often sustain a high level of performance over an extended period. Resources specifically allocated for vasectomy are less likely to be diverted to other purposes. With enough resources, the surgical team can offer efficient and safe services. However, unless an adequate caseload can justify the use of resources, having a specialized service may prove expensive.

Figure 9-1. Checklist for Planning and Organizing Vasectomy Services

Checklist for Planning and Organizing Vasectomy Services

1. Survey community, and identify potential obstacles.
2. Investigate local laws, legal issues, and regulations.
   - Obtain licenses and other approvals.
3. Estimate potential caseload.
4. Develop budget, and arrange financing.
5. Develop information and education programs.
6. Establish clinical facilities; select, prepare, and renovate site.
7. Arrange for supplies, equipment, and services.
   - Procure equipment, instruments, medicines, and supplies.
   - Establish storage and inventory systems.
   - Establish infection prevention procedures.
8. Establish essential policies.
   - Client selection criteria
   - Procedures regarding free and informed decision-making, counseling, and informed consent
   - Medical/surgical protocols and service standards
9. Develop and print record forms, information materials, and other documents.
   - Medical history/client record form
   - Informed consent form
   - Preoperative and postoperative instructions
   - Client brochures and other information materials
10. Staff the Program
   - Determine staff requirements, and develop job descriptions.
   - Recruit and select staff.
   - Train staff.

11. Establish client flow system and procedures.
   - Reception, intake, and registration
   - Record of patient history
   - Clinic-based information activities
   - Client counseling
   - Informed consent
   - Physical examination and medical screening
   - Referral for medical and psychological indications or for temporary contraception
   - Preoperative preparation
   - Surgical procedure
   - Complication management and emergency treatment procedures
   - Postoperative monitoring
   - Postoperative instructions and discharge
   - Follow-up procedures
12. Others:
   - Financial accounting procedures
   - Data collection and service statistics
   - Monitoring and evaluation

Facilities

- As discussed above, vasectomy can be offered in different permanent and temporary locations. However, the following space requirements must be met to provide high-quality, comprehensive services:
- A comfortable waiting room for new arrivals and follow-up clients
- A private space for counseling
- An examination room for preoperative and follow-up examinations
- An area for storage and retrieval of records
- An area for laboratory investigations (blood, urine, and semen analyses)
- A clean room for surgery, isolated from the outside and from clinic traffic
- Areas where vasectomy personnel can scrub
- Toilet and washing facilities for clients
- A rest area for clients after surgery
- Facilities for sterilization or HLD of surgical instruments and supplies
- Waste disposal facilities
- A laundry room

Several of these functions may share a common space, especially in facilities that are not very busy. As the caseload increases, a separate area may be assigned to each function. The accommodation

should be planned to permit an orderly flow of clients through the clinic, particularly as their number increases. Some of the components listed above, such as laboratory tests, laundry, and autoclaving, may be contracted out or handled by a central supply unit in multiple-site programs.

Medical Personnel Who Can Provide Vasectomy

Vasectomy can be performed by general practitioners, specialist surgeons, and other physicians. In all cases, operators must be carefully selected to ensure high-quality service delivery. Aside from knowledge, technical skills, and surgical proficiency, commitment to providing vasectomy services must be possessed by physicians who are to perform vasectomy.

Specialists, including urologists, may be too preoccupied with more complex surgical and medical problems to take an active interest in vasectomy, an elective procedure that can become tedious and boring for surgical experts. Interestingly, some of the most successful vasectomy programs have been organized and conducted by specialist obstetrician-gynecologists who are closely involved with and committed to FP.

Vasectomy may appeal to private practitioners because it requires little capital investment and can be performed on an outpatient basis in the physician's treatment room. Private practitioners are a primary source of health care in many countries; thus, program managers should consider instituting training programs for this important sector.

Staffing

- Determining the personnel required for a vasectomy service is a complex task. Program managers must arrange for sufficient staff to handle the following duties:
- Receiving clients and maintaining records
- Providing information and education
- Counseling clients
- Examining clients, performing surgery, and conducting follow-up
- Performing laboratory tests (optional)
- Sterilizing or high-level disinfecting equipment and supplies
- Doing laundry
- Cleaning and maintaining facilities

Only a nurse and a physician may be needed in clinics with a small caseload. A well-trained vasectomy assistant might easily receive the client, take the preliminary medical history, counsel the client, handle the laboratory tests, assist the surgeon in the operating room, and sterilize instruments. As the caseload increases, more personnel, each responsible for one area, may be needed.

Client Follow-up and Medical Referrals

Follow-up is a crucial part of vasectomy services. If mobile teams are used, local physicians or specially trained community health personnel may conduct follow-up examinations. Paramedical staff must be trained to identify problems and to refer clients to the nearest health center when serious complications are encountered. Clients themselves must be instructed to seek assistance if they encounter postoperative problems.

Programs must always be prepared to refer clients to another department or another sector of the health system when appropriate. A client showing rare, life-threatening complications may be referred to another facility better equipped to handle the situation. The vasectomy provider must be prepared to treat or refer the client if medical problems, such as the presence of an STD, are discovered during the prevasectomy examination. Screening and counseling may occasionally identify psychological problems that require referral for further counseling or psychiatric treatment.

Semen Analysis

In many settings, semen analysis is difficult or impossible to provide on site because it requires special training and equipment. For some programs, semen analysis may be less expensive and more convenient to arrange in an independent laboratory or another health facility. Some programs cannot provide semen analysis at all.

Vasectomy Reversal

Vasectomy should not be offered or promoted as a reversible method because it is intended to be a permanent procedure. Although reconstructive surgery can be performed to reverse a vasectomy, the surgery is expensive, time consuming, difficult, and not guaranteed to result in subsequent pregnancy. Every program should therefore include a client assessment or counseling component to help identify and screen out clients who are likely to regret their decision.

Despite all precautions, a few clients may regret their choice because of unanticipated events, such as remarriage and death of a child. Hence, a comprehensive vasectomy program may make vasectomy reversal services available. Experience has shown that one reversal request can be expected for every 400 to 700 vasectomies.

Assessing the Receptiveness of the Local Community

Before introducing vasectomy services, managers must consider the environment or community in which the services are to be located. Political, cultural, and religious attitudes must be identified and considered. The effects of local laws and regulations, guidelines for medical practices, and codes of ethics on vasectomy services must be studied. All necessary permits and licenses must also be obtained.

Managers must investigate the level of community knowledge and practice of FP, as well as the availability of other FP services. Existing data, group discussions, and community surveys can help identify common myths and misinformation about vasectomy that can be addressed with information and counseling. In addition, local medical and health professionals should be interviewed in preliminary community surveys to determine their attitudes about vasectomy, their readiness to collaborate in the provision of vasectomy services, and their willingness to refer potential clients.

Estimating the Potential Caseload

Service managers must estimate the potential demand for vasectomy to develop services that meet local needs. This estimation is important in determining the facilities, staff, and other resources needed. The actual number of clients who request services will be influenced by such variables as the cultural acceptability of sterilization, the design and accessibility of services, the

existence of similar services in the community, and the impact of information and education.

Requests for vasectomy may be limited when services are first introduced into a community. However, the caseload can be expected to increase as the number of satisfied clients grows, as accurate information becomes increasingly widespread, and as fears are allayed and misconceptions corrected. Estimating the potential number of clients can assist service managers in forecasting and planning for growth rather than being overcome by it.

Sustainability

Managers must understand and use the principles of budgeting and other aspects of financial planning and management to provide services efficiently and continuously.

Financing services can be a complex problem involving multiple sources of funding. The most common sources of funds for sterilization services are the following:

- *Government subsidies.* Although subsidies may initially help services available, subsidized services may be difficult to manage and sustain over the long term.
- *Grants from donor agencies.* Several international donor agencies provide grants for sterilization services during the first few years of operation. Most of these agencies have policies to phase-out support and encourage self-sufficiency.
- *Client fees for services.* Fees must be set at a level that covers costs but does not discourage the use of the service. Accommodations must be made for clients who cannot afford even modest fees; no client should be denied services because of an inability to pay.
- *Insurance schemes.* Private or government health insurance may cover the cost of sterilization.
- *Income-generating schemes.* Organizations sometimes help support the costs of sterilization by raising funds or by using profit from temporary FP or other reproductive health services.
- *Combined financing mechanisms.* Different sources may also be combined to provide financial support. For example, sliding-fee scales may be combined with profit from other services and grants from donor agencies.

Services should also pay attention to financial management and accounting procedures. Effective accounting and auditing systems help managers keep costs under control, stay within budget, and avoid or anticipate financial difficulties. Governmental and other donors often require particular accounting systems, but all services should maintain internal accounting systems that are designed to permit periodic internal and external audits.

Planning for Self-sufficiency

An important advantage of sterilization is its cost effectiveness in relation to other methods of contraception. Nevertheless, the costs of sterilization are relatively high and immediate, whereas those of temporary methods are usually spread over a long period. Clients who cannot afford the cost of sterilization will require subsidy.

New services often rely on outside funding or on sources of income that may be unreliable for the long term. Therefore, managers must prepare for the future and continuously monitor and improve the efficiency and sustainability of services.

Services that rely on subsidies are continuously compensating for reductions in funding. To reduce this problem, nongovernmental organizations should diversify and balance their sources of funding so that the elimination of one source will not drastically affect their ability to provide services. In most for-profit enterprises, the sustainability mandate is clear: costs must be transferred to clients or recovered from third parties (such as insurance companies or governments) as soon as possible, or the institution will be forced to close. Governments and donors may be willing to support for-profit organizations during their early stages but will not usually provide funds indefinitely for recurring costs.

Managers should consider the following strategies in working toward self-sufficiency:

- Keep costs to their absolute minimum without sacrificing quality.
- Review service options to deliver services as economically as possible.
- Achieve economies of scale so that costs are shared among more cases.
- Work toward cost recovery by gradually increasing reliance on fees and insurance.
- Adopt supplementary income-generating schemes.

CHARACTERISTICS OF SUCCESSFUL PROGRAMS

The activities listed so far are all essential for the organization of a vasectomy program. However, these activities may not be self-sufficient in launching and managing a successful program that meets the needs of the community. Public health professionals have compared an unsuccessful and a successful vasectomy program. A few characteristics shared by successful programs are summarized here.

Client Satisfaction is of Paramount Importance

Emphasis on Quality and Client Satisfaction

Satisfied clients are an important source of referrals for a vasectomy program. A program cannot afford mistakes, especially in the early stages. Maintaining high-quality services is important: lowering standards to achieve a large volume is self-defeating in the long run. Negligence and inconsiderate treatment of clients must not be tolerated. A vasectomy program that has established a reputation for excellent service is likely to produce a self-generating demand through word of mouth from clients and local health professionals.

Good planning is essential to establish high-quality services. Apart from component, well-trained staff with good surgical techniques, the treatment of clients in nonsurgical situations must also be given special attention. Thorough counseling and good preoperative examination eliminate clients who are at risk of vasectomy-related complications or regretting the operation at a later date. Whenever possible, semen analysis should be done three months after vasectomy to identify failed vasectomies before unwanted pregnancies occur.

The way clients are treated by clinic staff will undoubtedly influence their satisfaction with, and perceptions of, the services. If staff members are attentive and compassionate, even clients who experience complications are more likely to leave with a favorable impression and to share that impression with potential clients.

Attention to the Special Needs of Men

Programs that specifically consider the psychological characteristics of men are more likely to succeed. In some societies, the vasectomy program should be physically separate from female

FP services, or the key clinic staff should be men. Clinic hours should be convenient for clients; evening, weekend, or holiday sessions may be suitable for men who cannot leave their jobs on weekdays. Finally, educational materials and information programs should carefully address common misunderstandings about vasectomy.

Working Within the Community

A vasectomy service may be more acceptable and successful when it is located within the community it is intended to serve. Some programs have had good results by employing staff who reside in the clinic's neighborhood. As much as possible, staff members should have the same socioeconomic, cultural, and ethnic characteristics as their clients. Finally, the clinic should have good connections with other local institutions, such as social welfare organizations, local health facilities, community-based FP programs, and local government councils or groups. In sum, the program should strive to be part of the local social fabric.

Developing Leadership

A successful vasectomy program is usually headed by a professional who has taken a personal interest in involving men in FP and who is committed to the success of the project. A leader who is introducing vasectomy in a locality for the first time must be patient, persistent, committed, and willing to be a pioneer.

Features of Successful FP Programs

Vasectomy services should operate within the context of a client-centered FP program and should be well integrated into existing services. The main features of successful FP services are as follows:

- Provides a wide choice of methods of contraception
- Places the concept of FP within the broader context of each client's experience
- Ensures accessibility of FP methods through various staff and delivery systems
- Supports clients by providing full information and counseling and by providing reassurance when problems arise
- Enhances the quality of services by promoting the highest possible standards of care appropriate to the setting
- Responds to clients' needs and preferences for methods and services
- Provides effective outreach and follow-up
- Encourages active client participation at all stages of service development and implementation
- Undertakes research and evaluation to elicit clients' perceptions and preferences

ACTION PLANNING

LEARNING OBJECTIVE
At the end of the session, participants will be able to develop an action plan that will integrate the principles and skills learned in the course to his/her job.

NARRATIVE

Action planning is the process of planning what needs to be done, when it needs to be done, by whom it needs to be done, and what resources or inputs are needed to do it. It is the process of operationalizing the strategic objectives.

Most action plans consist of the following elements:

- a statement of what must be achieved (the outputs or result areas)
- the steps or activities that must be done to achieve what needs to be achieved
- a time schedule for when each activity must take place and how long it is likely to take (when)
- a clarification of who will be responsible for making sure that each step is successfully completed (who)
- a clarification of the inputs/resources that are needed to implement the activity

Developing an action plan that indicates how and when new skills will be applied increases the opportunity that training will be transferred to the job. It ensures that the trainee can establish how his/her newly acquired skill would positively contribute to the improvement of his/her performance and how it will affect program goals and objectives.

The trainer assists the trainees in developing an action plan that is realistic and reflects the principles and skills learned in the course. During the post-training monitoring of the trainees, the trainer determines the extent to which the action plan has been achieved and assists each trainee in resolving issues that impede the implementation of his/her action plan.

ANNEX I

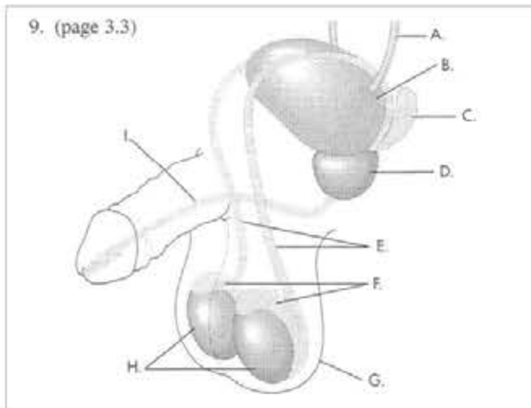
NSV Knowledge Assessment Test

Note: This test will not be graded. It will be used by the trainer to adapt this course to best suit your needs. Decide whether each of the following statements is T (true) or F (false). Write your answer in the space provided for each statement.

Anatomy and Physiology

1. _____Sperm is produced in the seminal vesicles.
2. _____Seminal fluid continues to be produced after vasectomy.
3. _____Sperm passes first through the vasa deferentia and then through the urethra.
4. _____If a vasectomy is performed correctly, subsequent development of antisperm antibodies would not occur.
5. _____After vasectomy, sperm can build up in the epididymides.
6. _____Each vas deferens is approximately 35 mm long, begins at the seminal vesicle, and ends at the prostate gland.
7. _____Testosterone is produced in the prostate gland.
8. _____Men who have had a vasectomy should be screened frequently for cardiovascular disease and prostate cancer.

9. Identify the parts of the internal male reproductive organs clockwise from A to H in the diagram below



A_____
B_____
C_____
D_____
E_____
F_____
G_____
H_____

10. Identify the parts of the spermatic cord clockwise from A to J in the diagram below

A_____
B_____
C_____
D_____
E_____
F_____
G_____
H_____
I_____
J_____

Counseling and Informed Consent

11. _____A trained counselor or a doctor is the best person to choose an appropriate contraceptive method for a couple.
12. _____NSV surgeons should verify a client's informed consent by talking with him before the procedure.
13. _____During vasectomy counseling, the client should be assured that he can change his mind at any time before the procedure without losing the right to other medical services.

Prevasectomy Evaluation

14. _____A man with diabetes cannot have a vasectomy.
15. _____A prevasectomy evaluation includes a medical history, a complete physical, and a hemoglobin count or hematocrit.
16. _____A client with syphilis should be treated before having a vasectomy.
17. _____A client whose vasectomy needs to be postponed should be counseled about alternative methods of contraception.
18. _____Prophylactic antibiotics should always be given before vasectomy.

Infection Prevention

19. _____An iodophor is an appropriate antiseptic to use on the scrotal area before NSV.

20. _____Instruments that have been boiled for 20 minutes can be used in NSV.

21. _____Instruments can be high-level disinfected by soaking them in alcohol or an iodophor for 20 minutes.

22. _____Instruments and gloves can be decontaminated by soaking them in a 0.5% chlorine solution for 10 minutes.

23. _____Handwashing is needed before putting on and after removing sterile or high-level disinfected gloves to perform a vasectomy.

24. _____Used hypodermic needles should be recapped, bent or broken, and then disposed of in a puncture-resistant container.

Postvasectomy Care

25. _____After vasectomy, a man should use an alternative contraceptive for three weeks.

26. _____A man who has bruising and/or passes a blood clot during ejaculation should immediately return to his NSV provider.

27. _____Following a vasectomy, a man should avoid strenuous activity and wear a snug undergarment for 48 hours.

28. _____Vasectomy provides protection against pregnancy and STIs.

29. _____After vasectomy, a man can resume sexual intercourse after three months if he has zero sperm count.

30. _____A man who developed fever, swelling, and severe pain in the scrotum should immediately return to the service provider.

ANNEX II

ANSWERS: NSV Knowledge Assessment Test

Note: This test will not be graded. It will be used by the trainer to adapt this course to best suit your needs. Decide whether each of the following statements is T (true) or F (false). Write your answer in the space provided for each statement.

Anatomy and Physiology

1. _____ Sperm is produced in the seminal vesicles.

2. _____Seminal fluid continues to be produced after vasectomy.

3. _____Sperm passes first through the vasa deferentia and then through the urethra.

4. _____If a vasectomy is performed correctly, there should be no subsequent development of antisperm antibodies.

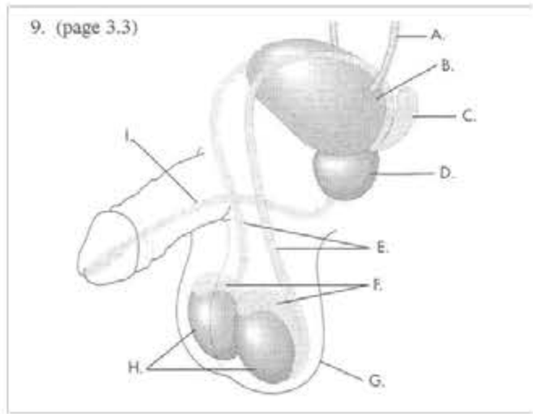
5. _____After vasectomy, sperm can build up in the epididymides.

6. _____Each vas deferens is approximately 35 mm long, begins at the seminal vesicle, and ends at the prostate gland.

7. _____Testosterone is produced in the prostate gland.

8. _____Men who have had a vasectomy should be screened frequently for cardiovascular disease and prostate cancer.

9. Identify the parts of the internal male reproductive organs clockwise from A to H in the diagram below



A___Ureter_____
B___Bladder_____
C___Seminal vesicle_____
D___Prostate gland_____
E___Vas deferens_____
F___Epididymis_____
G___Scrotum_____
H___Testicle_____
I. ___Urethra_____

10. Identify the parts of the spermatic cord clockwise from A to J in the diagram below

A___Vas _____
B___Vas lumen_____
C___Scrotal skin_____
D___Dartos_____
E___External spermatic fascia____
F___Cremasteric fascia_____
G___Cremasteric muscle_____
H_____
I___Artery_____
J___Veins_____

Counseling and Informed Consent

11.___F___A trained counselor or a doctor is the best person to choose an appropriate contraceptive method for a couple.
12.___T___NSV surgeons should verify a client's informed consent by talking with him before the procedure.
13.___T___During vasectomy counseling, the client should be assured that he can change his mind at any time before the procedure without losing the right to other medical services.

Prevasectomy Evaluation

14.___T___A man with diabetes cannot have a vasectomy.
15.___F___A prevasectomy evaluation includes a medical history, a complete physical, and a hemoglobin count or hematocrit.
16.___T___A client with syphilis should be treated before having a vasectomy.
17.___T___A client whose vasectomy needs to be postponed should be counseled about alternative methods of contraception.
18.___F___Prophylactic antibiotics should always be given before vasectomy.

Infection Prevention

19.___T___An iodophor is an appropriate antiseptic to use on the scrotal area before NSV.
20.___T___Instruments that have been boiled for 20 minutes can be used in NSV.

21.___F___Instruments can be high-level disinfected by soaking them in alcohol or an iodophor for 20 minutes.
22.___T___Instruments and gloves can be decontaminated by soaking them in a 0.5% chlorine solution for 10 minutes.
23.___T___Handwashing is needed before putting on and after removing sterile or high-level disinfected gloves to perform a vasectomy.
24.___F___Used hypodermic needles should be recapped, bent or broken, and then disposed of in a puncture-resistant container.

Postvasectomy Care

25.__F____After vasectomy, a man should use an alternative contraceptive for three weeks.
26.__F____A man who has bruising and/or passes a blood clot during ejaculation should immediately return to his NSV provider.
27.__T____Following a vasectomy, a man should avoid strenuous activity and wear a snug undergarment for 48 hours.
28.__F____Vasectomy provides protection against pregnancy and STIs.
29.__T____After vasectomy, a man can resume sexual intercourse after 3 months if he has zero sperm count.
30.__T____A man who developed fever, swelling, and severe pain in the scrotum should immediately return to the service provider.

ANNEX III

FAMILY PLANNING SERVICE RECORD (FP Form 1)

Side A

1. Fill out or check the required information at the far right of the form:
   - Client number
   - Husband's name, giving the family name first, date of birth, education, and occupation
   - Wife's name using her maiden family name, date of birth, education, and occupation
   - Monthly family income in peso
   - Choose "yes" or "no" for the couple's plan for more children
   - "New" or "current" for type of acceptor
   - Number of children: desired and actual
   - Birth interval desired in years
   - Previous method used; duration of use and reason for discontinuation
   - New/current method
   - Completed desired family size, economic, others for reasons for accepting permanent methods
   - Complete address of the client: number of the house, street, barangay, municipality, and province
   - Wife's age

2. Fill in the required information on medical, obstetrical/gynecological history, physical examination, pelvic/genital examination, client signature and date, name, and address of health facility.
3. Refer to a physician for any abnormal history/findings prior to provision of any method for further evaluation.

Side B

1. Fill in the required information at the far left of the form on client number and name.
2. On the first column, record the date when the service was delivered to the client.
3. On the second column, record the method accepted/number of supplies given.
4. On the third column, record the following:
   - Medical observations
   - Complaints
   - Services rendered, procedures/interventions done (Lab, treatment)
   - Reasons for stopping or changing the methods
   - Laboratory results
5. On the fourth column, record the name of the provider with the corresponding signature.
6. On the fifth column, record the next service date or appointment date.

ANNEX IV

NSV CLINICAL SKILLS CHECKLIST

TASKS	EVALUATION		
Trainers: When rating tasks for evaluation, use the following codes: **S = Satisfactory:** Performs the task according to the standard guidelines **U = Unsatisfactory** Does not perform the task according to the standard guidelines	Circle one: (M=model C=client) M C	M C	M C
All critical steps must be performed satisfactorily for the participants to be assessed as competent.			
Prevasectomy Evaluation			
1. Greets client.			
2. Ensures that the client has been appropriately counseled about the procedure.			
3. Takes medical history and performs heart, lung, and abdominal examination.			
4. ***Performs genital examination.**			
Preprocedure Tasks			
5. Ensures that the room is warm enough to relax the client's scrotum.			
6. Reviews chart for relevant medical history. 7. ***Verifies informed consent**			
8. Washes hands.			
9. Examines operative site to ensure that spermatic cords are mobile.			
10. Clips hair at operative site, if necessary.			
11. Ensures that the operative site is clean. 12. Retracts the penis upward on the abdomen in the 12 o'clock position, and anchors it comfortably.			
13. Performs surgical scrub, and wears sterile gloves.			
14. Prepares a syringe to administer 10 cc 1% or 5 cc 2% lidocaine (without epinephrine), and attaches a 1.5 inch (or metric equivalent) small-gauge needle (22 to 27 gauge)			
15. Adequately prepares the operative site with body-temperature antiseptic.			
16. Isolates operative site (scrotum) with sterile sheet(s) or towel(s).			
Procedure Tasks			
17. Observes and communicates with the client.			

***A critical step that must be performed satisfactorily for the participant to be assessed as competent.**

TASKS	EVALUATION					
18. ***Identifies, isolates, and fixes the right vas deferens under the median raphe midway between the base of the penis and the top of the testicles. Traps the right vas firmly using the three-finger technique.**						
19. ***Raises the skin wheal using 0.5 cc of 1% or 2% lidocaine (without epinephrine). Advances needle in the right external spermatic fascial sheath toward the inguinal ring approximately 1.5 in above the wheal, aspirates, slowly injects 2 cc to 5 cc of lidocaine into the sheath without withdrawing the syringe, and then removes the needle.**						
20. ***Uses the three-finger technique to firmly trap the left vas. Reintroduces the needle through the puncture. Advances the needle in the left external spermatic fascial sheath toward the inguinal ring approximately 1.5 in above the wheal, aspirates, and then injects 2 cc to 5 cc of lidocaine into the sheath.**						
21. Pinches the skin wheal between the thumb and forefinger to reduce local edema, and waits 2 to 3 minutes for the anesthesia to take effect.						
22. Fixes the right vas under the skin wheal using the three-finger technique.						
23. Applies upward pressure with the middle finger underneath the scrotum; presses the open tips of the ringed clamp onto the skin wheal overlying the vas; grasps the right vas, applying the clamp at a 90% angle perpendicular to the vas, with the palm facing up.						
For Steps 24 to 44, fill the columns for right and left with S or U as appropriate.	R	L	R	L	R	L
24. Checks with client to ensure that the anesthesia is sufficient. If not, repeats local infiltration being sure not to exceed the maximum dose.						
25. Elevates the entrapped vas by lowering the handle of the ringed clamp.						
26. ***Uses a quick, sharp, single movement to pierce the skin down to the vas lumen using the medial blade of the dissecting forceps, introduced at a 45° angle.**						
27. ***Withdraws the medial blade of the dissecting forceps, closes both blades, and inserts both tips of the dissecting forceps into the puncture site to the same depth down to the vas.**						
28. Gently opens the blades of the dissecting forceps and spreads the tissue to make a skin opening twice the diameter of the vas.						
29. ***Withdraws the dissecting forceps, uses the tip of the lateral blade of the dissecting forceps to pierce the vas wall (or holds the dissecting forceps. In line with the long axis of the vas and grasps the bare vas directly), and rotates the dissecting forceps clockwise 180°.**						
30. ***Delivers the vas through the puncture hole while releasing the ringed clamp but still keeping it in place.**						
31. Grasps a partial thickness of the elevated vas with the ringed clamp.						
32. **If the sheath is not completely dissected, gently punctures the vas sheath with one tip of the dissecting forceps, removes and closes the dissecting forceps, and then reinserts to strip the vas sheath.**						

***A critical step that must be performed satisfactorily for the participant to be assessed as competent.**

TASKS	EVALUATION					
Occlusion – Ligation With Excision and Fascial Interposition						
33. Ligates the prostatic end of the vas after carefully separating the fascia and blood vessels from the vas.						
34. ***Cuts one end of the suture approximately 2 mm to 3 mm from the knot, leaving a single uncut end of approximately 5 cm to 7 cm in length.**						
35. Ligates the testicular end approximately 1.5 cm from the prostatic end ligature, and leaves both end of the suture to approximately 5 cm to 7 cm in length.						
36. Excises up to 1 cm of vas in between the two ligatures.						
37. ***Pulls both ligatures to ensure that both stumps are separated by at least 1 cm.**						
38. **Ensures hemostasis**						
39. **Cuts both ends of the testicular suture, leaving approximately 2 mm to 3 mm**						
40. ***Allows both ends of the vas to drop back into their original position in the scrotum by gently pulling on the scrotum with the thumb and index finger.**						
41. ***Very gently pulls the long suture of the prostatic end of the vas to re-expose the cut ends of the vas, which will be covered with fascia.**						
42. **Gently grasps the fascia of the spermatic cord with the tip of the dissecting forceps and ties the fascia around the vas 2 mm to 3 mm below the previous tie of the prostatic end.**						
43. **Cuts the suture, and allows the stump to drop into its original position in the scrotum.**						
44. **Pulls slightly the prostatic end again up to the puncture wound, and cuts the single long end of the suture**						
45. **Isolates the left vas under the puncture site using the three-finger technique**						
46. **Grasps the left vas at the lower end of the puncture site with the ringed clamp**						
Repeats steps 24 to 44 for the left vas.						
47. **Pinches the puncture site tightly for a minute**						
48. **Inspects again for bleeding**						
49. **Secures sterile gauze dressing to the wound with a tape or a bandage**						
Postprocedure Tasks						
50. **Flushes the needle and syringe, and places all instruments in a 0.5% chlorine solution for decontamination**						
51. ***Ensures the disposal of waste materials and sharps in accordance with infection prevention guidelines**						
52. ***Immerses both gloved hands in 0.5% chlorine solution**						
53. ***Removes gloves by turning them inside out.** • **If disposing of gloves, places in a leak-proof container or a plastic bag** • **If re-using surgical gloves, submerges in 0.5% chlorine solution for 10 minutes for decontamination**						
54. **Washes hands thoroughly with soap and water, and dries with a clean cloth**						

55. Asks the client how he feels						
56. Provides the client with written postoperative instructions and information when and where to return for follow-up						
57. Reviews instructions orally, and asks if the client has any question						
58. Reviews the need for back-up contraception for at least 12 weeks, and provides the client with condom, if needed						
59. Advises the client to return for semen analysis (if available) after 12 weeks.						

***A critical step that must be performed satisfactorily for the participant to be assessed as competent**

Evaluation for: _____

(Print NAME OF PARTICIPANT)

The Participant is _____ COMPETENT _____ NOT COMPETENT IN SCROTAL MODEL PRACTICE

The Participant is _____ COMPETENT _____ NOT COMPETENT TO DELIVER NSV SERVICES

Trainer's Signature: _____ Date: _____

ANNEX V

MODEL INFORMED CONSENT FORM FOR VASECTOMY*

_____

Name of Facility

_____

Address

INFORMED CONSENT FOR VASECTOMY

I, _____, the undersigned, request that a vasectomy
(Client's name)

be performed on my person. I make this request of my own free will, without having been forced or given any special inducement. I understand the following:

1. There are temporary contraceptive methods available to me and my partner.
2. The procedure to be performed on me is a surgical procedure, the details of which have been explained to me.
3. The surgical procedure involves benefits and risks, both of which have been explained to me.
4. If the procedure is successful, I will be unable to have any more children.
5. The effect of the procedure should be considered permanent.
6. The procedure does not protect me or my partner from infection with sexually transmitted infections, including HIV/AIDS.
7. I can decide against the procedure at any time before the operation is performed (without losing the right to medical, health, or other services or benefits).

_____ _____

(Signature or mark of client) *(Date)*

_____ _____

(Signature of attending doctor or delegated assistant) *(Date)*

If the client cannot read, a witness of the client's choosing (male or female) and who speaks the same language as the client must sign the following declaration:

I, the undersigned, attest that the client has affixed his thumbprint or mark in my presence.

_____ _____

(Signature or mark of witness) *(Date)*

SAMPLE INFORMED CONSENT IN FILIPINO:

_____
Pangalan ng Ospital/Center

_____
Address

PAHINTULOT SA PAGTATALI SA PARAANG NO-SCALPEL VASECTOMY (NSV)

Ako, si _____, ang nakalagda sa ibaba, ay kusang loob na humiling na gawin sa akin ang pagtatali sa paraang no-scalpel vasectomy (NSV). Ito ay ayon sa aking sariling kagustuhan at walang pumilit sa akin. Nauunawaan ko ang mga sumusunod:

1. May mga pamamaraan na maaari kong gamitin at ng aking asawa o kinakasama upang pansamantala siyang hindi mabuntis o hindi ako makabuntis.
2. Ang pamamaraang gagawin sa akin ay isang simpleng operation na ang mga detalye ay ipinaliwanag sa akin.
3. Bukod sa mga ipinaliwanag na mga benepisyo sa pamamaraanng pagtatali na no-scalpel vasectomy, nauunawaan ko na may bihirang pagkakataon na nalalagay sa alanganin ang mga sumasailalalim sa operasyong ito.
4. Ang no-scalpel vasectomy ay isang permanenteng pamamaraan ng pagpaplano ng pamilya. Subalit hindi garantisadong lahat ng operasyon ay 100% na matagumpay. Mayroong bihirang pagkakataon na ang inoperan ay nakakabuntis parin. Kung ang operasyong gagawin ay magtatagumpay, hindi na ako makakabuntis pang muli.
5. Ang pamamaraang ito ay hindi makapagbibigay ng proteksyon sa akin at sa aking asawa o kinakasama laban sa mga nakahahawang sakit na nakukuha sa pakikipagtalik tulad ng gonoreya o sipilis, pati na rin sa HIV na nagdudulot ng sakit na tinatawag na AIDS.
6. Ako ay hindi pipilitin kung sakaling magbago ang aking desisyon bago simulan ang operasyon (at walang ano mang serbisyo o benepisyong pangkalusugan ang ipagkakait sa akin dahilan sa pagbabagong ito).

_____ _____
Lagda o tatak ng kanang hinlalake ng pasyente Petsa

_____ _____
Lagda ng doktor o kanyang assistant Petsa

Kapag hindi nakakabasa ang pasyente, isang saksi na lalaki man or babae at kalengwahe o kawika ng pasyente ang dapat pumirma sa sumusunod na pahayag:

Ako, si _____, na akalagda sa ibaba, ay nagpapatunay na nasaksahihan ko and pagtatak o paglagda ng pasyente sa dokumentong ito bilang pagsang-ayon sa mga nakalahad sa kasulatang ito.

_____ _____
Lagda ng Saksi Petsa

ANNEX VI

MODEL PREOPERATIVE EVALUATION SURGICAL RECORD

PREOPERATIVE NSV SCREENING CHECKLIST

Name of Clinic:_____
Address:_____

Client's Profile: **Date:**_____

Name of Client_____Age_____No. of Living Children_____

Name of Spouse:_____Age_____Telephone #_____

Complete Address:_____Religion_____

Preoperative Counseling Done by:_____

Previous Method Used:_____

Current Method Accepted: [ ] No-scalpel Vasectomy [ ] Conventional Vasectomy

Reason for accepting NSV: [ ] completed family size [ ] financial difficulties/economic reason [ ] health reason – contraindication with other FP methods [ ] Others_____
Specify

Informed consent explained/taken by:_____

Medical History and Physical Examination

[ ] allergy to drugs/anesthesia/medicines/food_____
[ ] difficulty of breathing/asthma [ ] other medical conditions

Check for the following:
Conditions that require extra caution
( ) Previous scrotal injury ( ) Large Varicocele ( ) Large Hydrocele ( ) Cryptorchidism

ANNEX VII

SAMPLE NO-SCALPEL VASECTOMY SURGICAL/OPERATING ROOM RECORD

Name of Facility:_____
Address of Facility: _____

NO-SCALPEL VASECTOMY SURGICAL/OPERATING ROOM RECORD

Name of Client: _____ Age:_____ Sex:_____

Date of Operation: _____ Case Number: _____

Surgeon: _____ Anesthesiologist: _____

Surgical Assistant: _____ Circulating Nurse: _____

Anesthesia: Lidocaine 1% or 2% Local Infiltration, Paravasal Block; Quantity Used: _____

Time Started: _____ Time Ended: _____

Preoperative Diagnosis: Normal Fertile Male desiring Permanent Contraception by NSV

_____

Operative Techniques for No-scalpel Vasectomy:

1. Asepsis and antisepsis procedures, including application of surgical drape (eye sheet) exposing only the scrotum, were performed.
2. Using the three-finger technique, the right vas was identified, isolated, and then fixed under the skin at the median raphe midway between the base of the penis and the top of the right testicle.
3. 0.5 mL of 2% lidocaine was infiltrated at the site of puncture using a G25 disposable needle and then re-directed and inserted along the right vas approximately 1.5 cm away from the puncture suite directed to the inguinal ring, and 2 mL of anethesia was deposited.
4. The needle was withdrawn, and the same procedure was performed on the left vas.
5. The skin at the puncture site was pinched to reduce skin edema.
6. Using the same procedure in isolating the right vas, it was grasped by the ringed clamp just near the puncture site.
7. Dissecting forceps were used to pierce the skin down to the anterior aspect of the right vas.
8. The vas was freed by dissection, hooked outside the scrotum, and then clamped by the ringed forceps approximately 1.5 cm of the vas id divested with the spermatic fascia.
9. The exposed vas was tied at each end with silk 2-0, and approximately 1 cm was excised between the two ligatures (-------X--- X --------).
10. A fascial interposition was conducted on the prostatic end of the vas and then dropped inside the scrotum and spermatic cord. (No bleeding is noted before the dropping is performed.)
11. The same procedure was carried out on the left vas.
12. No bleeding or abnormal findings were noted.

13. The puncture site was pinched for about a minute and confirmed the absence of bleeding; a JJ band aid was applied.
14. The patient walked back to the ward with postoperative instructions, including postoperative care.

Postoperative Diagnosis: No-scalpel vasectomy, bilateral done on a normal fertile client

Operation Done: No-scalpel vasectomy, bilateral

Suture Used Number: _____ pc/s Silk 2-0 (or 3-0), two strands per vas

Sponge Count; _____ Estimated blood Loss _____mL

Intra-operative Complications Noted (if any) [ ] bleeding [ ] hematoma [ ] others; describe:
_____

Postoperative Condition: _____

Postoperative Medicines Given: [ ] Amoxicillin 500 mg TID p.o. for five days
[ ] Mefenamic Acid 500 mg TID p.o. for pain or
[ ] Others: _____

_____
SIGNATURE OF SURGEON OVER PRINTED NAME

ANNEX VIII

SAMPLE: MALE VOLUNTARY SURGICAL CONTRACEPTION REFERRAL FORM

Male Voluntary Surgical Contraception Referral Form

Date:_____

Name/Address of Referral Facility:

Name of Client: _____ **Age** ____ **Civil Status** ____
Address: _____ **No. of Children** ____
Name of Spouse: _____
Reason for Referral: [ ] Preoperative assessment and counseling
[ ] for NSV Operation [ ] Postoperative counseling
[ ] Post NSV Semen Analysis [ ] Management of complication
Other Information:
[ ] *for management of complication, please attach a copy of the client service record and the surgical or operative record:

Name/signature and designation of person making the referral:

Name and Signature Designation

Referring facility and address _____

ANNEX IX

SAMPLE VASECTOMY LEAFLET

Vasectomy

is a permanent minor surgical procedure where the vasa deferentia, which serve as the passageway of the sperm from the testes to the seminal vesicle, are identified, cut, and then tied or blocked. This procedure is performed under local anesthesia and/or sedation. A new technique called no-scalpel vasectomy makes the procedure faster and safer.

How does vasectomy work?

The disruption of the tube prevents the meeting of the egg (ovum) and the sperm. After vasectomy, the man still produces semen but not sperm; hence, no pregnancy occurs.

When can a man have a vasectomy?

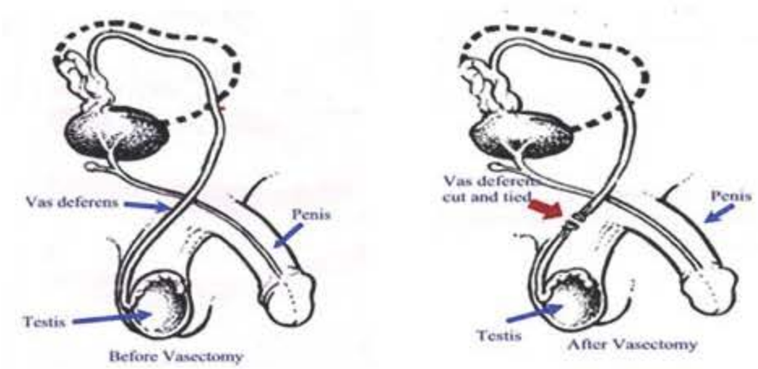
Any time he decides that he will never want any more children.

How effective is vasectomy?

Vasectomy is 99.99% effective. However, a newly vasectomized man is not yet considered sterile until after a negative sperm count taken after 15 to 30 ejaculations.

Who can undergo vasectomy?

- Males among couples who have completed the desired family size
- Men whose wives' lives could be in danger if impregnated



Who cannot undergo vasectomy?

Men who have the following conditions:

- Diabetes mellitus
- Infection at the site of incision
- Clotting disorders
- Enlarged or painful testicles
- Hernia or hydrocele

If you have decided to undergo vasectomy, consult the nearest FP clinic for assessment, schedule, and/or referral to the service center

Instructions to the Client:

Before the Procedure:

- Bathe thoroughly especially the genital area and upper thigh.
- Wear clean, loose-fitting clothing to the health facility.
- Do not take any medication 24 hours before the procedure unless otherwise instructed by the health care provider.

After the procedure

- If possible, apply cold compress on the scrotum for four hours to lessen swelling. You may experience some discomfort, swelling, and bruising, which should stop within two to three days.
- Rest for two days. Do not do any heavy work or vigorous exercise for a few days.
- Keep the incision clean and dry for two to three days. You can use a towel to wipe your body clean, but you should not soak it in water.
- Wear a snug underwear or pants for two to three days to help support the scrotum. Doing so will lessen swelling, bleeding, and pain.
- Take paracetamol or another safe, locally available pain reliever as needed. Do not take aspirin or ibuprofen because these medicines slow down blood clotting.
- You may have sex within two days after the procedure if comfortable.
- However, use condom or another effective family planning method for the next 20 ejaculations or 3 months after the procedure, whichever comes first..

Return to the clinic or hospital if

- you experience pain, fever, or enlargement of scrotum immediately or within seven days or two weeks after the procedure.
- your wife misses her menstruation or thinks she is pregnant.
- you have any questions or problems of any kind.

Return to clinic immediately if you develop the following:

- High fever (38 °C) in the first four weeks, but especially within the first week after the procedure
- Bleeding or pus from the wound
- Pain, heat, swelling, or redness at the incision that becomes worse

Vasectomy is a safe, permanent, effective, affordable family planning method

For more information about vasectomy, consult the nearest family planning clinic:

Produced by:
CMEN

For the
National Family planning Program

This publication was made possible through the assistance of the UNFPA and DOH

EFFECTIVE.....SAFE....EASY TO USE, AFFORDABLE

VASECTOMY

A Permanent Method for Planning the Family for Men with completed family

ANNEX X
Government Issuances

ADMINISTRATIVE ORDER No. 153 S 2002
SUBJECT: IMPLEMENTING GUIDELINES for the CREATION and OPERATIONALIZATION of OUTREACH/ITINERANT TEAM FOR VOLUNTARY SURGICAL CONTRACEPTION

I. Background and rationale

The ultimate goal of the family planning (FP) program has always been to improve the quality of life of the Filipino family. As such, the program efforts to assist couples or individuals to meet their desired family size or fertility intentions are geared toward achieving healthier, happier, and productive individuals and families.

However, meeting the unmet needs for FP services both for spacing and limiting methods remains a major challenge for the program. The 1998 National Demographic Survey showed a 20% rate (2.0 million) of unmet demands for FP services among women of reproductive age. Of these, 11% (or 1.1 million) do not want to have additional children yet they are unable to avail of services. This statistics reflects the backlog in terms of provision of permanent methods. Moreover, the incidence of abortion is estimated to be 300,000 to 500,000 per year, indicating a huge number of unplanned, unintended, or unwanted pregnancies. Abortions also reflect failure of provision of FP services.

Increasing access and availability of voluntary sterilization (VS) services, including bilateral tubal ligation and vasectomy, have emerged as vital and urgent concerns of the FP program. The current use of surgical FP methods is only 10.3% for BTL and 0.2% for NSV, clearly illustrating the need for an invigorated, concerted action to reinforce the past and on-going efforts in strengthening the VS program. Some of these efforts include identifying new and innovative strategies. The provision of VS services has encountered various difficult programmatic challenges. To respond to these challenges, the DOH and other key stakeholders have been working to assemble and implement a comprehensive program to make quality VS services available and accessible to Filipino couples. Previous efforts undertaken under the VS program include the following:

1. Improving the availability and accessibility of services through assistance to upgrade DOH and LGU hospitals to become VS capable sites with appropriate equipment and trained VS providers;
2. Strengthening selected DOH regional hospitals and medical centers to become functional training centers for VS;
3. Strengthening the capability of key staff in the Centers for Health Development (CHD) to become effective monitors of the VS program;
4. Improving referral mechanisms between the peripheral field health units and the VS service sites to strengthen dissemination of information on the availability of VS services to potential clients inside hospitals as well as outside in the surrounding communities;
5. Providing augmentation funds/external resources through special projects to reduce costs of the procedure (including drugs and supplies) to make the services more affordable.

However, lingering casual factors continue to hinder clients from availing VS services. These factors include physical/geographic inaccessibility and the limited number of VS sites that can routinely offer VS services. Another persistent constraint involves the transportation

costs that would have to be shouldered by the clients, their companion (usually a member of the family), and the barangay health worker, if the referral hospital is far from the client's residence.

These constraints could be adequately addressed by the fielding of outreach/itinerant VS teams and by bringing the services to communities where the potential VS clients live.

In this regard, the DOH issues AO 50-A s 2001, mandating all hospitals to create itinerant teams available for dispatch to respond to the surgical needs of urban and rural poor communities. Furthermore, this AO provides that "FP shall form part of the standard services to be delivered by these hospitals in all their medical missions and outreach activities."

The DOH believes that fielding outreach/itinerant VSC teams can answer these needs. Hence, all DOH hospitals were mandated through the AO No. 50-A Series of 2001 to create and deploy FP itinerant teams to communities with high unmet needs. Furthermore, this AO provides that "FP shall form part of the standard services to be delivered by these hospitals in all their medical missions and outreach activities."

II. Coverage and Scope

The coverage and scope for the provision of itinerant VS services should include areas in the country where the VS services must be brought directly to communities where the clients live. The DOH-CHD, in coordination with the concerned DOH hospital and the LGU community, should identify these areas as follows:

a. Communities with a documented demand for surgical methods and without trained service providers to provide the VS services;

b. Communities with existing VSC sites inadequate to meet the demand for VS.

III. Creation of Itinerant Teams

1. Organizational Structure

The Itinerant VS teams shall be organized in all DOH regional and medical centers, which will serve as the base of the team. A minimum of two VS teams should be available per hospital. The chief of the respective regional hospital or medical center, through the chairperson of the Department of OB-GYN/FP Center, shall be responsible for the creation and organization of the teams. A hospital order should be issued to create and operationalize the itinerant VS teams.

(The Governor, through the Chief of Hospital at the provincial and/or district level, shall organize and issue an office order to create and operationalize itinerant teams.)

2. Staff Composition

One itinerant team will be composed of the following:
a) A BTL Surgeon who is proficient in ML-LA procedure and/or
b) A trained vasectomy surgeon
c) A surgical nurse or midwife
d) A circulating staff

IV. Operationalization

1. Service Delivery

a. Facilities, Equipment, and Instruments

- If the itinerant VS site is a hospital (DOH or LGU managed), it should have an available operating room facility that complies with minimum requirements for performing minor surgery, tubal ligation, and vasectomy procedures.
- If the Itinerant VS service is a health center or a nonhospital venue, it should be refurbished to comply with the minimum requirements for providing MLLA and NSV.
- MLLA must be performed in a space that could be refurbished to simulate a restricted operating room, measuring 3 m × 3 m × 3 m in size, including provisions for a semi-restricted area.
- NSV must be performed in a clinic that is enclosed, well ventilated, and with fly-proof windows.
- The Itinerant VS teams should be equipped with a minimum of five (5) minilaparotomy sets and three (3) NSV sets during each scheduled Itinerant VS service. When necessary, a team should bring with them an OR table, OR light and mini-sterilizer or boiler.

b. Drugs and Supplies

- The DOH regional hospital or medical center should maintain a minimum stock level of drugs and medicines adequate for 30 clients. These drugs and medicines will be brought by the team to the site during the schedule for itinerant VS service.
- The CHD should provide augmentation funds for the purchase of drugs and supplies for VS provision to be used by the Itinerant teams from the DOH hospitals
- Alternatively and whenever appropriate, the outreach Itinerant team/ VS site or the LGU community may be tapped to provide VS drugs and supplies.

c. Personnel Requirements, including Duties and Responsibilities

i. Itinerant Team

- Two Itinerant VS teams should be dispatched during the scheduled itinerant services
- The itinerant surgeons will be responsible for the screening and final selection of clients, verification of informed consent, and assurance of quality of care, including proper infection prevention practices
- The provision of VS should be performed in accordance with the DOH-approved MLLA for female clients and NSV for male acceptors.
- Members of the itinerant VS team must ensure proper examination and monitoring of clients in the immediate postoperative period and upon discharge on the same day;
- The Itinerant VS team must secure copies of the records of all BTL and NSV cases performed and will be responsible for submitting reports of performance to the DOH-CHD every month.

ii. Staff of the Outreach VS Site

- FP counseling should be provided by trained staff of the outreach VS site. Counseling activities should be done regularly and during the scheduled outreach VS services;
- The staff of the outreach VS site should provide both verbal and written postoperative instructions, including follow-up schedules, to the client prior to discharge.
- They shall keep charts/records of all BTL and vasectomy clients, complete name of clients, age, address, number of children, and the date the procedure was performed.
- A medical personnel should be made available and tasked to do follow-up visits.

d. FP Counseling and Information Dissemination Activities

- All clients undergoing BTL or vasectomy should undergo FP counseling prior to the procedure. The staff of the outreach VS site should be properly trained to provide FP counseling.
- Informed consent must be explained by the surgeon to the potential VS clients during the counseling. Signature for consent should then be secured after the client has decided to undergo the procedure.
- The CHD will be responsible for coordinating activities with the LGU in connection with strengthening referral activities, linkages with other NGOs, and information dissemination for outreach VS services.
- BHWs should actively seek out and identify potential clients from the surrounding communities and refer them to the outreach VS sites for appropriate screening and counseling.
- All referrals should be adequately documented, both at the referring and referral units utilizing appropriate referral forms.

e. Schedule of VS Services

- The DOH regional hospital or medical center should coordinate with the outreach VS site in arranging a two-day schedule for itinerant VS services to be regularly conducted on a monthly basis
- The CHD should assist the DOH hospital itinerant team and VS site in the appropriate scheduling of the itinerant VS services.

2. Financial Resources

a. The DOH regional hospitals and medical centers should ensure that funds for the medical missions and outreach services of the itinerant teams are incorporated in their regular annual budget preparation and annual procurement plan. This is to reiterate the same provision in the DOH A.O. No. 50 s 2001 that said health facilities should also allocate funds for the operation of the itinerant VS teams, including their travelling cost, etc.

b. The DOH Center for Family and Environmental Health and the DOH-CHD should provide augmentation funds to DOH-retained hospitals to support the VS program including the itinerant VS teams.

V. Supervision and Management

a. The Chief of Hospital, through the Chairperson of the Obstetrics and Gynecology Department, should ensure that the itinerant VS teams are operational and functional as provided for in the guidelines

b. The CHD should exercise oversight functions and ensure that the Regional Hospitals and Medical Centers at their respective areas are delivering outreach VS services through the itinerant VS teams, as they have been mandated.

This order shall take effect immediately.

Sgd.: MANUEL M. DAYRIT, MD, MSc.
Secretary of Health

Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY

JUN 27 2012

ADMINISTRATIVE ORDER
No. 2012 - 0009

Subject: National Strategy Towards Reducing Unmet Need for Modern Family Planning as a means to Achieving MDGs on Maternal Health

I. BACKGROUND AND RATIONALE

Today, around six million Filipino women are estimated to have unmet need for modern Family Planning (FP), either for *limiting* (women who want no more children) or for *spacing* (women who want a child after three or more years). About half a million of these women have unplanned, unwanted, or mistimed pregnancies, that have 20 percent higher likelihood of complications during pregnancy and childbirth, including untimely deaths. This is because women with unplanned pregnancies are less likely to avail of adequate maternal care *(NDHS, 2008)*. Unplanned pregnancies also affect the health conditions of mothers, which can lead to poor maternal and fetal outcomes. Demand and supply side factors alter rates of unmet need.

Demand side factors that influence the level of unmet need for modern FP include: (1) lack of correct information on FP methods which result in fear of side effects, myths and misconceptions, and partner's refusal to any FP method or non-participation in decision-making process; (2) lack of information on what, how and where FP goods or services can be accessed; (3) lack of financial capacity to pay for FP goods and services; and (4) poor health-seeking behavior of clients. While the NDHS 2008 reported high level of awareness on FP (98 percent), this has not been translated into practice, in that only 34 percent reported use of any modern FP method.

On the other hand, supply side factors include: (1) inadequate availability of FP goods owing to irregular or maldistributed supply, poor logistics management; (2) inadequate number and capacity of both facilities/equipment and service providers (specially for long-acting and permanent methods or LAPM services); (3) missed opportunities during point of contact between client and information/service provider; (4) inadequate or nonsustainable budget allocation (i.e., financial and/or policy support) for FP at all levels; and (5) limited PhilHealth FP coverage and benefits.

Government-led intervention to address unmet need for modern FP is therefore necessary due to (1) inadequate and inappropriate information on FP and means to address unmet needs; (2) the serious and long-term health effects of having unplanned pregnancies; and (3) the need to minimize the costs of reducing unmet need.

In addition, the use of unmet need as the basis for developing programs and assessing progress in FP is consistent with the policy that focuses to meet needs rather than trying to change people's preferences on FP.

Building 1, San Lazaro Compound, Rizal Avenue, Sta. Cruz, 1003 Manila • Trunk Line 651-7800 Direct Line: 711-9501
Fax: 743-1829; 743-1786 • URL: http://www.doh.gov.ph; e-mail: usec@doh.gov.ph

However, current efforts to address unmet need for FP remain inadequate and fall below desired targets. The 2008 NDHS reported that there were an estimated 900,000 new FP acceptors from 2003 to 2008, or an average of only about 180,000 new FP acceptors per year. At this rate, it would take the country 30 years to address the problem of unmet need in the country.

Reducing unmet need for modern FP is a critical element in attaining the MDG goal of reducing by two-thirds the maternal mortality. Attaining MDGs is part of the third strategic thrust of *Kalusugan Pangkalahatan* (KP), which is the administration's execution plan meant to achieve Universal Health Care. KP provides that public health effort and resources will be focused towards areas with high concentrations of poor families listed in the NHTS-PR, where access to health services remains low. *(AO No. 2010-0036 and DO No. 2011-0188).*

II. OBJECTIVE

This Order provides for an updated and comprehensive approach to reduce unmet need for modern FP services in support of the strategic thrust to attain health-related MDGs by the year 2015, and is part and parcel of the implementation of the Aquino Health Agenda to achieve Universal Health Care as described in the *Kalusugan Pangkalahatan* Execution Plan.

III. SCOPE AND COVERAGE

This Order shall apply to the health sector, from both the public and private sectors: DOH Central Office, Centers for Health Development (CHDs), and DOH-retained hospitals; Central offices and regional units of the Commission on Population (POPCOM), Philippine Health Insurance Corporation (PhilHealth), and other DOH attached agencies; LGUs as provided for in their agreements with the DOH that involve resource transfers, and DOH-ARMM as provided for in the Memorandum of Agreement between DOH and ARMM dated 23 April 2009; Development Partners, in the context of their strategic agreements for health with the Government of the Philippines; private health care providers; and all others concerned.

IV. DEFINITION OF TERMS

1. **Community Health Team (CHT)** – a group of health volunteers having a critical role in increasing awareness on and recognition of health risks among families, promoting healthy behaviors, and prompting individuals to seek and utilize affordable and accessible health care services, particularly among poor families. DOH, DepEd, DSWD, and DILG JMC No. 2011-0073 provides for the creation of a TWG on CHTs, while DOH DM No. 2011-0286 provides for guidelines on the mobilization of CHTs.

2. **Cross-docking** – a practice in logistics management of unloading materials from the incoming bulk supplier and then loading these materials directly into outbound carriers/forwarders for direct delivery to the end distribution points, with little or no storage in between except for the time needed to obtain samples for quality control.

3. **Family Development Sessions (FDS)** – an integral activity of 4Ps that seeks to expand the knowledge and enhance the skills of beneficiary parents, in order to help them appreciate and comply with the health and education conditionalities of the program. *(DSWD Manual of Operations)*

4. **FP Competency-based Training (FP CBT)** – training for FP on infection prevention, client assessment, provision of certain FP methods (i.e., standard days method, hormonal contraceptives, and condoms), counseling, and FP clinic management that uses a laddered approach, exposing participants to levels of training based on developed knowledge, skills, and behavior. The modified training system, which is performance-based, develops the knowledge, attitudes, and skills of participants on the requirements of quality family planning (FP) service provision. FP CBT 1 covers knowledge on the different modern methods and skills on counseling, pills dispensing, injectable, condom insertion, and cycle beads FP methods, while CBT 2 covers IUD insertions. Specialized course on FP includes Natural Family Planning Methods, Minilaparotomy under local anesthesia (BTL), and No-scalpel vasectomy (NSV)

5. **Informed Choice and Voluntarism (ICV)** – a standard in the delivery of FP services, ensuring that clients freely make their own decision based on accurate and complete information on a broad range of available modern FP methods, and not by any special inducements or forms of coercion or misrepresentation. Guidelines on ensuring compliance to ICV in the delivery of FP services are contained in DOH AO No. 2011-0005.

6. **Interpersonal Communication and Counseling (IPCC)** – a face-to-face, verbal and non-verbal exchange of information. Effective IPCC between health care provider and client is one of the most important elements for improving client satisfaction, compliance and health outcomes.

7. ***Kalusugan Pangkalahatan* (KP)** – also known as the Aquino Health Agenda to achieve Universal Health Care (AHA-UHC), KP is a focused approach to health reform implementation, ensuring that all Filipinos especially the poor receive the benefits of health reform. KP's three strategic thrusts are i) rapid expansion in NHIP enrollment and benefit delivery using national subsidies for the poorest families; ii) improved access to quality hospitals and health care facilities through accelerated upgrading of public health facilities; and iii) attainment of the health-related MDGs by applying additional effort and resources in localities with high concentration of families who are unable to receive critical public health services. DOH AO No. 2010-0036 and DO No. 2011-0188 provide for the agenda and the execution plan to achieve UHC/KP, respectively.

8. **MDG 12 Areas** – these are sub-national areas of NHTS-PR poor households that have also been determined to have high concentrations of unmet need for public health services (including modern family planning), in accordance with DO No. 2011-0188 or the KP Execution Plan. These areas are: Metropolitan Manila, Negros Occidental, Quezon Province, Cebu Province, Pangasinan, Iloilo, Cavite, Maguindanao, Zamboanga del Sur, Leyte, Davao del Sur, and Pampanga.

9. **Municipal/City Links (MLs/CLs)** – serve as the link between the DSWD and LGUs in the over-all supervision of 4Ps implementation in municipalities/cities, in coordination with the Municipal Social Welfare and Development Office (MSWDO), and community facilities, like schools and health centers. They monitor compliance and grievances of all stakeholders in the program. Similarly, they provide training and capability building activities to beneficiaries.

10. **National Household Targeting System for Poverty Reduction (NHTS-PR)** – an information management system that identifies who and where the poor are, with its implementation being spearheaded by the DSWD. In compliance with EO No. 867, s. 2010, the DOH as a national government agency has adopted the NHTS-PR as a mechanism in prioritizing the beneficiaries of its programs and projects.

11. **National Online Stock Inventory Reporting System (NOSIRS)** – a logistics management initiative with standard and formal reporting systems that can generate logistics information at all levels of the health care system. NOSIRS utilizes Supply Management Recording (SMR) as the recording tool to efficiently track the status of commodities at health facilities and hospitals nationwide.

12. ***Pantawid Pamilyang Pilipino* Program (4Ps)** – a poverty reduction strategy that provides cash grants to extremely poor households to allow their family members to meet certain human development goals. The focus is on building human capital in the poorest families (through investments in their health/nutrition and education) because low schooling, ill health and high malnutrition are strongly associated with the poverty cycle in the Philippines. The 4Ps conditionalities for beneficiaries to remain in the program include the requirement for pregnant household members to attend at least one family planning counseling session prior to delivery, and another one within the first six weeks after childbirth. DSWD AO No. 16, s. 2008 provides for guidelines on the implementation of 4Ps.

13. **Parent Leaders (PLs)** – a beneficiary parent of 4Ps who has been determined by consensus of his/her peers to be the point person between the DSWD/4Ps, the LGU link, and the household grantees at the barangay level. The tasks of a PL include the follow-up and monitoring of attendance of household grantees in community assemblies and family development education sessions, as well as the conduct of home visits to household grantees who have not been attending the community assembly. *(DSWD 4Ps Manual of Operations)*

14. **Priority Municipalities for Poverty Reduction (Priority 609)** – these are municipalities tagged as the Aquino Government's priority areas for poverty reduction, pursuant to NAPC MC No. 2011-001.

15. **Private Sector Providers (PSPs)** – are health care providers (both for-profit and not-for-profit) that are not directly operated or controlled by the state or any of its instrumentalities. PSPs may be natural or juridical persons, and they may either provide health care services or goods.

16. **Service Delivery Network (SDN)** – refers to the network of facilities and providers within the province-wide or city-wide health system offering a core package of services (which includes modern family planning) in an integrated and coordinated

manner, pursuant to the MNCHN Strategy Manual of Operations (DOH DM No. 2011-0117).

17. **Social and Behavioral Change Communication (SBCC)** – an approach that looks at the role of communication in bringing about social change, including individual behaviors and social norms. SBCC utilizes a strategic mix of communication interventions using audience-appropriate interpersonal and mass media communication channels to engage individuals, families and communities to promote, stimulate and sustain behavior change.

18. **Unmet Need for Modern Family Planning (UMFP)** – the number of women who are fecund and sexually active but are not using any modern method of contraception, and report not wanting any more children (limiting) or wanting to delay the birth of their next child (spacing).

V. STATEMENT OF POLICY

A. Filipino families have fundamental, constitutional human rights to determine the number of children they want to have. Given their preferences and understanding of the health risks involved in pregnancy and delivery, Filipino families shall have access to all modern FP methods in order to allow them to determine when to have children and meet their desired family size.

B. The reduction of unmet need for modern FP shall respect the personal preferences of individuals involved. It shall be contextualized as a human rights-based intervention guided and anchored on the following principles: respect for the sanctity of life, respect for human rights, informed choice and voluntarism *(AO No. 2011-0005)*, and respect for the rights of clients to determine their desired family size.

C. Modern FP shall include among its methods the following: pills; injectables/DMPA; condoms; IUDs; natural family planning/NFP *(AO No. 132 s. 2004)* including lactational amenorrhea method (LAM); bilateral tubal ligation (BTL); vasectomy *(AO No. 50-A s. 2001)*; and any other method deemed to be safe and effective by the DOH.

D. The demand for modern FP methods among the priority beneficiaries shall be accelerated alongside the enhanced and expanded equitable provision of FP goods and services at all levels of the health care system. A whole-of-society, client-centered and social determinants approach shall be adopted.

VI. GENERAL GUIDELINES

A. FP as a program shall be implemented at the national and local levels with the active involvement of both public and private sectors. It shall have the following key elements *(RA No. 6365, Sec. 2 as amended by PD No. 79)*:

1. Quantitative estimates centered on the elimination of unmet need for modern FP, used for determining logistics and budget requirements for planning purposes *(AO No. 2011-0005, provision VI.1.f)*;

2. Information and education campaigns targeted to priority beneficiaries and delivered mainly at the interpersonal level; and
3. Provision of affordable and accessible counseling, supplies, commodities, and services of all safe and effective methods to couples desiring to space or limit family size.

B. The implementation of the FP program shall be *integrated and synchronized* with other public health programs/campaigns (e.g., Maternal, Neonatal, and Child Health and Nutrition or MNCHN programs, *Garantisadong Pambata*, etc.) in the broader context of the KP Execution Plan. It is expected that resources shall be optimized for joint use where applicable with other health priorities. A client-centered, life cycle approach on delivering FP services at any point of contact shall be adopted.

In particular, the following shall be accomplished:

1. Expansion of the enrollment of poor families into the NHIP. This shall include information and guidance on use of PhilHealth benefits for FP through organized Community Health Teams or by some other means that is practicable and sustainable;
2. Enhancement of the service delivery network (SDN) capacity of providers for FP, especially for LAPM, by upgrading public facilities and to consider contracting private service providers where there are gaps for implementation; and
3. Fast tracking of procurement and streamlining of distribution and replenishment of goods such as pills, injectables, condoms and IUDs according to the estimates and preferences of beneficiaries in priority areas.

C. Informed choice and voluntarism (ICV) shall be promoted by all public or private health care providers rendering FP services. Clients shall not be denied any right or benefit including the right to avail of any program of general welfare or health care, as a consequence of any decision regarding FP services; neither shall they be coerced to use any particular FP method.

D. Priority shall be given to delivering additional/enhanced FP services in localities that have the highest estimated unmet need for modern FP methods. Nevertheless, the delivery of additional/enhanced FP services shall be carried out such that current levels of modern FP use in priority and other areas are equitably maintained.

E. Contraceptive self-reliance shall be encouraged. Resources such as grants, supplies and commodities, and training/capacity building may be provided to the priority LGUs as lead implementers, in order to leverage for good FP program performance. LGUs that receive such support or assistance are expected to provide complementary allocations to implement health programs.

F. Interventions to reduce unmet need for modern FP shall be tailor-fitted to prevailing local conditions and needs of province- or city-wide health systems, in close consultation with LGUs.

G. In highly populated or urbanized areas and where there are gaps in LGU services, private sector providers (e.g., private practice health professionals, lying-in clinics/birthing facilities, non-government organization clinics, etc.) of FP goods and/or services shall be engaged through the provision of grants, commodities, and technical assistance or any other acceptable mechanism.

H. Monitoring and evaluation of progress in reducing unmet need for modern FP shall focus on indicators based on factors that influence demand and supply, and the resulting outcomes from these interventions.

I. All Social and Behavioral Change Communication (SBCC) activities for FP shall be not be independent of the overall unifying communication strategy for *KP* that addresses individual knowledge and behavior, collective attitudes or norms, and societal level policies and regulations.

VII. SPECIFIC GUIDELINES

A. The delivery of additional/enhanced FP services shall be executed according to the estimates of unmet need for FP in the following beneficiaries, in order of descending priority:

1. NHTS-PR poor households living in MDG 12 areas;
2. NHTS-PR poor households living in the Priority 609 municipalities;
3. All other NHTS-PR poor households not included in items 1 and 2 above; and
4. Other poor households that may be identified, as a result of need or availability of resources.

B. The procurement and distribution of commodities shall be streamlined according to the following:

1. Commodities shall be procured according to the estimated needs of priority populations based on the preferred method mix per age group, as determined by data on observed health-seeking behaviors using the most recent demographic health survey or its equivalent, or by some other comparable scientific method as deemed appropriate by the DOH..
2. Commodity grants to be provided to LGUs shall take into consideration the local availability of FP commodity stock supply, strength of the private sector market, LGU commodity self-reliance activities, and the commodity assistance of development partners.
3. Supply chain management shall promote efficiency with the end goal of the expedited distribution of quality-checked commodities to beneficiary families. Towards this end, innovations such as but not limited to cross-docking of commodities shall be adopted.
4. A unified information and communication technology (ICT) solution (e.g., NOSIRS/SMR) shall be used to track commodity flows in real time, from the point of initial procurement to the point of receipt by beneficiary families.
5. Commodity assistance or donations for FP from Development Partners shall be coordinated with DOH, who will allocate the said commodities according to the prioritization of beneficiaries in this

Order. Donated commodities shall be reserved for distribution to LGUs with supply gaps.

C. LGUs shall take the lead in implementing FP programs and services. Consistent with applicable provisions of AO No. 2008-0020, DOH shall provide assistance through grants, commodities, facility enhancement, technical assistance, and/or training/capacity building in the context of other assistance packages under KP. Assistance shall be delivered through grant mechanisms that shall promote collaboration and innovation among local partners such as the private sector, labor associations, NGOs, or civil society.

D. The training/capacity building of FP providers shall proceed according to the following:
   1. Standardized training for the provision of all modern FP services shall be offered to all government/public and private sector providers at a reasonable cost (e.g., meals and accommodation, among others). Once trainees complete the prescribed courses/activities, they shall be included in the SDN of their respective areas;
   2. All DOH regional medical centers are hereby designated as training centers for permanent methods of FP, such as BTL via mini-laparotomy under local anesthesia (MLLA) and no scalpel vasectomy, provided that they shall also be training centers for IUD insertion in areas where there are no preceptor sites for FP CBT Level 2;
   3. CHDs and LGU health offices shall organize and conduct FP CBT Level 1 and natural FP training courses; and
   4. Where there are gaps in public sector trainers, private sector partner training institutions/training centers shall be contracted to provide capacity building.

E. FP services are to be provided to poor families with zero co-payment on their part, consistent with KP policy on No Balance Billing (NBB). PhilHealth shall be the main source of financing to pay for FP services, according to the terms and conditions of its benefit packages for FP.

F. The upgrading of public hospitals and other health facilities shall ensure the availability of appropriate FP services according to their respective service delivery mandates, and shall be part of the hospital development plan.

G. Social and behavioral change communication (SBCC) activities shall be customized and targeted for direct delivery to beneficiary families at the *interpersonal* level, according to the following, among others:
   1. Community health teams (CHTs) and other community based volunteers shall be mobilized to conduct household visits to inform families, assist in health use planning, as well as follow-up and refer couples to appropriate health facilities/providers;
   2. Parent Leaders (PL), in coordination with the DSWD and LGUs, shall be integrated into or shall work with CHTs for mobilization to 4Ps families, including the conduct of Family Development Sessions (FDS) on responsible parenthood and family planning. Municipal

Links (ML) shall be tapped to assist in organization of FDS centered on modern FP; and
   3. The conduct of outreach activities to the poor shall generate supportive social norms for family planning, stimulate behavior change for the utilization of modern FP methods, and provide opportunities to serve clients (e.g., provision of mobile clinics)..

H. In areas where there is significant presence and activity of private sector providers and other stakeholders (e.g., urban areas), they may be contracted to provide and/or support FP services so that DOH, LGU, and other public sector effort and resources can be focused on isolated and hard-to reach areas (e.g., GIDAs).

I. Each province- or city-wide health system shall carry out measures to reduce unmet need for modern FP, which includes the following major steps:
   1. Using the latest data on the identities and locations of the priority beneficiary families (i.e., lists of 4Ps families and NHTS-PR families), estimate the magnitude of unmet need for modern FP as well as the magnitude of current modern FP use.
      a. The overall approach to reducing unmet need among the poor is conceptually illustrated in Annex A.
      b. Annex B provides the detailed estimates of unmet need for modern FP for CY 2012, subject to validation with actual households.
   2. Using the latest data on modern FP service and commodity preferences/method mix of the population, estimate the volume and cost of required commodities and services needed by the beneficiary families.
   3. Determine and document the inventory of available resources and capacities (budget, infrastructure, and trained personnel) for modern FP commodities and services from the central, regional, and local level, coming from the LGU, DOH, Development Partners, and private sector providers.
   4. Match/assign available resources and capacities for modern FP to the beneficiary families' requirements for commodities and services with the use of a geographic information system (GIS) such as Google Earth/Google Maps, or some other similar platform.
   5. Determine commodity and service gaps, if any, and propose solutions by which these gaps can be filled.
   6. Designate/contract at the level of municipalities/barangays public or private providers that can provide FP goods and services to the beneficiary families at no balance billing (NBB).
   7. Specify mechanisms for the delivery of FP services to families at the points of use, given local conditions and preferences, in consideration of both estimated unmet need and current use.
   8. Coordinate the timeline of activities to meet specific targets for reduction in unmet need and maintenance of current use with timelines at the regional and national levels.

J. The planned outcome of families using safe, affordable, and high quality FP commodities and services according to their preferences shall be achieved by ensuring that inputs (e.g., budgets, commodities, and other resources) shall lead to the necessary outputs (e.g., health use plans for FP) within a specific timeframe. An operational monitoring and evaluation system for FP services shall be integrated with its overall counterpart for KP, with data quality checking and adequate information systems management. In particular, CHTs shall validate the estimates of unmet need for modern FP with the expressed need of clients.

VIII. ROLES AND RESPONSIBILITIES

A. A Technical Steering Committee (TSC) shall lead the implementation of this Order.
   1. The TSC shall be co-Chaired by the heads of the DOH CO Technical Clusters supervising POPCOM and NCDPC. The Executive Director of POPCOM shall be the Vice Chair of the TSC.
   2. TSC members shall include the Directors IV of NCDPC and NEC; a representative of PhilHealth; and one Regional Director for each Operations Cluster, to be designated by the respective Operations Cluster heads.
   3. The TSC shall take the lead in terms of policy development, standard setting, advocacy, resource mobilization, capacity building, networking and coordination, and monitoring and evaluation, according to the provisions of this Order.
   4. The TSC shall report directly to the Secretary of Health and the DOH Executive Committee on the organizational, programmatic, and communication arrangements to implement this Order.

B. The Department of Health (DOH) shall coordinate and work closely with their respective national and local counterparts of the DSWD, DILG, NAPC, other national government agencies including Civil Society Organizations (CSO), so that the national strategy for reducing unmet need for FP services is shared and implemented synchronously at all levels.
   1. The National Center for Disease Prevention and Control (NCDPC) through the Family Health Office shall assume technical leadership over the FP program while providing logistic supplies and arrangements, as well as developing policies and plans for establishing, developing, and sustaining FP services at all levels in high priority areas. Specifically, NCDPC shall:
      a. Identify the medium- and long-term quantifiable estimates to reduce unmet need for modern family planning;
      b. Prepare and oversee centralized procurement requests for FP commodities based on the forecast demand;
      c. Develop standards and protocols for the delivery of FP services (e.g., screening of women with unmet need for modern FP; participation of the private sector), for reference and use by LGUs in their service delivery activities and PhilHealth in their accreditation of FP providers;

      d. Develop a monitoring and reporting mechanism to track progress in the implementation of this Order;
      e. Coordinate with the following: the Health Policy Finance and Research Development Technical Cluster in developing principles of FP grants; the NCHFD for the upgrading of DOH and LGU hospitals and facilities; the NCHP for the development and implementation of an FP communication plan; and CHDs to provide technical support; and
   2. Centers for Health Development (CHDs) of their respective Operations Clusters shall identify approaches and interventions that are most appropriate for the LGUs within their respective regions, and provide technical support to LGUs in the following areas:
      a. Development of the FP service delivery network and capacity building for FP CBT 1 and 2 and Natural Family Planning;
      b. Demand generation from women and couples with unmet need;
      c. Sustaining the current use rate for modern family planning;
      d. Design and implementation of FP grant mechanisms by consolidating available resources from the central office, regional funds, retained hospitals, and development assistance; and
      e. Monitoring and reporting of progress in reducing unmet need for modern FP.
   3. DOH-retained hospitals, including among others the Fabella Memorial Hospital, shall influence local performance by:
      a. Creating FP itinerant teams and making them available for dispatch to respond to the needs for surgical methods especially in urban and rural poor communities *(AO No. 50-A, s. 2001)*;
      b. Being resource centers for technical assistance, training and research including logistics;
      c. Being local benchmarks for clinical practice and procedures, following the Philippine Clinical Standards Manual on Family Planning 2006;
      d. Being sources of competitive pressure so that local private and public facilities are influenced to deliver quality and affordable care; and
      e. Being end referral facilities that will complement services provided by LGU hospitals and facilities.
   4. The Health Policy Finance and Research Development Technical Cluster, through the HPDPB and the BIHC, shall:
      a. Ensure that programs of units in the sector support the implementation of this Order by integrating programs, projects, and activities for FP into existing plans of KP;
      b. Integrate the monitoring and reporting mechanism to track progress in the implementation of this Order into the overall monitoring and evaluation frame for KP;
      c. Coordinate with Development Partners to ensure that their operations for FP are consistent with this Order.

5. The National Center for Health Facilities Development (NCHFD) shall:
   a. Provide standards for health facility enhancement related to FP services;
   b. Coordinate with Operations Clusters and CHDs so that the upgrading goals for DOH and LGU hospitals and facilities shall include the capability to provide FP services; and
   c. Work with NCDPC to coordinate, consolidate, and maximize interventions for FP services.
6. The Central Office Bids and Awards Committee (COBAC) shall, in coordination with the NCDPC, undertake necessary measures to facilitate timely and appropriate procurement of FP supplies and commodities, according to the provisions of this Order and in coordination with the TSC.
7. The Materials Management Division (MMD) shall, in coordination with the NCDPC, undertake necessary measures to strengthen logistics management to ensure, among others, the prompt delivery, tracking (e.g. use of NOSIRS) and distribution of FP supplies and commodities according to the provisions of this Order and in coordination with the TSC.
8. The Food and Drug Administration (FDA) shall facilitate the availability of safe, good quality, efficacious and cost-effective FP goods, including devices, by undertaking measures which include but are not limited to the release of necessary documents (e.g. CPR) for government procured or donated FP goods.
9. The National Center for Pharmaceutical Access and Management (NCPAM), in coordination with the FDA and NCDPC, shall ensure that FP goods are included in the Philippine National Drug Formulary, based on acceptable scientific standards, such as the WHO recommendations on Essential Medicines List.
10. The National Center for Health Promotion (NCHP) shall develop and implement an FP communication plan at the national, regional, and local levels, with focus on interpersonal communication and counseling (IPCC) to families through CHTs or any other mechanism, in tandem with the POPCOM, in order to generate increased demand for FP goods and services.
11. The National Epidemiology Center (NEC) shall provide technical assistance and operational support such as, among others, FP studies and surveys including the Field Health Surveillance and Information System (FHSIS), data quality assurance, and analysis of data related to FP indicators, in coordination with the TSC.
12. The Information Management Service (IMS) shall explore and implement options for developing and sustaining information systems for the FP program.

C. The Commission on Population (POPCOM) shall have a pivotal role of ensuring increased demand for FP goods and services, while assuming technical leadership over policies on human population and development, ensuring effective collaboration with major stakeholders, and lastly, providing an enabling environment for capacity building on advocacy.

Specifically, POPCOM shall:

1. Be the lead technical resource for FP advocacy particularly for LGU officials and in developing LGU capacity for demand generation;
2. Take the lead in assisting in the design and conduct of demand-generation activities based on the communication plan of LGUs and other stakeholders, such as private sector FP providers;
3. In coordination with the DOH-NCHP, launch advocacy/information and education campaigns on FP, with emphasis on interpersonal communication to families through mechanisms like the CHTs; and
4. In coordination with DOH-NCDPC, DOH-CHDs and DOH-ARMM, provide technical assistance and operations support in the monitoring and reporting of progress in reducing unmet need for modern FP.

D. PhilHealth shall exercise leadership in ensuring financial risk protection by providing options for optimal enrolment of recipients of FP services, and expanding benefits to its members to achieve goals of reducing unmet need for modern FP services.

Among others, it shall review its standards for accrediting and contracting health professionals (e.g., midwives, nurses, and physicians) and facilities (e.g., BHS, RHUs, private clinics, ambulatory surgical clinics, birthing centers, hospitals, etc.) alongside with the Bureau of Health Facilities and Services, in order to expand benefits and develop packages for FP services.

PhilHealth shall give due consideration to developing mechanisms to finance FP services delivered through alternative service delivery mechanisms such as outreach programs or by itinerant teams.

E. Local Government Units (LGUs) are encouraged and shall be assisted to:
   1. Execute and implement the major steps needed to reduce unmet need for modern FP, as enumerated in item VII. I. of this Order;
   2. Ensure that demand generation initiatives are implemented in the locality by providing local policy support, as well as budget allocation for all identified activities;
   3. Support the institutionalization of the participation of community-based volunteers in the locality for demand generation by providing incentives for their follow-ups/household visits;
   4. Participate in the SBCC campaigns by way of budget allocation for translation to local dialects and reproduction of SBCC materials;
   5. Mobilize and support local population officers/workers and barangay service point officers (BSPOs) or their designates to be the focal/resource persons in the conduct of the RP/FP module of the 4Ps FDS, as well as to be in-charge of overall reporting and monitoring of all RP/FP classes;
   6. Ensure that the FP service facilities are adequately accessible with trained service providers, appropriate equipment and commodities;

7. Ensure contraceptive self-reliance particularly to meet the FP unmet needs of their poor constituents;
8. Provide assistance in capacity building of MLs/PLs and community-based volunteers through the use of local facilities, equipment and vehicles and provision of budget for meals and snacks and materials for training; and
9. Monitor, submit and disseminate performance indicators on a regular basis through the CHDs. in coordination with the TSC.

F. Development Partners, within the context of the Sector-wide Development Approach for Health and subject to agreements with the DOH, shall ensure that their assistance to FP (commodities or otherwise) shall be consistent with the provisions of this Order. All FP-related projects shall be coordinated with the TSC, through the Bureau of International Health Cooperation (BIHC).

IX. ANNEXES

The following Annexes are an integral part of this Order:

Annex A – Illustration of the overall approach to reducing unmet need among the poor, for planning and budgeting purposes
Annex B – Estimates of unmet need for modern FP for CY 2012, subject to validation with actual households

X. REPEALING AND SEPARABILITY CLAUSE

All orders, rules, regulations, and other related issuances inconsistent with or contrary to this Order are hereby repealed, amended, or modified accordingly. All provisions of existing issuances which are not affected by this Order shall remain valid and in effect.

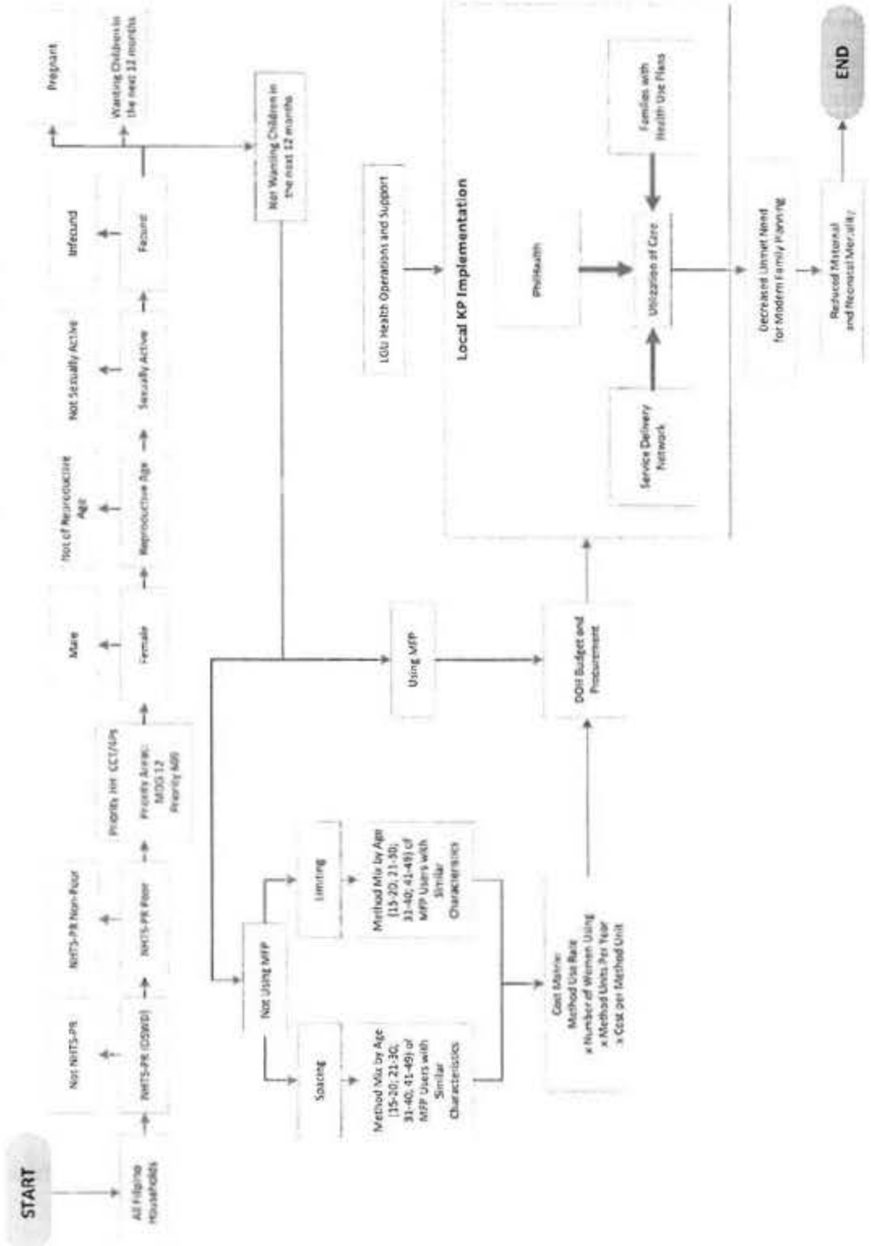
In the event that any provision or part of this Order is declared unauthorized or rendered invalid by any Court of law or competent authority, those provisions not affected by such declaration shall remain valid and effective.

XI. EFFECTIVITY

This Order shall take effect immediately.

ENRIQUE T. ONA, MD
Secretary of Health

Annex A – AO No. 2012-
Illustration of the overall approach to reducing unmet need among the poor, for planning and budgeting purposes



Annex B – AO No. 2012-0009
Estimates of unmet need for modern FP for CY 2012, subject to validation with actual households

Estimates of Unmet Need for Modern FP for CY 2012

Area	Number of NHTS-PR poor households*	Number of CCT/4Ps households*	Estimated UMFP of NHTS-PR poor households	Estimated UMFP of CCT/4Ps households
Philippines	**5,255,094**	**2,991,466**	**2,232,963**	**1,316,838**
Northern and Central Luzon Operations Cluster	**768,438**	**331,640**	**768,438**	**147,584**
CAR	**79,816**	**55,570**	**41,187**	**29,086**
ABRA	17,544	12,422	8,966	6,586
APAYAO	10,838	7,413	4,473	3,160
BENGUET	17,947	11,195	11,685	7,340
IFUGAO	12,229	9,270	6,772	5,202
KALINGA	13,605	9,818	6,980	5,135
MOUNTAIN PROVINCE	7,653	5,452	2,310	1,662
CHD I	**247,882**	**116,296**	**107,457**	**51,636**
ILOCOS NORTE	24,890	14,785	8,240	5,816
ILOCOS SUR	34,213	13,219	3,517	6,605
LA UNION	40,178	16,114	17,255	6,959
PANGASINAN	148,601	72,178	41,135	32,255
CHD II	**118,118**	**80,315**	**45,353**	**31,171**
BATANES	178	0	66	0
CAGAYAN	38,270	28,413	15,536	10,039
ISABELA	54,678	35,330	25,566	12,867
NUEVA VIZCAYA	16,500	10,289	4,722	5,072
QUIRINO	8,492	6,283	1,416	3,193
CHD III	**322,622**	**79,459**	**136,876**	**35,692**
AURORA	9,333	6,516	3,864	5,788
BATAAN	16,655	3,049	5,475	1,468
BULACAN	73,683	10,141	19,504	5,336
NUEVA ECIJA	96,863	31,226	36,147	11,021
PAMPANGA	55,328	9,258	21,273	2,852
TARLAC	46,956	12,279	15,519	5,422
ZAMBALES	23,804	6,990	5,056	3,805
Southern Luzon and NCR Operations Cluster	**1,410,509**	**691,167**	**687,302**	**355,598**
CHD IV-A	**389,811**	**156,346**	**181,470**	**78,774**
BATANGAS	105,359	49,597	36,189	17,637
CAVITE	58,536	11,019	25,612	4,986
LAGUNA	55,417	11,877	32,267	7,197
QUEZON	122,139	81,625	68,726	48,085
RIZAL	48,360	2,228	18,677	869

16

Annex B – AO No. 2012-_____
Estimates of unmet need for modern FP for CY 2012, subject to validation with actual households

Area	Number of NHTS-PR poor households*	Number of CCT/4Ps households*	Estimated UMFP of NHTS-PR poor households	Estimated UMFP of CCT/4Ps households
CHD IV-B	**242,633**	**159,441**	**104,468**	**71,219**
MARINDUQUE	14,152	7,315	6,512	3,411
OCCIDENTAL MINDORO	37,421	24,045	22,735	15,031
ORIENTAL MINDORO	73,878	52,272	30,731	22,491
PALAWAN	95,952	60,551	36,260	24,103
ROMBLON	21,230	15,258	8,230	6,183
CHD V	**461,242**	**307,665**	**245,583**	**172,110**
ALBAY	88,242	31,544	48,471	18,287
CAMARINES NORTE	40,802	28,546	25,517	18,872
CAMARINES SUR	136,208	98,721	70,763	53,198
CATANDUANES	16,743	13,724	9,372	7,939
MASBATE	103,478	77,645	56,843	45,797
SORSOGON	75,769	57,485	34,617	28,018
NCR	**316,823**	**67,715**	**155,780**	**33,495**
Manila	58,329	17,515	19,894	6,162
Mandaluyong	5,445	1,465	2,895	795
Marikina	11,997	1,750	6,164	903
San Juan	2,166	338	1,170	182
Navotas	20,633	4,639	12,714	3,018
Las Pinas	11,185	2,206	4,763	1,017
Makati	7,552	909	3,145	386
Paranaque	12,705	1,280	5,076	541
Muntinlupa	10,213	2,307	4,147	947
Pateros	2,436	317	1,015	131
Quezon City	51,445	9,416	25,739	4,784
Pasay	9,430	2,727	3,904	1,539
Valenzuela	18,615	3,051	11,339	1,941
Malabon	21,563	4,256	13,291	2,726
Caloocan	40,160	8,418	24,705	5,499
Pasig	19,131	3,781	10,373	1,596
Taguig	13,818	3,340	5,447	1,327
Visayas Operations Cluster	**1,035,376**	**683,684**	**464,239**	**318,921**
CHD VI	**385,516**	**253,171**	**173,669**	**116,298**
AKLAN	34,924	23,207	14,425	9,858
ANTIQUE	38,155	27,103	18,217	13,409
CAPIZ	39,855	33,446	12,947	11,058
GUIMARAS	11,148	6,574	10,079	6,166
ILOILO	122,770	76,187	61,745	39,434
NEGROS OCCIDENTAL	138,664	86,654	56,256	36,374
CHD VII	**314,652**	**205,925**	**126,512**	**86,183**

17

Annex B – AO No. 2012-_____
Estimates of unmet need for modern FP for CY 2012, subject to validation with actual households

Area	Number of NHTS-PR poor households*	Number of CCT/4Ps households*	Estimated UMFP of NHTS-PR poor households	Estimated UMFP of CCT/4Ps households
BOHOL	70,028	45,996	37,939	25,681
CEBU	151,425	94,498	50,872	33,181
NEGROS ORIENTAL	88,548	62,937	34,769	25,663
SIQUIJOR	4,651	2,494	2,932	1,657
CHD VIII	**335,208**	**224,588**	**164,058**	**116,440**
BILIRAN	8,070	6,386	5,574	4,539
EASTERN SAMAR	38,487	22,118	16,723	10,106
LEYTE	132,377	88,549	52,422	37,162
NORTHERN SAMAR	59,262	44,255	24,975	19,758
SAMAR (WESTERN SAMAR)	73,827	46,437	44,759	30,527
SOUTHERN LEYTE	23,185	16,843	19,605	14,349
Mindanao Operations Cluster	**1,509,245**	**971,194**	**379,451**	**380,620**
CHD IX	**369,236**	**227,352**	**144,689**	**95,304**
CITY OF ISABELA	10,596	5,029	6,039	3,168
ZAMBOANGA DEL NORTE	113,816	73,749	40,221	28,264
ZAMBOANGA DEL SUR	170,181	98,555	69,172	42,884
ZAMBOANGA SIBUGAY	74,643	50,019	29,257	20,988
CHD X	**338,749**	**233,083**	**122,277**	**88,493**
BUKIDNON	98,107	71,037	25,435	19,282
CAMIGUIN	7,470	4,889	3,869	2,752
LANAO DEL NORTE	94,007	63,471	37,825	26,868
MISAMIS OCCIDENTAL	46,061	34,191	17,364	13,818
MISAMIS ORIENTAL	93,104	59,495	37,784	25,773
CHD XI	**272,932**	**172,182**	**83,949**	**56,061**
COMPOSTELA VALLEY	58,148	38,283	16,795	11,946
DAVAO DEL NORTE	58,934	33,261	18,738	11,304
DAVAO DEL SUR	111,655	67,558	36,126	23,214
DAVAO ORIENTAL	44,195	33,080	12,290	9,598
CHD XII	**296,043**	**185,645**	**112,486**	**72,090**
COTABATO (NORTH COTABATO)	99,021	65,779	38,259	26,081
COTABATO CITY	19,434	10,992	12,184	6,975
SARANGANI	44,469	28,844	16,258	11,017
SOUTH COTABATO	70,771	40,552	26,849	16,047
SULTAN KUDARAT	62,348	39,478	18,936	11,971
CARAGA	**232,285**	**152,932**	**96,738**	**68,671**
AGUSAN DEL NORTE	49,437	28,412	22,896	13,989
AGUSAN DEL SUR	65,473	45,441	33,650	25,347

Annex B – AO No. 2012-_____
Estimates of unmet need for modern FP for CY 2012, subject to validation with actual households

Area	Number of NHTS-PR poor households*	Number of CCT/4Ps households*	Estimated UMFP of NHTS-PR poor households	Estimated UMFP of CCT/4Ps households
SURIGAO DEL NORTE	58,209	39,635	26,260	19,257
SURIGAO DEL SUR	59,166	39,444	13,932	10,079
ARMM	**531,526**	**313,781**	**190,410**	**114,115**
BASILAN	41,142	26,514	16,482	10,595
LANAO DEL SUR	109,725	82,024	52,578	38,760
MAGUINDANAO	227,599	111,343	69,991	34,219
SULU	122,218	77,663	39,521	24,235
TAWI-TAWI	30,842	16,237	11,838	6,306

*Data as of April 2012 update from DSWD CO NHTS-PR and 4Ps Offices

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