INDIVIDUALIZED TRAINING COURSE

NO-SCALPEL VASECTOMY COURSE HANDBOOK *for* TRAINERS

Government of Nepal
Ministry of Health
National Health Training Center
May 2016

USAID
FROM THE AMERICAN PEOPLE

INDIVIDUALIZED TRAINING COURSE

NO-SCALPEL VASECTOMY COURSE HANDBOOK *for* TRAINERS

Government of Nepal
Ministry of Health
National Health Training Center
May 2016

TABLE OF CONTENT

SECTION ONE: PARTICIPANTS HANDBOOK

SECTION TWO: GUIDE FOR TRAINERS

OVERVIEW

BEFORE STARTING THIS TRAINING COURSE

This individualized clinical training course will be conducted using principles of adult learning which are based on the assumption that people participate in courses because:

- They are interested in the topic.
- They know what they want to gain from the course. In other words, they can explain why they selected this particular course rather than some other course or topic.
- They are actively interested in learning new knowledge, attitudes and skills.

For these reasons, all of the course materials focus on the **participant**. For example, the course content and activities are intended to promote **learning**, and the participant is expected to be actively involved in **all** aspects of that learning. Finally, the **clinical trainer** will create a comfortable environment and promote those activities which assist the participant in acquiring new knowledge, attitudes and skills.

In this type of individualized learning program, the **clinical trainer** and the **participant** are provided with a similar set of educational materials. The clinical trainer by virtue of her/his previous training and experiences works with the participants as an expert on the topic and guides the learning activities.

The competency-based training approach used in this course stresses the importance of cost- effective use of resources, application of relevant educational technologies and use of detailed (step-by-step) counseling and clinical skills learning guides to help participants learn and measure their own progress. Finally, competency-based knowledge questionnaires and skills checklists are provided to assist the clinical trainer to evaluate each participant's performance objectively.

TRAINING APPROACH USED IN THIS COURSE

Competency-based training focuses on learning by **doing**. The objective is to more effectively equip health professionals with the knowledge and skills needed to provide quality no-scalpel vasectomy (NSV) services in a sensitive and caring manner.

Key features of the training approach include:

- Being based on adult learning principles, which means it is interactive, relevant and practical
- Using behavior modification (modeling) to facilitate learning
- Training to well-defined performance standards for each skill or activity
- Assessing how well the participant performs a skill or activity rather than how much s/he has learned
- The participant will learn the information in the reference manual on an individual basis using a combination of reading, watching videotapes, completing a series of exercises and working with the trainer.

WHAT IS COMPETENCY-BASED TRAINING?

Competency-based training (CBT) is distinctly different from the traditional educational process. CBT provides health care workers with those competencies vital to the successful performance of their jobs. Unlike traditional teaching which emphasizes evaluation of **what information the participant has learned**, CBT emphasizes evaluation of **how the participant performs** (i.e., a combination of knowledge, attitudes and, most importantly, skills).

To accomplish CBT successfully, the clinical skill or activity to be taught is first broken down into its essential steps. Each step is then analyzed to determine the most efficient and safe way to teach and learn it, a process called **standardization**. Once a procedure such as NSV has been standardized, competency-based learning guides and evaluation checklists can be developed to measure progress in learning and evaluate the participant's overall performance of the skill or activity.

An essential component of CBT is the use of **coaching** in which the clinical trainer first explains a skill or activity and then demonstrates it using an anatomic model or other teaching aid such as a slide set or videotape. Once the procedure has been demonstrated and discussed, the trainer/coach then observes and interacts with the participant to guide her/him in learning the skill or activity, monitoring her/his progress and helping her/him overcome problems.

The coaching process ensures that the participant receives feedback regarding performance:

- **Before practice**—The clinical trainer and participant should briefly meet prior to each practice session to review the skill/activity including the steps/tasks which will be emphasized during the session.
- **During practice**—The clinical trainer observes, coaches and provides feedback to the participant as s/he performs the steps/tasks as outlined in the learning guide.
- **After practice**—This feedback session should take place immediately after practice. Using the learning guide the clinical trainer discusses the strengths of the participant's performance and also offers specific suggestions for improvement.

When CBT is integrated with **adult learning principles** and is based on **behavior modeling**, the result is a powerful and extremely effective method for providing technical training. And, when the use of **anatomic models and other teaching aids** is incorporated, training time (and training costs) can be significantly reduced. For example, in a study conducted in Thailand, the traditional IUD training method was compared with one using the CBT approach just described. When trainees were allowed to learn and repeatedly practice with pelvic models, 70% of the 150 trainees were judged to be competent after just two insertions in clients and 100% by six. By contrast, of the 150 participants taught without the use of pelvic models, 50% obtained competency only after an average of 6.5 insertions and 10% never achieved competency (i.e., were not qualified) even after 15.

Incorporating the use of models (**humanistic training**) facilitates learning by allowing participants to learn and practice new skills initially in a simulated setting rather than with clients. This reduces stress for the learner as well as minimizes the risk of injury and discomfort to the client. Thus, employing this more humane training approach is an important component in improving the quality of clinical training and, ultimately, service provision.

HUMANISTIC TRAINING

As described above, anatomic models which closely simulate the human body are used by course participants for initial **skill acquisition** in NSV and to enable them to attain **skill competency** prior to working with clients in the clinical setting.

Terms Used to Describe the Levels of Clinical Skill Performance

Skill Acquisition: Knows the steps and their sequence (if necessary) to perform the required skill or activity but **needs assistance**.

Skill Competency: Knows the steps and their sequence (if necessary) and **can perform**

the required skill or activity.

Skill Proficiency: Knows the steps and their sequence (if necessary) and **efficiently performs** the required skill or activity.

For example, before a participant performs a clinical procedure with a client, two learning activities should occur:

- The clinical trainer should **demonstrate** the required skills and client interactions several times using an anatomic model and appropriate training videotapes.
- The participant should **practice**, under the guidance of the clinical trainer, the required skills and client interactions using the model and actual instruments in a simulated setting which closely replicates the real situation.

Only when **skill competency** and some degree of **skill proficiency** have been demonstrated should the participant have her/his first contact with a client.

COMPONENTS OF THE NSV LEARNING PACKAGE

This clinical training course is built around use of the following components:

- Need-to-know information contained in a **Reference Manual**
- A **Course Handbook** containing validated questionnaires, learning guides which break down the skill or activity (e.g., NSV) into its essential steps along with an individualized step-by- step guide to learn the essential need-to-know information about NSV.
- **Well-designed audiovisual materials**, such as, anatomic models, videotapes and other training aids
- **Competency-based performance evaluation**

The reference manual recommended for use in this course is ***No-Scalpel Vasectomy Reference Manual for Nepal.***

USING THE NSV LEARNING PACKAGE

As described above, when CBT is combined with behavioral modeling, it is particularly well- suited to providing technical training. In designing the training materials for this course, particular attention has been paid to making them "user friendly" and to permit the course participants and clinical trainer the widest possible latitude in adapting the training to the participants' learning needs. For example, at the beginning of each course an assessment is made of each participant's knowledge and clinical skills. The results of this precourse assessment are then jointly used by the participant and clinical trainer to adapt the course content as needed so that the training focuses on acquisition of **new** information and skills.

A second feature relates to the use of the reference manual and course handbook. The **Reference Manual** is designed to provide all of the essential information needed to conduct the course. Because the manual contains only information that is consistent with the course goals and objectives, it becomes an integral part of the participant's individualized study program.

The **Course Handbook**, on the other hand, serves a dual function. First, and foremost, it is the road map which guides the participant through each phase of the course. It also contains the course syllabus and program outline and schedule as well as all supplemental printed materials (precourse questionnaire, learning guides and course evaluation) needed during the course.

In keeping with the training philosophy on which this course is based, all training activities, whether in the classroom or clinic, will be conducted in an interactive, participatory manner. To accomplish this requires that the role of the clinical trainer continually change throughout the course. For example, s/he is an **instructor** when presenting a skill demonstration; a **facilitator** when conducting discussions or using role plays; and shifts to the role of **coach** when helping trainees practice a procedure. Finally, when objectively assessing performance, s/he serves as an **evaluator**.

In summary, the CBT approach used in this course incorporates a number of key features. **First**, it is based on adult learning principles, which means that it is interactive, relevant and practical. Moreover, it requires that the clinical trainer facilitate the learning experience rather than serve in the more traditional role of an instructor or lecturer. **Second**, it involves use of behavior modification (modeling theory) to facilitate learning a standardized way of performing a skill or **activity. Third**, it is competency-based. This means that evaluation of the participant is based on **how well** s/he performs the procedure or activity, not just on **how much** has been learned. **Fourth**, where possible, it relies heavily on the use of anatomic models and other training aids (i.e., it is humanistic) to enable participants to practice repeatedly the standardized way of performing the skill or activity **before** working with clients. Thus by the time each participant's performance is evaluated by the clinical trainer using the checklist, **every** participant should be able to perform **every** skill or activity competently. **This is the ultimate measure of clinical training.**

INTRODUCTION

COURSE DESIGN

This individualized clinical training course is designed for physician. The course builds on each participant's past knowledge and takes advantage of her/his high motivation to accomplish the learning tasks in the minimum time. Training emphasizes **doing**, not just knowing, and uses competency-based evaluation of **performance**.

This training course differs from traditional courses in several ways:

- During the first day of the course, participants demonstrate their knowledge of the management of NSV services by completing a written test (**Precourse Questionnaire**).
- Individualized study and clinic sessions focus on key aspects of service delivery (e.g., counseling of clients, how to provide services and manage side effects and other health problems).
- Progress in knowledge-based learning is measured during the course using a standardized written test (**Midcourse Questionnaire**).
- Clinical skills training builds on the participant's previous family planning experience.

Participants' first practice on the anatomical models according to the learning guides. In this way, they learn more quickly the skills needed to perform NSV.

- Clinical session with NSV clients will take place on those days identified in the course schedule, enabling participants to apply newly learned skills immediately.
- Progress in learning new skills is documented using detailed clinical skills learning guides.
- Evaluation of each participant's performance is conducted by a clinical trainer using competency-based skills checklists.

Successful completion of the course is based on mastery of **both** the content and skills components, as well as satisfactory overall performance in providing NSV services to clients.

NSV service delivery is a team effort, requiring the skills of trained clinicians (physicians, nurses and paramedics) and other types of health professionals, such as counselors. Although the course is designed for a single health professional, it is easily adapted for training teams of two persons (a clinician and a non-clinician, such as a counselor or health assistant) in all aspects of NSV service provision.

The person who actually performs the counseling or the NSV may vary from site to site, depending on national and programmatic policies. Thus, opportunities are provided for learning and practicing NSV, as well as counseling techniques, infection prevention, record keeping and follow up of clients. Even if a participant will not carry out a specific task, s/he needs to be familiar with it in order to ensure quality service delivery. Therefore, **all course participants** should be provided the opportunity to observe or perform all of the skills/activities associated with the safe delivery of NSV services.

Role and responsibilities of a NSV surgeon:

Surgeon must ensure over all management such as;

- Planning (preparation meeting)
- Coordination/communications
- Trained and competent team
- Physical facilities
- Logistic supplies
- Medicines are in place and not expired
- Referral mechanism
- IEC/BCC materials
- Counseling
- IP practices
- Follow up of the NSV clients
- Monitoring mechanism and
- Record keeping/Reporting

EVALUATION

This individualized clinical training course is designed to produce qualified NSV service providers. Qualification is a statement by the training institution(s) that the participant has met the requirements of the course in knowledge, skills and practice. Qualification does **not** imply certification. Personnel can be certified only by an authorized organization or agency.

Qualification is based on the participant's achievement in three areas:

- **Knowledge-**A score of at least 85% on the **Midcourse Questionnaire**
- **Skills-**Satisfactory performance of NSV clinical skills
- **Practice-**Demonstrated ability to provide NSV services in the clinical setting Responsibility for the participant becoming qualified is shared by the participant and the trainer. The evaluation methods which will be used in the course are described briefly below:
- **Midcourse Questionnaire**. This knowledge assessment will be given at the time in the course when **all** subject areas have been studied by the participant. An 85% or more correct score indicates knowledge-based mastery of the material presented in the reference manual. If the participant scores less than 85% on the first attempt, the clinical trainer should review the results with the participant and guide her/him on using the reference manual to learn the required information. Participants scoring less than 85% can take the **Midcourse Questionnaire** again at any time during the remainder of the course.

- **Clinical Skills Checklists**. The clinical trainer will use these checklists to evaluate each participant as s/he counsels clients and performs NSV. Evaluation of the **counseling skills** of each participant may be done with clients; however, it may be accomplished at any time during the course through observation during role plays using volunteers. Evaluation of the **clinical skills** usually will be done on the last day of the course.

In determining whether the participant is qualified, the clinical trainer(s) will observe and rate the participant's performance for each step of the skill or activity. The participant must be rated "satisfactory" in each skill or activity to be evaluated as qualified.

- **Provision of Services (Practice)**. During the course, it is the clinical trainer's responsibility to observe each participant's overall performance in providing NSV services. This provides a key opportunity to observe the impact on clients of the participant's **attitude**—a critical component of quality service delivery. Only by doing this can the clinical trainer assess the way the participant uses what s/he has learned.

It is recommended that, if possible, graduates be observed and evaluated in their institution by a **course trainer** using the same counseling and clinical skills checklist within three to six months of qualification. (At the very least, the graduate should be observed by a **skilled provider** soon after completing training.) This postcourse evaluation activity is important for several reasons. **First**, it not only gives the graduate direct feedback on her/his performance, but also provides the opportunity to discuss any startup problems or constraints to service delivery (e.g., lack of instruments, supplies or support staff). **Second**, and equally important, it provides the training center, via the clinical trainer, key information on the adequacy of the training and its appropriateness to local conditions. Without this type of feedback, training easily can become routine, stagnant and irrelevant to service delivery needs.

BASIC COURSE

COURSE SYLLABUS

Course Description. This twelve-day individualized clinical training course is designed to prepare the participant to counsel clients about, and to perform, a NSV.

Course Goals

- To influence in a positive way the attitudes of the participant towards NSV as a method of permanent voluntary sterilization.
- To provide the participant with counseling skills for NSV
- To provide the participant with the knowledge and skills needed for performing NSV, as well as preventing and managing complications related to NSV.
- To provide the participant with the knowledge and skills needed to organize and manage quality NSV services
- To familiarize the participant with the role of the physician in promoting family planning.
- To provide the participant with the knowledge of infection prevention practices.

PARTICIPANT LEARNING OBJECTIVES

By the end of the training course, the participant will be able to:

1. List the rationale for family planning programs and methods, particularly vasectomy, available in Nepal.
2. Understand the status of family planning in Nepal.
3. Understand about the anatomy and physiology.
4. Counsel a client interested in no scalpel vasectomy as a contraceptive method.
5. Understand and apply the principles of informed consent for voluntary sterilization.
6. Explain indications and precautions for NSV under local anesthesia.
7. Perform a client assessment, including a relevant reproductive health history and a genital examination.
8. Use recommended infection prevention practices in the provision of NSV which minimize the risk of postoperative infections and contracting hepatitis B and AIDS.
9. Understand the principles and requirements for the use of local anesthesia, including the importance of emotional preparation of the client and continual communication during surgery.
10. (Surgeon) Perform standard NSV procedure under local anesthesia.
11. (Nurse/Paramedic staff) Prepare the client for surgery and assist the surgeon during the NSV procedure.

12. Provide routine follow up management for NSV, including appropriate management of side effects and other health problems.
13. Recognize and manage surgical /anesthesia-related complications.
14. Describe the skills needed to organize and manage quality NSV services.
15. Know about the facial interposition.

Training/Learning Methods

- Individualized study and discussions with the trainer
- Individual exercises
- Role plays
- Video Presentation
- Simulated practice with anatomic (scrotal) model
- Guided clinical activities (counseling and performance of NSV)

Training Materials

This course handbook is designed to be used with the following materials:

- Reference manual: ***No Scalpel Vasectomy Reference Manual for Nepal***
- Participants' Handbook: ***No Scalpel Vasectomy Course Handbook***
- Trainers' Notebook: ***No Scalpel Vasectomy Trainers' Notebook***.
- National Medical Standards for Contraceptive Services
- Training videotape No-Scalpel Vasectomy (FHD, AVSC and JHPIEGO)
- Infection Prevention videotape: ***Infection Prevention for Family Planning Service Programs*** (AVSC and JHPIEGO)
- NSV instrument kits
- Resuscitation video and models
- Scrotal models

Participant Selection Criteria

Participants for this course should be physicians with no previous experience providing vasectomy services, and who work in a setting with an anticipated caseload sufficient to support the provision of NSV services.

Methods of Evaluation

Participant

- Pre- and Midcourse Questionnaires
- Basic learning Guides for NSV Counseling and Clinical Skills
- Checklists for NSV Counseling and Clinical Skills (completed by clinical trainer) Course
- Course Evaluation (completed by participant)

Course Duration

- Twelve-day course
- An additional five days of clinical practice (if needed)

INTRODUCTION TO THE INDIVIDUALIZED PROGRAM OUTLINE

The individualized program outline presented on the following pages is a model plan for how the participant will move through the NSV training course. It presents all of the learning activities (e.g., meet with your trainer, complete precourse questionnaire, read **Chapter 1**) necessary to achieve the course goals and objectives outlined in the course syllabus. This course is individualized, meaning that the participant is responsible for working through the various activities individually. There is, however, a schedule within which the participant must work in order to complete the course in the allotted time.

The individualized program outline is divided into three columns.
(Note: those who are enroll in Self-Paced NSC distance learning program will receive course outline via mail including all the related materials)

- **Day.** This section of the outline indicates which activities are to be completed on each day. It is essential that all activities be completed on the specified day in order to remain on schedule.
- **Participant Activities.** This section lists the entire participant learning activities in sequence. The participant will check each activity as it is completed.
- **Trainer Activities.** This section lists all of the supporting trainer activities. The trainer should plan one day ahead of where the participant is working in order to make the appropriate preparations (e.g., arrange a tour, have models ready).

PARTICIPANT'S NAME:_____DATE STARTED PROGRAM: _____

Upon completion of each activity within the individualized course outline, the participant should check indicating completion.

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
Prior to Training		Prior to the training course, the trainer should: • Meet with the clinic staff (e.g., counselor, OT in charge, waste disposal/autoclaving person) to orient them to the training course and to discuss their responsibilities. • Arrange for all course supplies (refer to course syllabus).
1	_____Meet with your trainer	Welcome the participant to the individualized NSV training course. Present an overview of the course (goals, objectives, schedule, materials, norms). Refer the participant to the course syllabus. Ask the participant to share expectations of the course.
1	_____Complete precourse questionnaire	Administer and score the precourse questionnaire following the guidelines in the Participant's Handbook.
1	Identify learning needs	Review results of precourse questionnaire with the participant. Discuss with the participant areas of strength and areas where extra attention to the course material will be required.
1	_____Read Handout: ***Family Planning Status of Nepal***	Review ***"Family Planning Status of Nepal" (Appendix A)***
1	_____Take a tour of the facility	Organize a tour of the facility (may be someone other than the trainer). Be sure the participant is shown all relevant areas of the clinic.
1	Read ***Chapters 1-3*** in the reference manual and review the *Learning Guide for No-Scalpel Vasectomy (NSV) Counseling Skills*	
1	_____Complete ***Exercise 1: Introduction***	

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
2	_____Review ***Exercise 1*** with your trainer	Discuss the answers to ***Exercise 1***.
2	_____Observe a demonstration of counseling with a client and complete Practice ***Exercise 2: Counseling and Decision Making***	Arrange for participant to observe counseling. This may be performed by the trainer or a counselor.
2	_____Review Practice ***Exercise 2*** with your trainer	Discuss the answers to Practice ***Exercise 2*** (see Trainer's Notebook). Address and clarify participant questions.
2	_____Participate in counseling ***Role Play: Good Counseling***	The role play is in both the Participant's Handbook and Trainer's Notebook. Facilitate, observe, coach and give feedback on the role play.
2	_____Read ***Chapters 4-6*** in the reference manual	
2	Complete Practice ***Exercise 3: Indications and Precautions***	
3	_____Review Practice ***Exercise 3*** with your trainer	Discuss the answers to Practice ***Exercise 3*** (see Trainer's Notebook). Address and clarify participant questions.
3	Observe client assessment performed on a model (refer to learning guide)	Demonstrate client assessment on a model. Be sure to follow the steps listed in the learning guide.
3	Practice client assessment on a model	Observe and coach participant practice. Record comments on the learning guide or checklist. Participant is not to work with clients until competence on models has been demonstrated.
3	Observe client assessment in the clinic (refer to the checklist)	Demonstrate client assessment. Interact with the participant as appropriate (e.g., ask questions, refer to the steps in the checklist), however, avoid doing so in front of the client.
3	_____Demonstrate the ability to perform a client assessment in the clinic	Observe and assess participant competence. Record comments on the checklist.

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
3	_____View sections of the Infection Prevention video: • Handwashing/scrubbing • Gloving • Instrument processing • Waste disposal	Ensure participant has access to a video player and the Infection Prevention videotape.
3	_____Complete Practice ***Exercise 4: Infection Prevention***	
3	Read ***Chapters 7-8*** and review ***Learning Guide for No- Scalpel Vasectomy (NSV) Clinical Skills***	
3	_____Complete Practice ***Exercise 5: Anesthesia***	
4	_____Review Practice ***Exercises 4-5.***	Discuss the answers to Practice ***Exercises 4-5*** (see Trainer's Notebook). Address and clarify participant questions.
4	_____View NSV Video	Discuss the procedure and review the learning guide with the participant.
4	Observe NSV in the operating theater (refer to the learning guide during the procedure)	Demonstrate NSV in the operating theater. Interact with the participant as appropriate (e.g., ask questions, refer to the steps in the learning guide).
4	_____Discuss operating theater observations	Facilitate a discussion focusing on the procedures observed by the participant. Refer to the steps in the learning guide as appropriate.
4	_____Observe demonstration of NSV on a model	Demonstrate NSV on model. Interact with the participant as appropriate (e.g., ask questions, refer to the steps in the learning guide).
4	Practice NSV on a model (work with another participant if available)	
4	Read ***Chapter 9: Postoperative Recovery, Discharge and Followup***	

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
4	_____Complete Practice ***Exercise 6: Post Operative Recovery, Discharge and Followup***	
5	_____Demonstrate the ability to perform NSV on a model.	Observe and assess participant competence. Record comments on the checklist.
5	_____Assist/observe (with learning guide) NSV procedures	Demonstrate NSV procedure with clients. When two participants are being trained, one will assist and one will observe. They should exchange places for the next client. When only one participant is being trained, this person will assist with each procedure.
5	_____Participate in a review of the cases of the day focusing on the surgical procedure and reinforcing IP and counseling	Facilitate review of the cases performed during the day.
5	_____Review Practice ***Exercise 6***	Discuss the answers to Practice ***Exercise 6*** (see Trainer's Notebook). Address and clarify participant questions.
5	Practice NSV on models (assessment of competence when ready)	Observe and assess participant competence on models when the participant is ready.
5	_____Read ***Chapter 10: Management of Complications***	
5	_____ Complete Practice ***Exercise 7: Management of Complications***	
6	_____Counsel and screen clients	Observe and assess participant competence. Record comments on the checklist.
6	Assist/observe NSV procedures, including Post Op (refer to checklist)	Demonstrate NSV procedure with clients. When two participants are being trained, one will assist and one will observe. They should exchange places for the next client. When only one participant is being trained, this person will assist with procedures as appropriate.
6	_____Review Practice ***Exercise 7***	Discuss the answers to Practice ***Exercise 7*** (see Trainer's Notebook). Address and clarify participant questions.

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
6	Participate in a review of the cases of the day focusing on the surgical procedure, IP and counseling	Facilitate review of the cases performed during the day.
6	_____Read ***Chapter 11: Quality of Care in NSV Service***	
6	Complete Practice ***Exercise 8: Quality of Care in NSV Service***	
7	_____Provide client followup services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
7	_____Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
7	_____Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
7	_____Review Practice ***Exercise 8***	Discuss the answers to Practice ***Exercise 8*** (see Trainer's Notebook). Address and clarify participant questions.
7	Complete Practice ***Exercise 9: Infection Prevention Processes for Surgical Instruments and other items***	
7	Read ***Chapter 12: Mobile Outreach Services and Appendix B: Emergency Preparedness***	
7	_____Complete Practice ***Exercise 10: Mobile Outreach Services***	
8	_____Provide client followup services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
8	_____Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
8	_____Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
8	Review Practice ***Exercise 9: Infection Prevention Processes for Surgical Instrument and Other Items***	Discuss the answers to Practice ***Exercise 9*** (see Trainer's Notebook). Address and clarify participant questions.
8	_____Review Practice ***Exercise 10***	Discuss the answers to Practice ***Exercise 10*** (see Trainer's Notebook). Address and clarify participant questions.
8	_____Review ***Appendix B: Emergency Preparedness***	Discuss information in ***Appendix B: Emergency Preparedness***. Also, use this time to orient participants to the midcourse questionnaire. Suggest that they review the precourse questionnaire, look over the practice exercises and review the main points in each chapter.
8	_____Study and prepare for midcourse questionnaire	
9	_____Provide client followup services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
9	_____Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
9	_____Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
9	_____Complete midcourse questionnaire	Administer and score midcourse questionnaire following directions in the Trainer's Notebook.

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
9	Read ***Chapter 6: Decontaminating and Cleaning Instruments, Hypodermic Needles and Syringes and Linens***	
10	_____Provide client followup services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
10	_____Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
10	_____Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
10	_____Observe demonstration of CPR: Review ***Appendix C***	Show video of CPR.
10	_____Complete Practice ***Exercise 11: Infection Prevention/Waste Disposal***	
11	_____Provide client followup services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
11	_____Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
11	_____Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES**
11	Discuss plans for implementation of NSV services (e.g., instruments, OT, IP, staff)	Facilitate discussions focusing on how participant can implement NSV services. Discuss plans for followup site visit by the trainer. Trainer completes the participant evaluation and forwards a copy to the NHTC so the participant's certificate can be prepared.
12	_____Provide client followup services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
12	_____Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
12	_____Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
12	_____Discuss plans for additional clinical experience	Facilitate discussion with the participant to determine their level of skill competence or initial proficiency and whether additional practice is required. If additional practice is required, help the participant make plans for practice the next week.
12	_____ Complete course evaluation	Course evaluation in the Participant's Handbook.

NSV SELF-PACED DISTANCE LEARNING COURSE OUTLINE

PARTICIPANT'S NAME:_____ DATE STARTED PROGRAM: _____

Upon completion of each activity within the individualized course outline, the participant should check indicating completion.

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE (Distance Training)		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES (including Training Coordinator) (VIA electronic media: email, viber, skype, messenger)**
Prior to Training	After going through all the training norms by NHTC, Get enrolled in the NSV Course. Send contact detail (email address and mobile/phone number) to NHTC focal person.	Prior to the training course, the trainer should: • Put enrolled person in training plan and inform the participant about his/ her enrollment in the training. Explain the participant about the training modality. • Send participant handbook including e-copy of pre-course questionnaire
	Meet with your trainer	Welcome the participant to the individualized NSV training course. Present an overview of the course (goals, objectives, schedulr, materials, norms). Refer the participant to the course syllabus. Ask the participant to share expectation of the course.
	Receive pre-course questionnaire and participant handbook	
	Read overview of the training and introduction section (page)	
	Complete pre-course questionnaire following instruction given in the questionnaire. And send to the trainer and also c/c copy to NHTC coordinator	Administer and score the pre-course questionnaire following the guidelines in the participant handbook.
1-3	Identify learning needs	Receive pre-course questionnaire. Review results of pre-course questionnaire with the participant. Send key comments or discuss over the telephone with the participant areas of strength and areas where extra attention to the course material will be required.
	Receive Reference Manual	Send Reference Manual
3-4	Read Handout: ***Family Planning Status of Nepal***	Review ***"Family Planning Status of Nepal" (Appendix A)***
5-6	Read ***Chapters 1-3*** in the reference manual and review the *Learning Guide for No-Scalpel Vasectomy (NSV) Counseling Skills*	
6-7	Complete ***Exercise 1: Introduction***	
	Complete ***Exercise 2: Counseling and Decision Making***	

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE (Distance Training)		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES (including Training Coordinator) (VIA electronic media: email, viber, skype, messenger)**
	View Counseling Video	
	Call the trainer (skype call or phone) if you have any question in the chapter or exercise. Review exercise 1 and 2 with your trainer.	Ask the participant if s/he has any questions in the content. Discuss the answers to Practice ***Exercises 1 and 2.*** Address and clarify participant questions.
	Conduct assessment of the FP counseling practice in your health facility using QI tools (See Appendix G). Prepare an action plan to address the gaps identified with your supervisor.	
8-10	Read ***Chapters 4-6*** in the reference manual	
11-15	Complete Practice ***Exercise 3: Indications and Precautions***	
	View IP Video	
	Review Practice ***Exercises 4, 9 and 11: Infection Prevention.***	
	Complete Practice ***Exercise 5: Anesthesia***	
	Call the trainer (skype call or phone) to discuss about the chapter or exercise Review exercise 3-5 and 11 with your trainer	Ask the participant if s/he has any questions in the content. Discuss the answers to Practice ***Exercises 3- 5, 9 and 11.*** Address and clarify participant questions.
	Conduct facility assessment using QI tools for general physical facility and IP n HCWM (See appendix H and I) Sit with your supervisor to address the identified gaps.	
15-17	Read ***Chapters 7-8*** and review ***Learning Guide for No-Scalpel Vasectomy (NSV) Clinical Skills***	
	View NSV Video	Forward video link on NSV procedure.
18	Read ***Chapter 9: Postoperative Recovery, Discharge and Follow-up***	
19	Complete Practice ***Exercise 6: Post-Operative Recovery, Discharge and Follow-up***	

NEPAL NSV INDIVIDUALIZED COURSE OUTLINE (Distance Training)		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINER ACTIVITIES (including Training Coordinator) (VIA electronic media: email, viber, skype, messenger)**
	Call the trainer (skype call or phone) to discuss about the chapter or exercise. Review exercise 6 with your trainer.	Ask the participant if s/he has any questions in the content. Discuss the procedure and learning guide. Discuss the answers to Practice ***Exercises 6.*** Address and clarify participant questions.
20-21	Read ***Chapter 10: Management of Complications***	
22	Complete Practice ***Exercise 7: Management of Complications***	
23	Read ***Chapter 11: Quality of Care in NSV Service*** ***Share about tools and discuss the gap identified with the supervisor and the service site management team/ committee and with all the staffs of health facility***	
24	Complete Practice ***Exercise 8: Quality of Care in NSV Service***	
25-26	Read ***Chapter 12: Mobile Outreach Services*** and ***Appendix B: Emergency Preparedness***	
27	Complete Practice ***Exercise 10: Mobile Outreach Services***	
	Call the trainer (skype call or phone) to discuss about the chapter or exercise. Review exercise 7, 8 and 10.	Ask the participant if s/he has any questions in the content. Discuss the answers to Practice ***Exercises 7, 8 and 10.*** Address and clarify participant questions. Ensure the participant is confident in all content and ready to give mid-course questionnaire. Explain the participant that s/he should score at least 85% in order to be enrolled for practicum session.
28-29	Study and prepare for midcourse questionnaire	
30	Complete midcourse questionnaire	Send e-copy of mid-course questionnaire. Set time to complete and forward the midcourse questionnaire. Administer and score midcourse questionnaire following directions in the Trainer's Notebook. If the participant scores 85% and competent in knowledge portion, inform NHTC about it and fix the time for practicum with NHTC so that NHTC releases the invitation letter for participant. Prepare training center for practicum.

Note: the participant or the trainer can coordinate with each other anytime as per the need during the training period.

Clinical Practicum-Training Site		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINERS ACTIVITIES**
	Prepare for clinical practicum. Make copies of the entire action plan prepared for IP, physical facility and counseling skills. So that you can discuss with your trainer if you need to discuss on how to fulfil the gaps	Inform training team about the date of practicum and divide the role and responsibility of the staffs during the practicum. Prepare all the training materials up to date.
1	Take a tour of the facility	Organize a tour of the facility (may be someone other than the trainer). Be sure the participant is shown all relevant areas of the clinic.
1	Review ***Exercises*** with your trainer if you've any confusion	Address the queries.
1	Observe a demonstration of counseling with a client.	Arrange for participant to observe counseling. This may be performed by the trainer or a counselor.
1	Participate in counseling ***Role Play: Good Counseling***	The role play is in both the Participant's Handbook and Trainer's Notebook. Facilitate, observe, coach and give feedback on the role play.
1	Observe client assessment performed on a model (refer to learning guide)	Demonstrate client assessment on a model. Be sure to follow the steps listed in the learning guide.
1	Practice client assessment on a model	Observe and coach participant practice. Record comments on the learning guide or checklist. Participant is not to work with clients until competence on models has been demonstrated.
1	Observe client assessment in the clinic (refer to the checklist)	Demonstrate client assessment. Interact with the participant as appropriate (e.g., ask questions, refer to the steps in the checklist), however, avoid doing so in front of the client.
1	Demonstrate the ability to perform a client assessment in the clinic	Observe and assess participant competence. Record comments on the checklist.
1	View sections of the Infection Prevention and health care waste management: • Handwashing/scrubbing • Gloving • Instrument processing • Waste disposal	Demonstrate handwashing/scrubbing, gloving, instrument processing and waste disposal. Ensure participant thoroughly understand about instrument processing, waste disposal and practice handwashing/scrubbing and gloving as per standard. If available show the video.
1	View NSV Video	Discuss the procedure and review the learning guide with the participant.

Clinical Practicum-Training Site		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINERS ACTIVITIES**
1	Observe NSV in the operating theater (refer to the learning guide during the procedure)	Demonstrate NSV in the operating theater. Interact with the participant as appropriate (e.g., ask questions, refer to the steps in the learning guide).
1	Discuss operating theater observations	Facilitate a discussion focusing on the procedures observed by the participant. Refer to the steps in the learning guide as appropriate.
1	Observe demonstration of NSV on a model	Demonstrate NSV on model. Interact with the participant as appropriate (e.g., ask questions, refer to the steps in the learning guide).
1	Practice NSV on a model (work with another participant if available)	
2	Demonstrate the ability to perform NSV on a model.	Observe and assess participant competence. Record comments on the checklist.
2	Assist/observe (with learning guide) NSV procedures	Demonstrate NSV procedure with clients. When two participants are being trained, one will assist and one will observe. They should exchange places for the next client. When only one participant is being trained, this person will assist with each procedure.
2	Participate in a review of the cases of the day focusing on the surgical procedure and reinforcing IP and counseling	Facilitate review of the cases performed during the day.
2	Practice NSV on models (assessment of competence when ready)	Observe and assess participant competence on models when the participant is ready.
2	Counsel and screen clients	Observe and assess participant competence. Record comments on the checklist.
2	Assist/observe NSV procedures, including Post Op (refer to checklist)	Demonstrate NSV procedure with clients. When two participants are being trained, one will assist and one will observe. They should exchange places for the next client. When only one participant is being trained, this person will assist with procedures as appropriate.
2	Participate in a review of the cases of the day focusing on the surgical procedure, IP and counseling	Facilitate review of the cases performed during the day.
2	Provide client follow up services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
2	Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.

Clinical Practicum-Training Site		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINERS ACTIVITIES**
2	Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
3	Provide client follow up services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
3	Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
3	Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
3	Review Appendix B: *Emergency Preparedness*	Discuss information in ***Appendix B: Emergency Preparedness***. Also, use this time to orient participants to the midcourse questionnaire. Suggest that they review the pre-course questionnaire, look over the practice exercises and review the main points in each chapter.
3	Provide client follow-up services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
3	Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
3	Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
3	Provide client follow up services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
3	Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
3	Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
3	Observe demonstration of CPR: Review ***Appendix C***	Show video of CPR.
3-6	Provide client follow up services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.

Clinical Practicum-Training Site		
DAY	**PARTICIPANT ACTIVITIES**	**TRAINERS ACTIVITIES**
3-6	Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
3-6	Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
3-6	Discuss plans for implementation of NSV services (e.g., instruments, OT, IP, staff)	Facilitate discussions focusing on how participant can implement NSV services. Discuss plans for follow-up site visit by the trainer. Trainer completes the participant evaluation and forwards a copy to the NHTC so the participant's certificate can be prepared.
3-6	Provide client follow up services, client counseling and client assessment. Participant and trainer may also use this time to focus on areas of interest or need.	Observe participant provide client services and assess competence. Facilitate discussions focusing on areas of interest or needs as necessary.
3-6	Perform/observe NSV procedure	Supervise and provide assistance and feedback as needed. Assess competence.
3-6	Review clinical cases	Facilitate review of clinical cases with the participant(s) as well as clinic staff as available.
6	Discuss plans for additional clinical experience	Facilitate discussion with the participant to determine their level of skill competence or initial proficiency and whether additional practice is required. If additional practice is required, help the participant make plans for practice the next week.
6	Complete course evaluation	Course evaluation in the Participant's Handbook.

PRECOURSE QUESTIONNAIRE

HOW THE RESULTS WILL BE USED

The **precourse questionnaire** is not intended to be a test but rather an assessment of what the participant knows about the course topics. Participants, however, are often unaware of this and may become anxious and uncomfortable at the thought of being "tested" on the first day of the course. Explain to the participant that the purpose of the precourse questionnaire is to let both the participant and trainer know what information the participant is bringing to the course. The questionnaire also alerts the participant to the important concepts in each chapter of the reference manual. The trainer should be sensitive to this attitude and administer the questionnaire in a neutral and non-threatening way as the following guide illustrates:

- Participant completes the precourse questionnaire.
- The trainer gives the answer to each question.
- The trainer and participant briefly discuss the answers and identify those areas where the participant has knowledge of the topics and those where the participant may need to study in more depth.

PRECOURSE QUESTIONNAIRE

Instructions: In the space provided, print a capital **T** if the statement is **True** or a capital **F** if the statement is **False**.

CHAPTER 1: INTRODUCTION	
1. Mechanism of action of NSV is the occlusion of vas deferens which carries the sperm from the testes to the penis.	
2. Half of the total VS procedures in the world are Vasectomies.	
3. The failure rate for NSV is less than 0.5%.	
4. Spermatic cord consists of vas deferens, testicles, vessels, internal spermatic fascia and cremasteric fascia	
5. Normal sperm count is 10-20 million per ml of ejaculation	
CHAPTER 2: COUNSELING AND DECISION MAKING	
6. Counseling in vasectomy is important because it is surgical procedure for a permanent form of contraception.	
7. The physician is the best qualified person to choose a contraceptive method for a couple in a good health.	
8. The most important part of counseling is describing the adverse side effects.	
9. Good counseling consists of talking to the client before the procedure, during and just after the procedure and also during follow-up.	
CHAPTER 3: INFORMED CONSENT	
10. Informed consent means the client has only signed the formal consent form.	
11. Informed consent is the same as NSV counseling.	
12. Properly administered informed consent reduces regret after NSV.	
13. It is the responsibility of the counselor to verify informed consent.	
CHAPTER 4: INDICATIONS AND PRECAUTIONS	
14. Controlled hypertension is a medical condition requiring further evaluation before performing NSV.	
15. A client who has excessive interest in reversing the procedure is not a suitable candidate for NSV.	
16. A client should not have NSV under pressure from his spouse or others.	
17. NSV can be performed on a client with an acute genital tract infection.	

CHAPTER 5: CLIENT ASSESSMENT	
18. A good candidate for accepting vasectomy is a man who wants an effective permanent contraception.	
19. Screening a potential vasectomy client should include only a medical history and general physical examination.	
20. Routine lab investigations are necessary for every client willing to have NSV.	
21. Performance of the NSV procedure depends on the skill and experience of the surgeon.	
CHAPTER 6: INFECTION PREVENTION	
22. The human immunodeficiency virus (HIV/AIDS) and the hepatitis B virus (HBV) are reliably eliminated by 0.5 % chlorine solutions.	
23. Surgical instruments which have been thoroughly decontaminated and cleaned can be sterilized by boiling in water for 20 minutes.	
24. Bacterial endospores which cause tetanus and gangrene are reliably killed by boiling (high level disinfection).	
25. Decontamination involves soaking soiled instruments in 0.5 % chlorine solution for 10 minutes right after a procedure.	
26. Shaving the pubic and scrotal hair is routinely done prior to vasectomy to prevent infection.	
CHAPTER 7 & 8: ANESTHESIA AND SURGICAL PROCEDURE	
27. The NSV technique requires specially designed instruments.	
28. The preferred anesthetic agent in vasectomy is 2% lidocaine plus epinephrine.	
29. The client should be reassured that he will feel no pain during the procedure.	
30. The NSV technique is essentially similar to conventional vasectomy.	
31. The goals of anesthesia for NSV procedures are to prevent pain, discomfort and minimize stress and anxiety.	
32. Doctors and support staff must observe strict infection prevention practices while performing NSV.	
33. The facility must be equipped with drugs to handle emergencies.	
34. Talking to the client during the NSV procedure is not recommended.	
35. The vas should be fixed under the median raphe at the junction of the middle and lower third of the scortum for NSV.	

CHAPTER 9: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP	
36. Semen analysis is a must 3 months after NSV to confirm the success of NSV.	
37. Minor pain and bruising of the scrotum are normal after vasectomy.	
38. After vasectomy, the client may resume sexual intercourse in 2 days if he feels comfortable.	
39. Vasectomy clients are sterile immediately after the procedure.	
CHAPTER 10: MANAGEMENT OF COMPLICATIONS	
40. Post NSV scrotal sinus discharge is treated by reassuring the client and through conservative management.	
41. In case of respiratory depression during NSV surgery, quickly finish the operation and then provide assisted respiration.	
42. Incision and drainage with antibiotic coverage is indicated for scrotal abscess after NSV.	
CHAPTER 11: QUALITY OF CARE IN NSV SERVICE	
43. Quality of care standards should be attainable, measurable, and relevant.	
44. Indicators for assessing quality of care in NSV are not very important in improving the quality of NSV services.	
45. Technically sophisticated equipment does not automatically improve the quality of services in NSV.	
46. Once the quality standard is achieved, there is no further need for a continuous monitoring and improvement process.	
CHAPTER 12: MOBILE OUTREACH SERVICES	
47. Because of high demand and shortage of services in mobile camps, a doctor should be allowed to perform as many operations as he possibly can.	
48. In a mobile camp situation, there is always a shortage of space and staff so counseling may be waived if there is a heavy client load.	
49. Nurses must have OT experience as a prerequisite to working in a mobile camp.	
50. Every mobile camp must have an emergency kit for emergency backup.	

LEARNING GUIDES FOR NSV SKILLS

USING THE LEARNING GUIDES

The Learning Guides for NSV Clinical Skills are designed to help the participant learn the tasks involved in the technique of no-scalpel vasectomy.

The learning guide contains the steps for performing a no-scalpel vasectomy.

The participant is not expected to perform all the activities/tasks correctly the first time s/he practices them. Instead the learning guides are intended to:

- Assist the participant in learning the correct steps and sequence in which the task/activity should be performed (**skill acquisition**)
- Measure progressive learning in small steps as the participant gains confidence and skill (**skill competency**).

Prior to using the **Basic learning guides for NSV Clinical Skills,** the clinical trainer will review the entire procedure with the participant. In addition, each participant will have the opportunity to practice NSV on scrotal model and to observe an NSV being performed in the clinic with a client.

Used consistently, the learning guides enable each participant to chart her/his progress and to identify areas for improvement. Furthermore, they are designed to make communication (coaching and feedback) between the participant and clinical trainer easier and more helpful. When using the learning guide, it is important that the participant and clinical trainer work together as a team. For example, **before** the participant attempts NSV the first time, the clinical trainer should briefly review the steps involved and discuss the expected outcome. In addition, immediately **after** the skill or activity, has been completed the clinical trainer should debrief the participant. The purpose of the debriefing is to provide **positive feedback** regarding the learning progress and to define the areas where improvement (knowledge, attitude or practice) is needed in subsequent practice sessions.

Because the learning guides are used to assist in developing skills, it is important that the rating (scoring) be done carefully and as objectively as possible. The participant's performance of each step is rated on a three-point scale as follows:

1. Needs Improvement:	Step or task not performed correctly or out of sequence or is omitted.
2. Competently Performed:	Step or task performed correctly in the proper sequence (if necessary) but participant does not progress from step to step efficiently.
3. Proficiently Performed:	Step or task efficiently and precisely performed in the proper sequence (if necessary)

Using the Basic Learning Guides

- The **Basic Learning Guide for NSV Clinical Skills** is designed to be used primarily during the early phases of learning (i.e, skill acquisition) when participants are practicing with the anatomic (scrotal) model.

- Initially, participants can use the learning guides to follow the steps as the clinical trainer demonstrates the NSV technique using a scrotal model.

- Subsequently, during the practice sessions it serves as step-by-step guide for the participant as s/he performs the technique using scrotal models. During this phase, participants (when other participants are available) work in teams with one "service provider" participant performing the skill or activity while the other participant uses the learning guide to rate the performance or prompt the "service provider" as necessary. During this initial learning phase, the clinical trainer will observe how the learning is progressing and check to see that the participant are following the steps outlined in the learning guide. When no other participants are available, the participant may need to work one-on-one with the trainer.

Remember: It is the goal of this training that every participant performs every task or activity correctly with clients by the end of the course.

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (NSV) COUNSELING SKILLS

(To be used by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

1. **Needs Improvement:** Step or task not performed correctly or out of sequence or is omitted.
2. **Competently Performed:** Step or task performed correctly in the proper sequence (if necessary) but participant does not progress from step to step efficiently.
3. **Proficiently Performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

PARTICIPANT_____ **Course Dates**_____

LEARNING GUIDE FOR NSV COUNSELING SKILLS					
STEP/TASK	**CASES**				
INITIAL INTERVIEW (Client Reception Area)					
1. Greet the client respectfully and with kindness.					
2. Establish purpose of the visit and answer questions.					
3. Provide general information about family planning.					
4. Give the client information about the contraceptive choices available and the risks and benefits for each. Explain the difference between reversible and permanent contraception. Correct false rumors or misinformation about all methods.					
5. Explain what to expect during the clinic visit.					
METHOD-SPECIFIC (Counseling Area)					
1. Assure necessary privacy.					
2. Obtain biographic information (name, address, etc.).					
3. Ask the client about his reproductive goals (Does he want to space or limit births?) and need for protection against GTIs and other STIs.					
4. Discuss the client's needs, concerns and fears in a thorough and sympathetic manner.					
5. Help the client begin to choose an appropriate method.					

LEARNING GUIDE FOR NSV COUNSELING SKILLS					
STEP/TASK	**CASES**				
If client chooses NSV:					
6. Screen the client carefully to make sure there is no medical condition that would be a problem (complete Client Screening Checklist)					
7. Clearly discuss the benefits of NSV. Emphasize that it is a permanent method, but there is a small chance of failure.					
8. Explain that NSV does not protect against GTIs and other STIs. If the client is at risk, he may need to use a barrier contraceptive method also.					
9. Explain common complications of the surgical procedure and be sure they are fully understood.					
10. Explain the surgical procedure and what to expect during and afterwards.					
11. Obtain client's signature or thumb print on the informed consent form. Obtain spousal consent if possible.					
PREPROCEDURE (Examination/Procedure Area)					
1. Review client history and physical examination to assure proper client selection.					
2. Check that informed consent was obtained and verify client's identity.					
3. Explain that he will feel a little pain during the procedure and he should inform a member of the surgical team if he feels any discomfort at any time.					
POST-PROCEDURE					
1. Monitor client continuously until he is ready for discharge.					
2. Give postoperative instructions, orally and in writing. Ask client to repeat instructions.					
3. Discuss what to do if the client experiences any problems.					
4. Return visit if necessary.					
5. Provide client with condoms as many as he requires for 3 months (if client want to use condom).					
6. Assure client he can return to the same clinic at any time to receive advice and medical attention.					
7. Answer client's questions.					
8. Complete client's record.					

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (NSV) CLINICAL SKILLS

(To be used by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

1. **Needs Improvement:** Step or task not performed correctly or out of sequence or is omitted.
2. **Competently Performed:** Step or task performed correctly in the proper sequence (if necessary) but participant does not progress from step to step efficiently.
3. **Proficiently Performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

PARTICIPANT_____ **Course Dates**_____

LEARNING GUIDE FOR NSV CLINICAL SKILLS					
STEP/TASK	**CASES**				
GETTING READY					
1. Greet client respectfully and establish rapport.					
2. Review client history and physical examination to assure proper client selection.					
3. Check that informed consent was obtained and verify client's identity.					
4. Determine if client understands the nature of the procedure.					
5. Check that client has thoroughly washed genital area.					
6. Check that client has recently voided.					
7. Help position client flat on his back on examining table.					
8. Determine that sterile or high-level disinfected instruments and emergency tray are present.					
PRE-OPERATIVE TASKS					
1. Wash hands thoroughly with soap and water and dry with clean towel and put on examination gloves.					

LEARNING GUIDE FOR NSV CLINICAL SKILLS					
STEP/TASK	**CASES**				
2. Examine scrotal area • Skin of scrotum - for rash, lesions and any abnormal thickness of skin, scars of previous surgery. • Testis-tenderness and or any abnormal mass (eg. Hydrocoele) • Spermatic cord - for tenderness, mass, any abnormal thickening. • Penis - for discharge, lesion, ulcer. • Inguinal region - for mass (eg. Hernia) ulcer or lesion scars of previous surgery.					
3. Retract penis upwards onto the abdomen in a 12 o'clock position (if necessary, anchor comfortably in place using small strip of surgical tape).					
4. If necessary, clip scrotal hair.					
5. Perform surgical scrub and put sterile or high-level disinfected gloves on both hands.					
6. Arrange sterile or high-level disinfected instruments and supplies neatly on the instrument tray or cloth.					
7. Apply antiseptic solution to the operative site using a circular motion.					
8. Wait for 2 minutes					
9. Drape scrotal area with sterile linen.					
10. Draw up 5 ml of 1% local anesthetic (e.g., lidocaine **without** epinephrine).					
11. Use 1–1½ inch #23 or #24 gauge needle.					
12. Throughout procedure talk to the client (verbal anesthesia) and staff.					
13. Identify, isolate and fix the right vas deferens under the median raphe at the junction of the middle and upper one third of the scrotum.					
NSV PROCEDURE					
Local Anesthesia					
1. Trap right vas firmly between middle finger underneath the index finger and thumb of the left hand (3-finger technique).					
2. Raise a small skin wheal over median raphe using 1.5 inch fine gauge needle and 0.5 ml of 1% local anesthetic (e.g., lidocaine without epinephrine).					

LEARNING GUIDE FOR NSV CLINICAL SKILLS						
STEP/TASK	**CASES**					
3. Advance the needle parallel to the vas within the sheath towards the inguinal ring (about 1.5 inches above the wheal).						
4. Slowly inject around 5 ml of local anesthetic in the sheath.						
5. Identify the left vas using the same 3-finger technique.						
6. Insert needle through the same hole and repeat injection of local anesthetic.						
7. Pinch skin wheal between thumb and forefinger to reduce local edema.						
8. Test puncture site with needle tip for adequate anesthesia. (If client feels pain, wait 2–3 more minutes and retest puncture site.)						
Isolating and Ligating & excision (LE) of the Vas						
9. Fix the right vas with left hand under the skin wheal using the three finger technique.						
10. Apply ringed clamp, palm up, at a 90° angle directly over and around the vas deferens.						
11. Transfer ringed clamp to opposite hand and elevate vas by lowering clamp handle.						
12. Press index finger down to tighten scrotal skin just ahead of the tips of ringed clamp.						
13. Puncture scrotal skin and anterior wall of vas using medial blade (left blade for right-handed person) of dissecting forceps.						
14. Withdraw dissecting forceps and close both blades.						
15. Insert both tips of the dissecting forceps into the puncture site.						
16. Gently open blades of dissecting forceps and spread tissue to make a skin opening twice the diameter of the vas.						
17. Clear the fascia overlying the vas using the dissecting forceps.						
18. Use the lateral (right) blade of the dissecting forceps to spear the bare vas wall; then rotate the dissecting forceps clockwise 180° to expose the vas.						
19. Deliver a loop of vas through the puncture hole while slowly releasing the ringed clamp but still keeping it in place.						

LEARNING GUIDE FOR NSV CLINICAL SKILLS					
STEP/TASK	**CASES**				
20. Grasp a partial thickness of the elevated vas with the ringed clamp.					
21. Isolate the vas from other structures using dissecting forceps. a. Puncture sheath with one tip of dissecting forceps. b. Next, insert both tips into punctured sheath. c. Open tips to strip the sheath away from the vas.					
22. After careful separation of fascia and blood vessels ligate the prostatic end of the vas.					
23. Cut one end of the suture leaving a single uncut end of about 5-7 cm in length.					
24. Ligate the testicular end about 1.5 cm from the prostatic end ligature and leave both end of the suture to about 5-7 cm in length.					
25. Excise up to 1 cm of vas in between the two ligatures.					
26. Ensure both stumps are separated by at least 1 cm by pulling both ligatures.					
27. Ensure hemostasis.					
28. Cut both ends of the testicular suture.					
29. Allow 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.					
30. Very gently pull the long suture of the prostatic end of the vas to re- expose the cut end covered with fascia.					
31. Gently grasp the fascia of the spermatic cord with the tip of the dissecting forceps and tie the fascia around the vas 2-3 mm below the previous tie of the prostatic end.					
32. Cut both ends of the suture and allow stumps to drop back into position.					
33. Pull the prostatic end again up to the puncture wound and cuts the single long end of the suture.					
34. Using the three finger technique, isolate the left vas under the puncture site.					

LEARNING GUIDE FOR NSV CLINICAL SKILLS					
STEP/TASK	**CASES**				
35. Grasp the left vas at the lower end of the puncture site with the ringed clamp.					
36. **Repeat steps 9-33 for the left vas**.					
37. Check scrotum and ensure that both vas deferens are ligated and in proper position.					
38. Pinch puncture site tightly for a minute.					
39. Apply antiseptic solution to the wound and use sterile gauze dressing with tape or a bandaid. Put on scrotal support, if possible.					
POSTOPERATIVE TASKS					
1. Help client off the operating table.					
2. Dispose needle and syringe by placing in a puncture-proof container.					
3. Place instruments in 0.5% chlorine solution for decontamination and soak for 10 minutes.					
4. Dispose of waste materials according to guidelines.					
5. Briefly immerse gloved hands in 0.5% chlorine solution. If disposing of gloves, place in leak-proof container or plastic bag. If reusing gloves, soak gloves in chlorine solution for 10 minutes.					
6. Wash hands thoroughly with soap and water and dry with clean towel.					
7. Provide client with written instructions.					
8. Review instructions verbally.					
9. Provide client with necessary condoms for 3 months.					
10. Advise client to return for semen analysis after 3 months.					
11. Complete NSV card and record in client record.					

LEARNING GUIDE: CARDIO-PULMONARY RESUSCITATION (CPR)

LEARNING GUIDE FOR CARDIOPULMONARY RESUSCIATION **(Many of the following steps/tasks should be performed simultaneously)**					
STEPS/TASKS	CASES				
STARTING RESUSCITATION (ABC approach to Assessment and Management of Cardiac Arrest)					
1. Confirm cardiac arrest by:					
• No response to "shake and shout"					
• No breathing while the airway is kept clear for 10 seconds					
• No signs of life: coughing, moving purposefully, eyes open					
2. SHOUT FOR HELP to urgently mobilize available personnel.					
3. Perform 30 chest compressions at least at a rate of 100 compressions per minute.					
4. Give 2 breaths, 1 second each.					
5. Resume chest compressions immediately.					
6. Continue until the patient breaths normally or shows signs of life: coughing, eyes open, speaking, groaning, moving purposefully.					
THE AIRWAY (A)—EXTRA INSTRUCTIONS					
7. Remove secretions in the mouth using gauze, a gloved finger or suction if ready.					
8. Use a laryngoscope, Magill's forceps and a rigid Yankauer sucker if needed.					
9. Use an oral airway (Guedel) or an LMA if available.					
10. While using the anesthesia mask, maintain jaw thrust to keep the airway open.					
BREATHING (B)—EXTRA INSTRUCTIONS					
11. Ventilate the patient (with oxygen if available) using a self inflating bag/bellows and anesthesia mask, LMA or ETT.					
• Position yourself at the top of the patient's head.					
• Insert oropharyngeal (Guedel) airway if available.					
• Spread the mask; mold it over the mouth and nose. Maintain jaw thrust.					

LEARNING GUIDE FOR CARDIOPULMONARY RESUSCIATION **(Many of the following steps/tasks should be performed simultaneously)**					
STEPS/TASKS	CASES				
• Squeeze the bag/bellows or ask assistant to squeeze the bag if using both hands to hold the mask.					
• Release the bag abruptly to allow for complete passive exhalation.					
• Give 2 breaths of 1 second each.					
12. Ensure each ventilation makes the chest rise.					
13. Ensure chest movements are equal, right and left.					
14. Use highest flow oxygen into the bag and mask equipment if available.					
15. If the patient is intubated: ventilate 10 breaths/min. DO NOT STOP chest compressions in the intubated patient. Continue ventilation (10/min) and compressions (100–120/min) AT THE SAME TIME for the intubated patient.					
CIRCULATION (C)—EXTRA INSTRUCTIONS					
16. Compress the chest 5–6cm at mid sternum at least 100–120/min—external cardiac massage (ECM).					
17. Run fast warm IV fluids—normal saline, if the patient has a cannula.					
18. Use emergency drugs according to protocols and doctor's orders:					
19. Only pause chest compressions for bag/mask ventilation of 2 breaths. Continue at 100–120 compressions per minute until the patient shows signs of life: coughing, speaking, groaning, moving purposefully AND resumes normal breathing.					
CHEST COMPRESSIONS—EXTRA INSTRUCTIONS					
20. Position yourself at either side of the patient on the operating table or on a stable, flat surface.					
21. Locate the position for chest compressions on the lower half of the sternum.					
22. Place heel of first hand over located position. Place the heel of the second hand on top of the first hand with fingers interlocking. Straighten your arms and lock your elbows.					

LEARNING GUIDE FOR CARDIOPULMONARY RESUSCIATION **(Many of the following steps/tasks should be performed simultaneously)**					
STEPS/TASKS	CASES				
23. Push the sternum downward toward the spine using the weight of your upper body. After each compression, release pressure without losing contact and allow chest to return to its normal position. Duration of compression and relaxation should be approximately equal.					
24. Compress at least at a rate of 100/min. Alternate 2 lung inflations every 30 compressions, unless the patient is intubated.					
REASSESSMENT					
25. Continue CPR until spontaneous pulse returns or patient begins to breathe and shows signs of life: coughing, moving purposefully, speaking, groaning, or eyes open.					
26. Abandon CPR when instructed by the doctor.					

NSV COURSE EVALUATION: BASIC COURSE

(To be completed by **Participants**)

Please indicate your opinion of the following course components:

5-Strongly Agree 4-Agree 3-No Opinion 2-Disagree 1-Strongly Disagree

COURSE COMPONENT	RATING
1. The Precourse Questionnaire helped me to study more effectively.	
2. The role play session on counseling skills was helpful.	
3. There was sufficient time scheduled for practicing counseling.	
4. The training video helped me to get a better understanding of how to perform NSV prior to practicing with the scrotal model.	
5. The practice sessions with the scrotal model made it easier for me to perform NSV on clients.	
6. There was sufficient time scheduled for practicing NSV with clients.	
7. I am now confident performing the NSV technique.	
8. I am now able to use the infection prevention practices recommended for NSV.	
9. The individualized learning course helped me focus on subjects in which I was weak.	
10. The training approach used in this course made it easier for me to learn how to provide NSV services.	
11. Twelve days were adequate for learning how to provide NSV services.	

ADDITIONAL COMMENTS

1. What topics (if any) should be **added** (and why) to improve the course?

2. What topics (if any) should be **deleted** (and why) to improve the course?

PRACTICE EXERCISES

Practice Exercise 1: INTRODUCTION TO NSV

Activity Description: After reading the handout entitled ***The Status of Family Planning in Nepal*** and **Chapter 1** of the manual, answer the following questions. Review and discuss the answers with your trainer.

estions

1. **Decide whether each of the following statements is T (true) or F (false). Write your response for each statement.**

a._____Sperm are produced in the seminal vesicles.

b._____Seminal fluid continues to be produced after vasectomy.

c._____Sperm pass first through the vasa deferentia, then through the urethra.

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

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

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

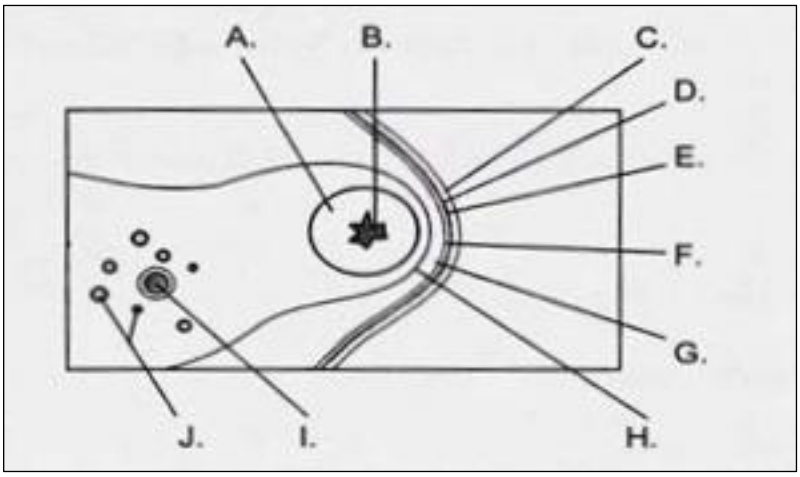
g._____Testosterone is produced in the prostate gland.

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

2. **Correctly identify the name of each structure indicated:**

a.

b.



3. Answer the following questions

a. What are the advantages of NSV?

b. What is the mechanism of action in NSV?

c. Where can NSV be performed?

d. Why are family planning programs important in Nepal?

Practice Exercise 2: COUNSELING AND DECISION MAKING

Activity Description: In addition to reading **Chapter 2**, the participant should observe a counseling session from the beginning to the point where the client has signed the consent form for voluntary sterilization (VS). Answer the following questions based on your observation.

Questions

1. Decide whether each of the following statement is T (true) or F (False). Write your response for each statement.

a._____Vasectomy providers should determine whether clients understand that temporary method of contraception is available.

b._____Each client has the right to choose whether or not to use a contraceptive method.

c. Clients should be informed that vasectomy risks include the rare possibility of failure.

d._____Because vasectomy is a safe procedure with only rare complications, there is no need to discuss possible side effects and complications of the procedure.

e._____Lubricating condom with oil or petroleum jelly before usage decreases breakage.

f. Leave space at the tip of the condom when unrolling it on the erect penis.

2. The following are multiple-choice questions. More than one option may be correct. Please circle the correct response(s)

a. If a client has decided to have a vasectomy despite the objections of his partner, you would:

   i. Delay the procedure, arrange further counseling for the couple (if possible), and discuss use of a temporary contraceptive method.

   ii. Perform the procedure according to the client's wishes.

   iii. Ask the client to return home and discuss this with his partner and return in a month.

b. Informed decision-making means:

   i. The vasectomy surgeon or assistant has informed the client about the most suitable contraceptive method.

   ii. The client has been fully informed about all contraceptive options available and has made a free choice from among them.

   iii. The vasectomy surgeon or assistant has chosen the best method for the client and has informed the client about its benefits and risks.

c. An effective counselor:

i. Gives the client advice about which family planning method to use.

ii. Uses the client's profile to determine the family planning method that best suits the client

iii. Tries to ensure that each client uses contraception.

iv. None of the above.

d. A vasectomy surgeon assessing a client's decision to choose permanent contraception before surgery should ask the following questions:

i. How did you decide to have a vasectomy?

ii. What do you know about other contraceptive methods?

iii. Why did you choose permanent contraception?

iv. All of the above.

v. None of the above.

3. Answer the following questions:

a. Was it group or individual counseling? How long did it take the client to reach a decision?

_____

_____

_____

_____

b. Write down one more point which you would have liked to discuss with the client that was not discussed by the counselor/trainer. Give your reasons.

_____

_____

_____

_____

c. Had the client decided upon an FP method before s/he came to the center? If so, what other information on FP methods was provided? If the client was undecided, list the main points of discussion which led to a decision.

_____

_____

_____

_____

d. What was the client's family size? Do you think the client is an ideal candidate for the method s/he chose? Why?

e. What does 'ABHIBADAN' stand for? Was it used in this counseling session?

f. What are the benefits of counseling?

g. Did the counseling help dispel false rumors about contraceptive methods? If no, write down one rumor you have heard about NSV.

Role Play: GOOD COUNSELING

Activity Description: The participant along with other participants, trainer or other clinic staff will be assigned roles for this section. Each participant should take a few minutes to read the background information and prepare. The observers should also read the background information so they can participate in the small group discussion following the role play.

Participant Role

Counselor: The counselor is very experienced in providing counseling services. He/she has to provide counseling to this NSV client using the principles of 'GATHER'.

Trainer or Staff

Client: The client is a young man of 30 who is interested in NSV. He has two children aged 3 and 7 years old. He does not want any more children but is apprehensive about the surgery and is concerned that it will prevent him from doing hard physical work.

Focus of the Role Play: The focus of the role play is on the interaction between the counselor and the client. The client is anxious and apprehensive about the side effects of NSV, but he is sure he wants no more children.

Discussion Questions

1. Did the counselor approach the client in a positive and reassuring manner?

2. Did the counselor talk about possible chances of regret in the future?

3. Were the client's fears realistic?

4. What other topics could the counselor have discussed?

_____

_____

_____

_____

Sample Correspondence Between Anatomy/Physiology and Misconceptions about Vasectomy.

Part	Misconception
Penis	Impotence; loss of pleasure
Seminal vesicle	No more ejaculate
Prostate gland	No more ejaculate; ejaculation and urination can occur simultaneously
Cowper's gland	No more ejaculation
Testes	Loss of manhood; loss of libido; become effeminate; castration; become fat
Vas deferentia	No more ejaculate (only sperms pass here)

Practice Exercise 3: INDICATIONS AND PRECAUTIONS

A. Activity Description: After reading **Chapter 4**, write the answers to the questions. Review and discuss the answers with your trainer.

1. Decide whether each of the following statements is T (true) or F (false). Write your response for each statement.

a._____It is not appropriate to ask a potential vasectomy client if he has ever had sexual difficulties.

b._____Varicoceles and hydroceles can be corrected at the same time that a vasectomy is performed.

c._____If a client has malaria, the malaria should be treated before the client has a vasectomy.

d._____An inguinal hernia must be repaired before a vasectomy is performed.

e. A man whose diabetes is controlled can have a vasectomy.

f._____Infertility is possible in a man who has unilateral cryptorchidism.

g. _____If a client's vasectomy cannot be performed as scheduled, you should counsel him about interim contraception.

h._____A thickened vas could indicate chronic infection.

2. The following are multiple-choice questions. More than one option may be correct. Please circle the correct response(s)

a. If a client who has gonorrhea requests an NSV, you would;
   i. Delay the procedure
   ii. Treat the infection
   iii. Counsel the client about condom use for STI prevention
   iv. All of the above

b. Elements of a prevasectomy evaluation include all of the following except:
   i. General examination
   ii. Hematocrit or hemoglobin
   iii. Medical history
   iv. Scrotal examination

Activity Description: Read the case study below and write the answers to the questions. Review and discuss the answers with your trainer.

CASE STUDY FOR NSV SKILLS: INDICATIONS AND PRECAUTIONS

A 30 year-old man comes to a clinic for NSV. He has two female children aged 3 and 5 years. While his wife wants a son, he does not want to have any more children. During the medical screening, they found the man had a large hydrocele.

Questions

1. Do you think the client is suitable for NSV despite the fact that his wife wants more children?

2. Do you think the client needs couple counseling? If yes, what are the points you would like to discuss during the counseling?

3. Will a large hydrocele be a problem in NSV? What will be your advice to him?

4. What are other medical conditions which require precaution in NSV?

Practice Exercise 4: INFECTION PREVENTION

Activity Description: Through the following self-test, you will answer questions which test the knowledge you have learned on infection prevention through the readings of **Chapter 6**. Review and discuss the answers with your trainer.

1. What is the purpose of infection prevention?

_____

_____

_____

_____

2. Define the following terms:
   a. Antisepsis _____
   b. Decontamination _____
   c. High-level disinfection _____
   d. Sterilization _____

3. Match each type of glove with its appropriate use:

Sterile surgical gloves	Scrotal exam
Utility gloves	No-scalpel vasectomy
Clean exam gloves	Washing used, decontaminated instruments

4. List the steps to be followed after using reusable gloves until they are ready for use with the next client:

_____

_____

_____

_____

5. Which solutions should be used for:
   a. Antiseptics _____
   b. Decontamination _____
   c. High-level disinfection _____
   d. Sterilization _____

6. List the different methods of sterilization:

_____

_____

_____

_____

7. Which of the following steps are IP practices in the NSV process?

a.	Washing hands before examining the client	YES	NO
b.	Applying Betadine to the operating area	YES	NO
c.	Applying a BandAid on the puncture wound	YES	NO
d.	Decontaminating the instruments in 0.5% chlorine solution for 10 minutes	YES	NO
e.	Wearing HLD or sterile gloves	YES	NO

8. Is this statement true or false: surgical (metal) instruments which have been decontaminated and thoroughly cleaned can be sterilized by boiling them in water for 20 minutes.

   TRUE FALSE

9. During NSV, when is handwashing indicated?

_____

_____

_____

_____

10. The preferred method for instruments processing in NSV is (circle one):

    STERILIZATION HIGH-LEVEL DISINFECTION

11. What is the disadvantage of HLD?

_____

_____

_____

_____

Practice Exercise 5: ANESTHESIA

Activity Description: Read and study the case study and answer the questions. Review and discuss the answers with the trainer.

Case Study

A 35 year-old man who does not want anymore children comes to the operating theater following counseling and screening for no scalpel vasectomy. He has never had an injection before and is afraid of the procedure. The attendant tells him that the doctor is very good and he will not feel any pain and that the procedure will take only five minutes. When the client is on the table the trainer tells the doctor to inject the local anesthesia without assessing the history of the client. The participant injects the local anesthesia without aspirating the syringe. The client complains of dizziness and ringing in the ears. The participant scolds him and tells him to keep quiet because these side effects happen occasionally. He continues injecting the local anesthesia. The client goes into convulsions. The participant panics and does not know what to do.

1. What did the doctor do wrong?

_____

_____

_____

_____

2. What is the percentage and dosage of local anesthetic generally used?

_____

_____

_____

_____

3. What are the complications of local anesthesia?

_____

_____

_____

_____

4. How should these complications be managed?

_____

_____

_____

_____

Practice Exercise 6: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP

A. Activity Description: After reading **Chapter 9**, circle the word true if the statement is **true**, and circle the word false if the statement is **false**.

True or False	1.	He should not have sexual intercourse for one week after NSV.
True or False	2.	He can start lifting heavy loads if he is able.
True or False	3.	If he has pain, he should take one or two aspirin tablets.
True or False	4.	The client may return for followup if needed.
True or False	5.	Post NSV counseling is not necessary after NSV.
True or False	6.	If the client experiences pain and swelling, he should return to the clinic immediately for followup.
True or False	7.	A semen analysis is optional three months after NSV.

B. Activity Description: Answer the following questions. Review and discuss the answers with your trainer.

1. When is a client ready to be discharged?

_____

_____

_____

_____

2. If three months after the NSV the semen analysis shows motile spermatozoa, what would you advise?

_____

_____

_____

_____

Practice Exercise 7: MANAGEMENT OF COMPLICATIONS

A. Activity Description: After reading **Chapter 10**, write the answers to the questions. Review and discuss the answers with your trainer.

1. Decide whether each of the following statements is T (true) or F (false). Write your response for each statement.
   a._____An asymptomatic sperm granuloma should be drained or excised.
   b._____Pressure that develops in the epididymis after a vasectomy can lead to congestive epididymitis.
   c._____Toxic doses of lidocaine can require use of dopamine and CPR.
   d._____Treatment of hematomas should always include drainage.
   e._____Sperm granuloma should be excised to prevent infection and bleeding.

2. The following are multiple-choice questions. More than one option may be correct. Please circle the correct response(s)

   a. Hematomas can be caused by:
      i. Failure to achieve hemostasis before closing the wound
      ii. Excessive strain or heavy lifting by the client after vasectomy
      iii. The client's failure to rest for 24 hours or to wear a scrotal support after vasectomy.
      iv. Inexperience of the surgeon
      v. Rough handling of the tissues during surgery

   b. A man returns eight weeks after vasectomy complaining of a mild continuous pain that began a few days ago. Upon examination, you suspect a granuloma and recommend the following treatment:
      i. A nonsteroidal analgesic
      ii. Immediate surgery for grnuloma removal
      iii. Cyst drainage and resealing of the vas
      iv. Antibiotics

   c. Most vasectomy complications can be prevented by:
      i. Gentle tissue handling
      ii. Adhering to infection prevention procedure
      iii. Careful client screening
      iv. Controlling bleeding during the procedure
      v. Secure occlusion of the vas

d. Four days after his vasectomy, a client returns to the clinic with a fever of 38.3^{O} C (101^{O}F), scrotal pain, swelling, and pyuria. You would suspect:
   i. Sperm granuloma
   ii. Hematoma
   iii. Infectious epididymitis
   iv. Chronic testicular pain
   v. Congestive epididymitis

e. Vasovagal reactions may need to be managed with:
   i. Diazepam
   ii. Ammonia capsules for syncope
   iii. Oxygen
   iv. Beta-blocker
   v. Reassurance

B. Activity Description: Read the case study below and write the answers to the questions. Review and discuss the answers with your trainer.

Case Study

After the NSV procedure, the client develops swelling, edema, and pain in the scrotum within the next 2-3 days. He does not return to the clinic because he was instructed to come after 7 days. Meanwhile, he starts running a temperature and swelling and pain increases. When he comes to the clinic, he is sent home with antibiotics and analgesics. After 5 more days, he returns with an abscess.

Questions

1. Was the client given good and proper post-operative counseling?

2. What should the doctor have done after the client presented symptoms of infection?

3. What complications might a client experience after NSV? List the various complications and their management.

Practice Exercise 8: QUALITY OF CARE IN NSV SERVICE

Activity Description: After reading **Chapter 11**, read the case study below and write the answers to the questions. Review and discuss the answers with your trainer.

Case Study

A physician went to Jumla to provide voluntary sterilization services in a mobile camp. The day before the camp was scheduled to begin, the operating theater was not prepared. There was a lack of coordination and management and there were no toilet and water facilities. There were 60 clients registered for the operation.

Questions

1. Was the facility well prepared ahead of time? **No.** How can this problem be overcome?

_____

_____

_____

_____

2. How important is it to provide water and toilet facilities and for what purposes?

_____

_____

_____

_____

3. How big should the case load be for a single physician and his team per day?

_____

_____

_____

_____

Practice Exercise 9: INFECTION PREVENTION PROCESSES FOR SURGICAL INSTRUMENTS AND OTHER ITEMS

Activity Description: After reading **Chapter 6**, answer the following questions. Review and discuss the answers with your trainer.

1. What is high level disinfection?

2. What are the various methods of high level disinfection?

3. What is the disadvantage of high level disinfection?

4. What is sterilization?

5. What are the different ways we can sterilize surgical items?

Practice Exercise 10: MOBILE OUTREACH SERVICES

Activity Description: After reading **Chapter 12**, read the passage below. The participant should identify the sentences which are not appropriate for mobile services and write down the corrected sentences in their place. Discuss these with your trainer.

Passage

Mobile outreach service is a standard means of the service delivery system for voluntary sterilization (VS) in Nepal. To have a successful mobile service, a considerable amount of planning and coordination is required in terms of physical facilities and logistics. A newly trained physician in VS is the right person to conduct such camps independently as he/she gets an opportunity to improve and master his newly acquired skills. Staff must be the most highly trained, skilled and experienced personnel available. If working independently, a new provider should have an experienced physician as backup support. Counseling and education of clients are performed before the camp starts. Local health workers and mass media help to inform the clients of the camp. The medical team, however, has to meticulously examine each and every client before the operation in order to maintain a high quality of care in service delivery. The medical team can depend on the client assessment made by local health workers and perform a complete physical exam only if in doubt. This way the physician can start the camp without wasting time on further counseling. The physician/medical team still needs to review the main points of counseling clients for VS and ensure the client has made an informed choice**.** The medical team should have at least one experienced staff nurse to monitor the activities of the operating room. In order to provide emergency backup services, the primary health center (PHC) or the district hospital should be informed of the activity and a formal relationship established with them. Arranging a good medical team for the camp is all that is required to have a successful camp. Arranging a good medical team, planning the promotion and implementation of mobile sites, including budgets, schedules, manpower and administration, as well as monitoring logistics at all times is what is required to have a successful camp.

It is optional to follow-up clients who undergo VS procedures in mobile settings, as complications are rare and the medical team is not always available. Clients who undergo VS procedures in mobile settings require the same follow-up care as those who receive services at fixed sites. In order to have smooth running mobile services, the manager should check the supplies each day and arrange to replenish any supplies that are low. The manager should also monitor infection prevention practices.

Practice Exercise 11: INFECTION PREVENTION/WASTE DISPOSAL

A. **Activity Description**: Circle the word true if the statement is **true**, and circle the word false if the statement is **false**.

True or False	1.	Used instruments should be immersed in a container filled with 0.1% chlorine solution for 7 minutes only for decontamination.
True or False	2.	After using a syringe, always recap the needle.
True or False	3.	Always iron surgical drapes or surgical gowns before sterilizing.
True or False	4.	Discarding needles and syringes in a puncture proof container immediately after use without decontamination is a safe practice.
True or False	5.	It is adequate to just wash bloody or wet areas of linen if you autoclave them.
True or False	6.	Discarded needles and syringes should always be incinerated or buried safely.

B. **Activity Description**: After reading **Chapter 6**, the participant will visit different areas of the clinic to observe and understand the steps in decontamination, cleaning and waste disposal. The participant will then answer the following questions and discuss them with the trainer.

1. Note three precautions that should be taken in preparing chlorine solution:

_____

_____

_____

_____

2. What is the name of the person who cleans the used instruments? In which part of the clinic is it done?

_____

_____

_____

_____

3. Where are the disposable syringes and other waste disposed in the OT?

_____

_____

_____

_____

4. What is the name of the person responsible for burning or burying the disposable waste? In which section of the clinic is it burned or buried?

5. Briefly describe the incinerator used at the Center. Note what it's made of, its dimensions and the reasons for burning/incinerating waste.

MIDCOURSE QUESTIONNAIRE

Instructions: Write the letter of the single best answer to each question in the blank next to the corresponding number on the attached answer sheet.

CHAPTER 1: INTRODUCTION

1. NSV acts as a contraceptive method by:
a) Occluding the vas deferens
b) Stopping sperm production
c) Removing the testes from the scrotum
d) Making the client lose his libido

2. NSV was first introduced in:
a) Nepal
b) USA
c) India
d) China

3. Spermatic cord consists of :
a) Vas deferense
b) Testicular artery
c) Internal spermatic fascia
d) all of the above

4. The following is the reported failure rate for NSV in the first year:
a) 0%
b) < 0.5%
c) < 1.0%
d) > 2.0%

CHAPTER 2: COUNSELING AND DECISION MAKING

5. For couples who are both in good health, the choice of contraceptive method is best made by:
a) Either one of the partners
b) Both partners
c) Counselor who sees the couple
d) Physician providing the procedure

6. The most important part of counseling is:
a) providing brochures about contraceptive methods to the client
b) obtaining written consent for the procedure from the client
c) identifying the client's concerns about the procedure and answering any questions
d) describing the complications and failure rate

7. Vasectomy counseling is important because:
a) it is a surgical method intended to be a permanent contraception
b) male clients need motivation to accept the procedure.
c) of side effects and complications associated with the procedure.
d) it establishes the client-provider relationship.

8. A person coming for NSV should be counseled:
a) before and immediately after the procedure
b) before, immediately after and also during followup
c) just before the procedure
d) just after the procedure

CHAPTER 3: INFORMED CONSENT

9. Informed consent has been obtained when:
a) the client presents a signed consent form before the procedure
b) signatures of the couple are on the consent form
c) the client has undergone a thorough counseling
d) the client voluntarily agrees to the procedure after being counseled

10. Which of the following is **not** a benefit of informed consent:
a) It helps to ensure client satisfaction.
b) It ensures safety to the surgeon.
c) Feelings of client regret are reduced.
d) It removes the need for a counselor.

11. Verifying informed consent is the responsibility of the:
a) the counselor.
b) the spouse.
c) the OT nurse.
d) the surgeon.

12. Which of the following statements is **not** true of informed consent:
a) determines that the client understands the procedure
b) consent of the spouse is a must
c) ensures that information about other contraceptive methods were given
d) ensures that the client's choice is voluntary

CHAPTER 4 AND 5: INDICATIONS, PRECAUTIONS AND CLIENT ASSESSMENT

13. Screening a potential vasectomy client should include a:
a) medical history and general examination
b) medical history, general and penile examination
c) medical history, general, penile and scrotal examination
d) medical history, general, penile, scrotal and rectal examination

14. Which of the following is a condition requiring further evaluation before performing the vasectomy:
a) hypertension (controlled)
b) unilateral cryptorchidism
c) small hydrocele
d) small varicocele

15. A good candidate for accepting vasectomy is a man who:
a) wants a highly effective, permanent contraceptive method
b) is considering sterilization but is not ready to make a final decision
c) has medical problems such as diabetes
d) has had previous scrotal surgery

16. Routine lab tests for NSV include:
a) blood cholesterol
b) semen analysis
c) Hb% and urine for sugar/albumin
d) None of the above

17. NSV skill performance depends on:
a) reaching your target
b) reaching the stated quality standards
c) ensuring client satisfaction
d) ensuring funding agency satisfaction

CHAPTER 5: CLIENT ASSESSMENT

18. Excessive interest in the vasectomy reversal procedure indicates that the:
a) client is suitable for NSV
b) client is not suitable for NSV
c) spouse should have a tubectomy
d) chances for regret are few

19. The best person to make the decision for the client to have voluntary sterilization is the:
a) spouse of the client
b) client himself
c) operating physician
d) counselor

20. A person with an acute GTI comes for NSV. The best course of action will be to:
a) perform NSV and treat the infection
b) tell the client NSV will cure the infection
c) advise the client that he should never have a NSV
d) delay the procedure until the infection is cured

CHAPTER 6: INFECTION PREVENTION PRACTICES

21. The human immunodeficiency virus (HIV/AIDS) and the hepatitis B virus (HBV) are reliably killed by:

a) thoroughly rinsing instruments with sterile water which has been boiled
b) air drying instruments for at least 48 hours before reuse
c) soaking instruments in 0.5% chlorine solution for 10 minutes
d) soaking instruments in a povidone iodine solution immediately after use

22. Surgical instruments which have been thoroughly decontaminated and cleaned can be sterilized by:

a) exposure to ultraviolet light for 1 hour
b) boiling them for 20 minutes
c) soaking them in chlorhexidine (e.g. Savlon) for 1 hour
d) Heat (autoclave or dry heat sterilizer)

23. Other than sterilization, the only acceptable alternative method for processing surgical (metal) instruments used for NSV is high level disinfection by boiling or soaking for 20 minutes in:

a) chlorhexidine (e.g. Savlon)
b) 2% glutaraldehyde (e.g. Cidex)
c) 5% povidone iodine solution (e.g. Betadine)
d) benzalkonium chloride solution

24. To minimize the risk of staff contacting hepatitis B or HIV/AIDS during the cleaning process, all used (soiled) instruments and reusable gloves first should be:

a) rinsed in water and scrubbed with a brush before disinfecting by boiling
b) rinsed in water and scrubbed with a brush before sterilizing
c) soaked in a fresh solution of 0.5% chlorine
d) soaked overnight in 8% formalin

25. When preparing the client for surgery, the staff should:

a) check if the genital area has been cleaned and trim scrotal hair only if it covers the operative site
b) instruct the client to shave his pubic and scrotal hair
c) wash the genital area with antiseptic soap before shaving scrotal hair
d) shave the pubic and scrotal hair before applying antiseptic solution

CHAPTER 7 & 8: ANESTHESIA AND SURGICAL PROCEDURE

26. When preparing the client for surgery, the staff should tell him that**:**

a) there will be a lot of pain during the procedure but that he won't feel it because of the anesthesia
b) the surgeon is very good and that he will probably not feel anything during the surgery
c) he will probably feel some pulling and very brief episodes of nausea during the procedure
d) he has to act like a man and should not mention it during the surgery

27. Local anesthesia for NSV involves:
a) using 1% lidocaine and adrenaline
b) creating a small wheal and infiltrating within the external spermatic fascial seath around the vas
c) premedications with meperidine and diazepam
d) using intravenous ketamine

28. The ringed forceps is one of the specially designed instruments for NSV. The other instrument is:
a) Sponge holding forceps
b) Vas forceps
c) Dissecting scissors
d) Sharp dissecting forceps

29. The ringed forceps is applied to scrotal skin and underlying the vas:
a) at 90 degree angle perpendicular to the cord
b) at 180 degree angle perpendicular to the cord
c) at 270 degree angle perpendicular to the cord
d) any angle

30. One percent xylocain is used in NSV to:
a) alter the client's mood to accept the surgery
b) block the genito-femoral nerve
c) lessen post-operative inflammation
d) provide cutaneous nerve block

31. The person most responsible for ensuring strict infection prevention practices are followed while performing NSV is the:
a) clinic helper
b) peon
c) lab assistant
d) surgeon

32. In case of convulsions during NSV, the following medicine should be available in the OT:
a) diazepam
b) naloxone
c) adrenaline
d) cortisone

33. One of the means to enhance local anesthesia is to:
a) maintain strict silence in the OT
b) educate the client on complications of NSV
c) use verbocaine with 1% lidocaine
d) use epinephrine with 1% lidocaine

34. During NSV, the best site on the vas to fix and expose it is at the:
a) junction of the middle and lower third
b) junction of the middle and upper third
c) junction of the upper two thirds and lower third
d) junction of the upper and lower half

CHAPTER 9: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP

35. After the procedure, explain to the client to:
a) abstain from sexual intercourse for at least 3 months
b) avoid lifting any objects heavier than the client's weight for 1 month
c) use a condom during sexual intercourse for the first three months after NSV
d) return to the clinic after 1 month for a sperm count

36. Three months after NSV, a client must have a semen analysis to:
a) confirm that the genito-femoral nerve was not cut during the operation
b) rule out any STDs
c) see if there is any change in the pH in the semen

37. Most NSV complications can be prevented by:
a) gentle tissue handling and adherence to IP practices
b) using chromic catgut for vas ligation
c) electrocautery for bleeders
d) creating an interfacial barrier

38. If active sperm are detected during the semen analysis after three months or 20 ejaculations, the next step is to:
a) immediately schedule a repeat NSV
b) request an immediate repeat semen analysis
c) counsel the client to return for a repeat semen analysis after one month
d) send additional semen samples to the regional center

CHAPTER 10: MANAGEMENT OF COMPLICATIONS

39. Scrotal sinus discharge is best treated by:
a) following the wait and watch principle
b) providing simple antibiotic coverage
c) active surgical intervention
d) rest and scrotal support

40. The following is **not** a complication of NSV:
a) hematoma
b) pregnancy
c) wound infection
d) impotence

41. In case of respiratory distress during NSV surgery, the surgeon should:
a) complete surgery and attend to the respiratory distress
b) continue surgery while the assistant uses an Ambu bag for assisted respiration
c) stop surgery and start CPR
d) stop surgery and oxygenate the patient using an Ambu bag

42. If a client comes back with scrotal pain and swelling after NSV:
a) confirm the presence of infection
b) treat with antibiotics
c) arrange for incision and drainage
d) all of the above

CHAPTER 11: QUALITY OF CARE FOR NSV SERVICE

43. Which one of the following is **not** a component of Quality of Care (QOC) standards:
a) attainable
b) measurable
c) targeted
d) relevant

44. The following are indications used to assess QOC in NSV, except:
a) hydraulic OT table
b) functioning autoclave
c) availability of ring forceps
d) availability of emergency drugs

45. A continuous quality improvement approach is a good tool to:
a) reach your target
b) reach the stated quality standards
c) ensure client satisfaction
d) ensure funding agency satisfaction

46. Which one of the following is the least relevant in improving the QOC in NSV:
a) counseling
b) sophisticated instruments
c) contraceptive options

CHAPTER 12: MOBILE OUTREACH SERVICES

47. To maintain good quality services, the maximum number of minilaparotomy or NSV that can be performed by one physician per day is:
a) 50
b) 35
c) 25
d) 75

48. Nursing staff accompanying a mobile outreach service should be:
a) experienced in the OT and able to handle surgical instruments
b) experienced and live locally
c) able to perform NSV or minilap
d) able to assist in a laparotomy

49. Which one of the following is **not** an essential component of emergency backup for a mobile outreach site:
a) a functioning oxygen cylinder
b) a functioning cardiac monitor
c) tubing and masks
d) an Ambu bag

50. The following are guiding principles of counseling in mobile setups except:
a) all family planning clients should receive the same degree of counseling, regardless of the service delivery site
b) should provide an opportunity for all clients to learn about methods of family planning
c) should allow clients to make an informed choice
d) should empower the clients to seek compensation in case of complications

Nepal Ministry of Health, National Health Training Center, FP/RH Participant Registration Form

To be completed by Participants:

First Name:_____
पहिलो नाम

Middle Name:_____
विचको नाम

First Name:_____
पहिलो नाम

Date of Birth:_____/_____/_____
जन्म मिति BS Day Month Year

Current Home Address (**हाल घरको ठेगना**)
Current Home Address (हाल घरको ठेगाना)

Ward No. (**वडा नं**): _____

Country (**देश**):_____

Region (**क्षेत्र**): _____

District (**जिल्ला**):_____

VDC/Municipality:_____
(गा. वि. स/ नगर पालिका)

Home phone (**घरको फोन**)::_____

E-mail Address:

Qualification ☑ **Check only one, the highest qualification achieved.**	
Community	☐ MCHW ☐ VHW
Paramedic	☐ Student ☐ Auxiliary Health Worker (AHW) ☐ Community Medical Auxiliary (CMA) ☐ Health Assistant (HA) ☐ Other
Nurse	☐ Student ☐ Auxiliary Nurse/Midwife (ANM) ☐ Staff Nurse (SN) ☐ Bachelor in Nursing (BN) ☐ Masters in Nursing
Medical	☐ Student ☐ Intern/Resident ☐ Ayurvedic Doctor/Kabiraj/Baidhya ☐ Medical Doctor ☐ Gyn/Obs ☐ Other
Other	☐ Bachelors (BSc, BEd, BPH, BA) ☐ Masters (MSc, MA, MPH) ☐ Doctoral (PhD, DrPH, ScD) ☐ Other, specify: _____

HuRDIS PIN Number: _____ **Gender लिङ्ग**
(Government Employee Only) ☐ Male **पुरुष**
Citizenship ID Number: _____ ☐ Female **महिला**

Current Work place (**हाल काम गर्ने ठाउँ**)

Ward No. (**वडा नं**): _____

Country (**देश**):_____

Region (**क्षेत्र**): _____

District (**जिल्ला**):_____

VDC/Municipality:_____
(गा. वि. स/ नगर पालिका)

Facility Type:

☐ Central Hospital	☐ Regional Hospital	☐ Sub Regional Hospital
☐ Zonal Hospital	☐ District Hospital	☐ PHC
☐ Teaching Hospital	☐ Health Center	☐ FP Clinic
☐ Health Post	☐ Sub Health Post	☐ DHO/DPHO
☐ NHTC	☐ MOH	☐ RHTC
☐ Other Health Institution		☐ Office
☐ Medical/Nursing/Midwifery/Other School		

Work Phone :_____**Fax** _____
(**काम गर्ने ठाउँको फोन**)

Sponsor: ☐ MOH ☐ MOE ☐ Semi Government ☐ NGO
☐ INGO ☐ Other (Specify……..)

Current Post/Responsibility	
☐ MCHW ☐ VCHW	☐ AHW/Senior AHW ☐ ANM
☐ CMA/Senior CMA ☐ HA/Senior HA ☐ Staff Nurse ☐ Sister in charge	☐ Counselor ☐ PHN/Senior PHN ☐ Matron/Asst. Matron
☐ Ayurvedic Doctor/Kabiraj/Baidhya ☐ Medical Officer/Sr. Medical Officer ☐ Specialist (Obs/Gyn, Surgeon etc)	☐ DHO/DPHO ☐ Medical Superintendent
☐ Clinical Preceptor/Instructor ☐ Faculty (Asst. Lecturer/lecturer/Reader/Professor)	
☐ Others, Specify: _____	

Participant Assessment to be completed by Trainer:

Event Name: _____
Training Site: _____
Start Date: _____/_____/_____
Day Month Year

End Date: _____/_____/_____
Day Month Year

Assessment Score
Pre-course Questionnaire _____%
Mid-course Questionnaire _____%

Trainers' Name: _____
Trainer's Signature: _____

Choose one: A, B, or C, according to training activity type.
☑ **Check only one**

A. Clinical Skills Course	Participant ☐ is competent ☐ is not competent **to provide the following clinical service(s) assessed at this training event + comments:**
B. Training Skills Course	**Participant successfully completed this course and is now a candidate:** ☐ Clinical Trainer ☐ Advance trainer ☐ Master Trainer ☐ ☐ Classroom faculty ☐ Clinical preceptor
C. Workshop	Participant ☐

PRECOURSE QUESTIONNAIRE

HOW THE RESULTS WILL BE USED

The **precourse questionnaire** is not intended to be a test but rather an assessment of what the participant knows about the course topics. Participants, however, are often unaware of this and may become anxious and uncomfortable at the thought of being "tested" on the first day of the course. Explain to the participant that the purpose of the precourse questionnaire is to let both the participant and trainer know what information the participant is bringing to the course. The questionnaire also alerts the participant to the important concepts in each chapter of the reference manual. The trainer should be sensitive to this attitude and administer the questionnaire in a neutral and non-threatening way as the following guide illustrates:

- Participant completes the precourse questionnaire.
- The trainer gives the answer to each question.
- The trainer and participant briefly discuss the answers and identify those areas where the participant has knowledge of the topics and those where the participant may need to study in more depth.

PRECOURSE QUESTIONNAIRE ANSWER KEY

Instructions: In the space provided, print a capital **T** if the statement is **True** or a capital **F** if the statement is **False**.

CHAPTER 1: INTRODUCTION	
1. Mechanism of action of NSV is the occlusion of vas deferens which carries the sperm from the testes to the penis.	**TRUE**
2. Half of the total VS procedures in the world are Vasectomies.	**FALSE**
3. The failure rate for NSV is less than 0.5%.	**FALSE**
4. Spermatic cord consists of vas deferens, testicles, vessels, internal spermatic fascia and cremasteric fascia	**FALSE**
5. Normal sperm count is 10-20 million per ml of ejaculation	**FALSE**
CHAPTER 2: COUNSELING AND DECISION MAKING	
6. Counseling in vasectomy is important because it is surgical procedure for a permanent form of contraception.	**TRUE**
7. The physician is the best qualified person to choose a contraceptive method for a couple in a good health.	**FALSE**
8. The most important part of counseling is describing the adverse side effects.	**FALSE**
9. Good counseling consists of talking to the client before the procedure, during and just after the procedure and also during follow-up.	**TRUE**
CHAPTER 3: INFORMED CONSENT	
10. Informed consent means the client has only signed the formal consent form.	**FALSE**
11. Informed consent is the same as NSV counseling.	**FALSE**
12. Properly administered informed consent reduces regret after NSV.	**TRUE**
13. It is the responsibility of the counselor to verify informed consent.	**FALSE**
CHAPTER 4: INDICATIONS AND PRECAUTIONS	
14. Controlled hypertension is a medical condition requiring further evaluation before performing NSV.	**FALSE**
15. A client who has excessive interest in reversing the procedure is not a suitable candidate for NSV.	**TRUE**
16. A client should not have NSV under pressure from his spouse or others.	**TRUE**
17. NSV can be performed on a client with an acute genital tract infection.	**FALSE**

CHAPTER 5: CLIENT ASSESSMENT	
18. A good candidate for accepting vasectomy is a man who wants an effective permanent contraception.	**TRUE**
19. Screening a potential vasectomy client should include only a medical history and general physical examination.	**FALES**
20. Routine lab investigations are necessary for every client willing to have NSV.	**FALSE**
21. Performance of the NSV procedure depends on the skill and experience of the surgeon.	**TRUE**
CHAPTER 6: INFECTION PREVENTION	
22. The human immunodeficiency virus (HIV/AIDS) and the hepatitis B virus (HBV) are reliably eliminated by 0.5 % chlorine solutions.	**TRUE**
23. Surgical instruments which have been thoroughly decontaminated and cleaned can be sterilized by boiling in water for 20 minutes.	**FALSE**
24. Bacterial endospores which cause tetanus and gangrene are reliably killed by boiling (high level disinfection).	**FALSE**
25. Decontamination involves soaking soiled instruments in 0.5 % chlorine solution for 10 minutes right after a procedure.	**TRUE**
26. Shaving the pubic and scrotal hair is routinely done prior to vasectomy to prevent infection.	**FALSE**
CHAPTER 7 & 8: ANESTHESIA AND SURGICAL PROCEDURE	
27. The NSV technique requires specially designed instruments.	**TRUE**
28. The preferred anesthetic agent in vasectomy is 2% lidocaine plus epinephrine.	**FALSE**
29. The client should be reassured that he will feel no pain during the procedure.	**FALSE**
30. The NSV technique is essentially similar to conventional vasectomy.	**FALSE**
31. The goals of anesthesia for NSV procedures are to prevent pain, discomfort and minimize stress and anxiety.	**TRUE**
32. Doctors and support staff must observe strict infection prevention practices while performing NSV.	**TRUE**
33. The facility must be equipped with drugs to handle emergencies.	**TRUE**
34. Talking to the client during the NSV procedure is not recommended.	**FALSE**
35. The vas should be fixed under the median raphe at the junction of the middle and lower third of the scortum for NSV.	**FALSE**

CHAPTER 9: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP	
36. Semen analysis is a must 3 months after NSV to confirm the success of NSV.	**TRUE**
37. Minor pain and bruising of the scrotum are normal after vasectomy.	**TRUE**
38. After vasectomy, the client may resume sexual intercourse in 2 days if he feels comfortable.	**TRUE**
39. Vasectomy clients are sterile immediately after the procedure.	**FALSE**
CHAPTER 10: MANAGEMENT OF COMPLICATIONS	
40. Post NSV scrotal sinus discharge is treated by reassuring the client and through conservative management.	**FALSE**
41. In case of respiratory depression during NSV surgery, quickly finish the operation and then provide assisted respiration.	**FALSE**
42. Incision and drainage with antibiotic coverage is indicated for scrotal abscess after NSV.	**TRUE**
CHAPTER 11: QUALITY OF CARE IN NSV SERVICE	
43. Quality of care standards should be attainable, measurable, and relevant.	**TRUE**
44. Indicators for assessing quality of care in NSV are not very important in improving the quality of NSV services.	**FALSE**
45. Technically sophisticated equipment does not automatically improve the quality of services in NSV.	**TRUE**
46. Once the quality standard is achieved, there is no further need for a continuous monitoring and improvement process.	**FALSE**
CHAPTER 12: MOBILE OUTREACH SERVICES	
47. Because of high demand and shortage of services in mobile camps, a doctor should be allowed to perform as many operations as he possibly can.	**FALSE**
48. In a mobile camp situation, there is always a shortage of space and staff so counseling may be waived if there is a heavy client load.	**FALSE**
49. Nurses must have OT experience as a prerequisite to working in a mobile camp.	**TRUE**
50. Every mobile camp must have an emergency kit for emergency backup.	**TRUE**

MIDCOURSE QUESTIONNAIRE

USING THE QUESTIONNAIRE

This knowledge assessment is designed to help participants monitor their progress during the course. By the end of the course, the participant is expected to achieve a score of 85% or better.

The questionnaire should be given on the day indicated in the course outline. This occurs when all subject areas have been studied. A score of 85% or more correct indicates knowledge-based mastery of the material presented in the reference manual. If the participant scores less than 85% on the first attempt, the trainer should review the results with the participant and provide guidance on using the reference manual to learn the required information. The participant can then retake the questions missed at any time during the remainder of the course.

Repeat testing should be done **only** after the participant has had sufficient time to study the reference manual.

The midcourse questionnaire should be administered in a neutral and non-threatening way as the following guide illustrates.

- Make a copy of the midcourse questionnaire.
- Ask the participant to print their name on the first page of the questionnaire **answer sheet**.
- In order to save paper, ask the participant **not to write on the questionnaire**. This will allow the trainer to use the questionnaire for the next participant.
- Give the participant sufficient time to answer all of the questions.
- The trainer should monitor the participant while the questionnaire is being completed.
- The trainer will use the answer key and score the questionnaire.
- A score of 85% or more correct indicates knowledge-based mastery of the material presented in the reference manual.
- If the participant scores less than 85% on the first attempt, the trainer should review the results with the participant and provide guidance on using the reference manual to learn the required information.
- The participant can then retake the questions missed at any time during the remainder of the course.

MIDCOURSE QUESTIONNAIRE

Instructions: Write the letter of the single best answer to each question in the blank next to the corresponding number on the attached answer sheet.

CHAPTER 1: INTRODUCTION

1. NSV acts as a contraceptive method by:
a) Occluding the vas deferens
b) Stopping sperm production
c) Removing the testes from the scrotum
d) Making the client lose his libido

2. NSV was first introduced in:
a) Nepal
b) USA
c) India
d) China

3. Spermatic cord consists of :
a) Vas deferense
b) Testicular artery
c) Internal spermatic fascia
d) all of the above

4. The following is the reported failure rate for NSV in the first year:
a) 0%
b) < 0.5%
c) < 1.0%
d) > 2.0%

CHAPTER 2: COUNSELING AND DECISION MAKING

5. For couples who are both in good health, the choice of contraceptive method is best made by:
a) Either one of the partners
b) Both partners
c) Counselor who sees the couple
d) Physician providing the procedure

6. The most important part of counseling is:
a) providing brochures about contraceptive methods to the client
b) obtaining written consent for the procedure from the client
c) identifying the client's concerns about the procedure and answering any questions
d) describing the complications and failure rate

7. Vasectomy counseling is important because:
a) it is a surgical method intended to be a permanent contraception
b) male clients need motivation to accept the procedure.
c) of side effects and complications associated with the procedure.
d) it establishes the client-provider relationship.

8. A person coming for NSV should be counseled:
a) before and immediately after the procedure
b) before, immediately after and also during followup
c) just before the procedure
d) just after the procedure

CHAPTER 3: INFORMED CONSENT

9. Informed consent has been obtained when:
a) the client presents a signed consent form before the procedure
b) signatures of the couple are on the consent form
c) the client has undergone a thorough counseling
d) the client voluntarily agrees to the procedure after being counseled

10. Which of the following is **not** a benefit of informed consent:
a) It helps to ensure client satisfaction.
b) It ensures safety to the surgeon.
c) Feelings of client regret are reduced.
d) It removes the need for a counselor.

11. Verifying informed consent is the responsibility of the:
a) the counselor.
b) the spouse.
c) the OT nurse.
d) the surgeon.

12. Which of the following statements is **not** true of informed consent:
a) determines that the client understands the procedure
b) consent of the spouse is a must
c) ensures that information about other contraceptive methods were given
d) ensures that the client's choice is voluntary

CHAPTER 4 AND 5: INDICATIONS, PRECAUTIONS AND CLIENT ASSESSMENT

13. Screening a potential vasectomy client should include a:
a) medical history and general examination
b) medical history, general and penile examination
c) medical history, general, penile and scrotal examination
d) medical history, general, penile, scrotal and rectal examination

14. Which of the following is a condition requiring further evaluation before performing the vasectomy:
a) hypertension (controlled)
b) unilateral cryptorchidism
c) small hydrocele
d) small varicocele

15. A good candidate for accepting vasectomy is a man who:
a) wants a highly effective, permanent contraceptive method
b) is considering sterilization but is not ready to make a final decision
c) has medical problems such as diabetes
d) has had previous scrotal surgery

16. Routine lab tests for NSV include:
a) blood cholesterol
b) semen analysis
c) Hb% and urine for sugar/albumin
d) None of the above

17. NSV skill performance depends on:
a) reaching your target
b) reaching the stated quality standards
c) ensuring client satisfaction
d) ensuring funding agency satisfaction

CHAPTER 5: CLIENT ASSESSMENT

18. Excessive interest in the vasectomy reversal procedure indicates that the:
a) client is suitable for NSV
b) client is not suitable for NSV
c) spouse should have a tubectomy
d) chances for regret are few

19. The best person to make the decision for the client to have voluntary sterilization is the:
a) spouse of the client
b) client himself
c) operating physician
d) counselor

20. A person with an acute GTI comes for NSV. The best course of action will be to:
a) perform NSV and treat the infection
b) tell the client NSV will cure the infection
c) advise the client that he should never have a NSV
d) delay the procedure until the infection is cured

CHAPTER 6: INFECTION PREVENTION PRACTICES

21. The human immunodeficiency virus (HIV/AIDS) and the hepatitis B virus (HBV) are reliably killed by:

a) thoroughly rinsing instruments with sterile water which has been boiled
b) air drying instruments for at least 48 hours before reuse
c) soaking instruments in 0.5% chlorine solution for 10 minutes
d) soaking instruments in a povidone iodine solution immediately after use

22. Surgical instruments which have been thoroughly decontaminated and cleaned can be sterilized by:

a) exposure to ultraviolet light for 1 hour
b) boiling them for 20 minutes
c) soaking them in chlorhexidine (e.g. Savlon) for 1 hour
d) Heat (autoclave or dry heat sterilizer)

23. Other than sterilization, the only acceptable alternative method for processing surgical (metal) instruments used for NSV is high level disinfection by boiling or soaking for 20 minutes in:

a) chlorhexidine (e.g. Savlon)
b) 2% glutaraldehyde (e.g. Cidex)
c) 5% povidone iodine solution (e.g. Betadine)
d) benzalkonium chloride solution

24. To minimize the risk of staff contacting hepatitis B or HIV/AIDS during the cleaning process, all used (soiled) instruments and reusable gloves first should be:

a) rinsed in water and scrubbed with a brush before disinfecting by boiling
b) rinsed in water and scrubbed with a brush before sterilizing
c) soaked in a fresh solution of 0.5% chlorine
d) soaked overnight in 8% formalin

25. When preparing the client for surgery, the staff should:

a) check if the genital area has been cleaned and trim scrotal hair only if it covers the operative site
b) instruct the client to shave his pubic and scrotal hair
c) wash the genital area with antiseptic soap before shaving scrotal hair
d) shave the pubic and scrotal hair before applying antiseptic solution

CHAPTER 7 & 8: ANESTHESIA AND SURGICAL PROCEDURE

26. When preparing the client for surgery, the staff should tell him that**:**

a) there will be a lot of pain during the procedure but that he won't feel it because of the anesthesia
b) the surgeon is very good and that he will probably not feel anything during the surgery
c) he will probably feel some pulling and very brief episodes of nausea during the procedure
d) he has to act like a man and should not mention it during the surgery

27. Local anesthesia for NSV involves:
a) using 1% lidocaine and adrenaline
b) creating a small wheal and infiltrating within the external spermatic fascial seath around the vas
c) premedications with meperidine and diazepam
d) using intravenous ketamine

28. The ringed forceps is one of the specially designed instruments for NSV. The other instrument is:
a) Sponge holding forceps
b) Vas forceps
c) Dissecting scissors
d) Sharp dissecting forceps

29. The ringed forceps is applied to scrotal skin and underlying the vas:
a) at 90 degree angle perpendicular to the cord
b) at 180 degree angle perpendicular to the cord
c) at 270 degree angle perpendicular to the cord
d) any angle

30. One percent xylocain is used in NSV to:
a) alter the client's mood to accept the surgery
b) block the genito-femoral nerve
c) lessen post-operative inflammation
d) provide cutaneous nerve block

31. The person most responsible for ensuring strict infection prevention practices are followed while performing NSV is the:
a) clinic helper
b) peon
c) lab assistant
d) surgeon

32. In case of convulsions during NSV, the following medicine should be available in the OT:
a) diazepam
b) naloxone
c) adrenaline
d) cortisone

33. One of the means to enhance local anesthesia is to:
a) maintain strict silence in the OT
b) educate the client on complications of NSV
c) use verbocaine with 1% lidocaine
d) use epinephrine with 1% lidocaine

34. During NSV, the best site on the vas to fix and expose it is at the:
a) junction of the middle and lower third
b) junction of the middle and upper third
c) junction of the upper two thirds and lower third
d) junction of the upper and lower half

CHAPTER 9: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP

35. After the procedure, explain to the client to:
a) abstain from sexual intercourse for at least 3 months
b) avoid lifting any objects heavier than the client's weight for 1 month
c) use a condom during sexual intercourse for the first three months after NSV
d) return to the clinic after 1 month for a sperm count

36. Three months after NSV, a client must have a semen analysis to:
a) confirm that the genito-femoral nerve was not cut during the operation
b) rule out any STDs
c) see if there is any change in the pH in the semen
d) confirm azoospermia

37. Most NSV complications can be prevented by:
a) gentle tissue handling and adherence to IP practices
b) using chromic catgut for vas ligation
c) electrocautery for bleeders
d) creating an interfacial barrier

38. If active sperm are detected during the semen analysis after three months or 20 ejaculations, the next step is to:
a) immediately schedule a repeat NSV
b) request an immediate repeat semen analysis
c) counsel the client to return for a repeat semen analysis after one month
d) send additional semen samples to the regional center

CHAPTER 10: MANAGEMENT OF COMPLICATIONS

39. Scrotal sinus discharge is best treated by:
a) following the wait and watch principle
b) providing simple antibiotic coverage
c) active surgical intervention
d) rest and scrotal support

40. The following is **not** a complication of NSV:
a) hematoma
b) pregnancy
c) wound infection
d) impotence

41. In case of respiratory distress during NSV surgery, the surgeon should:
a) complete surgery and attend to the respiratory distress
b) continue surgery while the assistant uses an Ambu bag for assisted respiration
c) stop surgery and start CPR
d) stop surgery and oxygenate the patient using an Ambu bag

42. If a client comes back with scrotal pain and swelling after NSV:
a) confirm the presence of infection
b) treat with antibiotics
c) arrange for incision and drainage
d) all of the above

CHAPTER 11: QUALITY OF CARE FOR NSV SERVICE

43. Which one of the following is **not** a component of Quality of Care (QOC) standards:
a) attainable
b) measurable
c) targeted
d) relevant

44. The following are indications used to assess QOC in NSV, except:
a) hydraulic OT table
b) functioning autoclave
c) availability of ring forceps
d) availability of emergency drugs

45. A continuous quality improvement approach is a good tool to:
a) reach your target
b) reach the stated quality standards
c) ensure client satisfaction
d) ensure funding agency satisfaction

46. Which one of the following is the least relevant in improving the QOC in NSV:
a) counseling
b) sophisticated instruments
c) contraceptive options

CHAPTER 12: MOBILE OUTREACH SERVICES

47. To maintain good quality services, the maximum number of minilaparotomy or NSV that can be performed by one physician per day is:
a) 50
b) 35
c) 25
d) 75

48. Nursing staff accompanying a mobile outreach service should be:
a) experienced in the OT and able to handle surgical instruments
b) experienced and live locally
c) able to perform NSV or minilap
d) able to assist in a laparotomy

49. Which one of the following is **not** an essential component of emergency backup for a mobile outreach site:

a) a functioning oxygen cylinder
b) a functioning cardiac monitor
c) tubing and masks
d) an Ambu bag

50. The following are guiding principles of counseling in mobile setups except:

a) all family planning clients should receive the same degree of counseling, regardless of the service delivery site
b) should provide an opportunity for all clients to learn about methods of family planning
c) should allow clients to make an informed choice
d) should empower the clients to seek compensation in case of complications

MIDCOURSE QUESTIONNAIRE ANSWER SHEET

Name :
Work station :
Date :

CHAPTER 1: INTRODUCTION

1. _____
2. _____
3. _____
4. _____

CHAPTER 2: COUNSELING AND DECISION MAKING

5. _____
6. _____
7. _____
8. _____

CHAPTER 3: INFORMED CONSENT

9. _____
10. _____
11. _____
12. _____

CHAPTER 4 AND 5: INDICATIONS, PRECAUTIONS AND CLIENT ASSESSMENT

13. _____
14. _____
15. _____
16. _____
17. _____

CHAPTER 5: CLIENT ASSESSMENT

18. _____
19. _____
20. _____

CHAPTER 6: INFECTION PREVENTION PRACTICES

21. _____
22. _____
23. _____
24. _____
25. _____

CHAPTER 7 & 8: ANESTHESIA AND SURGICAL PROCEDURE

26. _____
27. _____
28. _____
29. _____
30. _____
31. _____
32. _____
33. _____
34. _____

CHAPTER 9: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP

35. _____
36. _____
37. _____
38. _____

CHAPTER 10: MANAGEMENT OF COMPLICATIONS

39. _____
40. _____
41. _____
42. _____

CHAPTER 11: QUALITY OF CARE IN NSV SERVICE

43. _____
44. _____
45. _____
46. _____

CHAPTER 12: MOBILE OUTREACH SERVICES

47. _____
48. _____
49. _____
50. _____

MIDCOURSE QUESTIONNAIRE

Instructions: Write the letter of the single best answer to each question in the blank next to the corresponding number on the attached answer sheet.

CHAPTER 1: INTRODUCTION

1. NSV acts as a contraceptive method by:
A) OCCLUDING THE VAS DEFERENS
b) Stopping sperm production
c) Removing the testes from the scrotum
d) Making the client lose his libido

2. NSV was first introduced in:
a) Nepal
b) USA
c) India
D) CHINA

3. Spermatic cord consists of :
a) Vas deferense
b) Testicular artery
c) Internal spermatic fascia
D) ALL OF THE ABOVE

4. The following is the reported failure rate for NSV in the first year:
a) 0%
b) < 0.5%
c) < 1.0%
D) > 2.0%

CHAPTER 2: COUNSELING AND DECISION MAKING

5. For couples who are both in good health, the choice of contraceptive method is best made by:
a) Either one of the partners
B) BOTH PARTNERS
c) Counselor who sees the couple
d) Physician providing the procedure

6. The most important part of counseling is:
a) providing brochures about contraceptive methods to the client
b) obtaining written consent for the procedure from the client
C) IDENTIFYING THE CLIENT'S CONCERNS ABOUT THE PROCEDURE AND ANSWERING ANY QUESTIONS
d) describing the complications and failure rate

7. Vasectomy counseling is important because:

A) IT IS A SURGICAL METHOD INTENDED TO BE A PERMANENT CONTRACEPTION

b) male clients need motivation to accept the procedure.

c) of side effects and complications associated with the procedure.

d) it establishes the client-provider relationship.

8. A person coming for NSV should be counseled:

a) before and immediately after the procedure

B) BEFORE, IMMEDIATELY AFTER AND ALSO DURING FOLLOWUP

c) just before the procedure

d) just after the procedure

CHAPTER 3: INFORMED CONSENT

9. Informed consent has been obtained when:

a) the client presents a signed consent form before the procedure

b) signatures of the couple are on the consent form

c) the client has undergone a thorough counseling

D) THE CLIENT VOLUNTARILY AGREES TO THE PROCEDURE AFTER BEING COUNSELED

10. Which of the following is **not** a benefit of informed consent:

a) It helps to ensure client satisfaction.

b) It ensures safety to the surgeon.

c) Feelings of client regret are reduced.

D) IT REMOVES THE NEED FOR A COUNSELOR.

11. Verifying informed consent is the responsibility of the:

a) the counselor.

b) the spouse.

c) the OT nurse.

D) THE SURGEON.

12. Which of the following statements is **not** true of informed consent:

a) determines that the client understands the procedure

B) CONSENT OF THE SPOUSE IS A MUST

c) ensures that information about other contraceptive methods were given

d) ensures that the client's choice is voluntary

CHAPTER 4 AND 5: INDICATIONS, PRECAUTIONS AND CLIENT ASSESSMENT

13. Screening a potential vasectomy client should include a:

a) medical history and general examination

b) medical history, general and penile examination

C) MEDICAL HISTORY, GENERAL, PENILE AND SCROTAL EXAMINATION

d) medical history, general, penile, scrotal and rectal examination

14. Which of the following is a condition requiring further evaluation before performing the vasectomy:
a) hypertension (controlled)
B) UNILATERAL CRYPTORCHIDISM
c) small hydrocele
d) small varicocele

15. A good candidate for accepting vasectomy is a man who:
A) WANTS A HIGHLY EFFECTIVE, PERMANENT CONTRACEPTIVE METHOD
b) is considering sterilization but is not ready to make a final decision
c) has medical problems such as diabetes
d) has had previous scrotal surgery

16. Routine lab tests for NSV include:
a) blood cholesterol
b) semen analysis
c) Hb% and urine for sugar/albumin
D) NONE OF THE ABOVE

17. NSV skill performance depends on:
a) reaching your target
B) REACHING THE STATED QUALITY STANDARDS
c) ensuring client satisfaction
d) ensuring funding agency satisfaction

CHAPTER 5: CLIENT ASSESSMENT

18. Excessive interest in the vasectomy reversal procedure indicates that the:
a) client is suitable for NSV
B) CLIENT IS NOT SUITABLE FOR NSV
c) spouse should have a tubectomy
d) chances for regret are few

19. The best person to make the decision for the client to have voluntary sterilization is the:
a) spouse of the client
B) CLIENT HIMSELF
c) operating physician
d) counselor

20. A person with an acute GTI comes for NSV. The best course of action will be to:
a) perform NSV and treat the infection
b) tell the client NSV will cure the infection
c) advise the client that he should never have a NSV
D) DELAY THE PROCEDURE UNTIL THE INFECTION IS CURED

CHAPTER 6: INFECTION PREVENTION PRACTICES

21. The human immunodeficiency virus (HIV/AIDS) and the hepatitis B virus (HBV) are reliably killed by:

a) thoroughly rinsing instruments with sterile water which has been boiled
b) air drying instruments for at least 48 hours before reuse
C) SOAKING INSTRUMENTS IN 0.5% CHLORINE SOLUTION FOR 10 MINUTES
d) soaking instruments in a povidone iodine solution immediately after use

22. Surgical instruments which have been thoroughly decontaminated and cleaned can be sterilized by:

a) exposure to ultraviolet light for 1 hour
b) boiling them for 20 minutes
c) soaking them in chlorhexidine (e.g. Savlon) for 1 hour
D) HEAT (AUTOCLAVE OR DRY HEAT STERILIZER)

23. Other than sterilization, the only acceptable alternative method for processing surgical (metal) instruments used for NSV is high level disinfection by boiling or soaking for 20 minutes in:

a) chlorhexidine (e.g. Savlon)
B) 2% GLUTARALDEHYDE (E.G. CIDEX)
c) 5% povidone iodine solution (e.g. Betadine)
d) benzalkonium chloride solution

24. To minimize the risk of staff contacting hepatitis B or HIV/AIDS during the cleaning process, all used (soiled) instruments and reusable gloves first should be:

a) rinsed in water and scrubbed with a brush before disinfecting by boiling
b) rinsed in water and scrubbed with a brush before sterilizing
C) SOAKED IN A FRESH SOLUTION OF 0.5% CHLORINE
d) soaked overnight in 8% formalin

25. When preparing the client for surgery, the staff should:

A) CHECK IF THE GENITAL AREA HAS BEEN CLEANED AND TRIM SCROTAL HAIR ONLY IF IT COVERS THE OPERATIVE SITE
b) instruct the client to shave his pubic and scrotal hair
c) wash the genital area with antiseptic soap before shaving scrotal hair
d) shave the pubic and scrotal hair before applying antiseptic solution

CHAPTER 7 & 8: ANESTHESIA AND SURGICAL PROCEDURE

26. When preparing the client for surgery, the staff should tell him that**:**

a) there will be a lot of pain during the procedure but that he won't feel it because of the anesthesia
b) the surgeon is very good and that he will probably not feel anything during the surgery
C) HE WILL PROBABLY FEEL SOME PULLING AND VERY BRIEF EPISODES OF NAUSEA DURING THE PROCEDURE
d) he has to act like a man and should not mention it during the surgery

27. Local anesthesia for NSV involves:
a) using 1% lidocaine and adrenaline
B) CREATING A SMALL WHEAL AND INFILTRATING WITHIN THE EXTERNAL SPERMATIC FASCIAL SEATH AROUND THE VAS
c) premedications with meperidine and diazepam
d) using intravenous ketamine

28. The ringed forceps is one of the specially designed instruments for NSV. The other instrument is:
a) Sponge holding forceps
b) Vas forceps
c) Dissecting scissors
D) SHARP DISSECTING FORCEPS

29. The ringed forceps is applied to scrotal skin and underlying the vas:
A) AT 90 DEGREE ANGLE PERPENDICULAR TO THE CORD
b) at 180 degree angle perpendicular to the cord
c) at 270 degree angle perpendicular to the cord
d) any angle

30. One percent xylocain is used in NSV to:
a) alter the client's mood to accept the surgery
b) block the genito-femoral nerve
c) lessen post-operative inflammation
D) PROVIDE CUTANEOUS NERVE BLOCK

31. The person most responsible for ensuring strict infection prevention practices are followed while performing NSV is the:
a) clinic helper
b) peon
c) lab assistant
D) SURGEON

32. In case of convulsions during NSV, the following medicine should be available in the OT:
A) DIAZEPAM
b) naloxone
c) adrenaline
d) cortisone

33. One of the means to enhance local anesthesia is to:
A) MAINTAIN STRICT SILENCE IN THE OT
b) educate the client on complications of NSV
c) use verbocaine with 1% lidocaine
d) use epinephrine with 1% lidocaine

34. During NSV, the best site on the vas to fix and expose it is at the:
a) junction of the middle and lower third
B) JUNCTION OF THE MIDDLE AND UPPER THIRD
c) junction of the upper two thirds and lower third
d) junction of the upper and lower half

CHAPTER 9: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP

35. After the procedure, explain to the client to:
a) abstain from sexual intercourse for at least 3 months
b) avoid lifting any objects heavier than the client's weight for 1 month
C) USE A CONDOM DURING SEXUAL INTERCOURSE FOR THE FIRST THREE MONTHS AFTER NSV
d) return to the clinic after 1 month for a sperm count

36. Three months after NSV, a client must have a semen analysis to:
a) confirm that the genito-femoral nerve was not cut during the operation
b) rule out any STDs
c) see if there is any change in the pH in the semen
D) CONFIRM AZOOSPERMIA

37. Most NSV complications can be prevented by:
A) GENTLE TISSUE HANDLING AND ADHERENCE TO IP PRACTICES
b) using chromic catgut for vas ligation
c) electrocautery for bleeders
d) creating an interfacial barrier

38. If active sperm are detected during the semen analysis after three months or 20 ejaculations, the next step is to:
a) immediately schedule a repeat NSV
b) request an immediate repeat semen analysis
C) COUNSEL THE CLIENT TO RETURN FOR A REPEAT SEMEN ANALYSIS AFTER ONE MONTH
d) send additional semen samples to the regional center

CHAPTER 10: MANAGEMENT OF COMPLICATIONS

39. Scrotal sinus discharge is best treated by:
a) following the wait and watch principle
b) providing simple antibiotic coverage
C) ACTIVE SURGICAL INTERVENTION
d) rest and scrotal support

40. The following is **not** a complication of NSV:
a) hematoma
b) pregnancy
c) wound infection
D) IMPOTENCE

41. In case of respiratory distress during NSV surgery, the surgeon should:
a) complete surgery and attend to the respiratory distress
b) continue surgery while the assistant uses an Ambu bag for assisted respiration
c) stop surgery and start CPR
D) STOP SURGERY AND OXYGENATE THE PATIENT USING AN AMBU BAG

42. If a client comes back with scrotal pain and swelling after NSV:
a) confirm the presence of infection
b) treat with antibiotics
c) arrange for incision and drainage
D) ALL OF THE ABOVE

CHAPTER 11: QUALITY OF CARE FOR NSV SERVICE

43. Which one of the following is **not** a component of Quality of Care (QOC) standards:
a) attainable
b) measurable
C) TARGETED
d) relevant

44. The following are indications used to assess QOC in NSV, except:
A) HYDRAULIC OT TABLE
b) functioning autoclave
c) availability of ring forceps
d) availability of emergency drugs

45. A continuous quality improvement approach is a good tool to:
a) reach your target
B) REACH THE STATED QUALITY STANDARDS
c) ensure client satisfaction
d) ensure funding agency satisfaction

46. Which one of the following is the least relevant in improving the QOC in NSV:
a) counseling
B) SOPHISTICATED INSTRUMENTS
c) contraceptive options
d) competency of operating physician

CHAPTER 12: MOBILE OUTREACH SERVICES

47. To maintain good quality services, the maximum number of minilaparotomy or NSV that can be performed by one physician per day is:
A) 50
b) 35
c) 25
d) 75

48. Nursing staff accompanying a mobile outreach service should be:
A) EXPERIENCED IN THE OT AND ABLE TO HANDLE SURGICAL INSTRUMENTS
b) experienced and live locally
c) able to perform NSV or minilap
d) able to assist in a laparotomy

49. Which one of the following is **not** an essential component of emergency backup for a mobile outreach site:

a) a functioning oxygen cylinder

B) A FUNCTIONING CARDIAC MONITOR

c) tubing and masks

d) an Ambu bag

50. The following are guiding principles of counseling in mobile setups except:

a) all family planning clients should receive the same degree of counseling, regardless of the service delivery site

b) should provide an opportunity for all clients to learn about methods of family planning

c) should allow clients to make an informed choice

D) SHOULD EMPOWER THE CLIENTS TO SEEK COMPENSATION IN CASE OF COMPLICATIONS

LEARNING GUIDES FOR NSV SKILLS

USING THE LEARNING GUIDES

The Learning Guides for NSV Clinical Skills are designed to help the participant learn the tasks involved in the technique of no-scalpel vasectomy.

The learning guide contains the steps for performing a no-scalpel vasectomy.

The participant is not expected to perform all the activities/tasks correctly the first time s/he practices them. Instead the learning guides are intended to:

- Assist the participant in learning the correct steps and sequence in which the task/activity should be performed (**skill acquisition**)
- Measure progressive learning in small steps as the participant gains confidence and skill (**skill competency**).

Prior to using the **Basic learning guides for NSV Clinical Skills,** the clinical trainer will review the entire procedure with the participant. In addition, each participant will have the opportunity to practice NSV on scrotal model and to observe an NSV being performed in the clinic with a client.

Used consistently, the learning guides enable each participant to chart her/his progress and to identify areas for improvement. Furthermore, they are designed to make communication (coaching and feedback) between the participant and clinical trainer easier and more helpful. When using the learning guide, it is important that the participant and clinical trainer work together as a team. For example, **before** the participant attempts NSV the first time, the clinical trainer should briefly review the steps involved and discuss the expected outcome. In addition, immediately **after** the skill or activity, has been completed the clinical trainer should debrief the participant. The purpose of the debriefing is to provide **positive feedback** regarding the learning progress and to define the areas where improvement (knowledge, attitude or practice) is needed in subsequent practice sessions.

Because the learning guides are used to assist in developing skills, it is important that the rating (scoring) be done carefully and as objectively as possible. The participant's performance of each step is rated on a three-point scale as follows:

1. Needs Improvement:	Step or task not performed correctly or out of sequence or is omitted.
2. Competently Performed:	Step or task performed correctly in the proper sequence (if necessary) but participant does not progress from step to step efficiently.
3. Proficiently Performed:	Step or task efficiently and precisely performed in the proper sequence (if necessary)

Using the Basic Learning Guides

- The **Basic Learning Guide for NSV Clinical Skills** is designed to be used primarily during the early phases of learning (i.e, skill acquisition) when participants are practicing with the anatomic (scrotal) model.

- Initially, participants can use the learning guides to follow the steps as the clinical trainer demonstrates the NSV technique using a scrotal model.

- Subsequently, during the practice sessions it serves as step-by-step guide for the participant as s/he performs the technique using scrotal models. During this phase, participants (when other participants are available) work in teams with one "service provider" participant performing the skill or activity while the other participant uses the learning guide to rate the performance or prompt the "service provider" as necessary. During this initial learning phase, the clinical trainer will observe how the learning is progressing and check to see that the participant are following the steps outlined in the learning guide. When no other participants are available, the participant may need to work one-on-one with the trainer.

Remember: It is the goal of this training that every participant performs every task or activity correctly with clients by the end of the course.

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (NSV)
COUNSELING SKILLS

(To be used by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

1. **Needs Improvement:** Step or task not performed correctly or out of sequence or is omitted.
2. **Competently Performed:** Step or task performed correctly in the proper sequence (if necessary) but participant does not progress from step to step efficiently.
3. **Proficiently Performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

PARTICIPANT_____ **Course Dates**_____

LEARNING GUIDE FOR NSV COUNSELING SKILLS					
STEP/TASK	**CASES**				
INITIAL INTERVIEW (Client Reception Area)					
1. Greet the client respectfully and with kindness.					
2. Establish purpose of the visit and answer questions.					
3. Provide general information about family planning.					
4. Give the client information about the contraceptive choices available and the risks and benefits for each. Explain the difference between reversible and permanent contraception. Correct false rumors or misinformation about all methods.					
5. Explain what to expect during the clinic visit.					
METHOD-SPECIFIC (Counseling Area)					
1. Assure necessary privacy.					
2. Obtain biographic information (name, address, etc.).					
3. Ask the client about his reproductive goals (Does he want to space or limit births?) and need for protection against GTIs and other STIs.					
4. Discuss the client's needs, concerns and fears in a thorough and sympathetic manner.					
5. Help the client begin to choose an appropriate method.					

LEARNING GUIDE FOR NSV COUNSELING SKILLS					
STEP/TASK	**CASES**				
If client chooses NSV:					
6. Screen the client carefully to make sure there is no medical condition that would be a problem (complete Client Screening Checklist)					
7. Clearly discuss the benefits of NSV. Emphasize that it is a permanent method, but there is a small chance of failure.					
8. Explain that NSV does not protect against GTIs and other STIs. If the client is at risk, he may need to use a barrier contraceptive method also.					
9. Explain common complications of the surgical procedure and be sure they are fully understood.					
10. Explain the surgical procedure and what to expect during and afterwards.					
11. Obtain client's signature or thumb print on the informed consent form. Obtain spousal consent if possible.					
PREPROCEDURE (Examination/Procedure Area)					
1. Review client history and physical examination to assure proper client selection.					
2. Check that informed consent was obtained and verify client's identity.					
3. Explain that he will feel a little pain during the procedure and he should inform a member of the surgical team if he feels any discomfort at any time.					
POST-PROCEDURE					
1. Monitor client continuously until he is ready for discharge.					
2. Give postoperative instructions, orally and in writing. Ask client to repeat instructions.					
3. Discuss what to do if the client experiences any problems.					
4. Return visit if necessary.					
5. Provide client with condoms as many as he requires for 3 months (if client want to use condom).					
6. Assure client he can return to the same clinic at any time to receive advice and medical attention.					
7. Answer client's questions.					
8. Complete client's record.					

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (NSV) CLINICAL SKILLS

(To be used by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

1. **Needs Improvement:** Step or task not performed correctly or out of sequence or is omitted.
2. **Competently Performed:** Step or task performed correctly in the proper sequence (if necessary) but participant does not progress from step to step efficiently.
3. **Proficiently Performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

PARTICIPANT_____ **Course Dates**_____

LEARNING GUIDE FOR NSV CLINICAL SKILLS					
STEP/TASK	**CASES**				
GETTING READY					
1. Greet client respectfully and establish rapport.					
2. Review client history and physical examination to assure proper client selection.					
3. Check that informed consent was obtained and verify client's identity.					
4. Determine if client understands the nature of the procedure.					
5. Check that client has thoroughly washed genital area.					
6. Check that client has recently voided.					
7. Help position client flat on his back on examining table.					
8. Determine that sterile or high-level disinfected instruments and emergency tray are present.					
PRE-OPERATIVE TASKS					
1. Wash hands thoroughly with soap and water and dry with clean towel and put on examination gloves.					

LEARNING GUIDE FOR NSV CLINICAL SKILLS						
STEP/TASK	**CASES**					
2. Examine scrotal area • Skin of scrotum - for rash, lesions and any abnormal thickness of skin, scars of previous surgery. • Testis-tenderness and or any abnormal mass (eg. Hydrocoele) • Spermatic cord - for tenderness, mass, any abnormal thickening. • Penis - for discharge, lesion, ulcer. • Inguinal region - for mass (eg. Hernia) ulcer or lesion scars of previous surgery.						
3. Retract penis upwards onto the abdomen in a 12 o'clock position (if necessary, anchor comfortably in place using small strip of surgical tape).						
4. If necessary, clip scrotal hair.						
5. Perform surgical scrub and put sterile or high-level disinfected gloves on both hands.						
6. Arrange sterile or high-level disinfected instruments and supplies neatly on the instrument tray or cloth.						
7. Apply antiseptic solution to the operative site using a circular motion.						
8. Wait for 2 minutes						
9. Drape scrotal area with sterile linen.						
10. Draw up 5 ml of 1% local anesthetic (e.g., lidocaine **without** epinephrine).						
11. Use 1–1½ inch #23 or #24 gauge needle.						
12. Throughout procedure talk to the client (verbal anesthesia) and staff.						
13. Identify, isolate and fix the right vas deferens under the median raphe at the junction of the middle and upper one third of the scrotum.						
NSV PROCEDURE						
Local Anesthesia						
1. Trap right vas firmly between middle finger underneath the index finger and thumb of the left hand (3-finger technique).						
2. Raise a small skin wheal over median raphe using 1.5 inch fine gauge needle and 0.5 ml of 1% local anesthetic (e.g., lidocaine without epinephrine).						

LEARNING GUIDE FOR NSV CLINICAL SKILLS						
STEP/TASK	**CASES**					
3. Advance the needle parallel to the vas within the sheath towards the inguinal ring (about 1.5 inches above the wheal).						
4. Slowly inject around 5 ml of local anesthetic in the sheath.						
5. Identify the left vas using the same 3-finger technique.						
6. Insert needle through the same hole and repeat injection of local anesthetic.						
7. Pinch skin wheal between thumb and forefinger to reduce local edema.						
8. Test puncture site with needle tip for adequate anesthesia. (If client feels pain, wait 2–3 more minutes and retest puncture site.)						
Isolating and Ligating & excision (LE) of the Vas						
9. Fix the right vas with left hand under the skin wheal using the three finger technique.						
10. Apply ringed clamp, palm up, at a 90° angle directly over and around the vas deferens.						
11. Transfer ringed clamp to opposite hand and elevate vas by lowering clamp handle.						
12. Press index finger down to tighten scrotal skin just ahead of the tips of ringed clamp.						
13. Puncture scrotal skin and anterior wall of vas using medial blade (left blade for right-handed person) of dissecting forceps.						
14. Withdraw dissecting forceps and close both blades.						
15. Insert both tips of the dissecting forceps into the puncture site.						
16. Gently open blades of dissecting forceps and spread tissue to make a skin opening twice the diameter of the vas.						
17. Clear the fascia overlying the vas using the dissecting forceps.						
18. Use the lateral (right) blade of the dissecting forceps to spear the bare vas wall; then rotate the dissecting forceps clockwise 180° to expose the vas.						
19. Deliver a loop of vas through the puncture hole while slowly releasing the ringed clamp but still keeping it in place.						

LEARNING GUIDE FOR NSV CLINICAL SKILLS					
STEP/TASK	**CASES**				
20. Grasp a partial thickness of the elevated vas with the ringed clamp.					
21. Isolate the vas from other structures using dissecting forceps. a. Puncture sheath with one tip of dissecting forceps. b. Next, insert both tips into punctured sheath. c. Open tips to strip the sheath away from the vas.					
22. After careful separation of fascia and blood vessels ligate the prostatic end of the vas.					
23. Cut one end of the suture leaving a single uncut end of about 5-7 cm in length.					
24. Ligate the testicular end about 1.5 cm from the prostatic end ligature and leave both end of the suture to about 5-7 cm in length.					
25. Excise up to 1 cm of vas in between the two ligatures.					
26. Ensure both stumps are separated by at least 1 cm by pulling both ligatures.					
27. Ensure hemostasis.					
28. Cut both ends of the testicular suture.					
29. Allow 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.					
30. Very gently pull the long suture of the prostatic end of the vas to re- expose the cut end covered with fascia.					
31. Gently grasp the fascia of the spermatic cord with the tip of the dissecting forceps and tie the fascia around the vas 2-3 mm below the previous tie of the prostatic end.					
32. Cut both ends of the suture and allow stumps to drop back into position.					
33. Pull the prostatic end again up to the puncture wound and cuts the single long end of the suture.					
34. Using the three finger technique, isolate the left vas under the puncture site.					

LEARNING GUIDE FOR NSV CLINICAL SKILLS					
STEP/TASK	**CASES**				
35. Grasp the left vas at the lower end of the puncture site with the ringed clamp.					
36. **Repeat steps 9-33 for the left vas**.					
37. Check scrotum and ensure that both vas deferens are ligated and in proper position.					
38. Pinch puncture site tightly for a minute.					
39. Apply antiseptic solution to the wound and use sterile gauze dressing with tape or a bandaid. Put on scrotal support, if possible.					
POSTOPERATIVE TASKS					
1. Help client off the operating table.					
2. Dispose needle and syringe by placing in a puncture-proof container.					
3. Place instruments in 0.5% chlorine solution for decontamination and soak for 10 minutes.					
4. Dispose of waste materials according to guidelines.					
5. Briefly immerse gloved hands in 0.5% chlorine solution. If disposing of gloves, place in leak-proof container or plastic bag. If reusing gloves, soak gloves in chlorine solution for 10 minutes.					
6. Wash hands thoroughly with soap and water and dry with clean towel.					
7. Provide client with written instructions.					
8. Review instructions verbally.					
9. Provide client with necessary condoms for 3 months.					
10. Advise client to return for semen analysis after 3 months.					
11. Complete NSV card and record in client record.					

LEARNING GUIDES FOR NSV SKILLS

USING THE CHECKLISTS

The **Checklist for No Scalpel Vasectomy** (NSV) is used by the trainer to certify the participant's competency in providing NSV services to clients. This checklist is derived from the information provided in the reference manual as well as the learning guides. Unlike the learning guides, which are quite detailed, the checklist focuses only on the **key** steps in the **entire** process.

The trainer uses this checklist to evaluate for certification the performance of each participant as s/he provides NSV services to one or more clients. Criteria for satisfactory performance by the participant are based on the knowledge, attitudes and skills set forth in the reference manual.

In general, a participant is expected to satisfactorily perform NSV procedures on clients before being certified as competent. When determining competence, the judgment of a skilled trainer is the most important factor. Thus, in the final analysis, **competence** carries more weight than the number of procedures. Because the goal of this training is to enable every participant to achieve competency, additional training may be necessary.

It is recommended that, if possible, graduates be observed and evaluated in their institution by a course trainer using the same checklist within 3 to 6 months of certification. (At the very least, the graduate should be observed by a **skilled provider** soon after completing training.) This post-course evaluation activity is important for several reasons. **First**, it provides the graduate direct feedback not only on her/his performance, but also the opportunity to discuss any startup problems or constraints to service delivery (e.g., lack of instruments, supplies or support staff). Second, and equally important, it provides the training center, via the trainer, key information on the adequacy of the training and its appropriateness to local conditions. Without this type of feedback, training easily can become routine, stagnant and irrelevant to service delivery needs.

CHECKLIST FOR NSV COUNSELING AND CLINICAL SKILLS

(To be used by **clinical trainer**)

Rate the performance of each step or task observed using the following rating scale:

1. **Needs Improvement:** Step or task not performed correctly or out of sequence or is omitted.
2. **Competently Performed:** Step or task performed correctly in the proper sequence (if necessary) but participant does not progress from step to step efficiently.
3. **Proficiently Performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

PARTICIPANT_____ **Course Dates**_____

NO-SCALPEL VASECTOMY CHECKLIST						
STEP/TASK	**CASES**					
GETTING READY						
1. Greets client respectfully and reviews procedure.						
2. Reviews client history and physical examination.						
3. Verifies client's identity and checks that informed consent was obtained.						
4. Checks that client has recently voided and washed genital area.						
5. Determines that sterile or high-level disinfected instruments and emergency tray are present.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
PRE-OPERATIVE TASKS						
1. Performs surgical scrub and puts sterile, high-level disinfected gloves on both hands.						
2. Applies antiseptic solution and drapes scrotal area.						
3. Waits for 2 minutes						
Local Anesthesia						
4. Identifies isolates and fixes the right vas deferens using 3-finger technique.						
5. Injects 1% local anesthesia over median raphe to raise a small wheal and parallel to vas slowly injects 2–2.5 ml of local anesthetic in the sheath.						
6. Checks for anesthetic effect before making puncture.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						

NO-SCALPEL VASECTOMY CHECKLIST						
STEP/TASK	**CASES**					
NSV PROCEDURE						
1. Uses 3-finger method to isolate the right vas; applies ringed clamp.						
2. Elevates vas and uses index finger to tighten scrotal skin.						
3. Using the dissecting forceps, punctures scrotal skin and anterior wall of vas, and enlarges opening to twice the diameter of the vas.						
4. Exposes vas and delivers a loop of vas through the puncture hole.						
5. Isolates the vas from other structures using dissecting forceps.						
6. After careful separation of fascia and blood vessels ligates the prostatic end of the vas.						
7. Cuts one end of the suture leaving a single uncut end of about 5-7 cm in length.						
8. Ligates the testicular end about 1.5 cm from the prostatic end ligature and leaves both end of the suture to about 5-7 cm in length.						
9. Excises up to 1 cm of vas in between the two ligatures.						
10. Ensures both stumps are separated by at least 1 cm by pulling both ligatures.						
11. Ensure hemostasis.						
12. Cut both ends of the testicular suture.						
13. Allow 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.						
14. Very gently pull the long suture of the prostatic end of the vas to re-expose the cut end covered with fascia.						
15. Gently grasp the fascia of the spermatic cord with the tip of the dissecting forceps and tie the fascia around the vas 2-3 mm below the previous tie of the prostatic end.						
16. Cut both ends of the suture and allow stumps to drop back into position.						
17. Pull the prostatic end again up to the puncture wound and cuts the single long end of the suture.						
18. Using the three finger technique, isolate the left vas under the puncture site.						
19. Grasp the left vas at the lower end of the puncture site with the ringed clamp.						
20. Repeats steps 1-19 for left vas.						
21. Uses bandaid or sterile gauze dressing and tape to cover puncture site.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						

NO-SCALPEL VASECTOMY CHECKLIST						
STEP/TASK	**CASES**					
POSTOPERATIVE TASKS						
1. Disposes of needle and syringe in a puncture proof container.						
2. Decontaminates instruments by soaking in 0.5% chlorine solution for 10 minutes.						
3. Disposes of waste materials.						
4. Briefly immerses gloved hands in chlorine solution. If disposing of gloves, places in leak-proof container or plastic bag. If reusing gloves, soaks gloves in chlorine solution for 10 minutes.						
5. Washes hands thoroughly with soap and water and dries with clean towel.						
6. Instructs client regarding wound care and return visit.						
7. Provides client with 25 condoms.						
8. Completes NSV card and records in client record.						

PARTICIPANT IS q **QUALIFIED** q **NOT QUALIFIED** TO PERFORM NO SCALPELVASECTOMY UNDER LOCAL ANESTHESIA, BASED ON THE FOLLOWING CRITERIA:

• Score on Midcourse Questionnaire _ % (attach answer sheet)
• Counseling and Clinical Skills Evaluation: q Satisfactory q Unsatisfactory

Trainer's Signature_____Date _____

NSV COURSE EVALUATION: BASIC COURSE

(To be completed by **Participants**)

Please indicate your opinion of the following course components:

5-Strongly Agree 4-Agree 3-No Opinion 2-Disagree 1-Strongly Disagree

COURSE COMPONENT	RATING
1. The Precourse Questionnaire helped me to study more effectively.	
2. The role play session on counseling skills was helpful.	
3. There was sufficient time scheduled for practicing counseling.	
4. The training video helped me to get a better understanding of how to perform NSV prior to practicing with the scrotal model.	
5. The practice sessions with the scrotal model made it easier for me to perform NSV on clients.	
6. There was sufficient time scheduled for practicing NSV with clients.	
7. I am now confident performing the NSV technique.	
8. I am now able to use the infection prevention practices recommended for NSV.	
9. The individualized learning course helped me focus on subjects in which I was weak.	
10. The training approach used in this course made it easier for me to learn how to provide NSV services.	
11. Twelve days were adequate for learning how to provide NSV services.	

ADDITIONAL COMMENTS

1. What topics (if any) should be **added** (and why) to improve the course?

2. What topics (if any) should be **deleted** (and why) to improve the course?

PRACTICE EXERCISES

Practice Exercise 1: INTRODUCTION TO NSV

Activity Description: After reading the handout entitled ***The Status of Family Planning in Nepal*** and **Chapter 1** of the manual, answer the following questions. Review and discuss the answers with your trainer.

estions

1. Decide whether each of the following statements is T (true) or F (false). Write your response for each statement.

a. **F** Sperm are produced in the seminal vesicles.

b. **T** Seminal fluid continues to be produced after vasectomy.

c. **T** Sperm pass first through the vasa deferentia, then through the urethra.

d. **F** If a vasectomy is performed correctly, there should be no subsequent development of antisperm antibodies.

e. **T** After vasectomy, sperm can build up in the epididymides.

f. **F** Each vas deferens is approximately 35 mm long, begins at the seminal vesicle, and ends at the prostate.

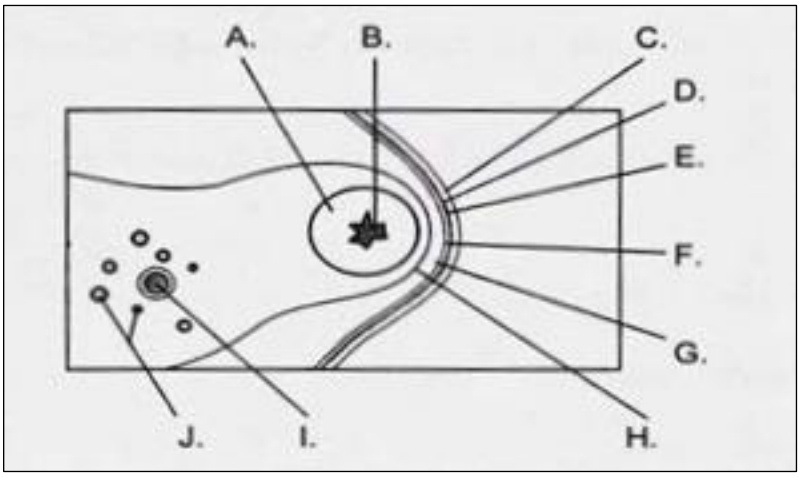
g. **F** Testosterone is produced in the prostate gland.

h. **F** Men who have had a vasectomy should be screened frequently for cardiovascular disease and prostate cancer.

2. Correctly identify the name of each structure indicated:

a.

b.



3. Answer the following questions

a. What are the advantages of NSV?

- **Less damage to tissues**
- **Reduction of risk of bleeding and hematoma**
- **No need for skin closure**
- **May decrease men's fear of vasectomy**

b. What is the mechanism of action in NSV?

The vas deferens that carry the sperm from the testes to the penis are occluded.

c. Where can NSV be performed?

NSV can be performed in hospitals, family planning service centers, doctors' clinics and temporary or mobile facilities.

d. Why are family planning programs important in Nepal?

- **Family planning programs in Nepal help stabilize the population growth rate and help families raise healthier children.**
- **It is the right of the client to receive family planning services.**

Exercise

Advance Preparation:

1. Prepare cue cards (total of 12 cards) with the different parts of the male external and internal reproductive system and their corresponding description and/or function written on them (one part per card; one description or function per card). The parts and the functions can be copied from the Participant‟s Handbook section on male anatomy and physiology.
2. Prepare a huge diagram of the male external and internal reproductive system WITHOUT labeling the parts. Print numbers corresponding to the part that you want identified by the participants for this activity.
3. Inform the participants that you have an activity that will review the basic anatomy and physiology of the male reproductive system. With this review, participants will learn how to address and answer all misconceptions and questions that clients may have about vasectomy‟s effect on them.

Sample Correspondence Between Anatomy/Physiology & Misconceptions about Vasectomy

Part	**Misconception**
Penis	Impotence; loss of pleasure
Seminal vesicle	No more ejaculate
Prostate gland	No more ejaculate; ejaculation and urination can occur simultaneously
Cowper‟s gland	No more ejaculation
Testes	Loss of manhood; loss of libido; become effeminate; castration; become fat
Vas deferentia	No more ejaculate (only sperms pass here)

Instructions:

1. Brainstorming:
   a. Each participant will brainstorm and list down as many questions, rumors, misconceptions, concerns, worries, fears and doubts about vasectomy that he/she himself/herself have or he/she may have heard from potential clients, fellow health workers or other people.
   b. Write these on flipcharts.
2. Explain that they will now have a brief review of the male anatomy and physiology, and then, using the basic knowledge, demonstrate how to answer all the questions they have written down.
3. **Before** giving out the cards, give the following instructions to the participants:
   a. Each participant will get six cards. On each card is written either the name of a part or the description or function of a part of the male reproductive system.
   b. Their task is to look at their card, then find the corresponding part or function held by another card.
   c. After finding the corresponding card look at the diagram that will posted in front and determine the number your part and function corresponds to.

d. Be ready to explain your part and function when your corresponding number is called.

e. Be ready also to demonstrate how to answer misconceptions related to the part assigned to them using the basic male anatomy and physiology after vasectomy.

f. Ask if there are any questions to the instructions.

4. Distribute the three cards per participant -then find the corresponding parts.

5. Post the diagram in front.

6. When participant finds the corresponding part call the numbers one at a time.

7. For each called number, let the participant with the corresponding part and function stand up and read his/her cards.

8. While still standing up, the facilitator will choose from the list of questions written on the flip charts that are related to the part and function discussed. For example, for "Penis" and its corresponding card "tubular structure….", the couple will answer the misconceptions about impotence resulting from vasectomy (by mentioning that erection is a result of blood flowing in to the penis and that the inflow of blood is controlled by the nervous system that passes from the brain into the spinal cord located posteriorly. Erection is facilitated by visual, auditory and tactile stimulation or autonomically accounting for nocturnal erection. Neither spinal cord nor blood supply to the penis is affected at all by No-Scalpel Vasectomy (NSV)).

9. In answering the questions, role-playing will be used: facilitator will pretend to be the client asking the question while the other will be the vasectomists answering.

10. Be sure to provide details or corrections to the answers as necessary. Be sure to let them practice using simple language understandable to laymen.

11. Call the other partner to participate in answering the questions, if necessary, also to get him/her involved.

12. After one participant, call on the next, until all parts and functions have been called and all questions/misconceptions listed on the flip charts have been answered.

13. If there are questions none of the participant answered, the facilitator will answer them. For example: the fear of body weakness and therefore inability to perform manual labor after vasectomy is a major concern for all men. This may not be directly answered by the anatomy and physiology cards.

14. After all the participants have done their parts and functions, ask if there are any questions posted on their flip charts that they still need to be clarified on. Answer any other issue they bring up.

On each card is written either the name of part or the description or function of a part of the male reproductive system.

Sample Correspondence Between Parts and Description and/or function

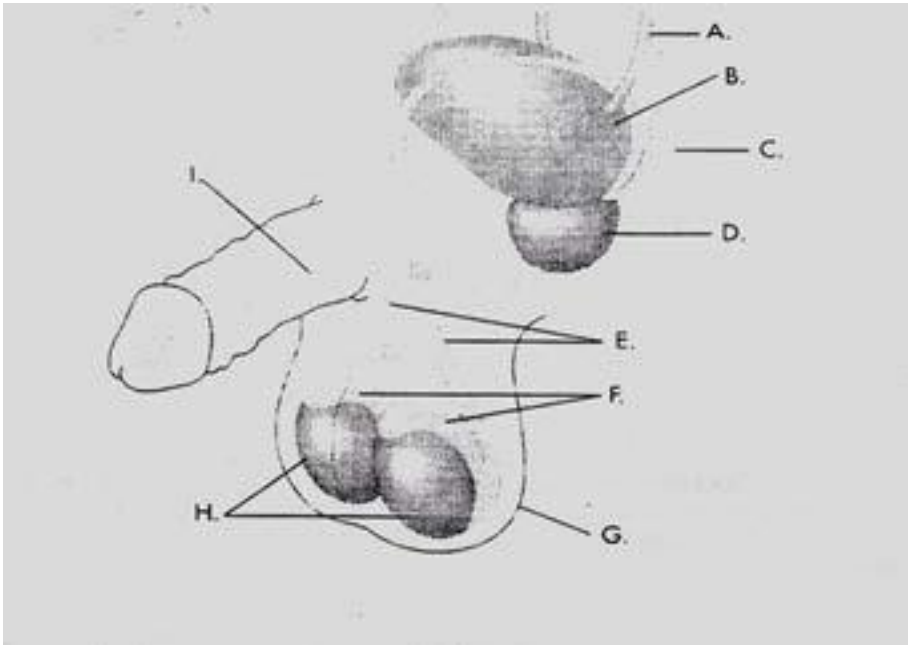
Part	Description or function
Penis	Tubular structure that can be flaccid or erect, male organ for sexual intercourse
Seminal vesicle	Secret the seminal fluid
Vas deferentia	Carry the sperms from epididymis to prostate
Testes	Produce sperms and the male sex hormone/testosterme
Urethra	Carries the sperms and seminal fluid out of the body during ejaculation
Epididymis	One each connected to one of the vas differentia

The preparations will look like this:

Sample Cards

PENIS	Tubular structure that can be flaccid or erect; male organ of sexual intercourse

Diagram:



Practice Exercise 2: COUNSELING AND DECISION MAKING

Activity Description: In addition to reading **Chapter 2**, the participant should observe a counseling session from the beginning to the point where the client has signed the consent form for voluntary sterilization (VS). Answer the following questions based on your observation.

Questions

1. Decide whether each of the following statement is T (true) or F (False). Write your response for each statement.

a. **T** Vasectomy providers should determine whether clients understand that temporary method of contraception is available.

b. **T** Each client has the right to choose whether or not to use a contraceptive method.

c. **T** Clients should be informed that vasectomy risks include the rare possibility of failure.

d. **F** Because vasectomy is a safe procedure with only rare complications, there is no need to discuss possible side effects and complications of the procedure.

e. **F** Lubricating condom with oil or petroleum jelly before usage decreases breakage.

f. **T** Leave space at the tip of the condom when unrolling it on the erect penis.

2. The following are multiple-choice questions. More than one option may be correct. Please circle the correct response(s)

a. If a client has decided to have a vasectomy despite the objections of his partner, you would:

   i. Delay the procedure, arrange further counseling for the couple (if possible), and discuss use of a temporary contraceptive method.

   ii. Perform the procedure according to the client's wishes.

   iii. Ask the client to return home and discuss this with his partner and return in a month.

b. Informed decision-making means:

   i. The vasectomy surgeon or assistant has informed the client about the most suitable contraceptive method.

   ii. The client has been fully informed about all contraceptive options available and has made a free choice from among them.

   iii. The vasectomy surgeon or assistant has chosen the best method for the client and has informed the client about its benefits and risks.

c. An effective counselor:

i. Gives the client advice about which family planning method to use.

ii. Uses the client's profile to determine the family planning method that best suits the client

iii. Tries to ensure that each client uses contraception.

iv. None of the above.

d. A vasectomy surgeon assessing a client's decision to choose permanent contraception before surgery should ask the following questions:

i. How did you decide to have a vasectomy?

ii. What do you know about other contraceptive methods?

iii. Why did you choose permanent contraception?

iv. All of the above.

v. None of the above.

3. Answer the following questions:

a. Was it group or individual counseling? How long did it take the client to reach a decision?

Discuss the participant's answer with him/her

b. Write down one more point which you would have liked to discuss with the client that was not discussed by the counselor/trainer. Give your reasons.

Discuss the participant's answer with him/her

c. Had the client decided upon an FP method before s/he came to the center? If so, what other information on FP methods was provided? If the client was undecided, list the main points of discussion which led to a decision.

Discuss the participant's answer with him/her.

d. What was the client's family size? Do you think the client is an ideal candidate for the method s/he chose? Why?

Discuss the participant's answer with him/her

e. What does 'ABHIBADAN' stand for? Was it used in this counseling session?

Answer found in Chapter 2

Step 1 : "A" refers to "Abhibadan," i.e., To Greet
Step 2 : "Bhi" refers to "Bhinna na thani sodhpuchh garne," i.e., Asking without discrimination
Step 3 : "Ba" refers to "Baadha hataune," i.e., To deal with problems and concerns Step 4 : "D" refers to "Dutta Chitta bhai sahayog garne," i.e., Help whole-heartedly
Step 5 : "N" refers to "Namaskar gardai punnah auna anurodh garne," i.e., Bid goodbye and request to come again

f. What are the benefits of counseling?

- **Counseling results in the client arriving at a free and informed decision. The client feels in control of his choice and does not feel he has been pressured into accepting a method of contraception with which he does not feel happy.**
- **The client knows exactly what to expect with the chosen contraceptive method.**
- **He understands all the benefits it will offer and will also be prepared for any side effects that may develop.**
- **The client knows whom to ask for advice if he feels concerned about anything at any time.**
- **The client knows whether the contraceptive method is permanent or temporary.**

g. Did the counseling help dispel false rumors about contraceptive methods? If no, write down one rumor you have heard about NSV.

Discuss the participant's answer with him/her

Role Play: GOOD COUNSELING

Activity Description: The participant along with other participants, trainer or other clinic staff will be assigned roles for this section. Each participant should take a few minutes to read the background information and prepare. The observers should also read the background information so they can participate in the small group discussion following the role play.

Participant Role

Counselor: The counselor is very experienced in providing counseling services. He/she has to provide counseling to this NSV client using the principles of 'GATHER'.

Trainer or Staff

Client: The client is a young man of 30 who is interested in NSV. He has two children aged 3 and 7 years old. He does not want any more children but is apprehensive about the surgery and is concerned that it will prevent him from doing hard physical work.

Focus of the Role Play: The focus of the role play is on the interaction between the counselor and the client. The client is anxious and apprehensive about the side effects of NSV, but he is sure he wants no more children.

Discussion Questions

1. Did the counselor approach the client in a positive and reassuring manner?

_____

_____

_____

_____

2. Did the counselor talk about possible chances of regret in the future?

_____

_____

_____

_____

3. Were the client's fears realistic?

_____

_____

_____

_____

4. What other topics could the counselor have discussed?

Practice Exercise 3: INDICATIONS AND PRECAUTIONS

A. Activity Description: After reading **Chapter 4**, write the answers to the questions. Review and discuss the answers with your trainer.

1. Decide whether each of the following statements is T (true) or F (false). Write your response for each statement.

a. **F** It is not appropriate to ask a potential vasectomy client if he has ever had sexual difficulties.

b. **T** Varicoceles and hydroceles can be corrected at the same time that a vasectomy is performed.

c. **T** If a client has malaria, the malaria should be treated before the client has a vasectomy.

d. **F** An inguinal hernia must be repaired before a vasectomy is performed.

e. **T** A man whose diabetes is controlled can have a vasectomy.

f. **T** Infertility is possible in a man who has unilateral cryptorchidism.

g. **T** If a client's vasectomy cannot be performed as scheduled, you should counsel him about interim contraception.

h. **T** A thickened vas could indicate chronic infection.

2. The following are multiple-choice questions. More than one option may be correct. Please circle the correct response(s)

a. If a client who has gonorrhea requests an NSV, you would;
   i. Delay the procedure
   ii. Treat the infection
   iii. Counsel the client about condom use for STI prevention
   iv. All of the above

b. Elements of a prevasectomy evaluation include all of the following except:
   i. General examination
   ii. Hematocrit or hemoglobin
   iii. Medical history
   iv. Scrotal examination

Activity Description: Read the case study below and write the answers to the questions. Review and discuss the answers with your trainer.

CASE STUDY FOR NSV SKILLS: INDICATIONS AND PRECAUTIONS

A 30 year-old man comes to a clinic for NSV. He has two female children aged 3 and 5 years. While his wife wants a son, he does not want to have any more children. During the medical screening, they found the man had a large hydrocele.

Questions

1. Do you think the client is suitable for NSV despite the fact that his wife wants more children?
   No, the client is not the ideal candidate for NSV, as the procedure may result in regret and tension with his spouse.

2. Do you think the client needs couple counseling? If yes, what are the points you would like to discuss during the counseling?
   Yes, couple counseling is a must in this case. Due consideration should also be given to the wife's desire to have a son. However, since gender of children cannot be predetermined, the wife should reconsider her decision, or decide on how many daughters she is willing to have before she says that she has had enough.

3. Will a large hydrocele be a problem in NSV? What will be your advice to him?
   Yes, large hydroceles are a problem in NSV. The best course of action would be to perform the vasectomy while operating on the hydrocele. In the meantime, he could use other temporary FP methods, like condoms, or Depo Provera injections for his wife.

4. What are other medical conditions which require precaution in NSV?
   Other medical conditions which require precaution in NSV are: varicocele, cryptorchidism, diabetes, severe hypertension, local skin infection, genital tract infection, systemic heart disease.

Practice Exercise 4: INFECTION PREVENTION

Activity Description: Through the following self-test, you will answer questions which test the knowledge you have learned on infection prevention through the readings of **Chapter 6**. Review and discuss the answers with your trainer.

1. What is the purpose of infection prevention?

   Minimize disease transmission for both clients and staff.

2. Define the following terms:
   a. Antisepsis

      Killing or inhibiting microorganisms on skin and other body tissues by using a chemical agent

   b. Decontamination

      Process that makes objects safer to be handled by staff, before cleaning

   c. High-level disinfection

      Process that eliminates most microorganisms except bacterial endospores

   d. Sterilization

      Process that eliminates all microorganisms, including bacterial endospores, from inanimate objects

3. Match each type of glove with its appropriate use:

1. Sterile surgical gloves	**3.** Scrotal exam
2. Utility gloves	**1.** No-scalpel vasectomy
3. Clean exam gloves	**2.** Washing used, decontaminated instruments

4. List the steps to be followed after using reusable gloves until they are ready for use with the next client:
   - Decontamination
   - Cleaning
   - Drying
   - Packing
   - HLD/Sterilization

5. Which solutions should be used for:
   a. Antiseptics
   - **Iodophors, e.g., Betadine**
   - **Chlorhexidine**
   - **Alcohols 60-90%**

   b. Decontamination
   - **Sodium hypochlorite 0.5%**
   - **Calcium Hypochloride 0.5%**

c. High-level disinfection

- **Sodium hypocholorite 0.1%**
- **Glutaraldehyde 2% for 20 minutes**

d. Sterilization

- **Glutaraldehyde 2% for 10 hours**

6. List the different methods of sterilization:
   - **Dry heat**
   - **Steam heat**
   - **Chemical**

7. Which of the following steps are IP practices in the NSV process?

a.	Washing hands before examining the client	**YES**	NO
b.	Applying Betadine to the operating area	**YES**	NO
c.	Applying a BandAid on the puncture wound	**YES**	NO
d.	Decontaminating the instruments in 0.5% chlorine solution for 10 minutes	**YES**	NO
e.	Wearing HLD or sterile gloves	**YES**	NO

8. Is this statement true or false: surgical (metal) instruments which have been decontaminated and thoroughly cleaned can be sterilized by boiling them in water for 20 minutes.

   TRUE **FALSE**

9. During NSV, when is handwashing indicated?
   - **Before touching the client**
   - **Before putting on and after taking off gloves**

10. The preferred method for instruments processing in NSV is (circle one):

    STERILIZATION HIGH-LEVEL DISINFECTION

11. What is the disadvantage of HLD?
    It does not reliably kill all bacterial endospores.

Practice Exercise 5: ANESTHESIA

Activity Description: Read and study the case study and answer the questions. Review and discuss the answers with the trainer.

Case Study

A 35 year-old man who does not want anymore children comes to the operating theater following counseling and screening for no scalpel vasectomy. He has never had an injection before and is afraid of the procedure. The attendant tells him that the doctor is very good and he will not feel any pain and that the procedure will take only five minutes. When the client is on the table the trainer tells the doctor to inject the local anesthesia without assessing the history of the client. The participant injects the local anesthesia without aspirating the syringe. The client complains of dizziness and ringing in the ears. The participant scolds him and tells him to keep quiet because these side effects happen occasionally. He continues injecting the local anesthesia. The client goes into convulsions. The participant panics and does not know what to do.

1. What did the doctor do wrong?
   a. **The doctor did not review the client's history.**
   b. **He did not aspirate the syringe of local anesthetic before injecting.**
   c. **He did not heed to the pay client's complaint during the procedure.**
   d. **He did not know that the complaints were actually the complications of the local anesthesia.**
   e. **He did not know how to manage complications of local anesthesia.**

2. What is the percentage and dosage of local anesthetic generally used?
   It is safest to use 5 ml of 1% lidocaine. The total dose should not exceed 3 mg per kg of body weight of the client (i.e., about 12 ml of 1% lidocaine).

3. What are the complications of local anesthesia?
   Mild effects
   - **Numbness of lips and tongue**
   - **Metallic taste in mouth**
   - **Dizziness and light-headedness**
   - **Ringing in ears**
   - **Difficulty in focusing eyes**

Severe effects

- **Sleepiness**
- **Disorientation**
- **Muscle twitching and shivering**
- **Slurred speech**
- **Tonic-clonic convulsions (generalized seizures)**
- **Respiratory depression or arrest**

4. How should these complications be managed?

   For mild effects, wait a few minutes to see if symptoms subside, talk to the client and then continue the procedure. Immediate treatment is needed for severe effects: keep the airway clear and ventilate by (Ambu) bag. Give oxygen, if available. Should convulsions occur or persist despite respiratory support, small increments (1-5mg) of diazepam may be given intravenously. Note: The clinician should be aware that the use of diazepam to treat convulsions may cause respiratory depression.

Practice Exercise 6: POSTOPERATIVE RECOVERY, DISCHARGE AND FOLLOWUP

A. **Activity Description**: After reading **Chapter 9**, circle the word true if the statement is **true**, and circle the word false if the statement is **false**.

True or **False**	1.	He should not have sexual intercourse for one week after NSV. **The client should not have sexual intercourse for 2-3 days, and should stop if uncomfortable.**
True or **False**	2.	He can start lifting heavy loads if he is able. **Lifting heavy objects or putting strain on the puncture site should be avoided for one week.**
True or **False**	3.	If he has pain, he should take one or two aspirin tablets. **Analgesics, i.e. ibuprofen, may be taken every 4-6 hours. Do not use aspirin as it may increase bleeding.**
True or False	4.	The client may return for followup if needed.
True or False	5.	Post NSV counseling is not necessary after NSV. **Post NSV counseling is absolutely necessary after NSV.**
True or False	6.	If the client experiences pain and swelling, he should return to the clinic immediately for followup.
True or False	7.	A semen analysis is optional three months after NSV. **A semen analysis is necessary. If the client cannot return for followup after three months, it cannot be determined if the NSV was successful. If returning to the clinic is difficult, the client could have the analysis in a more convenient location**

Trainer's Note:
In NSV video "sperm analysis" and "semen analysis" are used synonymously but the correct term to use is "semen analysis".

B. **Activity Description**: Answer the following questions. Review and discuss the answers with your trainer.

1. When is a client ready to be discharged?
   The client is recovered sufficiently to be discharged when he meets the following conditions:
   - **He can walk upright with minimal support.**
   - **His vital signs are stable.**
   - **He has no bleeding or seepage from the wound.**
   - **He has no unusual complaints.**

2. If three months after the NSV the semen analysis shows motile spermatozoa, what would you advise?

   If the semen analysis shows motile spermatozoa three months after NSV, instruct the client to return after one month for a repeat semen analysis. An additional condoms should be provided. If the repeat semen analysis is positive, compare it with the initial sperm analysis results for a substantial decrease in count and motility. If there is no change, advise the client that another NSV is necessary or a tubectomy for his wife. If the decrease is substantial on the repeat semen analysis, advise him to use condoms for 2 months and come for a third semen analysis to confirm azoospermia.

Practice Exercise 7: MANAGEMENT OF COMPLICATIONS

A. **Activity Description**: After reading **Chapter 10**, read the case study below and write the answers to the questions. Review and discuss the answers with your trainer.

1. Decide whether each of the following statements is T (True) or F (False). Write your response for each statement.

a. **F** An asymptomatic sperm granuloma should be drained or excised.
b. **T** Pressure that develops in the epididymis after a vasectomy can lead to congestive epididymitis.
c. **T** Toxic doses of lidocaine can require use of dopamine and CPR.
d. **F** Treatment of hematomas should always include drainage.
e. **F** Sperm granuloma should be excised to prevent infection and bleeding.

2. The following are multiple-choice questions. More than one option may be correct. Please circle the correct response(s)

a. Hematomas can be caused by:
i. **Failure to achieve hemostasis before closing the wound**
ii. **Excessive strain or heavy lifting by the client after vasectomy**
iii. **The client's failure to rest for 24 hours or to wear a scrotal support after vasectomy.**
iv. **Inexperience of the surgeon**
v. **Rough handling of the tissues during surgery**

b. A man returns eight weeks after vasectomy complaining of a mild continuous pain that began a few days ago. Upon examination, you suspect a granuloma and recommend the following treatment:
i. **A nonsteroidal analgesic**
ii. Immediate surgery for grnuloma removal
iii. Cyst drainage and resealing of the vas
iv. Antibiotics

c. Most vasectomy complications can be prevented by:
i. **Gentle tissue handling**
ii. **Adhering to infection prevention procedure**
iii. **Careful client screening**
iv. **Controlling bleeding during the procedure**
v. **Secure occlusion of the vas**

d. Four days after his vasectomy, a client returns to the clinic with a fever of 38.3^0 C (101^0F), scrotal pain, swelling, and pyuria. You would suspect:
i. Sperm granuloma
ii. Hematoma
iii. **Infectious epididymitis**
iv. Chronic testicular pain
v. Congestive epididymitis

e. Vasovagal reactions may need to be managed with:
   i. Diazepam
   ii. Ammonia capsules for syncope
   iii. Oxygen
   iv. Beta-blocker
   v. **Reassurance**

B. **Activity Description**: Read the case study below and write the answers to the questions.

Review and discuss the answers with your trainer.

Case Study

After the NSV procedure, the client develops swelling, edema, and pain in the scrotum within the next 2-3 days. He does not return to the clinic because he was instructed to come after 7 days. Meanwhile, he starts running a temperature and swelling and pain increases. When he comes to the clinic, he is sent home with antibiotics and analgesics. After 5 more days, he returns with an abscess.

Questions

1. Was the client given good and proper post-operative counseling?
No.

2. What should the doctor have done after the client presented symptoms of infection?
The doctor should have examined the client thoroughly for signs and symptoms of complications of NSV. After assessing the complications, he should have immediately treated them accordingly.

3. What complications might a client experience after NSV? List the various complications and their management.

A client may experience the following (shown in tabular form) complications.

	Bleeding	**Hematoma**
Symptoms	• Bleeding observed at incision site • Swelling of scrotum	• Swelling of scrotum
Treatments	• Most small vessel bleeding can be controlled by compre ssion	• Control bleeding by pressure • Cautery and ligature may be used for large vessel bleeding • Rarely, may require incision and drainage • If hematoma is stable, allow to resolve on its own • Provide prophylactic antibiotics
Prevention	• Careful surgical technique	• Careful surgical technique • Understanding and carrying out of postvasectomy instructions
Etiology	• Vasectomist‟s failure to strip spermatic cord vessels from the vas before transection • Vsectomist‟s failure to control bleeding before wound closure	• Rough handling of tissue • Vasectomist‟s failure to control bleeding before wound closure • Excessive strain or heavy lifting by client after vasectomy
	Infection	**Sperm Granuloma**
Symptoms	• Pus, swelling, or pain at the incision site or in the scrotum • Fever	• Pain at the testicular end of the vas or the tail of the epididymis • Nodule felt during palpation
Treatments	• *Superficial infection*: 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*: use 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	• Observation of proper infection prevention procedures • Recognition of bleeding • Client keeps wound dry after vasectomy	• Unknown
Etiology	• Failure by vasectomist to follow infection prevention procedure • Unrecognized or untreated hematomas • Improper postoperative care of the wound by vasectomists or client	• Occlusion of vas leads to accumulation of sperms

	Discharging scrotal sinus
Symptoms	• Delayed painless scrotal discharge usually after 3 months.
Treatment	• Under local anesthesia, release the adherent end of the vas from skin. • Confirm the release by freely rolling vas within the scrotum between the thumb and index finger
Precaution	• Appropriate performance of Fascial Interposition (FI) tying the internal spermatic fascia not cremasteric or external spermatic fascia and pulling the vas in its original position
Etiology	• Incomplete separation of sheath form the vas. Sometimes the scrotal muscle fibers or external spermatic or cremasteric fascia caught in the knot while doing fascial interposition (FI) becomes the cause of formation of scrotal sinus

	Chronic testicular pain	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 • Scrotal pain • Swelling • Induration
Treatments	• Nonsteroidal analgesics • Pain may gradually subside spontaneously	• Bed rest • Scrotal elevation • Ice packs • Nonsteroidal analgesic • Antibiotics
Prevention	• Unknown	*Infectious epididymitis*: • Follow infection prevention procedures • Screen clients for STIs *Congestive epididymitis* • Unknown
Etiology	Possibly caused by: • Neuroma or peri-neural irritation • Epididymal engorgement with sperm • Sperm granuloma formation due to back pressure-induced rupture of epididymal tubules • Site baths • Antibiotics • Spermatic cord blocks If the above fails, vasectomy reversal or denervation of the spermatic cord may be helpful.	*Infectious epididymitis*: • Failure to follow infection prevention procedure • Sexually transmitted pathogens *Congestive epididymitis*: • Pressure on epididymis resulting from sperm blockage

	Pregnancy in the client's partner	Vasectomy failure
Symptoms	• Client‟s partner is pregnant	• Semen analysis shows sperm
Treatments	*Determine the reason for the pregnancy by*: • Estimating the date of conception • Asking if the couple had unprotected intercourse for the 12 weeks after the vasectomy • In confidence, asking the partner if she has had intercourse with another man • Offering semen analysis • Referring the coupl to further counseling or prenatal care	• Explain to the couple how the failure could have concurred • Offer to repeat the vasectomy procedure.
Prevention	• Instruct the client to use contraceptive before vasectomy and during the post operative 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 12 weeks after vasectomy • Vasectomy failure	• The vasectomist‟s failure to properly occlude the • Spontaneous recanalization

COMPLICATION	POSSIBLE CAUSE	ASSESSMENT	MANAGEMENT
Wound infection	Failure to observe appropriate IP practices Failure to instruct client in proper care of wound	Confirm presence of infection or abscess.	If skin infection is present, treat with antibiotics. If abscess is present, drain and treat as indicated.
Postoperative fever	Infection	Determine source of infection.	Treat infection based on findings.
Hematoma	Unrecognized injury to blood vessels, bleeding around the spermatic cord.	Confirm presence of infection or abscess.	Apply warm, moist packs to site. Observe; it usually will resolve over time but may require drainage if extensive. If infected, treat as indicated (antibiotics).
Unusually severe pain at incision site	Collection of pus, serum or blood at incision site	Determine presence of infection or abscess.	Treat based on findings (e.g., moist heat, analgesics).
Superficial bleeding (skin edges or subcutaneously)	Failure to maintain hemostasis during surgery	Determine presence of infection, abscess or hematoma	**Postoperatively** Place secure pressure dressing on wound.
			If bleeding persists, reopen wound under local anesthesia and clamp and ligate the bleeding points.
Discharging Scrotal Sinus (Delayed Complication) Adhesion of vas to the skin forming a discharging sinus (client usually returns after 3 months or more)	Incomplete separation of sheath from the vas. Sometimes the scrotal muscle layer gets caught up in the knot while doing the fascial sheath burial procedure	Confirm the presence of discharging sinus and any concomitant infection	If infection - treat before undertaking release operation. (closacillin 500 x QID x 5 days)
			Under Local Anesthesia release the adhesions from skin. Confirm the release by freely rolling the vas within the scrotum between thumb and finger. Provide scrotal support, antibiotics and analgesics.
Vasovagal Reaction (Intra op)	Inadequate “verbal anesthesia” Inadequate local anesthesia	Check vital signs	Reassure client Evaluate clients lower extremities Provide additional local anesthesia if needed
Sperm Granuloma	Inflammatory reaction to sperm accumulation at cut end of vas	Confirm presence of nodule Determine if infection is present	Asymptomatic no treatment Pain- analgesic, persistent pain- Evacuate cyst, cut and seal 1/4” towards the testis

COMPLICATION	POSSIBLE CAUSE	ASSESSMENT	MANAGEMENT
Chronic Pain	Neuroma or Perineural Irritation	History of reaction of unilateral or bilateral scrotal pain	Non-steroidal analgesic
Pregnancy of the partner	Pre vasectomy pregnancy Unprotected intercourse during the unsafe period post vasectomy Vasectomy failure Sexual activity of partner with another man	Determine if pregnant and age of gestation	Refer for preventive care
Vasectomy failure	Inadequate vas accumulation spontaneous recanalization	Repeat to confirm positive sperm analysis	Explain how failure happened Refer to repeat procedure

Practice Exercise 8: QUALITY OF CARE IN NSV SERVICE

Activity Description: After reading **Chapter 11**, read the case study below and write the answers to the questions. Review and discuss the answers with your trainer.

Case Study

A physician went to Jumla to provide voluntary sterilization services in a mobile camp. The day before the camp was scheduled to begin, the operating theater was not prepared. There was a lack of coordination and management and there were no toilet and water facilities. There were 60 clients registered for the operation.

Questions

1. Was the facility well prepared ahead of time? **No.** How can this problem be overcome?
   No.
   How can this problem be overcome?
   The operating theater facility should be prepared at least 24 hours before starting voluntary sterilization.

2. How important is it to provide water and toilet facilities and for what purposes?
   Water and toilet facilities are essential to provide comfort to the clients and staff and to prevent infection during voluntary sterilization.

3. How big should the case load be for a single physician and his team per day?
   Fifty cases per day should be the maximum number of cases for a single physician and his team to maintain good quality of care.

Practice Exercise 9: INFECTION PREVENTION PROCESSES FOR SURGICAL INSTRUMENTS AND OTHER ITEMS

Activity Description: After reading **Chapter 6**, answer the following questions. Review and discuss the answers with your trainer.

1. What is high level disinfection?

   It's a process involving boiling, steaming or using chemicals to eliminate all microorganisms, except some bacterial endospores, on inanimate objects.

2. What are the various methods of high level disinfection?
   a. **Boiling/steaming chemical for 20 minutes**
   b. **Soaking for 20 minutes in:**
      - **Glutaraldehyde - 2%**
   c. **0.1% chlorine solution prepared with boiled water**

3. What is the disadvantage of high level disinfection?

   It does not destroy all bacterial endospores.

4. What is sterilization?

   It's a process that eliminates all microorganisms (bacteria, viruses, fungi, and parasites), including bacterial endospores from inanimate objects.

5. What are the different ways we can sterilize surgical items?
   - **Steam sterilization**
   - **Dry heat sterilization**
   - **Chemical sterilization**

Practice Exercise 10: MOBILE OUTREACH SERVICES

Activity Description: After reading **Chapter 12**, read the passage below. The participant should identify the sentences which are not appropriate for mobile services and write down the corrected sentences in their place. Discuss these with your trainer.

Passage

Mobile outreach service is a standard means of the service delivery system for voluntary sterilization (VS) in Nepal. To have a successful mobile service, a considerable amount of planning and coordination is required in terms of physical facilities and logistics. ~~A newly trained physician in VS is the right person to conduct such camps independently as he/she gets an opportunity to improve and master his newly acquired skills.~~ **Staff must be the most highly trained, skilled and experienced personnel available. If working independently, a new provider should have an experienced physician as backup support.** Counseling and education of clients are performed before the camp starts. Local health workers and mass media help to inform the clients of the camp. ~~The medical team, however, has to meticulously examine each and every client before the operation in order to maintain a high quality of care in service delivery~~. **The medical team can depend on the client assessment made by local health workers and perform a complete physical exam only if in doubt. This way the physician can start the camp without wasting time on further counseling. The physician/medical team still needs to review the main points of counseling clients for VS and ensure the client has made an informed choice.** The medical team should have at least one experienced staff nurse to monitor the activities of the operating room. In order to provide emergency backup services, the primary health center (PHC) or the district hospital should be informed of the activity and a formal relationship established with them. ~~Arranging a good medical team for the camp is all that is required to have a successful camp.~~ Arranging a good medical team, planning the promotion and implementation of mobile sites, including budgets, schedules, manpower and administration, as well as monitoring logistics at all times is what is required to have a successful camp.

~~It is optional to followup clients who undergo VS procedures in mobile settings, as complications are rare and the medical team is not always available~~. **Clients who undergo VS procedures in mobile settings require the same followup care as those who receive services at fixed sites.** In order to have smooth running mobile services, the manager should check the supplies each day and arrange to replenish any supplies that are low. The manager should also monitor infection prevention practices.

Practice Exercise 11: INFECTION PREVENTION/WASTE DISPOSAL

A. **Activity Description**: Circle the word true if the statement is **true**, and circle the word false if the statement is **false**.

True or **False** 1. Used instruments should be immersed in a container filled with 0.1% chlorine solution for 7 minutes only for decontamination.

The container should be filled with 0.5% chlorine solution for 10 minutes.

True or **False** 2. After using a syringe, always recap the needle.
A used syringe should never be recapped unless done by the single hand method.

True or **False** 3. Always iron surgical drapes or surgical gowns before sterilizing.
Drying linens should not be ironed as it makes autoclaving difficult.

True or False 4. Discarding needles and syringes in a puncture proof container immediately after use.
They should be discarded in puncture proof container immediately after use.

True or **False** 5. It is adequate to just wash bloody or wet areas of linen if you autoclave them.
The entire linen should always be washed thoroughly before autoclaving.

True or False 6. Discarded needles and syringes should always be incinerated or buried safely.

B. **Activity Description**: After reading **Chapter 6**, the participant will visit different areas of the clinic to observe and understand the steps in decontamination, cleaning and waste disposal. The participant will then answer the following questions and discuss them with the trainer.

1. Note three precautions that should be taken in preparing chlorine solution:
   a. **Use of plastic containers**
   b. **Use of mask to cover nose and mouth**
   c. **Use of utility gloves to protect your hands from corrosive action of chlorine.**

2. What is the name of the person who cleans the used instruments? In which part of the clinic is it done?

   Answers differ in different clinics.

3. Where are the disposable syringes and other waste disposed in the OT?

   Puncture proof or leak proof containers.

4. What is the name of the person responsible for burning or burying the disposable waste? In which section of the clinic is it burned or buried?

   Answers differ in different clinics.

5. Briefly describe the incinerator used at the Center. Note what it‟s made of, its dimensions and the reasons for burning/incinerating waste.

Note for the trainer:

I. Is it a double decker modified incinerator? If yes, the lower deck acts as a fireplace and the upper deck is for waste to be burnt.

II. Does it have a lid?

III. Is it a simple wide-mouthed tin container?

***Reasons for burning/burying*:**

I. To prevent secondary use of disposable items like needles and syringes.

II. To keep the environment clean.

This document is made possible by the generous support of the American people with funding through the United States Agency for International Development (USAID). The contents are the responsibility of Government of Nepal and do not necessarily reflect the views of USAID or the United State