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ADVANCED TRAINING SKILLS *for* REPRODUCTIVE HEALTH PROFESSIONALS

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JHPIEGO, an affiliate of Johns Hopkins University, is a nonprofit corporation dedicated to improving the health of women and families throughout the world.

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PREFACE

Advanced Training Skills for Reproductive Health Professionals is a companion piece to the reference manuals *Clinical Training Skills for Reproductive Health Professionals*, second edition, and *Instructional Design Skills for Reproductive Health Professionals*. This manual was written to help clinical trainers and preservice personnel strengthen their training skills as well as to provide guidance for those trainers who are moving through the trainer development pathway to become advanced trainers.

Chapters 1–4 of the manual focus on the needs of **all** clinical trainers, preservice faculty and clinical preceptors who wish to improve their skills as trainers, particularly in using and teaching problem-solving and clinical decision-making skills. These skills are critically important to high quality service provision, and it is not easy to teach them well. Therefore, we hope that readers will have the opportunity to apply what they learn here to their day-to-day work. **Chapters 5 and 6** focus on the development of advanced trainers. Proficient clinical trainers who have been identified to become advanced trainers will gain a better understanding of their roles and responsibilities as advanced trainers (**Chapter 5**) and learn the skills needed to effectively transfer their training expertise to others (**Chapter 6**).

Extensive field-testing of the *Advanced Training Skills* manual has helped us to sharpen its focus to the present content. Some of the original material has now been more appropriately incorporated into the second edition of the *Clinical Training Skills* manual. Recognizing that topics such as problem solving and clinical decision-making are important for all trainers, we considered including them there as well. To foster the growth of skills in a logical progression, however, we decided that this more complex material should be reserved for *Advanced Training Skills*. This will allow new trainers first to focus their attention on mastering the core content of the *Clinical Training Skills* manual and become comfortable with the role of clinical trainer before moving on to the next level of skill development.

The authors gratefully acknowledge the valuable contributions of our international colleagues, representatives of other organizations and JHPIEGO staff who have reviewed this manual in its various versions. We would particularly like to thank the many expert trainers in Cameroon, Ghana, Indonesia, Kazakstan, Kenya, Kyrgyzstan, Nepal, Tajikistan, Uganda, Ukraine, Uzbekistan and Zimbabwe who have assisted in the field-testing and provided us with helpful feedback and suggestions.

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INTRODUCTION

Since the 1970s, use of modern contraceptives has increased dramatically throughout the world, helping to improve the reproductive health of many women. According to recent estimates, however, over 350 million couples worldwide still do not have access to a range of safe and effective family planning methods (UNFPA 1999). And family planning is just one of the many services that must be offered in order to improve reproductive health. According to the United Nations Population Fund (1999):

- Every year, more than 585,000 women in developing countries die, and at least 7 million suffer infection or injury as a result of pregnancy, including 70,000 who die from unsafe abortion.

- Up to half of the nearly 175 million pregnancies each year are unwanted or ill-timed.

- There are more than 330 million new cases of treatable sexually transmitted diseases every year, and 11 new HIV infections every minute.

These and other statistics point to the increasing demand for accessible, high quality reproductive health services, and the corresponding need for qualified reproductive health professionals to provide those services.

Sustainable reproductive health programs are achieved as countries develop the capacity to train their own health personnel. To assist this process of developing a national training system, JHPIEGO published the second edition of *Clinical Training Skills for Reproductive Health Professionals* in 1998. It is designed to help **expert service providers** become **effective clinical trainers** who can, in turn, train other service providers in clinical reproductive health skills such as IUD insertion or infection prevention (IP). Training based on this approach is creating cadres of skilled clinical trainers in many countries throughout the world.

To sustain a national training system, it is also necessary to develop a core group of advanced trainers who will train healthcare providers and other trainers. This manual is designed to help trainers strengthen their basic training skills and become better trainers, and addresses the group facilitation, problem-solving, clinical decision-making and coaching skills that all trainers must have. It also addresses the special skills an individual needs to train new trainers effectively.

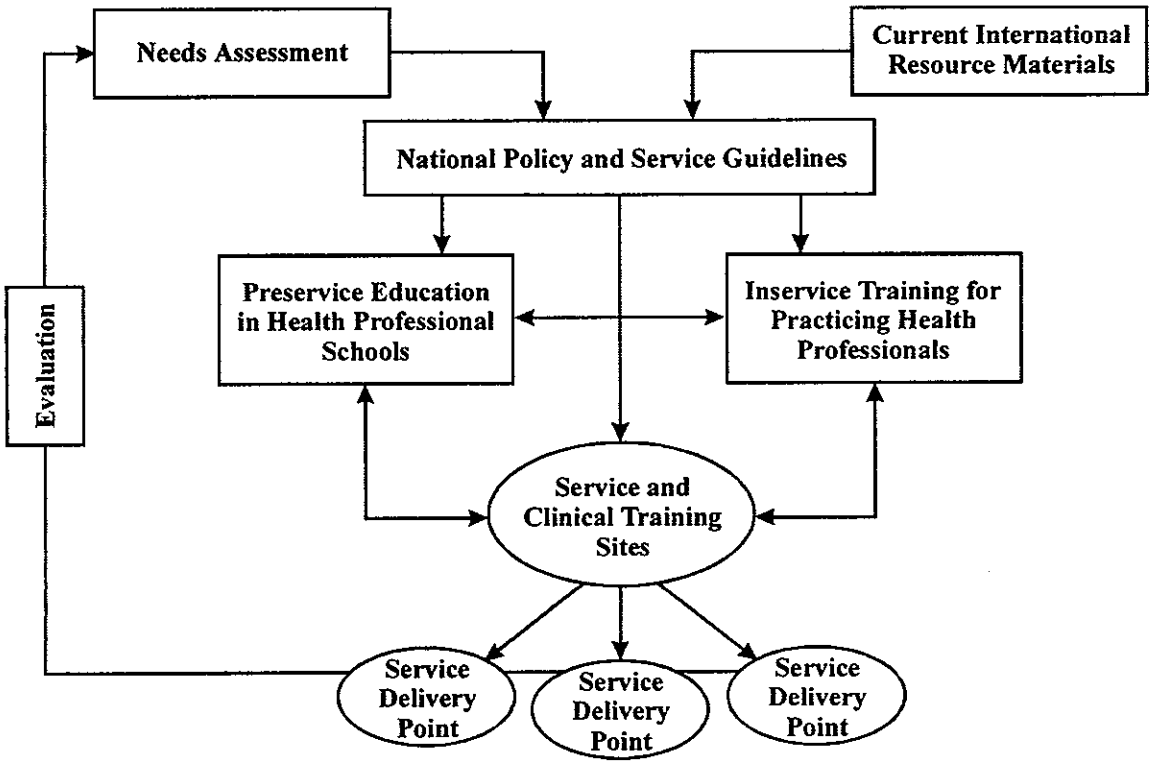
Another important component of a national training system is preservice education. Strengthening preservice education will result in better qualified reproductive health professionals, which will both improve the

quality of services provided and decrease the burden on the inservice training system. The *Clinical Training Skills* manual contributes to this goal by improving the skills of preservice faculty and clinical preceptors to transfer knowledge and clinical skills to their students. The *Advanced Training Skills* manual also makes an important contribution to preservice education by preparing faculty and preceptors to more effectively teach the critical skills of problem solving and clinical decision-making.

A FRAMEWORK FOR STRENGTHENING TRAINING

The framework for strengthening a country's reproductive health education and training may be seen as a network of pathways aimed at linking the national system of higher education, the healthcare system, the political system and cultural norms to strengthen reproductive health policy, training and services (**Figure 1**). Within this framework, the educational and health systems work together to prepare a cadre of providers who can deliver standardized, high quality reproductive health services. Service delivery, preservice education and inservice clinical training follow a single set of service guidelines that reflect up-to-date national policy. Implementation of this framework in various countries has demonstrated its appropriateness and effectiveness in improving the performance of healthcare providers and the systems within which they work.

Figure 1. Framework for Strengthening Reproductive Health Education and Training Systems in National Programs



The framework has the following components:

- **Needs assessments** are conducted at national, institutional and facility levels. Assessments may encompass the entire health sector, an organization, a discipline or selected provider performance. They serve to document constraints to high quality reproductive health service delivery, prioritize problems in provider performance and offer recommendations for interventions.

- **International resource materials** and accurate scientific information on reproductive health are essential to the development of national policy and guidelines in order to maximize the quality of services and eliminate unnecessary barriers to their provision. Preservice education and inservice training disseminate and promote use of these guidelines.

- **National policy** defines a government's strategy toward reproductive health (e.g., who will receive services, which services will be provided, through which service delivery mechanisms they will be provided, what the standards of quality will be). **Service guidelines** are more technically focused and specifically address the provision of services (e.g., how each service is to be provided, who should deliver specific services, what counseling should accompany each

service, what the minimum requirements are for delivery of each service).

- **Preservice education** represents all of the institutions (e.g., schools of medicine, nursing, midwifery) concerned with initial or basic education and training of healthcare providers at all levels. Preservice education is generally less disruptive to the service delivery system, less expensive and more sustainable than inservice training.

- **Inservice training** ensures that health professionals already providing services have the opportunity to update their knowledge and skills according to the latest scientific information and practices. Use of interactive, competency-based training helps ensure that skills, as well as knowledge and attitudes, are transferred. Linking inservice training to preservice education through clinical training sites that provide the opportunity for students to practice skills under supervision results in a systematic, coordinated training effort.

- **Service and clinical training sites** for both the preservice and inservice systems are standardized to the national service delivery guidelines with regard to essential equipment, supplies, IP practices and reproductive health services. Thus the trainees from any of these sites, whether they are medical interns, nursing students or practicing midwives, emerge from training with the requisite clinical skills to competently provide a full range of reproductive health services. In this way, clinical training sites link the preservice and inservice elements of the reproductive health system.

- **Service delivery points** are those sites where trained clinical service providers work to provide high quality reproductive health services. These may be community or district health centers, district-level hospitals or referral hospitals. In the context of the integrated training system, having well-trained staff at all service delivery points makes ongoing provision of quality reproductive health services possible.

- **Evaluation** approaches are used to provide feedback to assess how well the integrated training system is functioning and what impact it has made on service delivery. Informal feedback is provided through built-in evaluation mechanisms. Formal assessments, including special surveys, are conducted to determine the impact of training methodologies, the change in national and institutional capacity to produce competent providers and, ultimately, the ability of providers to provide high quality reproductive health services.

The components of this framework provide the core for strengthening national reproductive health education and training systems. There are many other factors specific to each country or situation, however, that also influence the process of improving the performance of healthcare providers and the systems in which they work. These factors include policy and advocacy interventions affecting licensure and certification bodies; deployment strategies for appropriate assignment of trained providers; management and human resource systems; mechanisms for motivating providers; and allocation and distribution of financial resources.

ORGANIZATION OF THIS MANUAL

The chapters in this manual have been organized to make it easy to use by: 1) all trainers, preservice faculty and clinical preceptors who wish to improve their skills as trainers and more effectively incorporate problem-solving and clinical decision-making skills into their teaching, and 2) proficient clinical trainers who will be trained as advanced trainers.

The needs of all clinical trainers, preservice faculty and clinical preceptors are addressed in **Chapters 1–4. Chapter 1** reviews the approach to training that is presented in *Clinical Training Skills for Reproductive Health Professionals* and used as the basis for this manual as well. **Group Process Skills (Chapter 2)** moves beyond the basic communication and interaction skills addressed in *Clinical Training Skills* to explore more fully how groups form, develop and interact in a learning situation, and how that process affects learning. **Problem-Solving Skills** and **Clinical Decision-Making (Chapters 3 and 4)** were designed to assist trainers in strengthening their own skills in these areas. Becoming better problem solvers and decision-makers will not only improve the quality of their daily work, but will enable them to more effectively incorporate these skills into training and promote their transfer to others. To facilitate their development as trainers and preservice personnel even further, **Chapter 4** focuses on practical strategies and techniques for fostering clinical decision-making skills, particularly in a preservice setting. Given the importance of these skills to the improvement of service provision, the involvement of as many preservice and inservice personnel as possible in advanced training skills learning events is encouraged.

The special needs of proficient clinical trainers who are moving toward becoming advanced trainers are addressed in **Chapters 5 and 6. Chapter 5** describes the process for acquiring the necessary knowledge, skills and practice needed to fulfill the roles and responsibilities of advanced trainer. Particular attention is given in **Chapter 6** to coaching new

trainers to ensure their readiness to conduct clinical skills training independently. It addresses the unique challenges faced by the advanced trainer when coaching in both classroom and clinical settings.

TERMS USED IN THIS MANUAL

To the extent possible, this manual uses terminology consistent with that of the *Clinical Training Skills* manual. Whenever the content is equally applicable to both preservice and inservice settings, we have used the term **trainer** to refer to the individual who is conducting the learning event or activity for the purpose of transferring knowledge, attitudes and/or skills. That learning event is usually referred to as a **course**, which is conducted for **participants**. In later chapters (**Chapters 5 and 6**) the term **advanced trainer** is used extensively because these chapters focus almost exclusively on the development and needs of that level of trainer.

The chapter on problem solving (**Chapter 3**) takes a somewhat different approach. As the content is directed at the reader for her/his personal use as well as for training purposes, we have avoided using training or learning terminology. Rather, we refer to the individual or problem solver.

In the portion of **Chapter 4, Clinical Decision-Making**, that deals with the **process** of clinical decision-making, we have used the term **clinician** for those individuals who make such decisions. It best describes the audience to whom this information is primarily directed. Some clinicians are novices, while others are highly experienced. "Clinician" may be just one of the roles they fill. They may, for example, also be trainers, faculty or researchers.

The latter portion of **Chapter 4** focuses on how to teach clinical decision-making effectively. As presented in the chapter, the more appropriate arena for this to occur is preservice education. That is where it can have the strongest and most sustainable impact on healthcare providers. It is not, however, the only arena; clinical decision-making must be addressed in inservice training as well. Although the content of this chapter can be used in either the preservice or inservice setting, we have chosen language that is consistent with an emphasis on preservice education, but that does not exclude its applicability to inservice training. Because clinical decision-making requires a sound knowledge base and is a cognitive, or mental, skill rather than a physical one, **learn** is the verb used to indicate the process of its acquisition and development. **Teacher** is used for the individual who is facilitating the development of clinical decision-making skills; that person may be either a classroom faculty member or clinical preceptor in preservice education, or a trainer in the

inservice system. **Learner** describes individuals, whether preservice students or inservice participants, acquiring these skills. In the instances that are distinctly preservice or inservice, however, the terminology specific to that setting is used.

ONE

AN APPROACH TO CLINICAL TRAINING

INTRODUCTION

The training approach described in this chapter is guided by principles of adult learning. These principles are based on the assumption that people participate in training courses because they:

- Are **interested** in the topic
- Wish to **improve** their knowledge or skills, and thus their job performance
- Desire to be **actively involved** in course activities

WHAT I HEAR, I FORGET;
WHAT I SEE, I REMEMBER;
WHAT I DO, I UNDERSTAND.

To be effective, clinical trainers must use appropriate training strategies. The participatory, "hands-on" training techniques emphasized in this manual are best reflected in this ancient proverb.

Chapter Objective After completing this chapter, the participant will be able to describe a mastery learning approach that incorporates adult learning principles and features competency-based training, coaching and humanistic training techniques.

Enabling Objectives To attain the chapter objective, the participant will:

- Identify the goal of clinical training
- Describe the mastery learning approach to training
- Describe the key features of effective clinical training
- Identify the responsibilities of clinical trainers and course participants
- Describe alternative learning methods

GOAL OF CLINICAL TRAINING

Effective clinical training emphasizes application of knowledge and attitudes in the performance of skills. The goal of clinical training is to assist healthcare providers in learning to provide safe, high quality

reproductive health services to clients through improved work performance. **Training** deals primarily with obtaining the knowledge, attitudes and skills needed to carry out a specific procedure or activity, such as inserting an IUD or providing counseling. Training presumes an immediate application of the information or physical skill(s) being learned.

Education, in contrast, is defined most often in terms of future goals. For example, an individual attends a school or university in order to prepare for a future role as a nurse or doctor. The student's education provides a broad array of knowledge (and skills) needed to perform that role and from which s/he can later select what is needed, according to a given situation.

No matter how effective training is in conveying information or influencing attitudes, if participants are unable to satisfactorily perform the procedure or activity assigned to them, the training will have failed. Therefore, clinical trainers must focus their energies on modeling the appropriate attitudes as well as transferring skills and providing the facts that participants need to do their jobs.

MASTERY LEARNING

The **mastery learning** approach to clinical training assumes that all participants can master (learn) the required knowledge, attitudes and skills, provided sufficient time is allowed and appropriate training methods are used. The goal of mastery learning is that 100 percent of those being trained will "master" the knowledge and skills on which the training is based. While some participants are able to acquire new knowledge or a new skill immediately, others may require additional time or alternative learning methods before they are able to demonstrate mastery. Not only do people vary in their abilities to absorb new material, but individuals learn best in different ways—through written, spoken or visual means. Mastery learning takes these differences into account and uses a variety of teaching and training methods.

The mastery learning approach also enables the participants to have a self-directed learning experience. This is achieved by having the clinical trainer serve as facilitator and by changing the concept of testing and how test results are used. In courses that use traditional testing methods, the trainer administers pre- and post-tests to document an increase in the participants' knowledge, often without regard to how this change affects job performance.

By contrast, the philosophy underlying the mastery learning approach is one of continual assessment of participant learning. With this approach, it is essential that the clinical trainer regularly inform participants of their progress in learning new information and skills and **not** allow this to remain the trainer's secret.

With the mastery learning approach, a precourse knowledge assessment (e.g., precourse questionnaire) is used to determine what the participants, individually and as a group, know about the course content. This assessment allows the clinical trainer to identify topics that may need additional emphasis or, in many cases, those that will require less classroom time during the course. Providing the results of the precourse assessment to participants enables them to focus on their individual learning needs. A second knowledge assessment, the midcourse questionnaire, is used to assess the participants' progress in learning new information. Again, results of this assessment are reviewed with participants.

With the mastery learning approach, assessment of learning is:

- **Competency-based**, which means assessment is keyed to the course objectives and emphasizes acquiring the essential knowledge, attitudinal concepts and skills needed to perform a job, not simply acquiring new knowledge.

- **Dynamic**, because it enables clinical trainers to provide participants with continual feedback on how successful they are in meeting the course objectives and, when appropriate, to adapt the course to meet learning needs. (Trainers using pre- and post-tests often do **not** review the correct answers with the participants. As a consequence, participants may leave the course not knowing why some of their answers were incorrect.)

- **Less stressful**, because from the outset participants, both individually and as a group, know what they are expected to learn and where to find the information, and have ample opportunity for discussion with the clinical trainer.

KEY FEATURES OF EFFECTIVE CLINICAL TRAINING

Effective clinical training is designed and conducted according to **adult learning principles**—learning is participatory, relevant and practical—and:

- Uses **behavior modeling**
- Is **competency-based**
- Incorporates **humanistic training techniques**

Each of these features is described briefly in this section.

Adult Learning Principles

The training methods and techniques discussed throughout this manual are based on the following eight principles:

- Learning is most productive when participants are **ready to learn**. Although motivation is internal, it is up to the clinical trainer to create a climate that will nurture motivation in participants.
- Learning is more effective when it **builds** on what the participants already know or have experienced.
- Learning is more effective when participants are **aware** of what they need to learn.
- Learning is made easier by using a **variety** of training methods and techniques.
- Opportunities for **practicing** skills initially in controlled or simulated situations (e.g., through role play or use of anatomic models) are essential for **skill acquisition** and for development of **skill competency**.
- **Repetition** is necessary for participants to become competent or proficient in a skill.
- The more **realistic** the learning situation, the more effective the learning.
- To be effective, **feedback** should be **immediate, positive** and **nonjudgmental**.

Behavior Modeling

Social learning theory states that when conditions are ideal, a person learns most rapidly and effectively from watching someone else perform (model) a skill or activity. For modeling to be successful, the trainer must clearly demonstrate the skill or activity so that participants have a clear picture of the performance expected of them.

Learning to perform a skill takes place in three stages (**Figure 1-1**). In the first stage, **skill acquisition**, the participant sees others perform the procedure and acquires a mental picture of the required steps. Once the

mental image is acquired, the participant attempts to perform the procedure, usually with supervision. Next, the participant practices until **skill competency** is achieved and s/he feels **confident** performing the procedure. The final stage, **skill proficiency**, only occurs with repeated practice over time.

Figure 1-1. Levels of 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

Competency-Based Training

Competency-based training (CBT) is distinctly different from traditional educational processes. Competency-based training is **learning by doing**. It focuses on the specific knowledge, attitudes and skills needed to carry out a procedure or activity. How the participant performs (i.e., a combination of knowledge, attitudes and, most important, skills) is emphasized rather than just what information the participant has acquired. Moreover, CBT requires that the clinical trainer facilitate and encourage learning rather than serve in the more traditional role of instructor or lecturer. Competency in the new skill or activity is assessed objectively by evaluating overall performance. Although CBT traditionally has been used for inservice training, elements of this approach are applicable to the preservice setting as well. Finally, CBT has a sound scientific basis. As shown in **Table 1-1**, a person's ability to recall essential information is vastly increased when the material is learned through participatory methods, rather than through more passive methods such as listening to a lecture or obtaining new information through reading.

Table 1-1. Learning Recall Related to Type of Presentation

TYPE OF PRESENTATION	PERCENTAGE OF MATERIAL RECALLED	
	After 3 Hours	After 3 Days
Verbal (one-way) lecture	25%	10–20%
Written (reading)	72%	10%
Visual and verbal (illustrated lecture)	80%	65%
Participatory (role plays, case studies, practice)	90%	70%

Adapted from: Dale 1969.

For CBT to occur, the clinical skill or activity to be taught must first be broken down into its essential steps. Each step is then analyzed to determine the most efficient and safe way to perform and learn it. This process is called **standardization**. Once a procedure, such as insertion of Norplant® implants, has been standardized, competency-based skill development (learning guides) and assessment (checklists) instruments can be designed. These instruments make learning the necessary steps or tasks easier and evaluating the participant's performance more objective.

An essential component of CBT is **coaching** (see **Chapter 6**), which uses positive feedback, active listening, questioning and problem-solving skills to encourage a positive learning climate. Unfortunately, the teaching model with which most healthcare providers are familiar is the classroom instructor lecturing to a group of students who anxiously take notes so that they can pass a written examination. This approach to teaching, used by a skilled clinical trainer, can be effective in providing basic knowledge. It is, however, a very poor way of transferring clinical skills (such as inserting an IUD), strengthening problem-solving skills or changing attitudes toward clinical practice.

What is needed is an approach to clinical training that is different from classroom teaching. Coaching has been used successfully for technical training in industry for many years. To use coaching, the clinical trainer should first explain the skill or activity and then demonstrate it using an anatomic model or other learning aid such as a slide set or video. Once the procedure has been demonstrated and discussed, the trainer/coach then observes and interacts with the participant to provide guidance in learning the skill or activity, monitors progress and helps the participant overcome problems.

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

- **Before practice**—The clinical trainer and participant should meet briefly before each practice session to review the skill/activity including the steps/tasks that 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 learning aids** is incorporated, training time (and training costs) can be reduced significantly.

Humanistic Training Techniques

The use of more humane (humanistic) techniques also contributes to better clinical training. A major component of humanistic training is the use of anatomic models, which closely simulate the human body, and other learning aids such as slide sets and videos. The effective use of models facilitates learning, shortens training time and minimizes risks to clients. For example, by using anatomic models initially, participants more easily reach the performance levels of skill competency and beginning skill proficiency before they begin working in the clinic setting with clients (see **Figure 1-1**).

Before a participant attempts 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 audiovisual aids (e.g., slide sets or videos).

- While being supervised, the participant should practice the required skills and client interactions using the model and actual instruments in a simulated setting that is as similar as possible to the real situation.

The number of procedures participants need to observe, assist with and perform using models will vary depending on their backgrounds. Only when skill competency and some degree of skill proficiency have been demonstrated with models, however, should participants have their first contacts with clients.

Incorporating the use of anatomic models and other learning aids can significantly reduce training time and the number of cases needed for skill competency. Practicing with models also helps participants correct mistakes in technique that could hurt the client. For example, in a study conducted in Thailand in 1991, the traditional IUD training method (6-week course) was compared with a 2-week course using the CBT approach described above. When participants were allowed to learn and practice repeatedly with pelvic models, 70 percent of the 150 participants were judged to be competent after just two insertions with clients, and 100 percent by six. By contrast, of the 150 participants taught without the use of pelvic models, 50 percent obtained competency only after an average of 6.5 insertions, and 10 percent never achieved competency (i.e.,

were not qualified) even after 15 insertions (Limpaphayom et al 1997; McIntosh 1993).

RESPONSIBILITIES OF THE CLINICAL TRAINER AND COURSE PARTICIPANTS

In CBT, the responsibility for meeting learning objectives is shared by the clinical trainer and each participant. The clinical trainer's goal is to help each participant attain full competency in a skill or activity, not just earn a high grade on a test of knowledge. If a participant does not reach full competency, the clinical trainer should not attribute failure simply to the participant's lack of ability, but should look for ways to improve training methods or provide additional practice for the participant.

The role of the clinical trainer is to facilitate learning. The clinical trainer guides participants toward the discovery of new knowledge and the acquisition of new or improved skills. The clinical trainer also seeks to influence participant attitudes by serving as a role model. For example, the trainer always should demonstrate the skill completely and accurately—poor performance is never acceptable.

Participants are actively involved in the learning process, and are encouraged to contribute what they know about the topic being discussed. The knowledge that participants bring to the training situation is as essential to the total training process as the knowledge that the clinical trainer offers. The success of this approach is based on the willingness of participants to take an active part in the training and to share their experiences and knowledge with other group members.

ALTERNATIVE LEARNING METHODS

The most common way to learn new knowledge, attitudes and skills is through a **group-based** course. With this method, whether it is an inservice course or a preservice class or lecture series, there are a group of participants and one or more trainers. The trainers deliver interactive presentations and demonstrations based on an existing learning package or curriculum. The participants interact, take notes, participate in classroom exercises (e.g., case studies, role plays, practice with models) and demonstrate mastery of the learning objectives. In the clinic, the trainers demonstrate skills and coach and assess participants as they practice and demonstrate competency in these skills while working with clients.

Relying solely on group-based learning can severely tax the limited resources of a national training system. One limitation is that only small numbers of providers can be trained at a time, making it difficult to have

an immediate impact on meeting the demand for trained providers. In addition, the quality of the training may lessen as trainers give the same course repeatedly. Finally, it is often a better use of resources to have a trainer working with learners in the clinic as services are being delivered, rather than spending time in the classroom.

The constraints of group-based learning have led trainers to look for alternative learning methods, particularly for delivering the knowledge portion of a course. It is important to note that alternative learning methods must incorporate the same four basic elements of group-based training:

- Transfer of knowledge
- Skill acquisition and practice
- Coaching by an experienced provider
- Assessment of performance in providing services (application of knowledge and skills)

Most of these alternative learning methods use a form of **self-paced learning**, as described below.

Self-Paced Learning

Self-paced or individualized learning is defined as learning directed by the individual in order to meet personal learning objectives. It can be as simple as reading a reference manual, completing exercises in a workbook or watching an instructional video. It can also be more structured. Examples used in reproductive health training include:

- Completing a computer-assisted learning (CAL) distance learning course on the Internet (knowledge transfer only).
- Completing a CAL course that uses interactive computer modules for knowledge transfer and one-on-one work with the clinical trainer for skills transfer, first with models and then with clients.
- Participating in a structured on-the-job training (OJT) clinical skills course that involves reading assignments in a reference manual, completing exercises in a workbook and working one-on-one with the clinical trainer for skills transfer, first with models and then with clients.

Although **self-paced learning** and **individualized learning** have essentially the same meaning, there are some subtle differences. In self-paced learning, the learner controls the pace of the learning process. For example, in a self-paced CAL course, two clinicians might begin the course on the same day but one may finish days ahead of the other. By contrast, in individualized learning, there may be some time parameters.

For example, a structured OJT course may require the individual to reach specific points in the course at specific times. The learning is still targeted to the individual but the pace of learning may be partially controlled by the trainer or facilitator. In this manual, the term self-paced learning is used to describe both methods.

Appendix A provides more information on both group-based and self-paced learning methods, including advantages and limitations and a comparison of CAL and OJT as each would be used to train IUD service providers.

SUMMARY

Clinical training in family planning and reproductive health assists healthcare providers in performing their jobs more effectively. When mastery learning based on adult learning principles and behavior modeling is integrated with CBT, the result is a powerful and extremely effective method for providing clinical training. And when humanistic training techniques such as using anatomic models and other learning aids are incorporated, training time and training costs can be reduced significantly.

Because the goal of clinical training is to help healthcare providers learn to provide safe, high quality services, the responsibility for achieving the training objectives is shared by the clinical trainer and each participant. If a participant does not meet the course objectives, the clinical trainer should not simply attribute failure to the participant's lack of ability, but should look for additional ways to assist the participant and improve training methods.

TWO

GROUP PROCESS SKILLS

INTRODUCTION

Group-based training brings together individuals of diverse backgrounds and experiences to share a common goal: to learn new knowledge and skills. As described in **Chapter 3** of *Clinical Training Skills for Reproductive Health Professionals*, second edition, people in training situations are often anxious and unsure of their ability to meet the challenges of the training course. The group they are part of provides the support and encouragement they need to learn new skills and behaviors.

The trainer is the coach and leader of the group and must work with the individual members to encourage this supportive network. This chapter explains how the trainer assumes the role of leader and uses group process skills to help individuals form a healthy, supportive group.

Understanding the responsibilities of a leader, the dynamics of group interaction and how to effect change on both an individual and group level has value beyond the training situation. These skills are also useful to the trainer who is conducting a needs assessment, serving on a committee to design a curriculum or working with a group of trainers to adapt learning materials to local needs. An understanding of group dynamics and the ability to use group process skills will contribute to the trainer's overall leadership skills and promote individual effectiveness in a wide variety of situations.

Chapter Objective

After completing this chapter, the trainer will be able to use group process skills effectively.

Enabling Objectives

To attain the chapter objective, the trainer will:

- Identify the characteristics of an effective group
- Describe the role of the trainer as leader and coach
- Identify basic principles of group dynamics
- Identify the stages of a training group
- Apply strategies for managing difficult training situations

WHAT IS AN EFFECTIVE GROUP?

New knowledge, attitudes and skills are often learned in a group-based setting. A small group (8–12 participants) provides for diverse interaction

and sharing, yet is small enough so that close relationships can be formed. The interconnections between people in the group are essential for providing support and encouragement as they learn new skills.

An effective group[1]:

- Understands its goals (overall and immediate)
- Is flexible in deciding how to work toward those goals
- Has a high degree of communication and understanding among its members
- Communicates directly and openly
- Is able to make effective decisions by considering all viewpoints and securing the commitment of all members to important decisions
- Achieves appropriate balance between productivity of the group and satisfaction of individual needs
- Shares leadership responsibilities
- Has a high degree of cohesiveness
- Makes intelligent use of the differing abilities of its members
- Is objective about reviewing its own processes, identifying problems and changing processes as needed

The trainer leads, or coaches, the group to achieve effective group interaction.

THE TRAINER AS LEADER AND COACH

One of the most important roles of the trainer is that of leader. A leader guides the participants and helps them achieve an effective, mutually supportive group. The trainer as leader[1]:

- Establishes an atmosphere of safety, honesty and trust
- Listens to others and shares their fears and concerns
- Is a role model
- Serves as the authority for the group
- Is an advisor, friend and advocate
- Makes decisions

[1] *Adapted from*: Curtis 1995.

- Resolves disagreements
- Initiates action
- Motivates the group
- Facilitates group interaction
- Moves the group from one level of achievement to the next
- Is sensitive to the needs of the group
- Responds to the expectations of others

Another important role of the trainer is that of coach—an enthusiastic mentor who inspires and instills self-confidence in the people being trained. The trainer leads by coaching, and by thinking and acting in a nontraditional way. The trainer focuses on the participant, encourages two-way communication, continually evaluates participant learning in order to provide useful feedback, supports collaboration among group members and encourages participants to manage themselves. This **interactive training** approach requires a change from traditional behaviors, as described in **Table 2-1**. The first step in becoming an interactive trainer is choosing to be one.

Table 2-1. Changes Necessary in Becoming an Interactive Trainer

CHANGING FROM...	TO...
Teaching, instructing	Facilitating, coaching
Centering on the instructor	Focusing on the learner
Lecturing	Interacting
Being detached, distant	Collaborating, cooperating
Exercising power over others (acting as the only authority)	Empowering learners to be the source of their own authority
Maintaining tight control of the group	Encouraging participants to manage themselves
Telling participants "the one best way"	Helping participants to discover the answers
Believing that the participants are the only learners	Believing that everyone in the group, including the trainer, is a learner

An effective trainer:

- Values excellence in both clinical and training skills and conveys this attitude to all participants

- Demonstrates a commitment to new ways of thinking and behaving by clearly presenting new ideas and serving as a role model for participants

- Is aware of and continually builds on personal strengths, seeing every training opportunity as a learning experience

- Has a life-long commitment to develop and demonstrate humility, compassion, generosity and understanding
- Fosters trust and credibility in the training room
- Appreciates the delicate balance of power in the training room and works with new trainers to develop their boundaries
- Maintains enthusiasm and optimism in the face of discouraging odds
- Instills in participants the confidence that they will be able to achieve the goals of training and successfully complete the course

GROUP DYNAMICS

Each training group has its own style and personality. Why are groups different when the course content is the same? Each training group is a **living system** which is different from the sum of the individuals in the group. The group grows and changes over the period of a training course as a result of interaction and behaviors present in the group.

As described in **Chapter 3** of the manual *Clinical Training Skills for Reproductive Health Professionals*, second edition, there are two levels of interaction in the group: content or tasks (what the group does) and process (how the group does it).

Examples of **content** include:

- Following a course schedule
- Completing reading assignments
- Working with anatomic models

Examples of **process** include:

- How the trainer communicates with the group
- How group members communicate with one another
- How the trainer moves the group toward achieving its objectives

There are individual and group behaviors which contribute, either positively or negatively, to the dynamics of a group. Those behaviors that focus on content are known as **task functions**. Behaviors that focus on process are known as **maintenance functions**.

At the beginning of a course, the trainer leads the group in the functions necessary to accomplish its tasks and develop and maintain the relationships within the group. As trainers become more skilled as leaders and group members, they can find more ways to support a group in reaching its goal.

Task Functions

Task functions are actions and behaviors that help the group complete a task. The trainer:

- **Initiates**—gives ideas, proposes a task, suggests a new direction. Initiation fuels the action needed to get the group started on meeting its objectives. The trainer and group members must be sensitive to when it is appropriate to explore a topic further or move in a new direction.

- **Seeks information**—asks for facts and ideas. The trainer must be aware of when to ask for further information and give participants the opportunity to volunteer information.

- **Gives information**—is the counterpart of seeking information. The more information the trainer can elicit from the group, the more the group can assume responsibility for task functions.

- **Clarifies and elaborates**—clears up confusion and provides the opportunity for expanding an idea. The trainer continually checks the group for its level of understanding and intervenes when clarification is needed. This function is particularly important when the trainer is giving instructions for activities early in the course.

- **Summarizes**—restates what has been said or offers a conclusion at the midpoint or end of a discussion. This summary is useful when the discussion is lengthy and complex. When this function is shared by several participants in the training group, the discussion tends to evolve smoothly.

- **Checks for consensus**—checks on the group's position on a specific topic of discussion. When used by the trainer or participants during a discussion that involves several differing opinions, this function allows the group to understand the extent of their differences.

Maintenance Functions

These actions and behaviors focus on **how** the group performs its task. These functions involve feelings, attitudes, needs, the growth of individual members and the growth of the group as a whole. Maintenance functions contribute to the relationships within the group that lead to a strong and supportive group. The trainer, as well as the group members:

- **Harmonizes**—reduces tension, explores differences. Tension is a natural part of any training course. The trainer should model behavior that acknowledges the tension and finds comfortable ways of managing it. Should a topic cause conflict within the training group, the trainer or group members must find some common ground that both sides can accept. On occasion it may be necessary to wait until later to resolve the conflict, but the disagreement must be acknowledged and resolved.

- **Facilitates participation**—ensures participation from as many group members as possible. When some participants are hesitant to volunteer, they can be included by being asked a question or their opinion on a topic. Because using interactive, participative learning methods ensures group involvement, this function is designed into most training activities.

- **Encourages others**—acts friendly, warm and accepting. Balance is the key in performing this function. If the trainer is modeling open, honest behavior, the participants will usually follow. The emotional tone of the training course changes over time—from businesslike to warm and friendly to intense problem-solving. No matter what the emotional tone, the group members should encourage one another to participate during the course. This behavior supports learning.

- **Compromises**—yields status, admits error. This function usually requires leadership from the trainer. This behavior models humility and honesty and therefore trustworthiness. When the trainer admits a shortcoming in the presence of the group, this establishes a precedent that perfection is not the goal in the training room.

- **Sets standards**—sets norms, tests limits. A norm is an acceptable pattern of behavior. The training group works on this function the first day of the course. The trainer should regularly check with the group to see whether the norms are being followed or should be reviewed and adjusted.

It is important to understand that all of these functions do not have to be performed by the trainer. As the group matures and develops into a cohesive entity, participants take on more of these functions and the trainer can play a less active role. Indeed, it is one of the responsibilities of the trainer to help group members learn to perform these actions and exhibit these behaviors.

Individual Negative Behaviors

Finally, group members, including the trainer, may engage in behaviors that impede the progress of the group. Usually this behavior occurs because the group has not performed the task and maintenance functions

summarized above. Note that the behaviors described below are individual behaviors. The trainer or group member:

- **Blocks**—prevents consensus and movement in the group. Blocking involves interfering with the progress of the group by going off on a tangent, arguing too much about a point or focusing on irrelevant detail. The blocking member achieves momentary power by focusing attention on her/himself rather than on the content of the course.

- **Dominates**—talks more than her/his fair share. Definitive pronouncements and overlong speeches are characteristic of a group member who dominates. Dominating behavior can produce a tense learning climate and prevent less forceful members from participating.

- **Plays**—uses humor or jokes inappropriately. Too much humor can give the training course an atmosphere of play and disrupt the progress of learning new skills.

- **Is self-seeking**—oppresses with personal needs. The group member engaged in self-seeking behavior draws attention to her/himself, uses self as the main reference point in a discussion and is generally unable to think about others in the group.

Observing the Group

There are predictable dynamics and patterns seen as the group develops into a learning community brought together by a common purpose. The trainer must understand these dynamics and patterns in order to describe what is happening in the group, predict what might happen and intervene in ways that will support learning. The trainer must do more than talk and listen. More important is observing the group in action.

Thoughtful observation helps the trainer understand the patterns of behavior that make participants productive and contribute to the growth of the group. This understanding provides the trainer with choices to influence how the group is functioning. An observation guide is presented in **Sample 2-1** at the end of this chapter.

Feedback to the group members on these observations is a tool trainers can use to encourage positive behavior change, correct inappropriate behavior and help others see themselves more clearly. Trainers should also give one another feedback throughout the course to ensure that the course is moving forward as designed.

HOW A GROUP DEVELOPS

From the first day of training, the group progresses through a cycle of stages. These stages of growth and development are similar to those observed in children. Children crawl before they walk; they eat soft foods until they have teeth; they talk in individual words before they have mastered complete sentences. Similarly, a training group begins its life cycle on the first day of a course. The stages of group development described in this section are:

- Stage 1: Beginning—Eager and Anxious
- Stage 2: Middle—From Frustration to Satisfaction
- Stage 3: End—Through Creation to Completion

Stage 1: Beginning

The length of this stage is relatively short if the beginning tasks are clearly defined and easy to achieve. Most training courses are structured with this factor in mind. The main focus at this stage is on the course goals, how the participants will achieve the goals and how the trainer will assist and support them in achieving the goals.

Participants:

- Are eager to begin the training course
- Have high expectations of themselves and the trainers
- Have some anxiety about why they are there, how they were chosen, what they will gain from the course and what will be expected of them after the course
- Are unsure about the other members of the group, who usually are strangers
- Are dependent on the trainers
- May have questions about the course schedule, financial arrangements, etc.

Trainer:

- Provides the goals and direction of the course
- Indicates what the group members will do and how they will do it and in general closely supervises the activities of the group

- Engages in two-way communication and models behavior that supports participants in accepting the trainer and one another
- Establishes a positive climate and clarifies expectations for two-way communication during the training course

Stage 2: Middle (Part I—Frustration)

At this stage, participants are slowly increasing their skill level despite any negative feelings or concerns they may have. Each part of the training course is designed to transfer new knowledge and attitudes and build skill competency one step at a time. The goal of the trainer during this stage is to support the participants as they **simultaneously** develop:

- Skills and knowledge needed to achieve course objectives, and
- Interpersonal and group process skills so that they can begin moving away from total dependency on the trainer.

Participants:

- Experience a difference between what they expected in the course and what is actually happening (e.g., expecting to hear a series of lectures but finding themselves actively engaged in the learning process)
- Do not want to be dependent on the trainer
- Sometimes experience feelings of incompetence or confusion about the skills to be learned and the interactive learning methods, which are different from anything experienced in the past
- Have doubts about their ability to perform new skills in front of their colleagues
- May have negative reactions to the trainer or other group members
- Question the goals and the interactive process of the course and may compete for leadership of the group

Trainer:

- Expects participants' frustration as part of the process and deals with participants in an understanding manner
- Does not take the behavior of the group personally when dissatisfaction is expressed
- Balances between task and maintenance functions

Stage 2: Middle (Part I–Frustration)
Examples of trainer's task functions: • Follows the course schedule as outlined • Communicates training objectives clearly and consistently • Models effective skills at the beginning, middle and end of each topic • Identifies how each part of the day's schedule fits into the overall goals of the course • Uses the course itself as a laboratory and creates time each day to reflect on the content and process of the day's activities • Uses the learning guides and checklists to break down any clinical skills being mastered
Examples of trainer's maintenance functions: • Acknowledges and tolerates the frustration participants may be experiencing without taking it personally • Encourages participants to make suggestions regarding the content and process of the course • Focuses on building more supportive relationships among participants • Uses active listening to validate what participants are feeling and to model how an experienced trainer handles negative feelings in a constructive manner

Stage 2: Middle (Part II—Resolution of Frustration)

In some courses this stage, in which participant skills and understanding steadily increase and the group is reinforced by the positive feelings among the group members, is relatively short, and may not be obvious. A number of factors influence the length of this stage: the ability of the group to develop norms of working collaboratively rather than competitively; the openness and comfort level of the trainer in dealing with dissatisfied participants; the ease with which participants learn new skills; and the quality of interpersonal relationships among participants and between the trainer and the group.

Participants:

- Become more satisfied as the course design identifies the ways in which the participants will master skills, and the course activities clarify how the group will work together
- Begin to experience the results of interactive techniques and realign their expectations to fit the reality of the course
- Through small group activities, develop respect for other participants; as a result, group cohesion begins

- By becoming actively involved in mastering new skills, begin to feel more self-esteem in relation to the group
- As more activities are completed successfully, take pleasure in their accomplishments

Trainer:

- Assumes more coaching behaviors and is less directive in communicating with the group
- Makes process observations that acknowledge the progress of the group in assuming responsibility for its own learning
- Knows when to intervene in the group and when to transfer responsibility to the participants as they gain more autonomy and confidence
- Is able to let go of total control of the group

Stage 3: End (Part I—Integration and Creation)

With the increase in knowledge and skill level, the work proceeds efficiently at this point, even when long hours are required to prepare for skill practice sessions. Though anxious about performing in front of colleagues, participants are usually proud of the skills that they have developed.

Participants:

- Concentrate on integrating the concepts that they have learned throughout the course by applying them to the skill practice sessions
- Regard their fellow team members positively
- Support other team members by recognizing their strengths and competence
- Are able to challenge one another without fear of damaging their relationships
- Communicate with candor and directness
- As a group, recognize one another's contributions to the success of the course

Trainer:

The trainer is aware that the special status of the trainer has been eliminated as the group has mastered the content and process of training. Participants are no longer dependent on the trainer and now have opinions of their own regarding the content of the course. The trainer treats group members as colleagues, yet is aware that they continue to need support in their newly discovered autonomy.

Stage 3: End (Part II—Completion and Ending of the Course)

Where it is appropriate, followup plans are made at this stage to support the participants as they apply their newly learned skills in the home environment. This support may take the form of a followup visit to a healthcare provider to assess continued progress in achieving skill proficiency, or an opportunity for a new trainer to deliver a course under the guidance of an experienced trainer. New clinical trainers are strongly encouraged to train with master trainers until they become proficient.

Participants:

- Have strong positive feelings about their accomplishments
- Have new reactions to clear, direct feedback about their performance; what was once feared has now been experienced as a factor that supports individual growth and group cohesion. There is an ambivalence about ending the course and moving on.
- Often feel a sense of loss or sadness about the ending of the course and their separation from other group members
- Sometimes deny or camouflage feelings by joking, leaving the course early or dismissing the other participants' statements about their feelings

Trainer:

- Is aware of her/his own feelings about the end of the course and appropriately shares them with the group
- Supports the participants in creating a "clean" ending, leaving no unfinished business behind
- Contributes to the followup plans of participants when asked, and follows through on any commitments made in the plans regarding her/his involvement in future training

The trainer must be aware of these stages and monitor the progress not only of individuals, but also of the group, as the course proceeds and the

group dynamics change. This monitoring gives the trainer opportunities to provide positive feedback and encouragement and ensure that the learning climate remains positive. **Appendix B** presents the group dynamics that occur during a training course, and the strategies the trainer uses to support and guide the group through its stages of development.

MANAGING DIFFICULT SITUATIONS

Trainers face many challenges during a training course. Good preparation will serve them well, but not every situation can be planned for in advance. Often trainers must respond immediately to situations or problems they have never experienced before. The ability to choose the correct response develops over time. Trainers should be able to analyze and learn from each situation in order to increase their options when faced with difficult situations.

As previously stated, the group is a living system that has a number of interrelated parts, including the:

- participant group,
- trainer group (if there is more than one trainer),
- training content,
- process being used to present the content,
- learning climate,
- learning materials, and
- physical elements of the room.

For training to be successful, each part of this system must function well. For example, if the training objectives are not clear, this lack of clarity will affect the use of learning materials, how the training will be conducted (i.e., the process used to present the content), the level of acceptance from the participants and the learning climate. When any one of the system parts is not functioning well, there will be a negative impact on the whole system.

The trainer must understand all parts of the system in order to analyze and evaluate how the training is progressing, make decisions about what might be needed and act on these decisions. This decision-making process occurs continually throughout a training course.

There are patterns that occur repeatedly in the training room for which a trainer can be prepared. Many situations involve recovering from surprises, unfortunate events and the trainer's own mistakes. Having the

capability to deal with these situations openly lets the trainer demonstrate exemplary trainer behavior to the participants. Below are several situations that many trainers have encountered. As you read each one, pause for a few moments and write down as many solutions as possible.

Situation 1: You are delivering a presentation on "Infection prevention practices for IUD insertion and removal." You have prepared questions for each segment of the presentation to make sure that participants understand the content. As you ask your questions, members of the group seem hesitant to volunteer answers, even when you look directly at one of them. What are three strategies that will encourage group members' involvement?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

Situation 2: Your presentation on "The mechanism of action of the IUD" is going well. Some of this information is new to the participants and is generating quite a discussion. No matter how you manage the larger group, there is a small group of individuals who continue to debate what they were taught about the IUD's mechanism of action. What are three strategies you can use to bring this small group back to the larger group?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

Situation 3: During a discussion of clients' rights, the senior ob-gyn professor in the group disagrees with the whole idea of "clients' rights" and then attacks you personally. What are three strategies you can use to deal with this difficult situation?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

Situation 4: As the course progresses, you notice that a particular participant tends to ask questions that lead the group away from the topic. What are three strategies you can use to deal with this situation?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

> **Situation 5**: Every time you guide the group toward closure of a topic, one particular participant tries to reopen the discussion. What are three strategies you can use to deal with this situation?
>
> Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

Strategies for Dealing with Difficult Situations

It is helpful to consider the following general guidelines for dealing with the surprises or difficult moments in a training course:

- When deciding on a course of action, the best decision is one that benefits the group as a whole.
- Often, participants will "test" the trainer to see how the trainer will handle an uncomfortable situation. Getting into a struggle of wills with a participant is a situation that will not benefit the trainer, the participant or the group.
- Adults do not like to feel incompetent in front of their peers. Sometimes participants make themselves feel competent by challenging the trainer. The experienced trainer does not take this behavior personally, but responds in a way that does not meet the challenge directly.
- The skilled trainer notices actions and patterns in the training room. Knowing when to respond and when to let something pass is a skill learned over time. The norm of doing what is best for the group as a whole will serve the trainer well in this situation.

SUMMARY

Individuals in a training group come together with a common goal: to acquire new knowledge and skills. An effective trainer understands the responsibilities of a leader, the dynamics of group interaction and how to effect change on an individual and group level.

The training group typically passes through three stages. In **Stage 1**, participants are enthusiastic and have high expectations about the course, although they may also experience some anxiety about why they were chosen for the course and what will be expected of them. At this stage, they are totally dependent on the trainer. **Stage 2** is characterized at first by frustration, when the participants' experiences differ from their expectations, and later by resolution of frustration as they realign their expectations to fit the reality of the course. In this stage, the participants

begin to move away from their total dependency on the trainer. **Stage 3** is a period of integration and creation, when participants have mastered the process and content of training. They are able to work in collaboration with the other members of the group and are no longer dependent on the trainer. At the end of Stage 3, participants experience a sense of completion and closing of the group. They have strong positive feelings about their accomplishments and are ambivalent about ending the course and leaving the group.

Trainers inevitably face difficult situations in the training room. When they learn from these experiences and deal with unexpected or unfortunate events openly, they can become more effective trainers and serve as positive role models for the participants.

SITUATION RESPONSES

Situation 1 Direct questions to specific participants. There are two ways to do this: name the person first and then ask the question, or ask the question and then name the person. You can ask participants to discuss the answers in pairs, or to write their answers down before volunteering to answer. Sometimes it may be necessary to give the group encouragement and be humorous in eliciting their answers. You can also volunteer answers of your own.

Situation 2 Give the subgroup your attention and ask them to explain to the entire group what they understand about the topic. Encourage members of the larger group to become involved in this discussion as well. Explain why this information is important. You can volunteer to get the needed references from research materials on the subject. Consider the time of day; participants may be tired, hungry or need a break. If so, you can pause and postpone the discussion until a more appropriate time. You may also be able to discuss this information outside of the session and resolve the issues then.

Situation 3 Don't assume the whole group feels this way; check with the group. If the idea of clients' rights is countercultural to participants, engage the group in a discussion of how the rights of clients can be respected in this particular culture. Clarify why this topic is included in the training program. You can also take a risk and share your personal feelings about this topic.

Situation 4 Remind the group of the objectives of the session and bring the focus back to course. Know that your directing attention to this kind of participant encourages the behavior, so choose your response to the person carefully. Consider the dynamics of the group. There may be something occurring in the group (such as anxiety) that you will uncover if you allow the participants to take charge for 10 minutes. Share your own experience.

Situation 5 Acknowledge the person by saying that you understand that he wants further discussion on the topic, but that the schedule must be followed. You can also ask the group for the answer to his question and allow the group to monitor its own time. Suggest that the person discuss the question or issue with the other participants during the break.

SAMPLE 2-1

OBSERVATION GUIDE

Instructions: The purpose of this observation is to guide you as you watch the group accomplish its tasks.

Fill in the names of group members across the top of the sheet. As you notice different behaviors of group members, place a check next to the behavior. You may want to use another sheet of paper to record **when** in the session you noticed a particular contribution by a group member. When reporting your observations to the group, please use the guidelines for effective feedback:

- Begin with positive comments
- Describe behavior in nonjudgmental terms
- Be specific in your description

		NAMES OF GROUP MEMBERS											
TASK FUNCTIONS	Initiating: gives ideas, proposes a task												
	Seeking information: asks for facts, ideas												
	Giving information: offers facts, ideas, beliefs												
	Clarifying and elaborating: clears up confusion												
	Summarizing: restates, offers a conclusion												
	Checking for consensus: checks on group's position on specific topics												
MAINTEN-ANCE FUNCTIONS	Harmonizing: reduces tension, explores differences												
	Facilitating participation: ensures participation of others												
	Encouraging others: acts friendly, warm, accepting												
	Compromising: yields status, admits error												
	Setting standards: helps set norms, tests limits												
INDIVIDUAL ROLES	Blocking: prevents consensus, movement												
	Dominating: talks more than her/his fair share												
	Playing: uses humor or jokes inappropriately												
	Being self-seeking: oppresses with personal needs												

Adapted from: Mill 1980.

THREE

PROBLEM-SOLVING SKILLS

INTRODUCTION

Everyone solves problems and makes decisions every day. Decisions about what clothes to wear, what to eat at each meal and how to handle the small problems at work can be made quickly and efficiently because they are such a part of our daily routine. Only when such decisions are removed from their routine context does one understand the conscious effort and process that are required to solve these problems.

Introductory Situation: What to order for dinner? You and your family are going out to dinner at a nice restaurant to celebrate your birthday. Because you do not eat out often, you are excited and anticipating something special. At home, meal planning and preparation are fairly routine. At the restaurant, however, there is a large variety of dishes available. How will you solve this problem and decide what to order for dinner?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Clinicians and trainers must continually make decisions and solve problems when providing services to clients, teaching healthcare providers and carrying out their other professional duties. To improve their problem-solving skills, as well as be able to teach them to others, trainers must understand the steps used to identify and solve problems. To illustrate the sequence of steps that must be followed in solving a problem, each Situation in this chapter has two scenarios—Situation A, an IP problem, and Situation B, an IUD training course problem.

Chapter Objective

After completing this chapter, the participant will be able to apply the six-step approach to problem-solving.

Enabling Objectives

To attain the chapter objective, the participant will:

- Identify the six steps in problem solving
- Describe the purpose of each step in problem solving
- Explain the actions to be taken in each step
- Apply techniques for promoting creativity in problem solving for use with both individuals and groups

THE SIX STEPS IN CREATIVE PROBLEM SOLVING

For many years, businesses and other organizations have studied the problem-solving process, and have identified a series of steps common to all problem-solving situations. Healthcare providers use the same steps every day to make decisions and solve problems, although they may not always be consciously aware of each step. Some, if not all, of the steps were probably used in the Introductory Situation about deciding what to order for dinner. Their application may vary depending on the specifics of the problem to be solved. The six steps in problem solving are:

- Recognize that there is a problem
- Identify the problem
- Generate alternative solutions
- Choose among the alternative solutions
- Implement the chosen solution
- Evaluate the solution

These steps alone may help you to solve a problem, but creativity enhances the process. Creativity allows individuals to devise new ideas and approaches to solving problems. Everyone can develop the capacity for creative thought, which occurs on the right side of the brain. Although it is natural to use one side of the brain more than the other, everyone can learn to use both sides of the brain, and thereby become a more effective, creative problem solver.

Some characteristics of each side of the brain are listed below. Each individual will have her/his own ideas about which characteristics best describe the way s/he thinks and considers problems.

The rational, or left, side of the brain:

- Follows a logical pattern
- Is objective
- Views time chronologically, hour by hour, day by day
- Sees things as true or false, black or white
- Seeks details
- Holds short-term memory
- Thinks critically, perhaps negatively, asks "why?"

The intuitive, or right, side of the brain:

- Follows intuitive hunches
- Creates patterns, without following a step-by-step process
- Is subjective
- Views time in a total sense—a lifetime, a career, a project
- Sees the "whole" rather than the details
- Thinks positively, unconstrained by preconceived ideas
- Asks "why not?" and breaks rules

This chapter presents techniques for fostering creativity—for letting the right brain have more freedom. Probably no individual will use all of them, but readers may identify specific techniques that will help them be more creative.

STEP 1: RECOGNIZE THAT THERE IS A PROBLEM

Situation 1A: You have just attended a 2-week IP workshop conducted by the inservice division of the Ministry of Health (MOH). The purpose of the workshop was to introduce new policies and standards. Back at your service site, the supervisor asks you to be sure that the IP practices currently being used agree with the new MOH standards. What is the first step you would take?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 1B: You are an experienced IUD trainer who has been asked to conduct the standard 10-day IUD course for 12 healthcare providers. One week before the course is to start, you are asked by the sponsoring agency to decrease the course length to 5 days. This will prevent the participants from being away from their work sites for such a long period of time, which has been disrupting services. Do you think the requested change is a problem? Why or why not?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

A problem is a situation that an individual wants to change. For most people, the word "problem" has a negative meaning. It implies that there is something wrong that needs correction. However, the first step of "recognizing that there is a problem" can also identify opportunities for improvement so that future problems can be prevented. Quality assurance

programs, for example, use a process very similar to the one presented here to identify opportunities for improvement and implement change before problems arise. The word "problem" can be replaced with words such as "challenge" or "opportunity," which have a more positive meaning, or with "issue," "situation" or "task" which are neutral. These words may make it easier to remember that the problem-solving process is useful for dealing with a wide variety of conditions that may not actually be considered problems—yet.

To identify opportunities for improvement, prevent problems from occurring or deal with situations quickly and effectively if they arise, it is important for individuals to constantly gather information about their internal and external environments. In other words, healthcare providers need to be aware not only of what is happening in their facility, but also of what is happening in the community around them (their clients) and the healthcare system as a whole (both public and private sectors). They must also be knowledgeable about national and international standards for care, whenever possible. Gathering this information requires a commitment of time and resources.

Gathering information helps not only to identify problems as they occur, but also to clarify or articulate the intuitive feeling that something is wrong. It may be necessary to think about the situation subconsciously for some time before being able to define the issue and take action. When information is gathered regularly, the process of recognizing that there is a problem can be accelerated, and a response to the situation can be made more quickly and effectively.

Techniques for Recognizing Problems

The most basic way to identify a problem or an opportunity is to review and describe the existing situation. Often, this approach will recognize a potential problem before it occurs. The following techniques can be used to creatively gather information about the current condition.

- **Comparison with others**. (This is also called benchmarking, best practices or racing against competitors.) In this technique, compare the practices under review with those of the best in the field, and then use the results to motivate change and set goals for improvement.

- **Monitoring for weak signals**. Look for problems that are occurring throughout the system, or in specific areas of the system. For example, Norplant implants are being gradually introduced throughout the country, and within the next 6 months your clinic will begin offering them. Monitoring of the national introduction process reveals that other clinics have been unable to meet the demand for services because of an insufficient number of trained staff. After recognizing this as a potential problem, move through the problem-

solving process to avoid or minimize this problem when your clinic begins providing Norplant implants services.

- **Comparison of current performance with objectives or past performance.** Most organizations have objectives or standards which they are expected to meet. By comparing current performance with those objectives and looking for differences between current and past performance, it may be possible to recognize that a problem exists.

- **Checklists.** Checklists provide a detailed list of what should be done and of the acceptable standards of performance. A comparison between current practices and the checklist will clearly show where the problems are occurring. (See **Tables 3-1** and **3-2**.)

- **Inverse brainstorming.** Most people are familiar with brainstorming which begins with a problem and looks for a solution. Inverse brainstorming begins with a situation that appears to be satisfactory and looks for potential problems with it.

Table 3-1. Infection Prevention Checklist

Standard of performance: Infection prevention practices reflect international standards for protecting healthcare providers and clients.

CRITERIA	YES	NO	COMMENTS
• The clinic has running water (plumbing or bucket and pitcher).			
• Clinic staff use appropriate handwashing technique.			
• The clinic has and uses puncture-proof containers for sharps.			
• Cleaning staff wear utility gloves when handling contaminated items.			
• Each examination room is equipped with trash bins and chlorine solution for decontamination.			
Steps continue.....			

Table 3-2. General Service Delivery Checklist

Standard of performance: Service delivery practices reflect minimum standards for quality.

CRITERIA	YES	NO	COMMENTS
• Clients are promptly greeted and checked in by the clerk upon arrival at the clinic.			
• The waiting area is clean and protected from the weather, and there is adequate seating.			
• Information, education and communication (IEC) materials are available to clients while they wait.			
• Clients do not wait longer than 1 hour.			
• The healthcare providers treat the clients with respect.			
• The healthcare providers ensure the privacy of each client during counseling.			
• The healthcare providers ensure the privacy of each client during physical examination and procedures.			
Steps continue....			

- **Listing complaints**. Another way of identifying problems is to have clients, staff and other individuals in the facility list their complaints. This can be done individually or in groups. It can also be useful to have staff list the obstacles they encounter in performing their daily duties.

- **Role playing**. In role playing, the participants pretend that they are someone else. Pretending to be someone else and experiencing an interaction from a new perspective may give insight into a situation. Staff members may take the role of the client or of other staff members who view things differently. A physician, for example, could play the role of the receptionist, and vice versa. Much can also be learned by observing role plays from the point of view of someone who is evaluating the program or clinical site.

STEP 2: IDENTIFY THE PROBLEM

Situation 2A: In your observation of the IP practices in the clinic, you find many practices that are already consistent with the new MOH standards, but note that the decontamination step of instrument processing is not being performed. What would you do?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 2B: You realize that before you can go to the sponsoring agency with your concerns, you need to clearly define the problem so that you can also offer some feasible solutions. What is the real problem in this situation?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

After it is determined that there is a problem, it is important to clearly and accurately identify what the problem is. This will ensure that efforts are directed at solving the real problem, not just eliminating its symptoms. Problem identification requires careful analysis of the problem and its major causes. This step, together with Step 1 (recognizing that there is a problem), is the most important in the entire problem-solving process. As much as 50 percent of your time and energy should be used to complete these steps successfully.

The process of identifying the problem is mostly a rational one, although some intuitive thinking may be involved. As much data as possible should be gathered about the problem and its causes. Answering the questions of **who, what, when, where, why** and **how** is essential to understanding and clarifying the problem. Some key questions to ask include:

Who

- Who says that this is a problem?
- Who caused or is causing the problem?
- Whom does it or will it affect?
- Who has done something about the problem?

What

- What happened or will happen?
- What are the symptoms?
- What are the consequences to others?
- What circumstances surround the occurrence of the problem?
- What is not functioning as desired?

When (can be a point in time or a point in a sequence of events)

- When did it or will it happen?
- When did it first occur?

Where (can be a specific place or a point in a sequence of events)

- Where is the problem occurring?
- Where did it or will it have an impact?

Why "Why" questions always look for the underlying cause. Asking at least five "why" questions increases the chance of finding the actual cause of the problem rather than just the symptoms.

- Why is this a problem?
- Why did it or will it occur?
- Why was nothing done to prevent the problem from occurring?
- Why did no one recognize and do something about the problem sooner?
- Why is a response needed now?

How "How" questions are less focused than the "five W" questions above, but usually concentrate more on the process of the problem or sequence of events. Consequently, they contribute less to identifying the problem and may be a distraction. Nevertheless, some useful examples are:

- How should the process be working?
- How are others dealing with this or similar problems?
- How do you know this is a problem; what supporting information do you have?

This second step of problem identification also involves establishing the objectives of the problem-solving process and determining what evidence that the problem has been solved will be accepted. The final questions to be answered in this step are:

- How will you know the problem is solved?
- What does the desired state look like?
- What data will you need to answer these questions?

The outcome is a set of decision criteria for evaluating the various options generated in the next step.

Techniques for Identifying the Problem

Talking to others. Share ideas about identifying the problem with someone else, who then reacts to them and shares her/his own ideas. Then discuss and defend your ideas until agreement is reached. This technique is an example of the old saying, "Two heads are better than one."

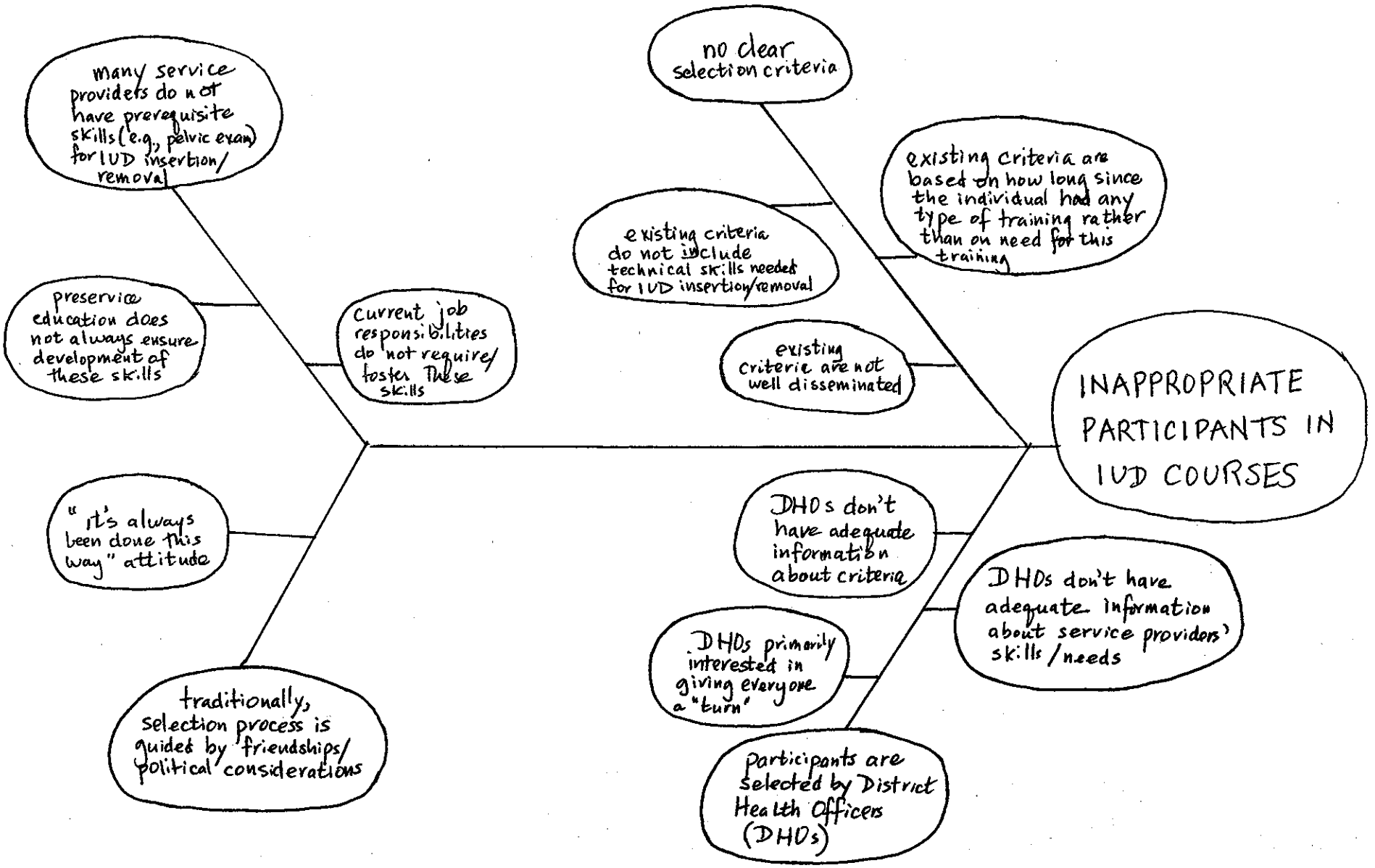
Consensus building. This is an expanded version of "talking to others." There are several methods for arriving at consensus. Some groups are able to arrive at consensus simply by discussing the problem until everyone agrees. Other groups may use a voting process.

Fishbone diagram. The primary purpose of this exercise is to identify and list all possible causes of the problem (see **Figure 3-1**).The basic steps in the process are as follows:

1. Write down the problem and enclose it in a circle on the right side of the paper.
2. Draw a straight, horizontal line to the left; this is the "backbone" of the fish.
3. Draw stems at a 45 degree angle from the backbone.
4. Brainstorm all the causes of the problem and place them at the end of each of the stems.
5. Draw additional stems and branches as necessary, to break down the causes further.
6. List more complicated causes at the tail of the fish and less complicated ones at the head of the fish.

When the diagram is complete, the individual or group can analyze the stems and branches to determine the real problem or problems that need to be solved. When the fishbone diagram is first used, it is best to begin with small, specific problems. After the process is learned, larger, more complex problems can be diagramed effectively.

Figure 3-1. Fishbone Diagram



The fishbone diagram is useful for identifying problems for several reasons:

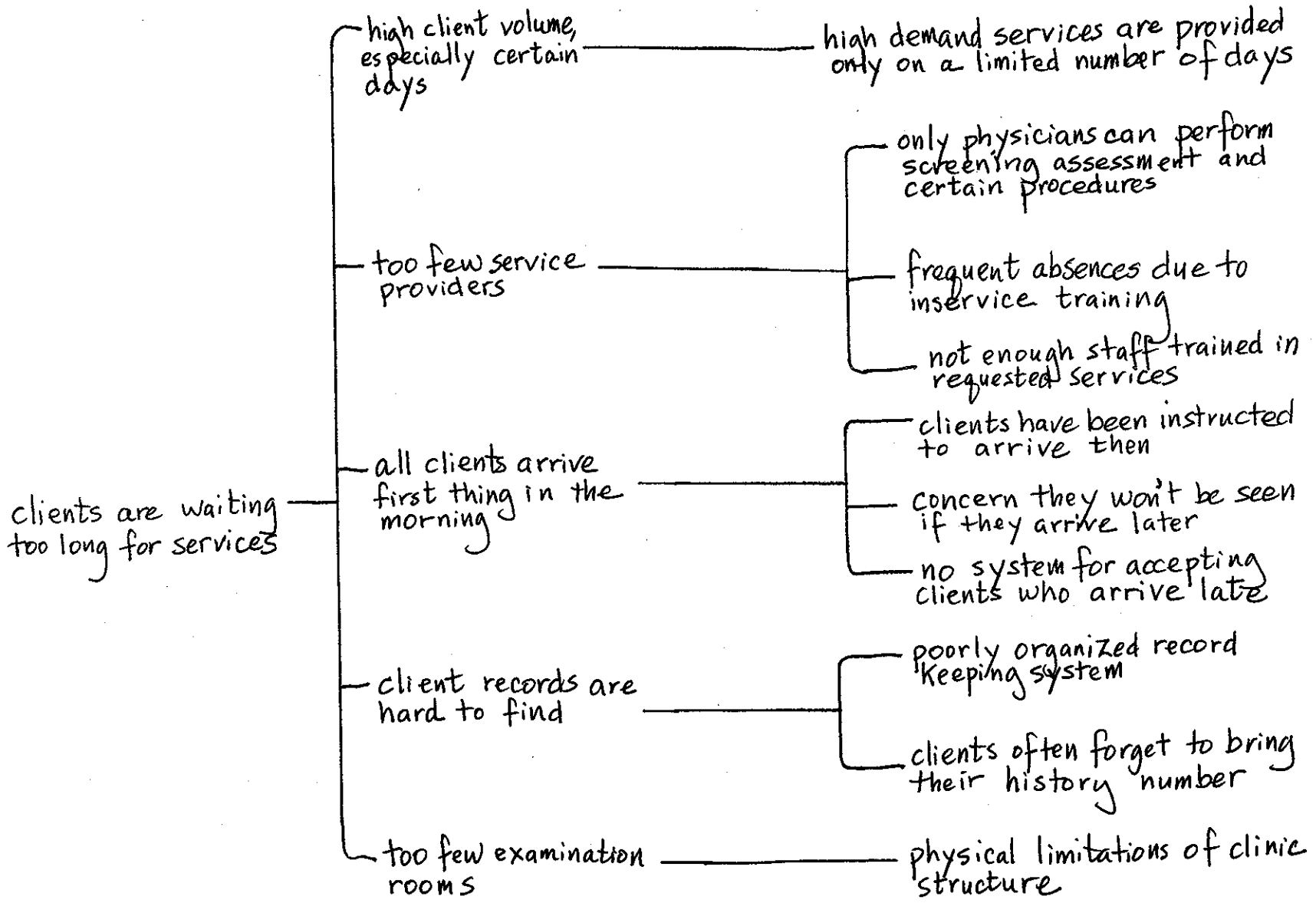
- It encourages study of all parts of a problem before making a decision.
- It helps show the relationships among causes and the relative importance of each.
- By focusing on the problem, it helps start the creative process.
- It helps start a logical sequence for solving a problem.
- It helps in seeing the total problem as opposed to focusing on a narrow part of it.
- It offers a way to reduce the scope of the problem and solve the less complex issues involved in the problem rather than the more complex ones.
- It helps keep the focus on the real problem rather than on unrelated issues.

Why-Why diagram. This technique is used to identify the cause(s) of a problem in a systematic way (see **Figure 3-2**). It is similar to the fishbone diagram, but it has no backbone. This diagram looks more like a decision tree or flowchart. To create a why-why diagram:

1. State the problem on the left side of the paper.
2. To the right of the problem, list the causes of the problem that were identified by asking the question "Why?"
3. For each of the causes, again ask the question "Why?" and list the responses to the right of the first list.
4. Continue this process until a sufficient level of detail has been achieved.

The why-why diagram is useful for the same reasons as the fishbone diagram, but it may help in exploring more possible causes and relating them to the overall problem, rather than focusing on a single cause. Consequently, it may lead to a more thorough analysis than the fishbone. Nevertheless, both are effective techniques for problem solving, and you should use whichever is easier for you.

Figure 3-2. Why-Why Diagram



Problem Statement

A problem statement is a brief (two to three sentences), clear, to-the-point identification of the specific problem to be addressed. The key rationale for why this problem should be solved is also included. Examples of problem statements are presented in the Situation Responses at the end of the chapter.

At the end of the problem identification stage, you should have identified the problem or problems that need attention and be able to make a more accurate problem statement than you might have otherwise. Generally, the more specifically the problem can be stated, the more easily it can be solved.

Usually, a problem changes a great deal from the beginning to the end of this step. Often the issue that is first thought to be the problem is very different from the final problem that is defined. As data are gathered, it is common for the issue to change. The issues or conditions that cause us to think that there is a problem are like symptoms of a disease. Treating the symptom brings temporary relief, but eventually the underlying disease emerges again.

STEP 3: GENERATE ALTERNATIVE SOLUTIONS

Situation 3A: You have identified the problem—decontamination is not being performed—and analyzed the possible causes. It is now clear that an underlying cause is the lack of enough available chlorine for decontamination. What is the next step in solving this problem?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 3B: You know that the sponsoring agency wants to have competent healthcare providers as a result of this training. You also know that a 5-day course will not produce that result. What must you do next?

Write your response on a piece of paper and then compare your response with the one at the end of this chapter.

Generating alternative solutions to a problem involves cataloguing all of the known options (a rational or left brain act) and thinking of additional options (an intuitive or right brain act). This step requires the greatest level of creativity during the problem-solving process.

The purpose of generating alternatives is to ensure that there are enough potential solutions when you are ready to choose a solution (**Step 4**). At

this stage, it is more important to focus on the **quantity** rather than the **quality** of possible solutions. Do not be afraid to brainstorm new ideas; learn to trust your right brain responses. There are always facts behind your intuitive reactions, although they may not be easily recognizable. Examples of individual and group techniques for generating alternative solutions are described below.

Individual Techniques for Generating Alternatives

- **Analysis of past solutions**. A variety of sources, such as technical reports and books, can provide information on how other organizations with similar problems have solved them. Their solutions may not be exactly what is needed, but they can be adapted to fit existing circumstances.

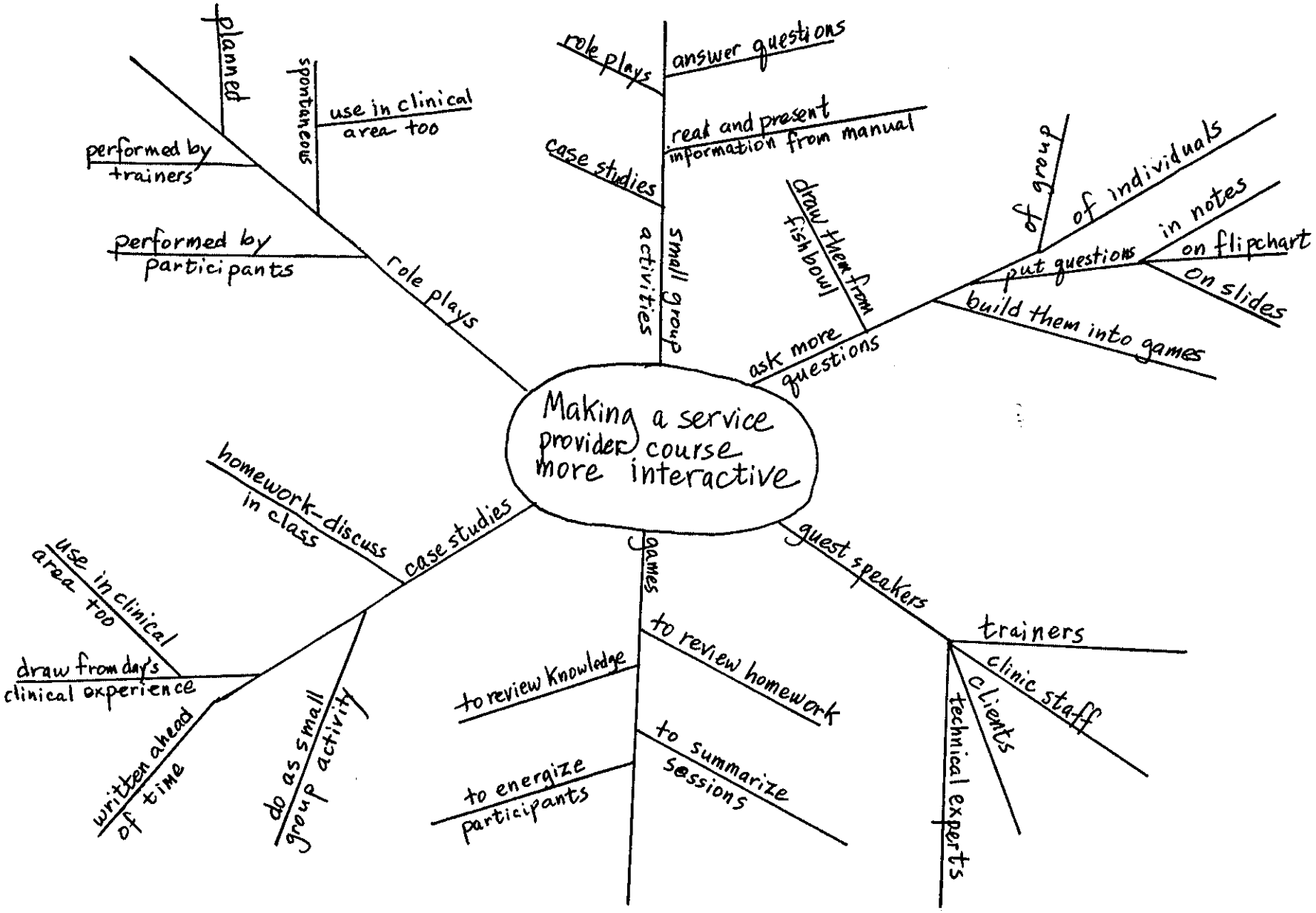
- **Fresh eyes**. Bring in someone from the outside who does not know anything about the problem. The outsider may be able to see new aspects of the problem and provide new ideas for solving it.

- **Mind mapping**. Mind mapping is an individual brainstorming process aimed at generating as many ideas as possible without worrying about their quality (see **Figure 3-3**). Record whatever comes to mind. To give some order to these ideas, begin by writing the problem in the center of a piece of paper and drawing a circle around it. Then identify the major components of the problem by brainstorming, and write them on lines drawn outward from the circle like spokes of a wheel. As brainstorming about each of these "spokes" continues and becomes more detailed, draw branches on them to record these ideas. This brainstorming can be done very systematically from the center outward, one spoke at a time, or jump from place to place as ideas develop.

  You can add other visual cues, such as different colors for the major spokes, circling words that appear more than once, and so on. When it is finished, study the mind map for ideas and terms that appear more than once and for relationships between various spokes and branches. These, in turn, may suggest certain solutions.

  Mind mapping is good for generating new ideas and also helps to develop intuitive capacity. About half of the people who use this technique find it useful. Others may not be comfortable using it because they prefer more structure and cannot be as spontaneous as the technique requires.

Figure 3-3. Mind Mapping



K3

- **Sleeping on it**. You may have had the experience of being very concerned about a problem. Despite thinking about it almost constantly, no solutions come to mind. Finally, you give up and go to bed, only to awaken in the morning thinking of more ideas! This happens because the left (rational) side of the brain goes to sleep before the right (intuitive) side, and the subconscious continues to think about the problem while you sleep. Rather than waiting for this to happen by chance, you can actively use this technique in the following ways:

  - Concentrate on the problem just before going to sleep.
  - If you awaken with a solution or other ideas, write them down on paper kept close to the bed.
  - Upon awakening, think about any dreams you had to see if they suggest solutions to the problem.

- **Visualization**. Because the mind seems to react more creatively to pictures than words, it may be helpful to visualize the problem and possible solutions. It is important to look for as much detail as possible in the "pictures" so as to understand the problem as completely as possible and identify all possible solutions. Visualization can be used with other techniques.

- **What if?** You should ask, "What if 'something' happens; what would be the consequences?" Each of the "somethings" that could happen should be one of the possible solutions that have been identified, so that their consequences can be compared.

Group Techniques for Generating Alternatives

Research and experience have shown that groups perform better than individuals in generating alternative solutions to a problem. Having the same group that generated the alternatives make the decision about which of the solutions to implement (**Step 4**) has also proven to be more effective than having an individual choose the solution. The advantages of using a group for **Steps 3** and **4** are:

- The shared knowledge and experience of group members will broaden the search and generate a wider variety of alternative solutions. Hearing the ideas of others, especially if they are very different from your own, and having the support of a group can stimulate a great deal of creativity. The group can then apply this expanded knowledge and experience to choosing the best solution to implement.

- Group participation leads to better understanding of how and why a decision was made. Consequently, those who must implement the solution or will be affected by it will accept it more readily if they

have been involved in both generating possible solutions and choosing the most appropriate one for implementation.

- In every group, some members are willing to take more risks, and perhaps fail more often, while other members prefer to avoid risks, which may limit their creativity. While they are generating solutions, their perspectives will add to the scope of possible solutions. Then, by working together in choosing a solution to implement, these two groups move toward a common middle ground about how much risk they are willing to take in the implementation stage. In most cases, a less risky solution that is more likely to succeed, but that is also innovative and new, will be chosen.

- The collective judgment of a group when making a decision is usually better than that of a single individual.

In most situations, the advantages of using groups for generating alternatives outweigh the disadvantages. Nevertheless, it is important to consider the following limitations:

- In interactive groups, there is pressure to conform. This pressure may negatively influence both the identification of **all** possible solutions as well as the decision about which solution to implement.

- One person may dominate the group so that this individual's opinion is accepted as the group's opinion. Again, this will have an impact on both generating solutions and selecting an alternative.

- Groups usually require more time for generating alternatives and making a decision than do individuals. Spending too much time coming to consensus may work against the advantages of a good decision.

- Although the shared knowledge and experience of the group members generally lead to better decisions, the group usually does not make better decisions than an individual who is an expert or has special knowledge and skills.

- Although groups generally do not make highly risky decisions, the support and encouragement group members give one another, along with a sense of camaraderie and shared responsibility, may sometimes lead them to take a chance and make a riskier decision than they should.

The following techniques will assist groups to effectively generate alternative solutions (**Step 3**):

- **Brainstorming**. Brainstorming is one of the most widely used and effective group techniques. The size of the group should be from six to twelve members. To generate enough ideas, there must be at least six members. If the group is more than twelve, too much information is generated, making it difficult for the group to absorb the ideas. There are four basic rules for brainstorming:

  - No judgments are made about any suggestion.
  - All ideas, even odd or impractical ones, are welcome.
  - Quantity of ideas is a major objective, because it leads to quality.
  - Ideas may be combined, refined and built upon each other.

  There should be a facilitator for the group who states the problem for the group as well as any other facts or issues to be considered. This person recognizes contributors, stimulates new ideas, maintains the group's focus and follows the four rules of brainstorming. A secretary or recorder for the group is also needed to write each idea on a visible surface (e.g., flipchart, chalkboard, whiteboard, overhead transparency) in front of the group. Each brainstorming session should last no longer than 30 to 40 minutes because the interaction is very intense. It may be shorter if the problem is smaller.

- **Alternative brainstorming method.** Members of the group warm up by writing down all of their ideas. This activity should last about 15 minutes. Each person then reads her/his ideas aloud. Members are encouraged to write new ideas that they think of as they listen to one another's lists. For the next hour or so, the members explain their ideas in detail to the group, while the leader records the ideas on a flipchart. In recording the discussion, the leader should try to capture how the ideas relate to the problem and to each other. The leader may choose to draw an idea map, which is similar to the mind map used by an individual, in that it visually shows the ideas generated and how they are interrelated.

- **Brainwriting**. This is a written form of brainstorming. The group members sit in a circle and write their ideas for solving a problem. After a specified period of time, members pass their ideas to the next person in the circle who then reads the ideas, and either adds new ideas or builds on existing ones. The papers are again passed to the next person to be read and have ideas added; this should happen at least three times. At the end, all of the ideas are read aloud or written on a board or flipchart. The main advantage of this method is that it prevents the leader from dominating the group, but it may also decrease the spontaneity in the group.

- **Brainwriting pool**. This technique is similar to brainwriting. The group sits in a circle. Each member of the group writes her/his ideas on a piece of paper. When a person has written at least four items, s/he passes the paper into the center of the group and takes someone else's paper from the center. S/he then reads the paper and builds on the ideas that are already written on it.

- **Nominal group technique**. The nominal group technique, which encompasses both Steps 3 and 4, can be used to minimize the impact of a dominant person on the group's process of generating ideas. It limits an individual's input to brief explanations and uses a secret ballot to choose among the brainstormed ideas. The group must agree that their decision is binding.

  For **Step 3 (Generate Alternative Solutions)**, group members are given a specified amount of time to write down their solutions to the problem. Then the leader asks each person for an idea, which is recorded in front of the group, and continues until everyone has given all of their ideas. This process emphasizes the equality of ideas and at the same time depersonalizes them. After all of the ideas are written, the leader asks if any ideas need clarification. If so, the presenter of the idea is given 30 to 60 seconds to explain it. As the group moves into Step 4 (Choose Among the Alternative Solutions), members are asked to write down their top five choices in order of rank. These scores are tabulated and shared with the group. There is usually another round of voting in which members rank in order of priority their top three choices. After tabulating these scores, the top choice of the group is the solution selected for implementation.

STEP 4: CHOOSE AMONG THE ALTERNATIVE SOLUTIONS

Situation 4A: You and your colleagues devised a list of all possible solutions to the problem of not having enough chlorine for decontamination. These include:

1. Petition the MOH to supply the chlorine until the District's system is functioning.
2. As part of decentralization, each clinic now has a limited amount of funds for purchasing special equipment and supplies. Buy chlorine with these clinic funds.
3. Use something other than chlorine for decontamination.
4. Begin charging clients for services and use the money to buy chlorine.
5. Ask clients to buy chlorine bleach, just as they buy many of their medications and dressing materials.
6. Do not worry about the chlorine and decontamination, but be sure that the staff who clean instruments are very careful and wear heavy rubber gloves.
7. Ignore the problem; if the MOH does not supply enough chlorine, the clinic cannot be expected to comply with the new policies.

Given this information, what is your next step?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 4B: You now have a list of possible solutions to share with the sponsoring agency. How will you decide which one to choose?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

After a list of all the potential solutions to a problem is developed, the next step is deciding which is the best one to put into action. This decision-making should be based upon a systematic evaluation of alternatives compared to the criteria developed earlier in the problem identification step. Screening of ideas should take place on two levels. First, the ideas should be judged for their compatibility with organizational objectives and constraints. Second, the possible outcomes and impact of each of the alternatives must be considered, particularly the obstacles and opportunities that may arise when changes are implemented. If potential pitfalls are identified before they occur, implementation of an unworkable solution that creates more problems than it actually solves may be avoided. Although this step is primarily rational, skilled problem solvers also rely on intuition, especially when dealing with a very complex problem.

Questions that will help in the evaluation of the various alternatives include:

- How practical is the idea?
- Is it realistic?
- How cost-effective is it?
- Can it be easily implemented by a limited number of individuals, or does it require that large numbers of other people be convinced that it is a good idea? Will they be easy to convince?
- Is the idea consistent with the directions already undertaken by the organization?

STEP 5: IMPLEMENT THE CHOSEN SOLUTION

Situation 5A: After careful analysis of each solution that the staff generated, the decision is made to speak with the clinic supervisor and get permission to purchase chlorine with the clinic's funds. How do you implement this solution to the problem?

Write your response on a piece of paper and then compare your response to the one found at the end of this chapter.

Situation 5B: The decision reached in collaboration with the sponsoring agency is to have a 5-day workshop that focuses on knowledge transfer and skill development with models and role plays only. The participants will be brought to a second course in 1 month to complete skill development with clinical practice and assessment of competency. How do you implement this solution?

Write your response on a piece of paper and then compare your response to the one found at the end of this chapter.

Once the solution to a problem is chosen, it is then possible to develop a plan for implementing it. Remember: no problem is solved until some action is taken. The following questions have to be answered:

- What resources are needed?
- Who else within the organization needs to approve the solution to the problem, and what will it take to win their approval?
- What has to happen in order to implement the solution; what are the steps in implementation?

- Who is going to be involved, and what will they do?
- When will the various phases of implementation take place?

Implementation requires constant attention. It will be vital to monitor the details of implementation and watch for potential obstacles and ways to overcome them. It is helpful to set specific goals and reasonable deadlines, in order to have some measure by which to monitor progress. As implementation moves forward, some adjustments may be needed in the plan. You hope that these adjustments are minor and can be made quickly. Sometimes, however, an important factor may have been missed earlier in the problem-solving process or the situation may have changed significantly. Then it may be necessary to return to a whole new round of problem solving. It is important to be able to recognize weaknesses in the solution that was chosen.

STEP 6: EVALUATE THE SOLUTION

Situation 6A: The clinic has now been using chlorine solution for decontamination of instruments for 2 months. Now what do you do?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 6B: You have completed both courses for this group of participants. Now what do you need to do?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

This final step—evaluation—is often overlooked. Because the earlier steps in the problem-solving process have been completed, it is assumed that the solution chosen and implemented will eliminate the problem. To be certain of that, however, there must be an evaluation to determine the extent to which the actions taken have actually solved the problem. The findings from the evaluation go back into the ongoing monitoring and gathering of information about the organizational environment. They may lead to new rounds of problem solving—either in the same area because the solution did not resolve the problem, or in different areas by pointing out other situations that require problem-solving attention.

SUMMARY

This chapter describes a six-step approach to problem solving that can be used in a wide variety of situations. The six steps are:

- Recognize that there is a problem.
- Identify the problem.
- Generate alternative solutions.
- Choose among the alternative solutions.
- Implement the chosen solution.
- Evaluate the solution.

Creativity is key to successful problem solving, particularly when identifying the problem and generating alternative solutions. A number of techniques are suggested that can be used by individuals and groups to enhance their natural creativity and help them use it more effectively.

SITUATION RESPONSES

Introductory Situation: What to Order for Dinner?

To begin, you would probably study the menu carefully and review all of your options. Before making your choice, you might ask the server to describe some of the dishes so that you would have a better understanding of what they contain and how they are prepared. You could look at what others around you are eating in order to obtain more information about your options, and perhaps even ask their opinion of their meal. You could also ask for recommendations from the restaurant staff.

After you have reviewed all of your options and gathered additional information, it is time to begin looking at the advantages and disadvantages of each option. You will probably use several criteria for assessing each option. Your personal food preferences will definitely help you decide. If you do not like chicken, then you will immediately eliminate all chicken dishes from the list. Price may also be another important consideration, as may preparation time. Eventually you will narrow down your list of options to a few that satisfy all of your criteria, choose from among them, place your order and have a fantastic meal! After the meal, you will make some sort of evaluation of the food, and store the information away in your mind for the next time you come to the restaurant and have to go through the problem-solving process again.

Situation 1A/ IP Step 1: Recognize That There Is a Problem

The first thing you need to do is determine if a problem exists. Start by observing current IP practices, comparing them to the new information you were given at the workshop. You may also have been given some tools, such as checklists, which will help you to identify where the existing practices differ from the standards or fail to meet the objectives set by the MOH. You could also do some inverse brainstorming with the other healthcare providers, if they have adequate knowledge of IP, to identify potential problems in current IP practices.

Once specific IP problems are identified—and it is very possible that more than one problem exists—then the remaining steps in the problem-solving process should be applied to each individual problem.

Situation 2A/ IP Step 2: Identify the Problem

The problem identified in Step 1 is that decontamination of instruments is not being performed. You must now analyze the situation to clearly define the real problem. Remember that often what you think is the problem when you first look at a situation is really a symptom of a more fundamental, underlying problem. Fixing the symptom usually does not fix the problem, but instead leads to the development of new symptoms.

You need to ask key questions about **who, what, when, where** and **why**.

Who says that this is a problem? The MOH.

Whom does it affect? The staff who clean the instruments are most closely affected, but if they become infected, their family and friends may also be at risk of infection.

What is not functioning as desired? The clinic is not practicing decontamination of instruments before cleaning them.

What are the consequences to others? Potential for transmission of HIV and hepatitis B virus to staff who clean the instruments.

What circumstances surround the occurrence of the problem? Decontamination is a relatively new IP practice that was instituted only 1 year ago. Only a few staff were trained in how to decontaminate instruments effectively and why it is important. They were supposed to teach others in the clinic, but did not. In addition, the country is undergoing decentralization of services from the national to the district level; the District is now responsible for supplying chlorine for decontamination solution. Unfortunately, reliable procurement systems are still being established, and it will be another 2–3 months before there is a regular supply of chlorine to your clinic.

Where is the problem occurring? Throughout the clinic.

Why did the problem occur? A why-why diagram indicates that there are two causes: not all clinic staff are trained in the importance of and procedure for decontamination, and there is an insufficient supply of chlorine bleach for making the decontamination solution.

In other words, there really are two causes, or problems, related to the lack of decontamination. You recognize that the first problem to be addressed is the lack of chlorine bleach. Once that problem is solved, training the staff will be necessary to ensure the correct use of chlorine for decontamination.

You will know that the problem is solved when there are adequate amounts of correctly prepared decontamination solution routinely available in the clinic.

PROBLEM STATEMENT: There is an inadequate supply of chlorine bleach for making decontamination solution; consequently, that step of instrument processing is not being performed. This places staff who are responsible for cleaning instruments at risk for transmission of HIV and hepatitis B virus.

Situation 3A/ IP Step 3: Generate Alternative Solutions

Using a number of the techniques described in this chapter, you work with other staff members to generate as many possible solutions to the problem of insufficient chlorine bleach.

The alternatives you come up with are:

1. Petition the MOH to supply the chlorine until the District's system is functioning.

2. As part of decentralization, each clinic now has a limited amount of funds for purchasing special equipment and supplies. Buy chlorine with these clinic funds.

3. Use something other than chlorine for decontamination.

4. Begin charging clients for services and use the money to buy chlorine.

5. Ask clients to buy chlorine bleach, just as they have to buy many of their medications and dressing materials.

6. Do not worry about the chlorine and decontamination, but be sure that the staff who clean instruments are very careful and wear heavy rubber gloves.

7. Ignore the problem; if the MOH does not supply enough chlorine, the clinic cannot be expected to comply with the new policies.

Situation 4A/ IP Step 4: Choose Among the Alternative Solutions

You and your fellow staff members must now decide which of the alternative solutions you will implement. To make this decision, you should consider the strengths and limitations of each alternative.

1. **Petition the MOH to supply the chlorine until the District's system is functioning.** At the workshop, the MOH announced that all service delivery sites will be expected to be in accordance with the new policies. The MOH, however, has no funding or other mechanism to assist these sites to comply with those policies; compliance is now the responsibility of the District.

2. **As part of decentralization, each clinic now has a limited amount of funds for purchasing special equipment and supplies. Buy chlorine with these clinic funds.** Although there are many demands for these funds, given the importance of decontamination and the very limited time for which it will be necessary to buy chlorine, it will be possible to convince the clinic supervisor to authorize their use to purchase chlorine.

3. **Use something other than chlorine for decontamination.** The clinic has a very limited amount of Savlon in stock, which you know can be used for decontamination if prepared in the correct concentration. It is expensive, and it is unclear if the clinic will be able to get more Savlon when current supplies run out. Using one decontamination solution now and switching to another later may be confusing to the staff.

4. **Begin charging clients for services and use the money to buy chlorine.** MOH policy prohibits charging clients for services, except in extraordinary circumstances.

5. **Ask clients to buy chlorine bleach, just as they have to buy many of their medications and dressing materials.** Many clients have complained about the need to buy all of their supplies, and a number of them have stopped coming to the clinic because of it. Requiring clients to purchase yet another item may turn even more of them away. In fact, it is more important that clients buy the items needed for their own care rather than for the clinic.

6. **Do not worry about the chlorine and decontamination, but be sure that the staff who clean instruments are very careful and wear heavy rubber gloves.** Six pairs of heavy rubber utility gloves are available in the clinic, and should be worn regardless of whether or not decontamination is performed. Although the gloves will provide some protection to the staff while cleaning instruments, the staff will still be at risk when handling sharp or pointed instruments.

7. **Ignore the problem; if the MOH does not supply enough chlorine, the clinic cannot be expected to comply with the new policies.** Unfortunately, the MOH has specifically stated that despite the limited availability of chlorine, all sites will still be held responsible for complying with the new policies. Decontamination, regardless of the MOH policies, is an important step to protect staff from transmission of disease and should be put into practice as soon as possible.

Given the need to immediately begin decontaminating used instruments, both to protect staff and comply with MOH policies, you decide to speak with the clinic supervisor and get permission to purchase chlorine with the clinic's funds.

Situation 5A/ IP Step 5: Implement the Chosen Solution

The alternative chosen was to ask the clinic supervisor for permission to use the clinic's funds to purchase chlorine.

To implement this alternative effectively it will be necessary to:

- Clearly present to the clinic supervisor the rationale for using clinic funds to purchase chlorine. This would include the purpose of decontamination; the risks to staff, clients and the community of not performing decontamination; a plan for training staff in the preparation and use of chlorine solution; and estimated costs until the District can regularly supply chlorine.

- After receiving permission, make the first purchase of chlorine and begin implementing the use of chlorine solution for decontamination.

- Train all of the clinic staff in the importance of decontamination and the appropriate preparation and use of chlorine for this purpose.

- Train staff to wear utility gloves when cleaning used instruments that have been decontaminated, as another means of protecting themselves.

- Appoint one person, on a rotating basis, to prepare the solution each day or as necessary, beginning as soon as training is completed.

- Submit a request immediately to the District for chlorine bleach so that as soon as it becomes available, an adequate supply will be sent to the clinic.

- Monitor the implementation. Is the solution being prepared correctly? Is it being changed at the appropriate intervals? Are gloves being used? Provide feedback and coaching to staff to maintain and improve their performance.

Situation 6A/ IP Step 6: Evaluate the Solution

Initially the staff was skeptical about the need for decontamination, but training has convinced them of its importance. They learned to make decontamination solution with chlorine without difficulty, but you find that they still occasionally over-dilute the solution because of concern about the cost and ongoing use of clinic funds which are also needed for other purposes. For the same reason, they also hesitate at times to change the solution when it needs to be changed.

Most of the staff who clean instruments have consistently used gloves. One person, however, does not like wearing gloves because they are hot and cumbersome, and consequently goes without gloves when she is cleaning instruments if she thinks she is not being observed.

So far, none of the staff members has become infected.

The District has just received its stock of chlorine and will begin shipping it to clinics within the next month. Your clinic's request has been in the District for several months now and should be one of the first requests filled.

Based on this evaluation, refresher training for the staff would be a good idea. Now that there will be a regular supply of chlorine from the District, emphasize again the importance of the correct dilution and changing the solution as needed. Be sure to let the staff know how well they are doing and encourage them to continue the good work.

Special attention should be given to the staff member who will not wear gloves, to reinforce the reason for wearing them.

Situation 1B/ Training Step 1: Recognize That There Is a Problem

Yes, it is a problem. This close to the start of the course (1 week before it begins), all the logistic arrangements have been made for a 10-day activity, including letters of invitation to the participants indicating a 2-week course. More important, from your previous training experience you know that it is often difficult for participants to achieve competency in 10 days. Shortening the course to 5 days will only make it more difficult, if not impossible. The course has been carefully designed, with the first 5 days spent in knowledge transfer and skills practice with models and role plays. It is only in the second week that participants are ready for clinical practice with clients, which is required to achieve competency. To allow them to begin working with clients too soon would be dangerous.

Situation 2B/ Training Step 2: Identify the Problem

You need to start by asking some key questions:

Who says that this is a problem? You, the experienced trainer, and perhaps ultimately the service delivery system that needs proficient healthcare providers.

Whom does it affect? It affects you, the trainer, in terms of logistic preparations and your ability to help the participants achieve competency in IUD insertion and removal. The participants themselves will certainly be affected as they strive to achieve competency in a very limited time. It will also affect the clients with whom these participants work in the clinic, as the participants may not be as confident of their skills with the shortened practice period.

What is not functioning as desired? The training will not be able to achieve its objectives, that is, it will not produce healthcare providers competent in providing IUD services.

What are the consequences to others? The future IUD clients of these healthcare providers may not receive safe and efficient IUD services.

Why did the problem occur? The problem arose out of a very legitimate concern of the sponsoring agency that if healthcare providers are away from their work sites for extended periods of time, services to their clients are disrupted. At the same time, it may be that the sponsoring agency does not fully understand competency-based training and the amount of time required to achieve the course objectives.

As an experienced trainer, you realize that you can deal with the logistic changes required by shortening the course, although it will be challenging! You decide to focus on the problem of meeting the course objectives and developing competent healthcare providers.

You will know that this problem is solved when there is a training plan that will provide course participants with adequate opportunity to develop competency in provision of IUD services.

PROBLEM STATEMENT: Reducing the training time to 5 days will not allow for development of skill competency with clients in IUD insertion and removal, which will compromise the quality of care provided by the participants in the future.

Situation 3B/ Training Step 3: Generate Alternative Solutions

Using mind mapping, you develop a list of potential solutions to the problem of achieving competency while reducing course length. These include:

1. Cancel the course completely.

2. Compromise on a 7-day course and do not change the objectives, assuming some of the participants will achieve competency with clients.

3. Reduce the course to 5 days and change the course objectives so that competency with models is sufficient. Competency with clients does not have to be achieved.

4. Limit this 5-day course to knowledge transfer and skill development with models and role plays only, and plan a second 5-day course for developing skill competency with clients.

5. Limit this 5-day course to knowledge transfer and skill development with models and role plays, and plan one-on-one followup with each participant in her/his work site to ensure development of competency with clients.

6. Reduce the course to 5 days, but do not change the objectives. Just do the best you can to get all of the participants as close to competency as possible.

Situation 4B/ Training Step 4: Choose Among the Alternative Solutions

You must first explain to the sponsoring agency why reducing the course to 5 days is a problem. Then you need to discuss each possible solution with the agency to decide how to solve this problem. You will have to present the strengths and limitations of each as you, the trainer, see them, and also consider the agency's point of view.

1. **Cancel the course completely.** This may be the best alternative if no agreement can be reached on another option, but it should not be the first choice until all other appropriate options have been carefully considered. Although it will not develop the needed healthcare providers, it will at least prevent developing poorly trained healthcare providers who may be unsafe practitioners, and it will save the sponsoring agency's funds and resources.

2. **Compromise on a 7-day course and do not change the objectives, assuming some of the participants will achieve competency with clients.** This option will have the participants away from their work sites for less time than originally planned. It will undoubtedly result in some of them achieving competency with clients, thereby meeting part of the service delivery system's needs. Clients' safety during clinical practice may be compromised, however, as participants are pushed to move as rapidly as possible in attempting to achieve competency. And there is the question of what the remaining participants will do with the skills they did learn. Will they go ahead and try to use them—at great risk to their clients—in the workplace? The sponsoring agency will have mixed results for its investment.

3. **Reduce the course to 5 days and change the course objectives so that competency with models is sufficient. Competency with clients does not have to be achieved.** This option will ensure the safety of the clients with whom the participants would work during clinical practice and reduce the pressure on you and the participants alike. It will not, however, contribute to the service delivery system's need for proficient IUD service providers, and the sponsoring agency will have used valuable resources. These participants will have been away from their work sites for 1 week, but will not have new skills to use safely upon their return.

4. **Limit this 5-day course to knowledge transfer and skill development with models and role plays only, and plan a second 5-day course for developing skill competency with clients.** This option has significant cost and logistic implications for the sponsoring agency. It also has scheduling implications for you. And

the healthcare providers will have to be away from their work sites for another 5-day period. It should, however, produce the competent IUD service providers needed by the service delivery system.

5. **Limit this 5-day course to knowledge transfer and skill development with models and role plays, and plan one-on-one followup with each participant in her/his work site to ensure development of competency with clients.** This option will result in all participants achieving competency with clients, although over a much longer period of time, especially if the sites have a limited number of IUD clients. It will also require a considerable investment of your time (or the involvement of a group of trainers). This solution certainly has cost implications for the sponsoring agency. It would have the strong advantage of providing very personalized coaching for each participant that could take into consideration the specifics of each individual work site, and permit adequate problem solving that would ensure the transfer of training to routine service delivery.

6. **Reduce the course to 5 days, but do not change the objectives. Just do the best you can to get all of the participants as close to competency as possible.** While this option seems like the easiest thing to do, it will have the worst results overall. The participants probably will not achieve competency, both trainer and participants will experience a great deal of stress, the clients with whom the participants work may be placed in uncomfortable or unsafe situations, the service delivery system will not get what it needs, and the sponsoring agency will have spent its money and resources with very little to show for it.

Together, the decision is made to implement option Number 4. The second course will take place 1 month after the first. The participants will still retain the information and skills from the first course, but will not have to be away from their jobs again too soon.

Situation 5B/ Training Step 5: Implement the Chosen Solution

To effectively implement the chosen solution you need to:

- Make the necessary adjustments in the logistic arrangements. Notify the clinic that you will not be coming, cancel lodging arrangements if appropriate, etc.

- Notify the participants that the course is now only 5 days, but that there will be another 5-day course in 1 month.

- Carefully review the course outline and make any changes that are necessary.

- Make arrangements with the clinic for the second course in 1 month.
- Make other necessary logistic arrangements for the second course.

Situation 6B/ Training Step 6: Evaluate the Solution

At the end of the first course, all participants scored 85 percent or better on the midcourse questionnaire. All had achieved competency on models and were ready to work with clients. There was some confusion among them, however, concerning the need for a second course. Several were concerned that they would not be able to attend and others didn't think it was necessary.

In fact, three individuals did not return for the second course. Of those who did return, all achieved competency and were eager to begin offering IUD services at their work sites.

The sponsoring agency felt that it was an effective use of its resources. It considered that two shorter absences were less disruptive of services than one longer one, so was satisfied in that respect. The solution did solve the problem in this instance, although three healthcare providers did not achieve competency. Its value as a long-term solution, however, would need additional analysis and evaluation.

FOUR

CLINICAL DECISION-MAKING

INTRODUCTION

Clinical decision-making, the systematic process by which clinicians make judgments regarding a client's condition, diagnosis and treatment, is a skill that often is not incorporated well into clinicians' preservice education. Although the knowledge and skills that are needed for effective clinical decision-making may be taught, the systematic process for applying that knowledge and those skills to specific clinical situations often is not adequately addressed. Rather, it is expected that clinicians-in-training will develop decision-making skills simply by observing other clinicians who are more experienced. Similarly, inservice training systems do not foster the development of decision-making skills because it is assumed that these skills have been taught in the preservice setting. And it is especially challenging to teach skills such as decision-making, which require time to develop, in short inservice courses.

Another challenge to teaching clinical decision-making is that until recently the process involved was not clearly understood. It is now known, however, that clinical decision-making follows a process similar to that presented in **Chapter 3** for solving other types of problems—a process that can be clearly described, taught and practiced. Practice, indeed, is critical. For teachers, knowing when to allow learners to make independent decisions is difficult. Teachers must balance client safety and high quality care with learners' need for practice. Nevertheless, learners must be involved in the clinical decision-making process in order to become confident in their ability to make appropriate clinical decisions.

This chapter outlines the key elements and steps in clinical decision-making and discusses how to effectively teach clinical decision-making to learners in pre- and inservice settings.

Chapter Objective

By the end of the chapter, the participant will be able to apply a systematic approach to learning and teaching clinical decision-making.

Enabling Objectives

To achieve the chapter objective, the participant will:

- Describe the process of clinical decision-making
- Describe the steps in the clinical decision-making process
- Describe methodologies for teaching and developing clinical decision-making skills

THE PROCESS OF CLINICAL DECISION-MAKING

When an experienced clinician is asked to describe how s/he makes clinical decisions, such as how a woman with lower abdominal pain is diagnosed as having pelvic inflammatory disease rather than an ectopic pregnancy, s/he may not be able to do so. The clinician may not remember exactly what symptoms clearly made the difference, or be able to explain the reasoning in a way that relates to the textbook approach. For experienced clinicians, decision-making is an intuitive process based on knowledge and experience. Many of the steps necessary to arrive at a decision can be completed rapidly and unconsciously—it will not be apparent to an observer that a logical step-by-step process is being followed.

The process can be compared to driving a car or riding a bicycle. When people are learning these skills, they have to be conscious of each step involved, no matter how small. With practice, however, many of the small steps become actions of which they are no longer consciously aware. The steps are still performed, but are done automatically. When experienced drivers are asked to describe how to drive, they find it hard to provide a comprehensive list of the steps that must be performed.

It is this intuitive nature of clinical decision-making that makes it so difficult to describe and teach. The mental processes involved in making decisions are complex, multifaceted and virtually simultaneous. The ability to make decisions does not depend entirely on the gathering of information but on the ability to organize, interpret and act upon this information. That ability is highly dependent on experience, knowledge and practice. These are, in fact, the most influential factors in decision-making.

Developing Decision-Making Ability

The brain contains two types of memory, each of which has a different function.

- **Long-term memory** is where the vast body of medical knowledge required for clinical decision-making is stored.

- **Short-term memory** is where the experiences needed for clinical decision-making are stored. It serves as the mental "problem-solving space."

  This problem-solving space has a very limited capacity, however, and works slowly when it is full. When this happens, the short-term memory condenses and combines all the experiences it contains, so that it is less full and can function more efficiently. This ongoing process creates space for still more experiences to be added to the short-term memory for use in decision-making.

These condensed experiences, which can no longer be clearly remembered individually, are **intuition**. Intuition lets the clinician "know" what to do even when how it is known is difficult to explain in words. It is the "gut feelings" or hunches that many clinicians experience in their daily practice.

A clinician faced with a situation in which there is some complexity, confusion or doubt, that is, a situation requiring a decision, will do two things:

- **Consider a solution from past experience.** Past experience may not include an exact match for the current situation, in which case the clinician will look for any elements of past experience that match the current situation and may help to clarify aspects of it.

- **Review the fund of current relevant knowledge in search of a solution.** This knowledge will also be used to identify new data that are needed to deal with the situation.

If there is nothing in past experience like this situation, or if the store of current knowledge is inadequate, the confusion cannot be cleared up and the problem is not solved. For this reason, among others, clinicians and teachers must keep their knowledge current and continue to provide clinical services.

In addition to intuition, the clinician also uses a variety of **decision rules**. Decision rules are developed by experts in the field, based on patterns and similarities identified in their pooled experiences and the latest clinical and scientific knowledge. Like intuition, they help organize and condense past experience into a form that is more readily accessible and useful to the clinician. These rules, together with intuition, make it unnecessary for the clinician literally to start over again with each case, and allow her/him to move through the decision-making process more rapidly.

Decision rules can take a variety of forms including clinical checklists (**Table 4-1**), indications and precautions (**Table 4-2**) and algorithms (**Figure 4-1**). More detailed information on the use of algorithms in clinical decision-making is presented later in this chapter. Decision rules help the clinician make decisions effectively and safely. They provide a framework for evaluating a new case or situation that the clinician can follow while amassing her/his own experiences. This makes them particularly useful tools in teaching clinical decision-making. The new clinician tends to follow these decision rules very closely. For an experienced clinician, a decision rule is seen more as a guide that has been refined and made more relevant and personal with use over time.

Table 4-1. Client Assessment Checklist for IUD Services

	YES	NO
Client (or partner) has other sex partners		
Sexually transmitted genital tract infection (GTI) or other STD (e.g., HBV, HIV/AIDS) within the last 3 months		
Pelvic infection (PID) or ectopic pregnancy (within the last 3 months)		
Heavy menstrual bleeding (twice as long or twice as much as normal)[a]		
Prolonged menstrual bleeding (> 8 days)[a]		
Severe menstrual cramping (dysmenorrhea) requiring analgesics and/or bed rest[a]		
Bleeding/spotting between periods or after intercourse		
Symptomatic valvular heart disease[b]		

[a] Does not apply to progestin-releasing IUDs.
[b] Give prophylactic antibiotics if not on long-term antibiotics at the time of IUD insertion.

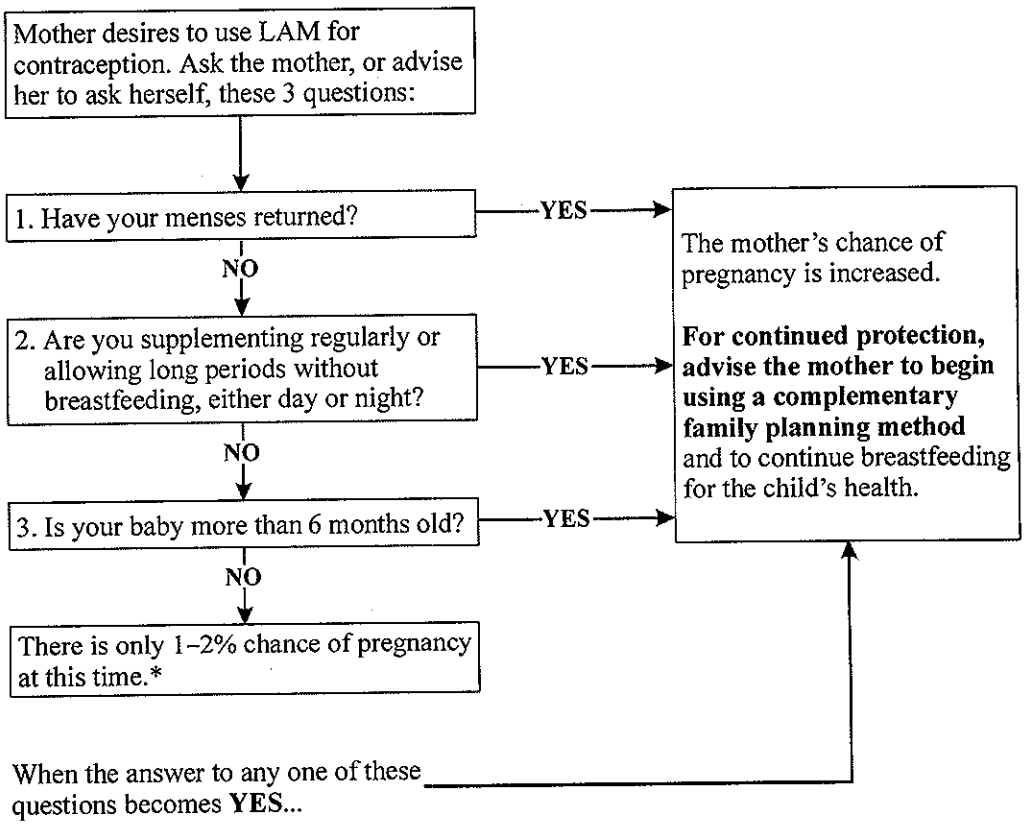
Source: Blumenthal PD and N McIntosh. 1996. *PocketGuide for Family Planning Service Providers 1996–1998*, second edition. JHPIEGO Corporation: Baltimore, Maryland.

Table 4-2. Indications and Precautions for the Use of Combined Oral Contraceptives (COCs)

Combined Oral Contraceptives are appropriate for:	Combined Oral Contraceptives require precaution with the following conditions:
Women of any reproductive age or parity who want highly effective protection against pregnancy	Pregnancy (known or suspected)
Breastfeeding mothers (6 months or more postpartum) or when supplementation of infant's diet begins (if before 6 months)	Breastfeeding mothers less than 6–8 weeks postpartum should **not** use COCs
Postpartum women who are not breastfeeding (may begin after third week postpartum)	Fully breastfeeding mothers 6 weeks to 6 months postpartum should avoid using COCs
Postabortion clients (may begin immediately)	Nonbreastfeeding women less than 3 weeks postpartum should avoid using COCs
Women with anemia	Unexplained vaginal bleeding (only if serious problem suspected)
Women with severe menstrual cramping	Jaundice (symptomatic viral hepatitis, gall bladder disease or cirrhosis)
Women with irregular menstrual cycles	Smoker and age 35 years or older
Women with histories of ectopic pregnancy	Ischemic heart disease or stroke (current or history of)
	Blood clotting disorders (deep vein thrombophlebitis or pulmonary embolus)
	Diabetes (more than 20 years duration; vascular problems, or central nervous system, kidney or visual disease)
	Headaches (migraine)
	High blood pressure (with or without vascular problems)
	Breast cancer
	Liver tumors (adenoma and hepatoma)
	Major surgery with prolonged bed rest
	Taking drugs for epilepsy (phenytoin or barbiturates) or tuberculosis (rifampin)

Adapted from: Blumenthal PD and N McIntosh. 1996. *Pocket Guide for Family Planning Service Providers 1996–1998*, second edition. JHPIEGO Corporation: Baltimore, Maryland.

Figure 4-1. Algorithm for the Lactational Amenorrhea Method



* The mother, however, may choose to use a complementary method *at any time*.

Adapted from: Labbok, Cooney and Coley 1994.

Algorithms in Clinical Decision-Making

Algorithms as decision rules have come into widespread use recently. Their value in guiding the clinical decision-making of both new learners and proficient clinicians is recognized. But algorithms are not a tool that individuals automatically understand how to use. To make the most effective use of algorithms, it is important to understand how algorithms are constructed, what they represent and how their structure and function will change as a clinician gains practical experience. An **algorithm** is a structured approach for solving a problem that graphically shows **all** the possible solutions to the problem and the sequence of steps, many of which involve decisions, followed in reaching each of those solutions. Each sequence of steps leads to a different solution, as determined by the choices, or decisions, made. A **clinical algorithm (Figure 4-1)** creates a picture of a diagnostic reasoning pathway.

An algorithm can provide guidance in very complex situations, such as treating postpartum hemorrhage, as well as less complex situations, such as providing a client with condoms. Algorithms can be developed and used for any situation in which decisions or judgments must be made. The simple algorithm in **Figure 4-1**, for example, will help clinicians assess the appropriateness of the Lactational Amenorrhea Method (LAM) of family planning for a specific woman by considering certain conditions. If the algorithm is appropriately structured and contains the correct information, the clinician, or even the client herself, will be able to make an accurate assessment of the reliability of LAM as a contraceptive method.

This graphic representation of a chain of decisions and events helps clinicians to analyze a problem and act upon this analysis by:

- organizing a clinical problem into sequential events and decisions,
- indicating the order in which decisions and events need to take place and which are dependent on others,
- identifying the strengths and weaknesses in these linkages,
- allowing the various solutions or options and the pathways for arriving at them to be compared visually, and
- reminding the clinician of options that may have been overlooked so that all are considered in dealing with the situation.

It can be used to help make a diagnosis or, more often, to implement a course of treatment (based on the available information) and evaluate whether that treatment has achieved the desired result.

Moving through a clinical algorithm can be compared to traveling down a road. The traveler comes to a fork in the road, a point where a choice must be made. Perhaps the left fork is chosen. While continuing to travel along the road to the left, another fork in the road—another decision—is reached. Because the left road was chosen, the new forks in the road are different from those that would have been encountered had the road to the right been chosen. Sometimes two different paths lead to the same place; the traveler just gets there by a different route. The journey down the road continues until the end or destination has been reached.

With a clinical algorithm, the clinician begins to gather information to guide treatment. Once some significant information has been gathered, a decision point is reached. A decision is made based on what is known, what is wanted or the condition of the client. This leads the clinician further ahead, through additional information gathering and other

decisions, to reaching a final point, where either the client has improved or has not improved, requiring a different course of action.

The Structure of an Algorithm

An algorithm can also be thought of as an upside down tree, with many branches. The situation or set of symptoms in question is the starting point—the trunk of the tree. At the first point where the clinician must make a decision, the trunk begins to branch—each branch is a possible option based on an assessment or decision. Moving out along the branches there are more dividing points, leading to smaller branches and finally the leaves, at the furthest point from the trunk.

The first block in an algorithm presents the situation or, in the case of reproductive health, the client's condition related to a **clinical need, situation or problem**. In **Figure 4-1**, the problem is that a woman needs to know if she is provided adequate contraceptive coverage by LAM in her current situation. Note that there is only one "exit" from the initial problem box.

The exit from the initial problem box leads to a **question** or **decision box**. Within a decision box, a question related to the problem is presented. In many algorithms, there are two choices in response to the question: **Yes** or **No**. The choices are mutually exclusive, meaning only one can be chosen. Assuming that the woman answers the question with "No—her menses have not returned" then the next question is asked, or the next decision is made—whether or not she is supplementing regularly or going long periods between breastfeedings. Again in this example, if the answer is "Yes," the pathway would lead to an **action box**.

In an **action box**, the user is directed to do something based upon the answer(s) to the previous question(s). In this case, the woman needs to begin using a complementary family planning method and continue breastfeeding. The algorithm ends once the actions taken solve the problem, or it is determined that the problem cannot be solved and the client must be referred for additional attention.

The LAM algorithm presents a fairly simple problem that requires very limited resources to solve—questions are asked of the mother only. As the problem to be solved by an algorithm becomes more complex, the amount of branching and level of detail in the algorithm will also increase. In addition, an algorithm for a specific clinical situation can be structured in different ways depending on the level of experience and skill of the user and how it will be used. It may also depend on whether it is used to **teach** clinical decision-making or simply to **remind** clinicians of the clinical decision-making process in a specific

clinical situation. More information on the use of algorithms to teach clinical decision-making is presented later in this chapter.

Terms Used in Clinical Decision-Making

There are various terms used to describe the process that a clinician goes through in reaching a final conclusion about a client's condition. These terms may differ somewhat from country to country or between doctors and nurses, but they define the same process and include:

- **Differential Diagnosis**. When a client presents with a specific clinical sign or symptom, the clinician creates a differential diagnosis, or a list of all the possible explanations for this sign or symptom.[1] The list may be short or long and may include common as well as rare conditions. For example, there are many explanations for a young woman with amenorrhea. Common conditions include pregnancy, lactation or the side effects of contraceptives, while rare conditions might include endocrine system disturbances or genital tract abnormalities. This list is a starting point for understanding the exact pathology underlying the client's presenting clinical sign or symptom and serves as the basis for gathering information through history taking, a directed physical examination or, sometimes, laboratory investigations. By creating a list of differential diagnoses, the clinician helps to ensure that the many possible causes for the client's problem are considered.

- **Hypothesis Testing**. Typically, through a process known as hypothesis testing, a clinician accepts or rejects as quickly as possible the diagnoses that are on the list. The clinician will consider other available information to give more or less priority to a particular diagnosis, and will "rule out" (find unlikely), or "rule in" (find more likely) a given diagnosis because of:

  - other signs or symptoms;
  - laboratory tests;
  - the probability of the diagnosis in this particular age group, ethnic group or gender; or
  - intuition or experience.

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[1] The list of possible diagnoses is called the **differential diagnosis**. The term differential diagnosis, however, also refers to each of the items on the list. Therefore, each list may have many **differential diagnoses**. Thus, we might say, "The differential diagnosis for abdominal pain is very long," but we can also say, "Ectopic pregnancy and pelvic inflammatory disease are possible differential diagnoses for abdominal pain."

Following the above example, you may test the hypothesis that the woman with amenorrhea is pregnant by performing a urine pregnancy test. If the results of this test are negative, pregnancy would be considered very unlikely and would fall low on this differential diagnosis list.

- **Working diagnosis**. After evaluating all of the possibilities on the differential diagnosis list and the available information, including history, physical and laboratory data, the clinician reaches a working diagnosis. This is also known as a provisional or initial diagnosis and, given what is known, is the single best explanation for the client's signs or symptoms. The clinician may continue to gather information at this point or may begin to plan treatment. It is important to realize that sometimes a clinician must choose a working diagnosis without having all of the necessary information. Sometimes the clinician doesn't "know" that this is the correct diagnosis, but "thinks" or "suspects" that it is, based on experience and the limited information available.

  For example, your working diagnosis of an older woman with a pelvic mass may be an ovarian tumor (cancer), but you don't "know" that she has an ovarian tumor until you have a chance to operate and more completely evaluate her condition. By performing an intervention appropriate to your working diagnosis, in this case a laparotomy, you obtain additional information that may lead you to change your original working diagnosis (ovarian cancer). Based on what you have learned, you may choose an alternative working diagnosis (benign ovarian cyst) from your differential diagnosis list.

- **Final diagnosis**. A final diagnosis is reached after more definitive or confirming information becomes available. This may be a pathology specimen in a patient with a tumor, or a blood test in a client with suspected malaria. Or it may be as simple as evidence of a growing uterus in a client who previously presented with 8 weeks of amenorrhea and a suspicion of pregnancy. Making a final diagnosis is useful in trying to understand the process of clinical decision-making or its teaching, but it is not always possible or necessary in order to make a rational treatment plan and take action. For example, in a life-threatening situation or when the tests needed to confirm a working diagnosis are not available, you will need to move forward with treatment based on the working diagnosis alone.

STEPS IN CLINICAL DECISION-MAKING

The steps in clinical decision-making are similar to the steps for problem solving described in **Chapter 3** (see **Table 4-3**).

Table 4-3. Comparison of Problem Solving and Clinical Decision-Making

PROBLEM-SOLVING STEPS	CLINICAL DECISION-MAKING STEPS
Recognize the problem.	Assessment
Identify the problem.	Diagnosis
Generate alternative solutions to the problem. Choose a solution to the problem.	Planning
Implement the chosen solution.	Intervention (treatment)
Evaluate the solution.	Evaluation

There are, however, important differences between problem solving and clinical decision-making. One is that the steps in clinical decision-making are expressed using medical terminology and values, as described in the previous section. These descriptions illustrate another difference between clinical decision-making and problem solving. Clinical decision-making is a circular process, in which the clinician moves back and forth through the differential diagnoses by using hypothesis testing. This often requires that the clinician return to earlier steps in the process or that steps be conducted concurrently. The problem-solving process, on the other hand, is more linear or sequential.

Clinical decision-making also differs from problem solving in the time that is available for its implementation. Although problem solving should be completed in a timely manner if it is to be effective, there usually is not an overwhelming sense of urgency. The specialized techniques described in **Chapter 3** for identifying the problem and generating possible solutions can be employed in most situations. Many opinions can be sought and clear consensus on the solution to be implemented can be achieved, even if it takes some time. In clinical decision-making, however, time is often critical and limited, and clinicians must sometimes act alone. In emergency situations clinicians must be able to make decisions quickly and accurately, or risk the lives of their patients. Even in non-emergency situations, the provision of high quality services and client satisfaction with those services depend on the clinician's ability to make decisions promptly. This is why it is critical that the clinician have current clinical knowledge and experience, together with well developed decision-making skills, to call upon when needed.

1. Assessment

Situation 1A: A 32-year-old woman arrives at your clinic requesting a family planning method. Her neighbor has an IUD and is satisfied with it, so the client is thinking about trying one herself. She has heard, however, that the IUD is dangerous because it can escape from the uterus and damage the heart. She wants you to help her select a family planning method. How do you begin?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 1B: A 28-year-old woman comes to the hospital stating that she has had vaginal bleeding for 3 days. She has traveled a great distance and appears very tired. Her husband is with her and appears anxious regarding his wife's condition. He urges you to see her immediately. What steps will you take in assessing her?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

This first step in clinical decision-making corresponds to the first step in problem solving—recognizing that there is a problem. This step is completed by both the client, through self-assessment, and the clinician. Usually it is the client who first recognizes that there is a problem and goes to the clinician for help. Often, the client's chief complaint leads to a more significant or underlying problem. In other cases, for example, during a routine reproductive health exam, the clinician may encounter problems of which the client is unaware. To identify the problem correctly, the clinician needs to collect information from and about the client that will assist in accurately diagnosing and treating the problem.

Clinicians obtain information through history taking, physical examination and possibly diagnostic testing, if available and appropriate. New clinicians often collect all the information that they can, whether or not it is pertinent to the situation. This may be due to a lack of confidence in their own, still developing, skills. They are afraid of missing something important in the client's condition. It may also happen because, with their limited experience, they cannot discriminate between relevant and irrelevant information. Whatever the reason, collecting excessive amounts of information, much of which is irrelevant, can interfere with high quality services by:

- slowing the provision of services,
- prolonging the time that clients are in the clinic,
- endangering patients' lives in emergency situations,

- increasing costs, and
- leading to dissatisfaction with the healthcare system.

What guides the clinician's process of data collection? Initially, a clinician will use a relatively standard format for gathering information. For example, in reproductive health the first questions typically asked of a woman who presents with a problem relate to:

- her chief complaint (e.g., "vaginal bleeding," or "referred for evaluation of abdominal mass");
- her age;
- her gravidity and parity;
- how long ago her last (normal) menstrual period was or, if she is pregnant, the estimated duration of the pregnancy; and
- what, if any, form of contraception she is using.

This initial information serves as a foundation for making sense of all of the other information that is collected subsequently. Consideration of vaginal bleeding is very different in a woman who is pregnant, a woman who is on Depo-Provera or a woman who is 60 years of age. Once these things are known, the clinician will decide what other information should be gathered.

Learners and inexperienced clinicians usually use a standard history and physical formula, or "external guide," to assist them in gathering data about a client in an orderly way. Experienced clinicians, however, have "internalized" this guide and gather information based on key diagnostic characteristics that help to direct their information gathering. They tend to ask fewer, more directed questions, and perform an examination focused on the organ or system most relevant to the client's chief complaint, thereby taking a shorter route to a working diagnosis.

2. Diagnosis

Situation 2A: During the assessment phase of the client who desires an IUD, you gathered the following information: The client has four children, the youngest of whom is 3 years old. The client has had no problems with her pregnancies in the past; all went full term with normal deliveries. She has not used family planning before. Although she is fairly confident about not wanting any more children, she is not so certain how her husband feels.

Her medical history is unremarkable. She and her husband are in a mutually monogamous relationship. Her pelvic examination indicates she is not pregnant, and there are no abnormalities of the genital tract. You do find, however, that she has a greyish white vaginal discharge that began several weeks ago. After counseling, the client is very interested in using the IUD as her family planning method, especially now that she knows it cannot damage her heart. What are your impressions and possible diagnoses?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 2B: You assess the client with vaginal bleeding and learn the following: She has been pregnant three times before and has two living children. She had one early (at 8 weeks) spontaneous abortion a year after the birth of her first child. Her last period was 9 weeks ago. She was using no contraception at that time.

She had some spotting a week ago but now is bleeding enough to change her pad every 2 hours. This started 3 days ago but she could not come to the hospital until now because her husband was away. She is having some lower abdominal cramping but says she has no other pain in the abdomen. On examination, her temperature is normal and her blood pressure is 106/74. Her pulse is 128 and her skin and conjunctiva are pale. Her pelvic exam shows a slightly dilated cervical os.

What was on your differential diagnosis when she first arrived? Have you reached a working diagnosis? What findings were important in making that diagnosis? Is there more than one diagnosis?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

After gathering some information, the clinician begins to formulate a differential diagnosis. Working from that list, the clinician uses her/his experience, fund of knowledge and clinical inference to guide further collection of data to support or disprove certain diagnoses. If needed, additional information is gathered to help identify the problem and move toward a working diagnosis from the list of all possible differential diagnoses. Ultimately, through the process of hypothesis testing, the clinician chooses a working diagnosis as a basis for planning treatment. Initial impressions are often formulated early in the interaction with the client. Experts will consider several possible diagnoses within the first 5

minutes, with very little, if any, data because they have more experience from which to draw. New clinicians, who may not be as familiar with all possible diagnoses, may take somewhat longer. These hypotheses, or differential diagnoses, serve as guides for still further data collection; data will be collected that will help prove, disprove or distinguish between diagnoses. These data will also help the clinician in selecting the appropriate treatment if the working diagnosis has several different treatment options. A clinician who makes effective decisions correctly assimilates and considers any new information or expert judgment even when it does not support the diagnosis or course of action initially preferred.

Thus, the movement from assessment to diagnosis is not so much a linear process, as in problem solving, as it is a circular process. Data gathered during assessment lead to a differential diagnosis. These initial diagnoses are then tested through gathering of more clinical information, which in turn strengthens or weakens some of the diagnoses. If one diagnosis is disproved, further assessment of the remaining diagnoses becomes necessary until a working diagnosis is chosen. Only then can treatment alternatives be considered.

For example, when a woman who is using Norplant implants as her contraceptive method returns to the clinic complaining of heavy vaginal bleeding between menstrual periods, you first need to determine what is causing the bleeding. Several possible causes, or differential diagnoses, will immediately come to mind based on past experience with Norplant implants. You will then collect information from the woman, such as the pattern and characteristics of the bleeding, the date of the last menstrual period, and so on. This information will help distinguish between the various diagnoses. As information is obtained, some working diagnoses will be discarded and additional information gathered, such as that gained from performing a pelvic examination, that is pertinent to the remaining diagnoses. Ultimately, you will reach a working diagnosis to guide treatment. In this case, it may be determined that the Norplant implants are the cause of the bleeding. You will now have to take the next step in clinical decision-making—deciding on a treatment for the problem.

Another example would be a woman who has an acute postpartum hemorrhage. By knowing only a few details about her (such as gravidity, mode of delivery and length of labor), you can form an immediate differential diagnosis. This diagnostic list may include uterine atony, vaginal laceration or retained placenta, among others. As an experienced clinician, you will direct subsequent history taking and physical examination toward gathering information to rule in or rule out diagnoses on the list. If you discover that the woman is a grand multipara who had an uncomplicated delivery, uterine atony becomes a more likely cause. Physical examination may reveal a soft, boggy uterus, further

strengthening the possibility that the hemorrhage is due to uterine atony. A working diagnosis, however, has not been reached and further assessment is needed. Inspection of the placenta or questioning of attendants regarding the placenta are crucial to making a working diagnosis. If you conclude that the woman has uterine atony, treatment options based on her condition, availability of resources and other factors must be considered in the next step.

3. Planning

Situation 3A: You know that it is not possible to insert an IUD at this time because of the client's vaginal infection. What would be your plan for her?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 3B: You recognize that this client has two major problems (or diagnoses) that require attention. What plan will you formulate to take care of these problems?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

This step in clinical decision-making corresponds to the third and fourth steps in problem solving—generating alternative solutions and choosing a solution. After deciding on a working diagnosis, the clinician chooses a treatment plan, if several options are available, using the data collected in the previous steps. For example, for the woman experiencing postpartum bleeding, you will decide whether the best course of treatment is to administer oxytocic agents, perform external uterine massage or immediately use bimanual uterine compression. The decision will be based on the amount of bleeding, available medications, success of previous treatment and other information. You weigh the costs and risks of negative consequences, as well as positive consequences, that could result from each treatment alternative. You then make detailed provisions for implementing the chosen course of action, with special attention to contingency, or backup, plans if known risks should occur.

There are a number of factors that influence the choice of a treatment option, including:

- clinician's experience
- research and clinical evidence
- clinician's values

- client's values
- bias due to missing or incomplete data

An important factor in the decision is the clinician's previous experience with the treatment options. In this example, a clinician who has never performed bimanual uterine compression may be hesitant to do so, and will try the other options first. Only if they fail will the clinician try bimanual compression. Another possible scenario might be that the clinician has used external massage in the past with several patients and has not had good results. The clinician might be hesitant to try it again, and would choose one of the other options first.

4. Intervention

Situation 4A: You discuss the situation with the client, explaining that it is not possible to insert an IUD at this time because of her vaginal infection. How will you implement the intervention chosen for this client?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 4B: You realize that the client has lost a large amount of blood due to the incomplete abortion, and needs attention for both problems. How will you go about implementing solutions for both problems—simultaneously or one after another?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

The next step in clinical decision-making is implementing the solution or treatment option chosen. Implementation requires certain clinical skills and an attention to detail during the performance of these skills. Some actions will have to be carried out simultaneously and others in a specific order, one immediately after the other. Sometimes the treatment will be carried out by the client (such as taking a medication and observing for the results) and other times it will be carried out by the clinical team (such as performing procedures to treat postpartum hemorrhage). Advance preparation of equipment, supplies and personnel will make the implementation of the planned treatment easier.

Although protocols and procedures for treatment interventions are usually more clearly defined and standardized than the process for implementing solutions to other types of problems, the same degree of constant attention and monitoring is required. It is very important that the clinician be aware of the client's response to the treatment and be ready to modify it according to that response. This monitoring will also provide data for the next, and final, step in clinical decision-making—evaluation.

5. Evaluation

Situation 5A: The client returns as scheduled, having completed her treatment as instructed. What do you do during this return visit?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Situation 5B: Now that you have implemented your treatment for this client, you must evaluate the results. How and when will you decide if the client is no longer in shock? What part or parts of your treatment have been most effective?

Are you able to inspect the products of conception to be sure that you have trophoblastic tissue? How will you do it? What will you decide if there is none? Is your diagnosis right or wrong?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

The evaluation step of clinical decision-making is the same as that of problem solving. In decision-making, the treatment plan chosen for the diagnosis is evaluated for its effectiveness. If it has not been effective, other treatment options must be considered and another intervention must be chosen. Thus, planning, intervention and evaluation follow a circular pattern in much the same way that assessment and diagnosis do. Indeed, sometimes the evaluation of the treatment, especially if it has not been effective, will also require additional data collection or revision of the diagnosis, thus effectively restarting the entire clinical decision-making process. Evaluation of the treatment can also lead the clinician to a final diagnosis—a working diagnosis that has been confirmed by more objective information. When the final diagnosis agrees with the working or provisional diagnosis, the clinician will use the details of this case in her/his body of clinical experience.

In an earlier example, you were faced with the diagnosis of excessive vaginal bleeding due to Norplant implants. After discussion with the woman, who was anxious to keep the implants if the bleeding could be controlled, you decided to try a course of COCs. You explained the treatment to the woman and asked her to come back after completing the cycle of pills if the bleeding did not improve. Unfortunately, the bleeding has not diminished and you are now forced to change the treatment plan and remove the implants.

It is important to keep in mind that the evaluation of an intervention must address the intervention's success in treating the diagnosis (the true problem), and not just the symptom. For the woman with postpartum hemorrhage, if the bleeding diminishes but the uterus remains boggy

(suggesting that the underlying uterine atony was not resolved), the treatment cannot be considered a success.

A final diagnosis that is different from the working diagnosis should not necessarily be considered "wrong." Because treatment is planned on the basis of available information, information that is incomplete or misleading will affect the clinician's ability to make a correct diagnosis. When new information contradicts the working diagnosis, the strength of these new data should be weighed against the strength of the previous data. All information should be carefully considered if the diagnosis is to be revised. When the working diagnosis is changed, the clinician should review what led to the choice of the original working diagnosis, and consider whether too much weight was given to some of the initial data. From this process the clinician can improve her/his clinical decision-making ability.

TEACHING CLINICAL DECISION-MAKING

Despite the importance of sound clinical decision-making to the provision of high quality reproductive health services, and the recognition of its importance by teachers, students often complete their preservice education without having developed this skill. Certain clinicians are able to develop decision-making skills on their own. Others are fortunate to find an experienced clinician to guide them through the development phase, while some never fully develop their abilities. None receive much assistance from inservice training systems, which do not routinely address clinical decision-making as a process.

In light of the importance of clinical decision-making, why is this so? Many challenges to effectively teaching clinical decision-making have contributed to the situation.

- Until recently, very little was known about how clinicians make decisions. Clinicians themselves were unable to describe the process they used, and little research had been carried out on the underlying steps. Teachers were at a loss about how to help a learner whose decision-making ability was limited. Now, however, research has been conducted that describes the process in detail. Nevertheless, this information has not yet been incorporated into all education and training programs.

- There is so much basic knowledge to be acquired during preservice education that there seems time for little else, such as the higher cognitive skills involved in clinical decision-making.

- Decision-making is not an easy skill to teach. To be taught effectively, it must be carefully planned and integrated throughout a curriculum or course. Individuals need time and constant practice to develop the skill fully. As a result, inservice courses, because of their relatively short duration, usually can provide only an overview of the process—if they choose to include it at all. Practice becomes the responsibility of course participants **after** they return to their work sites, where there may be no one to guide them.

- Decision-making skills can be developed most fully in a clinical setting. Often in the preservice setting, and at times also in the inservice setting, there is limited control and oversight of the clinical experience. Clinical practice is often supervised and carried out not by faculty from the school, but by clinic or hospital staff who may not have these skills themselves nor know how to teach them.

- Preservice education usually takes place in a clinical site that is very active. Given this high level of activity, there is often pressure to provide services expediently rather than take the time to allow junior members of the team to exercise their developing clinical judgment.

- Often, the most senior clinician is expected to be the principal or exclusive caregiver in a case. This expectation comes from clients, clinical colleagues and sometimes the tradition of the educational institution itself. Although this may result in delivery of high quality care, it limits the learning opportunities for subsequent generations of clinicians.

Why Teach Clinical Decision-Making?

Decision-making is a cornerstone of medical practice. It is a complex skill that requires guidance and mentoring to be developed effectively. As the quality of decision-making improves, so too does the quality of care provided for clients. Specifically, clinical decision-making should be taught for the following reasons:

- **To make the steps of clinical decision-making explicit.** Because experienced clinicians often make decisions intuitively, it can be difficult for the new clinician to identify how a sound clinical decision is made. Therefore, s/he first needs a clear, detailed description of each step in clinical decision-making. Then, throughout the learning process, the reasoning behind each decision should be explained, according to the steps in the decision-making process.

- **To help clinicians make effective and appropriate use of existing decision rules.** Clinicians routinely use rules (e.g., indications, precautions, protocols, clinical checklists, algorithms) to help them make decisions. Knowing the steps in decision-making will help

make these rules easier to understand. In addition, understanding how the rules were established will assist clinicians to apply them appropriately rather than follow them as absolutes; that is, clinicians will know when and to what degree it is appropriate to modify the rules and still remain within the bounds of safe practice. For example, rather than focusing on absolute rules about who can and cannot use each contraceptive method, it is important to teach a logical basis for weighing the benefits and limitations of each method for each client's unique situation. This will prepare the clinician to help the client make the best choice, even when that choice may not be consistent with common practice.

- **To help in the development of new decision rules.** Changes in medical knowledge and practice happen rapidly. Clinicians who understand the process of decision-making are able to incorporate new information into the decision rules, revise and alter them to reflect current practice and even create new rules where none were available before.

- **To reveal the value judgments within a decision.** Every decision involves both benefits and risks, and leads to some gains and some losses. How those benefits and risks, gains and losses are defined and the influence they have on decision-making often depend upon the value placed on them by both the client and the clinician. For example, there may be several treatment options available for a condition. One treatment option may be less expensive or available locally (benefit) but not be as effective in curing the condition as other options (loss). Another option may provide a much greater chance of cure (gain), but be extremely expensive (loss). In deciding which treatment to choose, different patients may value these risks/benefits and gains/losses in different ways. In this example, one patient may value cure so highly that she is willing to sell everything, take out loans and do whatever else is necessary to receive the most effective treatment. A different patient with the same options may place more value on maintaining her family's financial situation and therefore be willing to accept the risk of a less successful treatment option. Understanding how patients arrive at their decisions—what they value and how that affects their decisions—will help the clinician be more supportive, especially when the patients' values may be different from the clinician's.

  Each clinician also has beliefs and values that enter into decision-making. Discovering and understanding these values and how they affect decision-making will help the clinician make sound decisions that are in the best interests of the client. In the example above, the second patient's values may conflict with those of the clinician who often values cure above all other considerations. Nevertheless, the

clinician must respect and honor the patient's decision as the best one for her. Another example is a clinician who is personally biased against the IUD as a method of contraception and may convey this to the client. This attitude may cause the client to choose a different method when, in fact, the IUD would have been the best choice for her.

The teacher of clinical decision-making can help learners to identify the benefits/risks and gains/losses attached to each option as well as the values of each individual involved in making the decision. Learners can answer questions such as, "Which outcomes are the most important?" and, "Who is deciding priorities among the outcomes?" By doing so, the active involvement of the patient in decision-making is encouraged and a better quality decision is made.

- **To reveal the probabilities on which the decision is based.** Decisions are based not only on what the client and the clinician believe is important, or value, but also on what is most likely to happen. How likely is it that the chosen treatment will be effective? How frequent and severe is each of the side effects of the treatment? How serious are the consequences of no treatment? To continue the earlier example of choosing among treatment options, the patient who values cure over cost may not necessarily choose that option if the probability of cure, even with the more effective but costly treatment, is low.

  Based on experience, medicine is sometimes able to assign numbers or probabilities to these questions—a 40 percent cure rate, for example, or 85 percent of patients experience severe nausea and vomiting as a side effect of a specific chemotherapy regimen. In many cases, however, these probabilities and consequences are not stated so explicitly, but rather in more general terms; for example, most patients respond well to the treatment under consideration, or few experience any side effects. Teachers can help learners see how both kinds of probabilities are used in making decisions. They can also help learners see when the probabilities being used may actually be unknown or based on inaccurate or outdated information, which will affect the quality of the decision being made. In family planning, information changes very rapidly, and clinicians may not have the most current information, for example, about the risks of vascular problems with COCs. This lack of information may lead them to inappropriately deny COCs to a client.

- **To allow the teachers of clinical decision-making to become better decision-makers themselves.** Those who teach clinical decision-making skills come to better understand the process by which they make decisions themselves. As their understanding

improves, the quality of their decisions often improves as well, making them both better teachers and better clinicians.

How to Teach Clinical Decision-Making

Clinical decision-making is a crucial skill for all clinicians to learn, even though it can be a challenging and time-consuming skill to teach. Preservice education, rather than inservice training, is the preferable time to begin teaching clinical decision-making because of its longer training period and more extensive supervised clinical practice.

Several conditions are necessary if teaching of clinical decision-making is to be effective.

- It must be taught early in the curriculum and receive continual emphasis. The steps of clinical decision-making should be introduced early and used in a variety of situations.

- The curriculum must provide learners with opportunities and appropriate situations in which decision-making can occur.

- Teachers must create a safe and supportive learning environment where learners are given an active role in the outcomes of the clinical work. By providing learners with a sense of responsibility to the healthcare team, teachers can increase learners' commitment to active decision-making and empower them to risk making their own decisions.

Two of the main strategies for teaching decision-making are described below.

- **Teaching how to structure problems: the steps in decision-making.** Learners are often unclear about exactly what decisions were involved in the management of the clients they see because aspects of the assessment, diagnosis and treatment were not shared with them. What they do hear are opinions of experienced clinicians either for or against diagnoses or treatment options. But they usually do not hear the subtle reasoning involved in how that opinion was formed.

  Reasoning and **judgment** must be explained. Otherwise, learners may think that they are merely supposed to memorize opinions rather than understand the underlying strategy, values and probabilities, as described earlier, that went into forming that opinion or decision. Hearing the reasoning behind the opinion helps them learn the **process** for developing such opinions.

Giving learners the following tasks will help them identify the essential elements in managing problems—what to do first and what information to gather:

- Dissect the problem into a series of critical questions.
- Draw an algorithm or decision tree.
- Work out what information is needed before making a decision about a client.
- Set the goals of treatment and the means by which these goals will be reached.

- **Providing as much experience in decision-making as possible. Knowledge and experience** are the key components of successful decision-making. Once learners have a basic understanding of the decision-making process, it is important that they be given as many opportunities to apply that process as possible. Teachers should:

  - Expose learners to as many and as wide a variety of clients as possible.
  - Put learners in the clinical setting as early as possible and provide careful guidance as they gain their experience.
  - Give learners as much structured independence as possible; they must be given the opportunity and time to draw their own conclusions and consider their own decisions.
  - Provide learners with a forum, for example, case reviews or clinical conferences, for comparing their decisions with the decisions made by more experienced clinicians.

  It is important that the teacher discuss the decision-making process with each learner and that learners share their experiences with one another. By sharing experiences, learners get that many more cases or approaches to the same case to "file away" for future use, even though they may not have been directly involved themselves.

  Finally, the teacher should give learners feedback on how the clinical decision-making process was applied in a given situation. This will strengthen future performance more effectively than focusing on whether or not the "correct answer" was identified. In fact, a wrong answer for the right reason should receive more positive feedback than a right answer for the wrong reason.

Guiding Learners Through Decision-Making

The following actions can help teachers guide learners through each step in the decision-making process:

Assessment

- Show learners how to use the knowledge they have acquired to recognize patterns in the data that they collect about clients.
- Help learners categorize the information obtained, and mentally "file it away" for use in future situations.
- Highlight important cases that demonstrate critical principles of client care.
- Help learners choose when and where to limit the amount of data collected, and justify that decision.
- After the decision-making process is completed, help learners identify which of the information collected was most relevant to the final diagnosis. This may help learners develop a shortcut in the diagnostic process.

Diagnosis

- Assist learners to build associations between clinical features and diagnoses. Help learners to interpret the patient's initial complaint in terms of possible diagnoses, develop as complete a differential diagnosis as possible and avoid deciding prematurely on a working diagnosis. Using such questions as, "Given this symptom, which diagnosis is potentially most dangerous to my client?" and, "Given these symptoms, which diagnosis is most likely?" will help to build important associations between symptoms and possible diagnoses, and ensure a thorough list of differential diagnoses.
- Early in the process, encourage learners to develop broad differential diagnoses and use clinical data to support or not support the diagnoses they chose to place on their lists. They must be given an opportunity to discuss their thoughts with senior colleagues and use logical reasoning to refine their process of choosing a working diagnosis. Frequent use of the question "Why?" will help learners consider their choices and decisions more thoroughly.
- In choosing among the possible diagnoses, help learners to interpret the collected data. Learners must decide which pieces are strong and which are weak, and how the pieces combine to create a coherent picture. Help learners see the strength of each piece of data, not only in relation to a specific client but with regard to the types and amount

of disease in their client population. Having such a picture may facilitate future clinical decision-making.

- Ask learners to anticipate clinical findings, responses to different treatments and clinical developments as a way to expand their experience. This can be accomplished by asking questions such as, "The patient's blood pressure is 90/50 and she continues to have a moderate amount of vaginal bleeding despite our performing external uterine massage for 15 minutes. We have begun IV fluids, which are infusing rapidly. How would you evaluate the patient's response to our interventions? What are the next interventions to be tried? How do you anticipate her condition will change, based upon those interventions?" Learners can also be asked to research less commonly used treatments, for example, in the library and literature.

- Present learners with hypothetical situations that will challenge and clarify their reasoning process. Asking "what if" questions such as, "What if the client with postpartum hemorrhage is already in shock when you see her? How would that change your diagnosis and intervention?" and, "What if the family planning client is at risk for STDs? What impact would that have on counseling and method provision?" will help expand the learners' "experience" even though no actual client is involved.

Planning/Intervention

- Share with learners your personal experiences with various treatment options in order to suggest additional data that should be considered in choosing the best option.

- Help learners compile and analyze the probability figures discussed earlier that are needed to evaluate the various treatment options.

- Help learners to identify the full range of outcomes of a treatment and to consider their personal priorities and values and the level of risk, discomfort or inconvenience they would be willing to accept if they were the client. This approach will help the learners to see how their perceptions of risk, discomfort or inconvenience may differ from those of the client, who may have a different understanding of the problem and its implications. It will also teach learners how to involve the client in the decision.

Evaluation

- Help learners apply evaluation criteria to the treatment outcome and make an accurate assessment of its efficacy.

- Help learners decide if the treatment has addressed the symptom or the illness.

- Guide learners in deciding if another treatment option should be considered. Help them to choose an alternative, decide on additional information to be gathered and perhaps even modify the diagnosis based on the outcome of treatment.

Using Case Studies

Often, it is not possible to give learners experience with all the types of situations they will encounter as independent practitioners. Their "memory files" of experience can nevertheless be built up in other ways. Extensive use of case studies, role plays and drills, in which specific clinical situations are acted out, can contribute significantly to a learner's experience. For example, true shoulder dystocia during delivery is uncommon, but repeated drilling or practice on models of the corrective maneuvers will help learners respond to the emergency when it happens.

Although they can never completely replace working with clients, case studies are a particularly effective method for broadening learners' experience. They can give learners the opportunity to deal with rare or unusual situations and gain practice in applying the process of decision-making.

To make case studies as effective as possible, they should be written or chosen to:

- Exemplify the uniqueness of the situation. What is different about the situation in question that makes it worth studying? What is to be learned from it? Situations chosen for study should be ones less frequently encountered during supervised clinical sessions but that demonstrate an important concept.

- Contrast different uses of the same methods and techniques in a variety of situations. To be effective at clinical decision-making, learners must generalize or transfer knowledge and experience gained in one situation to other, very different contexts.

- Help learners to differentiate relevant from irrelevant information. For this purpose, case studies must be developed to include irrelevant information. Although it is not necessary to include a lot of irrelevant information, a moderate amount will give learners the opportunity to discriminate between what is and is not pertinent to a clinical situation.

- Illustrate different solutions to similar problems, or even to the same problem. In these instances, understanding how the different solutions were reached will add to the learners' experience.

- Illustrate the process of decision-making. The case study should be structured so that each step in decision-making can be identified and applied to the case under consideration.

It is important that learners be given the opportunity to share their answers to case studies and that the teacher discuss the decision-making process used to arrive at these answers. Particularly when two learners arrive at different diagnoses for the same case study client, the decision-making pathways should be discussed. The point of such a discussion is not to decide who is right and who is wrong, but rather to get a better understanding of how the learners reached their different diagnoses and to what extent the learners are beginning to master the decision-making process. It is also worthwhile to explore the decision-making processes of two or more learners even when they all arrive at the same diagnosis. It is not unusual for several different "routes" to be taken to arrive at the same point, and discussing how each learner arrived there will be very helpful to others.

Using Algorithms

As mentioned earlier, most individuals do not automatically understand how to effectively use algorithms to guide their clinical decision-making. New learners in particular need guidance to understand not only the technical content of an algorithm but also the thinking and decisions that went into its development. Therefore, while their use by new learners is to be encouraged, a thorough discussion of the purpose and structure of algorithms should be incorporated into teaching.

Algorithms used for instructional purposes generally are more detailed than those used by experienced clinicians. A new learner needs a very complete and explicit list of the steps involved in solving the clinical problem. The new learner tends to follow the algorithm exactly as it is written, every time it is used, and views it as a formula to be followed rather than as a guide. Therefore, new learners need to be reminded that:

- The purpose of algorithms is to **capture the thought processes** of experienced clinicians about a problem or situation requiring clinical judgments and decisions. Analyzing these thought processes and breaking them into logical and sequential steps in an algorithm will help others to understand how to make these diagnoses and solve similar problems.

- Algorithms **do not indicate a single sequence of steps** performed in the same order each time. Each time an algorithm is used, the clinician will start at the beginning. The pathway followed will be specific to each client's needs and responses.

- Algorithms are **not right or wrong**. They reflect how experts solve a problem.

Although the algorithms used by new learners may be more detailed or complex, they still need to be as simple as possible. They cannot contain all of the information that new learners need. Consequently, in many instances algorithms are supplemented with additional information that is linked to specific steps, much like a set of annotations. **Figure 4-2** is an example of an annotated algorithm. As shown in this example, additional assessments or procedures may be contained in a different tool or instrument. For example, in **Figure 4-2**, the clinician is referred to a separate checklist for guidance in performing the abdominal and pelvic exam. If the exam is abnormal, s/he is then referred to a separate algorithm for each of the possible causes of bleeding that may have been identified during the exam. This keeps the initial algorithm simple and focused on the original problem. Nevertheless, as you become more familiar with algorithms, you will be aware of modifications made to the basic format and details added to the content to make them as easy for new learners to use as possible.

As a learner gains practical experience, this supplementary information is no longer needed. Steps within the algorithm become more intuitive and may not need to be explicitly stated. A "condensed" version of the algorithm develops in the clinician's mind for future use, and s/he no longer needs to refer to the original written algorithm. The clinician feels more confident of her/his skills and less restricted by the formula provided in the algorithm.

SUMMARY

Until recently, the process of clinical decision-making has not been well understood. Although it is closely related to problem solving, intuition plays a large role and thus has made it difficult to clearly define the steps involved. Consequently, decision-making as a skill has not been taught well in either preservice or inservice programs. Now, however, the steps have been defined, allowing it to be taught to all clinicians as a critical skill that will improve the quality of care all clients receive.

Clinical decision-making is still a difficult skill to teach. Practitioners need regular practice to develop their clinical decision-making ability and confidence in that ability. Knowledge and experience are key to skill development. Experience can be obtained by working with as many and as wide a variety of clients as possible, with careful guidance from teachers and the use of case studies as a way to supplement clinical experience.

Annotations for Algorithm on page 4-31

Amount of bleeding
- Heavy bleeding is bleeding that is twice as long or twice as much as normal menses, or
- Passing blood clots.

New medication
Patients using Rifampicin or anti-epileptic drugs should use a backup method (such as condoms) while taking the medication. Alternatively, switch to a higher dose method (such as Depo-Provera) or a nonhormonal method (such as IUD).

- If the client is using Norplant implants, consider a backup method or a higher dose method such as Depo-Provera.
- If the client is using oral contraceptives, consider a backup method or a higher dose method.
- If the client is using Depo-Provera, she may continue to use the method. The dose of Depo-Provera is high enough that these drugs do not affect its efficacy.

Abdominal exam
Look for abdominal tenderness.

Speculum exam
Look for enlarged uterus, adnexal mass or uterine tenderness.

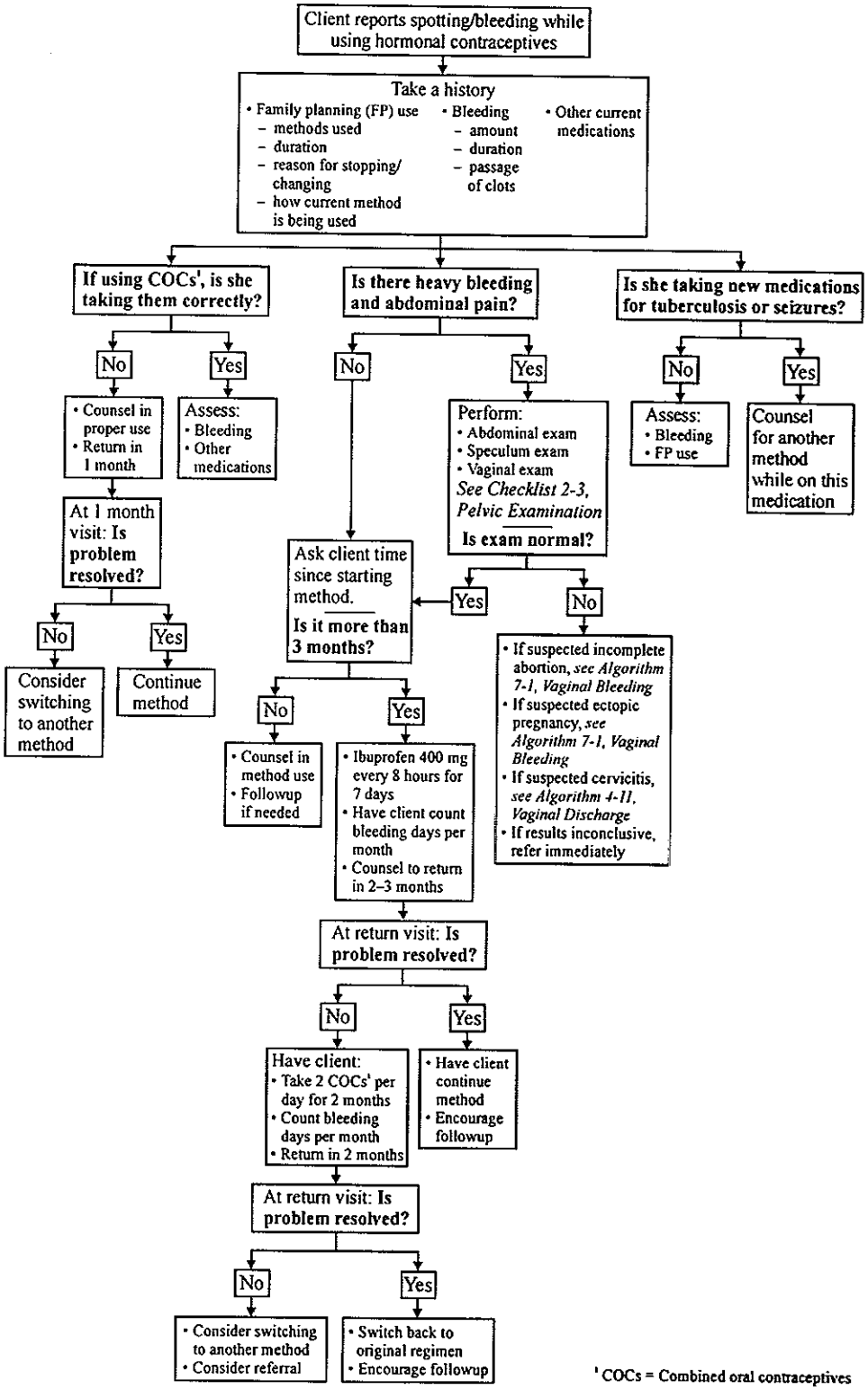
Vaginal exam
Look for cervicitis or dilated cervical os/products of conception in os.

Switching method
For clients on COCs: try Depo-Provera, or other nonhormonal (e.g., IUD) method.
For clients on Depo-Provera: try COCs, or other nonhormonal (e.g., IUD) method.
For clients on Norplant: try Depo-Provera, oral contraceptives or other nonhormonal (e.g., IUD) method.

Suspected ectopic pregnancy
Features of ectopic pregnancy
- Cervical os closed
- Pain is sharp, sometimes on one side
- Adnexal mass sometimes can be felt
- Uterus normal size

Features of threatened abortion
- Cervical os closed
- Uterus enlarged
- Pain is crampy and midline
- No palpable adnexal mass

Figure 4-2. Algorithm for Bleeding/Spotting on Hormonal Contraceptives



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SITUATION RESPONSES

Situation 1A You will probably begin by taking a **brief** medical and gynecological/obstetrical history of the client. You would be particularly interested in finding out if the client has used family planning before, what method she used, any difficulties she encountered and why she stopped using it. You also need to know more about her past experiences with pregnancy and delivery. Whether she is interested in spacing her pregnancies or preventing any further pregnancies is also important information to obtain. Because she is interested in the IUD, you need to find out if she has any risk factors for STDs or any of the limited number of medical conditions that are precautions for IUD use, such as genital tract cancer.

You would need to perform a pelvic examination to rule out pregnancy or any physical abnormality that is a precaution for IUD use. Some of your findings may lead you to perform selected laboratory examinations.

Finally, you would need to assess the client's knowledge of family planning in general and the IUD specifically, and provide her with up-to-date information so that she can make an informed choice. In particular, you need to address her misinformation concerning the ability of the IUD to move out of the uterus and cause damage to the heart.

Situation 2A By comparing your findings with the established indications and precautions for IUD use, you determine that in many respects the client could safely and effectively use an IUD. There is nothing in her medical or gynecologic/obstetric history that would be a problem, and she is not at risk for STDs. Her pelvic exam is normal, except for the vaginal discharge. But you also know that her discharge did not appear to be gonorrhea or chlamydia from its appearance and odor, and that there are a number of vaginal infections that, once treated and resolved, are not a precaution for IUD use. You have successfully dealt with a number of such clients in the past.

You therefore decide to run some simple laboratory tests, such as a "whiff" test, on the vaginal discharge and establish that it is, indeed, bacterial vaginosis and not a precaution for IUD use.

Given the client's continued interest in the IUD, and her new understanding of what it is and how it works, as well as its side effects and their management, you identify her as an appropriate candidate for IUD use—**after** her vaginal infection has been treated.

Situation 3A You cannot insert an IUD at this time, but you have several other options:

- Help the client to choose a different family planning method that is not affected by her vaginal infection.
- Provide the client with antibiotic treatment and a backup contraceptive method. Have her return after treatment is completed for re-evaluation of her condition and possible insertion of an IUD at that time, if appropriate.

Given the client's desire to use the IUD and the lack of other precautions for its use as well as the known effectiveness, availability and low cost of the antibiotic treatment, you choose the second option as the more appropriate for further discussion with the client.

Situation 4A After adequate discussion so that you feel certain the client understands the situation, you agree that the best option is to delay IUD insertion until after treatment of the infection is completed. You provide her with metronidazole and instructions to take 400 mg, twice a day for 7 days. You also give her condoms to use as her family planning method until she is able to have the IUD inserted. Finally, you make an appointment for her to return when treatment is completed.

Situation 5A You perform a pelvic examination to evaluate whether or not the medication has cured the vaginal infection. You find no further signs of infection. Consequently, you return to the assessment and diagnosis phases briefly. You review the client's record and the results of the pelvic examination and re-establish that no new conditions have developed that would be precautions for IUD use. "Diagnosing" her as an appropriate IUD user, you proceed to insert the IUD.

At her routine 4–6 week followup appointment and at any other return visits to the clinic she may make, you would evaluate the client's experience with IUD use. If, for example, she were to return after 8 months, complaining of heavy, prolonged menstrual periods, you would evaluate the situation. If the decision is made to change her family planning method, you would return to the assessment and diagnosis phases as you consider another method that would be appropriate for her.

Situation 1B It is important to begin any interaction with a patient or client in a manner that establishes rapport with her and helps her develop confidence in you. Show your concern, focus your full attention on her and her husband's needs and act professionally. Direct her to an examination table, or instruct an assistant to do so. Ask the assistant to prepare for a pelvic exam, including a speculum exam.

Start with a **brief** history to establish the severity of her bleeding and her general medical history. Ask about previous pregnancies, when her last normal period was and if she is using anything for contraception. Ask about duration and amount of bleeding and any related symptoms such as abdominal pain or cramping. If it appears that she is pregnant, ask her, in a manner that ensures confidentiality, whether there has been any interference with this pregnancy.

At the same time, begin to assess the woman's physical condition. Take vital signs, especially pulse and blood pressure, and begin to consider the possibility of shock or sepsis. Place a hand on her forehead to assess for fever, and check the conjunctiva for signs of anemia. While you are speaking to her, gently place a hand on her abdomen to evaluate for tenderness or guarding, and to make a rough determination of the size of the uterus if you suspect that she may be pregnant.

In these few minutes, you have made crucial observations that will help you understand the woman's condition and know what emergency measures to take.

While you were performing your initial assessment, your assistant has been preparing the few supplies needed to perform a pelvic exam, including a speculum examination. Perform this gently and carefully to determine the source of the bleeding. Note if there is obvious cervical dilation, or products of conception protruding from the cervical os. Look also for any trauma to the genital tract. Perform a brief vaginal exam to assess the size of the uterus and any tenderness.

Situation 2B

Immediately upon hearing that your patient has vaginal bleeding, you began to consider possible diagnoses. You consciously or unconsciously began to list all of the possible causes of her vaginal bleeding and directed your initial assessment based on your suspicions. Your initial differential diagnosis might have included some of the more common possibilities including:

- threatened abortion,
- incomplete abortion,
- complete abortion,
- ectopic pregnancy,
- complications of mid pregnancy,
- anovulatory bleeding,
- side effect from hormonal contraceptives, or
- side effects from the IUD.

But it may have also included some of the more unusual, but still possible, diagnoses such as:

- genital tract infection,
- genital tract trauma,
- genital tract cancer,
- endocrine or hormonal abnormality (such as thyroid or pituitary disturbances),
- cervical polyps or lesions, or
- uterine myomas or fibroids.

Given your experience and knowledge of the patient thus far, you directed your questions to the more common diagnoses. You focused your questions and exam so as to discover information about the leading diagnoses that you were considering. In discovering that she was not currently using family planning, you immediately ruled out side effects of contraceptives. By placing a hand on the abdomen you realized that, if she was pregnant, the pregnancy was still early, making antepartum hemorrhage in mid pregnancy unlikely. You are testing various hypotheses and are narrowing the list of potential causes for her bleeding.

Her last menses was more than 2 months ago, suggesting that she may be pregnant. Anovulatory bleeding, however, has not yet been disproved. You asked further questions and performed a directed exam to clarify the situation further. The speculum exam shows a dilated cervical os. Based on all of this information, you decide to proceed with a working diagnosis of incomplete abortion. You review the information that helped you establish it as the leading diagnosis:

- young woman of reproductive age,
- using no contraception and at risk of pregnancy,
- amenorrhea for 9 weeks,
- vaginal bleeding and uterine cramping lasting for several days,
- a nontender abdomen, and
- a dilated cervical os.

At the same time, however, your assessment revealed more about her condition. She is weak, her blood pressure is low and her pulse is rapid. She has a history of 3 days of vaginal bleeding and appears pale. You diagnose shock due to hemorrhage in addition to incomplete abortion, and begin to develop a plan for addressing the two conditions simultaneously.

Situation 3B In planning the treatment for this woman you must consider both:

- management of the incomplete abortion, and
- rapid resuscitation for the hemorrhagic shock.

To treat the incomplete abortion, you plan evacuation of the uterus by manual vacuum aspiration because you know it to be effective, rapid and safe, and you have been trained in how to provide it. You also know that the equipment is ready and that the procedure can be performed in the minor procedure room adjacent to the maternity. This is an advantage since the patient appears quite ill and the wait for an operating room may be several hours. You discuss this with the woman and her husband who are eager to move forward with the treatment.

In considering the management of shock, you plan the following. You are unaware if a transfusion of blood will be necessary, but know that the patient will benefit from rapid infusion of several liters of saline or Ringer's lactate. You ask for a measurement of her hemoglobin followed immediately by an IV drip with a large cannula. You also begin to inquire about possible blood donors. You know that repeated assessments will be necessary and therefore start to record your observations to make ongoing observation of her progress more reliable.

Thus, your planning has taken into account:

- availability of supplies, equipment and available therapies (e.g., IV fluids in the absence of blood);
- availability of trained personnel to perform these procedures;
- clinical experience regarding the chosen interventions; and
- acceptability for the patient and her family.

Situation 4B Because these two conditions are interrelated, implementation of their treatment must be simultaneous. Management of the shock without stopping the bleeding will result in greater blood loss; uterine evacuation while the patient is in shock may result in a more seriously ill patient once you are finished. The best approach is a team approach. The first step is to call for assistance in implementing your plan. While one person is starting the IV drip, the other can be preparing for the uterine evacuation.

Use personnel to the best of their abilities. If you are the only one who is able to perform these clinical procedures, ask the other personnel to assist by getting supplies, preparing equipment, etc. Ancillary personnel should be trained to support clinicians in a variety of ways, especially during emergency situations. Identify the steps that you must do (such as starting

the IV drip) and those that you can instruct the support staff to do (such as hanging the bottle, flushing the air from the line or applying tape).

Throughout this busy period, it is important to communicate with the patient. It will not only reassure her that she is being well and competently cared for, but it will also allow you to continually assess her level of consciousness and know if her state of shock is worsening.

If the patient must assist you in any way (such as maintaining a certain position or taking a medication in the prescribed manner) be certain that your instructions are clear and that she understands them.

Situation 5B The evaluation of your treatment plan may need to be on a minute-by-minute basis, as in an emergency situation, or after a period of time, if you are looking for a more gradual effect. In the situation presented here, both the improvement in the patient's shock and the management of the control of the bleeding must be rapidly evaluated.

Resuscitation with IV fluids is the most important intervention for a patient in shock; however, the patient's response to the IV fluids must be frequently checked. The clinician should look for a fall in the pulse rate to below 100 bpm and a stabilization of the blood pressure. This may occur only after several liters of fluid, and the IV drip should not be discontinued too quickly. If the patient still appears weak and pale, and the pulse remains above 110 bpm, more consideration should be given to a blood transfusion.

It is important always to inspect the products of conception that are removed from the uterus by performing uterine evacuation. If the clinician is not certain that trophoblastic tissue has been removed, s/he must consider revising the working diagnosis. If there is no trophoblastic tissue, the correct diagnosis may be either complete abortion (where the patient has already passed the products of conception) or ectopic pregnancy (where the slightly dilated cervix was not truly dilated but a result of the patient's being multiparous). If trophoblastic tissue is retrieved by performing the manual vacuum aspiration, the working diagnosis of incomplete abortion is correct and can be considered a final diagnosis.

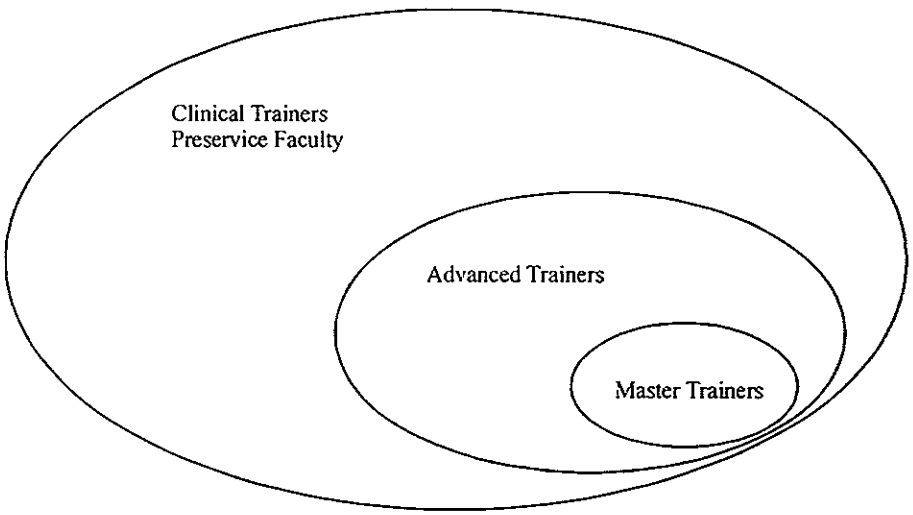
FIVE

BECOMING AN ADVANCED TRAINER

INTRODUCTION

A national training system for reproductive health requires three levels of trainers: clinical, advanced and master. Clinical trainers and preservice faculty are the largest part of the system; these are the trainers who transfer knowledge and clinical skills to healthcare providers. Then, to ensure adequate numbers of well prepared clinical trainers, a limited number of advanced trainers who transfer clinical training skills to new trainers is necessary. Finally, even fewer master trainers are required to design courses and learning packages, participate in assessments and evaluations, and prepare advanced trainers (see **Figure 5-1**).

Figure 5-1. Trainers Needed in a Training System



This chapter focuses on the process of becoming an advanced trainer. It provides information on the preparation required, the qualities to be looked for in an advanced trainer and the stages that an individual experiences while developing as a trainer.

Chapter Objective

After completing this chapter, the participant will be able to describe the process of becoming an advanced trainer and identify her/his own level of development as a trainer.

Enabling Objectives To attain the chapter objective, the participant will:

- Describe the trainer development process
- Describe the criteria for selecting advanced trainers
- Identify the stages of learning that the new trainer experiences

PROCESS FOR BECOMING A CLINICAL, ADVANCED AND MASTER TRAINER

Until recently, trainers had few ways to learn training skills. To some it came naturally, but usually only after many years of trial and error. A fortunate few had the opportunity to be taught by good clinical trainers whose style they could copy. For most, however, little training in these skills was available and even less guidance was provided in how to achieve a higher level of performance as a trainer.

A structured trainer development process recognizes that:

- there is a logical progression to the development of training skills,
- time and practice are required to master one set of skills before moving to the next, and
- the set of skills needed at each trainer level is unique.

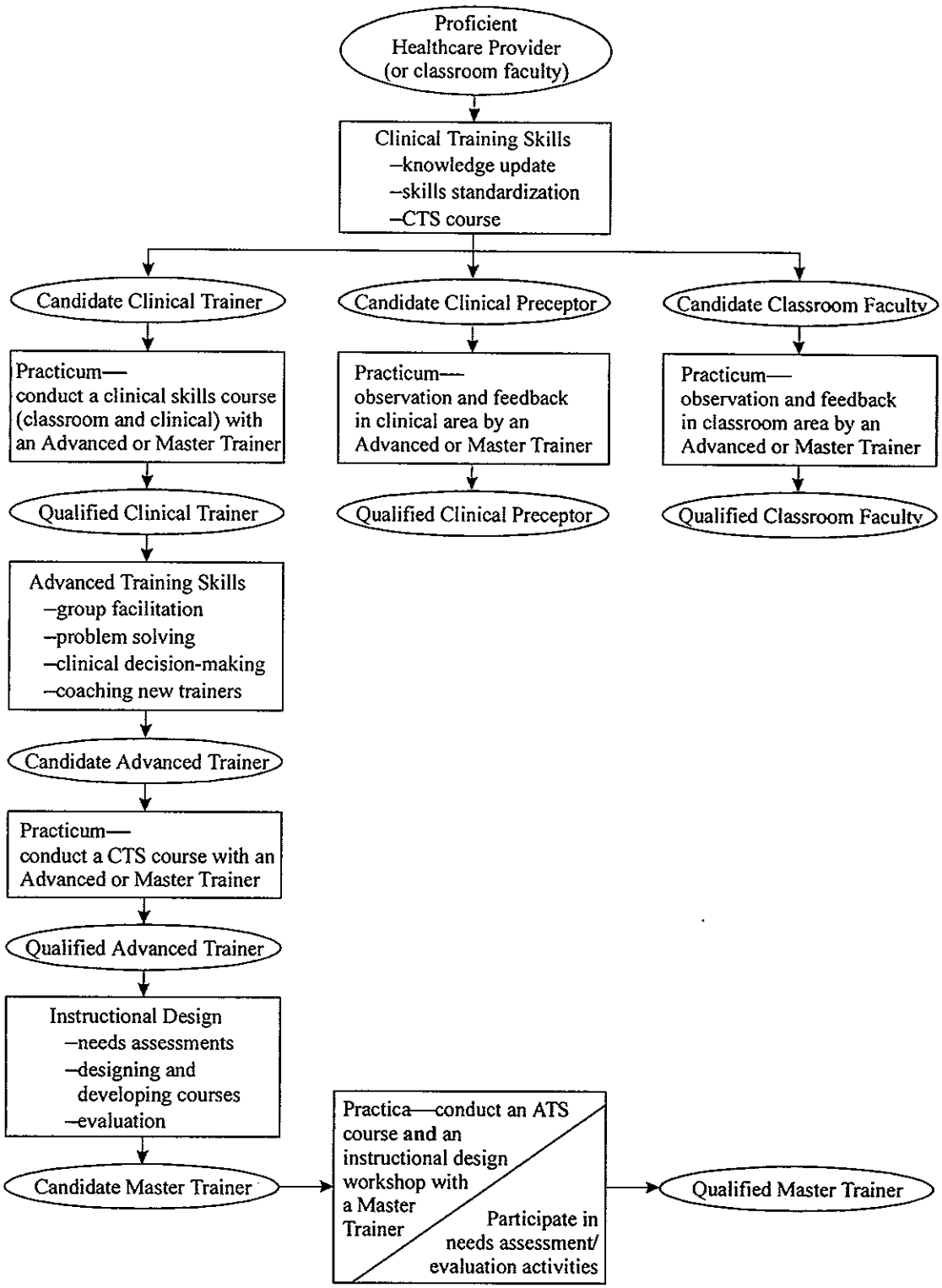
Consequently, at each level of the trainer development process there is a series of steps comprising:

- **coursework** to begin development of new training skills, and
- **practice** to become competent in those skills.

Only when coursework and practice have been successfully completed and competency in the appropriate skills has been demonstrated is the individual adequately prepared to act as a trainer at that particular level. **Figure 5-2** graphically presents the steps recommended to assist clinicians in making the transition from healthcare provider to clinical, advanced and master trainer. Progression through the steps is as follows:

- First, a **healthcare provider** must acquire service delivery skills, such as IUD insertion or management of normal deliveries, through clinical skills training and experience. Over a period of time, usually months or years of repeated practice, the healthcare provider becomes proficient in performing the clinical skills and providing services.

Figure 5-2. Faculty and Trainer Development Pathway



- Once proficient, the healthcare provider who wants to become a **clinical trainer** must successfully complete a knowledge update, skills standardization and clinical training skills (CTS) course. The CTS course focuses on learning the skills necessary to effectively transfer clinical knowledge and expertise to others. During this course, the healthcare provider learns coaching, humanistic training techniques and the use of competency-based skill assessments to evaluate participant performance. The healthcare provider also learns how to present information more effectively through the use of illustrated lectures, demonstrations, role plays, case studies, group discussions, audiovisuals and other training aids. At this point, the healthcare provider may be called a "candidate clinical trainer."

- The healthcare provider must then practice these new skills (i.e., complete a **practicum**), that is, conduct one or more clinical skills (CS) courses with an advanced or master trainer. The advanced or master trainer assesses training skills using the same criteria and skills checklists applied during the CTS course. If competency is demonstrated, the healthcare provider is now a qualified **clinical trainer** and ready to conduct clinical skills courses independently.

- Once proficiency is achieved in conducting CS courses, the clinical trainer who wants to **become an advanced trainer** focuses on learning the skills necessary to effectively transfer training expertise to others by training them as clinical trainers. During the advanced training skills (ATS) course, the clinical trainer learns group facilitation, problem-solving and clinical decision-making skills and how to teach them to others, and how best to coach a new trainer.

- The individual (sometimes called a "candidate advanced trainer") then conducts one or more CTS courses (practica) with an advanced or master trainer. The advanced or master trainer assesses the training skills acquired in the ATS course. When competency is demonstrated, the individual is a **qualified advanced trainer** and is ready to conduct CTS courses without further assistance. Over a period of time, the advanced trainer strengthens and expands skills through delivery of both CS and CTS courses. The advanced trainer is also able to coach and assess CTS participants as they conduct their first CS courses.

- Selected advanced trainers may then pursue additional training in instructional design (ID) in order to become **master trainers**. Although this training focuses on designing appropriate training courses and materials, information is also included on needs assessments and evaluation of training. The first requirement is to successfully complete the ID course. After the course, practica that

include conducting ATS and ID courses with a master trainer and participating in needs assessments or evaluation activities give the advanced trainer the opportunity to demonstrate competency and become a master trainer. As a master trainer, this individual can conduct CS, CTS, ATS and ID courses independently, coach new trainers at all levels during their practica, design courses and training materials, and conduct needs assessment and evaluation activities.

Implications for Preservice Education

The trainer development process described is based on a definition of a **clinical trainer** as a proficient healthcare provider who has the ability to conduct **both** the classroom and the clinical portions of a training course. The clinical trainer is able to **transfer both knowledge and clinical skills by working with models and clients**. Throughout preservice systems there are many individuals whose skills and abilities, as well as their job descriptions, allow them to follow the steps as presented above; that is, they are both classroom teachers and proficient healthcare providers.

There are other individuals, however, who work almost exclusively in either the classroom ("classroom faculty") or clinical ("clinical preceptors") portion of preservice education. Because neither of these groups fully develops and uses **both** classroom and clinical skills on a regular basis, it is difficult for them to move on to become advanced or master trainers. This does not prevent them, however, from participating in ATS or ID workshops, because the information presented in these workshops may be very useful to them, depending on their specific job responsibilities. Their modified trainer development process is as follows:

- **Classroom faculty** first have their reproductive health knowledge updated. Next, they attend a CTS course in which they learn effective classroom presentation skills for knowledge transfer. If they will use anatomic models for clinical skills demonstrations in the classroom, they have their clinical skills standardized with models. During the CTS course, these participants practice how to demonstrate, coach and assess skill development with models.

- **Clinical preceptors** begin with a knowledge update and clinical skills standardization just as clinical trainers do. They next attend a CTS course. This course includes classroom presentation skills but, in contrast to the preparation of classroom faculty described above, emphasizes and assesses their skills in clinical demonstration, coaching and assessment of **clinical skills** with models **and** clients.

Table 5-1 at the end of this chapter provides a summary of the trainer development process for trainers and preservice faculty and preceptors.

SELECTING ADVANCED TRAINERS

In the context of the trainer development process described above, an advanced trainer is an individual who:

- is a proficient clinical trainer,
- has completed an ATS course, and
- has successfully conducted one or more CTS courses while being coached by an advanced or master trainer who has determined the advanced trainer to be competent.

The advanced trainer is qualified to:

- continue serving as a clinical trainer, that is, conduct CS courses for healthcare providers;
- conduct CTS courses; and
- coach new clinical trainers during their practica.

Although this describes how someone becomes an advanced trainer and what the individual can do in that role, it does not fully explain who or what an advanced trainer **is**. It does not identify characteristics unique to the successful advanced trainer.

Experience has shown that it is neither necessary nor efficient for all clinical trainers to become advanced trainers. Although expertise in group facilitation, problem solving and clinical decision-making is useful to **all** trainers, it is expensive and difficult to arrange the training practice required for qualification. In addition, only a limited number of advanced and master trainers is needed to keep the training system functioning efficiently. How, then, does one determine who should be selected for advanced training? Some of the characteristics can be easily recognized, while others are more subjective. The best individual to make such a decision is a proficient master trainer, preferably one who has had the opportunity to work with the clinical trainer being considered.

Selection Criteria

The following criteria will guide the process of selecting advanced trainers:

- **Proficiency as a clinical trainer**. Proficiency cannot be defined by the length of time a trainer has been conducting training courses, the number of courses given or the frequency with which training is carried out. As with any skill, the experience needed to achieve and maintain proficiency will vary from individual to individual. Proficiency can only be determined accurately by an advanced or

master trainer observing a clinical trainer conducting a CS course. This observation involves not just clinical and training skills, but also the clinical trainer's openness to feedback as a means to continued learning and self-improvement.

- **Interest**. Only those clinical trainers with a genuine desire to become advanced trainers should be selected for advanced training opportunities. Many clinical trainers are very happy in their roles and have no inclination to train new trainers. Requiring them to do so may not prove successful and will deprive the training system of their full efforts as proficient clinical trainers.

- **Strong interpersonal skills**. All trainers are coaches, a role that requires good interpersonal skills. For the advanced trainer, coaching is more complex because training skills cannot always be assessed as objectively as clinical skills; there is not a single, standardized, step-by-step procedure for giving an effective presentation, for example. Individual styles and preferences of both the new and advanced trainers must also be taken into account. Consequently, being observed and assessed while practicing training skills may provoke even more anxiety for the new trainer than being assessed in clinical skills. The advanced trainer therefore must have strong interpersonal skills to make coaching during practice and assessment sessions both honest and effective, while also maintaining the participant's confidence and self-esteem.

  The coaching role of the advanced trainer is further complicated by the multiple levels of observation required during clinical practice. The advanced trainer must closely monitor both the new trainer's performance and that of the healthcare provider being trained. If there is a mistake in the procedure, the advanced trainer must find a balance between giving the new trainer the opportunity to handle the situation and protecting the client. The advanced trainer must be ready to step in should such a situation arise, and provide appropriate, timely feedback to both the new trainer and the healthcare provider. The advanced trainer must also serve as a role model for each of them. **Chapter 6** provides more information on the role of the advanced trainer as coach in both the classroom and clinical portions of the practicum.

- **Advocate for behavior change**. Perhaps most important, the new skills and concepts essential to competency-based training and mastery learning must be integrated into the advanced trainer's personal training style. The advanced trainer must continually recognize and foster the potential for learning in each participant. This requires humility and understanding on the part of the advanced

trainer as well as the ability to create a collaborative and trusting environment in which the trainer and participants can learn together. The advanced trainer should also encourage ongoing learning, even after the training course is over.

These skills should be so completely ingrained that the trainer would not even consider going back to previous ways of training. Enthusiasm for the "new" approach to training should be demonstrated during every course. Having changed her/his own behavior, this trainer is now ready and eager to promote that same behavior change in others.

THE FOUR STAGES OF LEARNING SKILLS

Both this chapter and **Chapter 2** use similar ways of describing how trainers and groups grow and develop over time. There are many parallels among development of an individual, a trainer and a group. The process whereby adults learn new skills and groups manage complex processes can be compared to the way a baby or small child grows and gradually develops. Each new stage of learning requires a different response as the trainer or group matures. This section focuses on the development of the trainer as s/he moves from one stage of development to the next.

Researchers who study the development of professionals have identified four stages, summarized in **Table 5-2** at the end of this chapter, through which a person who is learning new skills progresses[1]:

1. Energetic Beginner
2. Frustrated Learner
3. Hesitant Performer
4. Peak Performer

Knowing these stages helps you, the advanced trainer, understand your growth as a trainer. This knowledge also allows you to coach others as they progress as trainers and to give them appropriate feedback. Using the stages as a guide, you are able to describe how the new trainer is functioning, predict what might happen next and support the new trainer in ways that will encourage further growth.

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[1] *Adapted from*: Blanchard K. 1984. *Situational Leadership II*. Blanchard Training and Development, Inc.: San Diego, California.

Stage One: Energetic Beginner

"I've never done this before, but I am eager to learn."

Situation 1: You, the advanced trainer, have arrived 2 days before the start of the coaching experience, an IUD clinical skills course, for two new trainers who completed a CTS course with you 3 weeks ago. You find the new trainers excited and eager to get started; they are anxious to put into practice what they learned in the CTS course with you. They want the IUD course to go perfectly and are determined to do whatever it takes to ensure that. How can you best support these new trainers?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

The clinician approaching the task of becoming a trainer usually has little knowledge about what it means to be a trainer actually conducting a course. As the new trainer begins preparation for a CS course, s/he is enthusiastic about learning something new.

The attention of the new trainer at this stage is directed at **self**. The new trainer is concerned that clinical information must be 100 percent accurate, audiovisuals have to be prepared and many details about managing a course need to be learned. What is the response of the advanced trainer to the energetic, beginning trainer?

New trainers need structure (e.g., course schedule, course outline, division of responsibilities in the team) and clear, direct communication. When you clarify the tasks, allow for new trainer anxiety and are available for presentation "rehearsals" in beginning a CS course, you support the new trainers and the whole training team.

Stage Two: Frustrated Learner

"Learning all this is fun, but I had no idea it took so much effort."

Situation 2: On the second day of the course, one of the new trainers makes her first presentation. Her practice with you had gone well the evening before, but during the actual session several problems arise. The introduction to the session is a short game, but because she does not give clear instructions, there is some confusion. By the time the game is over, it has taken twice as long as originally planned. As a result, the new trainer rushes through the technical content. Although she uses the audiovisual equipment and aids very well, she does not interact with the participants. In order to do the summary activity, she uses 10 minutes of the participants' break that was scheduled to follow the session, which causes them to complain. During the feedback session at the end of the day, she is very discouraged and suggests that the "old" techniques for teaching may be easier and better. She is also angry with the participants, wondering why they are so hard on her when she's still learning. How can you best support this new trainer?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

As the course unfolds, the new trainer begins to realize that the role of trainer is far more complex and difficult than originally thought. The responsibilities seem never to end. When it is time to present a topic, the presentation must move forward regardless of how the trainer may be feeling. The work involved is intense and takes total concentration. Again, the new trainer is faced with the increasing number of details that need constant attention. At times, the new trainer may feel overwhelmed. It is at this stage that the new trainer can become discouraged and frustrated. It is not unusual for the trainer to question the commitment required for the effort. What is your response at this stage?

New trainers need support from advanced trainers. This support should be given in ways that do not diminish or humiliate. This stage in trainer development is as natural as breathing, and all trainers experience it. Communicating this to new trainers supports them and sends the message that they are not inadequate; they will move through this difficult stage and will become successful trainers. Modeling behavior that keeps the training standards high and allows room for emotional support will help in this stage. During this period, disagreements between trainers and participants about course content or the process in the training room may surface; such conflicts are almost unavoidable. It is to everyone's advantage that conflicts be handled as soon as they arise. In this phase, you should provide clear direction and supportive encouragement.

You need to be aware that unless there is a climate of safety, the feelings of the new trainer in this stage and the next will not be expressed. To create this climate, hold daily sessions in which the new trainer assesses

her/his own performance and receives feedback from you. This process allows the new trainer to recognize that everything is not perfect, and that this is normal and appropriate.

Stage Three: Hesitant Performer

"I know I can do this with the coaching trainer, but will I be able to do this without help?"

> **Situation 3**: You have continued to work with this new trainer throughout the first week of the course. By the second week, her sessions are going more smoothly. She is able to adhere to the time schedule while using interactive techniques. She is also beginning to see the course as more than just a series of individual sessions, but rather as interrelated activities that build on each other. She is able to focus more on team activities, such as conducting skills practice with models, rather than on just her own sessions. Nevertheless, she expresses the concern that she won't be able to do all of this without your help. How can you best support this new trainer?
>
> Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

While moving through Stage Three, the new trainer gradually sees conducting a training course as a whole. This understanding deepens as the trainer gains more experience and continues to receive feedback. The training course is now more than the presentations made by the new trainer. It is a complex of interrelated parts for which relevant activities and realistic outcomes should be thoughtfully planned. At this stage, the new trainer realizes that the course is to be **managed** rather than **controlled**. The new trainer can see how the parts of the course fit together and experience the rhythm of a well-run training course.

In reflecting on this stage, it is not unusual for the new trainer to question whether s/he will be able to conduct the course alone. Clearly, progress has been made in understanding the dynamics of the course, but there may be self-doubt about performing as well as the advanced trainer. How do you respond to a new trainer in this stage?

The best support that you can provide at this stage is to give honest feedback on the new trainer's strengths and weaknesses. There are some tasks that the trainer is performing well and other areas that need improvement. Every new trainer desires to be perfect: to deliver an energetic, interactive presentation; answer questions to all participants' satisfaction; be funny, lively and liked by all participants; and be the flawless clinical instructor modeling the ideal healthcare provider. Sometimes it takes courage to address an issue with a new trainer if the trainer seems unaware of the need to improve in a particular area.

This stage of development requires a major shift in thinking and behaving for the new trainer. It usually takes some time for this shift to take effect. To support this shift, encourage the new trainer to search for and try out solutions to situations in the training room, rather than giving the new trainer all the answers.

Stage Four: Peak Performer

"I have confidence in my training skills now and I am committed to training others."

> **Situation 4**: It's the end of the coaching experience and you and this new trainer have a final feedback session to look back over the entire course. As you discuss her progress, she actively expresses confidence in her ability to continue conducting such courses on her own. She has demonstrated competency in classroom presentation, clinical demonstration and coaching skills, as well as the ability to manage the course and deal with situations that arise. You agree that she is now a qualified clinical trainer. How can you best support this trainer?
>
> Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

By conducting training courses, receiving relevant feedback and working diligently, the new trainer becomes capable of managing any situation in the training room. At this point, the trainer is able to intuitively anticipate the needs of the group, respond appropriately and fulfill the multiple roles of an experienced trainer: **role model, instructor, clinical coach and evaluator**. The skills of planning and anticipating have become almost automatic. Situations which in the past were considered crises are now seen as challenges to be managed. The trainer has integrated the technical elements of training, the clinical components of providing services and the art of being open, honest and sincere in the training room. Participants learn that they can trust the trainer because they see that this person pays as much attention to the participants' learning needs as to the training design. By this stage the trainer is no longer a "new trainer" but an experienced peer who can be relied on to do what it takes to accomplish the task, no matter what situations arise.

SUMMARY

The systematic, step-by-step approach to developing trainers described in this chapter will facilitate the transition from clinical to advanced trainer. Clinical trainers who are proficient, are interested in becoming advanced trainers, have strong interpersonal skills and can be advocates for behavior change have the qualities needed to become advanced trainers. These last two qualities are particularly important in enabling advanced trainers to fulfill their critical role of coaching new trainers.

Furthermore, understanding the four stages of learning skills will assist advanced trainers in monitoring their own development as well as in coaching others as they progress as trainers.

SITUATION RESPONSES

Situation 1 You are off to a good start by arriving several days ahead of time. In this stage, new trainers need structure and clear communication. Before the course starts, you should review the course schedule with the new trainers, divide up responsibilities, clarify your role as advanced trainer, and determine how you and the new trainers will interact as a team in both the classroom and clinical portions of the course. The new trainers may also want to practice their sessions as they try to make them perfect, and you should provide honest feedback and suggestions about their performance.

Situation 2 In the feedback session, help the new trainer first to focus on what went well during her presentation, and then to identify what went wrong and how to correct it in the future. In this case, clear instructions would have helped ensure that the introductory game was completed in the allotted time and allowed the technical information to be presented in a more interactive manner. Explain that managing time within a session, particularly when using games and other interactive techniques, is one of the more difficult skills to learn, but that with practice she will indeed master it. Offer to help her plan and practice her upcoming sessions so she continues to use the "new" techniques and feels more comfortable with them. Help her understand the participants' reaction to losing part of their break. Discuss other ways in which she could have dealt with the situation, such as asking their permission to use break time, or having an alternative summary planned that could be completed in less time.

Situation 3 Most important, let her know that her reaction is entirely normal—all new trainers have similar experiences and reactions as they develop their skills. Even experienced trainers have them as they begin to teach new courses or adapt old ones. Reassure her that she will move past this stage and become a successful trainer.

Situation 4 Continue to provide her with honest and relevant feedback on both her strengths and limitations. Do not hesitate to identify areas for improvement, even if she does not see them herself. Then encourage her on her own to look for and try out solutions to these and other issues that arise during training. You, the advanced trainer, must avoid offering too many answers, but rather foster the problem-solving abilities of the new trainer.

With your help, she has developed the skills needed to be a peak performer. Let her know that you have confidence in her and that you look forward to having her as a colleague in the future. You are available for assistance should she need you, and you will also call upon her for the same.

Table 5-1. Summary of the Trainer and Faculty Development Process

LEVEL OF TRAINER/ FACULTY	REQUISITE SKILLS	PREPARATION/ COURSEWORK	PRACTICUM	SKILLS/ACTIVITIES TRAINER IS QUALIFIED TO CONDUCT
TRAINERS*				
Clinical Trainer	• Proficient in a specified skill (e.g., IUD, Norplant implants, normal delivery) • Interest in becoming a clinical trainer, i.e., training healthcare providers	• Update knowledge in a specific skill area • Standardize clinical skill in a specific skill area • Complete the CTS course	• Conduct a CS course in the specified skill area with an advanced or master trainer within 6 months of completing the CTS course	• CS courses (both classroom and clinical portions) for healthcare providers in the specified clinical skill
Advanced Trainer	• Proficient healthcare provider • Proficient clinical trainer • Interest in becoming an advanced trainer, i.e., training new trainers • Strong interpersonal skills • Advocate for behavior change	• Complete the ATS course	• Conduct a CTS course with an advanced or master trainer within 6 months of completing the ATS course	• CS courses for healthcare providers in the specified clinical skill • CTS courses for any area of family planning/reproductive health (FP/RH) • Coach candidate clinical trainers during their practica
Master Trainer	• Proficient healthcare provider • Proficient advanced trainer • Interest in becoming a master trainer, i.e., training advanced trainers - participating in needs assessments/evaluation - designing courses and learning materials	• Complete ID workshop	• Conduct an ATS course with a master trainer within 1 year of completing the ID workshop • Conduct an ID workshop with a master trainer within 1 year of completing the ID workshop • Participate in a needs assessment/evaluation activity within 2 years of completing the ID workshop	• CS courses for healthcare providers in the specified clinical skill • CTS courses • ATS courses/workshops • ID courses/workshops • Designing courses and developing course materials • Coach candidate clinical and advanced trainers during their practica • Conduct needs assessment/ evaluation activities

* Proficient service providers who are able to conduct both the classroom and the clinical portions of a training course. As they develop additional training skills, they can progress to the advanced and master trainer level.

LEVEL OF TRAINER/ FACULTY	REQUISITE SKILLS	PREPARATION/ COURSEWORK	PRACTICUM	SKILLS/ACTIVITIES TRAINER IS QUALIFIED TO CONDUCT
PRESERVICE EDUCATORS**				
Classroom Faculty	• Position teaching learners in a classroom setting **exclusively**	• Knowledge update in FP/RH • Skills standardization with anatomical models when appropriate • Completion of the CTS course	• Observation and feedback from an advanced or master trainer while conducting classroom sessions in FP/RH (classroom presentation, demonstration and coaching skills **with models only**) within 1 year of completion of the CTS course	• Classroom instruction for knowledge transfer in FP/RH • Classroom demonstration and coaching of clinical skills, in selected cases
Clinical Preceptor	• Proficient healthcare provider in a specified skill (e.g., IUD, Norplant implants, normal delivery, life-saving skills)	• Updated knowledge in a specific skill area • Standardized clinical skill in a specific skill area • Completion of the CTS course	• Observation and feedback from an advanced or master trainer while working with learners in a clinical setting (clinical demonstration, coaching and assessment with models **and** clients) within 1 year of completion of the CTS course	• Demonstrate clinical skills, coach skill development and assess skill competency with models and clients in a clinical setting

** Individuals who work almost exclusively in either the classroom **or** the clinical portion of preservice education, and whose development process is modified to focus only on those skills needed to fulfill their job responsibilities. Because they do not fully develop and use both classroom and clinical skills, they do not usually progress to become advanced or master trainers.

Table 5-2. Stages of Learning

STAGE	SUPPORT NEEDED BY NEW TRAINER	APPROACH USED BY ADVANCED TRAINER
Energetic Beginner *"I've never done this before, but I am eager to learn."*	• Structure • Division of responsibilities • Clear, direct communication	• Provide course syllabus, course outline • Clarify tasks • Provide opportunities for presentation rehearsals and feedback
Frustrated Learner *"Learning all this is fun, but I had no idea it took so much effort."*	• Support from advanced (coaching) trainer • Recognition that this stage is normal • Climate of safety	• Model appropriate trainer attitudes and skills • Encourage new trainer • Resolve conflicts immediately • Facilitate new trainer's self-assessment each day • Provide feedback on performance at the end of each day
Hesitant Performer *"I know I can do this with the coaching trainer, but will I be able to do this without help?"*	• Needs major shift in thinking and behavior	• Help new trainer improve group process skills • Encourage new trainer to try own solutions to problems
Peak Performer *"I have confidence in my training skills and I am committed to training others."*	• New trainer able to fulfill all trainer roles • New trainer able to work effectively both individually and as member of team • New trainer generates trust in those being trained	

SIX

COACHING NEW TRAINERS

INTRODUCTION

The primary responsibility of a clinical trainer is to prepare qualified healthcare providers to deliver high quality reproductive health services (e.g., insertion and removal of Norplant implants).The preparation of a clinical trainer encompasses four kinds of activities:

- **Standardization of the clinical skills** that will be the focus of courses the new trainer will conduct. Proficiency in performing the necessary clinical and counseling skills is ensured through the use of **checklists** and anatomic models before the clinical trainer learns to teach these skills to others.

- **Updating of family planning and reproductive health knowledge.**

- **Development of the essential clinical training skills** (e.g., presentation, demonstration, coaching and evaluation skills) as presented in the *Clinical Training Skills for Reproductive Health Professionals*, second edition, reference manual.

- **Conducting a CS course with an advanced or master trainer.** Using standardized clinical skills, updated knowledge and newly acquired training skills, the new clinical trainer is coached while conducting a CS course. The advanced or master trainer who fills the role of coach is also called the coaching trainer.

The focus of this chapter is on techniques for planning and conducting a successful coaching experience. Note that the coaching trainer could be an advanced or master trainer or, in some situations, a technical expert (e.g., in training skills, IP). In this chapter, it is assumed that the term "advanced trainer" includes these other possible coaching trainers.

Chapter Objective After completing this chapter, the participant will be an effective coaching trainer for new clinical trainers.

Enabling Objectives To attain the chapter objective, the participant will:

- Identify reasons for coaching new trainers
- Describe various approaches to coaching new trainers
- Complete coaching activities that take place before the course

- Serve as an effective coaching trainer during the course
- Complete coaching activities that take place after the course

REASONS FOR COACHING A NEW TRAINER

Situation 1: You are an advanced trainer and are visiting a clinical trainer who attended one of your CTS courses about a year ago. This trainer has since conducted several CS courses, but this is the first one you have been able to attend. You arrive after lunch on the third day of the course to find him making a presentation on IP. According to the schedule, this topic was to be taught yesterday. While there are a few flipchart pages on the walls, they all appear to have been prepared by him. He is writing a series of points on the flipchart that also appear in the learning guide in the participant's handbooks—which are nowhere in sight. You sit in the back of the room and wonder what happened—this was one of the outstanding participants in your CTS course.

What could have prevented this problem? When should you have arrived to observe this trainer? What do you do now?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

There are several reasons for using coaching experiences in the preparation of clinical trainers:

- New trainers are coached as soon as possible to **reinforce the knowledge, attitudes and skills acquired during the CTS course**. It is just as important for new clinical trainers to apply new training skills as it is for service providers to apply new clinical skills. The shorter the time between learning new skills and applying them, the greater the likelihood that the skills will be retained and the new trainers will move toward becoming proficient trainers.

- New trainers need **structure** (e.g., course schedule, course outline, division of responsibilities in the team) and clear, direct communication. When the coaching trainer clarifies the tasks, allows for the new trainer's anxiety, is available for presentation "rehearsals" in the beginning of a CS course, and provides assistance in the clinical practice site, the new trainers and the whole training team are supported.

- Coaching provides **opportunities for clinical trainers to receive immediate feedback** on their training and clinical skills. To help refine these skills and become proficient trainers, it is imperative that new clinical trainers practice in a safe environment, receive positive feedback and hear suggestions for improvement. Through this cycle

of practice and feedback, new trainers will begin to internalize effective training skills and will be much better prepared to conduct future courses on their own.

- Coaching provides **support for new trainers to put into practice what they have learned.** For many new clinical trainers, a mastery learning approach that is competency-based, humanistic and highly participatory is radically different from the approach they have experienced before. Although this approach and the resulting positive learning climate may appear easy to achieve during a CTS course, it is very difficult for new trainers to replicate them without a coaching trainer's support and encouragement. When this support system is not in place, there is a tendency for new trainers to revert to the comfortable but often ineffective behaviors with which they are more familiar. When coaching support is available, clinical trainers are more likely to conduct the course as demonstrated during the CTS course.

- Coaching is the most effective method for the advanced trainer to **receive feedback on the effectiveness of the CTS course**. During the course, the participants will demonstrate mastery of their knowledge of clinical and training skills as well as competency in their training skills, in both the classroom and clinical settings. The true measure of the effectiveness of the CTS course, however, is when these new clinical trainers conduct their first CS courses. Observing these trainers will tell the advanced trainer if the CTS course is effective or if changes to the course should be considered.

APPROACHES TO COACHING A NEW TRAINER

Situation 2: You and another advanced trainer are finishing a CTS course for a group of 12 proficient providers. They all possess standardized skills, updated knowledge and effective training skills. Unfortunately, you were unable to build a coaching experience into this CTS course. What are your options for providing coaching opportunities for the new clinical trainers?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

When a new clinical trainer begins to train service providers, it is recommended that this trainer conduct the first few CS courses with an advanced trainer. It has been shown that this coaching experience helps the new trainer to transfer clinical and training skills from the classroom environment to the more realistic setting of the preservice education or inservice training course.

There is no standard approach for conducting coaching events. Below are six possible approaches that advanced trainers can consider when preparing to conduct a CTS course and deciding how to incorporate appropriate coaching experiences for new trainers.

- The advanced trainer who conducted the CTS course coaches each new clinical trainer during the delivery of a CS course. Although this is the ideal situation, it often requires a commitment of more time than the advanced trainer has available. When participants in a CTS course can work in teams of two or three, there is a greater possibility that the advanced trainer can be their coach.

- The coaching experience is built into the design of the CTS course. This means that immediately following the CTS course, coaching takes place. Advantages of this approach are that all of the participants would be involved in both the course and the coaching experience, and the same advanced trainers would be available to provide coaching. The main disadvantages are that the CTS course can become too long, and too many new clinical trainers may end up trying to conduct a CS course at one time.

- New clinical trainers are coached by a regional- or national-level advanced trainer. In some countries or regions, there will be other qualified individuals available who can work with new clinical trainers during a coaching experience.

- New clinical trainers are coached by a colleague from the CTS course. Ideally this coaching experience coincides with a visit from an advanced trainer for at least the first few days of the course, because these days are the most important for setting a positive learning climate. Even when an advanced trainer cannot be there, having two new clinical trainers work together and support each other helps to ensure that the course will be conducted as designed. The two trainers know what they are supposed to do and can reinforce each other throughout the course.

- The advanced trainer observes and coaches during the first few days of a course. Although this approach is not ideal, at least the new clinical trainer has some guidance and support during those first critical days. After the advanced trainer departs, the new clinical trainer conducts the course alone.

- The new clinical trainer is coached by a proficient clinical trainer. When an advanced trainer is not available, it is often better for the new clinical trainer to be observed and coached by a proficient clinical trainer than to train alone.

ACTIVITIES BEFORE THE COURSE

Situation 3: You are an advanced trainer and have been asked to coach a new clinical trainer. You did not conduct the CTS course, but trust the course trainer's recommendation that this new clinical trainer is competent. You meet with the new trainer the day before the CS course begins and discuss the role of the coach. The new clinical trainer asks that you conduct the sessions on the first day because you are the better trainer. You sense that she is nervous about starting the course. How do you respond to her request?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

Clarifying the responsibilities of each trainer conducting a course will help to ensure a successful training experience. Ideally there will be two to four new clinical trainers and you, the advanced trainer, who will be functioning as the coaching trainer. You and the new trainers will meet before the course to discuss roles and responsibilities. Although this meeting may occur at any time, the most common time to meet is the day before the course begins. This does, however, limit the time available for preparing individual sessions. The first order of business is to discuss the role each person will play during the course. When you are planning and conducting this meeting:

- Have each trainer participate.
- Discuss course content as well as trainer and participant dynamics expected the first day.
- Clarify your role as a coaching trainer. You may serve both as a trainer and coach and conduct several of the classroom and clinical sessions, thereby affording you an opportunity to model specific training skills for the new clinical trainers. The other option is to observe, but not participate unless invited, thereby allowing the new trainers to assume full responsibility for the course. In either situation, you must observe, coach, provide feedback and evaluate the new clinical trainers.
- Discuss and agree on the norms for the training team (e.g., when to meet during the course, topics to be discussed during the meetings).
- Discuss each person's schedule during the course. It is expected that all trainers will attend all sessions, whether they are presenting to the group or not. Having trainers coming in and out throughout the course is not only disruptive, but makes it difficult to provide effective, useful feedback if much of the course is not being observed.

- Divide course topics among the trainers and make up the final schedule if it has not already been done. Ideally, topics should be assigned well in advance to allow time for preparation.

- Share relevant information about the participants (e.g., number, background, current positions) and consider any special arrangements that should be made to meet their needs.

- Prepare the classroom, set out participant materials and name tents, set up all audiovisual equipment (e.g., flipcharts with markers, overhead projector, screen), and check the anatomic models and all other items needed for simulated examination rooms (e.g., instruments, gloves, IP equipment). Prepare the flipcharts for the opening session (e.g., agenda, introductions, expectations).

- Gain agreement that all trainers will take responsibility to keep the room prepared and orderly; a messy room indicates sloppy training.

- Visit the clinic site to confirm that everything is ready. Be sure that clinic staff know that your participants are coming and clearly understand their own responsibilities in relation to the participants. Also clarify your role and that of the new trainers.

- Discuss how trainers will intervene, if it becomes necessary, during a presentation by another trainer. If a trainer wants to add to the ideas being presented, or if incorrect technical information has been given, how does the observing trainer make a contribution in a way that supports the authority of the trainer in front of the room?

- Discuss your role and that of the new trainers in the clinical practice portion of the course. How will the trainers interact with the clinic staff as well as with the course participants? How will the coaching and new trainers interact during clinical procedures?

- Discuss the daily trainer meetings. During the classroom portion, the trainers observing from the back of the room should be taking notes during presentations and be prepared to give one another feedback and offer suggestions for improvement during these daily meetings. In addition, at the clinical practice site, trainers should take notes on how effectively services are being provided and learning objectives are being met.

ACTIVITIES DURING THE COURSE

The Coaching Process

The advanced trainer serving in the capacity of a coaching trainer is playing several roles. In addition to often being one of the course trainers, the advanced trainer is functioning first as a coach and then as an evaluator. This is essentially the same as coaching a clinician who is performing a clinical procedure. Like clinical coaching, coaching a new clinical trainer involves several phases:

- **Demonstrations** of the essential training skills by the advanced trainer. These will have taken place during the CTS course. Additional demonstrations may occur during the coaching course if the new trainer asks you to do several presentations or more actively assist while at the clinical practice site.

- **Practice** by the new trainer while you **observe** using the presentation, demonstration or coaching skills **checklists (Samples 6-1, 6-2 and 6-3)** found at the end of this chapter.

- **Feedback** and **coaching** provided by you during the daily trainer meetings. The feedback session (regardless of who is facilitating) should follow the following sequence:

  - Ask the new trainer to describe the positive aspects of the presentations or clinical experience. Allow the trainer to identify the effective skills demonstrated during the day. At this point, avoid letting the new trainer discuss any areas needing improvement. Keep the focus on the positive.

  - Next, ask the new trainer to identify any changes that s/he would make for upcoming days in the clinic or when the presentations are given again. Allowing the trainer to identify the areas needing improvement will increase the likelihood of change occurring.

  - Ask any of the other trainers to describe their observations—focusing first on the positive and then asking for suggestions for improvement. Pay careful attention to the discussion to make certain that no comments are made that will have a negative impact on the self-esteem of the trainer receiving feedback.

  - Refer to the checklists and once again focus on the positive aspects of the presentations or clinical experience. Offer only suggestions for improvement that have not been identified either by the trainer or the other members of the training team. Help the new trainer set goals for future presentations or clinic sessions.

- **Evaluation** of the new clinical trainer using the appropriate **checklists** and a final determination of whether the new trainer is **qualified** as a clinical trainer.

In the Classroom

Situation 4: During the trainers' meeting at the end of the day, the new clinical trainer is asked to give feedback to another new trainer. You are the advanced trainer and are observing during the course. The new trainer giving feedback begins describing various aspects of the other new trainer's presentations. She is not referring to any notes but instead appears to be reflecting back and making comments. What could have prevented this situation? How should the observer (or advanced trainer) have opened the feedback session?

Write your responses on a piece of paper and then compare your responses with the ones found at the end of this chapter.

Once the course begins, the trainers must concentrate on working as a team. Below are some suggestions for effective teamwork that will foster consistency in training.

- Be consistent with the participants about adhering to the schedule. Begin and end on time regardless of who is conducting the session. If it is necessary to exceed the allotted time, discuss this with the group and gain agreement on how long participants can stay.

- Members of the training team should rotate the leadership of the daily trainer meetings. During these meetings, each agenda item for that day is discussed and the presenting trainers receive feedback from the coaching trainer and the other trainers as described later in this section. You or the leader facilitates the feedback process.

- As the course evolves, monitor the development of the group along with the new trainers and identify the stages of group development. Indicate the trainer behaviors that have been appropriate and supportive of the group's development. Brainstorm with the training team members the various options for handling specific problems in the training group.

- The trainers should make it a practice to compare notes in monitoring how the group is functioning. Each trainer may observe different patterns in the group. These observations can contribute to a better understanding of group process and group management.

- During the daily meetings, the trainers should review the schedule for the next day and modify it if necessary.

In the Clinic

Situation 5: You are an advanced trainer who is coaching a new trainer during his first IUD course. The classroom portion of the course went very smoothly and you are now in the clinical practice site.

Today you are coaching the new trainer as he coaches the service provider during IUD insertion with a client. The provider has successfully performed the steps in the procedure through cleaning the cervix. You notice that the provider now seems uncertain of what to do. She stares at the instrument tray and hesitantly reaches for the uterine sound. The new trainer silently observes. What would you do in this situation?

Write your response on a piece of paper and then compare your response with the one found at the end of this chapter.

The advanced trainer accompanies the new trainers to the clinical practice site and observes, coaches and assesses the new trainers as they demonstrate their training skills with the participants. As you, the advanced trainer, supervise and coach in the clinic, you need to be aware of how well the demand for services is being met, be alert for new learning opportunities and monitor the performance of the new healthcare providers. At the same time, you must coach and provide feedback to the new trainers. By working with the new trainers **before** going into the clinical setting, coaching them **during** the clinical practice sessions and then providing feedback **after** each clinical practice session, you can feel confident that service delivery will proceed smoothly, and you can focus your attention on the new trainers.

It is important that you work closely with the new trainers to plan the clinical practice sessions. During the CTS course, the new trainers will have had the opportunity to discuss a variety of ideas that are important to a successful clinical practice experience. It is your responsibility to ensure that these concepts—in particular clients' rights, creation of opportunities for learning, the importance of pre- and post-clinical practice meetings, and the role of the trainer as supervisor and coach—are successfully incorporated into the clinical practice.

Clarifying your Role

For service provision and learning to proceed as efficiently as possible, it is important that your role as advanced trainer be clearly understood. To help both you and the new trainers define your roles ahead of time, use the questions given below (and similar questions) as a guide for your discussion. Then, share this information with the participants and clinic staff before beginning the clinic sessions so that any remaining uncertainty they may have about your role can be clarified.

Participants will be familiar with you from the classroom, but will need to know what your role will be in the clinic. Can they ask you to supervise their work with clients? Can they look to you as a technical resource? For which activities (e.g., assessment of their skills) should they seek out the new trainers rather than you?

The clinic staff also need to be clear about your role in relation to the new trainers. To whom should questions, comments or feedback be addressed? Who will be making decisions for the participants? A great deal of confusion, delay and hard feelings can be avoided if the staff know to whom they should go with their concerns.

The client's right to be informed about the role of each person involved in her/his care extends to the advanced trainer, as does the client's right to refuse to have that individual present. You and the new trainers should decide in advance how to explain your presence in such a way that it does not alarm the client. Generally, it is helpful to reassure the client that both the new provider and the new trainer have already had extensive practice and are very skilled and that you, as a proficient provider, are ready to step in if necessary.

Clients may also find it reassuring and less awkward if you interact with them, by word and touch, during a procedure rather than simply observe them. Talking with the client gives you a more visible and personal role in what is probably already a crowded and uncomfortable situation. Your first responsibility, however, remains coaching and observing.

Responding to Unplanned Situations

Even when all of these elements have been considered ahead of time, there will be times when things do not go as planned. You then face the often difficult decision of whether or not to intervene. Before beginning the clinical practice sessions, you and the new trainers should discuss when and how intervention will take place, just as was decided for the classroom sessions. Typical situations that may arise include:

- You notice participants who are not involved in any activity. Should you address the situation directly with the participants or would the new trainers prefer to be told about it and deal with it themselves?

- You are approached by participants who have questions or requests. Which ones should you refer to the new trainers?

The most sensitive situation in which you may need to intervene is during a clinical procedure. At these times, you are observing on multiple levels. While your principal focus may be on the new trainer and the interaction with the healthcare provider, you must also be aware of how the newly trained provider is performing the skill. The client's response to the

procedure and interaction with the healthcare provider and new trainer are also being monitored. You must be prepared to step in at any, or all, of these levels if necessary.

There are no rules for when and how to intervene in such situations. You will have to consider a number of questions and make decisions very quickly. By thinking about the following questions ahead of time, discussing them with the new trainers and coming to agreement in advance about how these situations will be handled, a difficult situation will be made easier.

- Is the situation or mistake one that requires immediate intervention, that is, does it threaten the safety of the client, or can it be addressed after the procedure or during the feedback session?

- If immediate intervention is required, what is the appropriate action to be taken?

  - If the problem is with the healthcare provider or client, how long should you wait for the new trainer to respond to the situation before taking action? Although you want to give the new trainer ample opportunity to address the situation, you must always place the safety of the client first.

  - Should the new trainer be prompted to intervene or should you intervene directly? If there is enough time to prompt the new trainer and still not endanger the client, this is often the better option if done in a way that helps maintain the new trainer's self-esteem. The situation can then be discussed further after the procedure is completed or during the feedback session. What is an appropriate way to prompt the new trainer? A gesture? A question? More direct guidance? Again, this will often depend on the urgency of the situation. Prior discussion and agreement on how such communication will take place will make it more efficient and effective.

  - At what point should you take over the situation? How should you step in? Clearly, if prompting the new trainer does not lead to the appropriate action, or the client's safety is at risk, you must step in. Intervening in a situation can take several forms according to who is having a problem and how severe that problem is, including: coaching the provider directly, interacting with the client or performing the clinical procedure. These actions should be taken in a calm, straightforward manner that does not create anxiety for the client, new healthcare provider or new trainer.

- If you do step in, how should the new trainer behave? S/he should respond in a calm, reassuring manner and not consider your intervention as criticism or punishment. This is an opportunity for the new trainer to improve her/his observation and feedback skills; a defensive or angry response from the new trainer will only increase everyone's anxiety and interfere with the safe and efficient completion of the procedure. Discussing such situations ahead of time will ensure an appropriate response by the new trainer.

- When and how should you turn the situation back over to the new trainer? Try to return control of the situation to the new trainer as soon as the problem has been resolved. This will help maintain the new trainer's self-esteem and the confidence the healthcare provider and client have in her/him. As when intervening, it should be done in a calm, confident manner. If the new trainer is not capable of or interested in resuming control, you will need to continue managing the situation.

AFTER THE COURSE

By definition, the coaching experience ends when the course is completed and the new trainer has been qualified as a clinical trainer. There will be times, however, when you will be able to visit the clinical trainer to observe sessions in the classroom and clinic. These periodic visits help to reinforce the clinical trainer's skills and ensure that the trainer's approach to training is consistent. They also afford you an opportunity to collect data for trainer followup studies (e.g., collecting and distributing trainer logbooks, interviewing trainers, observing trainers). Finally, followup visits will help to identify proficient clinical trainers who are potential advanced trainers.

SUMMARY

Coaching a new trainer is the final phase of the process of developing competent clinical trainers. The time and effort invested in standardizing clinical skills, updating reproductive health knowledge and helping proficient healthcare providers acquire training skills may be wasted if appropriate coaching experiences are not conducted. When a new clinical trainer is coached by an advanced or master trainer as outlined in this chapter, there is a much greater possibility that the end result will be a competent clinical trainer who is well prepared to train other healthcare providers.

SITUATION RESPONSES

Situation 1 The ideal situation would have been for you, since you conducted the CTS course, to coach the candidate clinical trainer (or if you were not available, for another advanced trainer to coach the trainer) immediately following the course. In this situation, however, so much time has elapsed between the training course and the coaching experience that it may have had a negative effect on his performance.

You should have arrived the day before the course was to begin. This would have afforded both trainers the opportunity to discuss plans for the course and for you to determine the appropriate role to play. At this point, you should take notes and then meet with the new clinical trainer once the participants have left at the end of the day. You will need to be very careful not to destroy his self-esteem yet at the same time offer suggestions for salvaging the course. If at all possible, you should stay for the rest of the course.

Situation 2 There are several options:

- Assuming that each advanced trainer can coach six new clinical trainers, these courses should be scheduled immediately.
- If the participants can be divided into teams of two or three and conduct a course together, each advanced trainer would need to assist with only two or three courses.
- Schedule several CS courses, each starting 1 week after the other. One advanced trainer could assist with the first week (the most critical time) of three consecutive courses. If trainers were working in teams, that would mean that approximately six to nine trainers could be qualified in 3 weeks.

Situation 3 You should acknowledge the compliment and then suggest that you and the new trainer share responsibility for the first day. Ask which sessions the new clinical trainer would like to conduct. Be sure that she plays a major role in starting the course because this will make it easier as the course progresses and you begin to play a lesser role. Work with the trainer to determine how she plans on conducting each session and offer suggestions when appropriate. For her to gain the confidence to handle the course alone, it is critical that her first few sessions go well.

Situation 4 During the trainer meetings held before the course started, there should have been a discussion of how each trainer would give feedback to the other trainers. This process would include using the appropriate

checklist(s), making notes and following the agreed upon sequence of first asking the trainer being given feedback to describe the positive aspects of the presentation(s) and then to make suggestions for improvement. After self-analysis, the other trainers would discuss the positive aspects of the presentation(s) and then offer suggestions for improvement that were not mentioned by the trainer receiving the feedback.

Situation 5 Because sounding the uterus before applying the tenaculum to the cervix is potentially a serious problem, someone needs to intervene with the provider. You may quickly decide that, given the hesitancy of the provider, there is time to alert the new trainer and let him deal with the provider. Because you discussed ways to communicate in such situations with the new trainer beforehand, you now can get the new trainer's attention by placing your hand on his arm and then nodding toward the provider to indicate a need for intervention.

If the new trainer still does not take action or does not seem to understand what is needed, you can then directly assist the provider by quietly asking, for example, "What instrument do you need next?" or "Are you sure that is the next step?" This will also help the new trainer to identify the problem and continue helping the provider.

After the procedure is completed or during the feedback session at the end of the day, the situation should be discussed. The new trainer must be clear about the problem involved, what your expectation of him was and how he can improve in the future.

SAMPLE 6-1

CHECKLIST FOR CLASSROOM PRESENTATION SKILLS
(To be completed by **Trainer**)

Place a "✓" in case box if task/activity is performed **satisfactorily**, an "**X**" if it is **not** performed **satisfactorily**, or **N/O** if not observed.

Satisfactory: Performs the step or task according to the standard procedure or guidelines

Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines

Not Observed: Step, task or skill not performed by participant during evaluation by trainer

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR CLASSROOM PRESENTATION SKILLS					
STEP/TASK	**OBSERVATIONS**				
1. Present an effective introduction.					
2. State the objective(s) as part of the introduction.					
3. Ask questions of the entire group.					
4. Target questions to individuals.					
5. Ask questions at a variety of levels.					
6. Use participant names.					
7. Provide positive feedback.					
8. Respond to participant questions.					
9. Follow trainer's notes and/or a personalized reference manual.					
10. Maintain eye contact.					
11. Project voice so that all participants can hear.					
12. Move about the room.					
13. Use audiovisuals effectively.					

CHECKLIST FOR CLASSROOM PRESENTATION SKILLS					
14. Display a positive use of humor.					
15. Present an effective summary.					
16. Provide for application or practice of presentation content.					
Deliver an effective classroom presentation					

SAMPLE 6-2

CHECKLIST FOR CLINICAL DEMONSTRATION SKILLS
(To be completed by **Trainer**)

Place a "✓" in case box if task/activity is performed **satisfactorily**, an "X" if it is **not** performed **satisfactorily**, or **N/O** if not observed.

Satisfactory: Performs the step or task according to the standard procedure or guidelines

Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines

Not Observed: Step, task or skill not performed by participant during evaluation by trainer

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR CLINICAL DEMONSTRATION SKILLS					
STEP/TASK	**OBSERVATIONS**				
1. Use trainer's notes or a personalized reference manual.					
2. State the objective(s) as part of the introduction.					
3. Present an effective introduction.					
4. Arrange demonstration area so that participants are able to see each step in the procedure clearly.					
5. Never demonstrate an incorrect procedure or short cut.					
6. When using a model, position and talk to the model as if it were an actual client.					
7. Ask questions and encourage participants to ask questions.					
8. Demonstrate or simulate appropriate infection prevention practices.					
9. Maintain eye contact with participants as much as possible.					
10. Project voice so that all participants can hear.					
11. Provide participants opportunities to practice the skill/activity under direct supervision.					
Present an effective clinical demonstration					

SAMPLE 6-3

CHECKLIST FOR CLINICAL COACHING SKILLS

(To be completed by **Trainer**)

Place a "✓" in case box if task/activity is performed **satisfactorily**, an "X" if it is **not** performed **satisfactorily**, or **N/O** if not observed.

Satisfactory: Performs the step or task according to the standard procedure or guidelines

Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines

Not Observed: Step, task or skill not performed by participant during evaluation by trainer

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR CLINICAL COACHING SKILLS					
STEP/TASK	**OBSERVATIONS**				
BEFORE PRACTICE SESSION					
1. Greet participant.					
2. Ask the participant to review her/his performance in previous practice sessions.					
3. Ask the participant which steps or tasks s/he would like to work on during the practice session.					
4. Review any difficult steps or tasks in the learning guide that will be practiced during the session.					
5. Work with the participant to set specific goals for the practice session.					
DURING PRACTICE SESSION					
1. Observe the participant as s/he practices the procedure.					
2. Provide positive reinforcement and suggestions for improvement as the participant practices the procedure.					
3. Refer to the learning guide during observation.					
4. Record notes about participant performance on the learning guide during the observation.					
5. Be sensitive to the client when providing feedback to the participant during a clinical session with clients.					

CHECKLIST FOR CLINICAL COACHING SKILLS					
STEP/TASK	**OBSERVATIONS**				
6. Provide corrective comments only when the comfort or safety of the client is in doubt.					
AFTER PRACTICE FEEDBACK SESSION					
1. Greet the participant.					
2. Ask the participant to share feelings about the practice session.					
3. Ask the participant to identify those steps performed well.					
4. Ask the participant to identify those steps where performance could be improved.					
5. Refer to notes on the learning guide.					
6. Provide positive reinforcement regarding those steps or tasks the participant performed well.					
7. Offer specific suggestions for improvement.					
8. Work with the participant to establish goals for the next practice session.					
Use effective coaching skills					

APPENDIX A

ALTERNATIVE LEARNING METHODS

INTRODUCTION

Learning is the acquisition of new knowledge, attitudes and skills. It may occur during an organized course or through individual reading and study. The goal of clinical skills training is to assist healthcare providers in learning to provide safe, high quality services. As described in **Chapter 1**, such training should use mastery learning, be competency-based and be designed and conducted according to adult learning principles—it should be interactive, relevant and practical. Whether the training is offered as a group-based course or through individual study, it should have the following four elements:

- Transfer of knowledge
- Skill acquisition and practice
- Coaching by an experienced provider
- Assessment of performance in providing services (application of knowledge and skills)

Although most learning occurs in group-based courses, alternative learning methods are increasingly being used, especially where large numbers of individuals require training. It is important that alternative learning methods also incorporate these four elements.

This appendix describes group-based and self-paced learning approaches and discusses the advantages and limitations of each.

GROUP-BASED LEARNING

The most common approach to learning new knowledge, attitudes and skills is the group-based course. In this approach, whether it is an inservice course or a preservice class or lecture series, there is a group of participants and one or more trainers. The trainers deliver interactive presentations and demonstrations based on an existing learning package or curriculum. The participants interact, take notes, participate in classroom exercises (e.g., case studies, role plays, practice with models) and demonstrate mastery of the learning objectives. In the clinic, the trainers demonstrate skills and coach and assess participants as they practice and demonstrate competency in these skills while working with clients.

This group-based learning approach for a clinical skills course is described more fully below.

- In order to focus training on essential (need-to-know) information, trainers and participants use a learning package that contains the reference manual, course handbook for participants, course notebook for trainers, course-specific audiovisuals (e.g., videos) and other learning aids (e.g., anatomic models).

- Trainers at the course site transfer knowledge and skills to the participants through a series of classroom presentations based on the reference manual. These sessions are highly participatory, interactive and use a variety of learning materials, including anatomic models and audiovisuals.

- Pre- and midcourse questionnaires are administered to ensure that the process of transferring knowledge is effective.

- Learning guides and checklists are used to measure progress in learning skills or other observable behaviors relative to a predetermined standard. Learning guides facilitate participants' learning of the steps or tasks in performing a particular skill. Checklists objectively evaluate their performance of the skill.

- Participants' progress through the course is based on their demonstrating competence rather than on their performing a specific number of procedures or spending a certain amount of time in the clinic.

- The trainer demonstrates service delivery skills (e.g., counseling, IUD insertion and removal) using clinical role plays and anatomic models. The steps in performing these skills are outlined in learning guides which participants follow during demonstrations and practice sessions.

- As participants practice their newly acquired skills during role plays and with anatomic models, the clinical trainer functions as a coach to observe, provide feedback and ensure that the transfer of skills is successful. In addition, participants guide and assess one another using learning guides and checklists for practice. The checklist for practice is the same checklist the trainer uses as a final evaluation tool for determining if the participant is competent in performing the counseling and clinical skills.

- When participants have attained skill competency using models, they move to the clinic. The trainer demonstrates the procedure with

clients while one or more participants observe and refer to the checklist as a reminder of key steps. As participants apply their newly acquired skills with clients, the clinical trainer continues to function as a coach and observes, provides feedback and ensures that the counseling and clinical skills are being performed correctly.

- During the last 2 to 3 days of the course, the trainer uses a checklist to evaluate each participant's competency in performing counseling and clinical skills.

- Participants demonstrating mastery of information (i.e., achieving at least 85 percent correct on the midcourse questionnaire), skills (i.e., correctly performing the steps in the checklist) and practice (i.e., providing services competently to clients in the clinic) receive a statement of qualification that identifies the knowledge and skills mastered during the course.

- Although group-based training is the approach with which most healthcare professionals are familiar, it is not necessarily the best method for transferring knowledge, attitudes and skills. The advantages and limitations of group-based training are listed below.

Advantages

- Being part of a group can generate excitement and a feeling of camaraderie among participants.

- Participants learn from one another.

- Interaction among participants can add richness and depth to the learning experience.

- Participants are available to take part in demonstrations and role plays and assist with coaching one another.

- The trainer is able to focus full attention on the learning process.

- The trainer is able to ensure the quality of the learning experience.

- It is easier to standardize knowledge and skills because all participants receive the same information in the same way (if the course is delivered as designed).

- The courses are highly visible events, often providing positive recognition for both the clinical training site and the participants.

Limitations

- Individuals requiring training must wait for the next scheduled course.
- A minimum number of participants is needed, and there is usually a maximum number that can be accommodated.
- Participants must temporarily stop providing services at their clinical sites in order to attend training.
- Pace of learning is determined primarily by the trainer.
- Each trainer may deliver training differently or emphasize different aspects of the information (if the course is not delivered as designed).
- It can be difficult for the trainer to accommodate each participant's learning style.
- Trainers may have limited options when an inappropriate participant attends the course.
- A large client caseload is needed at one time so that all participants can have adequate clinic experience.
- The arrival of a large number of participants at a clinic may create challenges for clinic staff.
- Large quantities of materials and supplies must be obtained and stored.
- There may be costs associated with participant attendance (e.g., travel and per diem) and facilities rental.

Relying solely on group-based learning can severely tax the limited resources of a national training system. As mentioned above, only small numbers of providers can be trained at one time, making it difficult to have an immediate impact on meeting the demand for trained providers. In addition, the quality of the training may lessen as trainers give the same course repeatedly. Finally, it is often a better use of resources to have a trainer working with learners in the clinic as services are being delivered, rather than spending time in the classroom. These constraints have led trainers to look for alternative learning approaches, particularly for how to deliver the knowledge portion of a course. Most of these other approaches use a form of **self-paced learning**.

SELF-PACED LEARNING

Self-paced or individualized learning is defined as learning directed by the individual in order to meet personal learning objectives. Although **self-paced learning** and **individualized learning** have essentially the same meaning, there are some subtle differences. In self-paced learning, the learner controls the pace of the learning process. For example, in a self-paced computer-based course, two clinicians might begin the course on the same day but one may finish days ahead of the other. By contrast, in individualized learning, there may be some time parameters. For example, a structured OJT course may require the individual to reach specific points in the course at specific times. The learning is still targeted to the individual, but the pace of learning may be partially controlled by the trainer or facilitator. In this appendix, the term self-paced learning is used to describe both approaches.

Examples of Self-Paced Learning

In self-paced learning, the content, learning sequence, pace of learning and possibly even the media are determined by the individual. Examples of self-paced learning include:

- Reading a book to acquire new information about a topic.
- Reading a book, listening to accompanying audiotapes and completing exercises in a workbook.
- Reading a reference manual and watching a video.
- Completing a CAL course that uses interactive computer modules for knowledge transfer and one-on-one work with the clinical trainer for skills transfer, first with models and then with clients.
- Completing a CAL distance learning course on the Internet (knowledge transfer only).
- Participating in a structured OJT clinical skills course that involves reading assignments in a reference manual, completing exercises in a workbook and working one-on-one with the clinical trainer for skills transfer, first with models and then with clients.

Advantages

In most group-based courses, the trainer attempts to present the information to the typical or average learner. The more capable learners may become bored or frustrated, while the less capable learners may feel lost or overwhelmed. By contrast, a self-paced approach allows the learner to make many of the decisions about when, where, what and how quickly to learn. The trainer functions as a guide and facilitator of learning.

And there are other advantages to this "just-in-time" approach to learning:

- Learners can learn information and skills when they need them.
- Learners are not as dependent on the structure and pace established by the trainer.
- Assuming control of the learning process is highly motivating for many learners.
- Each learner has the same level of participation in the learning process. Participants are active rather than passive, and assume greater responsibility for their own learning.
- Because most self-paced learning courses allow participants to begin and end a segment of the training course at any time, it is an efficient use of training time and resources.
- Learning activities can be organized sequentially, because each component in a self-paced course has objectives that must be met before proceeding to the next component.
- Self-paced learning provides trainers with the time to focus more attention on participants who need assistance. Although participants who are not having difficulties certainly should not be neglected, this approach allows the trainer to spend time with participants who do require assistance.
- Essential equipment, materials and supplies used can be kept at a minimum because only one or two participants may be involved in training at any one time.

Limitations

As with any approach to learning, there are also limitations to consider:

- Most participants have not learned this way before, so they may feel uncomfortable with learning on their own.
- Participants may lack the necessary motivation to work independently.
- Participants may have poor reading skills, especially when the language of the reference materials is different from their primary language. Because most self-paced learning approaches require reading, this can be a major limitation.

- Participants may possess poor time management skills. Procrastination may make the self-paced learning process less effective than it can be.

- Most trainers did not learn this way and therefore need training to become effective facilitators of self-paced learning.

- Trainers may feel that they do not have time to manage a self-paced learning system.

- It may be challenging and time-consuming to design and develop the appropriate learning materials, in either print or electronic format.

- Without good planning, it may be difficult for the trainer to arrange for times to meet with the participant.

- Trainers may find that documenting, evaluating and updating participants' progress is very time-consuming.

COMPUTER-ASSISTED LEARNING

Rapid changes in technology have made the computer an integral part of our personal and professional lives. Concurrent with changes in computer technology have been major changes in how the computer is being used to enhance education and training. In many schools, it is now commonplace to find students using multimedia computers as an integral part of the learning process. Clinicians can take online continuing education courses or learn new information from a CD-ROM. Clearly, learning with the aid of a computer is here to stay. But what are the implications of using CAL for training reproductive health professionals? CAL means using computer technology to assist with, augment or deliver part or all of the instruction and to evaluate participant progress along the way. There are several terms commonly used in CAL:

Multimedia. Multimedia simply means a variety of media together. On the computer, the media can be text, sound and still or moving pictures. Multimedia instruction can simulate a real-life experience, such as decision-making on the job, thereby allowing the learner to progress through training by interacting with realistic situations. **Interactive multimedia** are those that require the participant to interact with the computer by completing exercises, answering questions and solving problems.

Computer-based training. Computer-based training, also known as computer-assisted instruction (CAI) or computer-assisted learning (CAL), is instruction delivered by a computer. Originally, it was text-based, but

most computer-based training programs now encompass many multimedia elements.

Internet or Web-Based Training. Many organizations are beginning to provide multimedia training materials on Internet websites so that training will be more accessible and materials can be more easily modified.

Distance Education. Distance education (also known as **distance learning** or **open learning**) is instruction in other than the traditional face-to-face or instructor-led format, often at a time and place of the individual's choosing. It can be in the form of self-study materials, CAL modules, Internet materials or some combination of these or other media.

Many of the terms used above have come to be used interchangeably. Multimedia instruction, for instance, can be delivered via the Internet or via a CD-ROM on a computer. The use of the Internet and CD-ROM can also be combined. In this type of learning, instructional content on the Internet can refer to related information on an individual's CD-ROM. The common element in these computer-assisted approaches is the use of technology.

Why Use Technology to Assist Learning?

CAL and traditional, group-based learning have the same purpose: transferring information and skills. In many ways, delivering instruction using computer technologies is similar to delivering it in a face-to-face format. Good instruction fulfills the desired learning outcomes, whether instructor-led or technology-based. As with any alternative learning approach, there are advantages and limitations to consider:

Advantages

- Improves access to instruction
- Complements a wide variety of learning styles
- Is non-threatening, allowing participants with varying knowledge and skills to obtain instruction in a more comfortable manner
- Allows individuals to choose a convenient time and place for learning
- Increases instructional effectiveness, because learners can review each topic as much as they need to, and do not have to progress to the next topic until they feel ready
- Results in increased retention because each learner has the same level of participation in the learning process
- Provides immediate feedback to participants

- Allows consistent, standardized presentation of material
- Allows easy updating of materials
- Reduces training time and costs

Limitations Some of the limitations of CAL are that it involves:

- Initial development time and high cost
- Access to computers and, for online learning, the Internet
- Technical support for computers
- Training of trainers to facilitate CAL
- Security for computers

STRUCTURED ON-THE-JOB TRAINING

Structured OJT (also referred to as **site-based** or **clinic-based training)** is a form of self-paced learning that allows the individual requiring training to acquire the necessary knowledge and develop the required skills while on the job. It must include all four of the critical training elements listed on **page A-1**. Although OJT programs may exist in several formats, there are many characteristics common to all OJT programs. OJT courses have the following advantages and limitations:

Advantages

- Participants can be trained immediately without waiting for a scheduled course.
- The problem of inappropriate participant selection (e.g., inclusion of an individual in a course for political reasons, selection of a participant who is not interested in training) is avoided.
- Clinic personnel who are proficient healthcare providers and trainers control the quality of the training experience.
- Training is designed to meet local needs.
- It is easier to obtain the client caseload needed for participants to reach competency.
- Once installed, it may be more sustainable than traditional group-based training because it has been integrated into the work of the clinical site.
- It is less expensive than group-based training.

Limitations

- There are fewer opportunities for interaction with other people than in a group-based course.
- Limited reading abilities of the participants often create problems.
- There is the tendency to "see one, do one, teach one" instead of following the steps in the OJT program.
- There may be a tendency for participants to work with clients instead of anatomic models during the early phases when their skills are weak.
- OJT trainers may not be provided with adequate resources to conduct training adequately (i.e., sending them a packet of materials may not be sufficient).
- Maintaining quality at a national level can be difficult.

CAL AND OJT: TWO SCENARIOS

Table A-1 compares two possible scenarios—CAL and OJT—for training clinicians to provide IUD services. The main differences between the two scenarios center around preparation of the trainer, how the participant learns new information, and how the precourse and midcourse questionnaires are administered and scored. When the participant moves into the portion of the course dealing with clinical skills, the two scenarios are almost identical. Note that the actual OJT program in a given country may not be as linear as the one described here, and may allow the participant to move back and forth between the reference manual and practice exercises. In both examples, participants receive a reference manual to use as a resource in their workplace.

Table A-1. Comparison of CAL and OJT Training in IUD Counseling and Clinical Skills

	CAL SCENARIO	OJT SCENARIO
PRELIMINARY ACTIVITIES	Print and multimedia materials are developed and a system for implementing, supervising and evaluating the program is designed.	Print materials are developed and a system for implementing, supervising and evaluating the program is designed.
	A facility is identified and equipped with computer(s) and technical support. A clinical site for skills practice is identified. Learning materials provided to the site include CD-ROM(s) containing the CAL course, a video and anatomic models.	A service delivery site that needs to train providers is identified. Learning materials provided to the site include a video and anatomic models.
	An experienced trainer is oriented to the CAL method and responsibilities of a CAL facilitator.	An experienced IUD service provider is oriented to the OJT method and trained to be an OJT trainer.
	A proficient clinician who is interested in becoming an IUD service provider is selected for training.	
	The clinician as participant meets with the trainer to discuss the program structure, schedule, objectives, assignments, and knowledge and skill evaluations.	
	The participant receives a set of materials including an IUD reference manual and participant's handbook that describes each of the steps in the CAL process. The participant is also shown how to turn on and use the computer.	The participant receives a set of materials including an IUD reference manual and a participant's handbook that describes each of the steps in the OJT process. The handbook contains practice exercises or assignments that the participant will complete after reading information in the reference manual.
TRANSFER OF KNOWLEDGE	The participant enters the first module and completes a precourse questionnaire based on content in the CAL course. The computer scores the questionnaire and presents the results to the participant.	The participant takes a precourse questionnaire based on the content in the reference manual. The trainer scores the questionnaire (the answers are found in the trainer's notebook) and reviews the results with the participant.
	The questionnaire results are used by the participant and trainer to identify topics in which the participant has some background and those in which more study will be required.	
	The trainer observes the participant's counseling and clinical skills through role play and performance using the pelvic model. Clinical skill assessments may include performing a pelvic examination, loading the Copper T 380A IUD in the sterile package, and IUD insertion and removal.	
	The participant begins the individualized process of information transfer (i.e., learning the content) by working through the CAL modules (similar to chapters in the reference manual), completing practice exercises and taking brief module assessments to ensure understanding of the information presented in each module, all on the computer.	The participant begins the self-paced learning process by reading the appropriate sections of the participant's handbook and following the series of steps listed, including reading chapters in the reference manual and completing exercises.
	Upon completion of all modules and/or assignments, the participant takes the midcourse questionnaire.	
	The computer scores the questionnaire and presents the results to the participant.	The trainer scores the questionnaire and reviews the results with the participant.
	If the participant scores at least 85% correct, s/he is considered to have mastered the knowledge portion of the course. If the score is less than 85%, the computer (for CAL) or the trainer (for OJT) identifies the topics requiring further study. The participant studies these topics and repeats the knowledge assessment until achieving a score of at least 85%.	

	CAL SCENARIO	OJT SCENARIO
TRANSFER OF CLINICAL SKILLS/COACHING	At the point indicated in the participant's handbook, the participant meets with the trainer for a demonstration of the IUD counseling process. The trainer and participant review the steps outlined in the counseling learning guide and view a video of a counseling session if one is available. Following the demonstration, the participant practices the counseling steps during a series of role plays, either with the trainer or with another staff member. The trainer functions as a coach and observes and provides feedback as the participant practices.	
	When the participant feels comfortable with the counseling process, the trainer uses a checklist to evaluate competency in counseling during a role play.	
	After the trainer determines that the participant is competent during the role play, the participant observes the trainer counseling a client in a clinic setting. The participant then counsels several clients as the trainer (now serving as a coach) observes and provides feedback.	
	When the participant feels comfortable counseling clients, the trainer evaluates these counseling skills to determine if the participant is competent.	
	At the point indicated in the participant's handbook, the participant meets with the trainer for a demonstration of IUD insertion and removal using an anatomic model. The trainer and participant review the steps outlined in the learning guide and view a videotape showing the procedures, if one is available. Following the demonstration, the participant practices insertion and removal using a model. The trainer functions as a coach and observes and provides feedback.	
	When the participant feels comfortable with the insertion and removal procedures using a model, the trainer evaluates these skills with a checklist to determine competency.	
	After the trainer determines that the participant is competent with models, the participant observes the trainer working with a client in a clinic setting. The participant then inserts and removes IUDs with several clients while the trainer, as coach, observes and provides feedback.	
ASSESSMENT	When the participant feels comfortable with the process, the trainer uses a checklist to evaluate these skills to determine if the participant is competent.	
	When the participant has demonstrated mastery of the required information and skills, the participant receives a statement of qualification which identifies the knowledge and skills mastered during the course.	

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APPENDIX B

APPLICATION OF THE STAGES OF GROUP DEVELOPMENT

This appendix explains how the concepts of group development outlined in **Chapter 2** can be put into practice during a CS or CTS course. In fact, they apply to all group training situations.

THE TRAINER'S PREPARATIONS FOR THE GROUP

Participants generally arrive at a course eager to learn. Some may be curious about why they were chosen to attend, or may only have been informed of their participation in the course on the morning of the first day!

The main challenges facing the trainer in the beginning of the course include:

- being prepared,
- knowing the structure and design of the day (following the suggestions appearing in the course outline), and
- managing the range of emotions in the room.

It is essential that you be organized, ready for the first day and, above all, enthusiastic. Practically, this means that you have spent time the previous day working on the room arrangement, testing audiovisual equipment and preparing all flipcharts needed for the first day. Name tents, markers and all participant materials are at each participant's place. When participants arrive and see a well-organized room, a space for themselves at the table and an agenda written on the flipchart, they receive the message that you are prepared. The participants also understand that you are interested in their comfort and value their participation in the course. Finally, this preparation demonstrates to them that this course is important to you, and that you consider it worth your time and effort.

Often the way that the room is set up (tables arranged in a U-shape so that participants are facing one another) and the materials that are used (flipcharts and anatomic models) are new to the participants. Add to these new elements uncertainty about the course itself and a room full of unfamiliar people, and participants will often experience some anxiety. It is your responsibility to reduce this anxiety and replace it with an atmosphere of excitement.

As participants arrive, they are leaving behind busy lives, full schedules and many responsibilities. You must involve the group in the content of the course without overwhelming them, thus allowing the group members to begin letting go of their preoccupation with activities outside the course.

STAGES OF GROUP DEVELOPMENT

The structure of the first day provides a "road map" of the territory that will be covered during the course. Thereafter, each day presents a particular stop along the road. This appendix describes many of the activities which occur during CS and CTS courses, with reference to the following stages of group development discussed in **Chapter 2**:

- Stage 1: Beginning—Eager and Anxious
- Stage 2: Middle—From Frustration to Satisfaction
- Stage 3: End—Through Creation to Completion

The activities described in this appendix are presented in the course schedule, and suggestions for carrying out these activities are given in the course outline. For each course activity presented in the boxes for each stage (below), potential group dynamics and suggested strategies for managing the group are described. Many activities are the same for CS and CTS courses, as are the dynamics in the group and strategies for the trainer. In these instances, CS and CTS courses are described together. When the activities and strategies for CS courses are different from those of CTS courses, they are addressed separately.

STAGE 1: BEGINNING

CS AND CTS COURSE ACTIVITIES:	Welcome, introductions, overview of the course

Dynamics in the group:

In both **CS and CTS courses**, the group follows the tone set by you, the trainer. You are in full control of everything in the room. Participants are serious about what they will experience in the course and they want to succeed. They may be apprehensive about what will happen during the course.

Strategies for the trainer:

In both **CS and CTS courses**, begin enthusiastically and be thoroughly prepared. Design this portion of the schedule so that the pace is steady, but not rushed. Make eye contact with the participants and be aware of how you move around the room. Encourage participants to tell the group the names they would like you and other participants to use (preferably first names with no professional titles). Start using participants' names as soon as they are displayed on their name tents. Participate in the introduction activity and involve the participants as you provide an overview of the course as described in the course outline.

CS AND CTS COURSE ACTIVITIES:	Precourse questionnaires, identification of group and individual learning needs

Dynamics in the group:

The questionnaires are often seen by both **CS and CTS course** participants as "tests." The energy in the group changes once the idea of knowledge assessments has been introduced. Reactions range from fear of failure and embarrassment to dismissing the questionnaires as unimportant. After completing the questionnaires, some members may be frustrated by being confronted with concepts and language outside of their experience. It is not uncommon for a very large percentage of the group to answer the same items incorrectly. When this happens, the group often moves to a discussion of the validity of the questionnaire.

Strategies for the trainer:

Stress that the purpose of the precourse questionnaires, in both **CS and CTS courses**, is to give the participants an idea of what will be covered during the course. They are not expected to know all of the answers, or they would not need to take the course. The questionnaires can also help participants identify those areas where they have previous knowledge and those where additional study will be required. The results of the questionnaires give you, the trainer, an idea of where the group's strengths are and where extra time may be required. Stress that the results of the precourse questionnaire are anonymous and that neither you nor the other participants will know how any individual did.

After participants have completed their questionnaires, review the answers, allowing individuals to score their own questionnaires. Complete the group assessment matrix by asking each participant to complete her/his section of the matrix. You will then review the results from the perspective of the entire group, stressing those areas in which the group did well and those in which special emphasis will need to be placed.

CS AND CTS COURSE ACTIVITY: Review of course materials

Dynamics in the group:

When **CS or CTS course** participants first enter the training room, the sight of all of those books and materials (e.g., reference manuals, handbooks) can be overwhelming. Participants may wonder about the purpose of each item, doubt if they will be able to understand all of the information and worry about being tested. They may also wonder if they will be allowed to take all of these materials home.

Strategies for the trainer:

Let the **CS or CTS course** participants know that the learning materials are theirs to keep and that they should immediately write their names on each item. Point out that all training presentations will be based on one or more of the training documents and that participants will be told ahead of time which document(s) will be used during each day of the course. Allow participants time to look through each item, examine their tables of contents and ask any general questions about the documents.

CS AND CTS COURSE ACTIVITY: Discussion of participants' expectations

Dynamics in the group:

Because **CS and CTS course** participants bring many and varied expectations to the training course, it is essential that these expectations be expressed and discussed. It is also important at this time for you to voice your expectations. All of the participants are probably not accustomed to talking about what they want in a course. Some may not understand what is asked for in this activity; others may see this as a waste of time. Some may think, "Why are we being asked to do this? Doesn't the trainer know what this course is about?"

Other than the participant introductions, this is the first time in the course that the group experiences the two-way communication that will become the standard way of working. The result of this discussion is clarification and, if necessary, negotiation. If there are conflicting expectations or expectations which cannot be met, it is your responsibility to define what lies within the boundaries of the course. The final outcome of this exchange is an agreement between you and the group. Making this agreement plants the initial seeds of trust between you and the group.

Strategies for the trainer:

Knowing that there might be a range of reactions to this activity, in both **CS and CTS courses** be prepared to accept all comments, questions and attitudes. Be honest with the group about what specifically can and cannot be accomplished during the course. For example, if the course content is training skills, there will not be time for a contraceptive technology update on injectable contraceptives unless participants wish to extend the training day. This kind of clarity respects the participation of group members and models professional trainer behavior.

Take responsibility for discussing the establishment of norms for beginning and ending on time, the expectation that participants will attend all sessions of the course and specific requirements for their receiving a statement of qualification or participation at the end of training. If the course is conducted at some participants' place of employment and they are responsible for client care, arrangements need to be made to support their full participation in the course.

The final element of this discussion concentrates on the "partnership" created as a result of the interactive learning methods used. Unlike traditional education where the professor or teacher is the only authority in the group and the students are passive "empty vessels to be filled," this type of learning acknowledges the experience and expertise of all group members. Participants are expected to assume responsibility for their own learning by contributing to all learning activities.

CS COURSE ACTIVITY:	**Precourse assessment of participants' skills**
CTS COURSE ACTIVITY:	**Skill standardization (if included)**

Dynamics in the group:

Participants in a **CS course** may react even more strongly to this pre-assessment of their clinical skills than they did to the precourse questionnaire. They may realize that their skills are limited or that they have no experience with the skill(s) in question. Being asked to demonstrate such skills in front of you and other participants will undoubtedly cause anxiety and concern, and unlike the questionnaire, anonymity may be difficult to ensure. Some may question the need for such an assessment, or even refuse to participate. Others may not take it seriously, joking and making light of the assessment process as a way of hiding their anxiety and/or limited skills.

Often, clinical skills standardization is included as part of the CTS course. Participants attending a **CTS course** are presumably proficient service providers and should not be concerned about the standardization of their clinical skills. Nevertheless, the prospect of any demonstration in front of peers will create participant anxiety. When participants do not meet the selection criteria (e.g., are not proficient service providers, are not interested in becoming trainers), their anxiety levels can be extremely high. This anxiety may cause participants to make comments such as, "I don't need to have my skills checked because I do this procedure all of the time" or "This is a waste of my time—anyone can counsel."

Strategies for the trainer:

As with the precourse questionnaire, stress that the purpose of this **CS course** pre-assessment is to allow the participants to identify their own strengths and weaknesses. It allows you to do the same on both an individual and group basis, and to focus the course activities appropriately. Remind the participants that they are not expected to have well developed skills or they would not have been invited to the course. Nevertheless, many participants come to courses with some skills, and the skill being taught may require other more basic skills, such as pelvic exam for IUD insertion. It is therefore important that you know the skill level of each participant.

Try to make each **CS course** participant's assessment as private as possible. Do not let participants observe the assessment of others, but rather encourage them to review the course materials, read the manual, and so on to keep busy when it is not their turn. This will also prevent the performance of others from influencing their own, thereby providing a more accurate assessment for you. Keep the assessment brief, giving positive feedback when appropriate. There will be time later in the course for coaching and skill development. If you do give more complete feedback, privacy must be ensured.

Approach the **CTS course** skill standardization (both counseling and clinical skills) as opportunities for participants to demonstrate their skills. Stress that the purpose is to ensure that all of the trainers will be using the same approach when conducting training. If appropriate, review the checklists that will be used during the standardization process. In some situations, you may not wish to share the checklists because it may affect how a participant demonstrates a skill.

STAGE 2: MIDDLE (FRUSTRATION)

CS COURSE ACTIVITIES:	**Transfer of technical information, initial development of clinical skills with models, practice and coaching**
CTS COURSE ACTIVITIES:	**Use of competency-based assessments to develop and assess skills, use of anatomic models to develop clinical skills, introduction and practice of coaching**

Dynamics in the group:

By the middle of either a **CS or CTS course**, participants are comparing their original expectations of the course with what is actually happening. Some participants may be disappointed that the experience is not exactly what they hoped for and expected. Although participants sometimes express their disappointment to the group, usually they do not mention it because they do not want to appear impolite.

At this stage of either the **CS or CTS course**, the participants may experience increased dissatisfaction with their total dependence on the trainer. This is a natural reaction for independent adult professionals who are used to functioning autonomously in their work situations. Resistance to the authority of the trainer (if it occurs) may be expressed by arriving late for sessions, competing with you for leadership of the group by challenging the course structure or questioning the validity of some of the training concepts.

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Strategies for the trainer:

The most appropriate response to this stage of the group dynamic of either a **CS or CTS course** is to expect these behaviors and resist taking them personally—often difficult for new trainers. Thus far in the course you have chosen behaviors that support the group in learning clinical and/or training skills by focusing on the activities outlined in the course schedule. At this stage you must choose responses that allow participants to experience their frustration and move through it without losing their focus on the course content. To engage group members by defending the content or process of the course diverts their attention away from the work of the course. Listen and acknowledge the situation. This respects the participants' experience and influences how they use their time and resources. Provide coaching, positive feedback and encouragement at every opportunity. This stage in particular requires thoughtful behavior modeling on your part.

Before explaining the beginning practice with models or the coaching process in the **CS or CTS course**, it is important to demonstrate the care and use of the pelvic or other model being used. Practicing with an anatomic model and learning to treat the model as if it were a client are new concepts for most participants. Emphasize that it is natural for some participants to feel overwhelmed because this approach is new and different. Stress that participants working in small groups will be given time to practice these new skills.

As trainers mature, they will develop their own style of managing this stage of the group development in the **CS or CTS course**. There is no "one best way." Each trainer must be aware of the choices available in any situation and respond in ways which will further the primary goal of the course—to produce skilled clinical trainers.

Dynamics in the group (continued):

For participants in a **CS course**, this portion of the course will offer many challenges. For some the amount of information and skills to be learned in a short period of time may be overwhelming. For those with previous experience, what they are asked to learn and how they are expected to learn it may conflict with prior knowledge and experience. They may have observed other practices or received different information from "experts" in their work sites or in other courses. This conflict may cause them to question you and resist accepting the course content and methodology. Still other participants may become frustrated if they feel that they are not learning and mastering the skills fast enough; they may choose to blame you or the teaching methodologies. All these concerns may be accompanied by anxiety about practicing in front of their peers. They may not fully participate in practice sessions as a result. All participants will be looking for the relevance of the course content to their daily work situations.

The skills introduced in this portion of the **CTS course** are more complex. Some of the concepts and skills include coaching, using the anatomic model to demonstrate a clinical skill and using competency-based assessments as part of the skill development and assessment process. Each of these skills requires an integration of a number of concepts and often demands changes in behavior that the participants may find uncomfortable or unfamiliar. In some groups, members will assist one another with the demands of some of the difficult assignments.

Also during this time period, participants in a **CTS course** are beginning to prepare for their first presentations before their peers. Anxiety and doubt about their ability to perform are common.

STAGE 2: MIDDLE (RESOLUTION OF FRUSTRATION)

CS COURSE ACTIVITIES:	**Continuing development and assessment of clinical skills on models, mastery of knowledge on midcourse questionnaire**
CTS COURSE ACTIVITIES:	**Preparation and use of audiovisuals; practice of coaching skills with peers; practice of demonstration skills with anatomic models; participants' assumption of responsibility for opening activities, introduction of agenda and management of review of day's activities**

Dynamics in the group:

As the participants in a **CS course** continue to practice on models, their skill and confidence increase. They begin to recognize that they can master these skills with coaching from you and assistance from the other participants. In addition, many also discover that they, in turn, can be of help to others. The group often consciously works together to ensure that everyone meets the learning objectives. Although participants generally feel good about their skills, they still experience some anxiety during the assessment process. When all of their efforts result in your assessing them as competent on models, they confidently look forward to moving to the clinical practice site and working with clients.

At this time, **CS course** participants also complete the last few information sessions. They then demonstrate their mastery of the knowledge presented in the course by successfully completing the midcourse questionnaire. This too contributes to their confidence and readiness to move into the clinical practice site.

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Strategies for the trainer:

Participants in a **CS course** should be given as much time as possible to work with models in order to master the clinical skills. This should include coaching by you. Give particular attention to those participants who are having the most difficulty, while at the same time ensuring that all participants receive adequate feedback. The assessment process should be conducted in a positive manner, so as to reduce the stress involved. Each participant's assessment should be kept as private as possible, with feedback provided so that the other participants cannot hear it. Should a participant **not** perform adequately, the individual should be given another opportunity, or as many as are needed, without being made to feel inadequate. Participants should be encouraged to help one another as well. The assessment process must be an honest and accurate one, however. It is never appropriate for a trainer to "pass" a participant unless the individual has indeed demonstrated competency in the skill.

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Dynamics in the group (continued):

In this portion of the **CTS course**, time is used for practice of all the new skills related to clinical training. If the course has been shortened to fewer than 10 days, practice time is decreased dramatically. Often in this situation, participants will arrive early or stay late to practice on the models, review assignments with peers or discuss training methods with you. A 10-day course affords several more days for practice and feedback.

Practice sessions in the **CTS course** provide participants with more confidence and they begin to believe that they can master new training skills. Activities are designed to provide participants with the opportunity to give feedback to each other during the practice sessions. Group members are now relying on one another as well as you for clarification and discussion of course material. This acknowledgment and respect for other group members increases group cohesion and creates a safe place for feedback to occur. Often during this stage, participants will take risks in presenting a new warmup activity, facilitating a daily summary or finding another way to present some of the learning material which fits the clinical situation in their particular country.

Strategies for the trainer (continued):

Providing time to practice with the models during the **CTS course** will allow the participants to focus on the coaching process. Give clear demonstrations of the coaching process, using both counseling and clinical skill examples. These demonstrations should involve as many of the participants as possible. Immediately following the coaching demonstration(s), the participants should practice coaching using the models, learning guides and checklists for practice. You will function as a coach during the practice sessions, moving among small groups of participants, providing positive feedback and offering suggestions. This constant, positive contact with you will help to reduce participants' frustration and concerns.

Observing the **CTS course** participants in action, you will become aware of how the group has matured in taking responsibility for its own learning. It is critical that you let go of the total control you have maintained until now. You are not abandoning the authority and responsibility vested in this role, but consciously choosing to be of service differently. At this stage, give fewer directions and assume the role of coach and resource to the group. Interventions in the total group should usually be limited to observations that reinforce the training concepts discussed earlier in the course, or suggestions that highlight a particular training process.

STAGE 3: END (INTEGRATION AND CREATION)

CS COURSE ACTIVITY:	**Clinical practice**
CTS COURSE ACTIVITY:	**Preparation for presentations to the group**

Dynamics in the group:

Having demonstrated their mastery of knowledge on the midcourse questionnaire and of skills by trainer assessment, **CS course** participants are now ready and eager to move into the clinical area. This will provide them with the opportunity to bring together all the information and skills that they have been learning —counseling, clinical procedures, IP, up-to-date technical information—as they provide high quality services. They will want to do as many procedures and as many different activities as possible. They will be eager to share their experiences with you and other participants during the clinical conferences. Their enthusiasm may be lessened, however, should they discover that the reality of the clinical site does not completely match what they were taught.

For many **CS course** participants, this excitement is also accompanied by some anxiety. They wonder if they will perform as well when working with clients as they did with models. They may be concerned about the reactions of the staff in the clinical practice sites, especially if they are colleagues of the participants. And they realize that you will be conducting another assessment of them.

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Strategies for the trainer:

To maintain their enthusiasm and ensure a successful clinical practice experience, the participants in a **CS course** must be well prepared. This includes orienting them to the clinical site and introducing them to the staff, sharing the learning objectives and plan for achieving them for each day, and alerting participants to some of the inconsistencies between classroom and clinic that they may encounter. Activities and clinical conferences can also address these inconsistencies throughout the clinical experience. Participants should clearly understand that while every effort will be made to provide ample opportunities to practice the skills being taught, the provision of safe, efficient services is the top priority regardless of their own learning needs. They should also know which activities require your supervision and which do not. Reassure them that you will be available to help them throughout the experience. Clinical conferences should focus on letting the participants share their experiences in such a way that others can learn from them too. Be aware of the concerns of the participants and offer encouragement that they will perform well in the presence of colleagues and clients. As in the classroom, assessment of participants should be conducted in a positive, professional and honest manner.

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Dynamics in the group (continued):

This is the first time **CTS course** participants have had the opportunity to synthesize their knowledge and skills. Depending on the size of the group, the presentations are given individually or in pairs. Ideally, the participants are able to present a traditional classroom presentation using information from a learning package reference manual. Participants (individually or in pairs) also demonstrate a clinical skill, role play a clinical coaching situation, demonstrate how to assess a clinical skill or facilitate the use of a case study or counseling role play.

The energy in the group is focused and intense. Everybody wants to make an excellent presentation. It is not uncommon for participants to spend hours preparing on the evening before the presentation.

When participants work in teams, they are able to challenge one another and discuss issues without fear of damaging working relationships. If no agreement is reached, you can be called on for an outside opinion. Communication is direct and honest as each member recognizes the contributions of others.

Strategies for the trainer (continued):

The **CTS course** trainer ensures that all materials the participants will need for their presentations are ready and available by the time participants start planning them.

Be available for consultation during this time and maintain contact with the group by checking with participants while they are working on their presentations. This is not the time for you to approve or disapprove of presentation designs (unless the information the participant is planning on presenting is inappropriate or incorrect). If your opinion is sought regarding a content or process issue, work with the participant to review the consequences of certain choices and leave the decision to the participant(s). When assigning the presentations, stress that this is a practice session and perfection is not expected. Some of the most significant learning can occur when a presentation does not proceed as planned. It is the responsibility of the trainer and every participant to maintain a safe learning climate so that everyone learns, no matter what happens during the presentations.

You will notice some anxiety in the participants as planning time draws to a close. Recognizing this anxiety as part of the process does not remove it, but simply acknowledges that some stress is part of the trainer's job.

STAGE 3: END (COMPLETION AND ENDING OF THE COURSE)

CS COURSE ACTIVITY:	**Close of the training course**
CTS COURSE ACTIVITIES:	**Presentations by all participants in the group, feedback to participants from trainers and peers, close of the training course**

Dynamics in the group:

During the latter part of the **CTS course**, participants will deliver presentations to their peers. Anxiety may run high as participants finish preparations and move to the front of the training room to make their presentations. Participants may feel a combination of many emotions, ranging from excitement at the prospect of making an effective and successful presentation to fear of failure. At the same time, participants know the end of the course is near and are excited about returning home. They may also feel regret at leaving the colleagues with whom they have spent so much time during the course. These emotions may make it hard for participants to focus on the new conceptual material you discussed in the sessions after their presentations.

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Strategies for the trainer:

Ensure, through the following actions, that **CTS course** participants are fully prepared to deliver their presentations:

- Provide opportunities for participants to practice their presentations (e.g., during the training day, evenings, weekend).
- If the equipment is available, allow participants to record their practice presentations on video and then analyze their own performances.
- Allow participants to sign up for the presentation time they choose instead of assigning them a specific time.
- Ensure that all of the audiovisual equipment is in working order the day of the presentations.
- Encourage the participants to applaud at the conclusion of each presentation.
- Ask participants to provide immediate written feedback to each presenter (i.e., list at least three effective presentation skills and one suggestion for improvement).
- As soon as possible after the presentations, you and the other trainers should sit down with each participant (or small group of participants) to provide feedback and review the video of each participant's presentation.

Although you may feel less energetic and focused after the presentations, it is important to be as enthusiastic and creative as possible during the rest of the sessions to maintain participants' interest and enthusiasm.

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Dynamics in the group (continued):

Participants in both **CS and CTS courses** look forward to returning home to their families and friends, and putting into practice what they have learned. At the same time, they feel regret at leaving their new friends in the group.

Strategies for the trainer (continued):

For the end of either a **CS or CTS course**, you have several options. One of the most common is to involve the participants in planning a closing ceremony. This could be as simple as you and the other trainers making closing remarks immediately following the course summary and evaluation. Review the highlights of the course and challenge participants to apply their newly acquired knowledge and skills on the job. For a **CTS course**, you should also review the support available as individuals plan and conduct training courses (i.e., coaching, material support).

Other closing ceremony options for a **CS or CTS course** include a formal lunch, dinner, reception or other event which may include special guests to make remarks and assist with the presentation of statements of qualification or participation. Presentation of a group photograph will help create a positive feeling as participants leave the closing ceremony and depart for home.

GLOSSARY

Active Listening — Communication technique that stimulates open and frank exploration of ideas and feelings and enables trainers to establish trust and rapport with participants. In active listening, the trainer accepts what is being said without making any value judgments, clarifies the ideas or feelings being expressed and reflects these back to the participants.

Advanced Trainer — Trainer who can transfer both clinical skills and clinical training skills to proficient healthcare providers. The advanced trainer should also be knowledgeable and experienced in conducting various types of reproductive health courses. Generally, an advanced trainer first has been a proficient healthcare provider, then a clinical trainer and has completed an advanced training skills course and practicum (i.e., conducted a clinical training skills course with an advanced or master trainer). (See also **Clinical Trainer** and **Master Trainer**.)

Advanced Training Skills (ATS) Course — Training course during which proficient clinical trainers acquire the skills needed to effectively transfer training expertise to others by training them as trainers, i.e., to conduct clinical training skills courses. Course content also includes group facilitation, problem-solving and clinical decision-making skills.

Algorithm — A structured approach to problem solving that graphically shows all of the possible choices to solving a clinical problem and the sequence of steps in reaching those solutions. A **clinical algorithm** creates a picture of a diagnostic reasoning pathway. (Also known as a flowchart or decision tree.)

Alternative Learning Methods — Learning methods or approaches that are not group-based. Examples include **Computer-Assisted Learning, On-the-Job Training** and **Self-Paced Learning**.

Audiovisuals — Materials used to supplement learning activities. Audiovisuals highlight key steps or information, reinforcing the learning process. They include writing boards, flipcharts, transparencies, slides and videos.

Behavior Modeling — Learning a skill or activity by watching someone else (model) perform it proficiently. (See also **Skill Acquisition, Skill Competency** and **Skill Proficiency**.)

Brainstorming — Learning strategy that stimulates thought and creativity and is often used in conjunction with group discussions. The primary purpose of brainstorming is to generate as extensive a list as possible of ideas, thoughts or alternative solutions that focus on a specific topic or problem. Brainstorming requires that participants have some background related

to the topic. (See also **Brainwriting, Fishbone Diagram, Inverse Brainstorming, Mind Mapping** and **Nominal Group Technique**.)

Brainwriting A group technique for generating alternative solutions to a problem, in which the members of a group write down and share their ideas for solving a problem. Brainwriting is a written form of brainstorming. (See also **Brainstorming**.)

Case Study Interactive learning method using real scenarios that focus on a specific issue, topic or problem. It is used primarily to strengthen knowledge and problem-solving and clinical decision-making skills. Typically, participants read, study and react to the case study in writing or orally during a group discussion.

Checklist Competency-based (skill) assessment instrument that is used to evaluate a participant's performance of clinical skills or other observable behaviors (e.g., counseling or presentation skills). Checklists focus on the **key steps or tasks** of a procedure or activity. They are used by trainers to evaluate performance of a procedure or activity objectively.

Classroom Faculty In preservice education, a faculty member, often known as a tutor or teacher, who imparts **knowledge** to others, but does not train others in clinical skills in a clinic or hospital setting. This individual may be able to demonstrate certain clinical skills on models in the classroom. To be qualified as classroom faculty, the individual completes a CTS course emphasizing classroom presentation and demonstration skills and then a practicum (i.e., observation and coaching by a qualified advanced or master trainer while presenting the classroom portion of the FP/RH component of the preservice curriculum). (See also **Teacher**.)

Clinic-Based Training See **Structured On-the-Job Training**.

Clinical Decision-Making The systematic process by which clinicians make choices, or judgments, regarding a client's condition, diagnosis and treatment. Steps in clinical decision-making are: assessment; diagnosis; planning; intervention or treatment; and evaluation.

Clinical Preceptor A proficient healthcare provider who can transfer clinical skills to others and whose work generally focuses exclusively on the clinical area. These individuals are frequently found in preservice programs, but are also active in inservice programs; they may be called clinical instructors. They may be employees of either the preservice institution or the healthcare system. To be qualified as a clinical preceptor, the healthcare provider completes a CTS course, which includes classroom presentation skills but emphasizes clinical demonstration, coaching and assessment of clinical skills, and then a practicum (i.e., observation and coaching by a qualified advanced or master trainer while using these skills in a clinical setting).

Clinical Skills (CS) Course Training course for healthcare providers (e.g., physicians, nurses, midwives) during which they acquire the skills needed to **competently provide** a clinical service (e.g., IUD or Norplant implants insertion/removal). Clinical skills courses can focus on one skill (e.g., minilaparotomy or Caesarean section under local anesthesia) or may include a number of skills (e.g., multiple contraceptive methods, management of complications of childbirth). (Also known as service providers' course.)

Clinical Trainer Trainer who can transfer clinical skills to healthcare providers. A clinical trainer must be proficient (expert) in the clinical service for which s/he will be providing training, as well as competent in clinical training skills. To become a clinical trainer, the healthcare provider must complete a clinical training skills course and practicum (i.e., conduct a clinical skills course with an advanced or master trainer). (Also called a clinical skills trainer.) (See also **Advanced Trainer** and **Master Trainer**.)

Clinical Training Skills (CTS) Course Training course during which proficient (expert) healthcare providers (e.g., physicians, nurses, midwives) acquire the training skills needed to competently train other healthcare providers in how to provide a clinical service (e.g., minilaparotomy under local anesthesia). Either prior to or as part of the clinical training skills course, the healthcare providers will have had their knowledge updated and skills standardized in the content area in which they will conduct training.

Clinician Anyone in the healthcare system who provides clinical care to clients that involves some level of decision-making about that care.

Coach A person who instructs, demonstrates, directs and prompts learners. Although the role of coach is usually assumed by the trainer, faculty member or preceptor, a participant also can coach another participant.

Coaching Learning approach that involves the use of positive feedback, active listening, questioning and problem-solving skills to ensure a positive learning climate. The trainer/coach demonstrates desired performance standards, encourages openness to learning and continually assesses participant performance. An effective coach focuses on practical issues, encourages collaboration, works to reduce stress and is a facilitator of learning. (See also **Active Listening** and **Feedback**.)

Coaching Trainer An advanced or master trainer who coaches a new clinical trainer during her/his first clinical skills course(s).

Competency Ability to perform a skill or skills to a specific standard. (See also **Skill Competency**.)

Competency-Based Training (CBT) Competency-based training is learning by **doing**. It emphasizes how the participant **performs** (i.e., a combination of knowledge, attitudes and, most important, skills) rather than what information the participant has **learned**. In CBT, participants' progress is continually measured against pre-established performance criteria (standards).

Computer-Assisted Learning (CAL) A learning method in which computer technology assists with, augments or delivers part or all of the instruction and evaluates participant progress. Also known as computer-based training. (See also **Distance Education**.)

Computer-Based Training See **Computer-Assisted Learning (CAL)**.

Course Handbook (Participant) Document that outlines the framework for a training course. It contains a course syllabus and schedule as well as all supplemental printed materials (precourse knowledge questionnaire, case studies if appropriate, learning guides and course evaluation) needed during the course.

Course Notebook (Trainer) Document that outlines the framework for conducting a training course and provides additional information and instructions for the trainer. It includes all the material given to the participant as well as the course outline; precourse skills assessment (if appropriate); precourse knowledge questionnaire answer key; individual and group assessment matrix, midcourse knowledge questionnaire, answer sheet and answer key; and the participant evaluation checklist.

Course Outline Detailed plan of topics to be presented in a course and **how** the training will be delivered. The course outline is a planning document. (See also **Course Schedule**.)

Course Schedule Brief day-by-day description of the major activities to be conducted in a training course. Information for the course schedule is taken from the course outline. (See also **Course Outline**.)

Course Syllabus Summary of the major components of a course. The syllabus should be given to participants in advance of training. It is important that a syllabus accurately describe the course content, goals and objectives (also known as a course description).

Decision Rules Tools that guide and facilitate clinical decision-making by providing a framework for evaluating a new case or situation. Decision rules are developed by experts from their pooled experiences and the latest clinical and scientific information. Examples of decision rules include clinical checklists and algorithms. (See also **Algorithm**.)

Demonstration (Clinical) Interactive learning technique in which the trainer explains and shows the steps, and sequence if necessary, required to perform a skill or activity. A variety of methods can be used to demonstrate a procedure, including slides, videos, anatomic models and role plays.

Differential Diagnosis The list of possible diagnoses for a client's presenting sign or symptom. The term differential diagnosis also refers to each of the items on the list. (See also **Final Diagnosis, Hypothesis Testing** and **Working Diagnosis**.)

Distance Education Instruction in other than the traditional face-to-face or instructor-led format, often at a time or place of the individual learner's choosing. It can be in the form of self-study materials, computer-assisted learning modules, Internet materials or a combination of these or other media. (Also known as distance learning or open learning.) (See also **Computer-Assisted Learning**.)

Distance Learning See **Distance Education**.

Education See **Preservice Education**.

Feedback Communication technique in which the trainer (or coach) provides information to participants about their progress in mastering a skill or activity or achieving the learning objectives of the course. Feedback is most effective when it is timely (provided immediately), positive and descriptive.

Final Diagnosis The diagnosis reached by the clinician after definitive or confirmatory information becomes available. (See also **Differential Diagnosis** and **Working Diagnosis**.)

Fishbone Diagram A technique for problem identification in which all of the possible causes of a problem and factors related to each are brainstormed and written down on a diagram in the shape of a fish. The problem is the head of the fish and the causes and related factors form its skeleton. Analysis of the diagram allows identification of the real problem that has to be solved. (See also **Brainstorming**.)

Group-Based Learning A learning method in which a group of participants receives training from one or more trainers.

Group Dynamics Forces present among individuals who come together to form a group.

Group Norms Patterns of behavior identified, agreed upon and enforced by the group in order to ensure the accomplishment of its objectives.

Group Process Interaction of members of a group.

Healthcare Provider Anyone who provides services within the healthcare system (e.g., physician, nurse, midwife, community-based distribution worker).

Humanistic Training Clinical training technique that uses anatomic models and other learning aids such as slide sets and videos to enable participants to reach the performance levels of **skill acquisition** and beginning **skill competency** before working in the clinical setting with clients. Humanistic training facilitates learning, shortens training time and minimizes risks to clients.

Hypothesis Testing The process clinicians use to accept or reject diagnoses on the list of differential diagnoses. (See also **Differential Diagnosis** and **Working Diagnosis.**)

Inservice Training Training for healthcare providers who have completed their preservice education and have graduated from a school that gives degrees or certificates. This training is job-related and provides them with additional knowledge and skills to carry out new job functions or to improve performance of existing job functions. (See also **Preservice Education.**)

Instructional Design (ID) Course Training course during which proficient advanced trainers acquire the skills needed to competently design and develop course and learning materials. They also acquire basic knowledge of needs assessment and evaluation activities as they relate to training.

Interactive Multimedia Media (e.g., text, sound, still or moving pictures) that require the learner to interact with the computer by completing exercises, answering questions and solving problems.

Internet Training A form of computer-assisted learning in which multimedia learning materials are available on Internet websites. (Also known as web-based training.) (See also **Computer-Assisted Learning.**)

Inverse Brainstorming A technique for recognizing that a problem exists that begins with a situation and looks for potential problems with it, in contrast to brainstorming, which begins with a problem and seeks a solution. (See also **Brainstorming.**)

Learner Anyone who is acquiring new knowledge, attitudes and skills. Also known as participant, student or trainee. The term learner may be used in both preservice education and inservice training. (See also **Participant** and **Student.**)

Learning Life-long process of acquiring new knowledge, attitudes and skills. It may occur formally during a learning event or informally during personal reading or study.

Learning Event An activity conducted for the purpose of transferring knowledge, attitudes and/or skills to participants. It can take the form of a course, workshop, seminar or topic update.

Learning Guide Competency-based skill development assessment instrument that focuses on clinical skills (e.g., IUD insertion) or other observable behaviors (e.g., counseling). Learning guides contain the individual steps or tasks in sequence (if necessary) required to perform a skill or activity in a standardized way. Learning guides are designed to help the participants learn the correct steps and sequence in which they should be performed (**skill acquisition**) and measure progressive learning in small steps as they gain confidence and skill (**skill competency**).

Learning Package Collection of materials used to conduct a course. Components of a learning package include, but are not limited to, a reference manual; a course handbook for participants; a course notebook for the trainer; audiovisual and other learning aids (e.g., videos and anatomic models); and competency-based assessment instruments. (See also **Course Handbook, Course Notebook** and **Reference Manual.**)

Maintenance Functions Actions and behaviors of a group that focus on the process of how the group performs a task. Maintenance functions include: harmonizing, facilitating participation, encouraging others, compromising and setting standards.

Master Trainer Trainer who can transfer advanced and clinical training skills as well as clinical skills to healthcare providers and clinical and advanced trainers. The master trainer should also be knowledgeable and experienced in developing courses, conducting various types of training courses in reproductive health, conducting needs assessments and evaluating training. Generally, a master trainer first has been a proficient healthcare provider, then a clinical trainer and an advanced trainer, and completed an instructional design course and several practica (i.e., conducted advanced training skills and instructional design courses with a master trainer and participated in a needs assessment or evaluation activity). Coaching new trainers at all levels and conducting instructional design workshops are also part of the master trainer's role. (See also **Advanced Trainer** and **Clinical Trainer.**)

Mastery Learning Approach to learning that is based on the premise that **all** participants can master (learn) the required knowledge, attitudes and skills, provided sufficient time is allowed and appropriate training methods are used. The goal of mastery learning is that 100 percent of the participants will "master" (learn) the knowledge, attitudes and skills on which the training is based.

Midcourse Questionnaire Competency-based knowledge assessment that allows each participant and the clinical trainer to determine the participants' progress in mastering the course material.

Mind Mapping An individual technique for generating alternative solutions to a problem. With the problem as the center, possible solutions and related factors are brainstormed and written on "spokes" drawn outward from the center. Further study of the mind map often suggests which solution to implement. (See also **Brainstorming**.)

Multimedia A variety of media together. (See also **Interactive Multimedia**.)

Negative Behaviors Individual behaviors that impede the progress of a group in completing its task(s). These include: blocking, dominating, playing and self-seeking.

Nominal Group Technique A group technique for generating alternative solutions to a problem. After brainstorming individually, group members share their solutions and explain them briefly, if necessary. A secret ballot is then taken to choose which of the solutions will be implemented. This technique minimizes the impact of a dominant person on the group's process of generating ideas. (See also **Brainstorming**.)

On-the-Job Training See **Structured On-the-Job Training**.

Open Learning See **Distance Education**.

Participant Individual receiving training; also known as student, trainee or learner. The term participant is used most frequently in inservice training. (See also **Learner** and **Student**.)

Participatory Learning Method of training that actively involves participants in the learning process.

Practicum Supervised, practical application of knowledge, attitudes and skills recently acquired during a course. Practica are used to qualify the learner, that is, s/he is expected to perform competently in order to perform that skill(s) or provide that service independently in the future. The practicum may be conducted as part of the original course or, more frequently, as a separate activity.

Precourse Questionnaire Competency-based knowledge assessment that is administered at the beginning of a course to determine what the participants, individually and as a group, know about the course topic. The assessment allows the clinical trainer to identify particular topics that may need emphasis or, in many cases, require less classroom time during the course. Providing the results to participants enables them to focus on their individual learning needs.

Preservice Education Learning that takes place in preparation for taking on a future role, for example as a doctor or nurse. This education provides a broad array of knowledge, attitudes and skills needed to fulfill that future role and from which the student can later select what is needed according to a given situation. Preservice education most frequently takes place in schools and universities (e.g., medical, nursing and midwifery schools) that often grant certificates or degrees. (See also **Inservice Training**.)

Problem Solving The systematic process by which a problem is identified and its best possible solution chosen and implemented. A six-step approach comprises: recognizing there is a problem; identifying the problem; generating alternative solutions; choosing among the alternative solutions; implementing the chosen solution; and evaluating the solution.

Problem Statement A brief (two- to three-sentence), clear statement identifying a specific problem to be addressed, and why it should be solved.

Proficiency The ability to perform a skill or skills efficiently, precisely and with expertise. (See also **Skill Proficiency**.)

Qualification The final step in the process of developing new knowledge, attitudes and skills in a specific skill area. After the learner demonstrates mastery of the knowledge and skills presented in a course and successfully completes a practicum, that individual is assessed as competent and therefore ready to perform that skill or provide that service independently. Qualification is usually determined by a training organization. Qualification does not imply certification, which is done only by an authorized organization or agency.

Questionnaire A set of **validated** and **reliable** questions used to assess the participant's precourse knowledge or to measure mastery of the course material (e.g., **Pre- and Midcourse Questionnaires**).

Reference Manual Text containing essential, need-to-know information pertaining to a specific skill or activity (e.g., IUD insertion, IP, clinical training skills). The reference manual contains all of the information needed to conduct a training course in a logical manner. It serves as the text for participants and the "reference source" for the trainer.

Role Play Interactive learning method in which participants act out roles in a realistic situation related to learning objectives. It is used primarily to affect behavior. A major advantage of this approach is that participants can experience a real-life situation without taking real-life risks.

Self-Paced Learning Learning directed by the individual in order to meet personal learning objectives. (Also known as individualized learning.)

Site-Based Training See **Structured On-the-Job Training**.

Skill Group of steps or tasks that use motor functions and typically require the manipulation of instruments and equipment (e.g., IUD or Norplant implants insertion, minilaparotomy). Activity is often used synonymously, but may or may not require motor functions.

Skill Acquisition Represents the **initial phase** in learning a new skill or activity. One or more practice sessions are needed for learning how to perform the required steps and, if necessary, the sequence in which they should be performed. Assistance and coaching are necessary to achieve correct performance of the skill or activity.

Skill Competency Represents an **intermediate phase** in learning a new skill or activity. The participant can perform the required steps, in the proper sequence if necessary, but may not progress from step to step efficiently. (See also **Competency**.)

Skill Proficiency Represents the **final phase** in learning a new skill or activity. The participant efficiently and precisely performs the steps, in the proper sequence if necessary. Proficiency is attained through repeated practice of the skill or activity. It usually is not attainable in a basic (introductory) clinical or training skills course.

Standardization Process of analyzing the essential steps in a skill or activity to determine the most efficient and safe way to perform it and train others. A standardized procedure provides the basis for developing learning guides, checklists and clinical learning packages. Individuals who have been "standardized" in a skill or activity will perform it using the standard, agreed-upon steps/tasks.

Structured On-the-Job Training A form of self-paced learning that allows the individual requiring training to acquire the necessary knowledge and develop the required skills while on the job. (Also known as site-based or clinic-based training.) (See also **Self-Paced Learning**.)

Student Individual attending a school or university to acquire a broad array of new knowledge, attitudes and skills in preparation for taking on a future role, for example as a doctor or nurse. (Also known as a **Learner**.)

Task Functions Actions or behaviors of a group that focus on the content of the course and help the group complete a task. Task functions include: initiating, seeking information, giving information, clarifying and elaborating, summarizing and checking for consensus.

Teacher Person who has knowledge and skills in a variety of subject areas and the ability and preparation to teach them to others. "Teachers" are usually found in classroom settings and preservice education programs. (See also **Classroom Faculty**.)

Teaching Transferring or conveying knowledge, attitudes and skills. Teaching usually refers to instruction provided through classroom activities and is often associated with **Preservice Education** programs.

Trainer Person who has knowledge and skills in a specified subject area and the ability and training to transfer them to others. Trainers are proficient (expert) in the skills and activities in which they provide training. In addition, they have received specialized training and practice in training skills.

Training Process which deals primarily with transferring or obtaining the knowledge, attitudes and skills needed to carry out a specific activity (e.g., IUD insertion). Training should be based on the assumption that there will be an immediate application of the physical or mental skill(s) being learned (as differentiated from education, which is most often directed toward future goals).

Web-Based Training See **Internet Training**.

Why-Why Diagram A technique for problem identification in which all of the possible causes of a problem are diagrammed. For each possible cause of the problem, the question "why?" is asked. For each of the responses, "why?" is asked again until the root causes, and perhaps the real problem to be solved, are identified. (See also **Fishbone Diagram**.)

Working Diagnosis The diagnosis made by the clinician after consideration of all the possible differential diagnoses and all other available information. It is the single best explanation for the client's signs or symptoms and serves as the basis for treatment. Also known as a provisional or initial diagnosis. (See also **Differential Diagnosis** and **Final Diagnosis**.)

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LEARNING PACKAGES

Each of the JHPIEGO learning packages described below contains all of the materials needed to deliver a given course. The central element of each learning package is the **reference manual**, which contains the need-to-know information for the course and is modular in design. It is complemented by a handbook for participants, a notebook for trainers and selected audiovisual materials and learning aids. The **handbook for participants** describes a competency-based training course and includes the course objectives, model course schedule, learning guides and checklists for practice, all linked to the reference manual. The **notebook for trainers** contains the precourse and midcourse questionnaires and answer keys and competency-based qualification checklists, in addition to all participant material. Handbooks and notebooks usually are provided in a ratio of one trainer's notebook for every five participant's handbooks.

IUD

IUD Guidelines for Family Planning Service Programs provides clinicians (physicians, nurses and midwives) with essential information on how to provide IUD services (specifically the Copper T 380A IUD) safely. The material is arranged sequentially, according to the usual way in which clients are cared for—beginning with counseling and ending with management of side effects and other health problems. (2nd edition, 1993) Available in **English, Portuguese, Russian and Spanish.** (1st edition, 1992, available in **French.**)

IUD Training Video—*Insertion and Removal of the Copper T 380A IUD.* This training video presents a systematic approach to the safe and gentle insertion of the Copper T 380A IUD featuring a "no touch" insertion technique. The video includes sections on IUD insertion and removal and managing problems with IUDs. (1998) Available in **English, French, Portuguese, Russian and Spanish.**

ModCal™ for IUD Services uses an interactive multimedia format to provide essential information on how to provide IUD services including counseling, insertion and removal of the Copper T 380A IUD and management of side effects. It is designed to be used in conjunction with skills practice and under the guidance of a clinical facilitator. The ModCal CD-ROM is intended for use with other learning materials such as the IUD reference manual, trainer's notebook, participant's handbook and anatomic models. (1999) Available in **English.**

POSTABORTION CARE

Postabortion Care: A Reference Manual for Improving the Quality of Care, produced by the Postabortion Care Consortium, provides clinicians with essential information on the safe and effective management of incomplete abortion and the life-threatening complications of unsafe abortion. The manual outlines the full range of activities needed to provide appropriate, high quality postabortion care, including family planning and referral to healthcare services needed after emergency treatment. The material in this manual is arranged sequentially according to the usual way in which patients are cared for—starting with the initial assessment of their condition and ending with the provision of followup care, including family planning and other reproductive health services. (1995) Available in **English, French, Portuguese and Spanish.**

Postabortion Care (continued)

Postabortion Care Video Photoset—*Use of Manual Vacuum Aspiration and Recommended Practices for Processing MVA Instruments.* This photoset, a series of still photos captured on a 30-minute video, has been developed as a clinical training tool. It is designed to assist healthcare professionals in learning how to treat women with complications following incomplete abortion. It is divided into two main sections: treatment of incomplete abortion using MVA and how to process MVA instruments. (1996) Available in **English, French and Spanish.**

Postabortion Care Video—*Postabortion Care: A Global Health Issue.* Produced by the Postabortion Care Consortium, the video provides an overview of the problem of unsafe abortion and the need for postabortion care. It also describes the three elements of postabortion care: emergency treatment of incomplete abortion and potentially life-threatening complications; postabortion family planning counseling and services; and links between postabortion emergency services and the reproductive healthcare system. It is designed to introduce the concept of postabortion care to policymakers as well as to clinicians. (1994) Available in **English, French, Portuguese, Russian and Spanish.**

Issues in Establishing Postabortion Care Services in Low-Resource Settings summarizes a workshop which focused on advocacy, access, institutionalization of training, sustainability and technical issues related to establishing and expanding postabortion care services in low-resource settings. (1999) Available in **English and French.**

Establishing Postbortion Care Services in Low-Resource Settings Strategy Paper (1999) Available in **English and French.**

Infection Prevention (IP)

Infection Prevention for Family Planning Service Programs is designed to enable clinic administrators, managers and healthcare professionals to develop uniform IP standards for use in any type or size of family planning service program. The goal of IP is twofold: preventing infection in the client and providing protection to both clients and healthcare workers. The three sections of the manual cover basic IP principles, practical and easy-to-do IP practices for each surgical contraceptive method, and "how to" instructions for using the recommended procedures. (1992) Available in **English, French, Portuguese, Russian and Spanish.**

Infection Prevention Training Video—*Infection Prevention for Family Planning Service Programs.* Produced in collaboration with AVSC International, this video emphasizes the dual role of IP in minimizing postoperative infections in clients and preventing serious disease transmission (hepatitis B and HIV/AIDS) to both clients and healthcare staff. It also documents practical, easy-to-do IP practices that minimize costs and the need for expensive technology and/or fragile equipment. The **trainer's notes**, included with the video, are designed to help trainers use the material effectively. (1994) Available in **English, French, Portuguese, Russian and Spanish.**

Infection Prevention: A History of Change Strategy Paper (1996) Available in **English.**

Norplant® Implants

Norplant® Implants Guidelines for Family Planning Service Programs provides clinicians (physicians, nurses and midwives) with essential information on how to safely insert and remove Norplant implants. The material is arranged sequentially, according to the usual way in which clients are cared for—beginning with counseling and ending with management of side effects and other health problems. (2nd edition, 1995) Available in **English and Russian.** (1st edition, 1993, including revised Chapters 3, 8 and 9, available in **French.**)

Norplant Implants Training Video—*Removal of Norplant® Capsules Using the "U" Technique.* This video demonstrates the "U" technique for removal of Norplant capsules, which has been found to be faster and easier to perform and easier to learn than the standard technique for removal. It also is useful in removing hard-to-remove capsules. (1996) Available in **English and French.**

Training Skills

Clinical Training Skills for Reproductive Health Professionals is designed for the expert service provider who wishes to become a clinical trainer. It focuses on the essential areas of clinical skills training including planning for a training course, creating a positive learning climate, using audiovisual aids, delivering interactive presentations, using competency-based assessment instruments, developing clinical skills, managing clinical practice and conducting the clinical training course. (2nd ed, 1998) Available in **English, French and Spanish.** (1st ed, 1995, available in **Portuguese.**)

ModCal™ for Clinical Training Skills uses an interactive multimedia format to help service providers become more effective preservice faculty or inservice trainers. Candidate clinical trainers first complete the ModCal instruction and then practice newly acquired skills under the guidance of an advanced or master trainer. The ModCal CD-ROM is intended for use with other learning materials such as the Clinical Training Skills reference manual, trainer's notebook and participant's handbook. (1999) Available in **English.**

Advanced Training Skills for Reproductive Health Professionals, a companion piece to the *Clinical Training Skills* and *Instructional Design Skills* reference manuals, is designed for: 1) all trainers, preservice faculty and clinical preceptors who wish to improve their training skills; and 2) proficient clinical trainers who will be trained as advanced trainers. It focuses on the group process, problem-solving and decision-making skills that all trainers need, and also describes the process of becoming an advanced trainer and coaching new trainers. (2000). Available in **English, French and Spanish.**

Instructional Design Skills for Reproductive Health Professionals is written for those trainers and preservice faculty members who will function as instructional designers to design, deliver and evaluate reproductive health courses, workshops, seminars and other learning events. It is designed to be used for both inservice and preservice training. (1997) Available in **English, French and Spanish.**

Delivering Effective Lectures Strategy Paper (1996) Available in **English and French.**

On-the-Job Training for Family Planning Service Providers Strategy Paper (1996) Available in **English.**

Why Do We Lecture? Strategy Paper (1996) Available in **English and French.**

The Competency-Based Approach to Training Strategy Paper (1995) Available in **English and French.**

SERVICE PROVISION GUIDELINES

PocketGuide for Family Planning Service Providers is designed to provide clinicians with easily accessible, clinically-oriented information about contraceptive methods and family planning clients. It is intended to be used by clinicians when they need immediate answers to questions about a client's condition or a contraceptive method. The easy-to-find information is organized into sections on providing services (e.g., client assessment, infection prevention), specific contraceptive methods (e.g., natural family planning, oral contraceptives, voluntary sterilization) and contraception for clients with special needs (e.g., adolescents, clients with chronic medical problems). (2nd edition, 1996) Available in **English, French and Russian.**

Service Delivery Guidelines for Family Planning Service Programs give service providers at all levels basic information on all contraceptive methods currently available. They are based on the most up-to-date knowledge and consensus opinions and complement the more detailed information available in the *PocketGuide for Family Planning Service Providers*. The *Guidelines* are designed to be adapted to meet a specific country's needs. (1996) Available in **English and French.**

SERVICE PROVISION GUIDELINES (CONTINUED)

Guidelines for Performing Breast and Pelvic Examinations is designed primarily to teach students in the preservice setting how to perform breast and pelvic examinations and teach breast self-examination to women. The *Guidelines* can also help healthcare providers at all levels strengthen these skills. They outline the clinical and counseling skills needed to provide high quality reproductive healthcare, including talking to women about their reproductive health needs and using recommended infection prevention practices. (2000) Available in **English, French, Russian and Spanish.**

Breast and Pelvic Examination Training Video—***How to Do a Breast and Pelvic Examination.*** This video presents an overview of the key steps for performing a breast examination, teaching breast self-examination to women and performing a pelvic examination. (2000) Available in **English, French, Russian and Spanish.**

WORKSHOP PROCEEDINGS

Issues in Establishing Postabortion Care Services in Low-Resource Settings summarizes a workshop which focused on advocacy, access, institutionalization of training, sustainability and technical issues related to establishing and expanding postabortion care services in low-resource settings. (1999) Available in **English and French.**

Alternatives for Cervical Cancer Screening and Treatment in Low-Resource Settings describes a workshop which focused on screening and treatment options for cervical cancer and on approaches for low-resource settings where the disease has already been identified as a public health priority. (1997) Available in **English.**

Issues in Training for Essential Maternal Health Care summarizes a workshop cosponsored by JHPIEGO and MotherCare II on the development of strategies for maternal healthcare training; improvement of training materials; and identification of practical training approaches. (1997) Available in **English.**

Issues in Management of STDs in Family Planning Settings summarizes a workshop held to explore options for introducing management of STDs into family planning programs. (1996) Available in **English.**

Learning Without Walls: A Pre-Congress Seminar contains presentations and discussion on the information revolution from a seminar held in Bali, Indonesia, in conjunction with the XVth Asian Oceanic Congress of Obstetrics and Gynecology. (1995) Available in **English.**

Issues in Cervical Cancer: Seeking Alternatives to Cytology summarizes a workshop held to review the status of cervical cancer screening worldwide and discuss alternative methods of detecting cervical cancer. (1994) Available in **English.**

STRATEGY PAPERS

JHPIEGO strategy papers are designed to summarize JHPIEGO's experience in reproductive health capacity building, with a focus on education and training. The papers are intended for use by program staff of JHPIEGO, USAID and its cooperating agencies and other organizations providing or receiving technical assistance in the area of reproductive health training.

Performance Improvement: Developing a Strategy for Reproductive Health Services (2000) Available in **English.**

Human Papillomavirus and Cervical Cancer (2000) Available in **English.**

Establishing Postabortion Care Services in Low-Resource Settings (1999) Available in **English and French.**

Accelerating the Reduction of Maternal Mortality in Developing Countries (1997) Available in **English.**

Delivering Effective Lectures (1996) Available in **English and French.**

STRATEGY PAPERS (CONTINUED)

Infection Prevention: A History of Change (1996) Available in **English.**

On-the-Job Training for Family Planning Service Providers (1996) Available in **English.**

Why Do We Lecture? (1996) Available in **English and French.**

The Competency-Based Approach to Training (1995) Available in **English and French.**

REPROLINE®

REPRODUCTIVE HEALTH ONLINE

The text of many of JHPIEGO's reference manuals, workshop proceedings and strategy papers is available on ReproLine at **www.reproline.jhu.edu**. ReproLine is a website tailored to the needs of JHPIEGO's international network of family planning and reproductive health trainers and faculty. In addition to these publications, ReproLine offers trainers and healthcare providers ready-to-use course materials, such as presentation graphics and checklists; training tips; information on contraceptive advances; articles on key topics in reproductive health training; and a free electronic newsletter on training and reproductive health topics.

The materials can also be viewed and downloaded from the ReproLine CD-ROM. To obtain a copy of the CD-ROM, please contact:

Natalie Maier
Phone: 410-614-3080
Fax: 410-614-9191
E-mail: nmaier@jhpiego.org

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Participant's Handbook = $3 (except Breast and Pelvic Examinations = $2)
Trainer's Notebook = $5 (except Breast and Pelvic Examinations = $3)
ModCal CD-ROM with Reference Manual and Trainer's Notebook = $50.00
Workshop Proceedings = $5 (except *Alternatives for Cervical Cancer Screening* and *Issues in Establishing Postabortion Care Services = $10*)
Videos = $20 (SECAM and NTSC format); $31 (PAL format); $10 (CD-ROM format)
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ASSESSMENT OF ADVANCED TRAINING SKILLS REFERENCE MANUAL

Please indicate on a 1–5 scale your opinion of the manual.

5-Excellent 4-Very Good 3-Satisfactory 2-Needs Improvement* 1-Unsatisfactory*

CONTENTS	Easy to read	Need-to-know information	Samples	Usefulness in problem solving
Overall Evaluation of Manual: *Advanced Training Skills for Reproductive Health Professionals*				
CHAPTERS				
1 An Approach to Clinical Training				
2 Group Process Skills				
3 Problem-Solving Skills				
4 Clinical Decision-Making				
5 Becoming an Advanced Trainer				
6 Coaching New Trainers				
APPENDICES				
A Alternative Learning Methods				
B Application of the Stages of Group Development				
GLOSSARY				

* Please comment on the back if you rated any chapter or appendix less than satisfactory.

COMMENTS:

1. What topics (if any) should be included in **more detail** to improve the manual?

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