



Federal Ministry of Health
Ethiopia

Infection Prevention and Patient Safety Training Resource Package

Facilitator's Guide

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Foreword

The Federal Ministry of Health's health care reform initiative aims to ensure the provision of quality health services at all levels. Among these, protection of patients, health care workers, and visitors from infections acquired in health care facilities is the main strategy to the reform initiative. In most health care facilities, many patients suffer from infections with health care-associated microorganisms, a condition that remains as a continued threat to the health of clients and increases cost to the patient as well as to the health care system. Adequate infection prevention and patient safety practices reduce the risk of acquiring infections like HIV, hepatitis B and C, and common bacterial and viral infections. As a result, the Ministry is working relentlessly to scale up the infection prevention and patient safety programs in order to reinforce the practice in health facilities.

Infection prevention and patient safety in health care settings is a nationwide initiative that involves the regular implementation of recommended infection prevention practices in every aspect of patient care. Such practices include hand hygiene, injection safety and medication safety, and health care waste management, among others. Resource limitation makes it difficult to control the infection rates and exposure of patients and health service providers to health care-associated infections. Accordingly, materials, human resources, training, policies, and guidelines are needed to promote appropriate infection prevention and patient safety practices.

This infection prevention and patient safety training resource package is a supplement to the *Ethiopian Hospital Reform Implementation Guidelines* and the *National Infection Prevention and Patient Safety Reference Manual* and is intended to serve as a training guide for health service providers and managers found at the different levels of the health system. The resource package is developed based on in-country experiences and internationally acclaimed standard recommendations. It is geared toward using innovative methods that are implemented in all parts of the world to reduce the overhead cost of the infection prevention and patient safety program. It is believed that health service providers, health service and program managers, and all other stakeholders will use this resource package effectively to prevent infections from occurring in health care facilities.

The Ministry would like to thank all individuals and institutions who contributed to the development of this infection prevention and patient safety resource package.



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Behavioral change in infection prevention and control and patient safety practices in the health care setting requires, at a minimum, building the capacity of all health care staff through training. However, over the past five years in Ethiopia, the quality of this resource-intensive intervention has been suboptimal in addressing national standards due to the lack of integration with patient safety principles.

The Federal Ministry of Health (FMOH), cognizant of the gap, was determined to improve the merit and effectiveness of the Infection Prevention and Patient Safety (IPPS) program at large and decided to develop a standardized IPPS training package in October 2010. Since then, the National Infection Prevention and Patient Safety Advisory Technical Working Group (IPPS ATWG) and the President's Emergency Plan for AIDS Relief (PEPFAR), funded through the U.S. Agency for International Development (USAID) AIDSTAR-One/Ethiopia project, have worked closely to produce this important material. The early draft of the materials went through a series of technical reviews by subject experts and enhancements by the IPPS ATWG, leading to an organized document that was ready for a national consultation. A national consultative workshop was held during which expert inputs were gathered and incorporated. The last activities include consolidation of the document with technical input from JSI, the implementing organization of the AIDSTAR-One/Ethiopia project.

The FMOH gratefully acknowledges the commitment and technical support of the IPPS ATWG members along with their organizations and key contributors who made the development of this IPPS training material a reality.

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The FMOH acknowledges the commitment and technical support of the IPPS ATWG members along with their respective organizations and key contributors who made the development of this *Infection Prevention and Patient Safety Facilitator's Guide* a reality. This document is made possible by the concerted effort of stakeholders working under the

Technical Working Group. The Technical Working Group is responsible for any and all content in this guide.

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Acronyms

AIDS	acquired immunodeficiency syndrome
ARV	antiretroviral
BSI	body substance isolation
CDC	Centers for Disease Control and Prevention
FMOH	Federal Ministry of Health
HAV	hepatitis A virus
HBV	hepatitis B virus
HCV	hepatitis C virus
HICPAC	Healthcare Infection Control Practices Advisory Committee
HIV	human immunodeficiency virus
HLD	high-level disinfection
IP	infection prevention
IPPS	Infection Prevention and Patient Safety
IUD	intrauterine device
JSI	John Snow, Inc.
LCD	liquid-crystal display
MMIS	making medical injection safe
OR	operating room
PEP	post-exposure prophylaxis
PPE	personal protective equipment
PPP	PowerPoint presentation
PS	patient safety
SSI	surgical site infection
TB	tuberculosis
TDS	training demonstration segments
TP	total parts
TTI	transfusion-transmissible infections
UP	universal precaution
USAID	U.S. Agency for International Development
VIPP	visualization in participatory programs
WHO	World Health Organization

How to Use the Infection Prevention and Patient Safety Training Resource Package

The Infection Prevention and Patient Safety Training Resource Package

This Infection Prevention and Patient Safety (IPPS) training resource package is designed to strengthen the capacity of health care providers to protect themselves, their patients and clients, and the community from health care–acquired infections.

Generally, the IPPS training resource package includes the following components:

- *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*
- *Infection Prevention and Patient Safety Resource Package: Facilitator’s Guide*
- *Infection Prevention and Patient Safety Resource Package: Participant’s Manual*
- *Video presentations*

Participants are also encouraged to read the *Ethiopian Hospital Reform Implementation Guidelines*.

Purpose of the Infection Prevention and Patient Safety Training Facilitator’s Guide

This guide is prepared to help trainers in providing effective training on IPPS. The guide will serve as a reminder on how to facilitate each activity and also provide detailed notes on each topic.

How the Guide Is Organized

The facilitator’s guide is developed in a user-friendly, flexible format using adult learning principles. Participatory approaches and techniques are used throughout the activities to help participants acquire the required knowledge, attitudes, and skills. The training activities encourage participants to see, analyze, and share their practice and experiences on IPPS.

This training resource package can be used in a variety of ways depending on the health care facility’s needs assessment, participants’ needs and background, program objectives and goals, time availability, and trainer’s capability.

The organization and materials of the facilitator's guide offer the following options for its implementation.

Group-Based Training

A basic six-day IPPS training for health care workers is presented in the course overview, and a detailed schedule and outline are provided. The modules are organized based on their similarity, flow of action, and rational sequence.

The six-day IPPS training covers a total of 22 modules. It is recommended that the trainer follow the sequence of modules in the schedule and outline. Each module is presented in an interactive and user-friendly format. PowerPoint presentation (PPP) slides are also provided for each module separately. However, in situations where the use of PPPs is not possible, trainers should use a flip chart as an alternative.

On-the-Job Training

This package represents a sequential (complete or partial) modular approach for health care providers with a structure depending on participants' needs. In this case, the trainer is required to adapt the schedule and outline according to the specific needs and module selected, using the schedules and outlines provided for the six-day group-based course as an example. The methodology may also change depending on the number of participants attending the training activity, time allocated for each module, and materials available. Regardless of the format used, however, it is important to maintain the basic principles of competency-based training and strengthen knowledge and skills to enhance transfer of learning. The trainer should plan in advance with the facility supervisor/managers and participants on the objectives of the IPPS training, methodology to be used, including the evaluation process, materials (e.g., reference manual, videos, IPPS supplies) to be used, and the schedule of the knowledge and practical sessions. The trainer can also set up the infection prevention (IP) stations related to the topic being covered and allow the participants to practice as their schedules allow. The trainer should then have time available to work with participants individually or in pairs to assess and qualify their skills.

Overview of the Training

Training Design

This training is designed for health care professionals. The course builds on each participant's past knowledge and experience and takes advantage of the individual's high motivation to accomplish the learning tasks in a period of time. Training emphasizes doing, not just knowing, and uses competency-based evaluation of performance.

This training differs from traditional courses in several ways.

- It uses a pre-training questionnaire to determine individual and group knowledge on IPPS.
- The health care facility's needs or gaps in IPPS are identified in advance or throughout the training using the Infection Prevention and Patient Safety Needs Matrix: Operational Action Plan.
- Practical sessions focus on using practical and simple IPPS practices that minimize costs.
- Learning progress is assessed using checklists, and each participant's performance is assessed by an IPPS trainer using a competency-based skills checklists.

Successful completion of the training is based on mastery of both the content and skill components, as well as satisfactory overall performance of the recommended IPPS practices.

Evaluation

This IPPS training is designed to produce health care workers at all levels who are qualified to use recommended basic IPPS principles and practices for primary and hospital care services. In this case, qualification is a statement offered by the training organization that the participant has met the requirements of the training in knowledge and skills. This does *not* imply certification, because personnel can be certified only by an authorized organization or agency.

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

Knowledge: A score of at least 85 percent on the post-training questionnaire (see Annex 2).

Skills: Satisfactory performance of recommended selected IPPS practices during a simulated situation. Responsibility for the participant becoming qualified is shared among the participant and the trainer. Both participants and trainers can keep track of their progress on the selected IPPS skills using the Participant Monitoring Sheet.

The evaluation methods used in the training are as follows:

- **Post-training test.** This knowledge assessment will be given at the point in the training when all subject areas have been presented. A score of 85 percent or more indicates knowledge-based mastery of the material presented in the reference manual. For any participants scoring less than 85 percent on their first attempt, the IPPS trainer should review the results with the participant individually and provide guidance on using the reference manual to learn the required information. Participants scoring less than 85 percent can retake the Post-Training Questionnaire at any time during the remainder of the course, after they have had time to study the selected areas of the reference manual.
- **IPPS checklists (station checklists).** The IPPS trainer will use selected checklists to assess each participant as the participant performs IPPS activities or practices in the simulated clinical setting. In determining whether the participant is qualified, the trainer(s) will observe and rate the participant's performance for each step of the skill or activity. The participant must be rated "satisfactory" in each skill or activity to be evaluated as qualified.

Within three to six months of qualification, it is recommended that an IPPS trainer or supervisor follow up with participants at their facilities using the same IPPS checklists or other consistent IPPS performance standards. Follow-up is crucial to maximize the transfer of learning and improve job performance, which is the main goal of a learning intervention. During the follow-up, the trainer or supervisor should provide direct feedback to the

participant and review the implementation of the action plan with the participant, supervisor, and co-workers.

This review provides the opportunity to identify and discuss progress to date as well as any start-up issues or constraints to service delivery (e.g., lack of instruments, supplies, support staff, IPPS policies). It also provides feedback on the training and its appropriateness to local conditions. Without this type of feedback, training can easily become routine, stagnant, and irrelevant to service delivery need.

Course Syllabus for Six-Day Basic Infection Prevention and Patient Safety Training

Training Description

The six-day basic IPPS training is designed to provide all levels of health care workers the basic IPPS knowledge and skills they need to use recommended IPPS principles and practices in primary health care and hospital settings with limited resources.

Goal of Basic IPPS Training

- To make health care facilities safer places.

Training Objectives

- To influence in a positive way the attitudes of the participant toward the benefits of using appropriate IPPS principles and practices
- To provide the participant with training in simple, inexpensive IPPS practices and processes
- To provide the participant with the knowledge and skills needed to implement and/or improve IPPS principles and practices in his or her home facility

Participant Learning Objectives

The learning objectives of the six-day training course are presented in each module.

Training/Learning Methods

- Brainstorming
- Games
- Gallery walk
- Group discussions
- Buzz groups
- Individual and group exercises
- Role play and simulations

- Videotapes and discussions
- Illustrative lectures
- Individual reflection
- Demonstrations
- Site observations or facility visits

Learning Materials

This facilitator's guide is designed to be used with the following materials:

- *Infection Prevention and Patient Safety Training Resource Package: Facilitator's Guide Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*
- *Infection Prevention and Patient Safety Training Resource Package: Participant's Manual*
- Training videotapes: *Infection Prevention Guidelines for Health Care Facilities with Limited Resources: Overview and Practical Training Demonstration Segments and Safe Practices in the Operating Room*

Participant Selection Criteria

Participants in the training are health professionals working at various levels in the health care system of the country.

Methods of Evaluation

Participant

- Pre- and post-training questionnaires
- IPPS checklists (to be completed by trainer)

The training

- Training evaluation (to be completed by each participant)

Number of Hours

48 hours (six-day course)

Suggested Training Composition

- Fourteen to twenty-five participants

- Two to four IPPS trainers

Basic Six-Day Infection Prevention and Patient Safety Training Schedule

Time	Module	Topic	Duration
Day One			
8:30 a.m.–8:40 a.m.		Registration	10 minutes
8:40 a.m.–10:45 a.m.		Welcome and introduction	40 minutes
		Participant expectations	10 minutes
		Review course materials	5 minutes
		Group norm	10 minutes
		Pre-test	35 minutes
		Training overview	25 minutes
10:45 a.m.–11:00 a.m.		Tea break	
11:00 a.m.–12:30 p.m.	1	Module 1: Introduction to Infection Prevention and Patient Safety	1 hour, 30 minutes
12:30 p.m.–2:00 p.m.		Lunch	
2:00 p.m.–2:45 p.m.	2	Warm-up	5 minutes
		Module 2: Standard Precautions	40 minutes
2:45 p.m.–3:30 p.m.	3	Module 3: Hand Hygiene	45 minutes
3:30 p.m.–3:45 p.m.		Tea break	
3:45 p.m.–5:00 p.m.	3	Module 3: Hand Hygiene	1 hour, 15 minutes
5:00 p.m.–5:10 p.m.		Daily course evaluation	10 minutes
Day Two			
8:30 a.m.–8:45 a.m.		Daily recap and warm-up	15 minutes
8:45 a.m.–10:45 a.m.	4	Module 4: Personal Protective Equipment	2 hours
10:45 a.m.–11:00 a.m.		Tea break	
11:00 a.m.–12:30 p.m.	5	Module 5: Safe Injection Practices	1 hour, 30 minutes
12:30 p.m.–2:00 p.m.		Lunch	
2:00 p.m.–3:45 p.m.	5	Module 5: Safe Injection Practices	1 hour, 45 minutes
3:45 p.m.–4:00 p.m.		Tea break	
4:00 p.m.–5:25 p.m.	6	Module 6: Surgical Antisepsis	1 hour, 25 minutes
5:25 p.m.–5:30 p.m.		Daily course evaluation	5 minutes
Day Three			

Time	Module	Topic	Duration
8:30 a.m.–8:40 a.m.		Daily recap and warm-up	10 minutes
8:40 a.m.–10:10 a.m.	7	Module 7: Safe Surgery and Safe Practice in the Operation Room	1 hour, 30 minutes
10:10 a.m.–10:30 a.m.	8	Module 8: Instrument Processing and Handling	20 minutes
10:30 a.m.–10:45 a.m.		Tea break	
10:45 a.m.–12:30p.m.	8	Module 8: Instrument Processing and Handling	1 hour, 45 minutes
12:30 p.m.–2:00 p.m.		Lunch	
2:00 p.m.–3:35 p.m.	8	Module 8: Instrument Processing and Handling	1 hour, 35 minutes
3:35 p.m.–3:50 p.m.		Tea break	
3:50 p.m.–5:00 p.m.	9	Module 9: Processing Linen and Laundry	1 hour, 10 minutes
5:00 p.m.–5:10 p.m.		Daily course evaluation	
Day Four			
8:30 a.m.–8:35 a.m.		Daily recap and warm-up	5 minutes
8:35 a.m.–9:35 a.m.	10	Module 10: Clinical Laboratory Services	1 hour
9:35 a.m.–10:15 a.m.	11	Module 11: Blood Safety	40 minutes
10:15 a.m.–10:30 a.m.		Tea break	
10:30 a.m.–11:30 a.m.	12	Module 12: Traffic Flow and Activity Patterns	1 hour
11:30 a.m.–12:30 p.m.	13	Module 13: Transmission-Based Precautions for Health Care Facilities	1 hour
12:30 p.m.–2:00 p.m.		Lunch	
2:00 p.m.–3:45 p.m.	14	Module 14: Tuberculosis Infection Prevention and Control in Health Care Settings	1 hour, 45 minutes
3:45 p.m.–4:00 p.m.		Tea break	
4:00 p.m.–5:15 p.m.	15	Module 15: Housekeeping	1 hour, 15 minutes
5:15 p.m.–5:30 p.m.		Daily course evaluation	15 minutes
Day Five			
8:30 a.m.–8:35 a.m.		Daily recap and warm-up	5 minutes
8:35 a.m.–10:20 a.m.	16	Module 16: Health Care Waste Management	1 hour, 45 minutes
10:20 a.m.–10:35 a.m.		Tea break	
10:35 a.m.–11:50 a.m.	17	Module 17: Medication Safety	1 hour, 15 minutes
11:50 a.m.–12:30 p.m.	18	Module 18: Post-Exposure Prophylaxis	40 minutes
12:30 p.m.–2:00 p.m.		Lunch	
2:00 p.m.–2:45 p.m.	19	Module 19: Food and Water Safety	45 minutes
2:45 p.m.–3:30 p.m.	20	Module 20: Client Education on Infection Prevention and Patient Safety	45 minutes
3:30 p.m.–3:45 p.m.		Tea break	
3:45 p.m.–4:25 p.m.	21	Module 21: Health Care Risk	40 minutes

Time	Module	Topic	Duration
		Management	
4:25 p.m.–5:25 p.m.		IPPS station	1 hour
5:25 p.m.–5:30 p.m.		Daily course evaluation	5 minutes
Day Six			
8:30 a.m.–8:40 a.m.		Daily recap and warm-up	10 minutes
8:40 a.m.–9:00 a.m.		Health facility visit briefing	20 minutes
9:00 a.m.–10:45 a.m.		Health facility visit	1 hour, 45 minutes
10:45 a.m.–11:00 a.m.		Tea break	
11:00 a.m.–12:30 p.m.		Health facility visit group presentation	1 hour, 30 minutes
12:30 p.m.–2:00 p.m.		Lunch	
2:00 p.m.–3:30 p.m.	22	Module 22: Managing Infection Prevention and Patient Safety Programs	1 hour ,30 minutes
3:30 p.m.–3:45 p.m.		Tea break	
3:45 p.m.–5:45 p.m.		Work plan, post-training assessment, final training evaluation, and closing	2 hours

General Guidance for Trainers

Before Conducting the Course

- Carefully read the IPPS facilitator's guide, participant's handout, IPPS reference manual, and other necessary materials.
- Read and rehearse the facilitator's guide (IPPS course outline and modules) and PPP slides. While reading, you need to focus on the flow of topics, the structure of the course, and the training methodology of each activity.
- Be thoroughly familiar with the whole IPPS training package and with the issues surrounding the course planning.
- Be ready to adjust and adapt the current syllabus and schedule to the real needs of the participants.
- Check with representatives of the institution that organized the training and make sure that all logistic and administrative issues are in place. Make sure that the training venue is suitable for training (see Classroom Selection and Organization).
- Identify representatives of local officials for the formal opening.
- Brief the guest of honor on the purpose and objectives of the training and time allocated for the opening remarks.
- Prepare in advance all handouts, flip charts, cards, and other materials and supplies required to conduct each module (see the IPPS course outline, resources, and materials for each module, and also make sure all of the listed IPPS supplies, materials, and equipment are available and in working order).
- Prepare name tags and other necessary materials for the participants and the trainers.
- Write the goals and objectives of the training on a flip chart or PPP.
- Discuss with the team of trainers on how to deal with the following circumstances:
 - How to intervene if a trainer forgets an important point during an exercise, lecture, or discussion
 - How to manage participants who dominate discussions
 - How to respond to participants who upset others by making negative comments
 - How to communicate with each other if the pace of the training is too fast or too slow and how to alert each other when a presentation or exercise is taking more than the allotted time

Selection of Infection Prevention Trainers

In competency-based training, the responsibility for meeting learning objectives is shared by the trainer and each participant. The role of the trainer is to facilitate learning. The trainer guides participants during the training toward the acquisition of new or improved skills in IPPS and also seeks to influence participant attitudes by serving as a role model. In selecting IPPS trainers to use this training package, the following criteria should be considered:

- Demonstrated proficiency in IPPS. The trainer must have knowledge and skills in the selected areas of IPPS to be taught in this training.
- The trainers must have received training of trainers course on IPPS.

The IPPS trainer must have experience using the master learning approach to provide the training, which is conducted according to adult learning principles—learning is participatory, relevant, and practical—and uses behavior modeling, is competency based, and incorporates humanistic training techniques. IPPS trainers for this course must be aware of basic principles of transfer of learning to help the participants transfer the new knowledge and skills in IPPS to their workplaces and improve job performance.

It is strongly recommended that at least two clinical trainers conduct this IPPS course. The trainers can divide roles and responsibilities according to their expertise, such as sharing the roles of “coach” and “facilitator” throughout the course.

Selection of Participants

Participants of the training are health professionals working at various levels in the health care system of the country. Local managers or supervisors of the health care facility might be part of the team or be informed and actively involved in the selection process to ensure support for changes in IPPS practices.

Training Site

The training site should be inside or near the health facility to avoid delays and to facilitate observation site visits.

Classroom Selection and Organization

The classroom should comfortably accommodate the participants and trainers and be suitable for all activities. It should meet the following requirements or considerations:

- Adequate light and ventilation
- Check availability and functionality of equipment in advance
- Set up equipment before participants arrive to start the course
- Table organized in “U” shape where all the participants can see the trainers, projection screen, flip charts, demonstrations, etc.
- Space in front of the “U” for the screen, auxiliary table for audiovisual aids, and one flip chart on each side
- Side table for training materials
- Space in the back of the room for warm-ups, group work, role plays, and having five stations simultaneously set up
- Extra tables and chairs for the stations and group work
- Restroom in close proximity to the training site

For Facility Observation Visits

Observation sites could be where the participants work or a facility that has excellent IPPS practices, poor IPPS practices, or a combination of both. The objective of the six-day training is to provide an opportunity for the participants to observe IPPS practices in different areas of the facility. It is important that trainers visit the sites in advance to become familiar with them (including physical plant, hours, contact person in each area to be visited, authorization issues, attire needed, etc.) and also to make arrangements for the date of the visit and organization of the groups. Visiting the facility in advance permits the trainers to identify good and bad IPPS practices that they want participants to observe.

Materials, Equipment, and Supplies

To conduct the basic six-day IPPS training, trainers will need the materials, equipment, and supplies listed in the following table. Trainers should be aware that specific materials, equipment, and supplies may vary according to local resources, reality, and audience.

Basic Six-Day Infection Prevention and Patient Safety Course Outline

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
Day One			
<p>Activity: Registration</p> <p>Activity: Welcome and opening of the training</p>	<p>Registration of participants when they come to the training site</p> <p>Welcome participants and thank them for attending the course. Introduce yourself, other facilitators, and guests. Invite guest of honor to make opening remarks.</p>	<ul style="list-style-type: none"> • Course materials, liquid-crystal display (LCD) projector, screen, flip chart with markers, masking tape, anatomic models, supplies, and instruments • Copies of the IPPS reference manual 	10 minutes
Activity: Introduction of participants and facilitators	Work in groups	<ul style="list-style-type: none"> • Flip chart with questions (partner's name, position, something interesting or unique about his/her partner) 	40 minutes
Activity: Establishing training norms	Brainstorming	<ul style="list-style-type: none"> • Flip chart, markers, and masking tape 	10 minutes
Activity: Participants' expectations	Individual work	<ul style="list-style-type: none"> • Blank pieces of paper (color or white paper), markers, flip chart, and masking tape 	10 minutes
Activity: Pre-training knowledge assessment	Follow instructions in the IPPS facilitator's guide; pre-training questionnaire	<ul style="list-style-type: none"> • <i>IPPS Participant's Manual</i> • Pre-test questionnaire (or copies of the pre-test questionnaire) • Small pieces of paper with numbers 	35 minutes
Activity: Training overview and agenda	Present the IPPS training overview	<ul style="list-style-type: none"> • <i>IPPS Facilitator's Guide</i> • <i>IPPS Participants' Manual</i> (one per participant) • <i>IPPS Reference Manual</i> (one per participant) • Videos (one per facility, or depending on needs, the video might be distributed at the end of the course) • Schedule • IPPS Needs Matrix: 	5 minutes

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
		Operational Action Plan <ul style="list-style-type: none"> • Writing tools • Stationery • Participant registration forms 	
<p>Activity: Identify individual learning needs.</p> <p>Introduction to health care facility’s IPPS Needs Matrix: Operational Action Plan</p>	<p>Trainer leads discussion of answers on the pre-training questionnaire and identifies the individual learning needs.</p> <p>Distribute the matrix and discussion</p>	<ul style="list-style-type: none"> • <i>IPPS Facilitator’s Guide</i> • Pre-training questionnaire • Copy of the health care facility’s IPPS Needs Matrix: Operational Action Plan 	20 minutes
<p>Module 1: Introduction to Infection Prevention and Patient Safety</p> <p>Objective: To understand the goals, definition, and basic principles of IPPS</p>	Interactive lecture using PPP	<ul style="list-style-type: none"> • <i>IPPS Reference Manual</i>, Chapter 1, glossary, highlighter (one per participant), flip chart, marker, masking tape, envelope/card, pen, pencil, computer, and LCD projector 	1 hour, 30 minutes
<p>Objective: Identify the risk of infection in health care settings</p>	Group exercise and discussion		
<p>Objective: Explain the disease transmission cycle and how to stop the spread of disease</p>	Brainstorming and interactive lecturing		
<p>Objective: Describe the role of the Centers for Disease Control and Prevention (CDC) isolation guidelines in preventing health care–acquired infections</p>	<p>Illustrative lecture and discussion</p> <p>Summarize the module by presenting the summary points of the module from the PPP</p>		
<p>Module 2: Standard Precautions</p> <p>Objective: Define standard precautions</p> <p>Objective: List the components of standard precautions</p>	<p>Brainstorming/discussion and illustrative lecture using PPP</p> <p>Summarize the module by highlighting the key points</p>	<p><i>IPPS Reference Manual</i>, Chapter 2: Standard Precautions</p> <p><i>IPPS Facilitator’s Guide</i>, Module 2, Presentation: “Standard Precautions”</p>	40 minutes
<p>Module 3: Hand Hygiene</p> <p>Objective: Explain the rationale for hand hygiene</p>	Brainstorming and discussion using PPP	Materials for the exercise chosen; see instructions in the <i>IPPS Facilitator’s Guide</i> , Module 3, “Simple Hand Hygiene” or “Caught Dirty-	2 hours

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
		Handed”	
Objective: List the hand hygiene techniques	Brainstorming and discussion using PPP	<i>IPPS Reference Manual</i> , Chapter 3 and Appendix A IP supplies for different techniques of hand hygiene:	
Objective: Explain the purpose of each hand hygiene technique	Brainstorming and discussion using PPP	<ul style="list-style-type: none"> • Plain soap • Medicated soap • Personal towel 	
Objective: Demonstrate how to prepare and use antiseptic hand rub	Brainstorming , interactive lecture, and demonstration	<ul style="list-style-type: none"> • Alcohol 60–90 percent • Glycerin liquid • Small measuring cup 	
Objective: Demonstrate the different hand hygiene techniques	Brainstorming, interactive lecture, and demonstration	<ul style="list-style-type: none"> • Small plastic container • Five- or ten-milliliter syringe 	
Objective: Mention common malpractices related to hand hygiene	Brainstorming and interactive lecture	<ul style="list-style-type: none"> • Sample of commercial waterless hand rub • IP video, TDS 1 	
Objective: Identify strategies for improving hand hygiene practices	Brainstorming and interactive lecture Summarize the module by showing the video on hand hygiene (TDS 1: Recommended Practices for Hand Hygiene)	<ul style="list-style-type: none"> • <i>IPPS Facilitator’s Guide</i>, Module 3, Presentation: “Hand Hygiene” 	
Objective: Review day’s assignments Objective: Remind participants/teams about the IPPS Needs Matrix: Operational Action Plan Objective: Complete the Daily Reflection Form	Review assignments in the schedule. IPPS Needs Matrix: Operational Action Plan: remind participants to think about and complete the matrix. Give participants the Daily Reflection Form and tell them to fill it in and leave it on the table when they leave the room.	<ul style="list-style-type: none"> • <i>IPPS Participant’s Manual</i> • Copy of the IPPS Needs Matrix on the wall • <i>IPPS Facilitator’s Guide</i> warm-ups and other exercises • Copy of Daily Reflection Form 	10 minutes
Reading assignment: <i>IPPS Participant’s Manual</i> , Modules 1, 2,			

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
and 3			
Day Two			
Objective: Review of Day One activities	Recap Day One activities in the form of question and answer	<i>IPPS Facilitator's Guide</i> , <i>IPPS Participant's Manual</i> , and PPP	5 minutes
Module 4: Personal Protective Equipment Objective: List personal protective equipment (PPE) Objective: Describe the use, effectiveness, and limitations of PPE Objective: Identify the types and demonstrate how to use drapes	Brainstorming, exercise, and discussion	<ul style="list-style-type: none"> • IP video: TDS 2 • Flip chart, markers, and masking tape • Module 4 PPP • Examination gloves, surgical gloves, elbow-length gloves, masks, respirators, scrub suits or cover gowns, surgical gowns, mackintosh or plastic apron, eyewear (face shield, goggle, mask with shield), footwear (plastic boots), caps, drapes • <i>IPPS Participant's Manual</i>, Module 4: Handouts 4.1 and 4.2 	2 hours
Objective: List types of gloves	Brainstorming, demonstration, and interactive lecture		
Objective: Demonstrate the correct way of putting on and removing PPE (gloves, masks)	Summarize the module by playing the video TDS 2: "PPE Use" from the infection prevention video		
Module 5: Safe Injection Practices Objective: Define injection safety Objective: Describe the magnitude of unsafe injection practices	Brainstorming, discussion, and interactive lecturing	<ul style="list-style-type: none"> • Computer and LCD projector • Flip chart, marker, and masking tape • Copy of the case study • Safety box, needle removers, waste bins, and bin liners • Different sizes and types of syringes • VIPP card • Handouts 5.1, 5.2, and 5.3 • PPP slides 	3 hours, 15 minutes
Objective: Recognize the risk and impact associated with unsafe injection practices Objective: Identify the risk factors leading to unsafe injections	Gallery work, brainstorming, group work, and interactive lecturing		
Objective: Identify the role of prescribers and providers in injection safety	Brainstorming and group discussion		

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
Objective: Identify injection devices and their safety features	Matching exercise, group work, and discussion		
Objective: Demonstrate best practices for safe injections	Brainstorming, case study, and discussion Summarize the module by presenting the summary points of the module from the PPP.		
Module 6: Surgical Antisepsis Objective: Define surgical antiseptics and disinfectants	Brainstorming and interactive lecture	<ul style="list-style-type: none"> • Flip charts, markers, masking tape, computer, and LCD projector • <i>IPPS Reference Manual</i> • Participant handouts • Anatomic model for skin and vaginal preparation (ZOE® Gynecologic Simulator [for intrauterine device (IUD) insertion/removal, pelvic exam, mini-laparotomy]) • Speculum, cotton, clean gauze square, gauze drum, pickup forceps with container, sample antiseptics listed in the materials and supplies table 	1 hours, 25 minutes
Objective: Identify common causes of wound infection	Brainstorming and interactive lecture		
Objective: Identify the safest and most effective antiseptics	Group work and interactive lecturing		
Objective: Select the appropriate antiseptics for skin and mucous membrane preparation Objective: Perform skin and mucous membrane preparation prior to procedure	Exercise using buzz group and interactive lecturing		
Objective: Explain the appropriate way to store and dispense antiseptic	Brainstorming and interactive lecturing Summarize the module by presenting the summary points of the module from the PPP.		
Objective: Review day's assignments Objective: Remind participants/teams about the IPPS Need Matrix: Operational Action Plan Objective: Complete the Daily Reflection Form	Review assignments from the schedule. IPPS Needs Matrix: Operational Action Plan: remind participants to be thinking about and filling in the matrix.		

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
	Give participants the Daily Reflection Form and tell them to complete it and leave it on the table when they leave the room.		
Reading Assignment: <i>IPPS Participant's Manual</i> , Modules 4, 5, and 6			
Day Three			
Objective: Review of Day Two activities	Recap Day Two activities in the form of question and answer	<i>IPPS Facilitator's Guide</i> , <i>IPPS Participant's Manual</i> , and PPP	10 minutes
Module 7: Safe Surgery and Safe Practice in the Operating Room Objective: Describe safe surgical care standards Objective: Identify and use the World Health Organization (WHO) Surgical Safety Checklist appropriately	Brainstorm/discussion and interactive lecturing	<ul style="list-style-type: none"> • Computer and LCD projector • Flip chart, markers, and masking tape • <i>IPPS Facilitator's Guide</i> • Supplies: kidney dish, towel, different types of forceps, suturing needles, scissors, scalpel with retractable blade, needle holder, surgical glove, surgical suite, surgical mask, goggles and cap 	1 hour, 30 minutes
Objective: Identify the risks of working in the operating room (OR) Objective: Identify which instruments cause the most injuries Objective: Explain how to prevent injuries from sharps	Group work discussion and interactive lecturing		
Objective: Identify strategies to design safer surgical procedures	Role play and plenary discussion Summarize the module by presenting the summary points of the module from the PPP		
Module 8: Instrument Processing and Handling Objective: Describe the steps of processing instruments and other	Brainstorming and interactive lecture	<ul style="list-style-type: none"> • Locally available bleach (if possible in both powder and liquid forms) • IP video: TDSs 4, 5, 6, 	3 hours, 40 minutes

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
items		and 7; and <i>IPPS Facilitator’s Guide</i> , Module 10	
<p>Objective: List commonly used disinfectants</p> <p>Objective: Explain how disinfectant solutions are prepared</p>	Brainstorming and discussion	<ul style="list-style-type: none"> • <i>IPPS Reference Manual</i>, Chapter 10, Tables 10-1, 10-2, 10-3, and 10-4 • <i>IPPS Facilitator’s Guide</i>, Module 10, Quick References for Mixing Bleach and How to Make Chlorine Solutions from Different Concentrations (page 83) 	
<p>Objective: Demonstrate the steps of the decontamination process, cleaning process, sterilization, and high-level disinfection (HLD)</p>	<p>Brainstorming, discussion, group work</p> <p>Demonstration and interactive lecture</p>	<ul style="list-style-type: none"> • Samples of wraps, containers, instruments, sterilants, and high-level disinfectants; copy of bingo exercise 	
<p>Objective: Explain how to store sterilized and high-level disinfected instruments and other items</p>	<p>Discussion and interactive lecture</p> <p>Summarize the module using bingo exercise</p>		
<p>Module 9: Processing Linen and Laundry</p> <p>Objective: Explain why careful handling and processing of soiled linen are important</p>	Brainstorming and interactive lecture	<ul style="list-style-type: none"> • Flip chart, markers • <i>IPPS Facilitator’s Guide</i> Module 9, “Processing Linen and Laundry” 	1 hours, 10 minutes
<p>Objective: Describe key principles in handling linen</p> <p>Objective: Explain how soiled linen should be collected, transported, sorted, washed, and dried</p> <p>Objective: Explain how clean linen should be stored, transported, and distributed</p> <p>Objective: Explain the minimum requirements for standard laundry</p>	<p>Brainstorming and interactive lecture</p> <p>Interactive lecture using PPP</p>		
<p>Objective: List the PPE used in processing linen and laundry</p>	<p>Brainstorming and interactive PPP</p> <p>Summarize the module by presenting the summary</p>		

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
	points of the module from the PPP.		
<p>Objective: Review day's assignments</p> <p>Objective: Remind participants/teams about the IPPS Needs Matrix: Operational Action Plan</p> <p>Objective: Fill in the Daily Reflection Form</p>	<p>Review assignments in the schedule.</p> <p>IPPS Needs Matrix: Operational Action Plan: remind participants to be thinking about and completing the matrix.</p> <p>Give participants the Daily Reflection Form and tell them to fill it in and leave it on the table when they leave the room.</p>	<ul style="list-style-type: none"> • <i>IPPS Participant's Manual</i> • Copy of the IPPS Needs Matrix on the wall • <i>IPPS Facilitator's Guide</i> warm-ups • Copy of Daily Reflection Form 	15 minutes
<p>Reading assignment: <i>IPPS Participant's Manual</i>, Modules 7, 8, and 9</p>			
Day Four			
<p>Objective: Review of Day Three activities</p>	Recap Day Three activities in the form of question and answer	<i>IPPS Facilitator's Guide</i> , <i>IPPS Participant's Manual</i> , and PPP	5 minutes
<p>Module 10: Clinical Laboratory Services</p> <p>Objective: Identify the sources of laboratory hazards in the health care setting</p> <p>Objective: Explain how exposures or accidental injuries occur in clinical laboratory settings</p>	Brainstorming and interactive lecture using PPP	<ul style="list-style-type: none"> • Flip chart, marker, and masking tape • LCD projector and computer • <i>IPPS Reference Manual</i>, Chapter 14 	1 hour
<p>Objective: List safe laboratory practices</p>	Brainstorming and interactive lecture using PPP		
<p>Objective: List bio-safety and infection prevention measures</p>	Brainstorming and interactive lecture using PPP		
	Summarize the module by presenting the summary points of the module from		

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
	the PPP		
<p>Module 11: Blood Safety Objective: List transfusion-transmissible infections (TTIs) of public health importance Objective: List the blood donor selection criteria Objective: Explain how to safely collect blood from donors</p>	Brainstorming and interactive lecture using PPP	<ul style="list-style-type: none"> • Flip charts, markers, and masking tape • LCD projector and computer • Participant handouts 	40 minutes
<p>Objective: Describe methods to minimize TTI Objective: Describe recommended IP practices to implement in making blood transfusion</p>	<p>Discussion and interactive lecture using PPP</p> <p>Summarize the module by presenting the summary points of the module from the PPP</p>		
<p>Module 12: Traffic Flow and Activity Patterns Objective: Define activity patterns and traffic flow in health care settings Objective: Explain the importance of regulating traffic flow and activity patterns in health care settings Objective: Describe how to design traffic flow and activity patterns in procedures, instrument processing, and surgical units</p>	<p>Brainstorming, role play, and interactive presentation</p> <p>Summarize the module by presenting the summary points of the module from the PPP</p>	<p><i>IPPS Facilitator’s Guide</i>, Module 12, “Traffic Flow and Activity Patterns”</p> <ul style="list-style-type: none"> • Flip chart, marker, and masking tape • Computer and LCD projector • A4 printed paper with a label of “OR,” “procedure room,” and “work area” • Handout 12.1 	1 hour
<p>Module 13: Transmission-Based Precautions for Health Care Facilities Objective: Describe transmission-based precautions Objective: List and explain components of transmission-based</p>	Brainstorming, discussion, and group work	<ul style="list-style-type: none"> • Flip chart, marker, and masking tape • Computer and LCD projector • Handouts 13.1 and 13.2 	1 hour

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
precautions			
Objective: Describe challenges to implement transmission-based precautions	Brainstorming and discussion Summarize by asking questions and presenting the key points of the module.		
Module 14: Tuberculosis Infection Prevention and Control in Health Care Settings Objective: Describe how tuberculosis (TB) can spread in the health care facilities	Brainstorming, buzz group, and discussion	<ul style="list-style-type: none"> • Flip chart, marker, and masking tape • LCD projector and computer • <i>IPPS Participant’s Manual</i>, Module 14, Handouts 14.1 and 14.3 • Module 14 PPP 	1 hour, 45 minutes
Objective: Explain how to reduce the risk of TB transmission in health care facilities	Group work and discussion		
Modules 15: Housekeeping Objective: Explain the importance of housekeeping Objective: State the general principles of housekeeping in health care facilities Objective: Demonstrate how to prepare disinfectant cleaning solution	Brainstorming and interactive lecture using PPP	<ul style="list-style-type: none"> • <i>IPPS Reference Manual</i>, Chapter 13 • 5-L plastic bucket • <i>IPPS Facilitator’s Guide</i>, Module 15, “Housekeeping” 	1 hour, 15 minutes
Objective: Identify cleaning methods Objective: List the type of PPE used during cleaning	Group work and interactive lecture		
Objective: Explain how to clean low- and high-risk areas	Discussion		
Objective: Review day’s assignments	Review assignments on the schedule.	<ul style="list-style-type: none"> • Copy of the course schedule 	5 minutes

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
<p>Objective: Remind participants/teams about the IPPS Needs Matrix: Operational Action Plan</p> <p>Objective: Fill in the Daily Reflection Form</p>	<p>IPPS Needs Matrix: Operational Action Plan: While reading or reviewing today's topics, start thinking about and filling in the matrix.</p> <p>Give participants a copy of Daily Reflection Form and tell them to complete it and leave it on the table when they leave the room.</p>	<ul style="list-style-type: none"> • Copy of the IPPS Needs Matrix on the wall • Copy of Daily Reflection Form 	
<p>Reading assignment: <i>IPPS Participant's Manual</i>, Modules 10, 11, 12, 13, 14, and 15</p>			
Day Five			
<p>Objective: Review of Day Four activities</p>	Recap Day Four activities in the form of question and answer	<i>IPPS Facilitator's Guide</i> , <i>IPPS Participant's Manual</i> , and PPP	5 minutes
<p>Module 16: Health Care Waste Management</p> <p>Objective: Describe transmission-based precautions</p> <p>Objective: List and explain components of transmission-based precautions</p>	Brainstorming, discussion, and group work	<ul style="list-style-type: none"> • Flip chart, markers, and masking tape • Computer and LCD projector • Cards • Information education and communication materials on health care waste management 	1 hour, 45 minutes
<p>Objective: Describe challenges to implement transmission-based precautions</p>	Brainstorming and discussion		
<p>Module 17: Medication Safety</p> <p>Objective: Define medication safety</p> <p>Objective: Identify the common causes of medical error and explain the possible measures to</p>	Brainstorming and interactive lecture using PPP	<ul style="list-style-type: none"> • Flip chart, marker, and masking tape • Laptop and LCD projector • Module 17, PPP 	1 hour, 15 minutes
	Interactive lecture using PPP and small group work		

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
overcome them			
Module 18: Post-Exposure Prophylaxis Objective: Define post-exposure prophylaxis (PEP) and describe HIV occupational exposure and indications for PEP	Brainstorming, discussion, and interactive lecture using PPP	<ul style="list-style-type: none"> • <i>IPPS Participant's Manual; IPPS Reference Manual</i>, Chapter 16 and Appendix D • Copy of list of materials and supplies required for programmatic implementation of PEP service • Copy of PEP decision-making tool wall chart 	40 minutes
Objective: Identify steps for the management of clients with HIV exposure Objective: Identify the recommended PEP drugs and discuss their efficacy	Discussion and interactive lecture using PPP		
Objective: Explain the management of occupational exposure to HIV, hepatitis B virus (HBV), and hepatitis C virus (HCV)	Brainstorming and interactive lecture using PPP		
Objective: Practice documentation and reporting of PEP service	Interactive lecture using PPP Summarize the module by presenting the summary points of the module from the PPP.		
Module 19: Food and Water Safety Objective: Explain food safety rules Objective: Elucidate how to make water safe in health facilities	Gallery walk and interactive lecture using PPP Summarize key points of the module using the PPP.	<ul style="list-style-type: none"> • VIPP card • Flip chart • Markers and masking tape • Computer and LCD projector • <i>IPPS Participant's Manual</i>, Handout 19.1 • <i>IPPS Reference Manual</i>, Chapter 18 	45 minutes
Module 20: Client Education on Infection Prevention and Patient Safety Objective: Explain why we educate clients on	Brainstorming/discussion and interactive lecture using PPP	<ul style="list-style-type: none"> • Flip chart, markers, and masking tape • Computer and LCD projector 	45 minutes

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
<p>IPPS and its importance</p> <p>Objective: Describe the components of effective client education programs</p> <p>Objective: Identify what considerations should be provided for effective implementation of client education on IPPS</p> <p>Objective: List key principles of IPPS for patient and client educators</p>	<p>Summarize the module by presenting the summary points of the module from the PPP.</p>		
<p>Module 21: Health Care Risk Management</p> <p>Objective: Describe health risk that might cause harm to patients, visitors, students, and health care facility workers</p> <p>Objective: Devise (design) possible interventions to prevent risks in health care settings</p> <p>Objective: Practice selected IP skills on stations</p>	<p>Buzz group and interactive lecture using PPP</p> <p>Clarify issues that are not clear and summarize the discussion displaying PPP 21.1.</p>		40 minutes
<p>Practice Stations</p> <p>Objective: Practice of selected IP skills on stations</p> <p>Objective: Qualify participants</p>	<p>Group work, simulation, and discussion using checklist</p> <p>Qualification: Randomly select only one station for each participant and then proceed with the qualification process.</p>	<ul style="list-style-type: none"> • Materials for Stations One, Two, Three, Four, and Five (follow <i>IPPS Facilitator's Guide</i>, IP stations) • Models • Instruments • IP materials and supplies • Copies of the simulation checklists 	1 hour
<p>Objective: Review day's assignments</p> <p>Objective: Remind participants/teams about</p>	<p>Review assignments on the schedule.</p> <p>IPPS Needs Matrix:</p>	<ul style="list-style-type: none"> • Copy of the course schedule • Copy of the IPPS Needs Matrix on the wall 	5 minutes

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
<p>the IPPS Needs Matrix: Operational Action Plan Objective: Complete the Daily Reflection Form</p>	<p>Operational Action Plan: While reading or reviewing today’s topics, start thinking about and filling in the matrix.</p> <p>Give participants a copy of Daily Reflection Form and tell them to complete it and leave it on the table when they leave the room</p>	<ul style="list-style-type: none"> • Copy of Daily Reflection Form 	
<p>Reading assignment: <i>IPPS Participant’s Manual</i>, Modules 16, 17, 18, 19, 20, and 21</p>			
Day Six			
<p>Objective: Review of Day Five activities</p>	<p>Recap Day Five activities in the form of question and answer</p>	<p><i>IPPS Facilitator’s Guide</i>, <i>IPPS Participant’s Manual</i>, and PPP</p>	<p>10 minutes</p>
<p>Activity: Site visit/observations Objective: Observe IPPS practices of the health care facility</p>	<p>Site visit/observations: Divide the participants into two or more groups and give them instructions for the observation visits. Ask them to observe the IPPS practices in their specific areas, looking for correct/positive practices, incorrect or missing practices, and how they would improve them.</p>	<ul style="list-style-type: none"> • <i>IPPS Facilitator’s Guide</i>, site visit • Appropriate attire for the sites to be visited • Observation tools (if needed) 	<p>2 hours, 5 minutes</p>
<p>Activity: Site visit/discussion Objective: Review site visit observations</p>	<p>Follow the <i>IPPS Facilitator’s Guide</i>, health care facility visit directions</p> <p>Site visit/discussion: After the participants return, ask groups to share their comments from the site visit, including:</p> <ul style="list-style-type: none"> • Positive findings (correct practices, ideas) • Negative findings 	<p><i>IPPS Facilitator’s Guide</i>, health care facility visit</p>	<p>1 hour, 30 minutes</p>

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
	(incorrect practices or practices that are missing) <ul style="list-style-type: none"> • Suggestions for improvements 		
Module 22: Managing Infection Prevention and Patient Safety Programs Objective: Describe the organizing principles of IPPS program management Objective: Identify the responsible entities and working groups involved in managing IPPS programs and their roles	Brainstorming and interactive lecture using PPP	<ul style="list-style-type: none"> • <i>IPPS Facilitator's Guide</i> and <i>IPPS Participant's Manual</i> 	1 hour, 30 minutes
Objective: Describe how to manage change in introducing recommended IPPS practices and processes Objective: Explain the basics for IPPS supportive supervision and tools Objective: Gain familiarity with the supportive supervision tools used in Ethiopia	Brainstorming and interactive lecture using PPP Group work and interactive lecture using PPP Discuss and summarize using PPP 22.2 about supportive supervision and mentoring	<ul style="list-style-type: none"> • Copy of the supportive supervision checklist used locally • Module 22, PPP • <i>IPPS Facilitator's Guide</i> 	
Work plan preparation, post-training assessment, and closing remarks Activity: Work plan development	Participants develop action plans.	<ul style="list-style-type: none"> • Additional blank copies of the IPPS Needs Matrix: Operational Action Plan sheet 	2 hours
Activity: Post-training assessment	Participants complete the post-training questionnaire. Trainers complete the qualification summary form.	<i>IPPS Facilitator's Guide</i> , midcourse pre- & post-training questionnaire answer key	

Objectives/Activities	Teaching Methods	Resources/Materials Required	Time
Activity: Training evaluation	Participants complete the training evaluation form.	<ul style="list-style-type: none"> • Evaluation forms in the <i>IPPS Participant's Manual</i> • Copy of the training evaluation form can also be given 	
Activity: Closing ceremony	<p>Closing speech from honorable guest</p> <p>Give participants their certificates.</p>		

Welcome and Introduction

Learning Objectives

By the end of this session, participants will be able to:

- Begin to name fellow participants, facilitators, and resource persons.
- Recognize the role of the facilitator(s).
- Establish ground rules to be followed during the training course.
- Explain course and training objectives and purpose of the training.
- Create a dynamic relationship among participants and trainers.
- Assess their pre-training knowledge and skills and their learning needs.
- Recognize administrative arrangements.

Time: 2 hours and 5 minutes

Content

1. Welcome and opening remarks (10 minutes)
2. Introduction of participants and facilitators (30 minutes)
3. Establishing training norms (10 minutes)
4. Participants' expectations (15 minutes)
5. Pre-training knowledge assessment (35 minutes)
6. Training overview and agenda (5 minutes)
7. Identifying individual learning needs and introduction to health care facility's IPPS Needs Matrix: Operational Action Plan (20 minutes)

Advance Preparation

- Identify representatives of local officials for the formal opening.
- Brief the guest of honor on the purpose and objectives of the training and time allocated for the opening remarks.
- Prepare name tags and other necessary materials for the participants and the trainers.
- Make enough copies of the agenda and handouts for participants for distribution.
- Prepare a small ball of paper or buy a plastic ball.
- Prepare sufficient copies of the pre-test questionnaires (Annex 1).

- Write the purpose and objectives of the training on flip chart paper or PPP.

Introduction

Start this session by welcoming the participants and informing the guest of honor to prepare for an opening speech.

Activities and Methodologies

1. Welcome and opening remarks (10 minutes)

- Welcome participants and thank them for attending the course. Introduce yourself, other facilitators, and guests.
- Invite the guest of honor to make opening remark.

2. Introduction of participants and facilitators (30 minutes)

- Explain to participants that everyone will be working as a team during the training, so participants need to know each other and feel comfortable. Ask participants to stand up and make a circle in the middle of the class.
- Start by throwing the ball to one of the participants and allow him or her to introduce himself or herself based on the following content:
 - Name
 - Place of work and profession
 - Experience with IPPS, including any previous training
 - Something of human interest (favorite food, hobbies, likes, dislikes)
 - What he or she would like to be called during the course (name or nickname)
- After the introduction, give each participant a piece of card or a name tag, and ask him or her to write his or her name on the card or tag. The card should be folded in half and placed in front of the participant's chair or clipped on his or her chest.

3. Establishing training norms (10 minutes)

- Explain that it would be a good idea to set some norms during the training.
- Ask participants to suggest norms.
- Write participants' responses on the flip chart.

- Post the flip chart with the training norms on the wall so that all participants can see it during the course.
- Choose and assign participants for recap, time keeping, and energizers.



Trainer's Tip

In alternating colors, write on the flip chart all suggestions, using participants' own words. However, consider rewriting the answers in positive terms, as needed. For example, if a participant says, "Do not be late," consider rephrasing this as "Be on time."

Some examples of ground rules:

- Participate actively.
- Respect each other's opinions/ideas.
- Speak one at a time.
- Ask if not clear.
- Put cell phone on vibration mode or turn off all cell phones.
- Be supportive rather than judgmental.

Assign participants for recap, time keeping, and energizers.

4. Participants' expectations

(15 minutes)

- Ask participants what they expect from the training.
- Write their responses on a flip chart.
- Summarize participants' responses.
- Present the general objective of the IPPS training and compare with participants' expectations.

General Objective of IPPS Training

The general objective of this training is to equip health care providers with essential knowledge, attitude, and skills needed to implement IPPS standards.

Specific Objectives

The specific objectives of this training are to:

- Identify the common infections occurring in health care settings.
- Explain the modes of transmission of common infections occurring in health facilities.
- Describe various interventions used to prevent common infections in the health facilities to protect both health care providers and clients.
- Enable participants to use appropriate approaches to educate clients to contribute to the infection prevention effort.
- Ensure participants understand and use essential medication safety principles.
- Highlight and encourage the planning, implementation, monitoring, and evaluation of IPPS program management in health care settings.

5. Pre-training knowledge assessment

(35 minutes)

- Briefly explain the purpose of the pre-training test. It helps to identify areas or topics that need to be emphasized during training.
- Distribute pre-training test questions to participants. Tell them that they have 30 minutes to complete the pre-training test. Remind them when five minutes are left.
- Ask participants to write their code number (previously assigned by random drawing of numbers) on the pre-training test.
- Correct all the pre-training tests on the same day and post the results with the codes on the wall. Identify topics that caused disagreement or confusion and need to be addressed. Participants should be advised that these topics will be discussed in detail during the training.
- Tell participants that there will be a post-training test at the end of the training.

6. Training overview and agenda

(5 minutes)

- Distribute and read the training schedule/agenda, and explain it briefly.
- Explain any logistic issues.
- Thank the participants for their active participation and tell them that the main training modules will now be started.

7. Identifying individual learning needs and introduction to health care facility's IPPS Needs Matrix: Operational Action Plan (20 minutes)

- Lead discussion of answers on the pre-training questionnaire and identify the individual learning needs. Remind participants that there will be a post-training test at the end of the training.
- Distribute the IPPS Needs Matrix to each participant and briefly explain the objective of it. Tell participants that during the training, as IPPS topics are introduced or reviewed, each participant/team should start analyzing their own IPPS needs and gaps and will gradually complete other columns (interventions/actions, responsibilities, quantity support, and time) during the training and present it at the end. The matrix will become their operational action plan to improve IPPS practices at their facilities after the training.

Module 1: Introduction to Infection Prevention and Patient Safety

Module Objective

- ❖ To enable health care workers to understand how infections are transmitted in health care facilities and identify the associated risks to health care workers, patients/clients, and the community at large.

Learning Objectives

By the end of this module, participants will be able to:

- Describe the magnitude of nosocomial infections.
- Identify the risk of infections in the health care delivery setting.
- Explain the disease transmission cycle and measures to halt the spread of disease at health care delivery settings.
- Describe the role of the Centers for Disease Control and Prevention (CDC) isolation guidelines in preventing health care–acquired infections.
- Explain IPPS.
- Identify the recommended activities to improve IPPS practices.
- Demonstrate barrier methods while caring for a patient with an infectious disease.

Time: 1 hour and 30 minutes

Module Content

- Risk of Infection in Health Care Settings (30 minutes)
- Overview of Infectious Disease (40 minutes)
- Overview of Infection Prevention and Patient Safety (20 minutes)

Advance Preparation

- Prepare the envelopes by marking the letter “A,” “B,” or “C” under the flap of each envelope or at the top of each visualization in participatory programs (VIPP) card. The letter “A” should be on 10 percent of the envelopes (*e.g., if there are 20 envelopes, only 2 envelopes should have the letter “A” under the flap*). “B” and “C” should be evenly distributed among the rest of the envelopes.

Module Introduction

Introduce this module by reviewing the purpose and objectives of the module and briefly highlighting its content.

Activities and Methodologies

Risk of Infection in Health Care Settings

(30 minutes)

Methodology: Group work, interactive PPP, and discussion

Activities

- Prepare the cards in advance by selecting diseases with different routes of transmission including hepatitis B virus (HBV), tuberculosis (TB), hepatitis A virus (HAV), and influenza.
- Divide participants into four groups.
- Distribute one card with an infectious disease to each group.
- Ask each group to draw the transmission cycle of their specific disease on a flip chart.
- Ask each group to identify barriers or measures to break the transmission cycle and prevent the spread of the infectious disease.
- Allow each group to present the disease transmission cycle and identified barriers and measures.
- Summarize the activity by the following possible responses and ask whether participants have questions.

Possible Answers for the Facilitator

Background Information for Trainers: Examples of Infectious Diseases

Pulmonary Tuberculosis

- Agent:** *Mycobacterium tuberculosis*. The tubercle bacillus has an incubation period of 4 to 12 weeks, and its period of communicability lasts as long as the bacillus is present in the sputum.
- Reservoir:** Primarily humans (client or patient, family, community, and health care workers), rarely primates.
- Method of transmission:** Exposure to tubercle bacilli in airborne droplet nuclei produced by people with pulmonary or laryngeal TB. The tubercle bacilli can be transferred into the air, either as airborne droplets or dust particles containing the bacilli; can be excreted through coughing, sneezing, talking, or procedures such as bronchoscopy or suctioning; can remain in the air for up to several hours; and can be spread widely within a room or over long distances.
- Place of exit and entry:** Upper respiratory tract
- Susceptible host:** All human beings (client or patient, family, community, and health care workers)

Barriers/measures to break the cycle:

Standard precautions (find more information in *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*, Chapter 2) and airborne precautions (find more information in *Infection Prevention and*

Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia, Chapter 17), including:

- Quick assessment of clients/patients with suspected TB (empiric use) to implement airborne precautions
- Patient placement: Keep patient in private room or use patient cohorting method (put patients who have the same active infection together)
- Respiratory protection (face shield, goggles, or surgical mask)
- Patient transport (limit transport of patient to essential purpose only; use of surgical mask if transportation is needed; notify area receiving the patient)
- Keep the airborne precautions until sputum conversion takes place during the treatment; sputum conversion takes place within four to eight weeks after treatment
- Management of contacts
- Health education on mode of spread and appropriate precautions (client or patient, family, community, and health care workers)

Influenza

Agent:	Influenza virus (types A, B, and C). Period of incubation is short, usually one to three days. Period of communicability is probably one to five days from clinical onset in adults and up to seven days in young children.
Reservoir:	Humans are the primary reservoir for human infections (client or patient, family, community, and health care workers).
Method of transmission:	Droplet spread predominates among crowded populations in enclosed spaces such as school buses; transmission can also occur through direct contact because influenza virus can persist for hours in cold weather and low humidity. Contact of the mucous membranes of the nose, mouth, and conjunctiva of the eye with infectious particles; this can be produced by coughing, sneezing, talking, or procedures such as bronchoscopy and suctioning. Droplet transmission requires close contact between the source and susceptible host because particles remain airborne briefly and travel only about three feet (one meter) or less.

Place of exit and entry: Contact of the mucous membranes of the nose, mouth, and conjunctiva of the eye with infectious particles

Susceptible host: All human beings (client or patient, family, community, and health care workers)

Barriers/measures to break the cycle:

Standard precautions (find more information in *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*, Chapter 2) and droplet precautions (find more information in *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*, Chapter 17), including:

- Quick assessment of clients/patients with suspected influenza (empiric use) to implement droplet precautions
- Patient placement (private room, door open; if private room is not available, place patient in room with a patient who has the same active infection)
- Respiratory protection (wear mask if within three feet of patient)
- Patient transport (limit transport of patient to essential needs only; use a mask if transportation is needed; notify others who are receiving the patient)
- Control of patient, contacts, and the immediate environment
- Education of the public and health care personnel on basic personal hygiene, especially the danger of unprotected coughs and sneezes and hand-to-mucous membrane transmission
- Immunization: 70 to 80 percent protection in healthy young adults; may be less effective in elderly population but may reduce the severity of the disease and the incidence of complications by 50 to 60 percent and death by approximately 80 percent

Hepatitis A

Agent: HAV. Incubation period is 15 to 50 days, with an average of 28 to 30 days. Period of communicability: Studies show maximum infectivity during the latter half of the incubation period, continuing for a few days after onset of jaundice. Most cases are probably noninfectious after the first week of jaundice.

Reservoir: Humans (client or patient, family, community, and health care workers); rarely captive chimpanzees

Method of transmission: Transmission occurs directly or indirectly from one infected or colonized person to a susceptible host (patient), often on the contaminated hands of a health care worker. The fecal-oral route transmits HAV from person to person. The infectious agent is found in feces, reaches peak levels the week or two before onset of symptoms, and diminishes rapidly after liver dysfunction or symptoms appear.

Place of exit and entry: Direct or indirect contact (fecal-oral); stool to mouth

Susceptible host: Client or patient, family, community, and health care workers. Susceptibility is general and homologous; immunity after infection probably lasts for life.

Barriers/measures to break the cycle:

Standard precautions (find more information in *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*, Chapter 2) and droplet precautions (find more information in *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*, Chapter 17), including:

- Quick assessment of the case
- Personal and environmental hygiene emphasize proper utilization of latrine
- **Preventive measures:** assessment of clients/patients with suspected HAV (empiric use) to implement contact precautions
- Maintaining contact precautions during the first two weeks of illness but not more than one week after onset of jaundice
- Patient placement (private room, door open; if private room is not available, place patient in room with a patient who has the same active infection)
- Gloving (wear clean, nonsterile examination gloves when entering the room, change gloves after contact with infective materials, and remove gloves before leaving the room)

- Hand washing (wash hands with antibacterial agent, or use a waterless, alcohol-based hand rub after removing the gloves)
- Avoiding touching potentially contaminated surfaces or other items before leaving the room.
- Wearing gowns and protective apparel (wear clean, nonsterile gown when entering the room if you anticipate contact with patient or if patient is incontinent or has diarrhea; remove gown before leaving the room)
- Patient transport (limit transport of patient to essential needs only; ensure that precautions are maintained during transport and notify area receiving the patient)
- Patient care equipment (reserve noncritical patient care items for use with a single patient, if possible, or clean and disinfect any equipment shared among infected and noninfected patients)
- Disinfect patient stool
- Control of patient, contacts, and the immediate caregiver:
 - Education of the public and health care personnel in basic personal hygiene, especially on careful hand washing and sanitary disposal of feces
 - Provision of proper water treatment and distribution system and sewage disposal
 - HAV immunization (effective after two to four weeks): 70 to 80 percent protection in healthy young adults; may be less effective in elderly population but may reduce the severity of the disease and the incidence of complications by 50 to 60 percent and death by approximately 80 percent

Summary of Basic Infection Prevention Principles

- Most infectious agents are transmitted by contact with body substances such as blood, feces, sputum, and anything that is wet or moist.
- Most infections are communicable for some period of time before symptoms are present, or even when symptoms are absent.

What can you do to protect yourself when you are working with patients or clients?

You should use standard precautions with each and every patient or client you care for. Standard precautions (which used to be called barrier precautions, blood and body fluid precautions, and universal precautions [UP]) were developed to reduce the risk of the transmission of microorganisms from both known and unknown sources of infection when caring for patients or clients in any health care setting, as well as at home. Standard

precautions, therefore, apply to all blood and body secretions, excretions, nonintact skin, and mucous membranes for every person.

Placing a physical, mechanical, or chemical barrier between you and microorganisms can prevent the acquisition of disease.

Additional precautions are necessary for other situations, depending on the route of transmission; these are called transmission-based precautions.

Airborne precautions are used for patients with diseases transmitted by droplet nuclei such as zoster, TB, measles, and chicken pox.

Droplet precautions are used for patients with diseases transmitted via large droplets such as meningitis, pertussis, and *Haemophilus influenzae*.

Contact precautions are used for patients with diseases spread via direct contact such as rotavirus, herpes, and HAV.

Immunizations can protect you from acquiring a number of diseases.

There are many immunizations available to health care workers as well as to the public, but you have to go get the immunization. Every health care worker should have access to the following immunizations:

- HAV
- HBV
- Influenza
- Pneumococcus
- Tetanus, diphtheria
- Chicken pox
- Measles, mumps, and rubella (German measles).

Methodology: Brainstorming and interactive lecture

Activities

- Ask participants:
 - How are infectious diseases transmitted?
 - What are the conditions needed in order to spread an infectious disease?
- Take a few responses and discuss
(The essential factors for the transmission of disease-causing microorganisms are: agent, host/reservoir, portal of exit, method of transmission, portal of entry, and susceptible host.)
- Display PPP 1.2, “Introduction to Infection Prevention and Patient Safety,” to review the disease transmission cycle and infectious disease prevention.

Display the PPP, which shows the CDC guidelines for preventing health care–acquired infections. Describe the history resulting in the current CDC guidelines. Discuss clearly what the current system has accomplished and incorporated.

CDC Isolation Guidelines

- In 1970, the CDC introduced disease-specific isolation categories.
- In 1985, UP was introduced.
 - Due to advent of blood-borne diseases such as HIV and resurgence of TB
 - To protect health care providers from HIV and blood-borne infections
 - UP did not address risk to patients and risk from other potentially infected body fluids (e.g., semen, amniotic fluid, or mucous secretions) and hence needed modification (CDC 1985).
- In 1987, body substance isolation (BSI) was introduced.
 - It included protection measures for patients and health personnel from all infectious fluids not just blood.
 - It included measures to protect patient-to-patient and health personnel-to-patient transmissions, which are neglected by UP.
 - It also included protective immunization of susceptible patients and staff.

- But it had shortcomings like added cost of personal protective equipment (PPE), especially gloves, and confusion with UP (Lynch and Jakson 1990; Patterson et al. 1991).

Current CDC Guidelines

- Introduced in 1996 to replace UP and BSI guidelines
- Incorporates major parts of both UP and BSI into a single set of guidelines that operate at two levels:
 - Standard precautions
 - Transmission-based precautions (Garner and the Hospital Infection Control Practices Advisory Committee 1996)

Overview of Standard and Transmission-Based Precautions

Standard precautions: are guidelines designed for use in caring for all people—both clients and patients—attending health care facilities. They apply to blood, all body fluids, secretions and excretions (except sweat), nonintact skin, and mucous membranes. The details of their use and issues related to implementing them are covered in Module 2.

Transmission-based precautions: are the second-level precautions intended for use in patients known to be or highly suspected of being infected or colonized with pathogens transmitted by: 1) **air** (TB, chicken pox, measles, etc.), 2) **droplet** (influenza, mumps, and rubella), or 3) **contact** (hepatitis A or E and other enteric pathogens, herpes simplex, and skin or eye infections).

Overview of Infection Prevention and Patient Safety

(20 minutes)

Methodology: Interactive lecture

Activities

- Using PPP 1.2, present the IP basic principles and standards, the role of health workers in IPPS, and the recommended activities to improve IPPS practices.

- Tell participants that they will learn the details on IPPS in the next modules.
- Encourage participants to refer to and read from the participant's handout.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the points of the module from the PPP.

Module 2: Standard Precautions

Module Objective

- ❖ To enable participants to understand the basic concept, principles, and purpose of standard precautions.

Learning Objectives

By the end of this module, participants will be able to:

- Define standard precautions.
- Explain the purpose of standard precautions.
- List the components of standard precautions.

Time: 40 minutes

Module Content: Standard Precautions: Definition and Purpose (40 minutes)

Advance Preparation

- Write the key components of standard precautions on flip chart paper.

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Standard Precautions: Definition and Purpose

(40 minutes)

Methodology: Group work, discussion, and interactive lecture

Activities

- Start this activity by reminding participants about the new CDC guidelines (standard precautions and transmission-based precautions) from the previous module.
- In plenary, tell participants to remember how standard precautions was defined in the previous module and ask a few volunteers to share what they understand by standard precautions and what they are designed to do.
 - **Definition of Standard Precautions:** *Guidelines designed to create a physical, mechanical, or chemical barrier between microorganisms and a person to prevent the spread of infection.*
- Acknowledge participants' contributions and display PPP 2.1 to define standard precautions, explain their purpose (what are standard precautions designed to do), and the principles and components of standard precautions.
- Divide the participants into five groups (three to four persons) and give each group one component of standard precautions (see the PPPs) and tell them to discuss the recommended practices of the component. Allow five minutes to work.

Physical: *PPE (gloves, face masks, goggles, gowns, aprons, and drapes)*

Mechanical: *High-level disinfection (HLD) by boiling or steaming and sterilization by autoclaving or dry heat ovens*

Chemical: *Antiseptics (alcohol-based antiseptic agents) and high-level disinfectants (chlorine and glutaraldehydes)*

- After five minutes, ask each group to present, in turn, what they have discussed. Write their responses on a flip chart.
- Complete missing essential ideas from the participants' discussion and summarize the activity by reminding them of the purpose of standard precautions.
- Tell participants that they will learn each component in detail in the coming modules.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.

- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting points of the module from the PPP.

Module 3: Hand Hygiene

Module Objective

- ❖ To enable participants to understand hand hygiene techniques.

Learning Objectives

By the end of this module, participants will be able to:

- Explain the rationale for hand hygiene.
- List the kinds of hand hygiene techniques.
- Explain the purpose of each kind of hand hygiene technique.
- Demonstrate how to prepare and use antiseptic hand rub.
- Demonstrate the different hand hygiene techniques.
- Mention common poor practices related to hand hygiene.
- Identify strategies for improving hand hygiene practices.

Time: 2 hours and 15 minutes

Module Content

- Why Hand Hygiene Is Important (20 minutes)
- Hand Washing (45 minutes)
- Hand Antisepsis and Antiseptic Hand Rub (40 minutes)
- Surgical Hand Scrub (10 minutes)
- Improving Hand Hygiene Practices (20 minutes)

Advance Preparation

- Prepare materials needed for demonstration (see the “Resources/Materials Required” on page 14).
- Prepare video (TDS 1: “Recommended Practices for Hand Hygiene”).
- Prepare posters on hand-washing technique and hand hygiene technique using alcohol-based formulation (let posters remain on the wall during the training period).

Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Why Hand Hygiene Is Important

(20 minutes)

Methodology: Brainstorming and discussion

Activities

- Start the activity by asking participants the following question.
 - Why do you think hand hygiene is important in the clinical setting?
(Possible answers may include minimizing the spread of disease, reducing the number of disease-causing microorganisms on hands and arms, and minimizing cross-contamination.)
- Write their responses on a flip chart.
- Ask participants the kinds of hand hygiene they know.
- Write their responses on the flip chart.

(If the list is not exhaustive, explain to them the following four kinds of hand hygiene. Hand washing, hand antisepsis, antiseptic hand rub, and surgical hand scrub. Emphasize that the use of soap and water remains the most common and most important of the various hand hygiene practices available.)
- Facilitate a brief discussion by asking:

- What are the criteria for choosing the specific type of hand hygiene practice?

(The decision to choose a type of hand hygiene practice depends on the intensity of contact with the patient and/or blood and body fluids, the likelihood of microbial transmission, the patient's susceptibility to infection, and the procedure being performed.)

- Summarize the activity by reviewing key ideas using PPP 3.1, "Hand Hygiene," and emphasize the points that were not raised during the discussion.

Hand Washing

(45 minutes)

Methodology: Brainstorming, exercise, interactive lecture, and demonstration

Activities

- Begin the activity by asking participants the following question.
 - When do you usually wash your hands (your actual practice)?
- Encourage participants to give an honest answer.
- Tell participants that the purpose of hand washing is to mechanically remove soil and debris from the skin and reduce the number of transient microorganisms.
- Tell participants that now you will see their practice of hand washing.
- Have participants put on sterile or high-level disinfected gloves using aseptic technique.
- Ask participants to close their eyes and put about 5 mL of the poster paint onto their gloved hands. With their eyes closed, they should begin their ordinary hand-washing technique.
- Tell participants to open their eyes and stop washing their hands after 10 to 15 seconds and examine their hands.
- Ask them to point to those parts of the gloves without paint and describe the areas (usually between thumb and index finger, between fingers, under nails, or on the back of hands). Emphasize the need to thoroughly wash all parts of the hand.
- Tell participants that you will now demonstrate proper hand-washing technique using soap and water.

- Ask for two volunteers to demonstrate the steps in hand washing.
- Ask participants to comment on the demonstrations comparing the two demonstrations. (*Tell participants to start with the positive and then to discuss the things that need to be improved*)
- Display the poster or picture that shows the steps for hand washing.
- Demonstrate the correct steps in hand washing.
- Encourage participants to ask questions and confirm they followed the demonstration.
- Tell participants to practice the steps, observe them moving in the room, and give immediate feedback.
- Give a chance for participants to reflect on practicing the steps.
- Summarize the activity by displaying PPP 3.2 on “Hand Hygiene” technique.

The following figure can be used to accompany the demonstration.

Hand washing Technique with Soap and Water



WHO Guidelines on Hand Hygiene in Health Care (advanced draft)/Modified according to EN 1500.

Hand Antisepsis and Antiseptic Hand Rub

(40 minutes)

Methodology: Brainstorming, interactive lecture, and demonstration

Activities

- Start this activity by asking participants the following questions.
 - What is antiseptic?

- What is the difference between hand antisepsis and antiseptic hand rub?

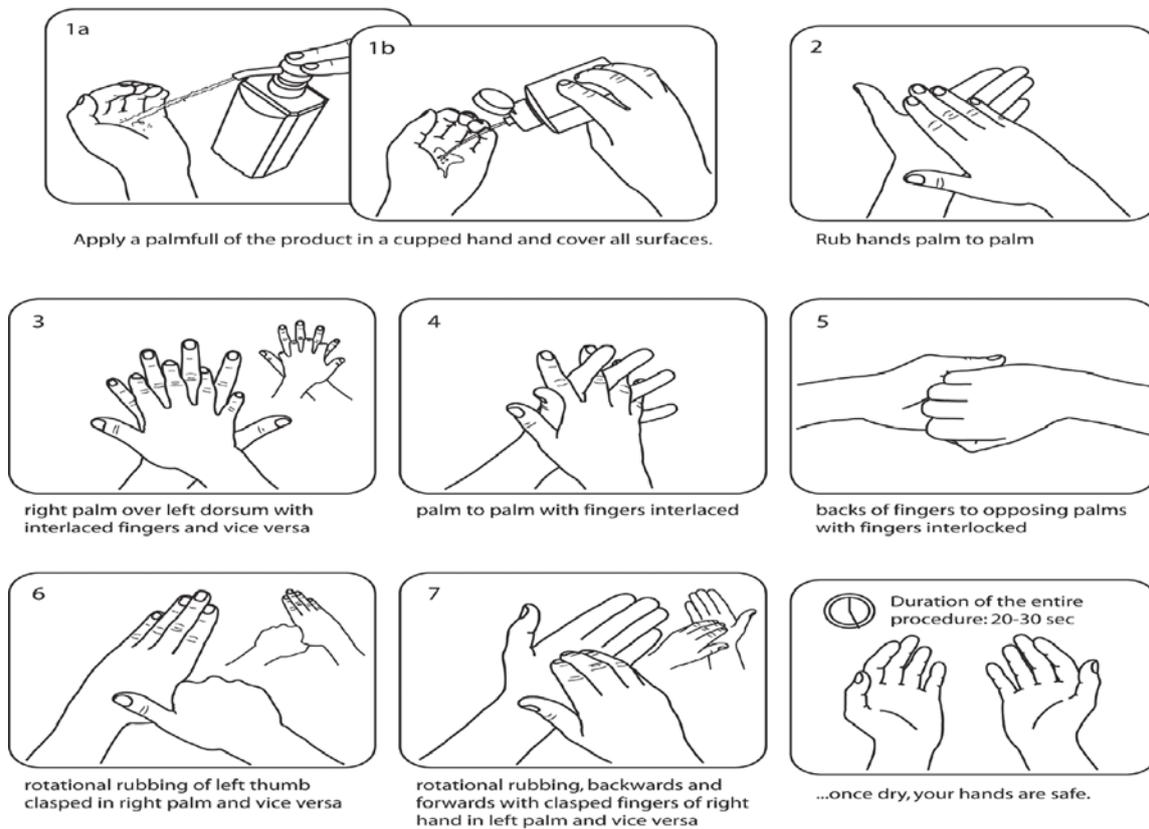
(Antiseptics: Chemicals that are applied to the skin or other living tissue to inhibit or kill microorganisms, reducing the bacterial count.)

*(The purpose of **hand antisepsis** is to remove soil and debris as well as to reduce both transient and resident flora; the technique is similar to that for plain hand washing, except that the soap or detergent contains an antiseptic agent.)*

*(The purpose of **antiseptic hand rub** is to inhibit or kill transient and resident flora; it is considered to be more effective than antimicrobial hand-washing agents or plain soap and water, and it is considered quicker and easier to perform.)*

- Tell participants that they can give examples. Take a few responses.
- Review the definition of hand antisepsis and antiseptic hand rub using PPP 3.3 on “Hand Hygiene.”
- Tell participants that the technique for hand antisepsis is similar to hand washing except that it involves use of soap containing an antimicrobial agent; tell them that you will demonstrate the antiseptic hand rub technique.
- Show participants how to prepare antiseptic hand rub from alcohol and glycerol. (See “Advance Preparation”).
- Display the poster or picture that shows hand hygiene technique using antiseptic hand rub and demonstrate the technique for antiseptic hand rub. Use the following procedure.

Hand Hygiene Technique with Alcohol-Based Formulation



WHO Guidelines on Hand Hygiene in Health Care (advanced draft) / Modified according to EN1500

- Encourage participants to ask questions and allow other participants to react before you give brief answers.

Surgical Hand Scrub

(10 minutes)

Methodology: Brainstorming, interactive lecture, and demonstration

Activities

- Tell participants that they will be learning another hand hygiene practice.
- Ask participants the following question.
 - What do you understand by surgical hand scrub?

(The purpose is to mechanically remove soil, debris, and transient organisms and to reduce resident flora for the duration of the surgery.)

- Take a few responses and display PPP 3.4 on “Hand Hygiene” surgical hand scrub.

- Tell participants that you will demonstrate the technique of surgical hand scrub, but before that, you will review the steps with them.
- Refer them to Participant Handout 3.4.
- Let participants read each step one by one (one participant may read one step only).
- Demonstrate the technique for performing surgical hand scrub to the participants.
- Allow participants to practice the technique on their own.
- Ask if participants have any comments or questions.

Improving Hand Hygiene Practices

(20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Tell participants that they will be examining the reasons why health workers do not wash their hands so as to suggest possible corrective measures.
- Brainstorm by asking the following questions.
 1. What are the common reasons that health care workers do not wash their hands in your health facilities?

Possible reasons why health workers do not wash their hands:

- Hand washing between every patient encounter is unnecessary.
 - Hand washing does not affect clinical outcome.
 - Hand washing is unnecessary when gloves are worn.
 - Frequent hand washing damages skin and cause cracking, dryness, irritation, and dermatitis.
 - Hand washing damages nails and nail polish.
 - Hand-washing facilities are not conveniently placed or well designed.
 - Hand washing takes too much time.
2. What are the possible measures that can be taken to improve compliance with hand hygiene among health workers?

Possible measures to improve hand hygiene among health workers:

- Have supplies available and at “point of use.”

- Disseminate and promote guidelines.
 - Reinforce guidelines.
 - Involve everybody.
 - Give positive feedback.
 - Reward role models.
 - Benchmark best practices.
-
- Encourage participants to feel free to contribute any possible solutions.
 - Display PPP 3.5 on hand hygiene (other issues and considerations related to hand hygiene and monitoring hand hygiene compliance).
 - Explain the recommended practices on hand hygiene in relation to glove use, hand lotion and hand cream, lesions and skin breaks, fingernails and artificial nails, nail polish and jewelry, and hand hygiene compliance. Also emphasize the point that to make hand hygiene compliance easier, staffs have to be provided with small, individual-use containers of an antiseptic hand rub.
 - Encourage participants to ask questions and facilitate discussion.
 - Ask participants to summarize what they have learned from this session.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by showing the video on hand hygiene (TDS 1: “Recommended Practices for Hand Hygiene”).

Module 4: Personal Protective Equipment

Module Objective

- ❖ To enable participants to understand how to properly use PPE.

Learning Objectives

By the end of this module, participants will be able to:

- List PPE.
- Describe the use, effectiveness, and limitations of PPE.
- List types of gloves.
- Demonstrate the correct way of donning and removing PPE (gloves, masks, etc.).
- Identify the types of drapes and demonstrate how to use them.

Time: 2 hours

Module Content

- Personal Protective Equipment (1 hour and 20 minutes)
- Gloves (40 minutes)

Advance Preparation

- Prepare materials needed for demonstration.
- Prepare video on PPE use (TDS 2).
- Prepare the following table for the first activity (Handout 4.1.) on a flip chart without the contents for the group work.

Table 4.1. Types of personal protective equipment

Type of Personal Protective Equipment	Must Be Used For:	Primarily Protects:
Caps, gowns/scrub suits, masks, aprons, drapes	Invasive procedures where tissue beneath the skin is exposed	Service provider and client
Closed boots or shoes (open sandals are not acceptable)	Situations involving sharp instruments or when contact with blood and/or body fluids is likely	Service provider
Goggles or glasses, masks, apron or mackintosh	Situations where splashing of blood, body fluids, secretions, or excretions is likely	Service provider
Apron or mackintosh	Situations where splashing or spillage of blood, body fluids, secretions, or excretions is likely	Service provider
Masks	Situations that call for airborne or droplet transmission precaution	Service providers
Sterile drapes	Major or minor surgical procedures	Client

Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Personal Protective Equipment

(1 hour and 20 minutes)

Methodology: Brainstorming and discussion

Activities

- Start by asking participants what PPE is and to name some of the types of PPE they know.

- Write their responses in the first column of the flip chart version of Table 4.1 (see “Advance Preparation”).
- Complete the list if it is not exhaustive.
 - *(Protective barriers and clothing are now commonly referred to as PPE. PPE includes gloves, masks/respirators, eyewear [face shields, goggles, or glasses], caps, gowns, aprons, and other items.)*
- Do this until all the PPE is discussed.
- Ask participants for what activity or procedure each PPE should be used, and write this in the second column of Table 4.1 (from participant handout or in the “Advance Preparation” section).
- Ask participants who (health provider or client) each PPE is primarily protecting.
- Complete the third column of Table 4.1 on the flip chart.
- Refer participants to Participant Handout 4.1 and tell them to find any information missing by comparing with the flip chart.
- Facilitate discussion.
- Demonstrate the correct use of PPE (cape, mask, goggles, drapes, apron, boots, gown, mackintosh).
- Summarize and give chances for participants to ask questions.

Gloves

(40 minutes)

Methodology: Brainstorming, demonstration, and interactive lecture

Activities

- Start by asking why health care providers wear gloves.
- Elicit responses.

(Health care workers wear gloves for the following three reasons: to reduce the risk of staff acquiring bacterial infections from patients, to prevent staff from transmitting their skin flora to patients, and to reduce contamination of the hands of staff by microorganisms that can be transmitted from one patient to another [cross-contamination].)
- Ask participants about the types of gloves they know of and when they use them.
- Give them the information from Participant Handout 4.2 about gloves.
- Tell participants that you will now demonstrate how to don and remove gloves.

- Ask two volunteers to come to the front and demonstrate how to don and remove clean gloves.
- Allow participants to comment on the demonstrations and tell them to begin with the positive and then discuss the areas that need to be improved.
- Ask another two volunteers to demonstrate the steps in how to don and remove sterile gloves.
- Again, ask participants to comment on the demonstrations.
- Thank the volunteers.
- Display the figures from the participant handout (Figures 4.2 and 4.3) that show the steps on how to don and remove clean gloves; then demonstrate the procedure yourself, emphasizing the steps that were missed or done incorrectly by the volunteers.
- Display the figures from the participant handout (Figures 4.4 and 4.5) that show the steps on how to don and remove sterile gloves, and demonstrate the procedure yourself, emphasizing common mistakes.
- Encourage participants to ask questions, and confirm they understood the demonstration.
- Tell participants about some dos and don'ts in using gloves.
- Finish by reminding participants once again about the key steps and the dos and don'ts.
- Summarize the activity by displaying PPP 4.2 on "PPE" gloves.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by playing the video TDS 2: "PPE Use" from the IP video.

Module 5: Safe Injection Practices

Module Objective

- ❖ To enable participants to understand the basic concepts of safe injection and the risk and impact of unsafe injections.

Learning Objectives

By the end of this module, participants will be able to:

- Define injection safety and related terms.
- Describe the magnitude of unsafe injection.
- Identify risk factors leading to unsafe injection.
- Recognize the risks and impact associated with unsafe injection practices.
- Identify the role of prescribers and providers in injection safety.
- Mention injection devices and their safety features.
- Demonstrate best practices for safe injection.

Time: 3 hours and 20 minutes

Module Content

- Introduction to Injection Safety and Magnitude of Unsafe Injections (35 minutes)
- Risks and Impact of Unsafe Injection Practices (45 minutes)
- The Role of Prescribers and Providers in Injection Safety (45 minutes)
- Injection and Safety Devices (30 minutes)
- Safe Injection Administration and Best Practice for Safe Injections (45 minutes)

Advance Preparation

- Practice using the available safety and injection safety devices and become familiar with their functioning
- Prepare two flip chart sheets with the headings “Unsafe and Unnecessary Injections: Factors Related to Health Workers” and “Unsafe and Unnecessary Injections: Factors

Related to Patients or Clients” for the “Risks and Impact of Unsafe Injection Practices” activity.

- Prepare four flip charts with the following text written on them (one question per flip chart) for the activity “The Role of Prescribers and Providers in Injection Safety” :
 1. Do you think all the injections prescribed by health providers are necessary? If you disagree, how can health providers eliminate unnecessary injections?
 2. What are the most common injections prescribed in your health facilities?
 3. Do you think the injections prescribed most commonly can be replaced by oral medications? What do you think of the effectiveness of these drugs?
 4. What are the indications for prescribing injections?
- Prepare the following table on four flip charts (for “Injection and Safety Devices” activity).

Type of Injection Device	Advantages	Disadvantages
Auto-disable syringes	<ul style="list-style-type: none"> • Cannot be reused • Eliminate cross-infection among patients 	<ul style="list-style-type: none"> • More expensive than standard disposable • Have no safety (needle-stick prevention) features • Need collection and disposal system
Manually retractable	<ul style="list-style-type: none"> • Cannot be reused • Safety feature: needle retracts inside barrel (needle-stick prevention) • Eliminates cross-infection among patients because cannot be reused 	<ul style="list-style-type: none"> • Not automatic • Relies on goodwill of health workers • High cost • Needs collection and disposal system
Automatically retractable	<ul style="list-style-type: none"> • Cannot be reused • Automatic safety feature: needle retracts inside barrel (needle-stick prevention) • Eliminates cross-infection among patients because cannot be reused 	<ul style="list-style-type: none"> • Most expensive • Needs collection and disposal system
Standard disposable	<ul style="list-style-type: none"> • Less expensive • Available on local market • Eliminates cross-infection among patients 	<ul style="list-style-type: none"> • If reused, can transmit blood-borne pathogens. Never reuse disposable syringes; they are only designed to be used once. • Has no re-use prevention or safety features • Needs sharps safety box or needle

		remover <ul style="list-style-type: none"> • Carries a high risk of infection if not used or disposed of properly • Needs collection and disposal system
--	--	--

- Print Case Study 5.1 for the “Safe Injection Administration and Best Practice for Safe Injections” activity.

Case Study 5.1

Alemu is a newly trained nurse at the Chiro Zonal Hospital Outpatient Department who has just started duty in the treatment room on a busy Monday morning. Outside the room, there is a long queue of patients waiting for treatment.

He gets the card of the next patient. While reading the prescription on the card, he is called to answer the telephone.

When he returns, the patient he was calling had gone to the toilet. He calls for the “next” patient, and the next patient in the queue walks in. Alemu washes his hands, checks the dose on the card, and draws the exact amount of 80 mg gentamicin into a newly opened 2-mL VanishPoint retractable syringe from his clean injection trolley.

The patient tries to indicate that he has not come for an injection but for a dressing, but because Alemu is in a hurry to clear the patients and because he isn’t paying attention, he asks the elderly man to get behind the screen for the injection the doctor had prescribed for him.

Alemu gives the injection at the outer upper quadrant of the left buttock and immediately drops the used syringe and needle in a safety box. The patient begins to sweat and shiver immediately.

Questions for Participants

- *What did Alemu do right?*

- *What did he do wrong?*

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content.

Activities and Methodologies

Introduction to Injection Safety and Magnitude of Unsafe Injections (35 minutes)

Methodology: Brainstorming, discussion, and interactive lecture

Activities

- Ask participants the following question:
 - *What do you understand about unsafe injections?*
- Take some responses and write them down on the flip chart.
(Unsafe injection: A practice that could harm the recipient, provider, and/or community and may result in waste that is dangerous.)
- Refer participants to Participant Handout 5.1, and randomly ask trainees to read.
- Have the participants take turns reading aloud the definitions of the key terminologies: safe injection, needle-stick injury, sharp injury, auto-disable syringe, safety devices, and safety (sharps) box.
- Facilitate a group discussion based on the following questions (ask one question at a time):
 - *Do you think unsafe injections are a problem in your health care setting? If you agree, in what way?*
 - *How many of you know of a needle-stick injury incident in your health facility in the last six months? Explain the event.*
- Summarize the discussion by displaying PPP 5.1 on “Magnitude of Unsafe Injection Practices.”
- Summarize by emphasizing the following points:

- *Injection safety is an integral component of infection prevention and control.*
- *Injection safety is an element of standard precautions.*
- *Injection safety is key element of patient and health care worker safety.*
- *Injection safety is supported by infection prevention and control policies and procedures such as hand hygiene, housekeeping, and waste management.*

Risks and Impact of Unsafe Injection Practices

(45 minutes)

Methodology: Gallery walk, brainstorming, group work, and interactive lecture

Activities

- Introduce the exercise by saying that the group will explore the range of factors that contribute to unsafe injections. Explain that you will be examining those factors that are related to health workers and patients.
- Post the flip chart with the following question:
 - *What are the common factors contributing to unnecessary and unsafe injections?*
- Emphasize that participants can think of either factors related to health workers or patients.
- Tell participants that you will give each person one card for them to write a common reason for providing unnecessary and unsafe injections. Only one reason should be written per card.
- Post the two flip charts with the headings of “Unsafe and Unnecessary Injections: Factors Related to Health Workers” and “Unsafe and Unnecessary Injections: Factors Related to Patients or Clients.”
- Have the participants take turns, one by one, reading aloud each card and then taping it on the wall under the appropriate category.
- Help participants to give reasons.

Possible answers:

Common reasons for prescribing and providing unnecessary and/or unsafe injections:

- *Inadequate policy guidance for prescribing:*
 - ✓ *Inadequate dissemination/promotion of standard treatment guidelines*
- *Prescriber preference for injections:*
 - ✓ *Lack of knowledge on the dangers of injections*
 - ✓ *Perception that injections are more effective than oral medications*
 - ✓ *Perception that injections give more rapid relief*
 - ✓ *Perception that injections are more potent*
 - ✓ *Financial incentive for prescribing injections*
 - ✓ *Fear that patients will go elsewhere if an injection is not prescribed*
- *Perceived belief that patients prefer injections*
- *Informal providers giving injections*

Common patient reasons for requesting injections, accepting injections without question, not insisting on avoiding unnecessary injections, or getting unsafe injections:

- *Lack of information on injection safety:*
 - ✓ *Belief that injections are stronger than oral medications*
 - ✓ *Belief that injections work faster than oral medications*
 - *Unequal status with the health workers*
 - ✓ *Difficulty talking to prescribers; prescriber may not welcome questions*
 - ✓ *Belief that health workers or prescribers know best*
 - *Sociocultural beliefs*
-
- Refer participants to Participant Handout 5.2 and summarize.
 - Tell participants that next they will work in a group.
 - Divide participants into four groups. Ask two groups to identify the “risk groups and risks associated with unsafe injections” and the other two groups to describe “impacts of unsafe injections.” Allow them 10 minutes to work in their groups. Let them select a facilitator and reporter.
 - Each group will make a three-minute presentation.
 - Give opportunities for questions and input.

- Summarize the discussion by reviewing the slide on risks and impact of unsafe injections (PPP 5.2).

The Role of Prescribers and Providers in Injection Safety

(45 minutes)

Methodology: Brainstorming and group work

Activities

- Tell participants they will next discuss the role of prescribers and providers.
- Ask participants what the role of prescribers in injection safety can be.
- Take a few responses.
- Explain that eliminating unnecessary injections represents one of the highest priorities for injection safety.
- Tell them that they will work in groups and that each group will respond to all the questions written on the flip chart.
- Post the four flip charts with discussion questions written on them (see “Advance Preparation”).
- Divide participants into four groups and ask them to write responses on the flip charts. Tell them that each group will spend two minutes at each flip chart to write as many responses as they can think of (without repeating those already listed), and then the groups will rotate to the next flip chart and repeat the exercise for all the questions.
- Give opportunities for asking questions and discussion.
- Summarize by referring to Participant Handout 5.3.

The Role of Prescribers and Providers in Injection Safety

Eliminating unnecessary injections represents one of the highest priorities of injection safety.

Therefore, if an oral alternative is available, injections should only be used in:

- Life-threatening conditions
- Malabsorption syndromes
- Occurrences of inability to swallow

Prescribers and service providers should also:

- Encourage patients to accept oral medications when possible. Injections should be given only when necessary.
- Explain the risks associated with injections.
- Explain to patients the need to take oral drugs as prescribed and review these instructions with them.
- Inform patients of the potential side effects of medications that are being prescribed.
- Explore why patients prefer injections.

Injection and Safety Devices

(30 minutes)

Methodology: Matching exercise, group work, and discussion

Activities

- Introduce the activity by telling participants that they will now identify the safety devices and state their advantages and disadvantages.
- Tell participants that they will do a matching exercise.
- Set up four tables and place the following items on each table.
 - Injection and safety devices (see “Advance Preparation”)
 - Names of injection and safety devices printed on paper (one name per page)
- Divide participants into four groups.
- Ask participants to match each injection and safety device with the printed names while working in groups.
- Go from table to table to see whether participants encounter any difficulties. Explain as needed if they have issues.
- Once they finish the matching exercise, introduce the next group activity, which is listing the advantages and disadvantages of injection and safety devices.
- Give participants the table with the headings “Type of Injection Device,” “Advantages,” and “Disadvantages” (see “Advance Preparation”).
- While they are working in the same groups, allow them to fill out the table.
- Ask the group to present the table to the plenary. Each group will present one component. Let all groups take turns stating the advantages and disadvantages of one injection device.
- Ask for input from other participants once each group finishes the presentation.

- Summarize the activity by displaying PPP 5.4, emphasizing the points not discussed during the presentation.

Safe Injection Administration and Best Practice for Safe Injections (45 minutes)

Methodology: Brainstorming, case study, and discussion

Activities

- Tell participants that now they will be exploring general best injection safety practices and guidance on skin preparation.
- Ask the question, “How can we ensure the safest and best injection administration practice?” and facilitate discussion.

(Best practices for administering injections include: selecting safe medicines, use of sterile equipment, avoiding contamination [observe aseptic technique], reconstituting drugs or vaccines safely, and disposing of injection waste and sharps properly.)

- Tell participants that they will work in pairs (with the pairs sitting next to each other) for 10 minutes to discuss a case study.
- Distribute a copy of Case Study 5.1 to the participants (see “Advance Preparation”), read the case study, and ask them to discuss and write their responses to the questions.
- After 10 minutes, invite participants to share their responses with the larger group; facilitate discussion.
- During discussion, make sure the following issues are addressed.

The discussion on the best safe injection practices should include the following themes:

- *Make sure you are doing the “right” things.*
- *Inform and reassure the patient throughout the procedure.*
- *Use new sterile disposable injection equipment and sharps.*
- *Prevent contamination of injection equipment and medication.*
- *Maintain the effectiveness and safety of injectable preparations.*
- *Apply recommended practices when providing injections.*
- *Prevent needle-stick injuries.*
- *Dispose of sharps appropriately.*
- *Advise the patient/client (provide important follow-up information).*

Right things to do:

- 1. Wash hands before the injection.*
- 2. Use the right equipment.*
- 3. Give the right dose.*
- 4. Use the right route.*
- 5. Use the right sharps disposal equipment.*

What Alemu did wrong in the case study:

- Did not confirm patient identity*
 - Did not listen to his patient*
 - Did not screen the patient for drug history to rule out previous reactions*
 - Did not talk to or counsel his patient*
 - Did not discuss the numbers of injections on the prescription*
- After the discussion, display PPP 5.5 to summarize the main points.
 - Emphasize that all nine “best injection practices” must be verified and are essential to a safe injection.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 6: Surgical Antisepsis

Module Objective

- ❖ To help participants understand how to select and use appropriate antisepsis in the prevention of surgical wound infections.

Learning Objectives

By the end of this module, participants will be able to:

- Define surgical antisepsis and disinfectants.
- Define wound infection.
- List common causes of wound infection.
- Identify the safest and most effective antiseptics.
- Select and use the appropriate antiseptics for skin and mucus preparation.
- Explain the appropriate way to store and dispense antiseptics.

Time: 1 hour and 35 minutes

Module Content

- Defining Antiseptics and Identifying Appropriate Antiseptics (45 minutes)
- Wound Infections (5 minutes)
- Use of Antiseptics for Surgical Antisepsis (30 minutes)
- Appropriate Storage and Dispensing of Antiseptics (15 minutes)

Advance Preparation

- Prepare a flip chart with the following terminology written on it (for “Defining Antiseptics and Identifying Appropriate Antiseptics” activity).
 - Antiseptic and antimicrobial agents
 - Antisepsis
 - Organ/space surgical site infection (SSI)
 - SSIs

- Disinfectants
- Prepare a flip chart with the following questions written on it (for “Defining Antiseptics and Identifying Appropriate Antiseptics” activity):
 - What antiseptics are locally available and used in your facilities?
 - For what purpose is each antiseptic used and not used?
 - What are the advantages and limitations of each antiseptic?
- Prepare video (TDS 3: “Cleaning Cervix and Vagina”).

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its contents using PPP.

Activities and Methodologies

Defining Antiseptics and Identifying Appropriate Antiseptics (45 minutes)

Methodology: Brainstorming, group work, and interactive lecture

Activities

- Post the flip chart text (see “Advance Preparation”) and randomly ask participants to share what they understand each term to mean. Antiseptic and antimicrobial agents, antisepsis, organ/space SSI, SSIs, and disinfectants.

(Antiseptic and antimicrobial agents: Chemicals that are applied to the skin or other living tissue to inhibit or kill microorganisms by reducing the bacterial count.

Disinfectant: Chemicals that destroy or inactivate microorganisms on inanimate objects, such as instruments or surfaces.

Antisepsis: A process of reducing the number of microorganisms on skin, mucous membranes, or other body tissue by applying an antimicrobial (antiseptic) agent.

Organ/space SSI: An infection of any part of the body other than the incised body wall parts that were opened or handled during an operation.

SSI is either an incisional or organ/space infection occurring within 30 days after an operation or within one year if an implant is present.)

- After listening to participants' responses, clarify any incomplete responses and provide correct definitions of antiseptic and related terminologies using PPP 6.1.
- Present the list of commonly used antiseptics using PPP 6.1.
- Tell participants that they will next work in groups.
- Divide the participants into four groups and tell them to discuss the questions written on the flip chart (see "Advance Preparation"). Allow 15 minutes to work.
- After the group work, ask participants to present in plenary and facilitate discussion. Allow each group three minutes to present.
- Use Participant Handout 6.1 to summarize participants' discussion on the commonly used antiseptics and their use, advantages, and limitations.

Wound Infections

(5 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Brainstorm by asking participants the following questions (ask one question at a time).
 - How common are wound infections in the health setting?
 - What are the common causes of wound infections?
 - What are the risk factors that increase the likelihood of wound infections?
- Acknowledge the contributing participants and briefly reflect on their responses. Reinforce correct responses, correct incorrect responses, and tell participants that in the next PPP, you will elaborate further.
- Using PPP 6.2, present wound infection and the risks. Encourage participants to ask questions if they have any, and summarize the activity by emphasizing the risks of wound infection.
- Tell participants that antiseptics have a greater role in preventing wound infection and that, in the next sessions, they will learn and discuss more about antiseptics.

Use of Antiseptics for Surgical Antisepsis

(30 minutes)

Methodology: “At my facility” exercise using buzz groups and interactive lecture

Activities

- Tell participants that you are going to discuss the use of antiseptics for surgical antisepsis.
- Divide them in buzz groups of two to three people and tell them they are going to do an “at my facility” exercise to reflect on the use of antiseptics in their facility.
- Ask participants to discuss how they perform the following procedures in their clinical setting; identify the type of antiseptic used for each procedure and how they do the surgical antisepsis (their actual practice):
 - Skin preparation prior to surgical procedures
 - Skin preparations for intravenous injections
 - Cervical or vaginal preparations
- Allow them to discuss for 10 minutes in their group.
- After 10 minutes, ask them to present to the larger group. While presenting, they should not repeat what was already said by others.
- Facilitate discussion; identify missed points and correct accordingly.
- Display PPP 6.3 and summarize the main points (if time allows, show TDS 3 video on “Cleaning Cervix and Vagina”).

Appropriate Storage and Dispensing of Antiseptics

(15 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Facilitate discussion by asking participants:
 - *How are antiseptics received, stored, and used at your facilities?*
- Record their responses on a flip chart.
- Ask the participants to identify practices used at their facilities that would increase the chances of contamination.

- For each incorrect practice, guide the group in discussing what could be done to change the practice and thereby minimize the risk of contaminating the solutions.
- Summarize the activity using PPP 6.4.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 7: Safe Surgery and Safe Practice in the Operating Room

Module Objective

- ❖ To help participants understand the recommended practices in the operation room in order to prevent potential risks of infection for patients and health care workers.

Learning Objectives

By the end of this module, participants will be able to:

- Identify the risks of working in the operating room (OR).
- Identify which instruments cause the most injuries.
- Explain how to prevent injuries from sharps.
- Identify strategies to design safer surgical procedures.
- Describe surgical care standards.
- Appropriately use the WHO Surgical Safety Checklist.

Time: 1 hour and 30 minutes

Module Content

- Risks and Safe Practices in the Operating Room (1 hour)
- Safe Surgical Care Standards (30 minutes)

Advance Preparation

- Prepare flip charts with the questions below (one question on each flip chart) for the “Risks and Safe Practices in the Operating Room” activity:
 1. What risks are there in the OR for patients?
 2. What risks are there in the OR for staff?
 3. List instruments that cause injuries in the OR.
 4. What can be done to make the OR a safer workplace?

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Risks and Safe Practices in the Operating Room

(1 hour)

Methodology: Interactive lecture and role play

Activities

- Post the four flip charts with the discussion questions (see “Advance Preparation”).
- Divide participants into four groups and give each group a question from the flip chart prepared in the Advance Preparation.

1. What risks are there in the OR for patients?

Possible answers:

- *Acquiring blood-borne infections*
- *Increased risk of hospital-acquired infections*

2. What risks are there in the OR for staff?

Possible answers:

- *Staff usually use and pass instruments without looking or letting the other person know.*
- *Confined workplace; visibility in the room may be poor.*
- *Increased risk of injuries due to urgency, anxiety, stress, frustration, and anger.*
- *Exposure to blood without health worker knowledge during operation increases duration of contact to blood.*
- *Minor finger cuts and scratches increase the risk of transmission by three-fold.*
- *Exposure to blood and other body fluids containing HIV, HBV, and HCV.*

- *Instruments that are designed to penetrate patients' tissue can just as easily injure the provider.*
- *Blood is almost everywhere, increasing the exposure to potentially infectious sources.*

3. List instruments that cause injuries in the OR.

Possible answers:

- *Hypodermic needles*
- *Wire sutures*
- *Laparoscopy and surgical drain trocars*
- *Orthopedic drill bits, screws, pins, wires, and saws*
- *Needlepoint cautery tips*
- *Skin hooks and towel clips*
- *Sharp-pointed scissors and sharp-tipped mosquito forceps*
- *Dissecting forceps*
- *Sharp-toothed tenaculi*
- *Broken medication ampoules*
- *Spinal needles*
- *Sharp bone edges and bone fragments*

4. What can be done to make the OR a safer workplace?

Possible answers:

- *Have a brief preoperative discussion of how sharps will be handled by the surgeon, assistant, or scrub nurse.*
- *Surgical team should discuss and review how to make each step in the operation safer.*
- *The use of hand-held straight suture needles to close skin incisions is especially dangerous, with higher injury rates than with curved needles carried in a needle holder.*
- *The risk associated with assisting or being the scrub nurse in surgery may be reduced by anticipating (preferably knowing) the needs of the surgeon for each step of the operation in advance.*

- Ask the group to write as many responses as possible. Allow them 15 minutes to work in their groups.
- Ask each group to present their work in plenary. After all four groups have presented, give participants a chance to ask questions and discuss.
- Present PPP 7.2 to summarize the key points.
- Tell participants that they will now prepare and stage a role play on “hands-free technique,” and give them the following instructions:
 - **Instructions:** Each team will prepare a role play on “hands-free technique” for passing of sharps (e.g., scalpel, suture needle, and cautery) during surgery. Teams will have five minutes to prepare and five minutes to present the role play to the rest of the group.
 - Divide participants into groups with four members. Assign one participant to act as surgeon, one participant as scrub nurse, and one participant as patient.
 - Ask one participant in each group to observe. Switch roles so that all the group members can practice each role in “hands-free technique.”
 - **Role-play:** The team is performing a cesarean section and has to:
 - Decide who will be on the team and their roles and responsibilities.
 - Identify and agree on the strategy to be used for the safe zone during surgery.
 - Use “hands-free technique.”
- After the role play, facilitate plenary discussion on the technique used during the role play and summarize.

Safe Surgical Care Standards

(30 minutes)

Methodology: Brainstorming, plenary discussion, interactive, and lecture

Activities

- Brainstorm by asking participants the following questions (ask one question at a time):
 - What do you understand by the term “safe surgery”?
 - What are the components of safe surgical standards?
- Write their responses on a flip chart and facilitate discussion.

(Safe surgery is surgery that does not harm and/or expose the patient and/or the provider to any avoidable risk.

The components of safe surgical standards include the Surgical Safety Checklist [WHO], monitoring and evaluation of surgical care, and implementation of the Surgical Safety Checklist and monitoring and evaluation procedures.)

- Write “at my facility” on a flip chart and ask participants to identify some challenges of implementing safe surgical standards in their facility.
- Write their response on a flip chart.
- Then ask participants what can be done to improve the identified problems and facilitate discussion.
- Finalize the activity by presenting PPP 7.2.
- Ask participants to pair with a person sitting next to them.
- Refer them to Participant Handout 7.2 and ask them to practice using the WHO Surgical Safety Checklist.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Reading the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 8: Instrument Processing and Handling

Module Objective

- ❖ To equip participants with the required knowledge and skills in processing instruments and other items (before reuse) so as to reduce the transmission of infections during clinical procedures and patient care.

Learning Objectives

By the end of this module, participants will be able to:

- Describe the steps for processing instruments and other items.
- List commonly used disinfectants.
- Explain how disinfectant solutions are prepared.
- Demonstrate the steps in the decontamination, cleaning, sterilization, and HLD process.
- Explain how to store sterilized and high-level disinfected instruments and other items.

Time: 3 hours and 45 minutes

Module Content

- Introduction to the Processing of Instruments and Other Items (20 minutes)
- Chemical Disinfectants (35 minutes)
- Decontamination (1 hour)
- Cleaning (20 minutes)
- Sterilization and Storage (1 hour)
- High-Level Disinfection and Storage (30 minutes)

Advance Preparation

- Print sufficient copies of the Instrument Processing Bingo exercise table (see the table in the “Module Summary” section).

- Obtain sample disinfectant solution and other needed materials for display during the session.

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content.

Activities and Methodologies

Introduction to the Processing of Instruments and Other Items (20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Ask participants to reflect on some of the ways that infections can be transmitted through instruments (to health care workers and clients).
- Take responses and make sure that the following points are mentioned.
(To clients: Service providers do not adequately prepare client before clinical procedure or correctly process and handle instruments and other items used in clinical procedures.
To service providers: Open cuts on the hands or forearms, chapped or cracked hands, injuries from needle-sticks or other sharp instruments [such as scalpel blades], and splashing of blood or other bodily fluids contained on the instruments or other items onto mucous membranes [such as the eyes].)
- Ask participants to mention some of the measures used to protect clients and health care workers who handle used instruments and other items.
- Take responses and write them on the flip chart.
- Make sure the following points are noted: destroying many harmful microorganisms early in the processing regimen (instrument processing) and preventing blood and other bodily fluids from coming into contact with the skin and mucous membranes.
- Review the importance of and the steps in instrument processing using PPP 8.1.

Chemical Disinfectants

(35 minutes)

Methodology: Brainstorming and discussion

Activities

- Start this activity by asking participants what a disinfectant is and to list the various types they know of or use at their facility.
- Take and record their responses on a flip chart.
(Disinfectants are chemicals that destroy or inactivate microorganisms on inanimate objects, such as instruments and surfaces. Some of the common disinfectants include alcohols, sodium hypochlorite [chlorine bleach], and calcium hypochlorite.)
- Ask participants to distinguish disinfectants from antiseptics.
- Take a few responses and correct any wrong information.
- Provide the complete definition, displaying PPP 8.1 on disinfectants and antiseptics. Emphasize any points missed by the participants, if there are any.
- Tell participants that next they will discuss the advantages and disadvantages of chemical disinfectants.
- Ask participants to take out Participant Handout 8.2 and take five minutes to read the uses, advantages, and disadvantages of each chemical disinfectant. Allow each participant to read and clarify one idea (e.g., advantages of chlorine).
- Clarify any misunderstandings and answer any questions.
- Ask participants how disinfectants are received and stored at their facilities. Encourage them to identify whether there are practices that lead to contamination of disinfectants. Record their responses on a flip chart.
- Tell them to take out the Participant Handout 8.2 and read how disinfectants get contaminated and ways of preventing contamination.
- Invite participants to read a statement taking turns with the group.
- Give an opportunity for questions and finalize.

Decontamination

(1 hour)

Methodology: Brainstorming, discussion, demonstration, and interactive lecture

Activities

- Start this activity by reminding participant of the steps in instrument processing, and tell them that decontamination is the first step in the process.
- Ask participants the following question:
 - *What strength of chlorine solution do you use for decontamination in your health facility?*
- Take a few responses, and ask participants how they dilute the chemicals to get the required strength (how they calculate it).
- Have a participant talk about the calculation and confirm that everybody understands.
- Tell them that now they will practice how to make solutions for decontamination and how to decontaminate instruments and other items.
- Display PPP 8.3 on how to make diluted solutions, and explain to participants how to decontaminate instruments and other items using the solution.

The steps for making a diluted solution from a concentrated solution are as follows:

- Check concentration (percent concentrate) of the chlorine product you are using.
- Determine total parts water needed using the following formula:

$$\text{Total parts (TP) water} = \left[\frac{\% \text{ Concentrate}}{\% \text{ Dilute}} \right] - 1$$

- Mix one part concentrated bleach with the total parts water required.

Example: Make a dilute solution (0.5 percent) from 5 percent concentrated solution.

Step 1: Calculate TP water.

$$\left[\frac{5.0\%}{0.5\%} \right] - 1 = 10 - 1 = 9$$

Step 2: Take one part concentrated solution and add to nine parts water.

The steps for making chlorine solutions from dry powders are as follows:

- Check concentration (percent concentrate) of the powder you are using.
- Determine grams of bleach needed using the following formula:

$$\text{Grams/liter} = \left[\frac{\% \text{ Dilute}}{\% \text{ Concentrate}} \right] \times 1,000$$

- Mix measured amount of bleach powder with one liter of water.

Example: Make a dilute chlorine solution (0.5 percent) from a concentrated powder (35 percent).

Step 1: Calculate grams/liter:

$$\left[\frac{0.5\%}{35\%} \right] \times 1,000 = 14.2 \text{ g/L}$$

Step 2: Add 14.2 grams to 1 liter of water.

- Invite two volunteers and give them concentrated hypochlorite solution or chlorine powder or both, if available, and ask them to calculate and prepare solution for decontamination. Ensure that all the necessary materials are available for them (see “Advance Preparation” section).
- After they have prepared the solution, give them available instruments and ask them to demonstrate how to decontaminate the instruments.
- Ask participants to comment on the demonstration. Encourage the correct points and clarify on points that were done incorrectly.
 - (*Note: Tell participants that when commenting they should start with the positive and then move to the things that need to be improved.*)
- Reinforce the correct procedure by playing the video TDS 4: “Decontamination Processes” from the IP video.
- Finalize this activity by reviewing the “Decontamination Tips” from Participant Handout 8.3.

Cleaning

(20 minutes)

Methodology: Interactive lecture and demonstration

Activities

- Start this activity by reminding participants of steps in instrument processing; tell them that cleaning is the second step in the process.
- Perform a presentation on how to clean instruments and other items using PPP 8.4 on “Cleaning.”
- Encourage participants to ask questions, and clarify if there are any unclear points.
- Finalize this activity by playing the video TDS 5: “Cleaning Procedures” from the IP video.

Sterilization and Storage

(1 hour)

Methodology: Group work, interactive lecture, and demonstration

Activities

- Start this activity by reminding participants that the final steps in instrument processing are either sterilization or HLD.
- Highlight the common sterilization techniques by displaying PPP 8.5.
- Tell participants that they will now work in groups and discuss their practice on sterilization at their health facility.
- Divide participants into three groups and tell them each group will discuss specific sterilization techniques on their actual practice of sterilization in their health facility. Give 25 minutes for the group work. Remind them to assign a leader, presenter, and time keeper. Distribute flip chart paper and markers for the presentation.

Group one: Steam sterilization (autoclaving): Preparation of instruments to be sterilized, time, pressure and temperature, loading and unloading sterilizers, steps in sterilization and storing of sterilized items

Group two: Dry heat sterilization (oven): Preparation of instruments to be sterilized, time and temperature, steps in sterilization, and storing of sterilized items

Group three: Chemical sterilization: Type of chemicals and the strength (concentration), preparation of instruments to be sterilized, contact time, steps in sterilization, and storing of sterilized items

- After the group work, allow each group to present in plenary (give five minutes for each group to present). Encourage other participants to ask questions, encourage the correct practices, and discuss how to fix the wrong practices.
- Show PPP 8.5 on sterilization, and demonstrate the wrapping and loading method. Highlight any malpractices identified during the group work, and remind participants to look for the differences between their practices and the best practices.
- Facilitate discussion on the gaps between the actual practices of sterilization presented by the participants and the best practices they learned from the PPP. Encourage them to discuss what they can do to “fill the gap” when they return to their facility.
- Finalize this activity by playing the video TDS 6: “Sterilization.”

High-Level Disinfection and Storage

(30 minutes)

Methodology: Brainstorming, interactive lecture, and demonstration

Activities

- Ask participants what HLD is and how different it is from sterilization.
- Write their responses on a flip chart, and facilitate discussion.
- Emphasize that HLD is the only acceptable alternative to sterilization when sterilization is not available or feasible.
- Briefly present the different HLD methods on PPP 8.6 on “HLD.”
- Tell them that they will next watch a video on how to perform HLD.
- Play the video TDS 7: “HLD.”
- Finalize the activity by summarizing the key points.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have any questions related to this module.

- Summarize the module using the following bingo exercise.
 - Distribute the papers with “Exercise: Instrument Processing Bingo” printed on them and read the following instructions aloud. As you read them, display the grid in a PPP, if possible, and point to the appropriate spot on the grid.
 1. The grid is divided into 16 blocks. Each block consists of a column across the top (letters A to D) and a row along the left hand side (numbers 1 to 4). Each row consists of four lines across. For example, the first line of row 1 going across includes *decontamination, cleaning, sterilization, and HLD*.
 2. To be read: “I will call out a block on the grid (for example, B3), and then read a sentence about an IP procedure. Listen carefully to the sentence as it is read.
 3. After I read the sentence, select the correct IP procedure from the four choices in that block, and circle the correct term. For example, for B3, the sentence is “This procedure physically removes infectious agents and other organic matter from instruments and other items.” From the four choices in that block, the correct answer is “cleaning,” so you would circle it.
 4. As I continue calling out blocks and reading sentences, you should continue selecting the correct IP procedure from the four choices in each block.
 5. As you play the game and circle the answers, you may notice that you have circled several answers in one line of a row. When you have circled four terms in a line going across, call out “bingo.”
 6. We will then review the winner’s answers to make sure they are correct and to clarify them, if needed.”

- Read the following sentences, either in the order in which they are presented or in random order. The blocks containing the correct answers in a horizontal row are A4, B4, C4, and D4. Therefore, one of these sentences should be read *last* to ensure that all the sentences have been read. *Note:* The answers appear after the sentences. Remember *not* to read the answers when reading the sentences.

B3. This procedure physically removes infectious agents and other organic matter from instruments and other items. **Cleaning**

A1. This procedure requires soaking instruments and other items in a 0.5 percent chlorine

solution for 10 minutes. **Decontamination**

B2. This procedure can be done by soaking items in chemicals or by using moist or dry heat. **Sterilization**

C4. This procedure requires the use of brush to remove organic material from instruments and other items. **Cleaning**

C1. One example of this procedure is rinsing gloved hands in a basin of 0.5 percent chlorine solutions, making used gloves safe for further processing (FMOH, *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*, February 2011). **Decontamination**

D3. If this procedure is not done, sterilization and HLD may not be effective. **Cleaning**

A2. This procedure is the second step in instrument processing. **Cleaning**

A4. This procedure kills all microorganisms except some bacterial endospores. **HLD**

B4. This procedure makes instruments and other items safer to handle for further processing by rapidly killing microorganisms such as HBV and HIV. **Decontamination**

C2. Steaming gloves is an example of this procedure (FMOH, *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*, February 2011). **HLD**

D1. This procedure uses a 0.5 percent chlorine solution as the first step in processing instruments and other items. **Decontamination**

A3. This procedure kills all microorganisms, including bacterial endospores. **Sterilization**

D2. This procedure can be achieved by soaking instruments and other items in chemicals or by boiling or steaming. **HLD**

B1. This is the only acceptable alternative for instruments and other items that will come in contact with the bloodstream when sterilization is not available. **HLD**

D4. This procedure is used for instruments and other items that will come in contact with the bloodstream or tissues under the skin. **Sterilization**

Exercise: Instrument Processing Bingo

	Columns			
	A	B	C	D
Row	Decontamination	Cleaning	Sterilization	HLD
	Cleaning	Sterilization	HLD	Decontamination

1	Sterilization	HLD	Decontamination	Cleaning
	HLD	Decontamination	Cleaning	Sterilization
Row 2	Decontamination	Cleaning	Sterilization	HLD
	Cleaning	Sterilization	HLD	Decontamination
	Sterilization	HLD	Decontamination	Cleaning
	HLD	Decontamination	Cleaning	Sterilization
Row 3	Decontamination	Cleaning	Sterilization	HLD
	Cleaning	Sterilization	HLD	Decontamination
	Sterilization	HLD	Decontamination	Cleaning
	HLD	Decontamination	Cleaning	Sterilization
Row 4	Decontamination	Cleaning	Sterilization	HLD
	Cleaning	Sterilization	HLD	Decontamination
	Sterilization	HLD	Decontamination	Cleaning
	HLD	Decontamination	Cleaning	Sterilization

Module 9: Processing Linen and Laundry

Module Objective

- ❖ To equip participants with the required knowledge and skills of linen processing and laundry.

Learning Objectives

By the end of this module, participants will be able to:

- Explain why careful handling and processing of soiled linen is important.
- Describe key principles in handling linen.
- Explain how soiled linen should be collected, transported, sorted, washed, and dried.
- Explain how clean linen should be stored, transported, and distributed.
- State the minimum requirements for standard laundry services.
- List the PPE used in processing linen and laundry.

Time: 1 hour and 10 minutes

Module Content

- Principles and Key Steps in Processing Linen (20 minutes)
- Collecting, Transporting, Sorting, and Laundering Linen (25 minutes)
- Storing, Transporting, and Distributing Clean Linen (10 minutes)
- Minimum Requirements and Periodic Monitoring for Standard Laundry Services (5 minutes)
- Personal Protective Equipment Used in Processing Linen and Laundry (10 minutes)

Advance Preparation

- Prepare a table with four columns on a flip chart and write the following activities as a title in the columns. “Collecting and Handling Soiled Linen,” “Transporting Soiled Linen,” “Sorting Soiled Linen,” and “Hand Washing Soiled Linen/Loading Automatic Washers.”

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Principles and Key Steps in Processing Linen

(20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Ask participants the following question.
 - *How do you process linen in your facility?*
- Take a few responses, and encourage participants to share their experiences.
- Display PPP 9.1 on “Processing Linen” to introduce the principles and key steps in processing linen.
- Conclude by reminding participants that no additional precautions are necessary, regardless of the patient’s diagnosis, if standard precautions are used in linen processing.

Collecting, Transporting, Sorting, and Laundering Linen

(25 minutes)

Methodology: Small group work and interactive lecture

Activities

- Introduce the activity by saying that next, participants will discuss what to do during linen collecting, sorting, laundering, drying, checking, and folding.
- Tell them that they will work in groups.
- Divide participants into four groups and ask them to identify what should be done (procedures, precautions, etc.) during the following activities:
 - Collecting and transporting linen
 - Sorting soiled linen

- Laundering linen
- Drying, checking, and folding linen
- Inform participants that each group will work on one of the four processes for 10 minutes. Each group should select a facilitator and reporter/presenter. Distribute the prepared flip chart and markers (see “Advance Preparation”).
- Allow each group to present their work for the larger group, and facilitate discussion. *Allow three minutes for each group.*
- Summarize using PPP 9.2 on “Processing Linen.”

Storing, Transporting, and Distributing Clean Linen

(10 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Tell participants that in this activity they will discuss what needs to be considered in storing, transporting, and distributing clean linen.
- Ask participants the following question:
 - *How do you store and transport clean linen in your health facility?*
- Encourage participants to share their experiences. Challenge them by identifying the right and wrong practices.
- Summarize using PPP 9.3 on “Processing Linen.”

Minimum Requirements and Periodic Monitoring for Standard Laundry Services (5 minutes)

Methodology: Interactive lecture

Activities

- Begin by stating that there are minimum requirements for standard laundry and that there needs to be periodic monitoring.
- Use PPP 9.4 on “Processing Linen” to introduce the minimum requirements and periodic monitoring for laundry.
- Ask for volunteers to read each bullet point in the PPP.

- Give them the opportunity to ask questions.
- Conclude by stating the need to train laundry staff and to assign a focal person for managing the machine.

Personal Protective Equipment Used in Processing Linen and Laundry (10 minutes)

Methodology: Brainstorming and interactive PPP

Activities

- Tell participants they will be discussing the PPE used in processing linen.
- Ask participants which kind of PPE should be used when performing the following activities:
 - Collecting and transporting linen
 - Sorting soiled linen
 - Laundering linen
- Take responses and ask participants whether they use the PPE or not.
- Finalize this activity using PPP 9.5 on “Processing Linen.”
- Remind participants what to do if there are no utility gloves in their facilities by saying: *“If utility gloves are not available, putting on two pairs of examination gloves (‘double gloving’) provides some protection for staff responsible for collecting, transporting, and sorting soiled linen and other items.”*

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 10: Clinical Laboratory Services

Module Objective

- ❖ To increase the knowledge of participants on the exposure risks and the biosafety classification in laboratories.

Learning Objectives

By the end of this module, participants will be able to:

- Identify the sources of laboratory hazards in the health care setting.
- List safe laboratory practices.
- Explain how exposures or accidental injuries occur in clinical laboratory settings.
- List biosafety and IP measures.

Time: 1 hour

Module Content

- Exposure Risks for Laboratory Staff (20 minutes)
- Safe Laboratory Practices (20 minutes)
- Biosafety Levels (20 minutes)

Advance Preparation

- Write brainstorming questions on a flip chart for “Exposure Risks for Laboratory Staff” and “Safe Laboratory Practices” activities.

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Exposure Risks for Laboratory Staff

(20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Begin this activity by asking participants:
 - *What could be the potential source(s) of laboratory hazards in the health care setting?*
- List their responses on a flip chart and assist them in categorizing their responses as physical, chemical, or biological.

*(The sources of laboratory hazards could be **physical, chemical, or biological** agents.*

Physical hazards arise from physical agents such as flames, hot water, or broken glass.

*Chemical hazards can arise from **laboratory chemicals** that can be corrosive, explosive, or poisonous. Biological hazards, which are the most common laboratory hazards, arise from biological materials and microorganisms.)*

- Discuss the most common laboratory hazards and what is needed to set up safe laboratory practices.
- Tell participants to refer to and ask one participant to read Handout 10.1 and to discuss.

Safe Laboratory Practices

(20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Begin this activity by asking participants:
 - *What factors contribute to laboratory accidents in the health care setting?*
- List their responses on the flip chart, making sure the following points are addressed:

A number of factors contribute to various laboratory accidents. Some of these factors are internal (i.e., associated with the individual practitioner), whereas the majority are external factors. They include poor training, lack of concentration, carelessness and negligence, overwork and fatigue, emergency conditions, untidy and noisy working environments, lack of

adequate PPE, poor waste disposal systems, hot and humid climatic conditions, hurrying to finish work on time, and poor design of laboratories.

- Ask participants how these factors can be prevented in the health care setting.
- Display PPP 10.2 on “Biosafety and Infection Prevention and Control Guidelines.”
- Summarize the activity by asking the participants if they have questions.

Biosafety Levels

(20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Ask participants about biosafety level guidelines from the *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*. Also use the PPP and discuss the IP measures.
- Summarize the biosafety level from PPP 10.3.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 11: Blood Safety

Module Objective

- ❖ To equip participants with the required knowledge about transfusion-transmissible infections (TTIs) and methods of minimizing them.

Learning Objectives

By the end of this module, participants will be able to:

- List TTIs of public health importance.
- List the blood donor selection criteria.
- Explain how to safely collect blood from donors.
- Describe methods to minimize TTIs.
- Describe recommended IP practices when handling blood transfusions.

Time: 40 minutes

Module Content

- Transfusion-Transmissible Infections and Components of Blood Banks and Transfusion Services (20 minutes)
- Prevention of Transfusion-Transmissible Infections (20 minutes)

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Transfusion-Transmissible Infections and Components of Blood Banks and Transfusion Services (20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Write “blood safety” on a flip chart and ask participants what it refers to.
- Write their responses on a flip chart and facilitate discussion.
- Make sure the following points are discussed.

(Blood safety refers to all the procedures that are undertaken to render blood safe for use on a patient. These procedures include preparing blood transfusion guidelines, meticulous selection of voluntary nonremunerated donors, aseptic blood collection from the donor, ABO and Rh grouping of donated blood, and screening for TTIs of public health importance [HIV, HBV, HCV, syphilis]. Blood safety also encompasses organized storage [according to blood groups and shelf life] of the useable donations at appropriate temperatures depending on the blood component, proper distribution before their expiry dates, proper transportation under ideal conditions, appropriate use at the clinical level, and all that it entails from the time of reception at the hospital to transfusion, including post-transfusion care of the patient.)

- Ask participants
 - *What are TTIs? Which infections are transmissible through blood transfusion?*
- Write their response on flip chart

(TTIs are infectious diseases that may be transmitted through transfusion; they include viruses, bacteria, and protozoa.)

- Ask participants if they have ever worked on blood transfusion services and encourage them to tell the others the components involved in blood transfusion services.
- Summarize by presenting PPP 11.1 on “Blood Safety.”

Prevention of Transfusion-Transmissible Infections

(20 minutes)

Methodology: Discussion and interactive lecture

Activities

- Tell participants to look at Participant Handout 11.2.
- Ask individual participants to read each step of the blood collection procedures from the handout and explain to the rest of the trainees.

- Present PPP 11.2.
- Summarize by emphasizing that strictly following the steps for blood collection from donors is essential to maintain IP in the context of blood transfusion services.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Reading the learning objective and check whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 12: Traffic Flow and Activity Patterns

Module Objective

- ❖ To provide participants with an overview of traffic flow and activity patterns and the importance of regulating the flow of visitors, patients, and staff in preventing disease transmission in health care facilities.

Learning Objectives

By the end of this module, participants will be able to:

- Define activity pattern and traffic flow in health care settings.
- Explain the importance of regulating traffic flow and activity patterns in health care settings.
- Describe how to design traffic flow and activity patterns in procedure areas, instrument processing areas, and surgical units.

Time: 1 hour

Module Content

- Overview and Importance of Activity Patterns and Traffic Flow in Health Care Settings (1 hour)

Advance Preparation

- Prepare in the training venue a simulation table setup by posting “OR,” “Work area,” and “Procedure area.”

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Overview and Importance of Activity Patterns and Traffic Flow in Health Care Settings

(1 hour)

Methodology: Brainstorming, role play, and interactive presentation

Activities

- Introduce the activity by saying that next you will discuss what the activity pattern and traffic flow should look like in health care settings.
- Ask participants what they understand by traffic flow and activity patterns in health care settings. Encourage them to give actual examples from their experience.
- Read them the definition of traffic flow and activity patterns in health care settings from Participant Handout 12.1.
- Tell participants that now they will work in groups.
- Divide participants into groups of five, with each member having a different role.
- **Instructions:** Ask participants to each act as a health provider, a guard, a patient, and members of the patient's family, and ask them to prepare the role play according to how they understand the traffic flow and activity patterns.

Health provider: Ask the health provider to assume working in a minor OR and let him or her open the OR doors.

Guard: Ask a participant to act as a guard and instruct him or her to hold a stick and allow the patient and caregiver to travel freely into the OR.

Patient and patient family members: Ask two or more participants to act as though they are going into the OR without asking and without reading the label on the OR door.

- Guide participants to prepare the role play in 10 minutes.
- After 10 minutes, ask two to three groups to stage the role play in plenary.
- Ask participants to comment on the role plays. They should comment on what was done correctly and what lessons can be learned from the role play.
- After discussion, ask participants why it is important to regulate traffic flow and activity patterns in health care settings.
- Write their responses on a flip chart, and facilitate discussion.

- Summarize using PPP 12.1.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 13: Transmission-Based Precautions for Health Care Facilities

Module Objective

- ❖ To enable participants to understand the concepts and components of transmission-based precautions and apply them in the health care setting.

Learning Objectives

By the end of this module, participants will be able to:

- Describe transmission-based precautions.
- Explain components of transmission-based precautions.
- Describe challenges to implementing transmission-based precautions.

Time: 1 hour and 15 minutes

Module Content

- Overview and Components of Transmission-Based Precautions (1 hour)
- Challenges to Implementing Transmission-Based Precautions (15 minutes)

Advance Preparation

- Write the following text on flip charts (one per flip chart):
 - Airborne precautions
 - Droplet precautions
 - Contact precautions
- Write the following text on a flip chart: “What are the possible challenges to implementing transmission-based precautions?”

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Overview and Components of Transmission-Based Precautions

(1 hour)

Methodology: Brainstorming, discussion, group work, and interactive lecture

Activities

- Start the discussion by asking participants which precautions a health provider would need to take if the admitted patient has a cough, a generalized rash of unknown cause, or an abscess.
- Encourage participants to list as many precautions as possible, and write the responses on the flip chart.
- Ask participants if they have ever heard about transmission-based precautions.
- Tell them what transmission-based precautions are, and explain the components of transmission-based precautions.

(Transmission-based precautions: Guidelines designed to reduce the risk of transmitting infections that are spread wholly or partly by airborne, droplet, or contact routes between hospitalized patients and health providers. Airborne, droplet, and contact precautions are the components of transmission-based precautions.)

- Tell participant's that now they will work in groups.
- Divide participants into three groups and assign the following precautions (one for each group) and ask them to discuss and list what precautions should be taken.

Group one: Airborne precautions

Possible response: Patient placement, respiratory protection, and patient transport

Group two: Droplet precautions

Possible response: Patient placement and respiratory protection

Group three: Contact precautions

Possible response: Patient placement, gloving, hand washing, gowns and protective apron, patient transport, and patient care equipment

- Allow 15 minutes for the group to discuss and ask them to present orally in plenary (3 minutes per group for each presentation).
- Ask participants what they should do to decide on the kind of precaution for a patient without a known diagnosis (what would be their basis for precautions). Facilitate discussion.
- Tell them that, because the infecting agent often is not known at the time of admission to a health care facility, transmission-based precautions are used empirically, according to the clinical syndrome and the likely etiologic agents at the time, and then modified when the pathogen is identified or a transmissible infectious etiology is ruled out.
- Emphasize the point by saying:

If there is any doubt about an infection in a patient without a known diagnosis, implementing transmission-based precautions should be considered based on the patient's signs and symptoms until a definitive diagnosis is made.

- Summarize this activity by presenting PPP 13.1.

Challenges to Implementing Transmission-Based Precautions (15 minutes)

Methodology: Brainstorming, discussion, and interactive lecture

Activities

- Ask participants whether they think implementing transmission-based precautions is a challenge. Ask them to think about the possible challenges to implementation.
- Summarize using the following points:

Possible challenges to implementing transmission-based precautions include:

- *Staff training is required to understand the rationale of using transmission-based precautions with patients having infections transmitted by airborne, droplet, or contact routes.*
- *Additional PPE is required for implementing transmission-based precautions.*
- *Regular supervision is needed to ensure compliance.*
- *Where resources are limited, recommendations will need to be modified according to what is possible, practical, and affordable.*

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 14: Tuberculosis Infection Prevention and Control in Health Care Settings

Module Objective

- ❖ To provide participants with appropriate knowledge on the risk of tuberculosis (TB) infection transmission in health care settings and appropriate TB infection prevention and control practices.

Learning Objectives

By the end of this module, participants will be able to:

- Describe how TB can spread in health care facilities.
- Explain how to reduce the risk of TB transmission in health care facilities.
- Discuss components of facility-level TB infection prevention and control.

Time: 1 hour and 45 minutes

Module Content

- Transmission of Tuberculosis in Health Care Facilities (30 minutes)
- Reduction of Tuberculosis Transmission in Health Care Facilities (30 minutes)

Advance Preparation

- Print sufficient copies of Exercise 14.1.
- Prepare a flip chart with the following text written on it for the “Reduction of Tuberculosis Transmission in Health Care Facilities” activity.
 - Why is TB so widespread?
 - Do you think it is possible to reduce the risk of TB transmission in health care facilities? How?
 - How can we ensure our health care facilities are risk-free from TB infection of health care providers, clients, and the community?

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Transmission of Tuberculosis in Health Care Facilities

(30 minutes)

Methodology: Brainstorming, buzz group, discussion, and interactive PPP

Activities

- Ask participants (ask one question at a time):
 - What is the cause of TB?
 - How does TB spread in health care settings?

(TB is caused by Mycobacterium tuberculosis. People who have TB in their lungs or larynx [throat] can release tiny particles containing Mycobacterium tuberculosis into the air when coughing, talking, singing, or sneezing.)

- Write their responses on a flip chart and facilitate discussion.
- Ask one participant to read the “How Does Tuberculosis Spread?” section of Participant Handout 14.1. Explain that health workers and other staff are also at risk of TB infection because of frequent exposure to patients with infectious TB.
- Ask participants to form buzz groups with a neighbor.
- Distribute Exercise 14.1 and allow them five minutes to discuss. After 5 minutes, ask them to reflect on what they have discussed and facilitate discussion.
- Ask a participant to read the “When Is Tuberculosis Infectious?” section from Participant Handout 14.1 and to summarize the activity.

Exercise 14.1

1. Which of the following can be used when advising on cough hygiene?
 - a. Using cloth or paper mask (surgical mask)

- b. Using tissue to cover mouth and nose while coughing
 - c. Covering mouth with old cloth
 - d. Covering mouth and nose with patient's upper sleeve
 - e. Covering mouth and nose with patient's hand
2. Rate each case according to the likelihood of transmitting TB (3 = most likely to transmit TB, 1 = least likely). Explain why.
- a. Postpartum woman bringing child for immunization, coughing since delivery due to undiagnosed TB
 - b. A person suspected of having TB
 - c. TB patient on treatment for three months using directly observed therapy
 - d. Three-year-old child with newly diagnosed pulmonary TB
 - e. Patient with TB meningitis (no other site)
 - f. Patient with sputum smear–negative pulmonary TB
 - g. Patient with pneumonia returns for sputum results; sputum was positive unknown; patient has been coughing for three weeks; this is the first visit; and the patient is not covering his mouth

Answers for Exercise 14.1

Question 1: a, b, c, and d

Question 2: a, b, g = 3

c, d, e, f = 1

Reduction of Tuberculosis Transmission in Health Care Facilities (30 minutes)

Methodology: Group work, discussion, and interactive lecture

Activities

- Divide participants into three groups and give them one question to discuss (see “Advance Preparation”). Allow them 10 minutes. Ask each group to present in plenary (three minutes for each group), and facilitate discussion.
- Read the following scenario and ask participants to rate each of the following according to the risk of TB transmission (3 = the worst risk; 1 = the least risk).

- A room with an open window, open door, and a window fan (1)
- Enclosed room with an open window, but door is kept shut; no window fan (3)
- Enclosed room with no window fan or open window (3)
- Enclosed room with window, door, and window fan, but the window and door are shut during clinic hours (3)
- Summarize by emphasizing to participants that they should strictly follow transmission-based precautions, which are designed to reduce the risk of transmitting infections that are spread wholly or partly by airborne, droplet, or contact routes between hospitalized patients and health providers.
- Ask participants to share their experience in their health care facility in preventing and controlling TB.
- Write their responses on a flip chart and facilitate discussion.
- Summarize by asking two participants to read Participant Handout 14.2 to the other participants.
- Ask whether there are any unclear issues and explain.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 15: Housekeeping

Module Objective

- ❖ To enable participants to acquire the required knowledge and skills on the recommended housekeeping practices in health care facilities.

Learning Objectives

By the end of this module, participants will be able to:

- Explain the importance of housekeeping.
- State the general principles of housekeeping in health care facilities.
- Demonstrate how to prepare disinfectant cleaning solutions.
- Identify cleaning methods.
- List the types of PPE used during cleaning.
- Explain how to clean low- and high-risk areas.

Time: 1 hour and 15 minutes

Module Content

- Introduction to Housekeeping (20 minutes)
- Cleaning Methods and the Use of Personal Protective Equipment (40 minutes)
- Schedules and Procedures for Cleaning (15 minutes)

Advance Preparation

- Prepare a flip chart with the following questions written on it (for “Cleaning Methods and the Use of Personal Protective Equipment” activity):
 - *What are the common methods of cleaning used in the health care setting where you work? List the methods and discuss when and for what purpose (to clean which room, material, etc.) they are used.*
 - *List the PPE that housekeeping staff should use, and discuss when they should use these PPE.*

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Introduction to Housekeeping

(20 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Ask participants the following question:
 - *Why is housekeeping important?*
- Take a few responses, and encourage participants to substantiate their ideas.

(Possible answers include: Reducing the number of microorganisms that patients, visitors, staff, and the community may come in contact with and providing a clean and pleasant atmosphere for patients and staff.)

- Ask the following question:
 - *What kind of cleaning solution do you use for housekeeping in your health facility?*
- Take few responses, and help participants to understand what “cleaning solution” and “disinfectant cleaning solution” mean.

*(Note: **Cleaning solution** is any combination of soap [or detergent] and water, with or without a chemical disinfectant, used to wash or wipe down environmental surfaces such as floors, chairs, bench tops, walls, and ceilings. **Disinfectant cleaning solution** includes products that are a combination of a detergent [soap] and a chemical disinfectant.)*

- Display PPP 15.1 on “Housekeeping.”
- Emphasize the general principles of cleaning.
- Ask participants whether they have questions and summarize.

Cleaning Methods and the Use of Personal Protective Equipment (40 minutes)

Methodology: Group work and interactive lecture

Activities

- Introduce the activity by telling participants they will soon see the different cleaning methods and use of PPE.
- Tell them they will work in groups to identify the common methods of cleaning and list the PPE.
- Divide participants into four groups and post the flip chart with the discussion questions (see “Advance Preparation”).

(Assign the first question to two groups and the second question to the remaining two groups. Distribute flip charts and markers. Allow 10 minutes for participants to discuss in their groups. Each group should select a facilitator and reporter/presenter.)

- After the group work, allow each group to present its work to the larger group and facilitate discussion. Allow three minutes for each group to make its presentations.
- Ask whether participants have any questions and summarize the activity displaying PPP 15.2 on “Housekeeping.”

Schedules and Procedures for Cleaning (15 minutes)

Methodology: Discussion

Activities

- Start this activity by telling participants that they are going to see cleaning schedules and cleaning processes for different areas in the health care setting.
- Tell them to take out Participant Handout 15.3 (“Schedules and Procedures for Cleaning”) and ask them to read one by one the schedule for cleaning different areas of the health facility.
- While they read, provide clarifications on the concepts and allow them to ask questions, if they have any.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have any questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 16: Health Care Waste Management

Module Objective

- ❖ To equip participants with the required knowledge and skills of the proper health care waste management systems in a health care facility.

Learning Objectives

By the end of this module, participants will be able to:

- Identify the various types of health care waste.
- Identify the risks related to health care waste.
- Describe the methods and steps in health care waste management.

Time: 1 hour and 45 minutes

Module Content

- Introduction to Health Care Waste (45 minutes)
- Management of Health Care Waste (1 hour)

Advance Preparation

- Prepare nine cards (for “Introduction to Health Care Waste” activity) with the following titles written on the cards: “Infectious Waste,” “Anatomical Waste,” “Sharps Waste,” “Chemical Waste,” “Pharmaceutical Waste,” “Radioactive Waste,” “Pressurized Containers,” “Waste with High Content of Heavy Metals,” and “Noninfectious Waste.”
- Prepare six cards (for “Management of Health Care Waste” activity) with the following titles written on the cards: “Black,” “Yellow,” “Red,” “Brown,” “Yellow with Radioactive Label,” and “Yellow Marked SHARPS.”

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Introduction to Health Care Waste

(45 minutes)

Methodology: Brainstorming, gallery walk, and interactive lecture

Activities

- Ask participants the following questions (ask one question at a time):
 - *What is health care waste?*
 - *What are the risks related to health care waste?*

(Health care waste is a byproduct of health care that includes potential risk and nonrisk wastes. Inadequate and inappropriate handling of health care waste may have serious public health consequences and a significant impact on the environment. Injuries, transmission of infection, environmental pollution, fire hazard, and public nuisance [offensive smells, unsightly debris, etc.] are the major risks and hazards of poorly managed health care waste.)

- Get a few responses, and tell the participants that next they will see the kinds of waste generated in health care facilities.
- Give each participant one VIPP card, and ask participants to write down one type of health care waste. Tell them to finish in three minutes.
- Post the nine cards with the titles of types of waste written on them on the wall (see “Advance Preparation”).
- Ask participants to read aloud what they wrote on their card and to post it beneath the card that shows the category the waste belongs to.
- After all participants finish posting the cards, go through each card, one by one, by asking participants whether or not the waste is placed in the correct category. Correct the placement if there is a waste placed in the wrong category.
- Summarize this activity displaying PPP 16.1 on “Health Care Waste Management.”

Management of Health Care Waste

(1 hour)

Methodology: Interactive lecture and group exercise

Activities

- Ask participants to identify the risks of poorly managed health care waste.
- Present PPP 16.2 on “Health Care Waste Management.”
- Tell participants that now they will practice how to segregate waste in health care facilities.
- Post on the wall the six cards with the names of colors written on them (see “Advance Preparation”). Explain that the cards represent bin liners with different colors for waste segregation.
- Ask participants to take the cards that were used during the previous exercise (their own cards) and to post them beneath the card with the correct color of bin liner based on the color coding for appropriate waste segregation.
- After all of the cards have been placed, go through each card, one by one, by asking participants whether or not the waste is placed in the correct bin liner. Correct placement if there is waste placed in the wrong bin liner.
- Revise the recommended final disposal methods for each group of waste. Refer to PPP 16.2.
 - Finalize this activity by telling participants that protective clothing should be worn by waste handlers when working with health care waste, including aprons, heavy duty gloves, footwear, goggles/glasses, and masks. Remind participants that this clothing should be taken off when work with waste is completed and should never be taken home. Hands should always be washed with soap and running water after removal of gloves.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 17: Medication Safety

Module Objective

- ❖ To enable participants to understand the basic concepts and importance of medication safety.

Learning Objectives

By the end of this module, participants will be able to:

- Define medication safety.
- Explain the importance of medication safety.
- Describe the standards of medication safety.
- Identify common causes of medication errors.
- Explain the possible measures to prevent medication errors.

Time: 1 hour and 30 minutes

Module Content

- Medication Safety (45 minutes)
- Medication Reconciliation and Medication Management (45 minutes)

Advance Preparation

- Prepare a flip chart with the following text written on it for the “Medication Reconciliation and Medication Management” activity:
 - *Identify medication errors and where they occur, and suggest possible measures to overcome them.*
- Prepare another flip chart with the following text written on it for the “Medication Reconciliation and Medication Management” activity:
 - *How can you prevent medications errors at different stages of clinical services?*
 - *Write a medication policy in your health setting to prevent medication errors.*
 - *Write and discuss the elements of proper prescription.*

- *How do you manage medications that are similar in name or appearance?*

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Medication Safety

(45 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Ask participants to share their experiences regarding the following:
 - Have they ever encountered medication errors?
 - What was the error, and how did it happen?
 - What were the consequences?
- Encourage participants to share what they have heard and seen. Tell them that they should not use the name of the person/s.
- Listen to the experiences of a few participants.
- Acknowledge participants for sharing their experiences and briefly reflect on issues raised.
- Display PPP 17.1 on the definition of medication safety, common errors and causes of errors, and the magnitude of medication safety.
- Emphasize that medication safety is a broad term that includes errors that are not side effects of drugs but rather a result of use of the wrong drug, wrong route, and/or wrong dose.
- Highlight that despite the paucity of evidence, the magnitude of medication errors both globally and in Ethiopian health care settings cannot be underestimated.

Medication Reconciliation and Medication Management (45 minutes)

Methodology: Interactive lecture and small group work

Activities

- Start by telling participants that next they will discuss medication reconciliation and medication management.
- Tell them that they will work in groups. Divide participants into four groups.
- Display the flip chart with the discussion question (see “Advance Preparation”). Allow 20 minutes for the group work.
- Allow each group to report back orally. Tell them not to repeat anything already said by the previous groups.
- Display PPP 17.2 and explain the concepts of medication reconciliation and medication management. Try to connect them with the points raised during the group discussion.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 18: Post-Exposure Prophylaxis

Module Objective

- ❖ To enable participants to understand the role of post-exposure prophylaxis (PEP) in the prevention of HIV, HBV, and HCV infections in health care settings.

Learning Objectives

By the end of this module, participants will be able to:

- Define PEP.
- Describe HIV occupational exposure and indications for PEP.
- Identify steps in the management of clients with exposure to HIV.
- Identify the recommended PEP drugs and discuss their efficacy.
- Explain the management of occupational exposure to HIV, HBV, and HCV.
- Practice documentation and reporting of PEP treatment.

Time: 1 hour and 10 minutes

Module Content

- Definition of Terms Used in Post-Exposure Prophylaxis Treatment Delivery (5 minutes)
- Risk of Acquiring HIV, Hepatitis B Virus, and Hepatitis C Virus Infections (10 minutes)
- Benefits of Administering Post-Exposure Prophylaxis Treatment (5 minutes)
- Recommended Steps in Administering Post-Exposure Prophylaxis Treatment (20 minutes)
- Management of Post-Exposure Prophylaxis in Nonoccupational Exposures (15 minutes)
- Follow-Up of People Receiving Post-Exposure Prophylaxis Treatment and Documenting, Monitoring, and Evaluating Post-Exposure Prophylaxis Treatment in Health Care Facilities (15 minutes)

Advance Preparation

- Write the following on the flip chart:
 - What is your experience with occupational exposure to HIV?
 - Do you know of anyone who has been on PEP? How was the person exposed? Did they complete the prophylaxis? (No names of the persons are needed.)
 - What is your experience in understanding what PEP is and its purpose?
 - What is your experience regarding the risk of acquiring HIV, HBV, and HCV infections in health care settings?

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Definition of Terms Used in Post-Exposure Prophylaxis Treatment Delivery (5 minutes)

Methodology: Interactive lecture

Activities

- Begin the activity by asking participants the following question:
 - Would you share with us an experience of anyone you know who has been on PEP? How was the person exposed? Did the person complete the prophylaxis? (No names of the persons are needed.)
 - What is PEP, and what is its purpose?
- Tell participants to read Participant Handout 18.1 in pairs and have buzz group discussions.

Risk of Acquiring HIV, Hepatitis B Virus, and Hepatitis C Virus Infections (10 minutes)

Methodology: Discussion and interactive lecture

Activities

- Post the flip chart with the discussion questions, asking one question at a time, and facilitate discussion (see “Advance Preparation”).
- After discussion, summarize the activity by presenting PPP 18.2.

Benefits of Administering Post-Exposure Prophylaxis Treatment (5 minutes)

Methodology: Brainstorming and discussion

Activities

- Start by asking the following question: What are the benefits of PEP?
- Take a few responses.
- When no more responses are offered, refer participants to Participant Handout 18.3 and discuss to what extent PEP can reduce HIV transmission.
- Emphasize that PEP reduces the transmission of HIV if prescribed within 72 hours.
- Emphasize that PEP should be started as soon as possible within two hours.

Recommended Steps in Administering Post-Exposure Prophylaxis Treatment (20 minutes)

Methodology: Discussion and interactive lecture

Activities

- Tell participants to open Participant Handout 18.4, and ask different participants to read each of the recommended steps of PEP treatment from the handout.
- Clarify each step in detail.
- Discuss the level of risk of exposure to HIV and recommendations to PEP using PPP 18.4.
- Discuss the nationally recommended antiretroviral (ARV) drugs for PEP and management of HBV and HCV using PPP 18.4.

Management of Post-Exposure Prophylaxis in Nonoccupational Exposures (15 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Begin the session by asking participants to define nonoccupational exposures and the possible list of instances where an individual can be exposed.
- Take a few responses.
- Emphasize that the management of both occupational and nonoccupational exposure to HIV, HBV, and HCV is more or less similar to the ultimate objective of preventing the transmission of HIV, HBV, and HCV infections, although the psychosocial support needs of clients exposed nonoccupationally requires particular attention.
- Present PPP 18.5 and summarize.

Follow-Up of People Receiving Post-Exposure Prophylaxis Treatment and Documenting, Monitoring, and Evaluating Post-Exposure Prophylaxis Treatment in Health Care Facilities (15 minutes)

Methodology: Interactive lecture

Activities

- Start by telling participants that follow-up of clients on PEP is important in maintaining optimum adherence to the ARV drugs for the success of the outcome of PEP treatment (i.e., the prevention of transmission of HIV in the exposed clients).
- Ask participants if they know of anyone who had an experience of occupational exposure and whether the exposure was documented and reported (emphasize that they should not mention names). If not, why? How can PEP reporting and documentation be improved in a health facility setting?
- Allow 10 minutes to discuss.
- Using PPP 18.6, present the standard follow-up schedules for PEP services and how to document, monitor, and evaluate PEP services in health care facilities.
- Encourage participants to ask questions for further clarification.
- Summarize the main points.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 19: Food and Water Safety

Module Objective

- ❖ To equip participants with the basic knowledge of food and water safety rules.

Learning Objectives

By the end of this module, participants will be able to:

- Describe food- and water- associated infections.
- Describe how to make water safe in health facilities.
- Explain food safety rules.

Time: 45 minutes

Module Content

- Food and Water Safety (45 minutes)

Advance Preparation

- Prepare VIPP cards.

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Food and Water Safety

(45 minutes)

Methodology: Gallery walk and interactive lecture

Activities

- Give one VIPP card to each participant, and ask participants to write one food and water safety rule that they know. Give them five minutes to think and write.
- Ask all participants to go to one side of the hall. Then ask each individual to read aloud what they wrote and to post it on the wall. Group together those cards with similar food and water safety rules.
- After all participants have posted their cards, invite them to think about whether there are any missing food and water safety rules and facilitate a discussion.
- Facilitate a discussion on the importance of each safety rule. Thank participants and tell them to return to their chairs.
- Summarize this activity using PPP 19.1 on “Food and Water Safety.” Emphasize those points missed during the group exercise.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Reading the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 20: Client Education on Infection Prevention and Patient Safety

Module Objective

- ❖ To introduce participants to the basic concepts of effective client education programs on IPPS.

Learning Objectives

By the end of this module, participants will be able to:

- Explain why clients are educated on IPPS and its importance.
- Describe the components of effective client education programs.
- List key principles of IPPS for patient and client educators.
- Identify what considerations should be provided for effective implementation of client education on IPPS.

Time: 30 minutes

Module Content

- Client Education on Infection Prevention and Patient Safety (30 minutes)

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Client Education on Infection Prevention and Patient Safety (30 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Start the activity by defining what patient/client education is.

(Definition: Patient education is defined as the transmission of the knowledge, skills, and attitude to the patient, family caregiver, and community that empower them to actively participate in the promotion and maintenance of a safe health care facility environment.)

- Divide participants into four groups.

(Instructions: Ask participants to prepare a role play. One of the group members plays the role of a health provider providing IPPS health education, and the other members act like the patients.)

- Allow some of the groups to present the role play, and ask participants to comment.
- Display PPP 20.1 on the components of effective patient education programs, and get participants to read each point one by one.
- Ask them if the ideas are clear. Encourage them to ask questions.
- Ask participants what health care providers should do to involve clients or patients in their health care delivery, especially when communicating with them.
- Write their responses on a flip chart, and facilitate discussion.
- Display PPP 20.1 on the key principles that allow patients to be more actively involved in their own care.
- Give participants the opportunity to ask questions, and summarize the activity.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have any questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Module 21: Health Care Risk Management

Module Objective

- ❖ To provide participants with the basic knowledge and skills on how to assess hazards and risks in health care settings and devise appropriate measures to prevent risks.

Learning Objectives

By the end of this module, participants will be able to:

- Describe health risks that might cause harm to patients, visitors, students, and health care facility workers.
- Devise (design) possible interventions to prevent risks in health care settings.
- Practice selected IP skills on stations.

Time: 1 hour and 40 minutes

Module Content

- Health Care Risk Management (40 minutes)
- Infection Prevention and Patient Safety Stations (1 hour)

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Health Care Risk Management

(40 minutes)

Methodology: Buzz group and interactive lecture

Activities

- Ask participants the following key questions and allow them to discuss the questions with the person sitting next to them for 5 to 10 minutes.
- 1. How can you assess health hazards and possible errors that might cause harm to patients and/or health care workers in your facility?
- 2. What are the possible interventions to prevent or minimize the known health risks in your health care facility?
- Let participants share their responses with the group. Go from pair to pair looking for new ideas.
- Clarify issues that are not clear, and summarize the discussion displaying PPP 21.1.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Infection Prevention and Patient Safety Stations

Instructions for Trainers

During this training, the trainer will use IP stations and checklists to evaluate the participants' performance of IPPS tasks and skills in a simulated clinic or hospital setting. In addition, the participants will use the stations to practice for skills assessments. The five stations included in this training are:

1. Selecting antiseptics and preparing skin/mucous membranes prior to procedures
2. Preparing clean water and chlorine solutions
3. Cleaning instruments and other items
4. Disposing of needles and syringes
5. Reprocessing instruments and disposing of medical waste after a vaginal childbirth

In addition to the station checklists, a list of supplies needed for each station and brief instructions are included. Criteria for evaluation of competency at the stations are based on the knowledge, attitudes, and skills set forth in the *Infection Prevention and Patient Safety Reference Manual for Service Providers and Managers in Health Care Facilities of Ethiopia*. In determining whether the participant is qualified, the trainer will observe and rate the participant's performance on each step of a task or skill. *The participant must be rated "competent" for each step covered in the station checklist in order to be deemed "qualified."*

Setting Up and Using the Stations

The trainer should gather all of the supplies needed for each station and set them up when indicated in the course outline. Once the station is set up, it should be available for the remainder of the course so that participants may use it for practice. Before allowing the participants to practice at the station, the trainer should give a demonstration of the skills and tasks covered in the station checklists. The trainer should also explain to the participants how the stations are to be used.

Use of Stations for Practice

- Participants will be divided into two or three groups

- One participant should demonstrate the skills and tasks in the station checklist, while another participant takes on the role of the trainer. If there is a third participant in the group, he or she should take on the role of observer.
- Using the station checklist, the participant playing the trainer should assess the participant's ability to demonstrate the skills and tasks in the checklist for that station.
- For learning and the sake of practice, the participants should practice all scenarios and skills and tasks.
- The trainer will rotate among the groups to observe participants and answer any questions.
- Participants may use the Participant Monitoring Sheet to monitor progress in using the stations for practice and qualification.

Use of Stations for Qualification

- Explain to the participants at the beginning that they need to practice at each of the five stations throughout the workshop. However, at the end of the workshop, they will be evaluated for qualification at only one station selected at random by the trainer.
- When a participant is ready to be qualified, he or she should inform the trainer.
- The trainer will select the station that the participant will use for qualification.
- The trainer will observe and assess the participant's performance on each step of the skill and task for the station. For some stations, the trainer will choose one of several scenarios. For other stations, there is only one scenario.
- The participant must be rated "competent" in each step and task covered in the checklist in order to be deemed "qualified."
- If the participant is not rated "competent," the trainer should work with him or her on the steps missed. The participant can be reassessed by the trainer after practicing the steps individually or with another participant.
- The trainer should complete the qualification summary form as the participants are rated "competent" in the selected station.

Site Visits

EXERCISE: What Is Right or Wrong with the Facility in Relation to Recommended Infection Prevention and Patient Safety Practice

Objectives

- To help participants start seeing things with “different eyes.”
- To enable participants to identify correct, incorrect, or incomplete practices in each part of their visit and discuss how to implement correct practices in their own sites or how to improve incorrect or incomplete practices.

Time: 20–30 minutes

Materials

- Paper, pen, camera (if allowed), flip chart, and marker

Instructions for the Trainer

Tell participants that they are going to visit the various departments of the facility and assess the IPPS practice of each site visited. Tell them they need to have a reporter and chairperson. Tell them also that they will present and discuss their findings.

Divide participants into groups to visit the following sites:

- Waiting area, health care compound, and waste disposal site
- Surgical or gynecology ward (look for waste containers, room ventilation, cleanliness, patient care issues, hand hygiene practice, etc.)
- OR and central supply department (in the instrument processing area, look for instrument processing equipment and practices)
- Laundry (check the laundry, effective use of PPE, and linen processing, and ask support staff about their understanding of IP) and the kitchen (check for food and water hand hygiene, how used materials are washed, and how food is stored, handled, cooked etc.)
- You can also select additional departments and divide the participants accordingly.

Procedure

- Tell participants to gather in their groups and go to the department they are assigned and observe the facility.
- Ask participants not to criticize observed poor practices. Instead, they should just make an assessment. If a suggestion is deemed important, it should be made in a polite way. When they make any recommendations, they should start with the positive things and then move to those things that need improvement.
- When they finish their assessment, tell them to gather around and discuss their observations and to think about how to improve the poor practices and how to implement the positive practices in their sites.
- When they get back to the training room, each group will share their assessments and discuss.
- Tell participants to start their report with the positive observations and then move on to practices that could be improved.

Discussion Questions

- What did you observe?
- What can you do to improve IPPS practices in your site?
- Did you give feedback when you saw positive practices? Why and how?

Summarize the Main Points

- There are always good practices to be recognized and bad practices to be improved upon.
- It is important to know how to observe both the positive and negative and to learn how to give feedback.
- Often, we are so used to our problems or poor practices that we cannot even see them and look for solutions to improve them. The same is true for the good practices.

Module 22: Managing Infection Prevention and Patient Safety Programs

Module Objective

- ❖ To provide participants with the required knowledge on how to properly manage IPPS programs.

Learning Objectives

By the end of this module, participants will be able to:

- Describe the organizing principles of IPPS program management.
- Identify the responsible entities and working groups involved in managing IPPS programs and their roles.
- Describe how to manage change in introducing recommended IPPS practices and processes.
- Explain the basics of IPPS supportive supervision.
- Identify the supportive supervision tools used in Ethiopia.

Time: 1 hours and 30 minutes

Module Content

- Managing Infection Prevention and Patient Safety Programs (45 minutes)
- Supportive Supervision and Mentoring (45 minutes)

Advance Preparation

- What is the purpose of supportive supervision in IPPS programs?
- How does mentoring improve IPPS activities?

Module Introduction

Introduce this module by presenting the purpose and objectives of the module and briefly highlighting its content using PPP.

Activities and Methodologies

Managing Infection Prevention and Patient Safety Programs

(45 minutes)

Methodology: Brainstorming and interactive lecture

Activities

- Ask participants how IPPS programs and practices are managed in their respective health facility. (**Hint:** How are the IPPS activities organized? Who is responsible for overseeing IPPS? Are there any supervision, monitoring, or reporting mechanisms? etc.)
- Ask participants whether they have any successful experience in managing their IPPS program.
- Display PPP 22.1 on “Managing Infection Prevention and Patient Safety Programs.”
- Use participants’ experience of managing IPPS programs to start the PPP. Emphasize the following points: operational standards in establishing successful IPPS programs/standards/practices, the key steps in implementing IPPS programs/standards/practices, organizing principles of IPPS program management, role of IP committee/working groups in managing IP program, importance of staff training/orientation, IPPS plans and the basic recommended activities, common obstacles/challenges in managing IPPS programs, and supportive supervision and monitoring of IPPS practices.
- Emphasize conducting regular orientation/training of the whole health facility staff on IPPS whenever possible based on the needs identified.
- Summarize the activity by emphasizing the need to have: a defined IPPS program/plan, an IPPS focal person or committee to assist managers in implementing the program, a plan for dealing with the common challenges in managing IPPS programs, and routine monitoring of IPPS practices.

Supportive Supervision and Mentoring

(45 minutes)

Methodology: Group work and interactive lecture

Activities

- Tell participants that next they will work in groups.
- Post the flip chart with discussion questions (see “Advance Preparation”).
- Divide participants into four groups and ask them to discuss the questions. Allow them 10 to 15 minutes to discuss the questions.
- Allow three minutes per group to present.
- Complete the presentation if the group presentation does not cover all points.
- Discuss and summarize using PPP 22.2 about supportive supervision and mentoring.

Module Summary

- Remind participants of the learning objectives of the module using the PPP.
- Read the learning objectives and check to see whether they have been achieved.
- Ask participants whether they have questions related to this module.
- Summarize the module by presenting the summary points of the module from the PPP.

Work Plan Preparation, Post-Training Assessment, and Closing Remarks

Objective

- ❖ To develop a work plan that will be used as a blueprint for implementation of IPPS programs in health care facilities, to assess the post-training knowledge of trainees, and to evaluate the training.

Learning Objectives

By the end of this session, participants will be able to:

- Explain the purpose of developing work plans.
- Develop a work plan for IPPS.
- Assess participants' post-training knowledge.
- Evaluate the training program.

Time: 2 hours

Content

- Work Plan Development (1 hour)
- Post-Training Assessment (40 minutes)
- Final Training Evaluation and Closing Remarks (20 minutes)

Advance Preparation

- Prepare sufficient copies of the Operational Action Plan Sheet (see Annex 8), Pre- and Post-Training Questionnaire (see Annexes 1 and 2), Qualification Summary Form (see Annex 6), and Training Evaluation Form (see Annex 10).

Introduction

Introduce this section by presenting the purpose and objectives of the section and briefly highlighting its content.

Activities and Methodologies

Work Plan Development

(1 hour)

- Ask each participant or team to finalize the IPPS Needs Matrix completing all columns.
- Explain for participants that next they will develop a work plan for the implementation of IPPS programs in their health facilities.
- Display the key IPPS activities that should be included in their work plan.
- Divide participants into groups based on where they come from (health facility, etc.) and distribute the work plan form to each group (see “Advance Preparation”).
- Distribute two copies of the Operational Action Plan Sheet to the groups (see Annex 8).
- Tell them that they should prepare the plan in two copies so that they will have one copy and the trainers will have the second copy. Tell them to finalize their work plan development in 40 minutes. Remind them when 10 minutes remain.
- Collect one copy of the work plan from each group and explain that the work plan will be used to follow-up and monitor their progress in implementing IPPS programs.
- The collected work plan of each group should be presented and discussed.

Post-Training Assessment

(40 minutes)

- Remind participants that they took a pre-test before the training and now they will take a post-test. Explain that it helps to measure the difference in knowledge before and after the training.
- Distribute the post-test to participants (see Annex 2). Tell them that they have 35 minutes to complete the test. Remind them when five minutes remain.
- Ask participants to write the code number they used during the pre-test.
- Correct all the post-tests immediately and post the results together with the pre-test results, using the codes. With the participants, look for differences in the knowledge

before and after the training. Discuss to see whether there are issues in the test that need clarification.

- Using the Qualification Summary Form (see Annex 6), prepare and display the results of the post-test and station practices. If needed, take action as per the instructions on the form.
- Congratulate the participants for their achievement.

Final Training Evaluation and Closing Remarks

(20 minutes)

- Tell participants that now it is time to evaluate the training program (overall training organization, the training content, facilitator’s performance, logistic and related issues etc.). This will help improve similar training in the future.
- Distribute the final training evaluation form to participants (see “Advance Preparation”) and ask them to fill out the form. Encourage them to write genuine comments and tell them that they have 10 minutes to complete it.
- After 10 minutes, collect the evaluation forms and thank them.
- Give participants the opportunity to elaborate if they have anything else to say about the training.
- Invite the guest to make a speech and officially close the training program.

Annex 1: Pre- and Post-Training Questionnaire

Participant's Code: _____

Instruction: Below are 40 multiple choice items. Choose one BEST answer by selecting the letter of your choice. Each correct response is worth one point.

Module 1: Introduction to Infection Prevention and Patient Safety

1. Which of the following conditions put health care workers at risk of infection? Put a check mark (✓) in the appropriate column.

Conditions	Yes	No
Exposure to potentially infectious blood and body fluids		
Processing contaminated instruments		
Cleaning facilities		
Disposing of medical waste		

2. Which of the following is a component of the current CDC guidelines of IP?
- A. Universal precautions
 - B. Body substance isolation
 - C. Standard precautions
 - D. Disease-specific category system
3. Which of the following statements is **FALSE** according to Spaulding category?
- A. Procedures that come in contact with blood stream are considered critical.
 - B. Procedures and items that come in contact with intact skin are considered semi-critical.
 - C. Noncritical represents the lowest level risk.
 - D. Spaulding category serves as the basis for selecting which prevention practices or processes to use.
4. Which of the following statements is **FALSE** regarding PS?
- A. "Clean care is safer care" and safe surgery are part of patient safety WHO initiative.
 - B. Knowledge and learning in PS are key action areas.
 - C. Health care worker protection is not part of the key action area.
 - D. Ensuring rational use of prescription of drugs is part of the PS recommendation.

Module 2: Standard Precautions

5. For which of the following groups should standard precautions be applied?
 - A. To all patients, regardless of whether or not they are infected
 - B. Only to patients with HIV
 - C. Only to patients with HIV or HBV
 - D. Only to patients who are hospitalized

Module 3: Hand Hygiene

6. Which of the following statements is **TRUE** about the purpose of washing hands with soap and clean water?
 - A. Hand washing reduces only transient flora on skin.
 - B. Hand washing reduces resident flora on skin.
 - C. Hand washing removes transient and resident flora on skin.
 - D. Hand washing removes soil and debris and reduces transient flora on skin.
7. When should a health care provider wash his or her hands?
 - A. Before examining a client
 - B. Before putting on gloves for a pelvic examination or IUD insertion
 - C. After removing gloves
 - D. At all times mentioned above
8. Which of the following statements is **FALSE**?
 - A. An alcohol-based hand rub kills or inhibits microorganisms and removes soil on skin.
 - B. Washing hands after removing gloves is important.
 - C. Hand antisepsis is one of the hand hygiene best practices.
 - D. An alcohol-based hand rub is the most effective hand hygiene practice.

Module 4: Personal Protective Equipment

9. Which of the following statements is **FALSE**?
 - A. PPE provides a physical barrier and protection of health care providers and patients/clients from microorganisms.
 - B. Wearing PPE is considered a mechanical barrier method.
 - C. If any procedure involves coming in contact with a large amount of blood or other body fluid, it is recommended to double glove.
 - D. Wearing plastic boots in the OR is a recommended practice.

10. Which of the following is **NOT** a purpose of wearing gloves?
- A. To reduce the risk of staff acquiring infections from patients
 - B. To prevent patients from being contaminated with skin flora of health professionals
 - C. To act as a physical barrier between the patient and the staff
 - D. To replace the need to wash hands after coming in contact with each patient
11. Which of the following PPE items do **NOT** protect the health care worker from splashes and spills of blood or bodily fluids?
- A. Gloves
 - B. Fluid-resistant masks and eyewear
 - C. Paper or cloth shoe covers
 - D. Plastic or rubber aprons
12. Surgical gowns, masks, and drapes made of cotton cloth are effective in stopping bacteria from passing through them only when they are:
- A. Dry
 - B. Wet
 - C. Sterile
 - D. High-level disinfected

Module 5: Safe Injection Practices

13. Which of the following is a safe injection practice?
- A. Recapping the needle
 - B. Bending the needle
 - C. Use of sharps container for needle
 - D. Breaking the needle
14. Which of the following is **NOT** part of the right ways to give a safe injection?
- A. Right drug
 - B. Right method of disposal
 - C. Right storage
 - D. Right room
15. Which of the following statements is **FALSE** according to safe injection practice recommendations?
- A. If not indicated otherwise, it is recommend to provide oral medication over injections.

- B. The safety box should be placed at arm's reach from where the injection is actually given.
- C. Hand washing before every injection is not important.
- D. Using auto-disable syringes could prevent the reuse of injection devices.

Module 6: Surgical Antisepsis

16. Which of the following is a reason to use antiseptics?
- A. To reduce the number of microorganisms on skin
 - B. To decontaminate instruments
 - C. To high-level disinfect instruments
 - D. To sterilize instruments
17. Which of the following chemical agents is **NOT** an antiseptic?
- A. Two to four percent chlorhexidine
 - B. Chlorine
 - C. Sixty to ninety percent ethyl alcohol
 - D. Three percent iodine
18. Which of the following procedures should **NOT** be routinely performed to prepare the skin for surgery?
- A. Allowing time for the antiseptic to become effective
 - B. Washing the area with soap and clean water, and if it is visibly soiled, dry the skin
 - C. Applying an antiseptic solution
 - D. Shaving the hair around the operative site

Module 7: Safe Surgery and Safe Practice in the Operating Room

19. Which of the following is a way to avoid sharps injuries in the OR?
- A. Replace sharps containers when completely full
 - B. Use a hand-free technique when passing and receiving equipment in the OR
 - C. Use fingers to hold tissue or to guide the needle
 - D. Keep sharps on the surgical field until the procedure is completed

Module 8: Instrument Processing and Handling

20. Which of the following is the right order of processing instruments?
- A. Cleaning → decontamination → HLD → sterilization
 - B. Decontamination → cleaning → HLD → sterilization

- C. Decontamination → cleaning → sterilization → HLD
 - D. Decontamination → cleaning → sterilization/HLD
21. Which of the following statements is **FALSE** about decontamination and cleaning?
- A. Decontamination inactivates HBV and HIV.
 - B. Decontamination is done by soaking equipment in 0.5 percent chlorine solution.
 - C. Decontamination and cleaning are difficult to do and expensive.
 - D. Cleaning is a method of mechanically reducing the number of microorganisms, especially endospores.
22. How many parts water are needed to make a 0.5 percent chlorine solution from one part concentrated 5 percent chlorine solution?
- A. Three parts water
 - B. Five parts water
 - C. Seven parts water
 - D. Nine parts water
23. Which of the following is an **unacceptable** method of sterilization?
- A. Dry heat
 - B. Boiling
 - C. Soaking in chemicals
 - D. Autoclaving
24. How long should items be boiled or steamed for HLD?
- A. Twenty minutes
 - B. Thirty minutes
 - C. Sixty minutes
 - D. One hundred twenty minutes

Module 9: Processing Linen and Laundry

25. After medical or surgical procedures or when changing linen in patient rooms, what should be done with the soiled or used linen?
- A. Presort at point of use and wash at the laundry.
 - B. Collect in containers with lids.
 - C. Presoaking in soap, water, and bleach is mandatory for all linens coming to the laundry.
 - D. Presort and wash at point of use if it is heavily soiled.

Module 10: Clinical Laboratory Services

26. Which of the following statements is **INCORRECT** about safe clinical laboratory practices?
- A. No eating, drinking, or smoking is permitted in the laboratory.
 - B. There is no need to wear new examination gloves when handling blood specimens.
 - C. Food should not be stored in refrigerators used for clinical specimens.
 - D. Work surfaces should be decontaminated daily or when contaminated.

Module 11: Blood Safety

27. Which of the following statements is **FALSE** about blood safety?
- A. Advocacy for voluntary donors and periodically screening donors are important.
 - B. Staff should be trained on screening and interpretation of test results.
 - C. Administer blood transfusion only on indications.
 - D. Because sterile gloves are worn while blood is collected, there is no need to wash hands after the gloves are removed.

Module 12: Traffic Flow and Activity Patterns

28. Recommended IP practices for minimizing microbial contamination of the OR during surgical procedures include:
- A. Keeping the doors closed at all times, except during movement of staff, patients, supplies, and equipment
 - B. Wearing masks when sterile supplies are open and scrubbed staff is operating
 - C. Keeping talking to a minimum in the presence of a sterile field
 - D. All of the above

Module 13: Transmission-Based Precautions for Health Care Facilities

29. Cohorting is the practice of placing patients with active infectious diseases into rooms or wards according to which of the following guidelines?
- A. Patients with an active infectious disease should be placed in a private room or ward.
 - B. Patients with different active infectious diseases should be placed in the same room or ward.

- C. Patients with the same active infectious disease should be placed in the same room or ward.
 - D. Patients with an active infectious disease should stay in their homes.
30. Empiric use of transmission-based precautions is implementing an isolation system based on which of the following?
- A. The clinical findings of the patient (signs and symptoms)
 - B. A definitive diagnosis including laboratory testing
 - C. Opinion of a group of experts
 - D. Opinion of the hospital manager

Module 14: Tuberculosis Infection Prevention and Control in Health Care Settings

31. Which of the following is **FALSE** regarding TB infection prevention control in health care settings?
- A. Maximizing natural ventilation is recommended, as is controlling the direction of airflow.
 - B. Wearing a surgical mask is highly recommended in place of respirators for health care workers
 - C. Use a tissue to cover mouth and nose while coughing.
 - D. Respiratory hygiene includes proper disposal of tissues and masks used by patients while coughing or sneezing.

Module 15: Housekeeping

32. How often should the OR be totally cleaned?
- A. Once every 24 hours
 - B. At the end of every week
 - C. At the end of every month
 - D. Between each case

Module 16: Health Care Waste Management

33. Which of the following is **TRUE** regarding health care waste management?
- A. Waste minimization is not a health care waste management measure.
 - B. X-ray films can be incinerated.
 - C. Infectious wastes are segregated in yellow-colored bins.
 - D. Open burning (outside of a pit, on the ground) should be practiced.

Module 17: Medication Safety

34. Which of the following is **NOT** a procedural standard of medication?
- A. Date and time of medication order
 - B. Abbreviation of the drug
 - C. Specify the amount of medicine to be given
 - D. Time and frequency of the drug

Module 18: Post-Exposure Prophylaxis

35. Which of the following is **NOT** a benefit of PEP?
- A. Both direct and indirect evidence suggests that treatment with ARVs soon after exposure to HIV decreases the risk of transmission.
 - B. PEP results in significant reduction of mother-to-child HIV transmission.
 - C. PEP is effective when initiated within 72 hours of exposure.
 - D. ARV treatment immediately after exposure to HIV can reduce risk of infection by about 90 percent.
36. Which of the following is **TRUE** concerning PEP counseling?
- A. The risk of transmission should be assessed.
 - B. It is not important to know the victim's HIV status prior to any ARV treatment.
 - C. There is no need to encourage the patient to be tested.
 - D. PEP is recommended after 72 hours following sexual assault.

Module 19: Food and Water Safety

37. Which of the following is a food and water safety measure?
- A. There is no need to cook food thoroughly.
 - B. Store food above 7°C/45°F or below 60°C/140°F.
 - C. Store raw and cooked food together.
 - D. The microbial water quality should also be monitored regularly.

Module 20: Client Education on Infection Prevention and Patient Safety

38. Which of the following indicates effective patient education programs?
- A. When facilities have policies and procedures
 - B. When patient education issues are incorporated into the education curricula

- C. When both qualitative and quantitative evaluation measures are included with motivational tools
- D. All of the above

Module 21: Health Care Risk Management

39. Which one of the following is **NOT** one of the major focus areas of health risk management?
- A. Event reporting
 - B. Staff capacity building
 - C. Informed consent
 - D. Environmental safety

Module 22: Managing Infection Prevention and Patient Safety Programs

40. Which of the following is **NOT** part of the scope of work of an IPPS committee?
- A. Define health facility annual IPPS plan
 - B. Ensure appropriate staff training in IPPS
 - C. Participate in the national technical working group
 - D. Monitor and evaluate performance of the IPPS program

Annex 2: Pre -and Post-Training Questionnaire Answer Key

Question Number	Answer	Question Number	Answer
1	All “yes”	21	C
2	C	22	D
3	B	23	B
4	C	24	A
5	A	25	B
6	D	26	B
7	D	27	D
8	A	28	D
9	B	29	C
10	D	30	A
11	C	31	B
12	A	32	A
13	C	33	C
14	D	34	B
15	C	35	D
16	A	36	A
17	B	37	D
18	D	38	D
19	B	39	B
20	D	40	C

Annex 3: Infection Prevention and Patient Safety: Individual and Group Assessment Matrix

The purpose of this matrix is to identify areas in the Participant’s Manual that need emphasis during the training. The first column lists individual questions in the pre-test and post-test and the rows show individual participant answers to each question. The questions that are not answered correctly by the majority of participants need more attention during the training.

Course: _____ Dates: _____

Question	Answers (participants)																		Categories	
1																				Module 1: Introduction to Infection Prevention and Patient Safety
2																				
3																				
4																				
5																				Module 2: Standard Precautions
6																				Module 3: Hand Hygiene
7																				
8																				
9																				Module 4: Personal Protective Equipment
10																				
11																				
12																				
13																				Module 5: Safe Injection Practices
14																				

Question	Answers (participants)	Categories
15		
16		
17		Module 6: Surgical Antisepsis
18		
19		Module 7: Safe Surgery and Safe Practice in the Operating Room
20		Module 8: Instrument Processing and Handling
21		
22		
23		
24		
25		Module 9: Processing Linen and Laundry
26		Module 10: Clinical Laboratory Services
27		Module 11: Blood Safety
28		Module 12: Traffic Flow and Activity Patterns
29		Module 13: Transmission-Based Precautions for Health Care Facilities
30		
31		Module 14: Tuberculosis Infection Prevention and Control in Health Care Settings

Question	Answers (participants)	Categories
32		Module 15: Housekeeping
33		Module 16: Health Care Waste Management
34		Module 17: Medication Safety
35		Module 18: Post-Exposure Prophylaxis
36		
37		Module 19 Food and Water Safety
38		Module 20: Client Education on Infection Prevention and Patient Safety
39		Module 21: Health Risk Management
40		Module 22: Managing Infection Prevention and Patient Safety Programs

Annex 4: Checklist for Materials, Equipment, and Supplies

No.	Materials	Quantity	Person Responsible	Remark
1	<i>IPPS Reference Manual</i>	*One copy per participant and per trainer		*Depending on the availability of copy
2	<i>IPPS Training Resource Package, Facilitator's Guide</i>	One copy per trainer		
3	<i>IPPS Training Resource Package, Participant's Manual</i>	One copy per participant		
4	CD copy of IP TDS: TDS/video shows	One copy per facility		
Audiovisual Equipment				
5	Overhead projector and/or laptop and LCD projector	One for each equipment		
6	Laptop with a CD-ROM drive and LCD projector	One for each equipment		
Other Course Materials				
7	Flip chart support stand	Two		
8	Flip chart paper as needed	As needed		
9	Colored markers for flip charts	Two boxes of eight (at least)		
10	Masking tape	Two		
11	Transparencies and markers for transparencies	As needed (if used)		
12	White and/or colored paper for exercises and warm-ups	As needed		
13	Folders, notepad, pens, highlighters, name tents/tags	One per each participant and per trainer		
	Calculator	Two		

No.	Materials	Quantity	Person Responsible	Remark
	Stapler	Two		
14	Additional handouts <ul style="list-style-type: none"> • Pre-training and post-training questionnaires • Individual and Group Assessment Matrix • Daily reflection form • Evaluation form • Schedule • Course event form • Reporting formats 	One per each participant		
	IPPS-related information, education, and communication, and behavior change communication materials <ul style="list-style-type: none"> • Algorithms • Pictures • Brochures 	A few samples		
	Bag	One piece		To hold all the material supplies
Anatomic Models or Substitutes (depending on the scope of the course and selected skills)				
	Orange or other similar object (for injections)	One for every four/five participants		
	ZOE® Gynecologic Simulator (for IUD insertion/removal, pelvic exam, mini-laparotomy)	One		
	Speculum	One		

No.	Materials	Quantity	Person Responsible	Remark
	Scalpel with retractable blade	A few samples		
	Cut gut	A few samples		
	Birth model with baby and placenta	Two		
	Mini-laparotomy kit	Two kits		
	Episiotomy kit	Two kits		
	Scales (to weigh powder bleach)	One		
	Timers	Two		
	Forceps of different sizes and types	A few samples		
	Needle holder	A few samples		
	Suturing needle	A few samples		
	Kidney dish	Five pieces		
	Cotton	One small roll		
	Clean gauze square	A few samples		
	Gauze drum	One sample		
	Pickup forceps with container	One sample		
	Plain soap (bar and liquid soaps)	A few samples		
	Medicated soap (Dettol, Medicam)	A few samples		
	Glycerin	One bottle		
	Small plastic measuring cups: metric (graduated)	Five		
	Commercially made hand rub	A few samples		

No.	Materials	Quantity	Person Responsible	Remark
	Personal hand towel	A few samples		
	Paint for hand hygiene exercise	Plaster paint—enough to use; see instructions for Module 3		
	Surgical gloves: sizes 7, 7½, 8, and 8½	One box of each size		
	Exam gloves	Two boxes		
	Scissors			
	Plastic cover gowns	20		
	Plastic aprons	Six		
	<ul style="list-style-type: none"> - Head covers/caps - Face shields - Masks with shield - Masks - Goggles 	10 for each		
	N95 respirators N99 respirators	A few samples		
	Utility gloves	Six pairs		
	Elbow-length gloves	A few samples		
	Plastic boots	Two pairs		
	Regular disposable syringes with needles	20		
	Auto-disable syringes	A few samples		
	Manually retractable syringes	A few samples		

No.	Materials	Quantity	Person Responsible	Remark
	Automatically retractable syringes	A few samples		
	Sharps container <ul style="list-style-type: none"> • Safety box • Hard plastic container 	Four safety boxes and one sample of a sharps container made of hard plastic		
	Five-liter plastic buckets <ul style="list-style-type: none"> • Black-colored bucket • Yellow-colored bucket 	Three of each		
	Plastic bin liners	To use during simulations; size should fit the colored-coded buckets		
	Five-liter plastic bucket with lid cover	Six		
	Detergent	A few samples		
	Bucket with tap	One sample		To demonstrate how they can improvise with locally available materials
	Toothbrush	One		
	Chlorine solution (bleach)	Five liters		
	70 percent and 35 percent powder bleach/chlorine solution	A few grams		
	60 to 90 percent alcohol	One bottle		

No.	Materials	Quantity	Person Responsible	Remark
	Iodine (3 percent); aqueous iodine and alcohol-containing (tincture of iodine) products	One sample		
	Iodophors (7.5 to 10 percent), various concentrations (povidone-iodine)	One sample		
	Chlorhexidine (2 to 4 percent) (Savlon)	One sample		
	Chloroxylenol (0.5 to 4percent) (para-chloro-metaxylenol or PCMX) various concentrations ([Dettol])	One sample		
	Triclosan	One sample		
	Samples of types of waste	A few simulated examples of infectious, noninfectious, hazardous, and sharps wastes		

Annex 5: Infection Prevention and Patient Safety Stations

Participant Monitoring Sheet

Participants may use this monitoring sheet to track their progress in using the stations for practice and qualification. In the numbered columns:

Write **O** to show each time you are observed by the trainer or another participant for practice.

Write **P** to show each time you use the station to practice individually.

Write **C** if you were observed by the trainer for qualification and assessed as competent.

Write **N** if you were observed by the trainer for qualification and assessed as not competent.

SKILL/TASK		1	2	3	4	5	6	7	8	9	10
Station One Selecting antiseptics and preparing skin/mucous membranes prior to procedures	Cesarean section										
	Intrauterine device insertion										
Station Two Preparing clean water and chlorine solutions	Preparing clean water										
	Decontamination										
	HLD										
Station Three Cleaning instruments and other items											
Station Four Disposing of needles and syringes	Disposable needle and syringe										
	Auto-disable syringe										
Station Five Reprocessing instruments and disposing of medical waste after a vaginal childbirth											

Station One: Selecting Antiseptics and Preparing Skin/Mucous Membranes prior to Procedures

Objectives

This station is used to practice and demonstrate:

- The selection of antiseptics for skin/mucous membrane preparation prior to procedures
- The preparation of skin/mucous membranes prior to procedures

Supplies

- Samples of the locally available antiseptics listed in Module 6
- Soap
- Water
- Towels
- Examination gloves
- Zoe® Gynecologic Simulator
- Orange or other similar object (for the intravenous site)
- Cotton or gauze squares
- Sterile or HLD forceps
- Speculum
- Copy of *IPPS Reference Manual*, Chapter 5, Table 5.2

Note: If it is not possible to obtain an item, you may use a card labeled with the name of the item it is supposed to represent.

Using the Station

The trainer should:

1. Set up the station for selection of antiseptics and preparation of skin/mucous membranes prior to procedures.
2. Demonstrate all scenarios to participants, according to the checklist.

Allow participants to practice. Using the following checklist, the trainer (or participant assuming the role of the trainer) should assess the participant's ability to select antiseptics and prepare skin/mucous membranes prior to procedures. For learning purposes, participants will practice both procedures. If this station is selected for qualification, the trainer will choose one procedure.

**SELECTING ANTISEPTICS AND PREPARING SKIN/MUCOUS MEMBRANES
PRIOR TO PROCEDURES**

QUESTIONS

Write **Y** if the question is answered correctly; write **N** if the question is answered incorrectly.

STEPS: Write **C** if the step is performed **competently**; write **N** if the step is **not** performed competently or is omitted.

Competent: Performs the step according to the standard procedure or guidelines.

Not Competent: Unable to perform the step according to the standard procedures or guidelines or does not perform the step at all.

**SELECTING ANTISEPTICS AND PREPARING SKIN/MUCOUS MEMBRANES
PRIOR TO A PROCEDURE**

SKIN PREPARATION PRIOR TO A CESAREAN SECTION

Trainer: Read the following information to the participant.

Mrs. X is scheduled to have a cesarean section. You are assisting the surgical team. The surgeon has asked you to prepare her skin for the procedure, and the anesthesiologist has asked you to first start an intravenous line. The surgery will probably last one hour.

Question	Answer	Observation				
		1	2	3	4	5
Given the type and length of the procedure, what are the antiseptic options for skin preparation for intravenous insertion?	Alcohol (60 to 90 percent ethyl or isopropyl)					
	Chlorhexidine (2 to 4 percent): Hibitane, Hibiscrub, Hibiclens					
	Chlorhexidine gluconate and cetrimide (at least 2 percent)					
	Iodine preparations (3 percent)					
	Iodophors (7.5 to 10 percent): Betadine					
	PCMX (0.5 to 4 percent): Dettol					
Which option is preferable?	Chlorhexidine (2 to 4 percent): Hibitane, Hibiscrub, Hibiclens					
Given the type and length of the procedures, what are the antiseptic options for skin preparation for a cesarean section?	Chlorhexidine (2 to 4 percent): Hibitane, Hibiscrub, Hibiclens					
	Iodophors (7.5 to 10 percent): Betadine					
	Explain the procedure to the patient.					
	Ask the patient about any known allergies or allergic reactions before selecting an antiseptic solution.					
	If the skin is visibly soiled, gently wash it with soap and water and dry the area before applying the antiseptic.					
	Select the antiseptic.					
Which options are preferable?	Chlorhexidine (2 to 4 percent): Hibitane, Hibiscrub, Hibiclens					
	Iodophors (7.5 to 10 percent): Betadine					
Task	Step	Observation				
		1	2	3	4	5
Skin preparation for intravenous insertion	Explain the procedure to the patient.					
	Ask the patient about any known allergies or allergic reactions before selecting an antiseptic solution.					
	If the skin is visibly soiled, gently wash it with soap and water, and dry the area before applying the antiseptic.					
	Select the antiseptic.					
	Put examination gloves on both hands.					

	Clean the insertion site with new cotton or gauze squares soaked in the antiseptic solution using a circular motion outward from the insertion site.						
	Wait long enough for the antiseptic to become effective before beginning the procedure.						
Skin preparation for cesarean section Note: Give the participant the following additional information: Mrs. X was not shaved before coming to the operation room.	Explain the procedure to the patient.						
	Do not shave hair around operative site. If necessary, hair may be cut close to the skin surface with scissors immediately before surgery in the preoperative area.						
	Ask the patient about allergic reactions before selecting an antiseptic solution.						
	If the skin is visibly soiled, gently wash it with soap and water, and dry the area before applying the antiseptic.						
	Select the antiseptic.						
	Put sterile gloves on both hands.						
	Using dry sterile or HLD forceps and new cotton or gauze squares soaked in antiseptic, thoroughly cleanse the skin.						
	Work from the operative site outward for several centimeters in a circular motion.						
	Wait long enough for the antiseptic to become effective before beginning the procedure.						
CERVICAL AND VAGINAL PREPARATION BEFORE INTRAUTERINE DEVICE INSERTION							
Trainer: Read the following information to the participant.							
Mrs. Y will have an IUD inserted. You should demonstrate preparation prior to the insertion.							
Question	Answer	Observation					
		1	2	3	4	5	
Given the type and length of the procedure, what are the antiseptic options?	Chlorhexidine (2 to 4 percent): Hibitane, Hibiscrub, Hibiclens						
	Chlorhexidine gluconate and cetrimide (at least 2 percent)						
	Iodophors (7.5 to 10 percent): Betadine						
	Alcohol and any antiseptics containing alcohol should be avoided for cervical and vaginal preparation. Alcohol burns, and it also dries and irritates mucous membranes, thus promoting the growth of microorganisms.						
Task	Step	Observation					
		1	2	3	4	5	
Cervical and vaginal preparation for IUD insertion	Explain the procedure to the patient.						
	Ask the patient about any known allergies or allergic reactions before selecting an antiseptic solution.						
	If the external genital area is visibly soiled, wash the area with soap and water, and dry the area before applying the antiseptic.						
	Put examination gloves on both hands.						
	Select the antiseptic.						
	After inserting the speculum, apply antiseptic solution liberally to the cervix and vagina (twice). It is not necessary to prepare the external genital area with						

	antiseptic solution.					
	If an iodophor is used, wait two minutes before proceeding.					

Station Two: Preparing Clean Water and Chlorine Solutions

Objectives

This station is used to practice and demonstrate the preparation of:

- Clean water (for drinking, hand washing, washing instruments, etc.) by boiling and by treating with liquid bleach (sodium hypochlorite) or powder bleach (calcium hypochlorite)
- Chlorine solution from liquid and powder bleach for decontamination
- Chlorine solution from liquid and powder bleach for high-level disinfection (HLD)

Supplies

- Locally obtained bottles of various concentrations of liquid bleach (can be empty)
- 70 percent and 35 percent powder bleach
- Three different sizes of measuring containers for liquid
- One 10-liter or 20-liter bucket (in which to mix solution) with lid
- Scale (for weighing powder bleach)
- Water (cards or colored paper may be used to represent water)
- Hot plate
- Pot or kettle
- Clean gauze, cotton, or sari cloth (for filtering water)
- Plastic apron
- Gloves (utility or exam)
- Card showing the formulas for preparing chlorine solutions
- Blank cards
- Calculator

Note: If it is not possible to obtain an item, you may use a card labeled with the name of the item it is supposed to represent.

Using the Station

The trainer should:

1. Set up the station for preparation of clean water and chlorine solutions.
2. Demonstrate all scenarios to participants, according to the checklist.
3. Allow participants to practice. Using the checklist below, the trainer (or participant taking the role of trainer) should assess the participant's ability to prepare clean water and chlorine solutions using the appropriate formula(s). For learning purposes, participants will practice all scenarios. If this station is selected for qualification, the trainer will choose one scenario.

PREPARING CLEAN WATER AND CHLORINE SOLUTIONS							
SCENARIO 1							
Trainer: Read the following information to the participant.							
The water in your hospital/clinic is contaminated. You are assigned to train one person in each unit/department to prepare clean water that is safe to drink and can also be used for other purposes (e.g., hand washing and medical instrument cleaning).							
Question	Answer		Observations				
			1	2	3	4	5
What are the options/methods to prepare clean water?	The two methods for preparing clean water are:	Boiling for five minutes Treating with liquid or powder bleach					
Task	Step		Observations				
			1	2	3	4	5
Boiling	Pour the water into a pot or kettle.						
	Place the lid on the pot/kettle and bring the water to a gentle, rolling boil using the hot plate.						
	Start timing when the rolling boil begins.						
	Keep the water at a rolling boil for five minutes.						
	Pour the water into a clean container and keep covered with a lid.						
Treating with liquid bleach Note: For qualification, the trainer may select different amounts of water to be prepared (e.g., 10, 20, or 50 liters).	Identify the concentration of the bleach available (select one container and check the concentration).						
	Select the appropriate formula (consulting Figure 10.1 of the <i>IPPS Reference Manual</i>) and choose the correct value: percent concentrate; percent dilute (0.001 percent).						
	Using the formula, correctly calculate the total parts of water for one part of liquid bleach.						
	Use appropriate PPE: plastic apron and utility gloves.						
	Select the appropriate measuring container with which to prepare 10 liters of clean water.						
	Mix the necessary parts of water with parts of liquid bleach in a plastic bucket or container to prepare 10 liters of 0.001						

	percent chlorine solution.					
	Keep the water in a clean plastic bucket or container with a lid.					
Treating with powder bleach Note: For qualification, the trainer may select different amounts of water to be prepared (e.g., 10, 20, or 50 liters).	Identify the concentration of the bleach available (select one container and check the concentration).					
	Select the appropriate formula (consulting Figure 10.2 of the <i>IPPS Reference Manual</i>) and choose the correct value: percent concentrate; percent dilute (0.001 percent).					
	Using the formula, correctly calculate the grams of powder bleach per liter of water.					
	Using the scale, measure and weigh the correct amount of powder bleach per liter of water, and then calculate the amount needed for 10 liters.					
	Use appropriate PPE: plastic apron and utility gloves.					
	Select the appropriate measuring container with which to prepare 10 liters of clean water.					
	Mix the measured amount of powder bleach with the necessary liters of water in a plastic container to prepare 10 liters of 0.001 percent chlorine solution.					
	Allow the calcium particulates to settle to the bottom of the container prior to use.					
	Keep the water in a clean plastic container with a lid.					
Question	Answer	Observations				
		1	2	3	4	5
What can be done if the water is cloudy?	The water can be filtered through four layers of woven cloth, such as cheesecloth or old sari material. Filtering will remove most particulates before boiling or treating with chlorine.					

DECONTAMINATION						
SCENARIO 2						
Trainer: Read the following information to the participant.						
You work in a reproductive health clinic with a high volume of clients for family planning, counseling and testing for HIV, and antenatal care. You have to prepare a chlorine solution for the decontamination of instruments. How do you prepare this solution?						
Task	Step	Observations				
		1	2	3	4	5
Using liquid bleach Note: For qualification, the trainer may select different amounts of chlorine solution to be prepared	Identify the concentration of the bleach available (select one container and check the concentration).					
	Select the appropriate formula (consulting Figure 10.1 of the <i>IPPS Reference Manual</i>) and choose the correct value: percent					

(e.g., 10, 20, or 50 liters).	concentrate; percent dilute (0.5 percent).					
	Using the formula, correctly calculate the total parts of water for one part of liquid bleach.					
	Use appropriate PPE: plastic apron and utility gloves.					
	Select the appropriate measuring container with which to prepare 10 liters of 0.5 percent chlorine solution.					
	Mix the necessary parts of water with parts of liquid bleach in a plastic container to prepare 10 liters of 0.5 percent chlorine solution.					
	Pour the chlorine solution into smaller plastic containers or keep the chlorine solution in the plastic container with a lid.					
Task	Step	Observations				
		1	2	3	4	5
Using powder bleach Note: For qualification, the trainer may select different amounts of chlorine solution to be prepared (e.g., 10, 20, or 50 liters).	Identify the concentration of the bleach available (select one container and check the concentration).					
	Select the appropriate formula (consulting Figure 10.2 of the <i>IPPS Reference Manual</i>) and choose the correct value: percent concentrate; percent dilute (0.5 percent).					
	Using the formula, correctly calculate the grams of powder bleach per liter of water.					
	Using the scale, measure and weigh the correct amount of powder bleach per liter of water, and then calculate the amount needed for 10 liters.					
	Use the appropriate PPE: plastic apron and utility gloves.					
	Select the appropriate measuring container to prepare 10 liters of 0.5 percent chlorine solution.					
	Mix the measured amount of powder bleach with the necessary liters of water in a plastic container to prepare 10 liters of 0.5 percent chlorine solution.					
	Allow the calcium particulates to settle to the bottom of the container prior to use.					
	Pour the chlorine solution into smaller plastic containers or keep the solution in the plastic container with a lid.					
Question	Answer	Observations				
		1	2	3	4	5
Where should the containers be placed for decontamination?	The containers should be placed at point of use in the room where procedures occur and instruments and other items are used.					
How long should the instruments be kept in the 0.5 percent chlorine	The instruments should be kept in the 0.5 percent chlorine solution for a minimum of 10 minutes. They should then be removed as					

solution?	soon as possible for cleaning.					
How often should you change the solution when in use?	The solution should be changed at the end of each day or clinic session or, depending on the procedure, when the solution becomes cloudy or bloody.					

HIGH-LEVEL DISINFECTION

SCENARIO 3

Trainer: Read the following information to the participant.
 You work in the central supply department (CSD) in your clinic, and you need to process some instruments through HLD with chlorine solution. **How do you prepare this solution?**

TASK	STEP	Observations				
		1	2	3	4	5
Using liquid bleach Note: For qualification, the trainer may select different amounts of chlorine solution to be prepared (e.g., 10, 20, or 50 liters).	Identify the concentration of the bleach available (select one container and check the concentration).					
	Select the appropriate formula (consulting Figure 10.1 of the <i>IPPS Reference Manual</i>) and choose the correct value: percent concentrate; percent dilute (0.1 percent).					
	Prepare and use HLD water (water boiled for 20 minutes).					
	Using the formula, correctly calculate the total parts of water for one part of liquid bleach.					
	Use the appropriate PPE: plastic apron and utility gloves.					
	Select the appropriate measuring container with which to prepare 10 liters of 0.1 percent chlorine solution.					
	Mix the necessary parts of HLD water with parts of liquid bleach in a plastic container to prepare 10 liters of 0.1 percent chlorine solution.					
Pour the chlorine solution into smaller plastic containers or keep the solution in the plastic container with a lid.						

Task	Step	Observations				
		1	2	3	4	5
Using powder bleach Note: For qualification, the trainer may select different amounts of chlorine solution to be prepared (e.g., 10, 20, or 50 liters).	Identify the concentration of the bleach available (select one container and check the concentration).					
	Select the appropriate formula (consulting Figure 10.2 of the <i>IPPS Reference Manual</i>) and choose the correct value: percent concentrate; percent dilute (0.1 percent).					
	Prepare and use HLD water (water boiled for 20 minutes).					
	Using the formula, correctly calculate the grams of powder bleach per liter of water, and then calculate the amount needed for 10 liters					
	Using the scale, measure and weigh the					

	correct amount of powder bleach per liter of water.					
	Use the appropriate PPE: plastic apron and utility gloves					
	Select the appropriate measuring container with which to prepare 10 liters of 0.1 percent chlorine solution.					
	Mix the measured amount of powder bleach with the necessary liters of HLD water in a plastic container to prepare 10 liters of 0.1 percent chlorine solution.					
	Allow the calcium particulates to settle to the bottom of the container prior to use.					
	Pour the chlorine solution into smaller plastic containers or keep the solution in the plastic container with a lid.					
Question	Answer	Observations				
		1	2	3	4	5
Where should the containers be placed for HLD?	The containers should be placed in the instrument processing area (clean area) of the clinic or central supply department as appropriate.					
How long should the instruments be kept in the 0.1 percent chlorine solution?	The instruments should be kept in the 0.1 percent chlorine solution for a minimum of 20 minutes.					
What should be done with the instruments after they have been soaked in 0.1 percent chlorine solution?	The instruments should be removed and rinsed with HLD water (water boiled for 20 minutes). They should be stored in an HLD container with a cover.					

Station Three: Cleaning Instruments and Other Items

Objective

This station is used to practice and demonstrate the procedure for cleaning instruments and other items.

Supplies

- Decontamination buckets/containers with instruments
- Utility gloves
- Face shield or mask and protective eyewear
- Plastic apron
- Closed shoes or fluid-resistant shoe covers
- Brush/toothbrush
- Liquid or powder detergent
- Forceps
- Two plastic basins or containers (or a utility sink)
- Hand soap
- Alcohol-based hand rub

Note: If it is not possible to obtain an item, you may use a card labeled with the name of the item it is supposed to represent.

Using the Station

The trainer should:

1. Set up the station for cleaning instruments and other items.
2. Demonstrate the scenario to the participants, according to the checklist.
3. Allow participants to practice. Using the checklist below, the trainer (or participant taking the role of trainer) should assess the participant's ability to clean instruments and other items.

CLEANING INSTRUMENTS AND OTHER ITEMS

QUESTIONS

Write **Y** if the question is answered correctly; write **N** if the question is answered incorrectly.

STEPS

Write **C** if the step is performed **competently**; write **N** if the step is **not** performed competently or is omitted.

Competent: Performs the step according to the standard procedure or guidelines.

Not Competent: Unable to perform the step according to the standard procedure or guidelines, or does not perform the step at all.

CLEANING INSTRUMENTS AND OTHER ITEMS

SCENARIO

Trainer: Read the following information to the participant.

You work in a hospital. You have just collected the decontamination buckets containing used instruments and surgical gloves. You need to clean them. The instruments have already been soaked in 0.5 percent chlorine solution for 10 minutes.

Task	Step	Observations					
		1	2	3	4	5	
Preparing for the procedure	Put on the proper PPE.	Utility gloves					
		Face shield or mask and protective eyewear					
		Plastic apron					
		Closed shoes					
Cleaning instruments	Fill a plastic container (or utility sink) with clean water.						
	Using a brush and liquid or powder detergent, scrub instruments and other items under the surface of the water, removing all blood and other foreign matter.						
	Disassemble instruments and other items with multiple parts and clean the grooves, teeth, and joints with a brush.						
	Thoroughly rinse the instruments and other items with clean water.						
Task	Step	Observations					
		1	2	3	4	5	
Cleaning surgical gloves	Wash the inside and outside of the gloves in soapy water.						
	Rinse in clean water until no soap remains.						
	Test gloves for holes by inflating them by hand and holding them under water. (Air bubbles will appear if there are holes.)						
Drying cleaned instruments and other items	Air dry instruments and other items, or dry them with a clean towel.						
Hand hygiene after cleaning	Remove all PPE.						
	Wash hands for 10 to 15 seconds with soap and running (or poured) water. Dry with a clean, individual towel or paper towel, or allow hands to air dry. OR Rub hands with 3 to 5 mL of an alcohol-based solution until the hands are dry (if hands are not						

	visibly soiled).					
--	------------------	--	--	--	--	--

DISPOSING OF NEEDLES AND SYRINGES

QUESTIONS

Write **Y** if the question is answered correctly; write **N** if the question is answered incorrectly.

STEPS

Write **C** if the step is performed **competently**; write **N** if the step is **not** performed competently or is omitted.

Competent: Performs the step according to the standard procedure or guidelines.

Not Competent: Unable to perform the step according to the standard procedure or guidelines, or does not perform the step at all.

Station Four: Disposing of Needles and Syringes

Objectives

This station is used to practice and demonstrate the disposal of:

- Disposable needles and syringes
- Auto-disable syringes

Supplies

- Disposable needles and syringes
- Auto-disable syringes
- Puncture-resistant sharps container
- Clean water
- Utility gloves
- Forceps

Note: If it is not possible to obtain an item, you may use a card labeled with the name of the item it is supposed to represent.

Using the Station

The trainer should:

1. Set up the station for disposal of needles and syringes.
2. Demonstrate all scenarios to participants, according to the checklist.
3. Allow participants to practice. Using the checklist below, the trainer (or participant taking the role of trainer) should assess the participant's ability to dispose of needles and syringes. For learning purposes, participants will practice all scenarios. If this station is selected for qualification, the trainer will choose one scenario.

DISPOSING OF NEEDLES AND SYRINGES

SCENARIO

Trainer: Read the following information to the participant.

You are the head nurse at an immunization clinic. Because you have a variety of needles and syringes (regular disposable needles and syringes, auto-disable syringes), your staff is confused about how to dispose of them properly. The policy at your clinic is the following:

- Disposable syringes are not reused. Needles are never reused.

You have decided to set up a station to demonstrate the proper disposal of the different types of needles and syringes.

Task	Step	Observations				
		1	2	3	4	5
Selecting supplies and setting up the station for a regular disposable needle and syringe	Regular disposable syringe assembled with needle and no cap					
	Puncture-resistant sharps container at “point of use”					
Disposal of a disposable needle and syringe	Do not recap, bend, or break the needle prior to disposal.					
	Do not disassemble needle and syringe.					
	Immediately after use, place the assembled needle and syringe directly into a puncture-resistant sharps container at point of use.					

AUTO-DISABLE SYRINGE

Task	Step	Observations				
		1	2	3	4	5
Selecting supplies and setting up the station for an auto-disable syringe	Auto-disable syringe without a cap					
	Puncture-resistant sharps container at “point of use”					
Disposal of an auto-disable syringe	Do not recap, bend, or break the needle prior to disposal.					
	Immediately after use, place the assembled needle and syringe directly into a puncture-resistant sharps container at point of use.					

Question	Answer	Observations				
		1	2	3	4	5
When and how should you dispose of the puncture-resistant sharps container?	When the puncture-resistant sharps container is three-quarters full, it should be sealed and either burned, encapsulated, or buried. The best practice is to incinerate.					

Station Five: Reprocessing Instruments and Disposing of Medical Waste After Vaginal Childbirth

Objective

This station is used to practice and demonstrate the procedure for reprocessing instruments and disposing of medical waste after a normal vaginal childbirth.

Supplies

- Samples of items to represent medical waste (gauze squares, cotton, dressings, disposable needles and syringes, linen, etc.)
- Birth model with placenta
- Leak-proof containers (for placenta, linen, and other medical waste)
- Plastic container with 0.5 percent chlorine solution for instruments
- Puncture-resistant sharps container
- Clean water and soap
- Alcohol-based hand rub

Note: If it is not possible to obtain an item, you may use a card labeled with the name of the item it is supposed to represent.

Using the Station

The trainer should:

1. Set up the station for reprocessing instruments and disposing of medical waste after a normal vaginal childbirth.
2. Demonstrate the scenario to the participants, according to the checklist.
3. Allow participants to practice. Using the checklist below, the trainer (or participant taking the role of trainer) should assess the participant's ability to reprocess instruments and dispose of medical waste after a normal childbirth.

**REPROCESSING INSTRUMENTS AND DISPOSING OF MEDICAL WASTE
AFTER A VAGINAL CHILDBIRTH**

QUESTIONS

Write **Y** if the question is answered correctly; write **N** if the question is answered incorrectly.

STEPS

Write **C** if the step is performed **competently**; write **N** if the step is **not** performed competently or is omitted.

Competent: Performs the step according to the standard procedure or guidelines.

Not Competent: Unable to perform the step according to the standard procedure or guidelines, or does not perform the step at all.

**REPROCESSING INSTRUMENTS AND DISPOSING OF MEDICAL WASTE
AFTER A VAGINAL CHILDBIRTH**

SCENARIO

Trainer: Read the following information to the participant.

You are a nurse-midwife and work in the labor and delivery ward. With your assistance, Mrs. D gave birth to a baby girl. She is resting on the delivery bed with her baby. Before you take off your gloves, you need to dispose of the medical waste and decontaminate all of the instruments.

Task	Step	Observations				
		1	2	3	4	5
Medical waste disposal and instrument decontamination	Place the placenta in a leak-proof container.					
	Dispose of all waste (e.g., gauze, cotton, dressings, etc.) in a leak-proof container.					
	Place instruments in a container with 0.5 percent chlorine solution for 10 minutes to decontaminate.					
	Immediately dispose of used needles and syringes in a puncture-resistant sharps container, without removing, recapping, or breaking the needle.					
	Dispose of all other disposable sharps in a puncture-resistant container.					
	Place soiled linen in a leak-proof container.					
Disposal of PPE	Immerse both gloved hands in a 0.5 percent chlorine solution.					
	Remove gloves by turning them inside out.					
	Dispose of gloves; place them in a leak-proof container. OR If reusing surgical gloves, place in a 0.5 percent chlorine solution for 10 minutes to decontaminate.					
	Remove all other PPE, and place the items in a 0.5 percent chlorine solution for 10 minutes to decontaminate.					
Hand hygiene after cleaning	Wash hands for 10 to 15 seconds with soap and running (or poured) water. Dry with a clean, individual towel or paper towel, or allow hands to air dry. OR Rub hands with 3 to 5 mL of an alcohol-based solution until the hands are dry (if hands are not visibly soiled).					

Annex 6: Qualification Summary Form

Instructions

This form is used to help the trainer(s) summarize the knowledge questionnaire scores and station qualifications of all participants in the training.

- Write the name of each participant in the first column.
- Record each participant's final score on the Post-Training Questionnaire in the Knowledge Questionnaire column.
- Record the evaluation of participant's skills as demonstrated at the selected qualification station. Write **C** if the participant was assessed as competent during the training. If the participant did not achieve competency in a station by the end of the course, write **N** to indicate not competent.

QUALIFICATION SUMMARY FORM

PARTICIPANT NAME	KNOWLEDGE QUESTIONNAIRE	STATIONS				
	Post-Training Result %	Station One Selecting Antiseptics and Preparing Skin/Mucous Membranes prior to Procedures	Station Two Preparing Clean Water and Chlorine Solutions	Station Three Cleaning Instruments and Other Items	Station Four Disposing of Needles and Syringes	Station Five Reprocessing Instruments and Disposing of Medical Waste After a Vaginal Childbirth
<i>Example: John Smith</i>	90%	---	C	---	---	---
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

Annex 7: Registration Form

SN	Participant Name	Sex		Qualification	Work Position	Place of Work	Woreda	Telephone
		M	F					
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

Annex 8: Operational Action Plan Sheet

Region: _____ Woreda: _____ Name of health facility: _____

Name of focal person: _____ Contact information: _____

SN	Infection Prevention and Patient Safety Needs Gaps and Possible Causes	Activity/ Intervention	Quantity	Responsible Person	Support Needed	Timeline						Remarks
						Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	
1												
2												
3												
4												
5												
6												

Prepared by: 1: _____ 2: _____ 3: _____ 4: _____

Annex 9: Daily Reflection Form

Daily Reflection Form of the Training

Note: Your constructive feedback will help us to improve the quality of the training in the remaining training days, so please give your feedback by answering the following questions.

1. Overall, how did you find today's sessions?

Not Useful _____ Useful _____ Very Useful _____

Additional comments about today's session:

2. What topics from today's session were the most useful for you or the most important thing you learned and why?

3. How was today's session?

Unclear _____ Clear _____ Very Clear _____

Additional comments:

4. Is there anything that you are still unclear about? If yes, please specify.

5. Would you like further information on today's sessions?

6. Do you have any additional comments or suggestions regarding today's session?

Annex 10: Training Evaluation Form

(To be completed by **participants**.)

Rate each of the following statements as to whether or not you agree with it, using the following key:

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

	Rating				
Training program					
<i>I feel that...</i>					
The objectives of the training were clearly defined.	5	4	3	2	1
The material was presented clearly and in an organized fashion.	5	4	3	2	1
The pre- and post-tests accurately assessed my in-course learning.	5	4	3	2	1
Technical information					
I learned new information from this training.	5	4	3	2	1
<i>I will now be able to...</i>					
Apply infection prevention interventions in my health facility.	5	4	3	2	1
Use appropriate approaches to educate clients on IPPS.	5	4	3	2	1
Apply essential medication safety principles in my health facility.	5	4	3	2	1
Plan, implement, monitor, and evaluate IPPS programs.	5	4	3	2	1
Training methodology					
The trainers' presentations were clear and organized.	5	4	3	2	1
The training methods were participatory.	5	4	3	2	1
The training methods used help me to acquire skills.	5	4	3	2	1
The trainers encouraged my questions and input.	5	4	3	2	1
Training location and schedule					
The training site and schedule were convenient.	5	4	3	2	1
The necessary materials were available.	5	4	3	2	1

Any additional comments:

Annex 11: World Health Organization Surgical Safety Checklist

Surgical Safety Checklist

World Health Organization
A World Alliance for Better Health Care

Patient Safety
A World Alliance for Better Health Care

Before induction of anaesthesia

Before skin incision

Before patient leaves operating room

(with at least nurse and anaesthetist)

(with nurse, anaesthetist and surgeon)

(with nurse, anaesthetist and surgeon)

Has the patient confirmed his/ her identity, site, procedure, and consent?

 Yes

Confirm all team members have introduced themselves by name and role.

Confirm the patient's name, procedure, and where the incision will be made.

Has antibiotic prophylaxis been given within the last 60 minutes?

 Yes
 Not applicable

Nurse Verbally Confirms:

 The name of the procedure
 Completion of instrument, sponge and needle counts
 Specimen labelling (read specimen labels aloud, including patient name)
 Whether there are any equipment problems to be addressed

Is the site marked?

 Yes
 Not applicable

Anticipated Critical Events

To Surgeon:

 What are the critical or non-routine steps?
 How long will the case take?
 What is the anticipated blood loss?

To Surgeon, Anaesthetist and Nurse:

 What are the key concerns for recovery and management of this patient?

Is the anaesthesia machine and medication check complete?

 Yes

To Anaesthetist:

 Are there any patient-specific concerns?

To Nursing Team:

 Has sterility (including indicator results) been confirmed?
 Are there equipment issues or any concerns?

Is the pulse oximeter on the patient and functioning?

 Yes

Is essential imaging displayed?

 Yes
 Not applicable

Does the patient have a:

Known allergy?

 No
 Yes

Difficult airway or aspiration risk?

 No
 Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?

 No
 Yes, and two IVs/central access and fluids planned

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

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