Simulation Training
For Educators of Health Care Workers

Guide for Facilitators
Jhpiego is an international, nonprofit health organization affiliated with The Johns Hopkins University. For more than 35 years, Jhpiego has empowered front-line workers by designing and implementing effective, low-cost, hands-on solutions to strengthen the delivery of health care services for women and their families. By putting evidence-based health innovations into everyday practice, Jhpiego works to break down barriers to high-quality health care for the world’s most vulnerable populations.

www.jhpiego.org

Published by:
Jhpiego
Brown’s Wharf
1615 Thames Street
Baltimore, Maryland, 21231-3492, USA

Copyright© 2011 by Jhpiego. All rights reserved.

This Simulation Training for Educators of Health Care Workers Learning Resource Package was made possible through the support provided in part by the U.S. Agency for International Development, under the terms of Cooperative Agreements No. 669-A-00-09-00001-00 (RBHS Liberia) and initial development of some content utilized for this Learning Resource Package was made possible by support from Jhpiego Ethiopia through funding from the Centers for Disease Control. The opinions herein are those of the authors and do not necessarily reflect the views of the U.S. Agency for International Development.

All photos by Jhpiego staff.

TRADEMARKS: All brand names and product names are trademarks or registered trademarks of their respective countries.

March 2011
# SIMULATION TRAINING FOR EDUCATORS OF HEALTH CARE WORKERS

*Course Handbook*

## Section One: Learner’s Guide

### ACKNOWLEDGMENTS

### OVERVIEW

Components of the Learning Resource Package ................................................................... 1
Using the Learning Resource Package ................................................................................... 1

### INTRODUCTION

Course Design ........................................................................................................................ 3
Facilitators ............................................................................................................................... 4
Sessions .................................................................................................................................. 4
Checklists ................................................................................................................................ 4
Evaluation ............................................................................................................................... 5
Course Syllabus ...................................................................................................................... 6
Simulation Training Course Schedule ................................................................................... 10

### PRE-COURSE ASSESSMENT

How the Results will be Used ................................................................................................ 12
Pre-course Assessment ........................................................................................................ 12

### LEARNING EXERCISES

S1.2: Observe a Simulation Center ....................................................................................... 14
S1.3: Complete Sections 1 and 2 of the Business Plan ........................................................ 14
S1.4: Create a Simulation Center Materials List ................................................................... 15
S2.1: Plan to Manage a Simulation Center ........................................................................... 15
S2.2: Revise Supporting Objectives for Simulated Activities ................................................ 16
S2.3: Create an Assessment Blueprint for Simulation .......................................................... 16
S3.1: Develop Lesson Plans and Stations for Simulation ..................................................... 17
S3.3: Practice Coaching and Feedback ................................................................................ 18
S3.4: Station Rotation ........................................................................................................... 18
S4.1: Review Standards for Monitoring and Evaluation of Simulated Settings ..................... 19
SESSION FOUR

Session 4.1 ........................................................................................................................... 98

POST-COURSE ASSESSMENT

Using the Post-course Assessment .................................................................................... 105
Post-course Assessment Answer Key ................................................................................ 105

APPENDICES (all located on the Simulation Training CD-ROM)

Using the Appendices ......................................................................................................... 112
Appendix A: Handouts
Appendix B: Checklists
Appendix C: Individual Learning Plan
Appendix D: Institutional Action Plan Template
Appendix E: Sample Performance Standards
Appendix F: Other Resources
   Excerpts from reports on field tested sites
   ETS Reference Manual
   Making a paper box (use to demonstrate good coaching)
   Presentation on making a box
   Folding a shirt instructions
   Clinical demonstration checklist (use if learners want more practice)
   Presentation on debriefing
Appendix G: Sample Locally Made Models
Appendix H: Learner Course Evaluation
Appendix I: Facilitator Evaluation
Appendix J: Reference Articles
ACKNOWLEDGMENTS

This *Simulation Training for Educators of Health Care Providers* Learning Resource Package (LRP) is a competency-based learning tool. The LRP focuses on management of and instruction in a simulated environment for instructors working in or assigned to improve/create a simulation center at their teaching institutions that prepare health care providers. In addition, the LRP is modifiable for any developing country and not country-specific. It has been tested in both Eastern and Western Africa, in both English- and French-speaking countries. It is based in large part on experience gained from working in a simulated environment and with teaching institutions in developing countries that are creating and managing interdisciplinary simulation centers.

The main challenge was to create a package that adequately covered all the necessary topics—which is not feasible in a five-day course. Hence, follow-up, advisement and coaching are needed to ensure that instructors are incorporating the newly acquired information and practice.

We would like to thank the contributors of this LRP:

- Udaya Thomas, a Senior Technical Advisor, Global Learning Office, Jhpiego, Technical Lead for this project.
- Dr. Peter Johnson, Director of Global Learning, Jhpiego, for encouragement and support.
- Pre-service education (PSE) team members (contributors no longer with Jhpiego are in italic) in Liberia and Ethiopia: Marion Subah, Tegbar Yigzaw, Eritrea Tadesse, Entisar Ahmed, Mesfin Goji, Tesfaye Habtetsion and Endris Mekonnen for their input and contribution to the sessions and session plans.
- Learners of Liberia and Ethiopian courses, whose input was incorporated with modifications in this LRP.
- Tsigué Pleah, Senior Technical Advisor, Jhpiego, for her presentation on models and her review of the materials prior to use in French-speaking West African countries.
- Martha Appiagyei, Reproductive Health Advisor, Jhpiego Ghana, for her photos and contributions on locally made model instructions.
- Julia Bluestone for her review of and input for the course syllabus.
- Essential Teaching Skills (ETS) and ModCAL® (Modified Computer-Assisted Learning) developers at Jhpiego.
- Pamela Jeffries, Johns Hopkins University (JHU) School of Nursing, for the Simulation Model contribution.
- JHU School of Medicine Simulation Center for simulation text reference suggestions.
- Rachel Rivas for editing and Renata Kepner for formatting, Publications, Jhpiego.
- RBHS Liberia for partial funding support for this training package and CDC Technical Support in HIV Treatment, Care and Prevention in Ethiopia programs for partial funding support to the
initial development of the workshop and components that were used to develop this training package.

While framing this LRP, the following articles and texts were referenced:


Other Articles:


Text References:

Text references allow trainers and instructors to expand on areas that were covered and not covered in the course. These references give more information for faculty development and coaching sessions with instructors. If feasible, purchasing these texts for each Faculty Educational Development Center would be useful. The text references recommended by JHU School of Medicine Simulation Center are:


Checklists:

To make this Simulation Training LRP competency-based, the author developed, modified and utilized existing checklists and clinical simulations based on the actual need and appropriateness. Many thanks to Jhpiego programs worldwide for this large repository of checklists.
LEARNER’S GUIDE
OVERVIEW

COMPONENTS OF THE LEARNING RESOURCE PACKAGE

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

- **Need-to-know information** contained in the *Effective Teaching Skills (ETS): A Guide for Educating Healthcare Providers, Reference Manual* (see Appendix F) and presentation graphics.

- **A Learner’s Guide** containing how to use the learning package, course design, syllabus and schedule, and learning exercises.

- **A Facilitator’s Guide**, which includes session plans, learning exercise, interactive presentation thumbnails and narration notes, assessments with answer keys and detailed information for conducting the course.

- **Well-designed learning aids**, including those located on the accompanying CD-ROM, anatomic models and supplies, and other educational materials.

- **Management binder**, a sample management binder per institution that includes the following sections: 1) objectives to be met in lab, 2) staffing plan, 3) lab student rotation schedule, 4) assessment schedule, 5) tracking and renewal of materials and equipment list, 6) equipment instructions and manuals, 7) learning outcomes achieved in lab, 8) educational strategies, 9) clinical research, 10) CMT members, 11) business plan, and 12) homemade models.

- **Competency-based performance evaluation**

The reference manual recommended for use in this course is the *ETS Reference Manual* and the *ModCAL® (Modified Computer-Assisted Learning) flash drive*. There are only select areas that are dedicated to simulation, coaching and feedback; however, key relevant articles will supplement the information as further reference material (see Appendix J).

USING THE LEARNING RESOURCE PACKAGE

In designing the training materials for this course, particular attention was paid to making them “user-friendly” and to permitting the course learners and facilitators the widest possible latitude in adapting the training to learner (group and individual) learning needs. For example, at the beginning of each course, an assessment is made of each learner’s knowledge. The results of this pre-course assessment are then used jointly by the learners and facilitators to adapt the course content as needed, so that the training focuses on acquisition of new information and practical activities.

A second feature relates to the use of the ETS Reference Manual and course handbook. The *ETS Reference Manual and articles* provide essential information needed to conduct the course in a logical manner. The manual and articles only contain information that is consistent with the course goals and objectives, so they are an integral part of all sessions (e.g., giving an illustrated lecture or providing problem-solving information). The **presentation graphics** highlight the key information in each chapter of the reference manual.
The Learner’s Guide, on the other hand, serves a dual function. First, and foremost, it is the road map that guides the learner through each phase of the course. Second, it contains the course syllabus and course schedule, as well as all supplemental printed materials needed during the course.

The Facilitator’s Guide, as the name suggests, contains specific guidance and materials for the facilitator—including course logistics, materials and answer keys. Competency-based qualification checklists may be found as electronic files and will be shared with learners along with other course content at the end of the course in a CD-ROM. Checklists will be printed by the facilitator as needed and requested by learners, depending on the cadre and tasks that the instructors are teaching and assessing in their own facilities.

In keeping with the mastery learning approach upon which this course is based, all training activities will be conducted in an interactive, participatory manner. To accomplish this, the role of the facilitator must continually change throughout the course. For example, he/she is an instructor when presenting a classroom demonstration; a facilitator when conducting small-group discussions or using role plays; and shifts to the role of coach when helping learners practice a procedure. Finally, when objectively assessing performance, the facilitator serves as an assessor.

New Terminology
The use of “task development” will replace “skill development.” The term “skill” will be replaced with “clinical task/task.” This replacement is being done to emphasize that each clinical activity encompasses the knowledge that has been acquired, the appropriate professional behavior (and the underlying attitude), and the tactile skills that are necessary rather than just the tactile skills. This emphasis is consistent with emerging literature on simulation. The use of tasks also incorporates other activities that may not be of a clinical nature but students (and patients) would benefit from their simulated practice. Competency in its simplest definition is a set of job-related tasks. A task is an observable professional behavior. As such, all checklists and protocols relate to tasks and incorporate a set of steps that address knowledge, skill and attitude, as well as problem-solving components. This is important in our discussions to broaden our thinking away from “skills” and embrace a more holistic definition that allows us to open the conversation on why the aspects of attitude and problem-solving or clinical decision-making are so important. Integrating more simulation with our teaching-learning environments allows us to move teaching institutions toward more interactive, humanistic, team-oriented centers for learning and sharing.
INTRODUCTION

COURSE DESIGN

This Simulation Training for Educators of Health Care Workers Learning Resource Package (LRP) was born out of a request for further training on managing and implementing simulated environments for students in health-related training institutions. The package was specifically developed to be used with or without Jhpiego ModCAL Training Skills (TS) course, but was harmonized with the Jhpiego ModCAL TS LRP; key concepts may be reinforced by viewing the Jhpiego ModCAL TS flash drive or CD-ROM. If Jhpiego ModCAL can be viewed by learners prior to this training, the training itself will be more interactive. Modules 8 and 11 of the Jhpiego ETS LRP were also utilized as a base for expanding the content, using the adult learning principle of starting with what people know and building on that foundation.

This LRP is intended to be live and modified as new information becomes available. Instructors are encouraged to update themselves and modify the presentations to their context. There are many roads to the same destination; as long as the objectives are maintained and used as a road map, the outcomes of this course will be successful. Since the learners are instructors and will be replicating this training in second-generation courses, they should receive the entire LRP at the completion of the course. This LRP is based on two pilot courses implemented in Liberia and Ethiopia, and experience from working in a simulated environment and delivering ETS in many countries.

This simulation training course is designed for educators of health care workers (e.g., physicians, nurses, lab technicians, pharmacists, environmental health technicians and midwives). The course builds on each learner’s knowledge and takes advantage of his/her high motivation to accomplish the learning tasks in the minimum time. The training emphasizes doing, not just knowing, and uses competency-based evaluation of performance.

This course differs from traditional courses in several ways:

- During the first day, learners are introduced to the key features of mastery learning and then are briefly tested (Pre-course Assessment) to determine their individual and group knowledge of management, instruction and coaching in a simulated setting.

- Classroom and simulation sessions focus on key courses objectives that learners will choose in small groups (which need practice and assessment in a simulated setting prior to patient contact).

- Progress in knowledge-based learning is measured during the course using a review of the management binder, team presentations of coaching a clinical or other task and finally the Post-course Assessment. The order of the post-course assessment and the team presentations is up to the discretion of the facilitators. Furthermore, coaching will need to be assessed formatively and remediated as needed since time may prohibit all learners from presenting their coaching skills in simulation at the end.

- Simulation training builds on the learner’s previously mastered clinical or non-clinical tasks. In many cases, the learners have not had simulated practice before or have had limited clinical experience and conduct (primarily theoretical lectures). Both facilitators and learners should
choose relatively simple clinical tasks or activities to coach, so that the focus is on the coaching and not the technical content since facilitators should be proficient in the technical content to be a coach. This will ensure that coaches are very comfortable with the clinical tasks and will allow them to spend their time processing and enhancing their coaching ability.

- Progress is measured formatively with very close contact of the facilitators in the group work and regular feedback and encouragement.
- Evaluation of each learner’s performance is conducted by a facilitator using a coaching aid checklist.

Successful completion of the course is based on attendance and participation in all the sessions, a team presentation of coaching (rotated if time permits or enough facilitators to break out into separate rooms), a partially completed management binder and the post-course assessment.

**FACILITATORS**

Facilitators of this course should be intimately familiar with delivering the Jhpiego ETS course and ModCAL and preferably have experience working in a simulation environment or at the very least supporting others who work in this environment. If they do not have this background, it is unlikely that they will be prepared with suggestions, guidance and answers for the learners. Learners of this course should be given the ETS Reference Manual in the course material CD-ROM, which is provided to them at the end of the training. They should also be given the ModCAL on flash drive or CD-ROM, so they will have both to refer to and review prior to facilitating the course or individual sessions to colleagues.

**SESSIONS**

Sessions may be given individually by instructors (who have participated in this course) to other instructors as time in their faculty development and continuing education permits. It is unlikely that you will be able to cover all instructors; therefore, those instructors should be prepared to replicate the training for others in their own institution. They may call on you to co-train with them and if this is feasible, trainers on this material should make every effort to do so. The sessions could also be divided into management versus clinical task or task development. Eventually, the Jhpiego Global Learning Office (GLO) would like to add a session on clinical decision-making and problem-solving. If a country has more than five days for the training, the course could easily incorporate additional sessions along with the session on locally available materials. If not, these additions could be conducted later on-site as follow-up coaching activities.

**CHECKLISTS**

Select checklists (Appendix B) according to the courses that you are teaching and for which tasks you are already proficient but you have not established simulated practice for at your institution. If you have checklists in your files that have been vetted and standardized, present them to the facilitator to review prior to using for the learning exercises.
EVALUATION
This simulation training course is designed to produce health care providers qualified to be a simulation center core management team (CMT) members and instructors/coaches in a simulated environment by:

- Building a management binder
- Mastering coaching ability according to the standard checklist
- Creating an assessment blueprint for the simulation objectives of at least one session of an existing course

Qualification is a statement by the training institution(s) that the learner has met the requirements of the course in knowledge, skills and practice. Qualification does not imply certification. Personnel can be certified only by an authorized organization or licensing agency (e.g., ministry of education or health).

Qualification is based on the learner’s achievement in three areas:

1. **Knowledge**—A score of at least 85% on the Post-course Assessment
2. **Skills**—Satisfactory coaching and feedback presentation that is technically correct
3. **Attitude**—Demonstrated ability to provide coaching and feedback in a professional manner

Responsibility for the learner becoming qualified is shared by the learner and the facilitator.

The evaluation methods used in the course are described briefly below:

- **Provision of Services (simulated practice only).** During the course, it is the facilitator’s responsibility to observe each learner’s overall performance in providing services. This provides a key opportunity to observe the impact on clients of the learner’s attitude—a critical component of high-quality service delivery. Only by doing this can the facilitator assess the way the learner uses what he/she has learned.

- **Post-course Assessment.** The assessment will be given at the time in the course when all subject areas have been presented. A score of 85% or more correct indicates knowledge-based mastery of the material presented in the reference material. For those scoring less than 85% on their first attempt, one of the facilitators should review the results with the learner individually and guide him/her on using the reference materials to learn the required information. Learners scoring less than 85% can repeat the exam in the afternoon on the final day and receive their certificate either later that day or in a follow-up coaching session that a facilitator might need to conduct with that instructor. If a learner is receiving less than an 85% because he/she missed one or more sessions, that learner is not eligible for a certificate and would need to repeat the course if feasible.
In determining whether the learner is qualified, the facilitator(s) will observe and rate the learner’s performance for each step of the Coaching Checklist. The learner must be rated “satisfactory” in each step to be evaluated as qualified.

Within three to six months of qualification, it is recommended that graduates be observed and evaluated while working in their institution by a trainer/advisor using the same coaching checklist. This post-course evaluation activity is important for several reasons. First, it not only gives the instructor direct feedback on his/her performance, but also provides the opportunity to discuss any start-up problems or constraints to conducting simulated practice sessions (e.g., lack of instruments, supplies lab manager or support staff). Second, and equally important, it provides the facilitators key information on the adequacy of the training and its appropriateness to local conditions. Without this type of feedback, training easily can become routine, stagnant and irrelevant to the needs of teaching institutions.

COURSE SYLLABUS
The syllabus below is your contract with the learners in this course. The syllabus and the schedule should be sent with the invitation to the course so that the selection criteria of the learners are well-understood and the right learners attend the course. There should also be a highlighted message in the invitation that the syllabi for the course that instructors facilitate should be brought with them to the course. If facilitators already have this material, they should make the relevant copies and have them available. There is nothing more frustrating to the facilitator than getting learners who expected an entirely different training. It affects costs, logistics and the number you expected to train, since the mismatch may cause learners to leave. Although the goals and objectives of the course are listed below, the administrator who received the invitation may not have given a copy to the selected learners. The goal and objectives should always be reviewed at the beginning of the course. The learners’ expectations should always come before these are shared, and then they can be reconciled with the objectives.

Course Description
This five to six day workshop is just one in a series of workshops to better prepare you and your institution to provide students with an improved educational experience and better prepared to provide safe, competent services upon graduation. The simulation course covers key aspects of managing a simulation center/environment, and prepares you to facilitate learning and clinical development in simulation. At the end of this course, you will be prepared to facilitate competency development in your students through the use of practice in simulation.

Course Goals
The goals of this course are that by the end, learners should be able to:
1. Assist in the management of the simulation center and
2. Facilitate the development of clinical competence in standardized tasks in a simulated setting.
**Learner Selection Criteria**

Learners for this workshop should be involved in managing their teaching institution’s simulation center and participate in assessing the development of clinical competency of students in simulation and in clinical practice.

**Course Pre-requisite**

Jhpiego ETS course or other Effective Teaching Course. (All learners should have attended an Effective Teaching course.)

**Learner Learning Objectives**

The specific objectives that will be covered include:

- Review the past and present of simulated practice for achieving competency
- Discuss the design of a simulated setting/center
- Identify core management team (CMT) member responsibilities
- Develop list of materials, supplies and equipment needed with locally available materials
- Develop components of a management binder for instructors and staff managing the simulation center. (See Articles and Text References below.)
- Discuss learning objectives/outcomes that could be achieved in simulation
- Link objectives to be achieved to assessment methods
- Develop lesson plans for students who have to acquire a specific set of clinical tasks in simulation
- Practice station rotation in groups in the simulated setting
- Practice coaching and feedback at simulated stations
- Present a coaching and feedback session at a simulated station

**Teaching and Learning Methods**

- Illustrated lecture
- Discussion
- Demonstration
- Coaching
- Role play
- Group activity

**Teaching and Learning Materials**

- Presentation graphics
- Video clips
- Selected articles on simulation provided on CD-ROM (listed below).
- Selected models and simulators
- Management binder, sample management binder per institution that includes the following sections: 1) objectives to be met in lab, 2) staffing plan, 3) lab student rotation schedule, 4) assessment schedule, 5) tracking and renewal of materials and equipment list, 6) equipment instructions and manuals, 7) learning outcomes achieved in lab, 8) educational strategies, 9) research, 10) CMT members, 11) business plan, and 12) homemade models

**Audiovisual Equipment**
- LCD (liquid crystal display) projector
- Power strip with surge protector, extension cords and plug adaptors
- Projection screen
- Laptop computers with CD-ROM drive
- Digital camera
- Flip chart, markers, flip chart stand

**Clinical Supplies**
- Prepare according to course syllabi that learners plan to bring with them to the course.

**Articles and Text References**

Reference articles for the course:


5. Local educational standards on simulation. Review and mark areas in need of updates based on discovery and reflection during this course.

Text references allow trainers and instructors to expand on areas that were covered and not covered in the course. It gives more information for faculty development and coaching sessions with instructors. If feasible, purchasing these texts for each Faculty Educational Development Center would be useful. The text references recommended by JHU School of Medicine Simulation Center are:


**Assessment Methods**

At the end of the course, each group will provide evidence that they are able to apply what they have learned throughout the course. The assignments will be contextualized to your working environment:

- Pre- and post-course assessments
- Submission of lesson plans for a clinical task or specific set of clinical tasks in the simulated center/setting.
- Presentation of a practical coaching and feedback session with assigned roles of coach, student, and student observer and simulated patient/s if applicable to the scenario.

**Course**

- Course Evaluation Form (to be completed by each learner)

**Logistics**

- Location: training room and simulation center
- Duration and dates

**Course Duration**

- 11 sessions for a five-day course

**Suggested Course Composition**

- 16 health care professionals
- Two or three facilitators
# Simulation Training Course Schedule

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morning (4 hours)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Opening Activities</td>
<td>● Agenda</td>
<td>● Agenda</td>
<td>● Agenda and Opening</td>
<td>● Agenda and Opening</td>
</tr>
<tr>
<td>● Welcome and Introduction</td>
<td>● Recap and Clarifications</td>
<td>● Recap and Clarifications</td>
<td>● Recap and Clarifications</td>
<td>● Recap and Clarifications</td>
</tr>
<tr>
<td>● Learner Expectations and Group Norms</td>
<td><strong>Presentation:</strong> Challenges and Opportunities of Managing the Simulation Center (S2.1)</td>
<td><strong>Presentation:</strong> Simulation Lesson Plans (S3.1)</td>
<td><strong>Presentation:</strong> Reviewing Standards for Monitoring and Evaluation (S4.1)</td>
<td><strong>Presentation:</strong> Reviewing Standards for Monitoring and Evaluation (S4.1) relating to simulation setting, coaching and feedback, note potential gaps and revisions needed</td>
</tr>
<tr>
<td>● Goals and Objectives</td>
<td><strong>Group Discussion:</strong> Identify courses and objectives in syllabi with practical components that may share the simulation space</td>
<td><strong>Learning Exercise:</strong> Developing Stations and Lesson Plans (S3.1)</td>
<td><strong>Learning Exercise:</strong> Reviewing Standards for Monitoring and Evaluation (S4.1) relating to simulation setting, coaching and feedback, note potential gaps and revisions needed</td>
<td></td>
</tr>
<tr>
<td>● Review of Materials and Schedule</td>
<td><strong>Learning Exercise:</strong> Complete sections 4 and 5 of business plan outline (S2.1)</td>
<td><strong>Presentation:</strong> Group presentations of lesson plans</td>
<td><strong>Learning Exercise:</strong> Reviewing Standards for Monitoring and Evaluation (S4.1) relating to simulation setting, coaching and feedback, note potential gaps and revisions needed</td>
<td></td>
</tr>
<tr>
<td>● Pre-course Assessment</td>
<td><strong>Mini-Presentation:</strong> Facilitate the Development of Health Care Delivery Tasks(S3.2)</td>
<td><strong>Mini-Presentation:</strong> Facilitate the Development of Health Care Delivery Tasks(S3.2)</td>
<td><strong>Mini-Presentation:</strong> Facilitate the Development of Health Care Delivery Tasks(S3.2)</td>
<td><strong>Mini-Presentation:</strong> Facilitate the Development of Health Care Delivery Tasks(S3.2)</td>
</tr>
<tr>
<td><strong>Presentation:</strong> Simulation Center Course Overview (S1.1)</td>
<td><strong>Health Break</strong></td>
<td><strong>Health Break</strong></td>
<td><strong>Health Break</strong></td>
<td><strong>Health Break</strong></td>
</tr>
<tr>
<td><strong>Presentation:</strong> History and Current Use of Simulation (S1.2)</td>
<td><strong>Presentation:</strong> Design Simulation Teaching and Learning Activities (S1.3)</td>
<td><strong>Presentation:</strong> Reviewing and Revising Specific Simulation Center Objectives (S2.2)</td>
<td><strong>Presentation:</strong> Coaching and Feedback for Health Care Delivery Tasks (S3.3)</td>
<td><strong>Presentation:</strong> Coaching and Feedback for Health Care Delivery Tasks (S3.3)</td>
</tr>
<tr>
<td><strong>Learning Exercise:</strong> Observations—tour of and scavenger hunt in available simulation environment/center (S1.2)</td>
<td><strong>Learning Exercise:</strong> Complete sections 1 and 2 of business plan (S1.3)</td>
<td><strong>Learning Exercise:</strong> Revise specific objectives as a group (S2.2)</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
</tr>
<tr>
<td><strong>Learning Exercise:</strong> Observations—tour of and scavenger hunt in available simulation environment/center (S1.2)</td>
<td><strong>Learning Exercise:</strong> Revise specific objectives as a group (S2.2)</td>
<td><strong>Learning Exercise:</strong> Practice coaching and feedback (S3.3)</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
</tr>
<tr>
<td><strong>Health Break</strong></td>
<td><strong>Health Break</strong></td>
<td><strong>Health Break</strong></td>
<td><strong>Health Break</strong></td>
<td><strong>Health Break</strong></td>
</tr>
<tr>
<td><strong>Presentation:</strong> Reviewing and Revising Specific Simulation Center Objectives (S2.2)</td>
<td><strong>Learning Exercise:</strong> Revise specific objectives as a group (S2.2)</td>
<td><strong>Learning Exercise:</strong> Practice coaching and feedback (S3.3)</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
</tr>
<tr>
<td><strong>Learning Exercise:</strong> Complete sections 1 and 2 of business plan (S1.3)</td>
<td><strong>Learning Exercise:</strong> Revise specific objectives as a group (S2.2)</td>
<td><strong>Learning Exercise:</strong> Practice coaching and feedback (S3.3)</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
<td><strong>Activity:</strong> Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.</td>
</tr>
</tbody>
</table>

*Simulation Training for Educators of Health Care Providers*
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lunch Break</strong></td>
<td><strong>Afternoon (3 hours)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Presentation:</strong> Locally Made Models (S1.4)</td>
<td><strong>Presentation:</strong> Linking Simulation to Assessment (S2.3)</td>
<td><strong>Mini-presentation:</strong> Review Station Rotation map and process (S3.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Exercise:</strong> Creating an Assessment Blueprint for Simulation (S2.3)</td>
<td></td>
<td><strong>Learning Exercise:</strong> Practice station rotation (S3.4) for coaching and if time permits work on binder for stations that may be grouped together for formative assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Health Break</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Exercise:</strong> Develop materials list and focus on locally available materials; complete section 3 of business plan (S1.4)</td>
<td><strong>Learning Exercise Continued</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Optional activity, time permitting:</strong> Develop other sections of the binder.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Daily Evaluation</strong></td>
<td><strong>Daily Evaluation</strong></td>
<td><strong>Daily Evaluation</strong></td>
<td><strong>Daily Evaluation</strong></td>
<td><strong>Daily Evaluation</strong></td>
</tr>
</tbody>
</table>
PRE-COURSE ASSESSMENT

HOW THE RESULTS WILL BE USED
The main objective of the Pre-course Assessment is to assist both the facilitator and the learners as they begin their work together in the course by assessing what the learners, individually and as a group, know about the course topic. Providing the results of the pre-course assessment to the learners enables them to focus on their individual learning needs. In addition, the questions alert learners to the content that will be presented in the course.

The questions are presented in a true-false format. A special form, the Individual and Group Assessment Matrix, is provided to record the scores of all course learners. Using this form, the facilitator and learners can quickly chart the number of correct answers for each of the 20 questions. By examining the data in the matrix, the group can easily determine its collective strengths and weaknesses and jointly plan how to best use the course time to achieve the desired learning objectives.

For the facilitator, the assessment results will identify particular topics that may need additional emphasis during the learning sessions. Conversely, for those categories where 85% or more of learners answer the questions correctly, the facilitator may elect to use some of the allotted time for other purposes.

For the learners, the broad learning objective related to each question and the corresponding session(s) in the reference materials are noted above the questions. To make the best use of the limited course time, learners are encouraged to address their individual learning needs by studying the material.

PRE-COURSE ASSESSMENT
Instructions: In the space provided, print a capital T if the statement is TRUE or a capital F is the statement is FALSE.

<table>
<thead>
<tr>
<th>Designing the Simulated Environment</th>
<th>TRUE OR FALSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The role of simulation in practical teaching is to provide activities that mimic the reality of a clinical environment.</td>
<td></td>
</tr>
<tr>
<td>2. Objectives, fidelity, complexity, cues and debriefing are all considerations in design of a simulation.</td>
<td></td>
</tr>
<tr>
<td>3. Creating lesson plans for simulated activities is a waste of the instructor’s time.</td>
<td></td>
</tr>
<tr>
<td>4. Models made from locally available materials may be used to meet learning objectives.</td>
<td></td>
</tr>
<tr>
<td>5. Supporting objectives for simulation MUST have BOTH a specific action and an object of the action.</td>
<td></td>
</tr>
<tr>
<td>Managing the Simulated Environment</td>
<td>TRUE OR FALSE</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>1. A core management team (CMT) MUST have at least one person from each department to represent what objectives MUST be met in the center.</td>
<td></td>
</tr>
<tr>
<td>2. Senior students are NOT appropriate to involve in managing the space and materials.</td>
<td></td>
</tr>
<tr>
<td>3. The simulation center MUST be available when instructors are demonstrating the clinical tasks.</td>
<td></td>
</tr>
<tr>
<td>4. Supplies MUST be kept open to air or they WILL degrade.</td>
<td></td>
</tr>
<tr>
<td>5. Ideally, a lab manager is the primary manager of the simulation space.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementing in the Simulated Environment</th>
<th>TRUE OR FALSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A coach MUST be proficient in the area being taught.</td>
<td></td>
</tr>
<tr>
<td>2. Checklists MUST NOT be given to students while they are acquiring the clinical tasks.</td>
<td></td>
</tr>
<tr>
<td>3. The stations MUST be fixed and ready for use at all times.</td>
<td></td>
</tr>
<tr>
<td>4. Students MUST always be given an opportunity to respond to your feedback.</td>
<td></td>
</tr>
<tr>
<td>5. Debriefing after simulated practice is analogous to summarizing the end of a lecture.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring and Evaluating the Simulated Environment</th>
<th>TRUE OR FALSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feedback sessions or assessments are both ways to monitor a simulation center.</td>
<td></td>
</tr>
<tr>
<td>2. SBM-R is NOT an appropriate monitoring tool for simulation centers.</td>
<td></td>
</tr>
<tr>
<td>3. Evaluation of the simulation center is defined as a PERIODIC assessment of the overall process and results of the simulation center.</td>
<td></td>
</tr>
<tr>
<td>4. Revising learning lab/simulation objectives is a POSSIBLE outcome of monitoring and evaluating the simulation center.</td>
<td></td>
</tr>
<tr>
<td>5. Use expected results to examine if activities and assessments in the simulation center reflect learning objectives.</td>
<td></td>
</tr>
</tbody>
</table>
LEARNING EXERCISES

S1.2 OBSERVE A SIMULATION CENTER LEARNING EXERCISE
Group Work
Objectives:
1. Conduct a visual survey of a simulation center.
2. Record observations in the sheet provided.

Materials: paper, pens, Handout S1.2: Observations of the Simulation Center

Time: 60 minutes

Instructions:
- Tour available simulation center.
- Observe what is available and record according to the handout you have been given.
- Lab manager will give an orientation and demonstrate storage and maintenance of simulators, allowing hands-on time.
- Group debrief on observations will be held before orientation and after orientation and hands-on experience.

S1.3 COMPLETE SECTIONS 1 AND 2 OF THE BUSINESS PLAN LEARNING EXERCISE
Group Work
Objectives:
1. Write the outline of the executive summary of the simulation center.
2. Design the start-up or improvement plan.

Materials: Handout S1.3A Business Plan Outline (sections 1 and 2), paper, pens, computers, management binder

Time: 60 minutes

Instructions:
- Form small groups (institution or department).
- Select a group leader, reporter and time keeper.
- Complete sections 1 and 2 of business plan:
  1. Write your mission statement and primary goal or objectives for the simulation center.
2. Decide which courses (with lab components)/departments will use the simulation center and if there are any hospitals, funding groups or private companies with which you will have strategic alliances.

3. Create a start-up plan identifying, if possible, a main faculty lab manager or coordinator who could dedicate their time to (at least) start up while you look for a more permanent manager.

S1.4 CREATE A SIMULATION CENTER MATERIALS LIST LEARNING EXERCISE

Group Work

Objectives:
1. Review objectives and courses in the last activity.
2. Identify locally or homemade models that could be utilized to achieve these objectives.
3. Start creating a materials list in the materials template provided to you.
4. Start a new sheet (keep the sample as a separate sheet in the same file).

Materials: Handout S1.3A Business Plan Outline (section 3), management binder, computer, Handout S1.4 Simulation Center Materials Tracking Sheet (Excel spreadsheet, printed or given to each group on flash drive)

Time: 120 minutes

Instructions:
- Divide into your institution groups.
- Look at the objectives you identified in the last activity.
- Start creating a list of materials you would need for your simulation center and focus on locally available materials.
- Add this list to your management binder.
- Present to the larger group a summary of the last two activity results.

S2.1 PLAN TO MANAGE A SIMULATION CENTER LEARNING EXERCISE

Group Work

Objectives:
1. Identify objectives from the syllabi that could be achieved in the simulation center.
2. Identify funding and supplies needed based on objectives.
3. Map courses and time slots for lab use.

Materials: paper, pens
Time: 100 minutes

Instructions:
- Break into institutional groups.
- Plan or enhance your simulation setting.
- Manage multiple courses:
  - Coordinate courses and times.
  - Establish times for open lab.

S2.2 REVISE SUPPORTING OBJECTIVES FOR SIMULATED ACTIVITIES
LEARNING EXERCISE
Small Group Work (3–5 people)
Objectives:
1. Revise three supporting objectives that should be attained in the skills area with at least one attitude objective or component.

Materials: paper, pens

Time: 15 minutes for revision and 30 minutes for sharing and correcting as a group

Instructions:
- Review your course syllabus-supporting objectives.
- Revise three supporting objectives that should be attained in the skills area, with at least one attitude objective or component.
- Share your revised or new objectives with the larger group.
- Main facilitator will review them in the large group and make any needed corrections with the group’s input or suggestions, identifying the specific action and the object of the action.

S2.3 CREATE AN ASSESSMENT BLUEPRINT FOR SIMULATION LEARNING
EXERCISE
Group Work
Objectives:
1. Develop an assessment blueprint for one unit or session.

Materials: Handout S2.3: Blueprint Template, pens

Time: 120 minutes
Instructions:
- Assign a recorder and a reporter.
- Select a course you are all interested in.
- Select a unit or session from the course syllabus.
- Pull out the learning objectives that are assessed in simulated environment, or use the ones you revised in the last session.
- Develop assessment blueprint for simulation to determine what tasks will be practiced in the simulation center.
- Continue with additional units if time allows.

S3.1 DEVELOP LESSON PLANS AND STATIONS FOR SIMULATION LEARNING EXERCISE

Group Work

Objectives:
1. Develop a lesson plan for a station activity.
2. Develop a station for appropriate demonstration and coaching of the chosen clinical task.

Materials: checklists, Handout S3.1: Lesson Plan Template, corresponding materials required in the checklists, markers, pens

Time: 90 minutes

Instructions:
- Break into five groups (by discipline with one person from a different discipline works best).
- Choose a supporting objective(s) from your course syllabus.
- Develop a lesson plan and station(s) for your simulated setting.
- Include a case study or role play that you have created before, or create a new one.
- Time limit of 40 minutes for group work.
- Group review of stations and lesson plans will have 50 minutes.

[NOTE: NO LEARNING EXERCISE FOR S3.2.]
S3.3 PRACTICE COACHING AND FEEDBACK LEARNING EXERCISE

Objectives:
1. Practice coaching at a simulated station with a student and observers.
2. Practice giving feedback at a simulated station with a student and observers.
3. Allow students to debrief or ask questions at the end as a summary, or plan for the “next practice session.”

Materials: checklists, Handout 3.3: Coaching Aid with Talley Sheet, Handout S3.1: Lesson Plan Template, station set up and materials, markers, pens

Time: 90 minutes

Instructions:
- Break into disciplines: assign coaches, student and observers.
- Use the checklist and lesson plan with the same station and task you chose yesterday.
- Practice demonstrating and coaching techniques, rotate so everyone has the opportunity to act as demonstrator/coach.
- Address the student by first inquiring if there is a particular part of the clinical task they would like to focus on, or if they would like to practice the whole checklist.

S3.4 STATION ROTATION LEARNING EXERCISE

Objectives:
1. Practice coaching at a station where students will rotate through.
2. Follow time limit of lab manager and send students to the next station.
3. Debrief on rotation exercise (time at each station, having similar or different stations, use of senior students, etc.).

Materials: checklist, Handout 3.3: Coaching Aid with Talley Sheet, Handout S3.1: Lesson Plan Template, station set up and materials, markers, pens

Time: 150 minutes

Instructions:
- Gather with your group at your station.
- Coaches will remain at the stations for the first round (one round means that all learners completed all stations).
- The lab manager (one of the facilitators) will let them know when they will change stations.
If time permits, rotate coaches that remained at the stations so that other coaches get a sense of repeating a coaching session for different students.

S4.1 REVIEW STANDARDS FOR MONITORING AND EVALUATION OF SIMULATED SETTINGS LEARNING EXERCISE

Objectives:
1. Analyze existing standards.
2. Modify/update standards based on evidence presented in this course.
3. Create sample standards for monitoring a simulation center if standards are not currently employed.

Materials: copies of sample simulation standards (Appendix E), pens

Time: 90 minutes

Instructions:
- Divide by discipline.
- Have them choose a recorder, reporter and time keeper.
- Take assigned standard and analyze it (20 minutes).
- Decide on any modifications based on what you have learned here and per evidence, or have learners create standards and ways to verify those standards.
- If standards exist, then each group should present as each group would have a different standard. If there are no existing standards, each group should present unless another group has already presented what you would have. Allow 5–10 minutes for presentation depending on the size of the group and if they are presenting new standards or analyzing the existing ones.
FACILITATOR’S GUIDE
COURSE LOGISTICS

Course Schedule

The course schedule is included below. It intentionally does not have restrictive times. Rather, it is a guide for you, and you will need to develop your timing for each session depending on the need of the learners coming to your course. Suggested timings are available for your consideration in the sample lesson plans included. A five-day course is recommend, but the course could be tailored to fewer days or more days depending on the outcomes you wish to achieve with your group and what previous training and experience they have.
<table>
<thead>
<tr>
<th>SIMULATION TRAINING COURSE SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day 1:</strong> Design and Develop Framework, CMT and Materials</td>
</tr>
<tr>
<td><strong>Day 2:</strong> Planning and Managing the Simulated Center</td>
</tr>
<tr>
<td><strong>Day 3:</strong> Implement and Manage Teaching and Learning</td>
</tr>
<tr>
<td><strong>Day 4:</strong> Monitoring and Evaluation</td>
</tr>
<tr>
<td><strong>Day 5:</strong> Presentation of Coaching and Feedback/Stations</td>
</tr>
</tbody>
</table>

### Morning (4 hours)

<table>
<thead>
<tr>
<th><strong>Day 1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day 2</strong></td>
</tr>
<tr>
<td><strong>Day 3</strong></td>
</tr>
<tr>
<td><strong>Day 4</strong></td>
</tr>
<tr>
<td><strong>Day 5</strong></td>
</tr>
</tbody>
</table>

#### Presentation:
- Opening Activities
- Welcome and Introduction
- Participant Expectations and Group Norms
- Goals and Objectives
- Review of Materials and Schedule
- Pre-course Assessment

#### Presentation:
- Simulation Center Overview (S1.1)

#### Presentation:
- History and Current Use of Simulation (S1.2)

#### Learning Exercise:
- Observe a Simulation Center (S1.2)

#### Presentation:
- Challenges and Opportunities of Managing the Simulation Center (S2.1)

#### Group Discussion:
- Identify courses and objectives in syllabi with practical components that may share the simulation space

#### Learning Exercise:
- Plan to Manage a Simulation Center (S2.1); work on sections 4 and 5 of business plan outline

#### Presentation:
- Developing Lesson Plans and Stations (S3.1)

#### Learning Exercise:
- Developing Stations and Lesson Plans (S3.1)

#### Group Presentation:
- Lesson plans

#### Mini-Presentation:
- Facilitate the Development of Health Care Delivery Tasks (S3.2)

#### Presentation:
- Monitoring and Evaluation of Teaching and Learning in the Simulated Setting (S4.1)

#### Learning Exercise:
- Review Standards for Monitoring and Evaluation of Simulated Settings (S4.1); coaching and feedback, note potential gaps and revisions needed

#### Activity:
- Group work on stations, build into lesson plan a role play or choose a new objective and build a lesson plan and station with role play or case study and practice for interactive presentation in the morning. Assign coach and student roles.

#### Individual Learning Plan & Institution Action Plans (60 min.)
- Present Action Plans (5–10 min. each group)
- Post-course Assessment
- Course Evaluation
- Slide show of photos taken during training
- CD-ROM review
- Closing

---

**Simulation Training for Educators of Health Care Providers**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lunch Break</td>
<td>Afternoon (3 hours)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation: Locally Made Models (S1.4)</td>
<td>Presentation: Linking Simulation to Assessment (S2.3)</td>
<td>Mini-presentation: [no PPT] Review Station Rotation map and process (S3.4)</td>
<td>Learning Exercise: Station Rotation (S3.4); for coaching, and if time permits work on binder for stations that may be grouped together for formative assessment</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Learning Exercise:</strong> Create an Assessment Blueprint for Simulation (S2.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Break</td>
<td>Learning Exercise Continued</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Exercise: Create a Simulation Center Materials List (S1.4); focus on locally available materials; work on section 3 of business plan</td>
<td>Learning Exercise Continued</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Optional activity, time permitting:</strong> Develop other sections of the binder.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EVALUATIONS

Course Evaluations

Evaluations of the material are suggested to be very frequent. This will ensure that you are keeping the pulse of the group and ensuring that there is a positive climate. Facilitators who have piloted this course have experimented with both written and daily evaluations and also morning and afternoon evaluations. The closer you assess impressions, the more helpful this assessment may be to you in making changes as you go and getting the most from the learners and other facilitators. There are several ways to do this. You can give a written evaluation on the first day so that learners have an idea of the rating system; then from there, you can modify the evaluations to be verbal, a game or a question and answer session. An example of a daily evaluation is included below for your use as well as several interactive suggestions you could use as each day progresses. Using different methods each day keeps the day fresh and your learners more engaged. Utilizing evaluations to address any clarifications needed the following morning before moving to the next topic is very useful. You may have a learner conduct this review, with you supplementing as needed, or let them conduct the recap/review and you answer the clarifications as needed.

Example Day 1: Written Daily Evaluation. These daily evaluations may be modified if you so choose, but they have been very useful as is. They may be used daily or mixed with other daily or periodic formative assessments as the training progresses. (See following page for Daily Evaluation Form.)

Example Day 2: What was new for you?

Example Day 3: Wishes and pluses for the day. What did you wish we covered? What were the highlights of the day?

Example Day 4: Three flip charts. Have learners write on Post-it notes and place them on the flip chart.

- One—with a big question mark—What remaining questions do you have?
- Two—with a large right angle, asking them to write what did they already know something about, but now see from a new angle.
- Three—A large circle, asking them to write what information or practice that you have learned here has completed the circle for you?

This evaluation method was very enlightening and done on the fourth day, which allowed facilitators to clear up any remaining questions. Some repeated responses from the first flip chart were: questions on lesson planning that led to more detail and explanation in the second training. Responses from the second flip chart: Coaching and feedback, attitude or humanistic approach. This demonstrated that we need to place plenty of emphasis here and increase if possible. Responses for the third flip chart: Coaching and feedback, construction versus destruction, open lab and locally made models.

Example Day 5: Review the learner expectations; see if all that were feasible, were met.
Daily Evaluation Form

This daily evaluation is confidential. Do not write your name here. Please give your most honest feedback so that we can conduct the most effective course. Score each course component, circling the number that best reflects your opinion about that component, with 1 being the least effective and 5 being the most effective. Then, answer the questions that follow.

<table>
<thead>
<tr>
<th>Course Component</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General organization</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Content</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Sequence of content and activities</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Morning presentation</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Afternoon presentation</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6. Time dedicated to each subject</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. Group work</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. Workshop materials (articles, handouts)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. Group participation</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. Logistics (space, hotel, food)</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

What did you learn today that was new for you? Please try to list one for each session covered.

Is there anything that you need clarified tomorrow morning before we move on to another topic?

Other comments:

Thanks for your feedback!
Learner Evaluations

Each person is part of a team that is evaluated. There are two assignments. As a team, they need to write and submit a lesson plan that includes one or multiple stations. Then they need to choose one of the clinical tasks and write a scenario in which they will need to demonstrate proper coaching and feedback. In practice, they will rotate roles; however, for their final presentation, they will need to choose one person for each role. If multiple facilitators and rooms are available, they may try to evaluate each person. This encourages teamwork, collegial collaboration and potentially team teaching in the future. You can divide them by discipline or by institution. We found that having a student(s) from another discipline in the group allows for more realistic coaching.

SPACE, ACCOMMODATIONS AND FOOD

The training space should have enough room for a semicircle of tables and chairs and space for individuals to be at arms’ length. Sometimes you do not have control of the training space, but if you plan three to six months in advance it may be easier to find a suitable space. The simulation center should be as close to the training space as possible. This will save time in going back and forth from the training room. For this training, the number of learners should be kept to 16 if possible, with a maximum of 24. If the selection criteria is strict and these persons will be part of the CMT, that should make it easier to keep smaller. Food and accommodations also tend to be difficult to control depending on what the options are. Do the best you can. Checking frequently if all is satisfactory allows for changes to be made more promptly and a happier, more focused group of learners. Accommodations and food is often the lowest rated area in the daily evaluations.

RECAP/REVIEW

This is a challenging area for learners. The tendency for learners given this assignment is to review the entire previous day’s agenda and what each session contained. Even after stating the objective and directions to the learner to only present two to three bullets of lessons learned and/or two to three ideas for action or implementation when they return to their teaching institution, learners return and often give a long presentation. Having seen this repeatedly over time and in many different countries, it have become evident that this behavior challenging to alter. However, if you can make this clearer to the learner, please proceed with that and share with us how this worked. There have been a few exceptions to this but it usually only happens toward the end of the training and repeating several times the expectations. What have we learned from this? Well, just as we write instructions for every other activity, they also need to be written here. Give the volunteer learner a sheet of paper with what you want them to present. Here is an example: 1) List three lessons learned and share them with the group. 2) List three activities related to these lessons learned that you want to implement when you go back to your teaching institution. This will be immensely helpful. After years of just stating this expectation, when we finally wrote it down it made all the difference.

THE SIMULATION CENTER/ENVIRONMENT

For this course, it is essential that there is a simulated environment. As mentioned earlier, choose a location for the training that has a functional simulation center, commonly referred to as a skills lab. Again, why are we updating the language? Simulation is the more holistic term, including focus on
improving professional behavior, infection prevention, safety measures, and not just physical or tactile skills. It relates to focusing on the whole task and then deconstructing the task as needed to learn toward mastery. Simulation also emphasizes that we are working as close to reality as possible, but that we have the power to pretend in a safe environment and make mistakes without risking life or limb. Simulating the real setting emphasizes that we ensure humanistic treatment—treating the models as if they were real human beings, talking to them, ensuring privacy by keeping them covered or exposing only areas as needed, speaking clearly but softly and with confidentiality and respect.

**Space**

Frequently learners ask if there is some requirement for how large the simulation space needs to be or specific dimensions. There is no hard and fast rule to this. Each institution needs to work with national guidelines on safety and space standards and if they lack these, they could use suggestions from the text references suggested here. However, it really depends on if it is being utilized by multiple programs or only one. Our recommendation is to share the space with other programs/departments. This will take coordination and planning but will also save on resources and most likely garner more support and funding. If for distance reasons on the campus this is not feasible, simulation activities should not begin until a space is identified or a shuttle system on the campus is worked out. If you think a shuttle is impractical in developing countries, it is not. A university in Ethiopia is a prime example of where they have found a way to support a university transport vehicle. The key is to have the space functional, with tables, chairs, and models movable. As one learner stated, “it should not look like a museum.”

**Group Work on Tasks**

Practice should not be more than six to a group. Working in groups of three to four is also good, as you could have an observer with the checklist who provides feedback on correct and missed steps when a coach is rotating and not constantly available. Having one laminated checklist for each task will reduce the number of checklists you need to print and can be re-used over and over. Learners will also see the benefit and may be encouraged to implement this in their simulated environment. Limit the learners in this course to the space available in the simulation center. Over-crowding will not be conducive to promoting implementation of a simulation center. Rotating stations must be a feasible activity and hence immovable structures would be inappropriate. See the ETS reference manual, page 4–7, for a conducive set up.

**Supplies**

Ensure that there are enough supplies for the week’s activities ahead of time. Keep track of what was used and try to re-use as much as possible. Again, there is no formula; this depends on the activities that you will be focusing on for the program(s) you are strengthening. This will be a trial and error process, but it is best to have a program assistant available with you for logistics to assist the existing lab manager and to purchase more supplies if needed. Save empty water bottles. They may be used to simulate saline containers, cleaning agents, etc. A few lab jackets to simulate the role of coaches may be more powerful and encourage more professional behavior.
**Ventilation**

If ventilation is poor, arrange for fans to be present. This will allow for more comfortable learners and better outcomes.

**Lighting**

Ensure that there is sufficient lighting and if physical exams may be simulated, have a few flashlights on hand for use by groups if needed.

All of this and much more is included in the materials to roll out this training. Best of luck and please contact any of the contributors if you have questions at firstinitialsurname@jhpiego.net if the guidance is not included here. Your comments and suggestions on this LRP are welcome.
COURSE MATERIAL

COURSE MATERIAL PREPARATION
You will need a number of materials and you should go over what you will be using during the training with the learners in the introductory session.

First, copies of the syllabus and schedule for all learners.

Second, a management binder for each teaching institution’s group. The management binder has multiple sections. Create a large, hard folder with sections: 1) Objectives to be met in simulation center, 2) Staffing plan, 3) Lab student rotation schedule, 4) Assessment schedule, 5) Tracking and renewal of materials and equipment list, 6) Equipment instructions and manuals (nice to have pockets for these if possible), 7) Learning outcomes achieved in lab, 8) Educational strategies, and 9) Research. Other sections may be added or deleted as each group finds useful or not.

Third, you will need the articles that are referenced. See Articles and Text References section below where they are listed by the day that you will need them.

Fourth, you will need checklists based on the cadres and technical areas you are working on in your program. There are many included in this package.

Fifth, copies of the handouts: cloth models handout, observations of a simulation center, clinical coaching checklist, clinical demonstration checklist, simulation conceptual framework, problem-solving handout, sample simulation center materials tracking sheet (place in each binder), sample open simulation center log, sample open simulation center schedule, and sample business plan outline.

Sample mission statements for and descriptions of simulation centers can be found under this research review conducted by Sarah Karmin and Hilary Schmidt in 2005 at http://www.cumc.columbia.edu/dept/fischbach/lectures/strategic_plan_II/simulation_resource_document.html. This information could be useful when learners want to further develop their business plan after the course is over. It will take too much time to review during the activity time allocated.

SESSION/LESSON PLANS
There are suggested lesson plans for each session. The terms “session” and “lesson” may be used interchangeably. What is the difference? Usually teachers tend to say lesson and other facilitators tend to use session, but the framework is really the same. The session plans are meant to reduce your preparation time when giving this training. However, they should be customized to the content you present and the activities that you choose. They are only included here to give you ideas and the expected format. A blank lesson plan has also been included for your convenience. We suggest using and promoting this format since it is easy to use and includes an evaluative component. Over time, the less presentation and the more interactive activities that may be incorporated, the better the retention and application that will follow. Since there is new and expanded information on
simulation, we are keeping a presentation for each session; this could be modified once facilitators become comfortable. Narration notes are also included for each presentation. When the note indicates “Read slide”, it is not meant that you read from the slide, but rather focus on the content in the slide paraphrasing and explaining as needed. You may also use technique of having a learner read key points from a slide or reference article that you want to highlight. In cases, where there is more information, feel free to use as relevant to the situation. These notes are a combination of the facilitators’ and learners inputs and experiences with the topic.

SESSION PLAN TEMPLATE
The session plan template, you will notice, is different from a typical session; the reason is that it focuses on the simulated environment. The session plan really focuses on the simulated activity or activities that you are going to implement. Currently, simulated sessions occur less frequently than classroom sessions; hence, they could contain multiple stations to include the content covered in class, with the focus on practical tasks that you want them to practice and get coaching and feedback on. Why bother? Well, such as with any plan, it keeps you on track, reminds you of the points you want to cover, and helps you plan the number of materials and human resources you will need. Debriefing is also a key component of simulated activities. Sometimes, when you do things in simulation and you talk to the model or simulated patient as if you are in the real setting, it brings up the emotional element of working with others to improve their health. Debriefing has been found to allow students and coaches to share what emotions, safety concerns or ethical issues arose in the simulated activity. There is a supplemental PowerPoint presentation (Appendix F) on Debriefing by Pamela Jeffries from the JHU School of Nursing. If you have time and confusion on the meaning of debriefing, you can share this presentation with your group. If you have the opportunity to have a six-day training, you can insert the extra materials that we refer to in this guide. Please see the sample session plan template below.

Session plan template for simulated settings (different from ones included here since these are session plans are for interactive presentations).
Session Plan Template for Instructors (Learners)

<table>
<thead>
<tr>
<th>Date: Month/day/year</th>
<th>Venue: Simulation Center</th>
<th>Session number:</th>
<th>Duration: Enough time to cover all stations, average 2–3 hour blocks of time depending on the number of stations and coaches</th>
</tr>
</thead>
</table>

Area: Example—Foundations Lab 2 Covering First Aid and Body Mechanics

Simulation Objectives:
List specific objectives based on one or more of the course objectives that focus on attitude, tactile skills, problem-solving or clinical decision-making.

<table>
<thead>
<tr>
<th>Methods and Activities</th>
<th>Materials/Resources</th>
</tr>
</thead>
</table>
| Introduction and Demonstration:  
  • 25% of your duration above (No lecture, just ask what questions they might have before starting. Then demonstrate the task(s) that will be practiced with a checklist or protocol sheet.) | Sample materials and resources to plan. This list is not exhaustive and depends on your objectives. |
| Return Demonstrations/Coaching and Feedback:  
  • 50% of duration above (Have laminated checklists so that students could use them over and over again for practice in the simulation center. Have them take turns doing return demonstrations and stop and coach as needed so that they don't continue wrong steps. This is the safe space where they can make mistakes.) | Number of coaches  
Number of students  
Number of stations  
Stations  
Materials needed for each station  
Number of waste baskets  
Number of sharps containers |
| Debriefing:  
  • 25% of your duration above (Don't cut this time short. It is important to give time for students to express their thoughts and feelings. This is safe space to share opinions and you can help to develop their professional demeanor, ethics and safety.) | |

Review/Evaluation (key points from the session, what worked well, what did not work well, modifications you would like to make in the future) **This is to be filled out after the session and the sooner the better, as it will guide you to make changes in the future.**

ARTICLES AND TEXT REFERENCES
There are several articles that are suggested as supportive reading for the sessions. They are labeled by the session that they correspond with. (For example: S1.2 Title of Article.) These articles are suggested reading and facilitators for this course should always research new articles and modify the content as new information becomes available.

Articles
Day One Reading:


Day Two Reading:

Day Three Reading:

Day Four Reading:
1. Local educational standards on simulation. Review and mark areas in need of updates based on discovery and reflection during this training.

Text References
Text references allow facilitators and instructors to expand on areas that were covered and not covered in the course. It gives more information for faculty development and coaching sessions with instructors. If feasible, purchasing these texts for each Faculty Educational Development Center would be useful. The text references recommended by JHU School of Medicine Simulation Center are:


PRESENTATIONS
There are presentations for each session, however, the activities are the focus and the presentations may be reduced depending on the climate of the training environment and the level of the learner involvement. We recommend not giving printed copies of the presentations to the learners while they are taking the course, as the sessions seem to be more interactive without them. Second, it allows the facilitator to revise some slides right before the training related to current events in the country, an inspiring idea or issue related to a presentation given the day before from another facilitator. Lastly, if they see all the slides, you cannot ask about an upcoming slide when the information is already there. In the end they will have the reference guide, which has all the standard presentations, six slides to a page. Facilitators, please pay close attention to the Notes Page view or Narration Notes. These notes under the slides have guidance about the slide. They also have comments that learners have made while discussing the topic (inserted while different facilitators were presenting).
LEARNING EXERCISES
There are many different suggested activities. Please see the lesson plans and presentation slides for instructions on conducting the activities. Feel free to change the activities. As long as you reach the objectives, how you get there is not of great importance. One suggestion that we didn’t get a chance to implement, but was tried later in a different integration workshop was getting learners to think about the best way in which they learn—visual, tactile or audio. This highlighted the need for more diverse teaching/coaching methods to include use of video, more hands-on and dialogue teaching to increase retention and increase those learners who learn more one way than another to have a better chance of succeeding and teachers to be able to understand their students better. Shy students or those that seem less involved in group activities benefit from occasionally having paired activities. They tend to be more participatory since there is only one person to talk to and report back with. As we have done in this training, some activities with pairing will assist in bringing out those individuals to participate more. Denise Knight (2009) discusses this premise in an article, pairing vs. small groups: a model for analytical collaboration found in a Special Report on Effective Group Work on Faculty Focus, found at www.facultyfocus.com.

Shared Responsibilities Matrix
Separate from the session activities, we encourage learners in this course, as other courses, to get involved in the logistics, recap (as mentioned earlier), time-keeping, morning warm-ups, periodic energizers and presenting agendas. There are many resources for warm-ups. One reference for facilitators that includes warm-ups is The Winning Facilitator by Julius Eitington. The book is a great reference for facilitators and has a number of warm-ups or what Eitington refers to as “icebreakers” or “openers” in the first chapter. There are several editions. The last and latest edition is the fourth edition. Every teaching institution should have a copy in the faculty development center.

CHECKLISTS
The checklist folder (Appendix B) on the accompanying CD-ROM houses many different checklists. Institutions may already have procedure manuals or checklists. If they have checklists that have been vetted and standardized, encourage them to bring those to the course. Some examples include folders containing checklists for foundations of nursing, family planning, maternal and neonatal health, HIV, etc. It is important to get a sense from the learners early in the course which checklists they will use for their activities, so that you as the facilitator or a program assistant will know which ones to print. Help them to choose checklists on tasks in which they feel proficient. This will allow them to focus more on improving the coaching and feedback process rather than on the technical components of the task to give feedback or coaching on.

Using the Checklists for Practice
Encourage learners to use the checklists for practice during the course and also with their students in their own simulated environments. Some instructors disagree with having students see the checklist; however, they reinforce that this is a sound teaching and learning practice and that during formal or summative assessment they would not have the checklist and be expected to conduct the task
according to the steps. This way they will be very clear on what is expected of them, be more motivated, and be more successful in reaching competency.

Encourage them to use only one form of the checklist rather than a learning guide and a checklist. This will decrease confusion on what is expected of them. Instructors in their role as coach can assist them in understanding the progression of one step to the next if there is any confusion. If it is an important step in providing a service, it should be on the checklist and assessed. It is a great way to coach objectively and to plan for areas of needed practice.

Storing all needed checklists in a three-ring binder per course in the simulation center is a convenient way to manage them. Having several copies and laminating them is even better, as students will be able to use and reuse them with a marker and their peers when they come to the center for independent practice.

**Checklists for Demonstration and Coaching**

Due to experience from past courses, the facilitators who have piloted have removed the demonstration checklist and activity from this course. The presentation is still in the course and hence if an activity is needed, the schedule could be easily adapted. The checklist is made available in the resources in case your group should need more time on this area. Coaching and feedback seem to be the areas that need more time and discussion and hence the coaching aid is included in Handout S3.3; copies should be made so that learners are aware of the measure that the facilitators use to evaluate them.

**SIMULATION CENTER SELECTION**

Prior to the training, you would need to arrange for a venue that has an established simulation center or skills lab. This center may or may not be part of your program. The idea is to give learners (instructors) the most experience with a functioning space where they can practice hands-on techniques for clinical tasks and where facilitators are able to both coach and assess them. Some of the activities will be conducted in the simulation center; thus, it needs to be as close to the course space as possible. For the training, ensure that there are enough copies of the Observation Guide (Handout S1.2) for the number of learners.

**VIDEO CLIPS**

There are suggested video clips from ModCAL and the Internet, but any video clips that meet the objectives can be utilized. Try to get video clips that match your checklists or learning guides, where the demonstrator does not make mistakes. You can also use some where mistakes are made if your objective is to discuss with the learners where an error is occurring; otherwise choose your videos very carefully.

**APPENDICES**

The appendices to this LRP are vital to facilitating the training. Please see the Appendices section of at the end of the Facilitator’s Guide, which details each appendix’s content.
PRE-COURSE ASSESSMENT

USING THE PRE-COURSE ASSESSMENT
The Pre-course Assessment is not intended to be a test but rather an assessment of what the learners, individually and as a group, know about the course topic. Learners, however, are often unaware of this and may become anxious and uncomfortable at the thought of being “tested” in front of their colleagues on the first day of a course. The facilitator should be sensitive to this attitude and administer the assessment in a neutral and nonthreatening way as the following guide illustrates:

- Learners draw numbers to assure anonymity (e.g., from 1 to 16 if there are 16 learners in the course).
- Learners complete the pre-course assessment.
- The facilitator gives the answers to each question.
- The facilitator passes around the Individual and Group Assessment Matrix for each learner to complete according to her/his number.
- The facilitator posts the completed matrix.
- The facilitator and learners discuss the results of the assessment as charted on the matrix and jointly decide how to allocate course time.

INDIVIDUAL AND GROUP ASSESSMENT MATRIX
A special form, the Individual and Group Assessment Matrix, is provided to record the scores of all course learners. Using this form, the facilitator and learners can quickly chart the number of correct answers for each of the 20 questions. By examining the data in the matrix, the group can easily determine its collective strengths and weaknesses and jointly plan how to best use the course time to achieve the desired learning objectives.
## Simulation Training Course: Individual and Group Assessment Matrix

**Course:** ____________________________________  **Dates:** ________________________  **Facilitator(s):** ___________________________________

<table>
<thead>
<tr>
<th>Question Number</th>
<th>CORRECT ANSWERS (Learners)</th>
<th>CATEGORIES (5 questions each)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 3 4 5 6 7 8 9 10 11 12 13 14 15</td>
<td>Design of Simulation Environments</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**PRE-COURSE ASSESSMENT ANSWER KEY**

**Instructions:** In the space provided, write **TRUE** if the statement is **TRUE** and write **FALSE** if the statement **FALSE**.

<table>
<thead>
<tr>
<th>Designing the Simulated Environment</th>
<th>TRUE OR FALSE</th>
<th>SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The role of simulation in practical teaching is to provide activities that mimic the reality of a clinical environment.</td>
<td>True</td>
<td>Session 1.3</td>
</tr>
<tr>
<td>2. Objectives, fidelity, complexity, cues and debriefing are all considerations in design of a simulation.</td>
<td>True</td>
<td>Session 1.3</td>
</tr>
<tr>
<td>3. Creating lesson plans for simulated activities is a waste of the instructor's time.</td>
<td>False</td>
<td>Session 1.3</td>
</tr>
<tr>
<td>4. Models made from locally available materials may be used to meet learning objectives.</td>
<td>True</td>
<td>Session 1.4</td>
</tr>
<tr>
<td>5. Supporting objectives for simulation MUST have BOTH a specific action and an object of the action.</td>
<td>True</td>
<td>Session 2.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Managing the Simulated Environment</th>
<th>TRUE OR FALSE</th>
<th>SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A core management team MUST have at least one person from each department to represent what objectives MUST be met in the center.</td>
<td>True</td>
<td>Session 2.1</td>
</tr>
<tr>
<td>2. Senior students are NOT appropriate to involve in managing the space and materials.</td>
<td>False</td>
<td>Session 2.1</td>
</tr>
<tr>
<td>3. The simulation center MUST be available when instructors are demonstrating the clinical tasks.</td>
<td>False</td>
<td>Session 2.1</td>
</tr>
<tr>
<td>4. Supplies MUST be kept open to air or they WILL degrade.</td>
<td>False</td>
<td>Session 2.1</td>
</tr>
<tr>
<td>5. Ideally, a lab manager is the primary manager of the simulation space.</td>
<td>True</td>
<td>Session 2.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementing in the Simulated Environment</th>
<th>TRUE OR FALSE</th>
<th>SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A coach MUST be proficient in the area being taught.</td>
<td>True</td>
<td>Session 3.3</td>
</tr>
<tr>
<td>2. Checklists MUST NOT be given to students while they are acquiring the clinical tasks.</td>
<td>False</td>
<td>Session 3.3</td>
</tr>
<tr>
<td>3. The stations MUST be fixed and ready for use at all times.</td>
<td>False</td>
<td>Session 3.3</td>
</tr>
<tr>
<td>4. Students MUST always be given an opportunity to respond to your feedback.</td>
<td>True</td>
<td>Session 3.3</td>
</tr>
<tr>
<td>5. Debriefing after simulated practice is analogous to summarizing the end of a lecture.</td>
<td>True</td>
<td>Session 3.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring and Evaluating the Simulated Environment</th>
<th>TRUE OR FALSE</th>
<th>SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feedback sessions or assessments are both ways to monitor a simulation center.</td>
<td>True</td>
<td>Session 4.1</td>
</tr>
<tr>
<td>2. SBM-R is NOT an appropriate monitoring tool for simulation centers.</td>
<td>False</td>
<td>Session 4.1</td>
</tr>
<tr>
<td></td>
<td>TRUE OR FALSE</td>
<td>SESSION</td>
</tr>
<tr>
<td>---</td>
<td>---------------</td>
<td>---------</td>
</tr>
<tr>
<td>3. Evaluation of the simulation center is defined as a PERIODIC assessment of the overall process and results of the simulation center.</td>
<td>True</td>
<td>Session 4.1</td>
</tr>
<tr>
<td>4. Revising learning lab/simulation objectives is a POSSIBLE outcome of monitoring and evaluating the simulation center.</td>
<td>True</td>
<td>Session 4.1</td>
</tr>
<tr>
<td>5. Use expected results to examine if activities and assessments in the simulation center reflect learning objectives.</td>
<td>True</td>
<td>Session 4.1</td>
</tr>
</tbody>
</table>
SESSION ONE

SESSION 1.1
Thumbnails for Session 1.1

Session 1.1: Simulation Center
Course Overview

What is the Big Picture?

- This course is just one of a series to better prepare you and your institution to provide students with an improved educational experience and to graduate students who are more prepared to perform services the country needs them to deliver.

Courses Offered

- Effective Teaching Skills (ETS)
- Instructional Design
- Clinical Teaching Skills (CTS)
- Technical Updates
- Simulation for Educators of Health Care
- Student Performance Assessment
- Standards-Based Management and Recognition
- Learning Technologies

Thoughts to ponder...
Simulation Training for Educators of Health Care Workers

COMPETENCIES

Skills:
- Psychomotor
- Communication
- Clinical Decision-Making

Attitudes:
- Essential for high-quality services
- Comfort providing services

Knowledge:
- Provide information needed
- Foundation of skills

Competency-Based Training

- Mastery Learning
- Develop competency
- Provides clear expectations

Educational Practices; Chickering and Gamson's Seven Principles

- Active Learning
- Prompt Feedback
- Student and Faculty Interaction
- Collaborative Learning
- High Expectations
- Diverse Styles for Learning
- Time on Task
Narration Notes for Session 1.1

Session 1.1: Simulation Center Course Overview

Slide 5
Competency-based training is based on three important, evidence-based theoretical principles. Click on each one to learn more about that theory. When you’ve reviewed each one, click “Next Slide” to continue.

Slide 6
When people hear the term “competency” they may think different about things. Let’s clearly define the various definitions of the term “competency.”

Animation one:
An ability: We often use the word “competent” as a description of ability: “We train them to competency,” or “you will become competent before you become proficient” or “the learner became competent in ARV management.” The competent individual is one who is able to perform a skill or task independently and to provide safe, beginning-level services.

Animation two:
We also use the term competency to describe a set of job-related tasks. In this sense, a competency is something required to perform successfully in your job. For example, one of the International Confederation of Midwifery competencies is: “Midwives provide high-quality, culturally sensitive care during labor, conduct a clean and safe delivery, and handle selected emergency situations to maximize the health of women and their newborn.” Think of the required knowledge and combination of skills and attitudes needed to perform this competency.

Animation three:
Competencies consist of a unique blend of knowledge, skills and attitudes. Knowledge, skills and attitudes are referred to as competency domains. To be specific, every competency requires certain skills (psychomotor, clinical decision-making and communication skills), the knowledge needed to perform those skills, and the appropriate attitudes to provide high-quality services. Preparation of a competent surgeon will provide a strong emphasis on psychomotor and clinical decision-making skills, while preparation of a counselor will require a stronger emphasis on communication skills.
Slide 7
Let’s look at a practical example of how competencies are broken down into different domains. Here is how knowledge, types of skills, and attitudes all contribute to one competency to “initiate and manage antiretroviral therapy.”

Animate each domain w/ its related bullets

Knowledge: To “initiate and manage antiretroviral therapy,” training or education must provide the information needed to analyze and make clinical decisions about which patients are appropriate for antiretroviral therapy. Knowledge is the foundation for any type of skill required for a desired competency.

The main types of skills include psychomotor, communication and clinical decision-making skills. To meet the competency of “initiating and managing antiretroviral therapy,” a provider needs the psychomotor skills of conducting a targeted physical examination, the clinical decision-making skills to identify patients appropriate for antiretroviral therapy initiation, and the communication skills to provide patient education.

In addition, to effectively initiate and manage antiretroviral therapy, providers need appropriate attitudes to ensure high-quality services and professional behavior. They need the appropriate professional attitudes and a level of comfort providing services to all types of individuals.

For providers to perform the required competencies for their job, they must have the essential knowledge, the professional and appropriate attitudes and the ability to perform all types of skills needed: psychomotor or hand skills and communication and clinical decision-making skills. Let’s look at how each domain influences the learning activities and assessment methods that are used.

Slide 8
As a trainer, you will use a range of learning activities for both learning and assessment. These activities are designed to address knowledge, types of skills, and attitudes. This table provides a nice overview of which activities are more appropriate for development and assessment by each domain.

Animation one:
Knowledge: There are a range of options for developing knowledge, whether updating existing information or providing new knowledge. But more than just communicating knowledge, you need to help learners apply and analyze knowledge in order to make good clinical decisions. Assessment methods focus on assessing learners ability to not only recall, but apply or analyze information.

Animation two:
Skills include psychomotor (sometimes called “hand” skills), clinical decision-making and communication skills. While you may use different techniques for different skills, all skills require demonstration and practice with feedback. Skill-assessment methods focus on observing the learners ability to demonstrate or perform the skills.

Animation three:
Attitudes can be addressed in several ways: behavior modeling is particularly useful, as are role plays and observation with feedback. Self-reflection or journaling are other means for learners to work on attitude development. Assessment is more difficult to objectively evaluate, but learner behavior demonstrated during practice in simulation and in clinic may be assessed. Role plays, and observation with an assessment tool that outlines expected behaviors, are useful for assessing attitudes.

Animation four:
Throughout all these learning activities, the behavior modeling that occurs during informal contact between the learners and the trainer helps demonstrate training skills and appropriate attitudes and behaviors.
Animate appropriately: We’ve talked about competencies. Now, what is competency-based training? Competency-based training focuses on developing desired competencies: the right mix of knowledge, types of skills, and attitudes needed for job performance. This means learning activities and assessment are based on desired competencies or abilities, not just new knowledge.

Animate: Competency-based training includes the principles of mastery learning—a focus on developing competency or mastery in the learner, rather than comparing scores. Competency-based training focuses on producing competencies, and clearly outlining expected results of training from the very beginning.

Competency-based training is essential throughout the career span. Education (which should also be competency-based) prepares individuals for a future career or profession. Training reinforces existing competencies or develops new knowledge, skills and attitudes for practicing providers. Training is used for continued professional development throughout the professional career.

Slide 10 Chickering and Gamson’s Seven Principles

Slide 11 Ask a participant to pick a term and tell you what it means. The names no one chooses, explain. The definitions are included in the Reference Guide or can be found by reading the articles/text.

Ask someone to state how competency relates to tasks? Competency, in its simplest definition, is a set of job-related tasks. A task is an observable, professional behavior. Hence, all checklists or protocols relate to tasks and incorporate a set of steps that address knowledge, skill, attitude and problem-solving components. This is important in our discussions to broaden our thinking from “skills” to embrace a more holistic definition that allows us to open the conversation on why the aspects of attitude and problem-solving or clinical-decision making are so important.

Slide 12 Ask volunteers to tell you what each one is, if they are able; fill in the gaps. The models include an advanced childbirth simulator (covered and open), no scalpel vasectomy model, handheld IUD model, breast model, Madame Zoë (designed by Jhpiego and Gaumard), condom model and implant arm.
**SESSION 1.2**

**Plan for Session 1.2**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue:</th>
<th>Session number:</th>
<th>Duration:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conference room</td>
<td>1.2</td>
<td>120 min.</td>
</tr>
</tbody>
</table>

**Topic:** History and Current Use of Simulation

**Session Objectives**

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

- Describe simulation and its types.
- Review history of simulation.
- Discuss the benefits and potential applications of simulated training.
- Recognize the values of simulation.

**Methods and Activities**

**Introduction (10 min.):**
- Ask learners to describe the practical training in military and aviation? Ask why simulation is important in military and aviation?
- Ask if same issues could apply for health care providers?
- Keep the discussion brief at this stage.
- Review the objectives.

**Key Points:**
- Increase safety with simulation, decrease errors, lessons from other disciplines
- Discussion...15 min.

**Summary (10 min):**
- Review key points on the slide.
- Address learners’ questions.

**Activity:**

Tour of simulation center:
1. Have learners observe the center according to the observation guide.
2. Have lab manager give a brief presentation with hands-on time to get familiar with the simulators available.
3. Debrief on observations before and after the hands-on session.

**Materials/Resources**

- PowerPoint Slides
- LCD and laptop
- Flip chart and markers
- Handout S1.2 “Observations of the Simulation Center”
- Anatomic models and simulators in sim. center

**Required reading**

- Paul Bradley. History of Simulation in Medical Education and Possible Future Directions. *Medical Education* 2006; 40: 254–262 (Appendix J)

**Review/Evaluation (key points from the session, what worked well, what did not work well, modifications you would like to make in the future):**

I would reduce the number of slides. Some sections where there are two slides could be scaled down. The handouts were not available so I would make copies for my own session or confirm before arrival that these were copied for the learners. As a plan B, I had the observations checklist on the screen and they took down notes in their stationary and that worked out fine, but it would have been better to have the handouts. They had interesting observations and were more critical than I expected them to be. I would also make sure that in this session there would be time for going over some of the care and storage of the models like we did in Liberia. Reducing the slides and having the checklist ready would allow the time for this.
Simulation Training for Educators of Health Care Workers

Thumbnails for Session 1.2

Session 1.2: History and Current Use of Simulations

Learning Objectives
- Describe simulation and its types.
- Review history of simulation.
- Discuss role and application of simulated training.
- Discuss the benefits of simulated training.

Introduction
- How is practical training in the military conducted?
- How about pilots?
- How about health care providers?

What is Simulation?
- The imitation of a process utilizing a suitable analogous situation and/or apparatus for the purpose of training:
  - Devices, trained persons
  - Lifelike virtual environments
  - Contrived social situations that mimic conditions
  - Presents education and evaluation problem authentically.
  - Student responds as in the real situation.

Types of Simulators
- Part-Task Trainer
  - Body part for training of procedural skills such as catheterization
  - High-fidelity CVS to recognize cardiac findings
- Computer-Based Systems
  - Multimedia programs with audio and video
  - Interactive systems providing feedback to users
  - Virtual reality and haptic systems as used in endoscopy training

Types of Simulators, Cont.
- Simulated patients and environments
- Integrated simulators
  - Combine mannequin with computer controls
  - Include instructor-driven simulator
  - E.g., SimMan
History of Simulation

- Centuries old, stretching to medieval times
- Military: chess, jousting
- Aviation: flight simulation, crew resource Mx
- Space industry: training and testing
- Nuclear power industry: technical operations

Simulation in Health Care Education

Drives and Background to Simulation

- Practice makes perfect with risk-free training (Friedrich 2002)
- Power to pretend (Sperlazza 2009)
- Practical knowledge must be studied holistically (Benner 1984)

Additional Factors in Ethiopia

- Large student number
- Shortage of clinical faculty
- Need for deliberate practice

Role of the Simulated Setting

- Practice space for acquiring competencies
- Assessment space for evaluating competencies
- Open space for independent/assisted learning
Potential Applications of Simulation

- Routine learning and rehearsal of clinical and communication skills
- Routine basic training of individuals and teams
- Practice of complex clinical situations
- Training of teams in crisis resource management
- Rehearsal of serious or rare events

Potential Applications of Simulation, Cont.

- Rehearsal of planned, novel or infrequent interventions
- Induction to new clinical environments or use of equipment
- Design and testing of new clinical equipment
- Performance assessment of staff
- Refresher training of staff

Madam Zoë®

- Full-sized lower female torso—hard, plastic base with soft foam and “skin” overlay; multiple removable/replaceable parts/organs
- Used to teach:
  - Basic anatomy
  - Pelvic examination
  - IUD insertion and removal
  - Minilaparotomy
  - Laparoscopy
  - MVA
  - Diaphragm fitting
  - Use of the female condom

Benefits of Simulation

- Risks to patients and learners are avoided.
- Undesired interference is reduced.
- Tasks/scenarios can be created to demand.
- Tasks can be practiced repeatedly.
- Training can be tailored to individuals.
- Retention and accuracy are increased.
- Transfer of learning from classroom to real situation is enhanced.
- Standards for student performance evaluation are enhanced.

Features of Simulation Facilitating Learning

- Educational feedback
- Repetitive practice
- Curriculum integration
- Provision of a range of difficulty levels
- Adaptability to multiple learning strategies

Features of Simulation Facilitating Learning, Cont.

- Provision of a range of clinical scenarios
- Provision of safe, supportive learning environment
- Active learning based on individual needs
- Defined outcomes
- Simulator validity as realistic recreation
Summary

- Simulations are safe and effective.
- Simulations complement education in patient care settings.
- Questions?

Activity: Observation of the Simulation Center

- Tour available simulation center.
- Observe what is available and record according to the handout you have been given.
- Lab manager to give an orientation, demonstrate storage and maintenance of simulators, and allow hands-on time.
- Group debrief on observations before orientation and after orientation and hands-on experience.

Narration Notes for Session 1.2

Session 1.2: History and Current Use of Simulations

Slide 1
Ask learners why simulation is important in the military and in aviation? Are there similar issues in health care training?

Slide 2
[Read slide.]

Slide 3
[Read slide.]

Slide 4
[Read slide.]

Slide 5
Harvey is an example of a cardiovascular simulator with programs for different murmurs and thrills associated with a variety of disorders.

In interactive systems, physiological and pharmacological variables can be given, which can be manipulated, giving feedback about the actions taken.

Virtual reality is recreating an environment or object as a complex computer-generated image. Haptic systems replicate the kinesthetic and tactile perception.

Slide 6
[Read slide.]

Slide 7
Simulation is also widely used in engineering and management, such as Mx games for business executives.

In all cases, training or systems testing in the real world would be too costly or too dangerous to undertake.

Slide 8
Resusci-Anne, a low-cost resuscitation model developed by Laerdel, revolutionized resuscitation training.

Sim One, by Abrahamson and Denson, has sophisticated features, such as breathing, temporal and carotid pulse synchronized with heartbeat, blood pressure, opening and closing of mouth, blinking eyes, and responds to 4 IV drugs and gases (oxygen and nitrous oxide) automatically.

*The medical education reform including changes in teaching methods is in response to the information overload at the expense of clinical and communication skills and based on the premise to give safe, protected and sound educational experience.*

Slide 9
[Read slide.]

Slide 10
[Read slide.]

Slide 11
[Read slide.]

Slide 12
[Read slide.]
Learning Exercise for Session 1.2
S1.2 Observe a Simulation Center Learning Exercise

Group Work

Objectives:

1. Conduct a visual survey of a simulation center.
2. Record observations in the sheet provided.

Materials: paper, pens, Handout S1.2: Observations of the Service Center

Time: 60 minutes

Instructions:

- Tour available simulation center.
- Observe what is available and record according to the handout you have been given.
- Ask the lab manager to give an orientation after he/she has had time to make observations. Ask him/her to demonstrate storage and maintenance of simulators and allow hands-on time for learners to try some of the equipment.
- Conduct a group debriefing on observations before and after orientation and hands-on work. Ask them to share their impressions. Then, ask them to volunteer what they wrote on their forms. Let them keep the forms when you are done.

Distribute the management binders now if not done during the orientation to the workshop. Give a brief explanation of the sections. The presentation should take no more than 40 minutes. Since you will start this activity at about 10:15 a.m. or 10:30 a.m., you should have about an hour for the activity, give or take (depending on your lunch break and if the presentation takes longer). Learners will return to the business plan several times and will need to complete it with their CMT after the course (they may finish some components prior). Encourage them to really lay out solid ideas. Jhpiego experience elsewhere tells us that the more prepared they are, the more serious the administration will take them in supporting the simulation center. A plan is always an important first step, whether for revitalization of an existing structure or for a new center. They do not need to present this if time is limited. Circulate and assist them in their small-group work.
## SESSION 1.3

### Plan for Session 1.3

<table>
<thead>
<tr>
<th>Date: Month/day/year</th>
<th>Venue: Training Room</th>
<th>Session number: 1.3</th>
<th>Duration: 60 min.</th>
</tr>
</thead>
</table>

**Topic:** Design Simulation Teaching/Learning Activities

### Session Objective

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

- Describe the role of simulation in practical/clinical teaching.
- Recognize a framework for designing, implementing and evaluating simulation.
- Design teaching-learning activities for a simulation.

### Methods and Activities

<table>
<thead>
<tr>
<th>Introduction (5 min.)</th>
<th>Materials/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do the classroom and simulation center differ?</td>
<td>PowerPoint Slides of Session two</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Body (30 min.)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of simulations (2 slides)—Illustrated presentation</td>
<td>LCD and laptop</td>
</tr>
<tr>
<td>Employing the nursing process (1 slide)—Illustrated presentation</td>
<td>Flip chart and markers</td>
</tr>
<tr>
<td>Conceptual framework (14 slides)—Question and answer, discussion and illustrated presentation (show only the conceptual framework and use the other slides to prepare for the session)</td>
<td>Jeffries article (Appendix J)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summary (5 min.): Forward a summary of questions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What should be considered during the design step of simulation learning experience?</td>
<td>Handout S1.3A: Sample Business Plan Outline</td>
</tr>
<tr>
<td>How does the simulation design contribute to the overall teaching and learning experience?</td>
<td>Handout S1.3B: Conceptual Framework</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Application (20 min.): Group exercise—divide by institution</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the courses and objectives that will be met in the lab?</td>
<td>Required reading: Pamela R. Jeffries. A Framework for Designing, Implementing, and Evaluating Simulations Used as Teaching Strategies in Nursing. <em>Nursing Education Perspectives</em>. March/April Vol.26 No.2 (Appendix J)</td>
</tr>
<tr>
<td>What supplies do you need?</td>
<td></td>
</tr>
<tr>
<td>Add these to your management binder and we will come back to them in the later exercises</td>
<td></td>
</tr>
<tr>
<td>Complete sections 1 and 2 of Business Plan</td>
<td></td>
</tr>
</tbody>
</table>

### Review/Evaluation:

- The session went very smooth and the content was well-covered within the given time.
- I didn’t need to show most of the slides following the conceptual framework as the discussion on the framework captured all the required points.
Session 1.3: Design Simulation
Teaching/Learning Activities

Objectives
- Describe the role of simulation in practical/clinical teaching.
- Recognize a framework for designing, implementing, and evaluating simulation.
- Identify objectives in the curriculum that address teaching-learning activities for a simulation.

Introduction
- How do the classroom and simulation center differ?
- What does a simulation center look like?

Simulations
- Are activities that mimic the reality of a clinical environment
- Are a relatively efficient method of demonstrating procedures and teaching:
  - Content
  - Critical-thinking skills
  - Decision-making skill safely
- Use techniques such as role playing, devices, interactive videos, mannequins, written or live simulated patients

Simulations, Cont.
- Successful learning from the use of simulations requires:
  - Proper simulation design, and
  - Appropriate organization of students in the simulation.
- When simulation is conducted in an unorganized manner, it is difficult to pinpoint effective and ineffective development and practice.
- The simulation model/framework

Employing the Nursing Process
- The nursing process may be used as a guide to planning and designing a simulation program:
  - Assess how and where simulation might work in your setting.
  - Diagnose areas where simulation will be the most productive and have the best support.
  - Identify key personnel who will assist in implementing the program.
  - Plan learning, supplies, and orientations needed
  - Implement the simulation scenarios.
  - Evaluate the simulation experience with pertinent questions.
Simulation Training for Educators of Health Care Workers

32

Conceptual Framework

Facilitator’s Factor

- Instruction using simulation is student-centered
- The facilitator provides:
  - Support as needed throughout
  - The debriefing that concludes the experience
  - Facilitator must be prepared and feel comfortable with the simulations they are using.
  - Teachers may require assistance.

Students’ Factor

- Students should be responsible for their own learning.
  - Students should know the ground rules for the activity.
- Competition during a simulation experience is usually detrimental to learning.
- Various roles during debriefing
- Two student roles when simulations are implemented in clinical practice:
  - Response-based
  - Process-based

Simulation Design

- The design for creating the teaching activities must support course goals, skill competencies and individual learning objectives.
- Specifically, attention must be paid to:
  - Objectives
  - Planning
  - Fidelity
  - Complexity
  - Cues
  - Debriefing

Educational Practices

(Chickering; Gamson’s Seven Principles)

- Good Educational Practices
  - Active learning
  - Feedback
  - High expectations
  - Collaboration
  - Diverse learning
  - Time on task
  - Student-faculty interaction

Objectives

- Written objectives are needed.
  - The objective will determine the kind of simulation created.
  - Simulation is typically a new learning experience for students. In addition to objectives, students need information about:
    - The activity, process, amount of time required, role expectations and outcome expectancies.
Objectives

- Planning Activities
  - Identifying objectives for the experience.
  - Providing students with guidelines on:
    - Time frame
    - Role specifications
    - How the simulation experience would be monitored
    - How the role is related to the theoretical concepts

Clinical Simulations

- Clinical simulations need to:
  - Mimic clinical reality
  - Be process based
  - Have established validity
    - Must be authentic
    - Must include as many realistic environmental factors as possible

Realistic Clinical Simulation

- The structure of a realistic, simulated clinical situation requires three elements:
  1. Relatively little information should be available initially.
  2. The student should be allowed to investigate freely, employing questions in any sequence.
  3. The student should be given the clinical information over time during the simulation.

Complexity

- Simulation Practices
  - Simple to complex
    - Based on the learning objectives
    - Can be constructed with high or low levels of relevant clinical information

Cues

- During a Simulation
  - Help the student progress through the activity
- Cues
  - Indicative of the problem, complication or need
  - Faculty available to provide cues if a student does not know what to do

Debriefing

- A valuable tool when used with simulation, but is sometimes overlooked.
- Takes place at the end of the session.
- A debriefing activity reinforces the positive aspects of the experience and encourages:
  - Reflective learning
  - Link theory to practice and research
  - Think critically
  - Discuss how to intervene professionally in very complex situations
Outcomes of Simulation Experience

- Knowledge
  - Didactic knowledge gained from simulations is retained longer than knowledge gained through lectures.

- Skill Performance
  - Leads to quicker acquisition of the skill than conventional training methods.
  - Ideal setting to develop psychomotor skills without risk of inflicting harm on patients.

Outcomes, Cont.

- Learner Satisfaction
  - There is a high level of student satisfaction with the learning experience.

- Critical Thinking
  - Occurs during simulation learning experience.

- Self-confidence
  - Provides increased self-confidence and improved clinical judgments.

Summary

- The process of teaching and learning using simulations is complex, multifaceted and challenging.
- Proper design and planning is needed!
- What should be considered during the design step of simulation learning experience?
- How does the simulation design contribute to the overall teaching and learning experience?

Group Activity

- Form small groups (institution).
- Complete sections 1 and 2 of the business plan (20 minutes).
- Select a group leader, rapporteur and time keeper.

Narration Notes for Session 1.3

Session 1.3: Design Simulation Teaching/Learning Activities

Slide 1  [Read slide.]
Slide 2  [Read slide.]
Slide 3  What resources are already available? Will a skills lab work in our setting? Transmit attitude more in the simulation center. Materials are different; while you may have flip chart and white board in the simulation center, you will have more hands-on practice than in the classroom. The classroom may have some group activities, but primarily will consist of interactive presentations. The number of students also has to be more limited in the simulation center as opposed to the classroom.
Slide 4  Students will commit to decisions—*relate back to mock code*—CPR. Not ethical to teach on the real patient. Also, highlight that you don’t always need equipment, as in role play.
Slide 5  Nursing tends to be a fore-runner in simulation, why is that? Higher client exposure, lessons from the community. Lab and pharmacy less awareness, medicine valuing apprenticeship model more.
Slide 6  [Read slide.]
Slide 7  [Read slide.]
Slide 8  [Read slide.]
Slide 9  [Read slide.]
Slide 10  [Read slide.]
Learning Exercise for Session 1.3
S1.3 Complete Sections 1 and 2 of the Business Plan Learning Exercise
Group Work

Objectives:
1. Write the outline of the executive summary of the simulation center.
2. Design the start-up or improvement plan.

Materials: Handout S1.3A: Service Center Business Plan Outline (section 1–2), paper, pens, computers, management binder

Time: 60 minutes

Instructions:
- Form small groups (institution or department).
- Select a reporter, recorder and time keeper
- Complete sections 1 and 2 of the business plan:
  1. Write your mission statement and primary goal or objectives for the simulation center.
  2. Decide which courses (with lab components)/departments will use the simulation center and if there are any hospitals, funding groups or private companies with which you will have strategic alliances.
  3. Create a start-up plan identifying, if possible, a main faculty lab manager or coordinator who could dedicate their time to (at least) start up while you look for a more permanent manager.

Display the sample materials list Excel spreadsheet (Handout S1.4: Simulation Center Materials Tracking Sheet). Circulate the groups and assist those that are not familiar with Excel. Try to
have someone in the group who is familiar with Excel be the recorder. Demonstrate how to create a new sheet and add materials to it based on what is relevant for that country.
### SESSION 1.4

#### Plan for Session 1.4

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue:</th>
<th>Session number:</th>
<th>Duration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month/day/year</td>
<td>Training room</td>
<td>1.4</td>
<td>90 min.</td>
</tr>
</tbody>
</table>

**Topic:** Locally Made Models

**Session Objective**

**By the end of this session, learners will be able to:**
- Describe locally made models.
- Discuss what materials are available in the country.
- Share ideas for what could be made locally.
- Apply what simulators could be utilized for which simulation objectives.

<table>
<thead>
<tr>
<th>Methods and Activities</th>
<th>Materials/Resources</th>
</tr>
</thead>
</table>
| **Introduction (5 min.):** | • PowerPoint Slides  
  • LCD and laptop  
  • Flip chart and markers  
  • Sample locally made model if feasible  
  • Instructions for making cloth models (Appendix F)  
  • Handout S1.4: Simulation Center Materials Tracking Sheet |
| - Ask the group what they think is a locally made model. Tell a story about how the materials did not arrive for a training event and how we improvised with making models with locally available materials.  
  - Highlight: 1) Several different categories or materials and how they could be attached to attaining core competencies without harming a client, 2) The cost effectiveness of using locally made materials, 3) A simulation center does not need high-fidelity models, objectives could be achieved with something much simpler. Give example of how getting replacement skins for implant arm proved to be challenging and not affordable. The suggestion was given to try a utility glove and the trainer not only did that, but also found an inexpensive way to make the arm and not rely on the model that needed to be purchased! (20 min.) |
| **Summary (5 min.)** | |
| **Application (60 min.):** | |
| - Group Exercise—Divide by institution.  
  - Have them develop a list of locally available materials, thinking about which objectives that they just identified in the previous activity they would be linked to. Complete Sec. 3 of Business Plan. |

**Review/Evaluation:** The session generated a lot of interest in locally made models. We experimented with the location of this presentation and had it at different points in the week. It was determined that it worked best on the first day and pushing other content further down, so that while they were creating objectives and lesson plans, they could keep what they could make locally in mind.
Thumbnails for Session 1.4

**Session 1.4: Locally Made Models**

**Objectives**
- Describe a locally made model.
- Display what other instructors/countries have made.
- Discuss what materials are available in the country.
- Share ideas for what could be made locally.
- Apply which simulators can be utilized for which simulation objectives.

**Locally Made Models**
- Designed to meet learning objectives
- Made with locally available materials
- Humanistic
- Environmentally friendly
- Cost-effective

**Locally Made Models from Ghana**
- The next few slides are on initiatives taken in Ghana to reduce need for expensive models.
- Creativity, imagination and access to only a small budget have resulted in many innovative simulators.
Can use cucumber or other vegetable
Group Discussion

- What are the possibilities for making models here?
- What types of models could be made?
- What types of materials are available?
- Are there faculty members that are interested in forming a working group on making models for each simulation center or across simulation centers?

Summary

- Locally made models are more cost-effective and sustainable.
- A sub-group or lab manager should lead this process.
- Thinking about the objectives you identified to be met in the simulation center will help you identify what models you might make locally.
- Consider identifying local factories to make more complicated models.

Group Activity

- Divide into your institution groups.
- Look at the objectives you identified in the last activity.
- Start creating a list of materials you would need for your simulation center and focus on locally available materials.
- Add this list to your management binder.

Thank You!
# Narration Notes for Session 1.4

**Session 1.4: Locally Made Models**

<table>
<thead>
<tr>
<th>Slide</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>2</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>3</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>4</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>5</td>
<td>These cardboard rolls from toilet tissue are stuffed with newspaper print and then placed in the water bottle, next slide.</td>
</tr>
<tr>
<td>6</td>
<td>Then, they are wrapped with foam and a utility glove to simulate an implant arm. Very cost effective and you are recycling materials that would normally go to waste. The utility glove should be new though. It could also be used for transdermal.</td>
</tr>
<tr>
<td>7</td>
<td>This is a neonatal resuscitator from the top of a water bottle with foam on the bottom. You can make a premie size by changing where you cut the bottle.</td>
</tr>
<tr>
<td>8</td>
<td>This PVC pipe is designed to allow the nursing student to get more comfortable cleaning a tracheostomy dressing, simulating the difficulty of getting around a patient’s neck.</td>
</tr>
<tr>
<td>9</td>
<td>This simulator was made on cardboard with a surgical dressing, and allows the student to practice cleaning a suture wound with correct technique and empty the drainage bag, ensuring no air in the bag.</td>
</tr>
<tr>
<td>10</td>
<td>Here you see a kidney basin taped to cardboard, simulating a wound that needs cleaned and packed with gauze.</td>
</tr>
<tr>
<td>11</td>
<td>This cotton pack with a hole in it and red coloring on top simulates a deep tunneling wound that needs packed to heal. Students are able to practice the length of the wound by seeing the length of packing needed as it decreases (as the wound heals).</td>
</tr>
<tr>
<td>12</td>
<td>This is an arm that was made locally by cutting two ends of a water bottle, stuffing it with newsprint paper to make it firm, and applying a utility glove on top to practice transdermal injections and implant insertions.</td>
</tr>
<tr>
<td>13</td>
<td>This is a dressing for nursing students to practice cleaning a central venous line and ensuring patency of the ports. It is also taped onto cardboard.</td>
</tr>
<tr>
<td>14</td>
<td>This is a placenta and umbilical cord, which may be used for manual removal of the placenta.</td>
</tr>
<tr>
<td>15</td>
<td>This is a childbirth simulator model made in a developing country, based on a Western model. The Western model was too expensive and not locally sustainable in the long run, so they found a local factory to make a version.</td>
</tr>
<tr>
<td>16</td>
<td>Here facilitators are using a banana to demonstrate condom demonstration. A penis model is preferable, but if one is not available, a banana could be used. In this instance, the participants ate the banana after the activity was over. The funny part was they were working in pairs, but the last to hold the banana ate it without sharing.</td>
</tr>
<tr>
<td>17</td>
<td>This model was purchased, but they used colored water to simulate blood, which is what should be pointed out here. You could make these arms with the material mentioned before or other local materials.</td>
</tr>
<tr>
<td>18</td>
<td>This is foam, found just about everywhere, which can be used for simulating suturing of cervical tears.</td>
</tr>
<tr>
<td>19</td>
<td>You could also make your own posters and protocols on flip chart paper and reuse it over and over again. Travels easy also.</td>
</tr>
<tr>
<td>20</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>21</td>
<td>[Read slide.]</td>
</tr>
</tbody>
</table>
Learning Exercise for Session 1.4
S1.4 Create a Simulation Center Materials List Learning Exercise
Group Work
Objectives:
1. Review objectives and courses in the last activity.
2. Identify locally or homemade models that could be utilized to achieve these objectives.
3. Start creating a materials list in the materials template provided to you.
4. Start a new sheet (keep the sample as a separate sheet in the same file).

Materials: Handout S1.3A: Service Center Business Plan Outline (section 3), management binder, computer, Handout S1.4: Simulation Center Materials Tracking Sheet (Excel spreadsheet, printed or given to each group on flash drive for a computer)

Time: 120 minutes

Instructions:
- Divide into your institution groups.
- Look at the objectives you identified in the last activity.
- Start creating a list of materials you would need for your simulation center and focus on locally available materials.
- Add this list to your management binder.
- Present to the larger group a summary of the last two activity results.

Have learners use Handouts 2.1A–C to help guide them and business plan sections 4 and 5. This may just be the beginning of this exercise (and they may have to do follow-up work on this as they will need to talk with administrators, etc.), but if they approach administration with a plan, they will be taken more seriously. If administration is not a barrier, they will at least be more organized and hopefully identify ways to generate or acquire income sources.

Some examples are: a school in Egypt set up a private clinic where they charge for glucose checks and blood pressure screenings and refer as needed; another school, found a private pharmaceutical company to provide donations; and another was able to acquire supplies from an adjoining hospital. If learners are feeling discouraged by how much the simulation lab will cost, offer these stories as reassurance that once they create a plan and vision, they may see more clearly how to fund and sustain the center.
### SESSION TWO

**SESSION 2.1**

**Plan for Session 2.1**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue:</th>
<th>Session Number:</th>
<th>Duration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month/day/year</td>
<td>Training room</td>
<td>2.1</td>
<td>2 hours, 20 min.</td>
</tr>
</tbody>
</table>

**Topic:** Set Up and Management of Simulation Center

**Session Objectives**

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

- Discuss management challenges and opportunities of a Simulation Center.
  - Review tracking of materials and equipment.
- Discuss set up of the simulation center (apply the nursing process and Jeffries Model).
  - Review the orchestration of a simulation center.
- Outline TOR of a Core Management Team (CMT).
  - Review benefits of establishing an Open simulation center.
- Discuss caring and storing models, equipment and supplies.
  - Work on simulation center management binder.

**Methods and Activities**

**Presentation/Discussion:**
- Intro activity: Challenges and Opportunities of a Simulation Center- flip chart activity (10 min.)

**Interactive presentation, highlight the following (40 min.):**
- Use of nursing process
- Implementation process and management of implementation process
- Describe how to track materials
- Concept of open lab and how that assists with management
- Emphasize importance of CMT members roles
- Stress importance of orientation of faculty and students

**Summary (5 min.):**

Group Work—Planning to Manage the Simulated Center (60 min.)
(Break of 15–20 min.)
- Break into institutional groups.
- Plan or enhance your simulation setting.
- Manage multiple courses.
- Complete sections 4 and 5 of Business Plan.

(Use planning to manage questions to consider handout to help and see detail for GW on slide.)

**Materials/Resources**

- Presentation slides
- LCD projector
- Laptop
- Handout S2.1A: Open SC Schedule
- Handout S2.1B: Open Sim. Center Log
- Handout 2.1: Questions to Consider while Planning Management

**Review/Evaluation:**

Orientation for faculty may even warrant its own mini-presentation or guidance. Orientation for students could be handled by faculty as needed; so we discussed the former being more critical during this course. I squeezed in quickly the homemade models presentation, but this is also something that should come at the beginning of the course, so that they have this idea when building lesson plans, etc. Some people that were focused on high-fidelity models really had an “ah-ha” moment during this presentation. I will need to put some of the content with the photos so that others will be able to present this session with ease. That was very rewarding. The activity was also cut short because the first half of the management presentation went over time. In the future, having the challenges and opportunities activity and this session earlier will work out better. It really didn’t fit on the 4th day and that was apparent. If they had already seen the homemade models session, that would have gone much smoother. Although the activity was shortened, they still made initial plans for a CMT.
group, started creating a list of materials, using the sample as a starting point and adding locally available materials, and they started working on their business plan. Unless we make this activity for ½ day which we could think over, they would not get very far as the management binder is quite a large task to fill. Had they also had their curriculum with them, every activity would have been easier. In the future, this should be ensured.

**Thumbnails for Session 2.1**

**Session 2.1: Challenges and Opportunities of Managing the Simulation Center**

**Objectives**

- Discuss management challenges and opportunities of a simulation center.
- Discuss set up of the simulation center (apply the nursing process and Jeffries Model).
- Outline TOR of a core management team (CMT).
- Discuss caring and storing models, equipment and supplies.

**Objectives, Cont.**

- Review tracking of materials and equipment.
- Review the orchestration of a simulation center.
- Review the benefits of establishing an “open” simulation center.
- Work on simulation center management binder.
Assess a Simulation Center Space

- Administrative support and dedicated space, equipment and supplies
- Room that is accessible, secure and can be locked
- Room with lighting and space for students to work

Assess: With Whom Do You Need to Coordinate?

- Hospital Administrators
- University Administrators
- Medicine, Nursing, Midwifery, Pharmacy and Lab Faculty
- Users of current space
- Vendors

Diagnose: Where Will the Supplies Come From?

- Local vendors
- Faculty hospital/in-house vendors
- Supplies made by simulation center coordinator and teams

Diagnose the Key Players and Space

- Meet with administrative staff.
- Set up a core management team (CMT):
  - At least one person from each department who will represent what objectives are to be met in the simulation center.
  - Is able to meet weekly to review coordination issues.
- Decide space, logistics, orientations and hours.

Plan: Set Up and Orientation to Simulation Center

- Physically set up space and materials
- Orient faculty
- Orient students

Plan: Caring for and Storing Supplies

- Anatomic models
- Learning materials
- Physical supplies
- Medical supplies
Where to Keep What?

- **Closet**: Medical equipment, all plastic bins with medical supplies, etc.
- **Drawers**: Portable sphygmomanometers, stethoscopes, thermometers, etc.
- **File Cabinets**: Learning guides, checklists, case studies, role plays, etc.
- **Bookshelf**: Videos, reference guides, textbooks, etc.

Plan: Tracking Materials and Equipment

- Establish a way to categorize materials on tracking sheet by a system (alphabetical, cost or category).
- Create a form to track all materials and equipment.
- Establish a replenishment system.
- Track any minor or major repairs and have manuals and instructions readily available.
- See sample tracking sheet.

Orient Faculty to Simulation Center

- Orient faculty to use and care of models.
- Brainstorm with faculty about how to incorporate simulation center with teaching.
- Plan with faculty which objectives from classroom could be met by simulation center practice.

Orient Students to Simulation Center

- Through lecture, begin to introduce concept of simulation center and link to objectives to be achieved in the simulation center.
- Mastery Learning
- Give mini-tours to groups of classes and orient them to the models, equipment, etc.
- Humanistic Approach

Consider Preparing Post-Graduate (PG) Assistant/Senior Student (SS)

- PG/SS students may assist in formative assessment.
- Assist in identify areas for improvement.
- PG/SS can help supervise practice sessions using checklists.

Implementation and Management
Implement: Manage Anatomic Models

- Full-body models are durable.
- Partials should be stored in the package/bag.
- Mini-simulators stored with cords.

Implement and Manage: Learning Materials

- Exercises, case studies and role plays
- Videos of demonstrations—have available on a computer in the simulation center
- Clinical protocols and checklists available in simulation center; lamination will allow reuse and save paper.

Implement and Manage: Medical and Physical Supplies

- Medical supplies should be stored in clear plastic containers and clearly labeled.
- Physical Supplies
  - Cost
  - Maintenance

Open Simulation Center

- Open simulation center is a place and time when students can come in to practice their tasks.
- Resource person present to assist them with supplies.
- One faculty member

Open Simulation Center Hours

- Hours may vary and need to be when it is convenient for students.
- See example of open simulation center log and open simulation center schedule.

Orchestration

- Post in key locations the hours that the simulation center will be open and any related schedules.
- Provide instructions on how to gain access to the simulation center after hours.
- Remind appropriate faculty of the availability of the simulation center.
Orchestration, Cont.

- Delegate someone to be available and responsible for keeping the keys.
- Staff the simulation center with faculty or senior students during designated times for practice and demonstrations.
- Maintain supplies, resources and equipment, and ensure that they are not borrowed for other uses.

Orchestration, Cont.

- Choose several senior-level students and at least one faculty.
- Before approving students as assistants, use checklists to evaluate their skills.

Group Work: Planning to Manage the Simulated Center

- Break into institutional groups.
- Plan or enhance your simulation setting.
- Identify objectives from the syllabi that could be achieved in the simulation center.
- Identify funding and supplies needed based on objectives.
- Manage multiple courses.
  - Coordinate courses and times.
  - Establish times for open lab (use planning to manage questions to consider handout to help and Business Plan sections 4 and 5)
- Time Limit: 100 minutes

Summary

- Name one key point that you have taken away from this session.
- Or, name one action item that you would like to start at your institution.

Narration Notes for Session 2.1

Session 2.1: Challenges and Opportunities of Managing the Simulation Center

Slide 1 Have two flip chart papers. Ask learners write on a Post-it note the challenges and opportunities of managing a simulation center that they know already or speculate.

Slide 2 In this session, we will take time to discuss the experiences of the day-to-day management and successes and challenges that come with this intense coordination.

Slide 3 [Read slide.]

Slide 4 [Read slide.]

Slide 5 Decide if you will have: one lab, two labs (beginner and advanced) or labs for each discipline. What are some of the things you would consider in planning a skills lab? How do you do it in the _______ faculty?

Slide 6 My experience and preference, as it is with my colleagues, is to have one main lab and share the space across departments and to coordinate hours in faculty meetings/curriculum committee.

Slide 7 Ministry needs to support establishment, other universities, individuals and income-generation activities.
Slide 8  **Bullet one:**
Reach consensus on establishing the skills lab and how the skills lab will be managed.

**Bullet two:**
This would be a group of faculty across departments.

**Bullet three:**
Gather this group to reach consensus on physical location and set up, supply management, faculty orientation to the skills lab, skills lab hours and staffing.

Slide 9  Plan for the number of students, plan for sustainability, time schedule for the center, make sure it doesn’t look like a museum. Ensure that staff are well-trained in managing and categorizing materials so that instructors can easily set up their stations. If the center is organized by the clinical tasks, then materials will be available.

Slide 10  (Exercises, videos, learning packages, reference materials)

Slide 11  (EKG machines, glucometers, wheelchairs), oxygen tanks, linens/gowns, buckets, sharps disposal containers, partial models. The importance of having experts from the departments be involved with how to store items, which items need to be away from sunlight, reagents that shouldn’t be next to each other, etc.

You can use crates or boxes if you can’t get file cabinets.

Booklets, brochures, laboratory diagnosis manuals, drug reference books, etc. (These should all be labeled with Property of the SON/SOM.)

Slide 12  [Read slide.]

Slide 13  [Segway from lecture… In the Lab…. Be sure to…] Brainstorming and much of these definitive planning activities can be decided as a part of the mini-courses that the EDC will have for professors.

Part of mini-courses from this course or CE.

Slide 14  [Read slide.]

Slide 15  Free up your time to work in the clinical area and not take up too much of your time.

The other activity that we want to consider for the project is incorporating the practice of lectures be accessed online, which would free up time to work in the lab with the students.

Slide 16  [Read slide.]

Slide 17  They may lay out on the beds with a hospital gown and sheet covering them; they should be routinely disinfected with chlorine disinfection.

They came in to ensure longevity and in a secured closet—point to Zoë case.

Slide 18  Can be developed by the EDCs or drawing from already established resources and adapting them for the skills lab. Can be created by instructors.

(Learning guides and checklists) and reference materials should be adapted and…standardized and available for ease of student use.

Slide 19  To keep out moisture. Should and can be offset by Contributors, such as the HWD Project and in house departments, but with proper maintenance will be a large cost upfront. But in the long-term, plan can be worked into the budget for the lab as they will need to be updated.

Slide 20  [Read slide.]

Slide 21  Such as around the lunch hours or other times when there are no classes.

Need to take into account that the lab schedule should be planned and persons allocated at the end of the university year for the next just as if you were scheduling classes and allocating rooms.

Let’s take a look at the samples and see if there are any questions regarding these.

Slide 22  For demonstration of skills and assessment of competency prior to clinical experiences.
Learning Exercise for Session 2.1
S2.1 Plan to Manage a Simulation Center Learning Exercise
Group Work
Objectives:
1. Identify objectives from the syllabi that could be achieved in the simulation center.
2. Identify funding and supplies needed based on objectives.
3. Map courses and time slots for lab use.

Materials: paper, pens

Time: 100 minutes

Instructions:
- Break into institutional groups.
- Plan or enhance your simulation setting.
- Manage multiple courses:
  - Coordinate courses and times.
  - Establish times for open lab.

Make sure that each group (group by small groups per profession or course instructors) has a course syllabus to work from. There is 1.25 hours for this session depending on the first session and the length of the health break. Make sure that the interactive presentation is short and there is ample time for practice. During the exercise, project the examples of the objectives (in the PowerPoint presentation) that demonstrate the specific action and the object of the action.
## SESSION 2.2

### Plan for Session 2.2

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue:</th>
<th>Session Number:</th>
<th>Duration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month/date/year</td>
<td>Training room</td>
<td>2.2</td>
<td>30 min.</td>
</tr>
</tbody>
</table>

**Topic:** Reviewing and Revising Simulation Objectives

### Session Objectives

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

- Review course and supporting objectives.
- Review components of a specific objective.
- Practice as a group examples of a specific objective.

<table>
<thead>
<tr>
<th>Methods and Activities</th>
<th>Materials/Resources</th>
</tr>
</thead>
</table>
| **Interactive Presentation (20 min.):** | • Laptop with LCD  
• Flip chart with permanent marker  
• Presentation slides print out  
• Examples of specific objectives  
| • Review quickly the course and supporting objectives and gage if they remember the components of a specific objective.  
• Highlight the 2 components of specific objectives and give examples of the specific action and the object of the action. Use humor for greater retention of the concepts.  
• Highlight importance of including attitude component or attitude objective and review words that develop attitudes. | |

| Group Exercise (10 min.): | |
| • Developing simulation objectives.  
• Explain that we will practice writing specific objectives in lesson plans session. | |

**Review/Evaluation:** This session worked very well as everyone had written objectives, but the components were forgotten and it was good to review again before practice. Keeping it short and moving directly to sim. lesson plans was effective. We had planned for 45 minutes, but I think we finished this session in less than half an hour.
Session 2.2: Reviewing and Revising Specific Simulation Center Objectives

Introduction
- What are learning SC objectives?
- Have you ever written learning SC objectives?
- Easy to write?
- Look at Figure 2-1.

Objectives
- Identify the course, course objectives and supporting objectives related to skill or task to be attained.
- Identify any attitudes or “emotional elements” that need to be developed.
- Write/revise simulation center objectives for one of your courses.

Learning Domains
- Knowledge: What we know (also known as the cognitive learning domain)
- Skills: What we do or perform (also known as the psychomotor learning domain)
- Attitudes: How we feel about what we know and do (also known as the affective learning domain)

Course Objectives
- Course objectives often encompass knowledge, skill and attitude areas or domains, and should relate to one or more of the core competencies for the overall academic program.

Supporting Objectives
- An objective (also known as a secondary, specific, instructional or enabling objective) that supports the main objective by describing the specific knowledge, skills and attitudes that students must master to achieve the main objective.
- We build simulation center objectives from supporting objectives; let’s look at a supporting objective to get an idea...
What are the two parts of a supporting or specific objective?

Parts of a Supporting Objective
- **Specific action** to be taken (see action verbs in Table 2-1)
- **Object of the action** (the specific information, skill or attitude the students are expected to know or demonstrate to meet the course objective)

How Many Supporting Objectives?
- If you have 40 students in a course (or clinical rotation) and 10 of your supporting objectives require that you directly observe and assess the students' competence, you will be making 400 observations!
- So how do you determine the number of objectives? Let's look at the next slide.

Answer These Questions #1
- How many students are in your course?
- Is there a practical component of your course?
- Are there other teachers or students who can assist with skills demonstrations and skills practice sessions?

Answer These Questions #2
- Are there other teachers who can assist with administering skills assessments?
- Are there clinical instructors or preceptors who can assist with skills demonstrations, practice and assessments during clinical rotations?
- Is there an assessment tool or does one need to be adapted/developed?

A Few Examples
- Label a diagram with the organs of the male and female reproductive systems.
- Test acids and bases with pH strips.
- Demonstrate how to use a female condom with a vagina model and penis model in a professional manner.
- Counsel patients about sexual risk reduction using non-judgmental attitude.
Narration Notes for Session 2.2

Session 2.2 Reviewing and Revising Specific Simulation Center Objectives

Slide 1  [Read slide.]
Slide 2  [Read slide.]
Slide 3  [Read slide.]
Slide 4  We are focusing on S,A as you know…
Slide 5  Quickly review course and supporting. Move to specific objectives.
Slide 6  [Read slide.]
Slide 7  Ask what are the two parts of a supporting or specific objective? Do you remember? Go to next slide if unable to get answer. Then, show examples.
Slide 8  [Read slide.]
Slide 9  [Read slide.]
Slide 10  [Read slide.]
Slide 11  [Read slide.]
Slide 12  Let’s identify the action and the object of the action. Ask learners to indicate which ones may have an attitude component.
Slide 13  Conduct this as a group activity on the flip chart and highlight the action and the object of the action.
Slide 14  [Read slide.]

Learning Exercise for Session 2.2

S2.2 Revise Supporting Objectives for Simulated Activities Learning Exercise
Small Group Work (3–5 people)
Objectives:
1. Revise three supporting objectives that should be attained in the skills area with at least one attitude objective or component.

Materials: paper, pens
**Time:** 15 minutes for revision and 30 minutes for sharing and correcting as a group

**Instructions:**

- Review your course syllabus supporting objectives.
- Revise three supporting objectives that should be attained in the skills area with at least one attitude objective or component.
- Share your revised or new objectives with the larger group.
- Main facilitator will review them in the large group and make any needed corrections with the group’s input or suggestions, identifying the specific action and the object of the action.

Divide groups by discipline. Pass out the Handout S2.3: Blueprint Template. They will cover more on assessment in the Student Performance Assessment Workshop; however, it is important for learners to see the linkage between the simulated activities and the type of assessment they would create. Learning for performance allows them to see that the simulations that they practice also need to be assessed either formatively or summatively.

There is a time limit; you can use all the time and provide lots of formative feedback, or you can use half the time and allow the other half for presentations. If this were ETS, the presentations are important; since team work and building products that they could implement immediately is a higher priority, less time may be spent on presentations—unless you feel that learners would benefit more from the larger group’s input.
### SESSION 2.3

**Plan for Session 2.3**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue:</th>
<th>Session Number:</th>
<th>Duration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month/day/year</td>
<td>Training room</td>
<td>2.3</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

**Topic:** Linking Simulation Objectives to Assessment

#### Session Objectives

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

- Describe the concepts of assessment.
- Apply the concepts of criterion-referenced measurement and pass score.
- Discuss the use of blueprint.
- Describe a variety of assessment tools and how they are used.
- Describe roles during assessment process.
- Use assessment results to guide teaching.

#### Methods and Activities

<table>
<thead>
<tr>
<th>Presentation/Discussion: (60 min.)</th>
<th>Materials/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction:</strong></td>
<td>LCD projector</td>
</tr>
<tr>
<td>How assessment does matter and how to make inference meaningful (5 min.)</td>
<td>Laptop</td>
</tr>
<tr>
<td><strong>Body (50 min.):</strong></td>
<td>Models and simulators</td>
</tr>
<tr>
<td>Stress importance of identifying how many simulation objectives necessary to meet core competencies for graduate. We will discuss both summative and formative, but stress that we are focusing on formative assessment since summative will be covered in another workshop.</td>
<td>Equipment and supplies</td>
</tr>
<tr>
<td><strong>Summary (5 min.):</strong> Q&amp;A</td>
<td>Checklists</td>
</tr>
</tbody>
</table>

**Activity:**

**Group Work:**

- Divide into disciplinary groups.
- Develop test blue print for some portion of their course (60 min.).

**Develop OSCE Tools (60 min.):**

- Create scenario/activity.
- Develop coach, student and standardized client instruction.
- Determine pass score for each station.

**Review/Evaluation:** Spend less time on the intro and first slides. Give a clearer example of blueprint. Reduce slides on summative assessment. New slides have been incorporated now.
Session 2.3: Linking Simulation to Assessment

Introduction
- Why does assessment matter?
  Assessment establishes readiness for practice
- Who is responsible for assessment?
  Facilitators and students are responsible for assessment
- When should learners be assessed?
  Assessment should occur before, periodically during and at the end
- How do you know assessment findings are meaningful?
  Findings are meaningful if they link directly to learning objectives

Objectives
- Describe the concepts of assessment.
- Apply the concepts of criterion-referenced measurement and pass score.
- Discuss the use of blueprint.
- Describe a variety of assessment tools and how they are used.
- Describe roles during assessment process.
- Use assessment results to guide teaching.

Assessment
- Provides a meaningful measure of student competency.
- Based on principles of measurement evidence and evaluation.
- Is inherently a process of professional judgment.
- Influences student motivation and learning.

Assessment
- Good assessment enhances instruction.
- Good assessment is valid, fair and ethical.
- A variety of appropriate tools must be selected in order to measure knowledge, skills and attitudes.

Formative Assessment
- Non-threatening:
  - Scored, not graded
- Direct and immediate feedback:
  - Provide learner’s with feedback on progress
- Structured information:
  - Use to make decisions about learner mastery of content
- Facilitates learning:
  - Use to reinforce important information, assess understanding
Summative Assessment Methods

- May use a range of tools:
  - Provides a comprehensive measure of progress
- Well-defined and structured:
  - Clear guidance on assessment tools and scoring criteria
- Provides an analysis:
  - Of learner progress at specific times or of cumulative learning
- Used to make decisions:
  - About ability to progress or practice

Criterion-Referenced Measurement and Scoring

- Measurement against a pre-considered set of criterion
- Criterion and purpose must be logically related
- Evidence must support the selection of the criterion
- Highly defensible
- Provides instructional feedback
- Accounts for exam variation

Basic Steps for Developing a Test Aligned to the Curriculum Framework

1. Establish the learning target.
2. Determine the knowledge, skill and attitude demand for this learning target as expressed in the curriculum.
3. Develop the test blueprint.
4. Determine an appropriate passing score (i.e., an appropriate level of performance).
5. Determine an appropriate length of time for students to “hit” the learning target.
Basic Steps for Developing a Test, Cont.

- Create test forms.
- Assess at regular or planned intervals.
- Use assessment results to differentiate instruction, and to make other educational decisions.

Test Blueprinting

- **Is the key** to matching assessment to curriculum objectives
- **Provides** the scope, content, structure and relative emphasis of assessment
- Ensures adequate sampling across subject area and domains

Sample Format—Assessment Blueprint

<table>
<thead>
<tr>
<th>Essential learning objective</th>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
<th>% Emphasis</th>
<th>Station</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clinical reasoning skill</td>
<td>Clinical/practical skill</td>
<td>Communication skill</td>
<td>Respect/professional manner</td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Consider Appropriate Means of Measuring Competency

<table>
<thead>
<tr>
<th>Male Circumcision</th>
<th>Counseling</th>
<th>Group Education</th>
<th>Surgical Procedure</th>
<th>SRH - Advocacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>MCQ</td>
<td>Role play</td>
<td>OSCE</td>
<td>MCQ</td>
</tr>
<tr>
<td>S</td>
<td>MCQ</td>
<td>Role play</td>
<td>Role play</td>
<td>Role play</td>
</tr>
<tr>
<td>A</td>
<td>OSCE</td>
<td>OSCE</td>
<td>MCQ</td>
<td>OSCE</td>
</tr>
</tbody>
</table>

Methods of Assessment

- Drills
- Quizzes
- Case Studies
- Project Reports
- Essay Exams
- OSCE

- Written exams
- Direct observation
- OSCE

Assessment of Skills and Attitudes

- Process begins with checklists in simulation.
- Standardized, often using scripted role plays and/or anatomic models.
- Use may be continued through clinical training until mastery is consistently demonstrated.
Objective Structured Practical Exams
- Priority learning objectives to test
- Decide on task or activity
- Prepare, for each station:
  - Instructions for the activity
  - “Patient” instructions if applicable
  - Assessment tool
  - Resources needed
  - Time limit for each station
  - Scoring criteria
  - Assign an assessor

Sample Integrated Management of Childhood Illness OSCE
- Time limit at each station
- Student communicates with model or simulated patient
- Assessor at each station needing observation
- Same scoring criteria used for each student

Peer Assessment in Formative OSCE
- Strengths
  - Deep rather than surface learning
  - Promotion of learner autonomy and life-long learning
  - Develops critical, analytical and reflective thinking, self-motivation and time management

Lab Coordinator
- In Formative Assessment:
  - Assists with flow and changing of stations.
  - Troubleshoots as needed.
  - Tracks time and notifies students of outside practice time (time on task).
  - Ensures students have guides or checklists.
  - Tracks focus on learning objective and safety.

Students
- Arrive prepared to practice as if they are in a real situation.
- Come to open lab if were not able to practice enough.
Coaches
- Trained instructors or senior/post-grad students/residents
- Always utilize checklist or protocol
- Encourage students to come to Open lab to practice more
- For continued practice, ask the student what area or specific steps they need assistance or practice with

Learning Journal
- Similar to a portfolio, but learning-focused.
- Useful for activities with minimal supervision.
- Generally used for formative assessment.

Learning Journal
- Similar to a portfolio, but learning-focused.
- Useful for activities with minimal supervision.
- Generally used for formative assessment.

Care Plan
- Document data, care required and expected outcomes
- Most often used in nursing
- Assess student’s ability to select appropriate interventions

<table>
<thead>
<tr>
<th>Data</th>
<th>Diagnosis</th>
<th>Intervention</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Structured Feedback Forms
- Are easy, efficient and consistent.
- Provide a formal structure for assessment.
- Reinforce essential skills.
- Ensure that each student receives feedback.

Structured Feedback Form Sample

What questions/comments do you have?
Group Activity

- Work in discipline groups.
- Select a course you are interested in.
- Select a unit or module.
- Pull out the learning objectives that are assessed in simulated environment.
- Develop assessment blueprint for simulation to determine what tasks will be practiced in the simulation center.

Narration Notes for Session 2.3

Session 2.3: Linking Simulation to Assessment

Slide 1 [Read slide.]

Slide 2

Animate first bullet: then response
Valid assessment is critical to identify if individuals are ready to independently provide safe, beginning-level services. In addition, assessment can be a powerful tool for behavior change.

Animate second bullet: then response
Facilitators and learners share responsibility for assessment. Adult learning is more effective when adults are involved in assessing their progress. During training, we emphasize the responsibility for life-long learning for all learners. Assessment must be presented in a manner that is positive and builds learner confidence.

Animate third bullet: then response
While assessment is a continuous process, there are times it is critical. Assessment (even self-assessment) conducted before training can provide a baseline measure of learners’ existing knowledge, skills and attitudes, and can be used to develop an individualized learning plan. Knowledge assessment at the end of completion of a computer- or technology-assisted update allows a learner to demonstrate readiness for practice and mentoring. Skills assessment using simulation (models or role plays) documents the learner’s readiness to practice with clients with supervision. Assessment is also critical when a learner, with input from her or his trainer, believes that she or he is ready for independent practice with a client.

Animate fourth bullet: then response
Assessments must be meaningful, and provide a clear and honest measure of learner progress. They must be clearly stated and logically related to the competencies and related learning objectives that are being taught. They must be an appropriate level of difficulty for determining safe, beginning-level practice. Meaningful assessments are quality checked by a variety of experts.

Slide 3 [Read slide.]

Slide 4 [Read slide.]

Slide 5 [Read slide.]
Here are some key features of formative assessment, which is essential for learners to develop competency. Formative assessment is non-threatening. It may be scored, but isn’t graded. Learners can score their own work, and are encouraged to ask questions about the content.

Formative assessment includes direct and immediate feedback. Whether asking group or individual questions, doing group exercises, games or reviewing homework—direct and immediate feedback should be provided.

Formative assessment can be used to provide structured information on certain topics, maybe using a quiz or homework assignment. You can use that information to make decisions about mastery of content and revise training accordingly.

Formative assessment is used to reinforce important information, assess understanding and helping learners’ master essential competencies. Skills practice and coaching sessions are a great example of how to use formative assessment to help learner’s learn. As a trainer, you will use formative assessment to help learners develop competency, provide information on how the training is progressing so you can select any additional learning activities based on those findings. Now let’s look at summative assessment.

Here are key features of summative assessment.

Summative assessment methods use a range of tools. They may be written exams, checklists for observable skills, or objective structured clinical examinations that combine skill performance and questions in standardized stations. A range of tools provides a comprehensive measure of learner progress.

Summative assessments are well-defined and structured. For example, a training learning resource package will include standardized tools for assessment of knowledge and skills and include specific guidance on how to use them. These assessments usually occur at specified times—such as assessing for competency in simulation before moving into clinical practice.

Summative assessments are used to provide a summary or analysis of learner progress at certain times during training. They may summarize previous experiences or formative assessment results to provide an analysis of learning.

Summative assessment methods are used to make decisions about learner progress at specified points. As a trainer you will use summative assessment to decide if learners are ready to work with clients, if they are competent in the required knowledge, types of skills and attitudes and if you can consider them qualified to provide services. We’ll talk more about qualification later in this module.

Before we look at specific assessment tools you will use, here’s a summary of how you will use assessment during training.

At the beginning, there is usually some type of pre-course assessment to measure the learning needs of the group before the course begins. It may be done electronically before the course or it may be done at the beginning of a group-based course. It may be done using self-assessment based on the related clinical performance standards. A careful review of learning needs at the beginning of the course will help you tailor training. These early or pre-assessments are the initial phase of formative assessment—identifying learning needs to help learners achieve competency.

During classroom training, you will use a range of assessment tools for formative assessment to help learners’ progress through the course. Usually, there is some type of summative assessment of competency in simulation before moving into clinical training.

During clinical practice, you will use assessment tools again for formative and summative assessment. These often include types of checklists, record reviews, and may also include logbooks or the use of a portfolio to document experiences.

Post-assessments may be used at the end of technology-assisted learning to determine readiness for: a group-based course, mentoring experience, or clinical practice component. Then used again for skill assessment toward the end of clinical practice to make a decision about qualification. Post-assessments provide a meaningful measure of mastery of knowledge, skills, and attitudes.
Assessment provides a meaningful measure of learner competency to determine if they are **qualified** to provide basic, beginning-level services. Key principles of formal assessment are that they are structured, objective and non-judgmental. Apply structured assessments fairly and objectively in order for the results to be meaningful.

**Animate knowledge graphic**
For example, knowledge can be informally assessed using questions, quizzes, exercises and games—or formally assessed using quizzes, exams, case studies or other means.

**Animate skills graphic**
Skills can be assessed using checklists, algorithms, clinical simulations, role plays, etc. Assessment of skills usually requires some type of observation and documentation.

**Animate attitudes graphic**
Attitudes can be assessed through the use of role plays, self-reflection journals, direct observation and self-assessment methods.

Here's a broad overview of different techniques used to assess knowledge, skills, and attitudes.

**Animate in knowledge text box**
You can assess knowledge in many ways—they are listed here. What's important is that questions test **reasoning and application**—not just recall. Objective and structured answers are better than subjective oral exams or written essays without grading criteria.

**Animate in skills text box**
The primary means to assess skills is through direct observation, usually with a structured assessment tool, such as a checklist or protocol. Other common assessment tools, especially for preservice education, include objective structured clinical exams (or OSCE), structured feedback forms, and self-assessment tools.

**Animate in attitudes text box**
Attitudes can be assessed in several ways. Knowledge of professional ethics and principles of practice can be assessed with written exams. Attitudes are often assessed during direct observation of skills performed. Most objective structured clinical exams include aspects of the behavioral components of attitudes, and most structured feedback forms for preceptors include some type of assessment of the student’s attitude. Jhpiego checklists for skill assessment include behavioral components of attitudes in order to help assess them.

Every Jhpiego learning resource package includes the tools you need for assessing knowledge and skills and guidance on criteria for qualification. Let’s look at tools commonly used.

**Slide 18 Second bullet:**
I think he means that checklists include measurements of behaviors that should reflect good attitudes: treating client with respect, addressing all client concerns, etc.
One of the most well-known forms of the structured practical examination is OSCE (objective structured practical exam). Structured practical examinations require time for planning and preparing valid stations, but provide a highly structured and reliable method for assessing knowledge, skills and attitudes. Typically students rotate through a series of stations where they answer questions (orally or in writing), or perform tasks while being observed. OSCEs can be used over and over. OSCEs may include the use of standardized patients, persons trained to simulate a medical condition in a standardized way. This photo is from an OSCE in Vietnam, you can see there are several stations, the assessor is using an assessment tool and a woman is acting as a standardized patient.

When preparing an OSCE station, first…

Select the priority learning objectives to test. Since creating OSCE stations, and implementing OSCE, is time consuming, prioritize the most important learning objectives for assessment. For each learning objective, decide on a task or scenario to be completed that will assess that objective. For each station, plan the details.

For each station you will:
- Write the task/scenario to be completed.
- Develop instructions for the student.
- Develop instructions for the standardized patient.
- Develop assessment tools (usually includes the use of checklists for observation).
- List the resources needed.
- Determine the time limit for each station.
- Establish scoring criteria.

Here’s a map of an OSCE used for Integrated Management of Childhood Illness. A few key points:
- There is a time limit for each station (5–10 min.)
- Student communicates with standardized patient or patient when required.
- An assessor is located at each station that requires observation. (Notice that this OSCE would only require an assessor at two of the six stations.)
- All students are assessed according to the same standards or scoring criteria. Feedback is delayed until the learner has completed the entire circuit.

A learning journal is similar to a portfolio, but is used to record learning experiences. Learning journals are especially useful for community or distance rotations, when the student has minimal or no faculty supervision. For example, learning journals may be used for home visits, community-based experiences, or rotations to distant clinic sites. Learning journals are usually used for formative assessment—students record the incident or problem that occurred, how it was managed, and what they learned from it.

A care plan is used to document the patient’s problems, care required, and expected outcomes. Generally used in nursing, typical components include: Data, Diagnosis, Intervention, and expected Outcomes (notice the relationship to the clinical decision-making process).

Students are often required to create care plans to demonstrate their understanding of, and ability to manage a specific problem. You can use a review of care plans to assess student’s abilities to select appropriate interventions for different problems presented.
Structured feedback forms or reports are a standardized way to provide quick feedback. They are useful for assessing general performance over time. Clinical instructors, faculty and preceptors can complete these. They can cover overall performance, demonstrated attitudes, and essential health care delivery skills.

Here’s an example that provides a formal structure for general clinical skills. In general, feedback forms:

- Are easy, efficient, and consistent.
- Provide a formal structure for assessment, particularly formative assessment.
- Reinforce essential skills.
- Ensure that each student receives feedback.

Here’s a sample feedback form that is useful for assessing characteristics such as personal attributes, attitudes, and professional values. Notice the standardized rating scale with specific descriptors. This is better than a generic numeric scale, which is less meaningful and provides no feedback.

Learning Exercise for Session 2.3
S2.3 Create an Assessment Blueprint for Simulation Learning Exercise
Group Work
Objectives:
1. Develop an assessment blueprint for one unit or session.

Materials: Handout S2.3: Blueprint Template, pens

Time: 120 minutes

Instructions:
- Assign a recorder and a reporter.
- Select a course you are all interested in.
- Select a unit or session from the course syllabus.
- Pull out the learning objectives that are assessed in simulated environment (S/A) or use the ones you revised in the last session.
- Develop assessment blueprint for simulation to determine what tasks will be practiced in the simulation center.
- Continue with additional units if time allows.

This activity will set the stage for the upcoming activities. The best group configuration seems to be by discipline with one person in the group who is from a different discipline if that is possible. The rationale for this is that when learners act out the stations, this person will make the best student. If possible, choose these individuals based on your background knowledge of who might need the least support as a coach and interacts with other disciplines well.
Have groups choose their clinical task according to the checklists that you have available. Have all the materials needed for those stations easily accessible. This takes some planning and should be made ready before the beginning of the entire workshop to reduce time lost on searching for materials. Some materials can be made from locally available materials rather than anatomic models—this should be encouraged whenever possible.

Laminate some of the checklists so that they can be reused and save paper, if possible. This will also give them the idea that they could do the same in their simulation center.
### SESSION THREE

#### SESSION 3.1

**Plan for Session 3.1**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue: Training room/sim ctr.</th>
<th>Session Number: 3.1</th>
<th>Duration: 80 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month/day/year</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Topic:** Develop Stations and Simulation Lesson Plans

**Session Objectives**

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

- Build a lesson plan and station for your skills period.
- Determine how many stations could be run simultaneously.
- Work with colleagues to coordinate stations.
- Practice your simulated station.

**Methods and Activities**

**Interactive Presentation (30 min.):**

- Highlight that as simulation objectives are identified, they may be group together and the lesson plan could be covering multiple clinical tasks.
- Highlight the types of resources needed.
- Discuss the number of instructors or assistants it may require.
- Remind them to include number of students, number of clinical tasks and determine time allotment that way.
- Describe the general formula of 25% for into/demo, 50% for practice and 25% for debriefing.

**Group Exercise (50 min.):**

- Practice creating a simulation lesson plan.
- Include role play if time permits.
- Present in the morning.

**Materials/Resources**

- Laptop with LCD
- Flip chart with permanent marker
- Presentation slides print out
- Empty lesson plan templates

**Review/evaluation:** This session effective. Learners saw why it was important to have a session plan. For example, if for some reason they were not available, there was a documented plan that another instructor could follow. They all stuck to one station in their lesson plan, which indicates that either more time is required or they still needed more practice on the concept. Perhaps more concrete examples of multiple related stations would be helpful. The 25/50/25 formula was helpful, but the presentation needed the some corrections and more information on debrief here. The corrections have been made.
**Session 3.1: Developing Lesson Plans and Stations**

**Objectives**
- Build a lesson plan and station for your skills period.
- Determine how many stations could be run simultaneously.
- Determine resources required for station readiness.
- Work with colleagues to coordinate stations.
- Practice your simulated station.

**Simulation Lesson Plan Objectives**
- Depending on capacity, lesson plan could have one or multiple stations and tasks.
- Relate to one supporting objective from syllabus that would need specific objectives and/or learning guides/procedural manuals as resources or have multiple resources needed.

**Resources**
- Multiple facilitators or senior students to re-demo, coach and give feedback
- Number of materials
- Types of materials
- Learning guides/checklists/procedural manual/protocol
- Clock in the room and coordinator for students rotating in multiple stations

**Introduction and Demonstration**
- One main demonstration by lead facilitator or video/DVD

**Activity: Return Demo and Practice**
- Students conduct return demonstrations and practice at multiple stations
- Staff coach and give feedback and ensure enough supplies
Debriefing

- Station staff summarize at stations.
- Re-convene as a larger group for debrief, discussion and questions.
- Debriefing allows for students to express any feelings that came up during the simulation.
- At times, the simulation can feel “real.”

Strategies during Debriefing

- Clear any misperceptions or correct errors that have happened in the encounter.
- Non-blame attitude.
- Address safety issues.
- Reinforce positive actions.
- Create strategies for improvement.

Examples of Debriefing Questions

- Did you accomplish what you wanted to do?
- What would you have done differently?
- Can you help me understand why you performed the intervention when you did?
- Were your interactions/interventions all appropriate?
- How did you feel about the experience?

Group Work

- Break into five groups.
- Choose a supporting objective(s) from your course syllabus.
- Develop a lesson plan and station(s) for your simulated setting.
- Include a case study or role play that you have created before
- Time limit: 40 minutes
- Group review of stations and lesson plans (50 minutes).

Summary

- Debrief of station-building activity.
- Remember that your tasks in the stations may be simple and developed to become more complex by adding role play or case scenario.
- As you work with your instructors and clinical preceptors to identify critical tasks, protocols and learning guides, you will have the appropriate stations in your simulation center bank.
Narration Notes for Session 3.1

Session 3.1: Developing Lesson Plans and Stations

<table>
<thead>
<tr>
<th>Slide 1</th>
<th>[Read slide.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slide 2</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 3</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 4</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 5</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 6</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 7</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 8</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 9</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 10</td>
<td>[Read slide.]</td>
</tr>
<tr>
<td>Slide 11</td>
<td>[Read slide.]</td>
</tr>
</tbody>
</table>

Learning Exercise for Session 3.1

S3.1 Develop Lesson Plans and Stations for Simulation Learning Exercise

Group Work

Objectives:
1. Develop a lesson plan for a station activity.
2. Develop a station for appropriate demonstration and coaching of the chosen clinical task.

Materials: checklists, Handout S3.1: Lesson Plan Template, corresponding materials required in the checklists, markers, pens

Time: 90 minutes

Instructions:
- Break into five groups (by discipline with one person from a different discipline works best).
- Choose a supporting objective(s) from your course syllabus.
- Develop a lesson plan and station(s) for your simulated setting.
- Include a case study or role play that you have created before, or create a new one.
- Time limit for the group work is 40 minutes.
- Group review of stations and lesson plans during the remaining 50 minutes.

The group may or may not have had some exposure to this in ETS. However, it is usually the weakest competency of instructors and is very challenging to master with an even temper and patience. Groups should remain the same from the station and lesson plan they built; have them practice coaching in turns. Have everyone who is in the discipline practice coaching and feedback before the person who is from another discipline—since you have chosen that person.
accordingly—as they will need to see the clinical task repeatedly before they attempt to role
play as a coach. This person should play the role of the student since they may be able to role
play it more effectively (being new to the clinical task). They will make more mistakes and
hence require more coaching, which gives the coach lots of opportunity to practice coaching.
(In the actual scenario, a coach should be proficient in the clinical task before coaching as
discussed in the interactive lecture).

Tell learners to skip the introduction and demonstration, and move directly to pretend that
they are covering steps of the clinical task that the student would like to work on.

Rotate among groups, with different facilitators providing feedback on the coaching and
feedback as needed. Utilize the coaching checklist to assist you in constructive feedback: start
with a positive statement, then, be very specific on what could be improved. Be open to
comments and questions before leaving to assist another station.
# SESSION 3.2

## Plan for Session 3.2

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue:</th>
<th>Session number:</th>
<th>Duration: 70 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month/day/year</td>
<td>Training room</td>
<td>3.2</td>
<td></td>
</tr>
</tbody>
</table>

**Topic:** Introducing and Demonstrating Health Care Delivery Tasks

### Session Objectives

By the end of this session, learners will be able to:
- List the stages of tasks development.
- Develop and use competency-based learning tools.
- Introduce and demonstrate a task.

### Methods and Activities

<table>
<thead>
<tr>
<th>Introduction (15 min.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think—Pair—Share</td>
</tr>
<tr>
<td>Discussion on how tasks/skills developed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interactive Presentation (40 min.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stages of tasks development?</td>
</tr>
<tr>
<td>Tools used to teach tasks?</td>
</tr>
<tr>
<td>Steps to develop tasks?</td>
</tr>
<tr>
<td>Ways to demonstrate a task?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Video Demo (10 min.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Activity: Group choice, work on intro/demo or combine with coaching and feedback</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summary (5 min.)</th>
</tr>
</thead>
</table>

### Materials/Resources

- Flip charts and markers
- Computer and LCD
- ETS Manual
- Instructions for folding a t-shirt

### Review/evaluation

The session generally went well. Learners were excited about the graphics used to express the various stages of skills development. Particularly, the demonstration on how to fold a shirt worked very well to teach how to introduce and demonstrate a skills session. It was a simple and time saving procedure. I recommend for its use in the future. It would be better to minimize the time for presentation and discussion and give more time for demo and practice. The group chose to combine intro/demo with coaching and feedback. Some groups may need to deconstruct the process further, but this group was comfortable combining.
Session 3.2: Facilitate the Development of Health Care Delivery Tasks

**Think-Pair-Share**

- Think of something that you know how to do well and write it down (1 min.).
- Then, write down who first taught you how to do this task (1 min.).
- Then, write down how they taught you to do this task (1 min.).
- Share with your neighbor (2 min.).
- Share with the group (5 min.).

**Steps in Task Development**

- **Introduce and demonstrate the task.**
- Observe students as they *practice* the task.
- Give feedback to students on how well they performed the task.
- Assess students for competency in the task.

**Objectives**

- Describe the steps of task development.
- Develop and use competency-based learning tools.
- Introduce and demonstrate a task.

**Stages of Task Development**

- Task Acquisition
- Task Competency
- Task Proficiency

**Task Acquisition**

- Students are aware of the task and know how it should be performed.
- But, do not always perform it correctly.
**Task Competency**

- Students perform the task correctly.
- But, may not always progress from step to step efficiently.
- This is the level of task competency expected of graduating students.

**Task Proficiency**

- Last stage of task development.
- Occurs after graduation and having practiced the task over time.
- Proficient professionals consistently perform task correctly and efficiently.

What are the tools we use to teach tasks?

**Competency-Based Learning Tools**

- Learning materials greatly facilitate tasks learning, particularly difficult or complex tasks.
- Present the individual steps of a task in a standardized way.
- Help students learn the correct steps for a task.
- Help to measure students’ progress in learning as they gain confidence in the task.

**Examples of Tools**

- Learning guides
- Decision trees
- Flow charts
- Algorithms
- SOPs
- Posters

**Testing Algorithm**

![Testing Algorithm Diagram](image)
Using Learning Tools

- Before, during and after demo and practice sessions.
- Before practice sessions, pairs of students can work together to remind each other of the steps.
- While the teacher or other student demonstrates a task.
- Students can also use them as a self or peer assessment tool and give each other feedback.

Introducing a Task

- Describe the objective of the demonstration session.
- Explain:
  - What the task is and why it is important
  - Its relation to other procedures
  - The steps involved in performing the task
  - The materials/tools required
- Take any questions before demo.

Ways to Demonstrate a Task

- Demonstrate by following the list of steps.
- Show the steps using slides or a videotape.
- Perform a role play in which a student simulates a patient.
- Use anatomic models to demonstrate a task.
- Demonstrate the task with simulated or real patients/peers/faculty.

Whole-Part-Whole Approach

- Demonstrate the whole procedure from beginning to end.
- Isolate or break down the procedure or activity into parts and allow practice of the individual parts of the procedure.
- Demonstrate the whole procedure again and then allow students to practice it from beginning to end.

A Four-Step Approach

1. Demonstration: Trainer demonstrates at normal speed, without commentary.
2. Deconstruction: Trainer demonstrates while describing steps.
3. Comprehension/formulation: Trainer demonstrates while learner describes steps.
4. Performance: Learner demonstrates with describing steps.

Rodney Peyton, 1998
Remember

- Review objectives and answer any questions.
- Use learning/assessment tool to provide detail.
- Demonstrate the task according to standard.
- Interact with the students and/or have them read from the tool as you conduct procedure.
- Use proper infection prevention for behavior modeling.

Key Point!

- Starting with demonstrations that do not involve patients enables you:
  - To take time, stop and discuss key points.
  - Repeat difficult steps without endangering the health or comfort of a patient.
  - It is “humanistic.”

Introduce and Demonstrate: Fold a Shirt

Introduce the Practice Session

- Set up the practice area.
- Review/discuss the task with the students.
- Tell students you will be available as they practice.
- Let them know how much time they have.

For Large Numbers

- Divide students into small groups, and have them do a rotation.
- Students can work in small groups and take turns practicing, observing, giving feedback each other.
- Identify other persons, such as tutors or more senior students, who could assist.
- Have multiple stations of the same task.

Examples of Task Practice Methods

- Role Plays
- Simulations
- Video, Photograph or Computer Exercises
- Case Studies
- Projects
- Work with real patients/peers/faculty
Summary

- Introduce the task with no mistakes.
- If you make a mistake, acknowledge it and start over.
- Demonstrate humanistic approach every time.
- Use a video(s) if you have a large number of students.
- Have students follow with checklist/protocol.
- Have individual station coaches ask if they have any questions or would like to see the demonstration again before practicing.

Group Work

- Break into small groups.
- Using your station and lesson plans, choose a task and checklist to introduce, demo, summarize.
- Rotate roles in the group.
- Focus on the process.
- Time limit: 60 minutes
- Finally, choose one person to present.
- Presentations: 5 minutes each

Narration Notes for Session 3.2

Session 3.2 Facilitate the Development of Health Care Delivery Tasks

Slide 1  [Read slide.]
Slide 2  Something that requires training, practice, and experience to do it well. Skills require more than performing tasks, i.e., need knowledge and a positive attitude. Skill can be demonstrated by physical activity called psychomotor skill or it can be an intellectual activity—cognitive skill.
Slide 3  Students develop skills best by going through the following steps. Almost all skills can be demonstrated, although some skills (e.g., decision-making, communication) are more difficult to demonstrate than others.
Slide 4  [Read slide.]
Slide 5  [Read slide.]
Slide 6  When students learn skills, they typically move through three stages of skills development: Attempt to do alone, but it is messy.
Slide 7  Main point here is efficiency, need to work on time management.
| Slide 8 | [Read slide.] |
| Slide 9 | Ask learners what local tools they use; have them share specific examples. |
| Slide 10 | CBLT are learning materials that greatly facilitate skills learning, particularly for difficult or complex skills. |
| Slide 11 | The learning tool may be a list of linear steps (e.g., a learning guide, SOP), or it may be a nonlinear diagram (e.g., flow chart, decision tree) that allows for deviations in tasks or steps based on the outcome of decision points or the answers to specific questions. |
| Slide 12 | [Read slide.] |
| Slide 13 | [Read slide.] |
| Slide 14 | [Read slide.] |
| Slide 15 | Relate to why they are practicing this first—bridge to job responsibilities and what they will see in the clinical practice area. |
| Slide 16 | Highlight that learners are able to review tasks on videos when instructors are not around. |
| Slide 17 | [Read slide.] |
| Slide 18 | Highlight that learners will know what is ahead and use of learning guide or checklist with steps while seeing the steps performed. Highlight again the REAL timing first and that it motivates the students to see the end goal (proficiency). |
| Slide 19 | “First impression is important.” |
| Slide 20 | Difficult or invasive steps. Humanistic not about using people, rather it is using anatomic models and mannequins to learn skills. |
| Slide 21 | You can also use a video of demonstration from ModCAL. If you have time, do both. |
| Slide 22 | Practice is the performance of skills by learners in the presence of a teacher, tutor, or clinical instructor. This step of skills development also may be called coaching. Coaching is a learning approach that involves the use of positive feedback, active listening, questioning, and problem-solving skills to ensure a positive learning climate. Helps students to master the skill correctly and also help to monitor their progress. |
| Slide 23 | Highlight how complex tasks may need more stations than others. No need to have a coach at every station for the multiple stations, peers may assist each other with learning guide and coach could rotate. |
| Slide 24 | [Read slide.] |
| Slide 25 | [Read slide.] |
| Slide 26 | [Read slide.] |
| Slide 27 | [Read slide.] |

[No Learning Exercise for Session 3.2.]
SESSION 3.3
Plan for Session 3.3

Date: [Month/day/year]  
Venue: Conference room  
Session Number: 3.3  
Duration: 180 min.

Topic: Coaching and Feedback for Health Care Delivery Tasks

Session Objectives
By the end of this session, learners will be able to:
- Describe the process of developing competency in students.
- Describe tips for developing professional attitude in students.
- List attributes of a good coach.
- Outline the process for providing individual feedback.
- Review elements of coaching.
- Practice giving feedback.

Methods and Activities

Introduction:
- Making a box (20 min.), make one quickly without instruction and choose 1 or 2 students to focus on. Get impressions. Do again with learning guide, “senior students” to help with coaching and get impressions again.

Interactive Presentation (40 min.):
- Show coaching demo video, show clinical simulation video

Exercise and Discussion (120 min.):
- Break into groups of three: coach, student and observer
- Choose a learning guide among repository available.
- Practice coaching techniques; rotate so everyone has the opportunity to act as coach (30 min.).
- Present to the classroom a coaching session (30 min.).

Summary:
- A good coach is proficient, supportive, facilitative and humanistic.
- Feedback allows students to speak first, is timely, specific and constructive not destructive.
- Developing attitudes requires strong objectives, behavior modeling, and interactive teaching.

Materials/Resources

- Laptop with LCD
- Pointer if possible
- Flip charts and markers
- ETS Manual
- Supplies available
- Plain paper for making a box
- Learning guide for making a box

Review/evaluation: Making a box took a little longer than expected, but the concepts learned from that activity were well worth the time. I did it first without a checklist and then with a checklist and the feedback was very positive on the clear difference they felt with and without instructions, a guide and a supportive coach. We checked in with the group and rather than splitting intro/demo activity and coaching/feedback activity, we combined it into one activity in the afternoon. This was good and in fact, we should spend less time on intro/demo and more time on coaching. Coaching is a tough concept for all and everyone wants to focus on critical comments rather than on positive feedback. More work on motivation and the benefits of positive feedback is needed.
Introduction

- What is your idea of a good coach?
- What about a bad coach?

Objectives

- List attributes of a good coach.
- Review elements of coaching.
- Describe tips for developing professional attitude in students.
- Outline the process for providing individual feedback.
- Practice giving feedback.

Coaching

- Students should first practice clinical tasks in the presence of a teacher, tutor or clinical preceptor.
- Coaching is a learning approach that involves the use of feedback, active listening, questioning and problem-solving skills.
- Helps students to master the task correctly.
- It also helps to monitor their progress.

A Good Coach

- Is proficient in the area being taught
- Supports learners
- Facilitates learning
- Is self-aware
- Reinforces correct behaviors
- Helps students analyze practice

Effective vs. Ineffective

The Effective Coach...
- Focuses on the practical
- Encourages working together (collegial relationship)
- Works to reduce stress
- Fosters two-way communication
- Is a facilitator of learning

The Ineffective Coach...
- Focuses on the theoretical
- Maintains a distance (status is above the participants)
- Often creates stress
- Uses one-way communication
- Acts as the authority or the only source of knowledge
Simulated Practice

- Ensure sufficient opportunity for simulated practice.
- Ensure adequate amount of time for practice.
- Keep groups small to allow everyone to practice.
- Assign roles so that everyone remains engaged.
- Provide models, supplies, equipment so that practice is realistic.
- Assess mastery before practicing with clients.

Simulated Practice, Cont.

- Additional Tips:
  - Ask skilled learners to coach others.
  - Use assessment tools for learning and continual assessment.
  - Apply coaching skills.

Developing Competency in Learners

He/she uses assessment tools to:

- Assess learners level of competency and learning needs during training.
- Provide objective feedback on performance.
- Determine if learners have mastered the required knowledge, skills and attitudes.

Humanistic Learning Principles

- Master tasks in simulation first.
- Use model clients or patients, or anatomic models.
- Make the simulation as realistic as possible.
- Practice with client after competent in simulation.
Using Technology in Learning Effectively

- Ensure learners understand how to use it.
- Check on learner progress on a regular basis.
- Verify learners have completed assigned activities.

Developing Attitudes

- Primarily developed through observation and imitation
- Link to course and supporting objectives
- Interactive activities that have controversial or clinical decision-making components
- Behavior modeling in the lab and in clinical practice
  - Reduce assumptions when materials are available (e.g., IP practices)

Developing Attitudes, Cont.

- Starts from the classroom, threaded to simulation setting and then to clinical practice area
- Evidence reveals students grasp tasks more when emotional element is included
- Evidence also tells us the role plays and media are strong influences
- Takes time and patience/role modeling key

Cognitive Apprenticeship

- Makes complex tasks easy to master.
- Relies on behavior modeling and coaching.
- Emphasizes learning in the real working context.
- It is effective!

Cognitive Apprenticeship, Cont.

- Explains knowledge and decisions.
- Demonstrates and provides feedback.
- Provides independence over time.
- Emphasizes need for caring, safety and confidentiality.
Feedback

For Every Skill

Use an assessment tool.
Demonstrate correct behaviors.
Provide coaching and supportive feedback during practice.

Effective Feedback

- Be timely.
- Be specific.
- Prompt student to say what they think they might be doing correctly and what they need to practice more on.
- Avoid blaming/critical statements; instead use something such as "I noticed that..."

Effective Feedback, Cont.

- Give suggestions for improvement according to a standard.
- Convey positive feedback by facial expression and tone of voice rather than words, when appropriate.
- Give students an opportunity to respond to the feedback, while you actively listen during this response.

Active Listening

- Stop talking and listen to the student.
- Restate the student's exact words.
- Paraphrase in your own words what the student said.

Active Listening, Cont.

- Understand and reflect the student's underlying feelings (identify the emotion).
- Identify with the student's emotions and state the implications of those feelings.

The Ear
Write Down a Question that You Think Represents Active Listening.

Active Listening Examples

- “Could you tell me more about that?”
- “Could you help me understand what you said.”
- “I’m not clear. Could you explain more?”

Avoid: “Why did you do that?” or “What are you going to do about that?” Active listeners are not accusatory, nor do they ask questions that lead to only one answer.

Clinical Simulations

Questions to Ask Learner

- Ready for an Activity?
  - Break into disciplines: assign coaches, students and observers.
  - Use the learning guide and lesson plan with the same station and task you choose yesterday.
  - Practice introducing, demonstrating and coaching techniques; rotate so everyone has the opportunity to act as demonstrator/coach.
  - Time limit: 90 minutes

Coaching during Clinical Simulation Video

Clinical Simulations

- Present a simulated patient management situation.
- May be delivered in many ways:
  - Paper-based
  - Media simulated
  - Role play simulations
  - Physical simulators
  - Live simulated patients
### Simulation Training for Educators of Health Care Workers

#### Session 3.3: Coaching and Feedback for Health Care Delivery Tasks

**Slide 1**
[Read slide.]

**Slide 2**
Building a Box Activity

**Slide 3**
[Read slide.]

**Slide 4**
[Read slide.]

**Slide 5**
*Graphic of trainer w/ coach hat is up w/ “A Good Coach” title*

Throughout competency development, starting in the classroom and ending in the clinical site, you will “coach” learners. Here are some characteristics of a good coach.

**Animation one:**
Coaches are proficient in the area being taught. They know the topic well enough to be able to break it down into manageable pieces for learners. Beginning with simple concepts and skills and increasing in difficulty.

**Animation two:**
Coaches support learners. They promote open, two-way communication by seeking feedback and encouraging learner contributions and discussion. They are patient and supportive, and provide feedback and suggestions in a way that maintains learner self-esteem and encourages confidence. They are aware and manage learner and their own stress.

**Animation three:**
Coaches facilitate learning. They demonstrate different types of skills and provide feedback to help learners become competent in new knowledge, skills, and attitudes. They use active listening, questioning, and feedback to help learners self-assess attitudes, apply knowledge, and develop clinical decision-making skills. Active listening involves listening, paraphrasing what the speaker has said, and identifying the speaker’s emotions.

**Animation four:**
Coaches are self-aware. They assess their own stress level and manage it, identify their own attitudes and prejudices and work to improve them, and work toward identifying ways to improve as a trainer and coach. Here’s a video explaining the role of coaching in the training setting.

**Slide 6**
[Read slide.]

**Slide 7**
Key to all types of skills development is the opportunity for practice and feedback in a safe setting. Be sure there is ample opportunity for skills practice, and assessment of skills competency development in simulation.

Some basic tips for facilitating practice sessions include: ensure you have enough space, make sure you have enough materials and supplies, keep groups small so all learners can practice. Be sure you have the supplies you need for practice. If models or instruments are in short supply, you can rotate groups through other learning activities to make the best use of training time. Build in time to assess learners as having mastered the skills in simulation before moving into clinical practice.

**Slide 8**
*Title, tips and photo are all up*

During simulated practice activities, you will rotate through and provide feedback during practice sessions. In addition, you may…

Ask skilled learners to coach others.

Disappear photo and put in checklist

Use assessment tool for practice sessions. The assessment tools may be a checklist, set of performance standards, algorithm, or counseling guide. Learners should use the tool when they practice and to guide feedback as you help learners develop competency.

Apply your coaching skills during simulated practice. Here’s a video demonstration of a trainer coaching a learner during a simulated practice session. Notice how the trainer follows the steps for what to do before and during when coaching a learner during practice.
Slide 9

Generally, developing competency in learners during training or education involves:

- Providing some type of transfer of knowledge,
- Helping learners develop skills by providing demonstration and practice with coaching with feedback,
- Incorporating behavior modeling and attitude development, and
- Assessment of learner competency.

Throughout the process, assess learner progress using structured assessment tools. These are important for learners to:

- Assess their skill level and learning needs when entering, and throughout, training,
- Provide objective feedback, and
- Determine if the learner has mastered the content.

Assessment tools and assessment is covered in detail in another module.

Slide 10

Let’s look at developing skills in learners, a very time-consuming and important aspect of training. There are three phases in the transfer and development of all types of skills. In training, the goal is to develop competency in learners. Here’s a summary of each phase of the process, and what you do to facilitate it.

Acquisition: During skill acquisition, or learning, you will demonstrate or otherwise “break down the skill” into manageable pieces, and then provide practice and feedback. We’ll look at tips for developing each type of skill shortly.

Competency: Skill competency means the learner is competent delivering clinical services in their workplace, and can perform skills accurately and with some confidence. Use the same assessment tool to assess the development of competency, first in simulation, then in clinical. Competency is the goal of training.

Proficiency: Proficient learners can perform efficiently, confidently and make appropriate clinical decisions. This occurs with repeated practice in the workplace following the deployment of the competent health worker.

Slide 11

Another important principle of competency-based training is humanistic learning principles or techniques. Humanistic techniques or principles make the learning experience more humane for clients and learners. Humanistic learning principles include:

Animation one: first bullet:
Developing competency (especially in psychomotor or clinical decision-making skills that have the potential for adverse effects) in simulation first.

You can do this in several ways:

Animation two: second bullet:
- Use “model” clients or patients—this can be paid model clients (rarely done due to cost), or other learners who may act as clients or patients during role plays, or acting as the client during clinical simulations using an anatomic model.
- Use anatomic models for developing psychomotor skills. Would you want someone doing surgery on you before they mastered the skill with a model? Using models and simulations reduces training time, and results in less adverse events for clients.

Animation three: bullet only:
Make the simulation as realistic as possible by having other learners or trainers act as the client when using a model-responding to the one practicing, giving the learner practicing someone to communicate with during a procedural skill.

Animation four:
Humanistic learning principles means that practice with clients should only occur after learners are competent in simulation, and competent on models for any hand skills.
Here are a range of training approaches used.

**Group-Based Learning**
This is a learning method in which people learn in a group facilitated by a trainer or trainers. It may occur outside the learner’s workplace with a group of learners from various organizations, or it may be site-based, and occur within a facility and consist of only employees from that facility. It can even be a component of whole site training.

**Whole site training** usually is described as an approach that meets the learning needs of all the staff at a service-delivery site. Generally, it is provided using some type of performance improvement approach, such as Standards-Based Management and Recognition or other means of identifying training needs and providing training based on those needs. Rather than all learners going through the exact same training, training is tailored to the learning needs identified for the different job positions or units. For example, the lab may receive targeted training through a unit-based coaching visit, whereas the physicians might receive a short, group-based update after morning rounds.

**Structured On-the-Job Training** (sometimes also called “site-based” training) occurs in a real working situation. It can involve learners learning in their own workplace, or learners coming to another workplace to focus on specific training goals. It is usually somewhat individualized, allowing learners to complete the knowledge content on their own, and includes structured time for skill demonstration and practice with coaching and feedback.

Site-based training has the advantage of being able to address specific training needs in a site without disrupting services. It combines learning and transfer of learning by integrating learning into the workplace.

**Technology Supports Learning:** A range of technologies can be used to support learning. Computers, mobile devices (such as cell phones), television, radio and more—can all be used to provide knowledge updates, demonstrate skills, develop appropriate attitudes and assess learning. Technology supported methods can be mixed with any of these training approaches to make it more efficient and effective. This “mix” of training approaches is called “Blended learning,” and can be constructed many different ways. It can be formal learning, like these approaches, or informal learning—through relationships, conversations, self-study and independent research.

---

When using technology in learning, be sure that…

- Learners understand how to use it—Can they open and navigate the method used to deliver the content?
- Check on learner progress on a regular basis—Make sure that learners are progressing, and answer any questions.
- Verify learners have competed assigned activities—Be sure that learners have mastered the content and are ready to progress.
Like any learning activity, when using technology it must meet desired learning objectives. Here are some examples of appropriate use of technology for developing (and even assessing!) knowledge, skills and attitudes.

**Animate first column:**
Knowledge-related objectives may be met and assessed through a variety of means—for example, narrated presentations, video lectures or interactive radio instruction.

**Animate second column:**
Skill-related objectives can be met through the use of video for demonstrations, and computer clinical simulations can be used to develop and assess the ability to make clinical decisions. Mobile technology can be used to provide checklists or decision-trees for providers as job aids, OR to gather data on skills completed. E-portfolios, or electronic “case logs” can be used for providers to capture their experiences and outcomes, share successes and challenges, be a space for posting publications and presentations, etc.

**Animate third column:**
Attitude-related objectives can be met through the use of audio or video stories or simulations to model behavior or present situations to use for discussing or self-assessing attitudes.

When you hear the word “apprentice” what comes to mind? A master carpenter teaching a young apprentice? An experienced surgeon guiding a new surgeon during a procedure? “Apprenticeship” is an age-old method of training used to transfer complex skills to a new learner. Cognitive apprenticeship is a learning theory that describes the process of making the complex skills of a master easy for a learner to observe and learn in a structured way.

Cognitive apprenticeship is a process of using behavior modeling and coaching to help learners become more independent in performing the desired skills. It emphasizes learning in a real working context-just as training and education for healthcare providers emphasizes making practice as realistic as possible, and providing adequate practice time in real work situations.

It is effective—Individuals who work with an experienced mentor or coach learn more quickly, learn to a higher level, and retain learning longer. Let’s look at the “apprenticeship” process a bit closer.

To transfer complex skills to a new learner, the master:
- Provides the knowledge needed for performing the skill,
- Demonstrates the skill and explains each step,

**Animation three:**
- And uses behavior modeling and coaching to provide feedback as the learner progresses to a more independent practice.

This process should sound very familiar to you, as it very similar to what happens during competency-based training or education.
While different skills require different techniques, there are the common steps when teaching all types of skills:

- Use an assessment tool to outline steps, and highlight critical steps. BEFORE the course begins, review the assessment tools you plan to use to ensure they are accurate and make sure you are comfortable with the skill. Review and practice to ensure proficiency.
- Demonstrate correct behaviors: Demonstrate correctly using the appropriate assessment tool, avoid shortcuts. Use the right type of infection prevention skills and protective equipment. Remember: if you forget to put on a face mask, so might your learners!
- Provide coaching and supportive feedback during practice: no matter what type of skill you are teaching, learners need feedback to help them progress. Let’s look at using feedback effectively during skills acquisition.

No matter what the situation, here are some basic rules for providing effective feedback:

**Animation one:**
Be timely. Whenever possible, give feedback right after the event. Immediately after a question or practice or coaching activity.

**Animation two:**
Be specific. Your feedback will only be as useful as it is specific. Describe exactly what was well done and things that could be done better. Use reference manuals or assessment tools (like algorithms, performance standards, or any checklists) to help keep your feedback specific.

**Animation three:**
Here’s an example of vague feedback: “You did a good job educating the client”. Compare that to this: “You did an excellent job summarizing the mother’s concerns and addressing them. You also used questions well to ensure understanding. Nice work”. See how useful it is to be specific? This is especially important when providing suggestions or corrective feedback.

**Animation four:**
Speak for yourself. Own your feedback. Use “I” when providing feedback. Rather than saying “You didn’t monitor the mother well after that delivery” use the word, “I noticed that you didn’t monitor the mother until 30 minutes after delivery of the placenta.” You are owning your feedback, as well as providing specific feedback on performance.

This is an example of a clinical simulation that requires the use of a model to demonstrate related hand, or psychomotor skills. The learner is NOT provided with a copy of the clinical simulation, it is used to guide the trainer in which questions to ask and which answers should be expected. Notice that the questions to ask the learner and correct answers are outlined clearly in the clinical simulation. An experienced trainer will ask additional, probing questions to help the learner further develop their clinical decision making skills. The following slide includes a video demonstration of the use of this clinical simulation. Notice how the trainer uses additional questions to help the learner develop clinical decision-making skills.
Clinical simulations can take many forms, but generally they present the learner with a simulated patient management situation. Use annotations to highlight each delivery method at the appropriate time. They are excellent for developing clinical decision-making skills in a safe setting.

Clinical simulations are often conducted in small groups, with one learner as the primary responder as the others observe. They can be delivered as paper-exercises—learners respond to questions and receives feedback in order to make the next decision, media simulations—using media to present the problem or situation and instruct the learner to respond, role-play simulations—often focus on addressing attitudes or behaviors.

Physical simulators, which are anatomic models that may, or may not, produce data for the learner to respond to.

Live simulated patients—persons trained to act as a patient, they are provided with a very specific script and the interaction may be recorded for providing feedback later.

Learning Exercise for Session 3.3
S3.3 Practice Coaching and Feedback Learning Exercise

Objectives:
1. Practice coaching at a simulated station with a student and observers.
2. Practice giving feedback at a simulated station with a student and observers.
3. Allow students to debrief or ask questions at the end as a summary, or plan for the “next practice session.”

Materials: checklist, Handout S3.3: Coaching Aid with Tally Sheet, Handout S3.1: Lesson Plan Template, station set up and materials, markers, pens

Time: 90 minutes

Instructions:
- Break into disciplines: assign coaches, student and observers.
- Use the checklist and lesson plan with the same station and task you chose yesterday.
- Practice demonstrating and coaching techniques, rotate so everyone has the opportunity to act as demonstrator/coach.
- Address the student by first inquiring if there is a particular part of the clinical task they would like to focus on or if they would like to practice the whole checklist.

If your program is utilizing SBM-R, have copies of the simulation-related standards available so that learners may look at the aspects of the simulation lab they should be monitoring. If standards are not available or not part of the program and since the group at this training course were chosen because they would be assigned to assisting to develop and manage the...
simulation space, utilize this time to assist them in developing some standards to monitor and evaluate their simulation center. Have several examples of standards for them to review.

The changes made in this activity will need to be vetted by a larger group of stakeholders. However, based on the “technical update” they have received in simulation, these updates should be seriously considered. Work with in-country stakeholders to analyze the changes/modifications that the small groups propose at the respective institutions. Some instructors are not as familiar with the standards; keeping this in mind, this exercise provides insights to where standards relate to simulation as well as information whether they are being monitored according to the latest evidence-based practice.
## SESSION 3.4
### Plan for Session 3.4

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue: Sim. Center</th>
<th>Session Number: 3.4</th>
<th>Duration: 110 min.</th>
</tr>
</thead>
</table>

**Topic:** Station Rotation

**Session Objectives**

**By the end of this session, learners will be able to:**
- Include priority tasks or core competencies for stations.
- Include a case study or role play into the station.
- Set up stations similar to how students would be assessed.
- Rotate through stations in a timed, organized manner.

### Methods and Activities

<table>
<thead>
<tr>
<th>Review:</th>
<th>Materials/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Priority learning objectives to test.</td>
<td>● LCD projector</td>
</tr>
<tr>
<td>● Decide on task or activity.</td>
<td>● PowerPoint presentation</td>
</tr>
<tr>
<td>● Prepare, for each station:</td>
<td>● Stations</td>
</tr>
<tr>
<td>1. Instructions for the activity</td>
<td>● Supplies</td>
</tr>
<tr>
<td>2. “Patient” instructions if applicable</td>
<td>● Flip chart paper</td>
</tr>
<tr>
<td>3. Learning guide or checklist</td>
<td>● Colored paper</td>
</tr>
<tr>
<td>4. Resources needed</td>
<td>● Required: relevant educational standards</td>
</tr>
<tr>
<td>5. Time limit for each station</td>
<td></td>
</tr>
<tr>
<td>6. A coach</td>
<td></td>
</tr>
<tr>
<td>7. System for renewing supplies</td>
<td></td>
</tr>
</tbody>
</table>

### Activity:

- Choose a coach, students will be those that are rotating then coaches will become students and you will reverse roles.
- Setup your station with your learning guide, case study or role play available
- 20 min. per station
- Repeat 5 times

### Review/Evaluation:

Due to some logistics problems, we had a late start and only had 30 minutes for the activity by the time we got the simulation center. I reviewed the station rotation concept with them and they went directly to their stations and rotated to the next station as I called for them to rotate. Even though the activity was truncated, they got several lessons that we discussed in debriefing. They realized that coaching needs more time, that senior students would be helpful to have to assist in activities so that they didn’t have to remain at the same station for the entire practice time, that coaching should be individualized and not canned and that rather than repeating the same thing, the coach should ask what the student wants to work on. This took a few rotations before they realized that coaching should be tailored and it makes it more interesting for both the coach and students. Conducting this rotation gave them and the co-trainers a sense for the flow of rotation with coaching/feedback versus in an assessment. Prior to this just describing it was not clear. This session also gave them a more concrete sense for why the timeframe for simulated practice needs to be longer than classroom time.
Station Rotation (Review this on a flip chart paper).

Preparation
1. Have numbers and names for each station that the small groups have been working at. Tape them to the end of the table or on the wall near the station so it is easily visible to all.
2. Stations should already be in an easy to flow design from one station to another set up in the simulation center.
3. Draw on a flip chart paper the stations and label them.
4. Have everything needed for the station already in place.
5. Instructions for the activity
6. “Patient” instructions if applicable
7. Learning guide or Checklist
8. Resources needed
9. Time limit for each station
10. Coaches
11. System for renewing supplies

Key messages
1. Use your session plan to guide you.
2. Describe the station map
3. Describe the rotation and that they lab manager will ask them to change stations if there are different station activities by saying “change stations” after a designated time period.
4. If you have a 2–3 hour time slot, divide the time so that all groups will move to all stations. If you only have 2–3 different types of stations you will have the maximum practice time.
5. Have stations that are related to each other if possible. If you don’t you will see how challenging it will be and there will not be enough time to practice.
6. Coach can sum up at the station
7. Debrief with all students together
8. Remind coaches that they can start from any steps that the “students” need review on. They need to ask them when they get to the station assuming that the Intro/demo has been completed and they have had one practice session. This will allow them to really practice coaching and feedback.

Activity
1. Coaches will remain at the stations for the first round (one round means that all students got to all the different types of stations)
2. The lab manager (you or another trainer) will let them know when they will change stations.
3. If time permits, rotate coaches that remain at the stations.

Debrief
1. Get their impressions without giving any information
2. Ask open ended questions
3. Find out if anyone has tried this approach already and have them describe their experiences compared to what they just did.
4. What things did they learn that were new?
5. Highlight: importance of planning, open lab, helpers, how resources could be used and re-used, simulation of hand washing (not just stating it) and anything else that comes up as a teachable moment.
Learning Exercise for Session 3.4
S3.4 Station Rotation Learning Exercise

Objectives:
1. Practice coaching at a station where students will rotate through.
2. Follow time limit of lab manager and send students to the next station.
3. Debrief on rotation exercise (time at each station, having similar or different stations, use of senior students, etc.).

Materials: checklist, Handout 3.3: Coaching Aid with Talley Sheet, Handout S3.1: Lesson Plan Template, station set up and materials, markers, pens

Time: 150 minutes

Instructions:
- Gather with your group at your station.
- Coaches will remain at the stations for the first round (one round means that all learners completed all stations).
- The lab manager (one of the facilitators) will let them know when they will change stations.
- If time permits, rotate coaches that remained at the stations so that other coaches get a sense of repeating a coaching session for different students.
### SESSION 4.1

**Plan for Session 4.1**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Venue:</th>
<th>Session Number:</th>
<th>Duration: 105 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month/day/year</td>
<td>Training room</td>
<td>4.1</td>
<td></td>
</tr>
</tbody>
</table>

**Topic:** Monitoring and Evaluating the Simulated Setting

**Session Objective**

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

- Define monitoring.
- Describe how to monitor simulation center.
- Discuss monitoring SBM-R standards related to the simulation center.
- Define evaluation.
- Modify standards to incorporate latest evidence.
- Discuss revision of demonstration, coaching and feedback for evaluation.
- Discuss revision of tools utilized in the simulation practice (guidelines, checklists and models).

<table>
<thead>
<tr>
<th>Methods and Activities</th>
<th>Materials/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction (10 min.)</strong></td>
<td>- PowerPoint slides of session two</td>
</tr>
<tr>
<td><strong>Interactive Presentation (40 min.):</strong></td>
<td>- LCD and laptop</td>
</tr>
<tr>
<td>Highlight:</td>
<td>- Flip chart and markers</td>
</tr>
<tr>
<td>- Use of standards to monitor</td>
<td>- Reference articles</td>
</tr>
<tr>
<td>- Use of student feedback for monitoring to improve sim. center activities</td>
<td>- SBM-R assessment form—split into sections for different groups to take different sections related to simulation activities</td>
</tr>
<tr>
<td><strong>Summary (10 min.)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Activity:</strong></td>
<td></td>
</tr>
<tr>
<td>- Review and suggest revisions for standards (40 min.) 20 min. group work and 5 min. presentations.</td>
<td></td>
</tr>
</tbody>
</table>

**Review/Evaluation:** The session went fairly smoothly. The learner was actively engaged. Some of the points on feedback and debriefing were repeated and I preferred to escape them. For the next time we need to includes points which particularly relate with simulation center and its application to the context. These revisions have been done. Debriefing was moved to an earlier session and the presentation has been revised to fit more with simulation needs.
Objectives

- Define monitoring.
- Describe how to monitor the simulation center.
- Discuss monitoring SBM-R standards related to the simulation center.

Objectives, Cont.

- Define evaluation.
- Modify standards to incorporate latest evidence.
- Discuss revision of demonstration, coaching and feedback for evaluation.
- Discuss revision of tools utilized in the simulation practice (guidelines, checklists and models).

What is Monitoring Teaching and Learning?

- **Monitoring** is a continuous, cyclic process of collecting information about teaching and learning process for practical judgment and decision-making.
- **Effective monitoring** Open organizational culture, commitment to students’ learning, self-awareness, constructive feedback, reflection and professional development.

Why Monitoring?

- CMT meetings with documentation
- Debriefing sessions
- Functional standards
- Active management binder
- Open lab usage
- Equipment and simulator observation and tracking of maintenance

Monitoring Simulation Center

- CMT meetings with documentation
- Debriefing sessions
- Functional standards
- Active management binder
- Open lab usage
- Equipment and simulator observation and tracking of maintenance
Monitoring Information

- Process
  - Is the skills lab organized?
  - How is the student flow?
  - Is there sufficient time for all lab sections to practice?
  - What methods and materials were used?
  - Ratio of simulation center staff to students?

Monitoring Information, Cont.

- Immediate Outcomes
  - What have students achieved as a result of the lab section?
  - Were the learning objectives achieved?
  - Do students demonstrate the applied knowledge to the skills and attitudes expected?

Measure Immediate Outcomes

- You can measure the immediate outcomes of a session, rotation, course or term.
- The purpose is to determine if the students:
  - Understood what was demonstrated, and in turn
  - Demonstrated the expected knowledge, skills and attitudes,

Measure Immediate Outcomes, Cont.

- Review the results of previous practical assessments.
- Assess a sample of current students.

Feedback from Students

- Extent to which the course met the students’ expectations
- Appropriateness of the practical teaching and assessment methods used
- Appropriateness of the materials used
- Aspects of the simulation center that students found the most or least helpful
- Links between theoretical and practical sessions

Options for Student Feedback

- Feedback questionnaire (Sample 12-1)
- One-on-one interviews
- Informal discussions
- Debriefing sessions
- Focus group interviews
Are you using SBM-R for monitoring and evaluating simulation in your teaching institution?

13. Instructors use the demonstration and practical lab effectively for demonstrating practical skills

Verify through observation of two practical lab sessions.

Verify whether instructor uses learning lab to foster practical learning by:

13.1 Ensuring that all students have the necessary learning materials (e.g., supplies, models, manuals, etc.)
13.2 Describing the skill and why the skill is important
13.3 Describing steps involved in the skill, using the relevant learning guide
13.4 Simulating practical setting as much as possible
13.5 Proceeding in a step-by-step manner
13.6 Demonstrating skill accurately
13.7 Demonstrating skill from beginning to end, without skipping steps
13.8 Interacting with students, asking and answering questions
13.9 Using all the necessary supplies and equipment
13.10 Demonstrating procedures so that all students can see
13.11 Ensuring that each student follows using a learning guide
13.12 Summarizing and asking students if they have questions

14. Instructors use the practical skills lab effectively for student practice of practical skills

Verify through observation of one practical skills lab session whether instructor uses learning lab to foster practical learning:

1. Allowing students to practice the skill in small groups, taking turns with various roles (practicing, observing, giving feedback, simulating role of patient)
2. Ensuring that there are no more than six students per group
3. Observing students practicing and providing feedback in a positive and constructive manner
4. Questioning students to check their knowledge and problem-solving skills
5. Summarizing the session before the end

What is Evaluation?

Evaluation is the periodic assessment of the overall process and final results of a course or academic program.
Why Evaluation?

- Make Decision
- Assess Student and Teacher Success
- Measure Course Effectiveness
- Lessons Learned
- Control Utilization of Resources
- Review or Reinforce

Types of Evaluations

- Process
- Outcomes
- Effectiveness
- Impact
- Let's look at Table 12-1.

Possible Modifications Based on Monitoring and Evaluation

- Reorganizing the course and hence lab sessions
- **Revising learning lab objectives**
- Identifying new methods for demonstration, coaching and assessment or refining existing methods

Possible Modifications, Cont.

- Choosing new materials or revising existing materials (e.g., learning guides, checklists, protocols)
- **Selecting new practice facilities or upgrading existing ones**
- Improving human resources and coordination with other teaching units or courses

Group Activity

- Divide by discipline.
- Choose a recorder, reporter and time keeper.
- Take assigned standard and analyze it (20 minutes).
- Decide on any modifications based on what you have learned here and per evidence.
- Present your modifications in 5 minutes.

Take Home Points

- Use assessment results to guide revision simulation center activities.
- Select appropriate interventions when students are unable to demonstrate competency.
- Revise SBM-R tool to reflect the monitoring and evaluation that you would like to implement.
- Use expected results and work backward to see if activities and assessments in simulation center reflect learning objectives.
Narration Notes for Session 4.1

Session 4.1: Monitoring and Evaluating Teaching and Learning in the Simulated Setting

Slide 1
If you can, scratch the whole presentation and create a game, or brainstorm on what might be considered monitoring versus evaluation with regard to the simulation center. Then, have them do the activity. We have done that in previous workshops and it would work well here also. It turns what can be somewhat dry material into something fun and something they will be less likely to forget.

Slide 2 [Read slide.]
Slide 3 [Read slide.]
Slide 4 You can hide this slide and the next if they already have this information from a previous workshop—go straight to slide 6.

Slide 5 [Read slide.]
Slide 6 [Read slide.]
Slide 7 [Read slide.]
Slide 8 [Read slide.]
Slide 9 [Read slide.]
Slide 10 [Read slide.]
Slide 11 [Read slide.]
Slide 12 [Read slide.]
Slide 13 Simulation-related standards from SBM-R tool if SBM-R is being used.

Slide 14 Replace these slides with your own standards that have simulation focus.

Slide 15 [Read slide.]
Slide 16 [Read slide.]
Slide 17 [Read slide.]
Slide 18 [Read slide.]
Slide 19 [Read slide.]
Slide 20 [Read slide.]
Slide 21 [Read slide.]

Slide 22 New protocols come out frequently, keeping up with vertical programs, in-service and involvement of the clinical sites in the evaluation would be helpful and sync the materials to the real world.

Slide 23 [Read slide.]
Slide 24 After you complete this module, you will be able to use assessment results to guide training, describe a variety of assessment tools and how they are used, determine learner qualification using assessment tools included in the learning package, and select appropriate interventions when learners are unable to demonstrate competency during a training.
Learning Exercise for Session 4.1
S4.1 Review Standards for Monitoring and Evaluation Learning Exercise

Objectives:
1. Analyze existing standards.
2. Modify/update standards based on evidence presented in this workshop.
3. Create sample standards for monitoring a simulation center if standards are not currently employed.

Materials: copies of standards (Appendix E), pens

Time: 90 minutes

Instructions:
- Divide by discipline.
- Have them choose a recorder, reporter and time keeper.
- Take assigned standard and analyze it (20 minutes).
- Decide on any modifications based on what you have learned here and per evidence or have learners create standards and ways to verify those standards.

If standards exist, then each group should present as each group would have a different standard. If there are no existing standards, each group should present unless another group has already presented what you would have. Allow 5–10 minutes for presentation depending on the size of the group and if they are presenting new standards or analyzing the existing ones.
POST-COURSE ASSESSMENT

USING THE POST-COURSE ASSESSMENT
This knowledge assessment is designed to help the learner monitor their progress during the course. By the end of the course, all learners are expected to achieve a score of 85% or better.

The assessment should be given at the time in the course when all subject areas have been presented. A score of 85% or more correct indicates knowledge-based mastery of the material presented in the reference material. For those scoring less than 85% on their first attempt, the facilitator should review the results with the learner individually and guide him/her on using the reference material to learn the required information. Learners scoring less than 85% can retake the assessment at any time during the remainder of the course.

Repeat testing should be done only after the learner has had sufficient time to study the reference material.

POST-COURSE ASSESSMENT ANSWER KEY
Simulation Training for Educators of Health Care Providers
Please choose the BEST answer(s) and CIRCLE the letter of the correct response. There are 20 multiple-choice questions and multiple True-False questions. For multiple True-False, place an “x” in the appropriate box.

1. Learning activities that are designed to help develop professional behaviors and attitudes include all of the following EXCEPT:
   a. Brainstorming
   b. Case studies
   c. Role plays
   d. Self-reflection

2. Competency in its simplest definition is:
   a. A set of job-related tasks
   b. Completing tasks quickly and efficiently
   c. The process of acquiring a new set of tasks
   d. Understanding all the tasks in one’s job description

3. Potential applications of simulation include all of the following EXCEPT:
   a. Design and testing of new clinical equipment
   b. Practice of complex situations, serious or rare events
   c. Routine basic training of students and teams
   d. Substituting all theoretical content with activities
4. Choose all that are appropriate by placing an x in the appropriate box.

Debriefing encourages:

<table>
<thead>
<tr>
<th>Answers</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion on how to intervene correctly in very complex situations</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Discussion prior to the simulated activity</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Linkage between theory and practice</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Reflective learning</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Thinking critically</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

5. Student A went to the simulation center to practice. She noticed two of her other classmates, Student B and Student C, and asked if she could join them. The lab manager said they are practicing “IV insertion on a model arm, would you like to join them?” Initially, she observed and then Student B soon asked her if she would follow along on the checklist and let her know what things she was doing correctly and incorrectly, so that Student C would not have to be both simulated patient and observer. Student C stated that the IV puncture hurt. Student B responded calmly letting her know that if the pain didn’t resolve quickly to let her know but that it was expected to hurt a little when first inserted. Student C said that pain was decreasing and Student B said great, I will now hook up your IV fluids so we can get you feeling better and then turned to perform hand hygiene and document the procedure. Student B said, “Student A would you like to be the patient or the nurse now?” Student A eagerly wanted to be the nurse so Student B became the patient and they rotated roles.

According the scenario above, indicate with an “x” which outcomes are true and which ones are false. The above simulated role-play provided:

<table>
<thead>
<tr>
<th>Answers</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior modeling</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Game</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Increase in self-confidence</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Learner satisfaction</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Opportunity to practice appropriate professional communication</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>OSCE</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Problem-solving opportunity</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
6. Locally made models:
   a. Are NEVER made in a factory
   b. Are NOT environmentally friendly
   c. **Must be designed to meet learning objectives**
   d. Require specialized training to create

7. Which of the following is the responsibility of a core management team?

<table>
<thead>
<tr>
<th>Answers</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assist to identify/appoint a lab manager</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Maintain the cleanliness of the lab on a daily basis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meeting regularly to review coordination issues</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Organize the materials in the closets, drawers, and cabinets</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Representing their department's course in reporting what objectives need to be met in the simulation center</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

8. Medical supplies are BEST stored in protective packaging and:
   a. Cardboard boxes so that it is secure and not clear what is inside the box
   b. Durable rubber, air tight containers
   c. **Clear plastic containers with clear labels of what is inside**
   d. Unlocked drawers for easy access to all

9. There are 5 departments (nursing, medicine, midwifery, lab and pharmacy) that are interested in having times in practice and assessment in a simulated environment. There are several courses in which they share the same clinical tasks, but these are mostly in the basic sciences with a few exceptions.
   What is the **MOST APPROPRIATE first step**?
   a. **Conduct a meeting with administration and CMT to discuss what courses would need to share the space/s and determine from there how many “rooms” would be needed in the center.**
   b. Exclude lab and pharmacy from the discussion since they only need a laboratory which is already available.
   c. Medicine should have a separate meeting, Nursing and Midwifery should meet together, and Lab and Pharmacy should meet together.
   d. Meet as individual departments as each department should have their own space; it is too complicated to share.
10. University A doesn’t have the money to include sinks in their simulation center until next year or the year after. They are advised that flip charts are posted with an image of a sink. On a follow-up visit you notice that students are actively stating that they washed their hands before per the checklists.

Your most effective response would be:

a. **Telling the coach that it is great that students are recognizing the importance of handwashing, but you would like the coaches to have them simulate handwashing for 15 seconds and discuss with them why that might be important.**

b. Telling the coach: Your flipchart is great and I am glad that you are instructing students to state that handwashing is key to their clinical tasks!

c. Telling the students directly: you moved very quickly to the second step and were just providing care to another patient. What do you think might happen to this patient that you are working with now?

d. Telling the students directly: That is great that you haven’t forgotten to include handwashing, but I would like to see that you actually simulate handwashing for 15 seconds before you move to the next step.

11. A new lab manager needs to set up all the equipment and supplies for the center. The local hospital has offered to donate unused equipment to the simulation center. They have also offered to assist in ordering disposable supplies if students also come to clinical practice with their own disposable gloves in their lab jackets. The Core Management Team has given you a list of all the tasks, the items that they need, and the number of students that need to practice. Rank from 1–4 the CORRECT order of next steps, 1 being the first step.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Rank in order of right performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish some type of alert system so you know when to notify vendors,</td>
<td>3</td>
</tr>
<tr>
<td>hospital and other donors for replenishment of supplies</td>
<td></td>
</tr>
<tr>
<td>Establish a way to categorize the list</td>
<td>1</td>
</tr>
<tr>
<td>Track any minor or major repairs</td>
<td>4</td>
</tr>
<tr>
<td>Create a form to track all the materials and equipment</td>
<td>2</td>
</tr>
</tbody>
</table>
12. Please indicate which are true and which ones are false with an x in the appropriate box. Choose the written simulation objectives that have the *specific action* and the **object of the action** CORRECTLY *italicized* and **bolded**:

<table>
<thead>
<tr>
<th>Answers</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counsel <em>patients</em> about STI risk reduction using a non-judgmental attitude</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td><em>Demonstrate how to use a female condom with a vagina model and penis model in a professional manner</em></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Test acids and bases with pH strips</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

13. Blueprinting for simulation is:
   a. A waste of time, plan to assess on all simulation-related objectives in an OSCE.
   b. **Key to matching assessment with learning objectives of the course**
   c. Requires specialized training in creating blueprints beyond this course.

14. Instructor M has set up stations for running practice on the related tasks of blood pressure measurement, apical heart rate, and temperature measurement in one room with two stations for each clinical task. The two senior students act as patients for apical pulse station. Laminated checklists and all the station materials and supplies are provided at each station. Instructor M pulls out her lesson plan and realizes she has forgotten one necessary item for the practice session to run smoothly.

   Which of the following does she need?
   a. **A watch to cue coaches when students should rotate practice stations**
   b. Assessors to evaluate students
   c. A 10 minute time limit for each station

15. Which of the following items is **NOT CORRECT** regarding Peer Assessment:
   a. Promotes increased ability to recognize and apply criteria, and formatively assess own and peer’s work.
   b. **Peers may be used to assess in summative assessment, such as OSCE, to reduce need for the instructors assessors.**
   c. Reduced need for instructors to coach/assess during practice.
   d. Provides a sense of ownership of formative assessment process, thus improving motivation.
16. A Senior Instructor, J, has written all his lesson plans for the semester’s upcoming clinical practice sessions and has worked closely with the lab manager to ensure that all materials will be ready for his students. After the first 2 weeks of class, he is ready to have them start working on simulated sessions. He has given them their assignments and he has organized senior students and junior instructors to assist with the lab sessions. The dean calls you, and tells you that Instructor J has fallen ill and will not be able to teach the remainder of the semester. He will need time to decide who will take over the in-class portion but was aware that Instructor J had created lesson plans for class and simulation. You are also a Senior Instructor.

What is your response? “Very sorry to hear that…..

a. …Shall we postpone class until next semester? Instructor J’s leadership is needed to continue and we need him”

b. …Where might I collect the lesson plans? We will inform the students and continue according to his lesson plans”

c. …Let’s cancel class the rest of the week until we can meet and discuss alternative plans”

17. Choose the CORRECT components of a simulation lesson plan:

a. Objectives, Game, Demonstration, Summary, Debriefing, and Resources


c. Objectives, Introduction/Demonstration, Return demonstration and practice, Debriefing, and Resources

d. Objectives, Story, Introduction/Demonstration, Return demonstration and practice, Debriefing, and Resources

18. Students are practicing lab draws for the first time on a model arm. You make your rounds between 2 stations to make sure all the students may benefit from your coaching. You notice that Student R is struggling but his classmates are not sure what to tell him. You ask him to start from the beginning.

What would be the MOST appropriate feedback when you see that he has used proper sterile technique but is unable to get inside the vein?

a. I noticed that the angle that you are inserting the needle is too deep. What is the angle that the needle should enter?

b. Perhaps you and I can set a separate time together to practice so we don’t waste the other students’ time today?

c. You have done well in using proper sterile technique. Perhaps you would like to try adjusting your angle and position to get inside the vein. Would you like me to demonstrate again or guide your hand through?

d. What angle does the checklist tell you to enter at? Okay, try again.
19. You have written a lesson plan for 3 first aid related clinical tasks that have been identified by your department as essential for practice upon deployment (leg splints, arm slings, and applying pressure to wounds) after your initial first aid lecture. You have 30 students that need to practice, 2 other instructor who teach first aid and are available during the identified lab time for the course, 2 senior students to act as patients, leg and wound models, and three scenarios that you have written for the stations.

*Besides a task specific checklist at each station*, Choose the following station set up that you would request from the lab manager, *considering instructor to student ratio*.

a. 1 hour time slot, 2 stations for slings, 2 stations for splints, 2 stations for wounds
b. 2 hour time slot, 1 station for slings, 1 station for splints and 1 station for wounds
c. 3 hour time slot, 1 station for slings, 2 stations for splints, 2 stations for wounds
d. 3 hour time slot, 2 stations for slings, 2 stations for splints, 2 stations for wounds

20. Please choose whether the element listed is a **monitoring activity** versus an **evaluation outcome** by marking an “x” in the appropriate box.

<table>
<thead>
<tr>
<th>Elements</th>
<th>Monitoring</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Management Binder Choosing new materials</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Choosing new materials</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>CMT meetings</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Equipment and materials tracking sheet</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Identifying new methods for demonstration, coaching or assessment</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Open lab log</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Reorganized courses</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Revised learning lab objectives</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
APPENDICES

USING THE APPENDICES
The appendices are KEY materials needed for the course. There will be references throughout the session plans and course schedule on when to use them. They are located in the Simulation Training CD-ROM that is part of this LRP. Appendix A includes all the handouts that instructors can print and distribute to learners. Appendix B includes the checklists that have been referred to in this LRP. Appendix C is the Individual Learning Plan, which is to be given to learners at the end of the course. Appendix D is a Sample Action Plan that is to be used during the institutional action planning on the last day. Appendix E is Sample Performance Standards, the section to print is Area 1, section B and only as a sample if there are no existing standards related to simulation. Appendix F includes other resources: reference PowerPoint presentations that facilitators may draw from, the ETS Reference Manual and a few instructions for facilitators related to some of the sessions. Appendix G compiles instructions for locally made models to incite interest and creativity for making low-cost, locally made models that assist in attaining competencies that educational institutions set for their programs. Appendix H is the Participant Course Evaluation. Appendix I is the Facilitator Evaluation of this LRP and course. Please fill this out and submit to Jhpiego’s Global Learning Office upon completion of a course at glo@jhpiego.net. Lastly, Appendix J is the reference articles that were compiled, with permission obtained for inclusion in this package. These articles are also referenced in the session plans, specifically on when to print and distribute to learners. Please DO NOT print the article S1.2 The History of Simulation in Medical Education and Possible Future Directions as Jhpiego has only received permission to have it on the CD-ROM.