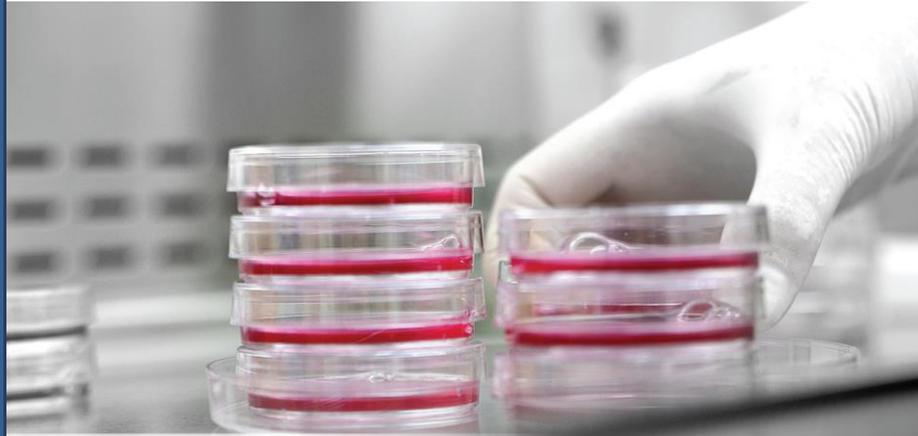


2015 Version

MODULE 2

Work Area Management



My lab provides a clean,
safe, and functional
work environment.

SLMTA Trainer's Guide

Overview

MODULE 2. WORK AREA MANAGEMENT

Performance Outcome

With satisfactory participation in the training and successful implementation of laboratory improvement projects, a participant's laboratory should achieve the following outcome:

- Clean, adequate, safe, and functional equipment, work space, and storage area

Checklist Items Supported by this Module

This module supports the requirements for the following items from the SLIPTA Checklist:

1.5, 2.1, 2.2, 6.1, 6.2, 7.8, 10.1, 10.2, 10.3, 11.4, and all items in 12.0 (Facilities and Safety Section)

Learning Objectives (Management Tasks)

By the end of this module, participants should be able to perform the following management tasks:

1. Assess any reported incidence or abnormalities
2. Authorize and follow up on repairs
3. Monitor staff adherence to safety rules & practices
4. Ensure appropriate physical work environment for testing
5. Ensure that safety equipment is accessible and readily available (e.g., place safety equipment such as sharp box and PPE close to work station to encourage use)
6. Ensure Safety Manual with safety procedures for laboratory functions and possible emergencies is accessible to and reviewed by all staff
7. Ensure reagents & chemicals are stored properly
8. Ensure that waste is properly disposed

What's in this Module?

ACTIVITY TITLE	PURPOSE	DURATION
Laboratory Safety Demonstrations	Safety concerns may be overlooked in the bustle of day-to-day laboratory activities. Two interactive and light-hearted demonstrations sensitize participants to the importance of safety.	15 min
Assessing Safety Incidents	Unsafe structures and practices impact the productivity and efficiency of laboratories. Through role-plays, participants learn to assess, document, correct, and follow-up safety incidents.	45 min

Overview

ACTIVITY TITLE	PURPOSE	DURATION
Conducting a Safety Audit	Safety is a primary concern for laboratory operations. In this activity, participants are introduced to conducting an assessment of facility and personal safety using the Laboratory Strengthening Checklist and reviewing laboratory photographs.	1 hr 35 minutes
What did we see on the Site Visits?	Knowledge of good laboratory safety practices does not always result in the implementation of these practices. This activity uses actual site visit photos to highlight and discuss why these unsafe practices persist despite knowledge to the contrary.	45 min
TOTAL ACTIVITY TIME:		3 hrs 20 min

Overview

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Activity: Laboratory Safety Demonstrations	2-1
Activity: Assessing Safety Incidents	2-5
Activity: Conducting a Safety Audit	2-11
Activity: What did we see on the Site Visits?	2-25

ACTIVITY Laboratory Safety Demonstrations Module 2

PURPOSE:

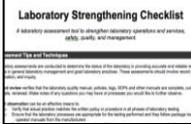
Safety concerns may be overlooked in the bustle of day-to-day laboratory activities. Two interactive and light-hearted demonstrations sensitize participants to the importance of safety.

RESOURCES FOR FACILITATOR:

-  [PowerPoint](#) slide: 2.3
- Supplies for:
 - Aerosolization demonstration** - A sample of flour or talcum powder and/or perfume
 - Blood splatter demonstration** - Two blood collection tubes filled with water (dyed with red food color), gloves, lab coats, gauze square, colored “sticky” dots

RESOURCES FOR PARTICIPANT:

- No materials needed

This activity supports the following laboratory management tasks and SLIPTA checklist items	
<p>Management Tasks</p> 	<p>2.3 Monitor staff adherence to safety rules & practices</p> <p>2.4 Ensure appropriate physical work environment for testing</p>
<p>Checklist Items</p> 	<p>12.4 Is the physical work environment appropriate for testing?</p> <p>12.7 Is the work area clean and free of leakage & spills, and are disinfection procedures conducted and documented?</p> <p>12.15 <u>Safety Equipment</u> Is standard safety equipment available and in use in the laboratory?</p> <p>12.16 <u>Personnel Protective Equipment</u> Is personal protective equipment (PPE) easily accessible at the workstation and utilized appropriately and consistently?</p> <p>12.17 <u>Staff Vaccinations</u> Are laboratory personnel offered appropriate vaccination and employee medical surveillance?</p>

This activity is related to the following activities:	
	<p>Module 2: Assessing Safety Incidents, Conducting A Safety Audit, What did we see on the Site Visits?</p>

ACTIVITY AT-A-GLANCE				
Step		Time	Resources	Key Points
1	Explain that laboratory safety is important to many key stakeholders	5 min	Flipchart & markers	
2	Conduct Demonstration 1: Aerosolization	2 min	Slide 2.3 Demonstration Supplies	
3	Conduct Demonstration 2: Blood Splatter	3 min	Demonstration Supplies	
4	Debrief the activity	2 min		
5	Conclude the Activity	3 min		
	TOTAL TIME:	15 min		

PROCESS

Preparation

- Ready samples of talcum powder or flour and perfume for use.
- Fill two blood collection tubes with water (dyed red).
- Set up two “work” stations - each with a towel, a pair of gloves, and a red-water-filled blood collection tube. Place gauze at one station only.
- Place sticky colored dots near station without gauze.

Step 1. Explain that laboratory safety is important to key stakeholders 5 min

- Project  Slide 2.3. Discuss who benefits from a safe laboratory? The following are suggested key stakeholders:
 - The patient - A safe phlebotomy area reduces the risk of infection.
 - The integrity of the patient’s sample - Contaminated patient samples may result in incorrect diagnosis, which in turn may lead to improper treatment.
 - The individual laboratorian - The laboratorian risks illness or injury if exposed to on-the-job safety hazards.
 - All the laboratory staff - If one staff member is out of work because of job-related illness or injury, the workload will increase for the remaining laboratorians.
 - The community-at-large - Improper waste disposal puts the community at risk of infection and illness.
- Laboratory safety is everyone’s concern and ... everyone’s responsibility!

Step 2. Conduct Demonstration 1: Aerosolization 2 min

- Blow flour or talcum powder from your hands into the air to demonstrate how particles aerosolize and fill the air.
- Alternatively, spray perfume into the air to demonstrate the concept of aerosolization.
- Point out that disease-causing bacteria and organisms also aerosolize, just as the powder does, into the air in participants’ laboratories.

Step 3. Conduct Demonstration 2: Blood Splatter 3 min

- Recruit two volunteers from the audience.
- Direct each volunteer to one of the stations previously set up. Drape the volunteers with the towels to protect their clothing, or have each wear a lab coat.
- Have each volunteer uncap the tube of red-dyed-water. One will use gauze and one will not use gauze.
- Accentuate the “blood” splatters from the participant that did not use the gauze by placing the colored sticky dots on the towel or lab coat.

Step 4. Debrief the activity 2 min

- Simple practices like performing laboratory work in a breezy area or uncapping

tubes without gauze have safety consequences. Sensitization to these and many more unsafe practices begins with this activity and continues throughout the other Module 2 activities.

Step 5. Conclude the Activity 3 min



- Link to *Conducting a Safety Audit* activity. Laboratory safety begins with a safety assessment of each individual laboratory facility and practices.
- Highlight or reiterate the key messages below.
- Make sure participants achieved objectives of the activity.

⏪ **KEY MESSAGES**

- Laboratory Safety affects all the key stakeholders:
 - The patient, affecting his/her direct safety, plus the safety and integrity of the patient's sample
 - The individual laboratorian, and the entire laboratory & hospital staff
 - The community-at-large
- Laboratory Safety is everyone's concern ... and everyone's responsibility!

Can they:

- Think of and become sensitized to improper safety practices in all daily laboratory routines?
- Create a safe environment for laboratorians, patients, and the community?

☑ **ACTIVITY OBJECTIVES MET?**



Aerosolization Demonstration



Blood splatter demonstration



ACTIVITY **Assessing Safety Incidents** **Module 2**

PURPOSE:

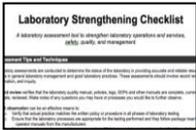
Unsafe structures and practices impact the productivity and efficiency of laboratories. Through role-plays, participants learn to assess, document, correct, and follow-up safety incidents.

RESOURCES FOR FACILITATOR:

-  [PowerPoint](#) slides: 2.4 to 2.5
- [Tool: Role-play scripts](#)
- Role-play supplies (see scripts)

RESOURCES FOR PARTICIPANT:

- [Worksheet: Occurrence Report Form \(201\)](#)

This activity supports the following laboratory management tasks and SLIPTA checklist items	
<p>Management Tasks</p> 	<p>2.1 Assess any reported incidence or abnormalities</p> <p>2.3 Monitor staff adherence to safety rules & practices</p> <p>2.6 Ensure Safety Manual with safety procedures for laboratory functions and possible emergencies is accessible to and reviewed by all staff</p>
<p>Checklist Items</p> 	<p>1.5 <u>Laboratory Policies and Standard Operating Procedures</u> Are policies and/or standard operating procedures (SOPs) for laboratory functions, technical and managerial procedures current, available and approved by authorized personnel?(Identification and Control of Nonconformities; Laboratory Safety Manual)</p> <p>2.1 <u>Routine Review of Quality and Technical Records</u> Does the laboratory routinely perform a documented review of all quality and technical records?</p> <p>10.1 Are all identified nonconforming activities/ work identified and documented adequately?</p> <p>10.2 <u>Root Cause Analysis</u> Is documented root cause analysis performed for non-conforming work before corrective actions are implemented?</p> <p>10.3 Is corrective action performed and documented for non-conforming work?</p> <p>11.4 Are quality indicators (TAT, rejected specimens, stock-outs, etc.) selected and tracked?</p> <p>12.7 Is the work area clean and free of leakage & spills, and are disinfection procedures conducted and documented?</p> <p>12.15 <u>Safety Equipment</u> Is standard safety equipment available and in use in the laboratory?</p> <p>12.19 Are adverse incidents or injuries from equipment, reagents, occupational injuries, medical screening or illnesses, documented and investigated?</p> <p>12.20 <u>Biosafety Training</u> Are drivers/couriers and cleaners working with the laboratory trained in Biosafety practices relevant to their job tasks?</p>

This activity is related to the following activities:	
	<p>Module 2: Laboratory Safety Demonstrations, Conducting a Safety Audit, What did we see on the Site Visits?</p>

ACTIVITY AT-A-GLANCE				
Step		Time	Resources	Key Points
1	Discuss the effects of safety incidents on laboratory function	5 min	Slide 2.4	
2	Introduce the role play activity	5 min	Slide 2.5 <u>Worksheet</u>	
3	Conduct / Debrief the activity - Safety Incident #1	10 min	<u>Tool</u> <u>Worksheet</u>	
4	Conduct the activity - Safety Incident #2	10 min	<u>Tool</u>	
5	Debrief the activity - Safety Incident #2	10 min	<u>Worksheet</u>	
6	Conclude the Activity	5 min		
	TOTAL TIME:	45 min		

PROCESS

Preparation

- Copy the [Tool: Role-play Scripts](#) for 4 volunteer “actors”.
- Select 4 participants as “actors” for the role-plays. Provide them with the scripts ([Tool](#)), and brief them on how to act out the incidents.

Step 1. Discuss the effects of safety incidents on laboratory function 5 min

- Project  [Slide 2.4](#). Review the associated Framework Task.
- Explore why it is important to assess safety incidents. Safety incidents can cause illness & injury, which in turn affect employee productivity, and ultimately lead to loss of efficiency in laboratory operations.
- Remind participants that all safety incidents must be documented. As in all areas of the laboratory, NOT DOCUMENTED = NOT DONE! (or in the case, did not occur)
- Emphasize that documenting a safety incident on an Occurrence Report Form such as the [Worksheet: Occurrence Report Form](#) is not sufficient follow-up. The occurrence report must include a corrective action, and that corrective action must be followed up.
- Stress that the nature of the problem dictates the corrective action. For example, the corrective action may be as simple as instructing the employees to do a certain action or stop doing a certain action. Or, the corrective action may be complex and may require systemic change, using tools such as process mapping, fishbone, “5 Whys”, etc.

Step 2. Introduce the role-play activity 5 min

- Project  [Slide 2.5](#). Two safety incidents will be portrayed.
- Refer participants to the [Worksheet: Occurrence Report Form](#). This is an example of a form for documenting not only the occurrence, but the follow-up action, and the reassessment also.
- After the Safety Incident #1 is presented, the entire group will work together to determine how to document the occurrence, using the [Worksheet](#) as a guide. Following the presentation of Safety Incident #2, participants will complete the [Worksheet](#) as an individual activity.

Step 3. Conduct / Debrief the activity - Safety Incident #1 10 min

- Ask participants to briefly respond verbally only to the following four sections of the [Worksheet: Occurrence Report Form](#): Brief Description of Occurrence, Immediate Action Taken, Corrective Action Plan, and Proposed Follow-up Action.
- Debrief this role-play as an example of an incident where the corrective action is simple and individually directed. In this case, the laboratory manager should instruct the courier/employee on proper specimen transport. Assume that other couriers do not have such incidents reported against them, and this is an individual issue.
- This is another opportunity to remind the participants that documentation of an issue, and accumulation of data, is important for managing risk.

Step 4. Conduct the activity - Safety Incident #2 10 min

- Following the presentation of the role-play, allow participants 5 minutes to complete the [Worksheet: Occurrence Report Form](#). Let the participants know that you will be looking for a volunteer to share his/her report with the participants.
- Instruct them to be brief with the writing, including only the following four sections: Brief Description of Occurrence, Immediate Action Taken, Corrective Action Plan, and Proposed Follow-up Action. The patient identification, demographic data, etc. are not to be completed.
- Encourage them to focus on assessing the situation, identifying an appropriate corrective action, and following-up.

Step 5. Debrief the activity - Safety Incident #2 10 min

- Ask for one volunteer to present his/her report ([Worksheet](#)). Remind the volunteer that the focus of the presentation is on appropriate assessment of the situation, corrective action, and how to follow up that action to see if it was effective. Allow 4 minutes.
- Summarize the volunteer's report. Ask for additional ideas/comments on the corrective action and follow-up.
- Debrief this incident as a complex issue, requiring a system-wide change. There must be a policy for appropriate footwear, a laboratory safety plan, MSDS (Material Safety Data Sheets) on all hazardous chemicals to indicate how to handle spills/burns, etc.

Step 6. Conclude the Activity 5 min



- Link to activities - *Laboratory Safety Demonstrations, Conducting a Safety Audit, and What did we see on the Site Visits?*
- Highlight or reiterate the key messages below.
- Make sure participants achieved objectives of the activity.

⤴ **KEY MESSAGES**

- Safety incidents cost the laboratory in terms of employee injury/illness, loss of money, and loss in productivity. Our first goal is to prevent any safety incidents. However, if and when safety incidents do occur, we must assess the risk, seek a solution, and follow-up appropriately.
- Assessing and documenting safety incidents, and implementing appropriate corrective actions are important responsibilities of laboratory management.
- Corrective actions are dictated by the nature of the incident. Corrective actions may be simple or complex. The actions required may be in the form of providing instructions or may require a system change.

Can they:

- Assess a safety incident?
- Complete an occurrence report form, focusing on accurate assessment, immediate action/s, and a proposed corrective action/s?
- Follow-up and assess the effectiveness of the corrective action?

ACTIVITY OBJECTIVES MET?

Tool: Role-play Scripts

Safety Incident #1 (Script)	
<p>PROPS:</p> <ul style="list-style-type: none"> ▪ Plastic bag with leaky blood tube (simulate blood with food coloring or tomato sauce) ▪ Laboratory coat, if available 	<p>ROLES:</p> <ul style="list-style-type: none"> ▪ Courier ▪ Laboratorian receiving specimens
<p>ACTION:</p> <p><u>Courier</u> arrives with bag with a broken/leaky blood tube, presents specimen to laboratory, and says, "Here is the specimen from Hospital _____. Please process it."</p> <p><u>Laboratorian</u> politely rejects the specimen by saying, "The laboratory cannot accept this specimen because it represents a safety hazard."</p> <p><u>Courier</u>: "It was positioned under auto spares in my vehicle".</p>	
Safety Incident #2 (Script)	
<p>PROPS:</p> <ul style="list-style-type: none"> ▪ Label one bottle, filled with water, "Acid" ▪ Lab coats for each laboratorian, if available ▪ Table, to represent a workbench ▪ Book or paper labeled "Laboratory Safety Plan" 	<p>ROLES:</p> <ul style="list-style-type: none"> ▪ Laboratorian #1, female, wearing open-toed shoes or sandals ▪ Laboratorian #2
<p>ACTION:</p> <p><u>Laboratorian #1</u>: Working at the bench, she holds up the bottle labeled acid, takes the lid off, and accidentally drops it on her toes. She grimaces and screams in pain.</p> <p><u>Laboratorian #2</u>: Rushes in to check on Laboratorian #1, asking "What happened?"</p> <p><u>Laboratorian #1</u>: "I dropped this acid on my toes. They are burning very badly. You must tell me what to do for an acid burn."</p> <p><u>Laboratorian #2</u>: "There is no Laboratory Safety Plan or MSDS sheet to tell us how to provide first aid for acid burns. I don't know what to do. I suppose that we must get you to the clinic to see the doctor. I guess your toes will just have to continue to burn while we go to the clinic."</p>	

Worksheet: Occurrence Report Form

DATE OF OCCURRENCE 10-10-20XX DATE OF REPORT 10-10-20XX

TIME OF OCCURRENCE 09:30 Requires immediate attention by manager Yes No

PERSONNEL REPORTING OCCURRENCE M.Y. Self

PATIENT'S NAME Not Applicable PATIENT ID Not Applicable
(IF APPLICABLE) (IF APPLICABLE)P

PATIENT'S CLINICIAN Not Applicable

LOCATION OF OCCURRENCE Laboratory Work Bench

BRIEF DESCRIPTION OF OCCURRENCE _____

IMMEDIATE ACTION TAKEN (If any) _____

CORRECTIVE ACTION PLAN _____

FOLLOW-UP ACTION _____

SIGNATURE OF REVIEWER _____ DATE _____

CLINIC DIRECTOR _____ DATE _____

ACTIVITY **Conducting a Safety Audit** **Module 2**

PURPOSE:

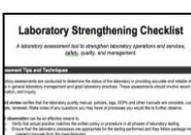
Safety is a primary concern for laboratory operations. In this activity, participants are introduced to conducting an assessment of facility and personal safety using the SLIPTA Checklist and reviewing laboratory photographs.

RESOURCES FOR FACILITATOR:

-  [PowerPoint](#) slides: 2.6 to 2.9
- Tool 1: Laboratory photos**
 - [JPG version \(202\)](#)
 - [PowerPoint version \(203\)](#)
- Tool 2: Lab Photo PowerPoint with Answers (204)**
- Tool 3: Completed Photo Audit Answer Sheet**
- Four envelopes

RESOURCES FOR PARTICIPANT:

- The SLIPTA Checklist (001)**
- Worksheet: Photo Audit Answer Sheet (205)**

This activity supports the following laboratory management tasks and SLIPTA checklist items	
<p>Management Tasks</p> 	<p>2.3 Monitor staff adherence to safety rules & practices</p> <p>2.4 Ensure appropriate physical work environment for testing</p> <p>2.5 Ensure that safety equipment is accessible and readily available (e.g., place safety equipment such as sharp box and PPE close to work station to encourage use)</p> <p>2.6 Ensure Safety Manual with safety procedures for laboratory functions and possible emergencies is accessible to and reviewed by all staff</p> <p>2.7 Ensure reagents and chemicals are stored properly</p> <p>2.8 Ensure that waste is properly disposed</p>
<p>Checklist Items</p> 	<p>1.5 <u>Laboratory Policies and Standard Operating Procedures</u> Are policies and/or standard operating procedures (SOPs) for laboratory functions, technical and managerial procedures current, available and approved by authorized personnel?(Identification and Control of Nonconformities; Internal Audits; Accommodation and Environmental Conditions; Laboratory Safety Manual)</p> <p>2.1 <u>Routine Review of Quality and Technical Records</u> Does the laboratory routinely perform a documented review of all quality and technical records?</p> <p>2.2 <u>Management Review</u> Does the laboratory management perform a review of the quality system at a management review meeting at least annually?</p> <p>6.1 <u>Internal Audits</u> Are internal audits conducted at intervals as defined in the quality manual and do these audits address areas important to patient care?</p> <p>6.2 <u>Audit Recommendations and Action Plan & Follow up</u></p> <p>7.8 <u>Storage Area</u> Are storage areas set up and monitored appropriately?</p> <p>12.14 <u>Safety Audits</u> Are safety inspections or audits conducted regularly and documented?</p> <p><u>Entire Section 12.0 – Facilities and Safety - covered by this activity</u></p>

This activity is related to the following activities:



Module 2: Laboratory Safety Demonstrations, Assessing Safety Incidents, What did we see on the Site Visits?

ACTIVITY AT-A-GLANCE				
Step		Time	Resources	Key Points
1	Review the Safety Assessment Checklist	10 min	Slides 2.6 to 2.8 <u>Checklist</u>	
2	Introduce the Laboratory Photo Safety Audit Activity	5 min	Slide 2.9 <u>Worksheet</u>	
3	Conduct the Laboratory Photo Safety Audit	30 min	<u>Worksheet</u> <u>Tool 1</u>	
4	Review safety audit findings	20 min	<u>Tool 2</u>	
5	Correlate Assessment Findings with Checklist <u>Overnight Homework</u>	10 min	<u>Checklist</u> <u>Worksheet</u>	
6	Debrief the homework	15 min	<u>Worksheet</u> <u>Tool 3</u>	
7	Conclude the Activity	5 min		
	TOTAL TIME:	95 min		

PROCESS

Preparation

- Print one set of lab photos (30) using [JPG version](#) of [Tool 1: Laboratory photos](#) either on 5X7 size photo paper or regular paper. Number the photos 1 to 30 on the back according to the order noted in [Tool 1](#). Divide the set into four groups and place each group in an envelope marked with the corresponding photo numbers (for example, 1-7, 8-15, 16-22, 23-30).
- Alternative: use [PowerPoint version](#) of [Tool 1: Laboratory photos](#) to project the lab photos to the entire group.



Overnight Homework: After this activity, ask participants to complete the 'checklist' (center) column and 'corrective action' (right) column of [Worksheet: Photo Audit Answer Sheet](#) as homework.

Step 1. Review the SLIPTA Checklist

10 min

- Project  [Slides 2.6 to 2.8](#). Refer to the Laboratory Framework Tasks and the [SLIPTA Checklist](#) - Safety section.
- Emphasize that laboratories must be assessed routinely for safety hazards. Not only must the laboratory facilities be assessed, but the personal safety practices of the laboratorians must also be assessed.
- Note that the framework dictates a safe working environment. The checklist is a tool for assessing whether the framework tasks have been performed adequately. This checklist assesses specific requirements for a safe laboratory.
- As a group, review each item in the Safety section of the checklist. Ask participants to find questions relating to specific topics. Allow 10 minutes for familiarization with the checklist.
- State that we will be performing a laboratory assessment using photographs. Participants will be asked to look at the pictures and determine if the facility or practice pictured is safe or unsafe.
- Indicate that each participant will be expected to return to his/her own laboratory and perform a safety self-assessment.

Step 2. Introduce the Safety Audit Activity

5 min

- Project  [Slide 2.9](#). Divide participants into four groups. Give each group an envelope with the photos.
- Indicate that there will be 7 or 8 photos in each envelope. The participants will have 7 minutes to review the photos in each envelope. Then the photos will be rotated to the next group of participants.
- Refer participants to the [Worksheet: Photo Audit Answer Sheet](#).
- As participants review each picture, they are to record the laboratory facility or safety practice depicted and indicate whether it is safe or unsafe, all in the **left column** of [Worksheet](#). Remind participants to mark the answer in the row with number that corresponds to the number on the photo.
- Tell participants that there will be one main issue per photograph and they should spend no more than 1 minute per photograph in the exercise.
- Remind participants that there will be one safe laboratory facility or practice

present in each group of pictures, so not every example will be an error.

- Demonstrate the process using the first photograph or slide.

Step 3. Conduct the Safety Audit Using Photos

30 min

- Begin the timer, allowing 7 minutes for each group to assess an envelope of photos. Have each participant record answers on his/her [Worksheet: Photo Audit Answer Sheet](#).
- Monitor the activity. Make sure participants use their time efficiently so they can complete the activity within the time allotted.
- Rotate photos to the next group and proceed with timing for 7 minutes.
- Continue until each group has seen all 30 photos.
- If using [PowerPoint version](#) of [Tool 1: Laboratory photos](#), project the slides, allowing 1 minute for each slide. Each participant will complete his/her own [Worksheet](#) independently.

Step 4. Review Safety Assessment Findings

20 min

- Project [Tool 2: Lab Photo PowerPoint with Answers](#). Solicit response from the participants before revealing the answers.
- Discuss the safety violations. Also allow participants to identify the safe practices depicted.
- Clarify any misconceptions.

Step 5. Correlate Audit Findings with Checklist

10 min

- Instruct participants to complete [Worksheet: Photo Audit Answer Sheet](#) by 1) locating and recording the corresponding checklist item in the 'checklist' (center) column; and 2) if safety is violated in the picture, note necessary corrective action in the 'corrective action' (right) column.
- Assign this work for homework overnight.

Step 6. Debrief the homework

15 min

- Review the responses for the 'checklist' and 'corrective action' columns in [Worksheet: Photo Audit Answer Sheet](#).
- Solicit responses from all participants, moving systematically around the room.
- Reiterate the importance of using the checklist and always following up with corrective action. Refer to [Tool 3: Completed Photo Audit Answer Sheet](#) for suggested answers.

Step 7. Conclude the Activity

5 min



- Link to activities - *Laboratory Safety Demonstrations, Assessing Safety Incidents and What did we see on the Site Visits?* A manager's responsibility is to ensure that the laboratory is a safe working environment for the laboratorians, as well as to protect the safety and security of the patients, the patient sample, and the community as a whole.
- Highlight or reiterate the key messages below.
- Make sure participants achieved objectives of the activity.



KEY MESSAGES

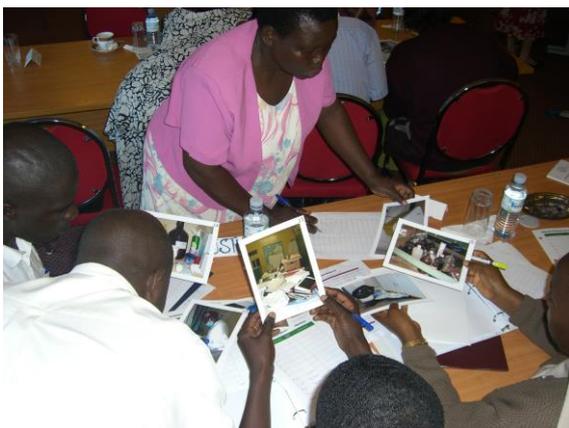
- Safety in the laboratory is not optional.
- There are many safety practices that are in the control of the laboratorians.
- Safety is everyone's responsibility.
- The laboratory supervisor or manager must assess the facility and safety practices for compliance with standards and guidelines. The checklist is a tool for this assessment.
- Corrective Action is imperative as a follow-up to an assessment with the checklist.

Can they:

- Use the checklist to perform a safety assessment?
- Determine appropriate corrective actions for deficiencies noted during the assessment with the checklist?
- Institute improvement projects for safety deficiencies that require a systemic approach?



ACTIVITY OBJECTIVES MET?



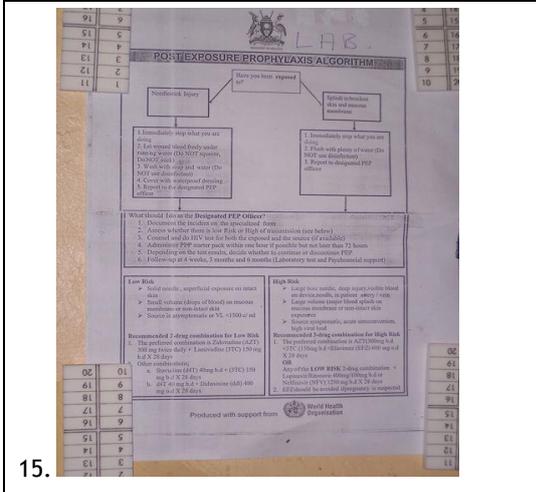
➤➤ Connections and Applications

- **Advocacy** - Ensuring facility safety, including procuring safety equipment, and ensuring consistent availability of personal protective equipment (PPE), may not always be in the control of the individual laboratorian or supervisor; however, laboratorians working collectively can create change through the power of advocacy.
- **Safety Audit** - Documentation of safety deficiencies provides data, which when compiled, provides the weight of evidence - a powerful tool for advocacy.
- **Policy / Safety Manual** - Policy is a driver for safety by setting standards or benchmarks. The laboratory manager must place the safety manual in the laboratory, assure that all staff have read it, and ensure that the policies and guidelines are followed.
- **Checklist** - The checklist provides the evidence of whether the policy is being implemented or not. A safety audit using the checklist is an important driver of improvement work.

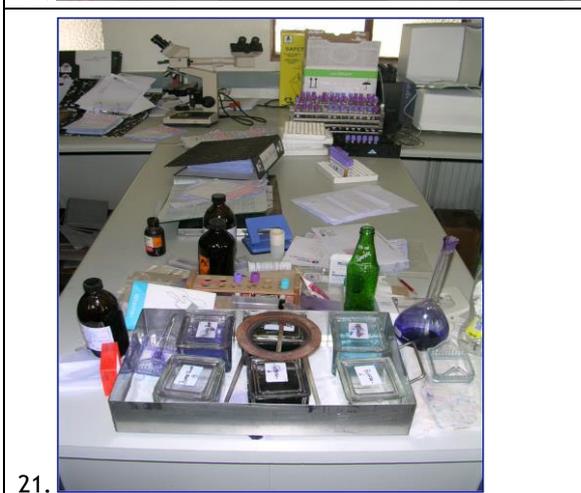
Tool 1: Laboratory photos



Tool 1: Laboratory photos



Tool 1: Laboratory photos



Tool 1: Laboratory photos



25.



26.



27.



28.



29.



30.

Tool 3: Completed Photo Audit Answer Sheet

Item		Checklist Item #	Corrective Action
1	Unsafe - Leaking analyzer	12.7	Repair
2	Inappropriate - Workstation /Work environment cluttered	12.3, 12.4	Sort, Straighten, & Organize workspace
3	Unsafe - Electrical cord in traffic flow	12.4	Re-rout plug out of traffic flow
4	Safe - First Aid Kit, Eyewash Kit, & MSDS Sheets available	12.11 12.15	
5	Unsafe - Food / Drink in Laboratory Refrigerator	12,4, 12.6	Remove food, Post signage
6	Unsafe sharp handling & blood contamination	12.12	Disposable tubes & slides best
7	Unsafe handling of infectious waste	12.10	Secure infectious waste then burn or incinerate
8	Unsafe - Spill with improper containment / cleaning	12.7	Repair leak, clean spill
9	Safe - Signage restricting Unauthorized Entry	12.5	
10	Unsafe - Improper storage of hazardous chemicals	12.11	Discard old chemicals according to MSDS sheets
11	Inappropriate - Workstation / Work environment cluttered	12.3, 12.4	5'S - Sort, Straighten, Shine, Standardize, & Sustain
12	Unsafe - Hazardous chemical storage next to drinking cup	12.11	Store chemicals separately from food items
13	Unsafe - Improper Blood Storage	12.6, 12.7	Store blood separately in refrigerators; Clean / disinfect spills
14	Unsafe - Improper sharps disposal - container overflowing	12.12	Replace sharps container before the current one is full
15	Safe - Post-Exposure Prophylaxis procedure posted on door of lab	12.18	
16	Unsafe - Temperature out of range	12.6, 12.7	Follow SOP on corrective action when storage temperature is out of range
17	Unsafe - Electrical cord stretched across counter & no UPS	12.4	Use UBS; Secure cords along wall

Tool 3: Completed Photo Audit Answer Sheet

Item		Checklist Item #	Corrective Action
18	Unsafe - Fire hazard - open flame next to potentially hazardous / flammable material; Cluttered workstation	12.3, 12.13	Keep open flame away from potentially flammable material; Organize workstation
19	Unsafe - Improper waste disposal, Improper separation of waste	12.10	Clearly defined waste disposal policy; Monitor waste disposal
20	Unsafe - Sharps improperly placed at work bench	12.12	Dispose of sharps after use; Do not leave sharp point exposed
21	Unsafe - Food/drink in lab	12.4, 12.6	No food or drink in lab
22	Unsafe - Eyewash access blocked	12.15	Provide unobstructed access to eyewash station
23	Unsafe - Improper hazardous chemical storage next to sink which is clearly labeled "Do not dump chemicals down the drain"	12.11	Store chemicals away from sink; Provide appropriate container for chemical disposal
24	Unsafe - Shower blocked, suboptimal tabling	12.15	Remove table; Place analyzer on appropriate support
25	Improper analyzer placement - too close to sink	12.4	Place analyzer away from sink
26	Unsafe - Poor storage, precarious positioning, and keeping non-functional equipment	5.8, 12.4	Remove nonfunctioning equipment from lab; Safe storage
27	Improper - Samples & reagents stored together	12.6	Best to store samples & reagents in separate refrigerators
28	Improper - Overstocked storage plus food in reagent refrigerator	12.6	No food in laboratory refrigerators
29	Unsafe - Blood and reagents stored together	12.6	Store blood in separate refrigerator best
30	Safe - Fire Extinguisher in place	12.13	

Worksheet: Photo Audit Answer Sheet

Laboratory Safety Assessment Safe versus Unsafe	Checklist Item #	Corrective Action, if indicated
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Worksheet: Photo Audit Answer Sheet

Laboratory Safety Assessment Safe versus Unsafe	Checklist Item #	Corrective Action, if indicated
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

ACTIVITY **What did we see on the Site Visits?** **Module 2**

PURPOSE:

Knowledge of good laboratory safety practices does not always result in the implementation of these practices. This activity uses actual site visit photos to highlight and discuss why these unsafe practices persist despite knowledge to the contrary.

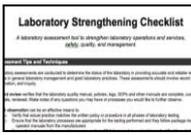
RESOURCES FOR FACILITATOR:

-  [PowerPoint](#) slide: 2.10
- Camera
- Computer with PowerPoint software

RESOURCES FOR PARTICIPANT:

- [Job Aid: Waste Disposal Decision Tree \(206\)](#)

This activity supports the following laboratory management tasks and SLIPTA checklist items

<p>Management Tasks</p> 	<p>2.3 Monitor staff adherence to safety rules & practices</p> <p>2.4. Ensure appropriate physical work environment for testing</p> <p>2.5 Ensure that safety equipment is accessible and readily available (e.g., place safety equipment such as sharp box and PPE close to work station to encourage use)</p> <p>2.6 Ensure Safety Manual with safety procedures for laboratory functions and possible emergencies is accessible to and reviewed by all staff</p> <p>2.7 Ensure reagents and chemicals are stored properly</p> <p>2.8 Ensure that waste is properly disposed</p>
<p>Checklist Items</p> 	<p><u>Entire Section 12.0 – Facilities and Safety - covered by this activity</u></p>

This activity is related to the following activities:

	<p>Module 1: Planning & Conducting a Staff Meeting</p> <p>Module 2: Lab Safety Demonstrations, Conducting a Safety Audit, Assessing Safety Incidents</p>
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ACTIVITY AT-A-GLANCE				
Step		Time	Resources	Key Points
1	Introduce Activity	5 min	Slide 2.10	
2	Share “What did we see on the Site Visits?”	20 min	Site Visit Photos - PowerPoint Presentation	
3	Discuss reasons for site visit findings	10 min	<u>Job Aid</u>	
5	Debrief the activity	5 min		
6	Conclude the Activity	5 min		
	TOTAL TIME:	45 min		

PROCESS

Preparation

- Photograph unsafe laboratory structures and practices during site visits. Import these photos into a PowerPoint for presentation. Be sensitive when discussing poor laboratory practices of a particular laboratory. Do not name the laboratory or embarrass anyone.

Step 1. Introduce the Activity

5 min

- Project  Slide 2.10. Inform participants that the photographs from the site visits will be shown.
- Proceed with photo presentation without further discussion at this time. Let the photos “speak for themselves” first.

Step 2. Share “What did we see on the Site Visits?” PowerPoint

20 min

- Present the photos taken on site visits as PowerPoint slides.
- Ask the participants to view the photos taken within their own laboratories.
- Allow participants to comment on what is unsafe in each photograph. Move quickly through the photos, pausing to clarify what is wrong with the photos.

Step 3. Discuss reasons for site visit findings

10 min

- Select one commonly encountered issue, such as improper waste disposal, as a way to begin the discussion. Acknowledge that often times knowing what should be done is not always what is done. “Head” knowledge does not always translate to change in behavior. Discuss why this is so. Possible responses include:
 - The environment is not designed to make compliance with waste disposal regulations easy.
 - The environment is not organized, clutter-free. The 6S system has not been implemented. There is no set place for everything and everything is not in its place.
 - There is no visual management of the environment, i.e. it is not easy to see what should be done and where waste is to be disposed.
 - Lack of ownership or accountability for waste disposal.
- In follow-up, ask what can be done to counteract these issues. Possible responses include:
 - Clearly define the waste disposal policy
 - Discuss / Review the policy at staff meeting
 - Create a visual workplace where proper waste disposal is easy to see - posting wall posters, color-coding trash bins and liners, etc. (See example - [Job Aid: Waste Disposal Decision Tree](#))
 - Organize the workplace physically so that proper waste disposal is easy to do
 - Organize the workplace with the 6S Tool - (See connections and applications below)
 - Provide consistent oversight, monitoring, and accountability

Step 4. Debrief the activity 5 min

- Remind participants that unsafe practices persist despite knowledge to the contrary.
- Often times, the deciding factor lies in the laboratory set-up. The laboratory must be organized to make proper waste disposal convenient and easy. The design of the laboratory effects not only waste disposal, but all safety practices.
- Relate story of lab manager checking the trash daily as the laboratory staff are modifying their behavior. Accountability & monitoring serve to reinforce good laboratory practice.

Step 5. Conclude the Activity 5 min



- Link to activities - *Laboratory Safety Demonstrations, Assessing Safety Incidents, Conducting a Safety Audit, and Planning and Conducting a Staff Meeting*. These activities all serve to sensitize the participants to the actual safety climate in the laboratories in the country. After sensitization, action is required to change that climate.
- Highlight or reiterate the key messages below.
- Make sure participants achieved objectives of the activity.

⏪ **KEY MESSAGES**

- Proper waste disposal relies on a clearly defined policy, a well designed and organized workspace, and accountability / oversight by laboratory management.
- A workspace requires physical organization. The design must be carefully thought out to reflect the way people actually work in the environment.
- A workspace requires visual organization. Visual cues that clearly communicate quickly and easily are required.

Can they:

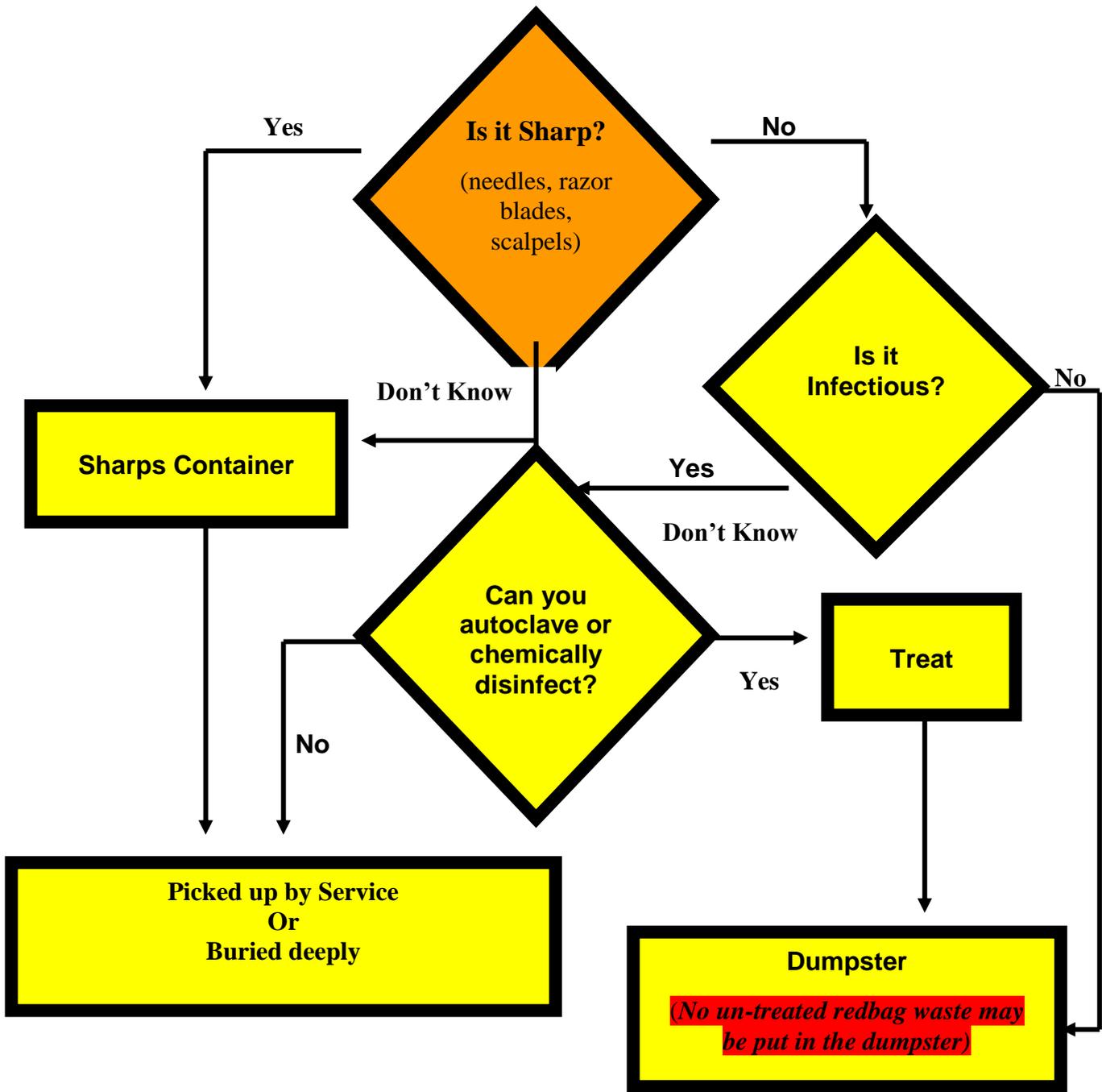
- Articulate the lab policy for safe waste disposal?
- Spot unsafe practices in waste disposal?
- Create a workplace that is organized physically and visually to promote not only safe waste disposal, but safety in all laboratory practices?

ACTIVITY OBJECTIVES MET?

 **Connections and Applications**

- **6 S Design** - A Tool used to organize the workplace!
 - **Safety** - Safety is the most important quality of the workplace. Safety is always first! Organize the workplace so as to minimize the risk of harm or injury. Eliminate the possibility that a defective service might harm the patient.
 - **Sort** - Get rid of what is not needed. Eliminate unnecessary items. Sort needed items according to frequency of use.
 - **Straighten** - Organize what belongs! Have “a place for everything and everything in its place”. Use labeling and visual cues to indicate where things belong.
 - **Shine** - Clean everything!
 - **Standardize** - Standardization is the key to keeping the workplace clean & organized. Standardize work by using standard procedures! This requires communication and oversight.
 - **Sustain** - It is a natural tendency to return to the ‘status quo’ - the way things have always been. Communication and management is required to avoid returning to the old way.
- **Staff Meeting** - The staff meeting is the primary means of communication to the staff. This is an opportunity to provide the safety policies and procedures to all the laboratorians. The policies can be reviewed, clarified, and signed to document understanding.
- **Benefits of Site Visit Photos** - Many times when one works in an environment on a daily basis, one does not see the unsafe structures or practices. But looking at one’s own laboratory through the lens of the camera allows these issues to be clearly seen. These photos provide a non-judgmental way to address chronic safety lapses.

Job Aid: Waste Disposal Decision Tree



University of Wisconsin – Milwaukee,
Department of University Safety &
Assurances, www.safety.umw.edu, May,
2006