
Tabletop Exercise: Communication and Coordination

Exercise Instructions

Training Goal

The tabletop exercises uses simulation-based activities to train students to identify and communicate with individuals within and outside the laboratory and institution to analyze potential risks and associated risk mitigation approaches. The exercise encourages students to consider with whom and how to work with individuals within their institutions to implement risk reduction measures.

Lead Developing Organization

Gryphon Scientific, LLC, USA

Developers

Gautham Venugopalan, Halima Benbouza, Khalid Temsamani, Lauren Richardson, Nisreen Al-Hmoud, Elias Rahal, and Kavita Berger.

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Tabletop Exercise: Communication and Coordination MENA Training Event

Goal

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Outcome

At the end of this exercise, students should be able to identify actions that elicit concern and an analysis of potential risks; identify situations about risk that require communication with individuals within and outside a laboratory and institution; and describe effective strategies for communicating risk. Students should be able to describe considerations and/or approaches for coordinating risk mitigation strategies with individuals within a laboratory and institution environment. Through this exercise, students may identify existing policies and best practices for addressing biosecurity and biosafety risks.

Output

This tabletop exercise results in the identification of risk communication strategies and biorisk management strategies, with an emphasis on communication and coordination with stakeholders. Discussion will center around a hypothetical scenario organized into two modules: Detection and Mitigation.

Materials

Copies of Tabletop Exercise Modules
Copies of the Tabletop Exercise Worksheet
Pens
Computer for notetaker

Process

To facilitate the tabletop exercise, instructors will follow the steps below. This exercise works best with 10 or fewer individuals. The instructor should describe ground rules for participating in this interactive exercise. These rules include overcoming deference to hierarchy or status, and ensuring that discussions among trainees is constructive rather than combative or judgmental.

Planning and Preparation

Step 1: The instructor defines the learning goals and objectives for this exercise. The learning goals should be outcome-based and address a training need. The instructor should limit the number of learning goals to a maximum of two per exercise. The learning goals should be key concepts that the exercise addresses. The instructor should limit the number of learning objectives to a maximum of four per

Teaching Tidbits

Tabletop exercises are particularly helpful in training students to recognize safety, security, and ethical problems that are not clearly presented, to identify strategies for addressing these problems, and to identify individuals with whom they should speak about these problems.

Instructors should identify aspirational goals for the tabletop exercise that challenge students to think beyond compliance with regulations to identify and address problems in realistic scenarios.

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learning goal. The learning objectives should be specific actions that inform student expectations for the exercise.

Step 2: The instructor identifies the risks or problems on which the exercise should focus and determines whether existing training materials address those areas or new materials are needed. The instructor can choose to use existing materials or develop his/her own materials (Step 3). The training materials should include a notional, but realistic scenario that focuses on the key learning goals and objectives.

Step 3: If existing training materials are needed, the instructor designs a notional scenario and associated questions. Each exercise (scenario and questions) should be realistic, able to be conducted with the allotted timeframe, and can be assessed using evaluation measures. In addition, scenarios should be straightforward, be simple, and provide sufficient information to allow students to focus on the primary problem presented in the scenario. In general, each scenario should be no greater than one page long. More than one part of a scenario (referred to as modules of a scenario) can be developed to address different risks or problems at different times during the tabletop exercise. The instructor should develop questions that encourage students to think critically about the problem, identifying potential risks associated with the problem, individuals within and outside the institution who play a role in preventing or mitigating potential risks, and measures that could prevent or mitigate the risks. The scenarios should be provided to students in a document separate from the worksheet containing the questions.

Step 4: The instructor develops a plan for conducting the exercise. Based on the size of the training session, the instructor should determine whether the exercise should be conducted in small groups. Groups should consist of approximately 8-10 students each. The instructors can assign students to specific groups or have students form their own groups. Assigning students to their own groups allows the instructor to encourage diversity of experience levels, scientific expertise, research focus, and gender within each group. Having students form their own groups can promote open and participatory discussion. However, it may limit the amount of creative thinking and consideration of different perspectives, which are critical aspects of the tabletop exercise. Once the instructor decides whether students will be divided into small groups, the instructor should create a plan for facilitation, which includes time to discuss the expectations and ground rules of the exercise, read the scenario(s), review the questions on the worksheet, and allow for discussion. If students are divided into small groups, time should be allotted for small group and large group discussion.

Exercise

The duration of this exercise, as outlined below, is approximately two hours long. The actual time required depends on the number of small groups involved. This exercise is not a role-playing activity, therefore students will be participating as themselves, bringing their own knowledge and experience into the discussions.

Step 5: The instructor should explain the objective and expectations of the exercise to students. The instructor should describe the learning goals of the tabletop exercise and expectations of students. This information enhances student understanding about the exercise itself and his/her role in the exercise. The instructor should inform students that the scenario is simulation-based and not real, but was designed to be realistic and focus on a particular problem or risk, and therefore, students should not argue with or otherwise critique the scenario. The instructor should inform students that they are expected to primarily consider

the problem described in the scenario, but they can be informed by their own experiences in the laboratory during the small and large group discussions. The instructor should stress the importance of welcoming different view points during the discussion, promoting a supportive environment for students to share ideas openly and without hesitation.

Step 6: The instructor should provide students 10 minutes to review the scenario. During this time, students should review the notional characters of the scenario, read the scenario, and read the associated questions. The instructor should reinforce to students the importance of highlighting key pieces of information in scenario that will help them answer the questions accompanying the scenario.

Step 7: The instructor should provide students 20 minutes to discuss and answer the questions on the exercise worksheet. The tabletop exercise is discussion-based. Students discuss each question in the worksheet, referencing information in the scenario and their own laboratory experiences to support their answers. Students work collegially and collaboratively during the exercise. During this time, the instructor should visit each group, offer to answer any clarifying questions and listen to the discussions, providing guiding questions if needed. If students are discussing topics that are irrelevant to the scenario and/or the problem presented, the instructor should redirect the discussion back to the exercise focus through direct instruction or guiding questions, depending on the degree of irrelevance. At least one student in each group should document the group's answers on the worksheet, indicating on what students agreed and disagreed.

Step 8: The instructor should spend 20 minutes discussing each groups' answers to the questions from the scenario (Step 7). During this time, one student from each group should report his/her group's answers to each question, highlighting the answers that the group agreed upon, those the group generally disagreed, and reasons for the group's answers. As students summarize their groups' answers, the instructor should write the answers on flip charts or a power point slide, indicating answers shared by more than one group. After all groups have summarized their answers, the instructor should discuss to each question, drawing on policies and best practices at his/her institutions and countries. The instructor should provide additional information about risks and practices that were not discussed already.

If a scenario involves only one module, Step 8 is the end of the exercise and the output is a description of the risks, risk prevention and mitigation practices, approaches for coordinating implementation of risk prevention/mitigation practices, and individuals to whom risks should be communicated. If a scenario involves more than one module, Steps 6-8 are repeated and build on the answers from the previous modules.

Step 12: The instructor should end the exercise by highlighting the primary outcomes from the scenario(s). The instructor should summarize the outcomes of the discussion, highlighting primary risks and prevention or mitigation practices, individuals with whom to communicate risks, and approaches for coordinating implementation of prevention and mitigation practices. Students can use this information to address similar problems in their own institutions. In addition, students and instructors can discuss other potential risks for which additional tabletop exercises may be developed and conducted.

Working with Large Groups

Although tabletop exercises can be conducted with 20-30 students, smaller group sizes of approximately 8-10 students each maximizes participation in the exercise. Therefore, if the number of students exceeds 30, instructors should consider dividing the students into smaller groups for completion of the worksheet for each module. After each group has had an opportunity to discuss their answers, a representative from each of the smaller groups should share their answers with the whole group, after which the instructor should engage the entire group in discussion to arrive at one list of risks and practices and the primary output. If students are divided into small groups, the instructor should have students discuss their answers with the entire group before initiating the second module.