

# #23 EXPERIENCES IN CONDUCTING FEDERAL SELECT AGENT PROGRAM DRILLS AND EXERCISES

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## Abstract:

Facilities authorized by the Federal Select Agent Program (FSAP) to possess select agents are required to perform drills or exercises at least annually to test biosafety, biosecurity and incident response plans. Columbia University has over ten years experience in performing tabletop exercises, drills and reporting of actual response events to fulfil FSAP expectations. We have engaged internal stakeholders such as Public Safety and Facilities Operations and external partners such as the FBI and Fire Department. We have appreciated the value in identifying exercise goals, establishing ground rules, recording video of in-person drills, having evaluators ask the right questions, performing a hot wash, and writing a meaningful after action report using Homeland Security (HSEEP) guidelines. Exercises have included plausible scenarios related to misdirected and leaking select agent packages, non-inactivated and mislabeled specimens mistakenly leaving the BSL-3 lab, biosafety cabinet, centrifuge and autoclave failures, person down, and insider threat, as well as having participants create scenarios (“choose your own adventure”). We will share our experiences to guide others who are looking to establish or maintain a successful drills and exercise program.

## Take home message:

It's a challenge to keep stakeholders engaged in fulfilling a regulatory requirement, especially in a Select Agent Program facility which has storage-only status. We have done this by continuously changing the format of our drills and exercises, providing realistic scenarios, and giving everyone a job to do. Our most engaging and effective exercises were a hybrid drill and table top (videoed drill in the BSL-3 lab critiqued by others) and a “Choose your own adventure” team-based tabletop exercise.

## Identify your exercise goals:

- Improve preparedness efforts
- Improve incident response abilities
- Clarify roles
- Build relationships with partners
- Identify any shortcomings in the:
  - ✓ BSL-3 Biosafety Plan
  - ✓ Security Plan
  - ✓ Incident Response Plan

## Identify the type of exercise:

- For full engagement, think small – generate scenarios that could realistically happen (not plane crashes or multi-agency responses)
- Drill – Practical simulation of actual event
  - Table top exercise – discussion based
  - Hybrid drill (videoed) and table top - Useful in areas where space is tight or there are access restrictions
  - Actual Incidents – We used Hurricane Sandy response for our 2012 exercise

## Ideas for crafting scenarios:

- Actual events – e.g. non-inactivated select agents leaving CDC lab
- Internal audit findings – e.g. incomplete records
- Experiences at other institutions - Networking with other ROs and Biosafety Officers
- Asking the investigators what they think their vulnerabilities are
- Adding multiple contributing factors to a scenario to create a perfect storm
- Guidance document from FSAP

## Establish ground rules:

- Confidentiality
- Varying viewpoints, even disagreements, are expected
- Exercises are intended to be an open, low stress environment
- Don't fight the scenario - Maintain realistic expectations of what the scenario entails

## Types of select agent exercise scenarios – 2011 to 2020:

- Misdirected package containing select agent (1)
- Leaky select agent-containing package received at lab
- Non-inactivated specimen leaves BSL-3 lab in mislabeled tube resulting in worker illness (2)
- Autoclave used to decontaminate select agents fails QC and requires lengthy repairs (3)
- Centrifuge fails, contaminates room and a fire starts
- Insider threat - Stolen select agent
- Person down in BSL-3 lab (4)

## Keep your participants engaged:

- Split players into two teams – e.g. Jr. and Sr.
- Appoint evaluators and note takers
- Involve external participants (e.g. FBI, local first responders)
- Provide floor plans for those unfamiliar with the lab layout
- Provide actual lab forms for participants to complete
- Use BSL-3 shutdowns as an opportunity to do in-person drills
- Choose your own adventure – One team of participants craft the scenario, the next team adds a complication, the third team formulates a response (5)

## Memorialize key lessons learned while still fresh (“hot wash”)

- Can be during the drill (“time out”) or immediately post; use your evaluators to weigh in

## Write a meaningful after action report:

- Commend positive behaviors
- Identify corrective actions (SOP revisions, training needs, resource needs)
- Distribute to all applicable stakeholders

