



Incident Response & Investigation


Student Guide

2013




GLOBAL BIORISK MANAGEMENT CURRICULUM





Introductions

- Instructors
- Students
 - Your name?
 - Where are you from?



Slide 2

Action Plan

By the end of this lesson, I would like to:

KNOW		FEEL		BE ABLE TO DO	
------	--	------	--	---------------	--

Your learning doesn't stop with this lesson. Use this space to think about what else you need to do or learn to put the information from this lesson into practice.

What more do I need to know or do?	How will I acquire the knowledge or skills?	How will I know that I've succeeded?	How will I use this new learning in my job?



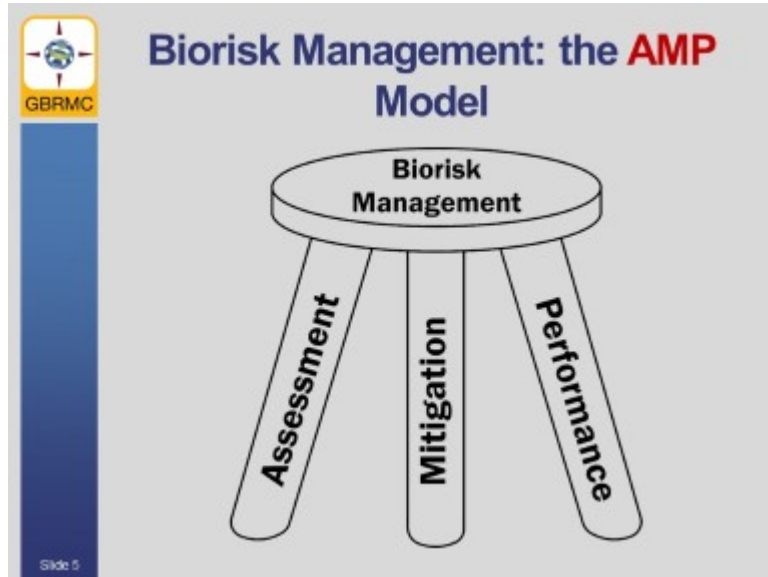
Key Messages


- There are different response measures for different incidents
- Incident investigation procedures must be standardized and well-communicated to encourage incident reporting and appropriate corrective and preventative action.
- Incident investigation must examine all root causes of an incident – focusing on individual AND institutional behaviors and processes.
- Because actual testing of the incident response system cannot be predicted, it must be tested by regularly scheduled drills, audits, and tabletop exercises, for example.
- Drills must be designed to “break” the system – the metric is not whether it breaks, but how long it takes to break.

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Incident Response & Investigation


Biorisk Management






Key Components of Biorisk Management

- **Biorisk Assessment**
 - Process of identifying the hazards and evaluating the risks associated with biological agents and toxins, taking into account the adequacy of any existing controls, and deciding whether or not the risks are acceptable




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Define **Biorisk Assessment**:




Key Components of Biorisk Management

- **Biorisk Mitigation**
 - Actions and control measures that are put into place to reduce or eliminate the risks associated with biological agents and toxins




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Define **Biorisk Mitigation**:



Key Components of Biorisk Management

- **Biorisk Performance**
 - Improving biorisk management by recording, measuring, and evaluating organizational actions and outcomes to reduce biorisk.



Define **Biorisk Performance**:



Incidents

Group Exercise:

In your groups, spend **5 minutes** to list all possible examples of an **Incident** that might impact or involve biological agents or toxins. Write each incident on an individual **sticky-note** and place them on your **flip chart**.

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Incident Response Components

Group Exercise:

In your groups, spend **10 minutes** to answer the following questions for the incident you've been assigned?

- How do you know an incident has occurred?
- How do you know what type of action the incident requires?
- How do you make sure that there is a response to the incident?

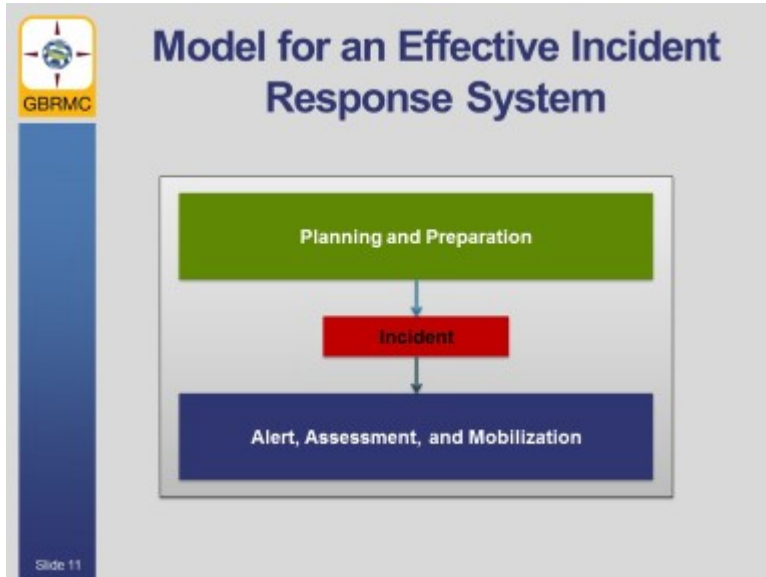
Once you are done, **write your answers at the top of the flip chart**, and be prepared to discuss with the rest of the class.

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How do you know an incident has occurred?


How do you know what type of action the incident requires?

How do you make sure that there is a response to the incident?



Incident Response & Investigation

Alert



Alert

Alerting is the process of identifying an **incident** as it is occurring, or after it has occurred, and using that information to **generate a response**.

Questions:
What are some ways one could **alert**?
Who would you **alert**?

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What are some ways one could alert?


Who would you alert?



Alert

An institution's **incident response plan**, as developed by **management**, should address **procedures** for **alerting** appropriate **personnel** in the event of an **incident**.

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Alert

Question: How would one determine whether **alerting** should occur during an **incident**, or after the **incident**?

Please consider this question for **5 minutes** and be prepared to discuss with the class.

Hint: What are the **key factors** about the incident that would make a difference about when to **alert**?

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How would one determine whether alerting should occur during an incident, or after the incident?



Assessment

In part, the answer to the previous question is a matter of **assessment**.

Assessment is the evaluation of the type and severity of an **incident**, in order to determine an appropriate response.

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Assessment

Question:
Who should conduct an **incident assessment?**



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Assessment

Question: How do you assess an incident?

In your groups, please consider this question for **5 minutes**, and list all the criteria by which an incident can be assessed. Put each criteria on a **sticky-note**.

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Alerting and Assessment

Alerting and **assessment** provide information as to the existence and nature of a particular **incident**.

Some **incidents** are self-resolving, and by the time an **alert** is raised and the **incident** is **assessed**, a specific response may not be needed.

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Mobilization

Mobilization is the activation of **personnel** and use of **equipment** to respond directly to an **incident** and hasten its **resolution**.

Question: What are some factors that determine the mobilization?

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Mobilization

Questions:

- When an incident is considered to be resolved?
- Who determines that an incident is resolved?

Please consider this question for **5 minutes** and be prepared to discuss with the class.

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Response Procedures

Group Exercise:

Your **small group** will be assigned a **simple incident scenario**.

Question: Use the worksheet in your **workbook** to consider each step of a response for that scenario (alert, assessment, and mobilization) to determine:

1. **Who** should be involved?
2. **What** materials (equipment, supplies, other resources) are required?
3. **When** the step should be timed?
4. **Where** the step should occur?
5. **How** the step should occur?

Please take **15 minutes** to **Fill out the Worksheet** and be prepared to discuss with the class.

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Incident:

	Alert	Assessment	Mobilization
Who?			
What?			
When?			
Where?			
How?			



Are you prepared?

Look at the **worksheet** that your **small group** developed.

Question:

What is required in planning & preparation to assure that the steps you've identified can occur?

Please take **5 minutes** to answer this question and be prepared to discuss with the class.

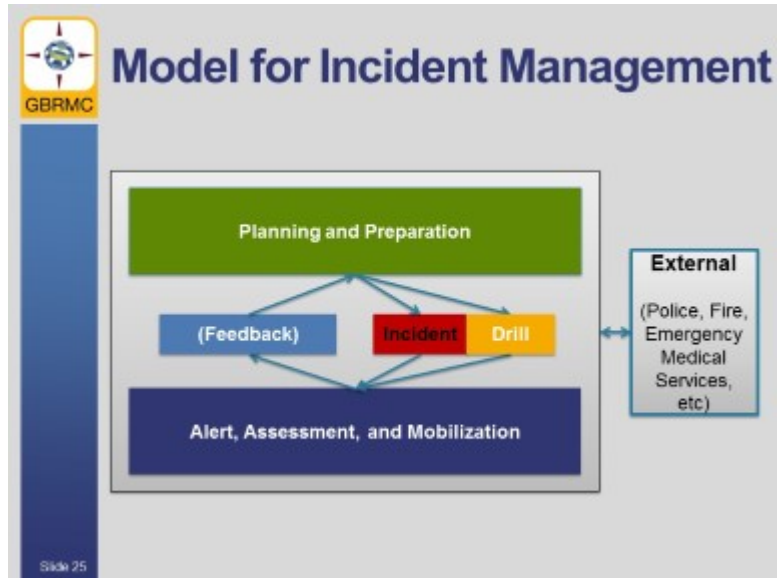
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Outside Responders

As part of both **planning and preparation** as well as **alerting, assessment, and response**, an **incident response system** must interact with the **outside world** in order to properly manage serious incidents.

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Outside Responders

It is often not economical for an **institution** to develop the capacity to respond to large, infrequent **incidents** and **emergencies** completely on its own.

Also, depending on the laws of the jurisdiction that an institution is located in, there might be certain kinds of incidents that the institution cannot respond to.

Thus, coordination with **police**, **fire brigades**, and **emergency medical services** are crucial for effective **incident response**.

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Can you think of examples when the laws of the jurisdiction that an institution is located in, might keep it from responding to certain kinds of incidents?



Outside Coordination

Question: How would **outsiders** such as the **fire brigade** interact with an institution during each of these **incident response system** phases?


- **Planning and Preparation**
- **Alert & Assessment**
- **Mobilization**
- **Feedback**

In your tables, please spend **10 minutes** discussing these questions and be prepared to share your table's thoughts with the class.

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Incident Response & Investigation

Investigation



What Went Wrong?

AFTER an incident has occurred and a response has been initiated and completed, how do you figure out **WHY** the incident occurred in the first place?

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Incident Investigation

Group Exercise:

- What is the goal of an incident investigation?
- What actions would you take to investigate the incident that was previously assigned to your group?

Take **10 minutes** to discuss these questions in your groups. Be prepared to discuss your answers with the class.

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Responsibilities

Question:


Who should conduct an incident investigation?

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 **What Happened?!!**

What information do you need to begin an investigation?

How is the information required for an investigation different from the information required for a response (alert, assessment, and mobilization)?



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 **Root Cause**

- Effectively investigating an incident requires determining the root cause or **causes of an incident**.
- While there are very complex root cause analysis procedures, a basic assessment can be very simple.
- For our purposes, there are two simple tools that you can use.

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Simple Root Cause Tools

- System Assessment (also called KATTAR)
 - **K**nowledge
 - **A**ssignment
 - **T**raining
 - **T**ools
 - **A**ccountability
 - **R**esources
- The “Five Whys”

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System Assessment (KATTAR)

Use the worksheet in your workbook to complete a system (KATTAR) analysis of the incident you were assigned.

You may need to make some assumptions because the information you have on your incident is very limited. Write down the assumptions you make.

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	System Question	Yes/No	Comments/Description	Assumptions Made
K	Was the person(s) involved knowledgeable about the correct procedures?			
A	Was the person(s) carrying out tasks that they had been officially assigned ?			
T	Did the person(s) involved have the training required to be conduct correct procedures?			
T	Were the proper tools for conducting correct procedures available to the persons involved?			
A	Was there proper oversight and accountability of supervisors or management for the involved persons and the procedures occurring?			
R	Were resources adequately deployed to allow correct procedures to occur?			



The 5 Whys

Another way of getting to a root cause is to ask “**why**” at least 5 times.



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For Example - A Needle Stick

- **Why** did the worker get a needle stick?
 - Because she was using a needle for a procedure instead of a micropipette
- **Why** was she using a needle, instead of a micropipette?
 - Because there were no micropipettes in the stockroom.
- **Why** were there no micropipettes in the stockroom?
 - Because the stockroom clerk didn't know that the supply had been depleted
- **Why** did the stockroom clerk not know that the supply had been depleted?
 - Because the inventory occurs once per month and is not due until next week
- **Why** is the inventory only once per month?
 - Because there are no staff to conduct it more frequently.

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Root Cause Example

Group Exercise

In your small group, use the **KATTAR** tool and the answers from the 5 whys given in the previous slide to determine the causes of this incident.

Take 10 minutes.

Then, decide what actions might be appropriate for addressing the incident.

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Take Action, 1

Corrective action is a **short-term** solution to directly address the item of non-conformance.

- For example, if training is lacking, a corrective action may be to immediately replace the person requiring training with a fully-trained person and to schedule and provide training for the un-trained staff member.

Preventive action is a **long-term**, more systemic approach to addressing underlying issues.

- In this example, preventive action may be the institution or revision of a training plan for persons previously unidentified or implementation of more stringent demonstrations or competency after training.

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Take Action, 2

Questions:

Look at the actions you've proposed for the needle stick incident.

- Which are **corrective** actions and which are **preventive**?
- Why do you need **both** corrective & preventive action?

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Take Action, 2

Questions:

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Incidents as a Performance Indicator

Individual incidents and their root causes can and should be included as a performance indicator for biorisk management.

However, indicators must include more than just numbers of incidents.

Why?

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Incident Investigation over Time

Data collected from incident investigation should be evaluated **over time** to see if there are **trends** in certain incidents, functions, locations, types of corrective or preventive actions.

Looking at this **collective information** might show additional areas for improvement and possible ways to reduce the potential for incidents.

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Incident Response & Investigation

Review & Wrap-Up



Review

To wrap-up, let's discuss what we learned about **Incident Response & Investigation**

What did we learn? What does it mean? Where do we go from here?

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Key Messages

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Use space on back, if needed