



Introduction to Incident Management & Response

Student Guide

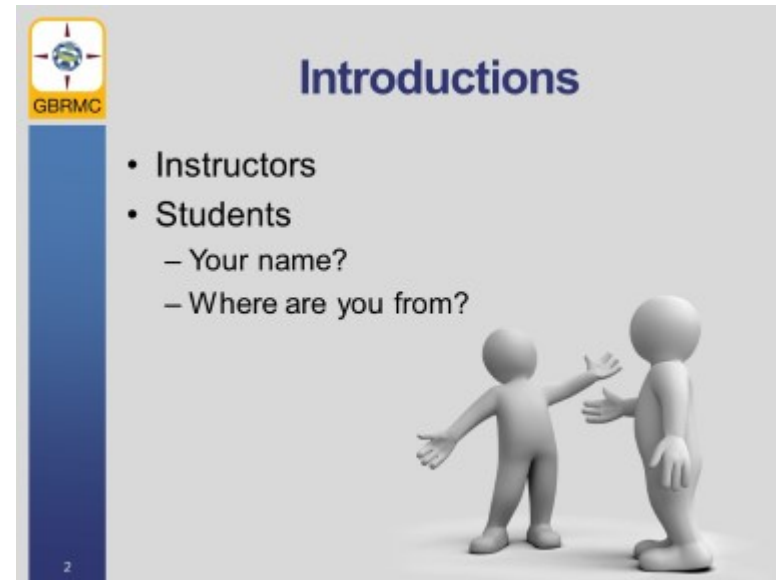
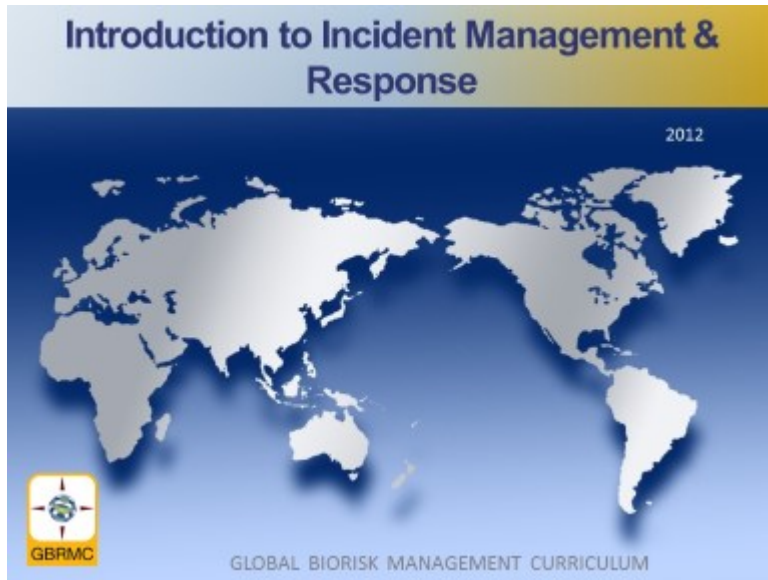
2012



GLOBAL BIORISK MANAGEMENT CURRICULUM

Introduction to Incident Management & Response

Welcome & Introductions



Action Plan

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

KNOW		FEEL		BE ABLE TO DO	
<i>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.</i>					
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?		

Use space on back, if needed



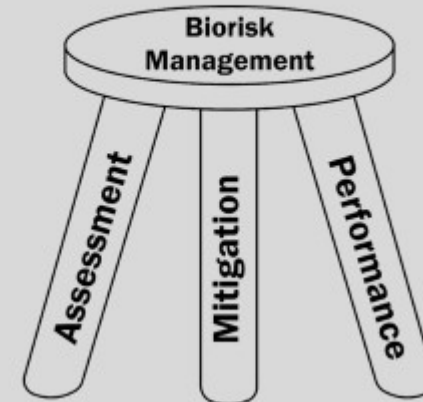
Key Messages

- An incident response system is broad in scope and complexity.
- An incident response system requires the input of many stakeholders – some internal and some external.
- Planning and preparation is essential to the success of an incident response system.
- To determine the effectiveness of an incident response system, it must be tested. Drills and other exercises are critical to measure how well as system has been designed and communicated and if it is the appropriate system.
- The right personnel must be notified as part of an effective incident management system.
- Providing feedback from drills and incident response and continually improving the system is imperative for success of the system.

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Biorisk Management: the AMP Model



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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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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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Key Components of Biorisk Management

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



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Incident

Group Exercise:

In your groups, spend **5 minutes** to develop a **definition for an Incident?**


To help with this task, list all possible examples of an **incident** on **sticky-notes** and place them on your **flip chart**.

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

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Define an incident:

What are some examples?



Incident

What is the difference between an **incident** and an **emergency**?

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What is the difference between an incident and an emergency?



Incident versus Emergency

An **incident** is an event that is likely to have adverse consequences.

An **emergency** is an **incident** that requires an immediate response.

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Notes:



Incident versus Emergency

Group Exercise - Continued:

Take **5 minutes** to look at your examples of **incidents** and categorize them as either an **incident** or an **emergency** especially in terms of biorisk.

Can you see the difference?

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What is the difference between an incident and an emergency?




Incidents Some Things to Consider

- Some types of **incidents** can have adverse consequences that are relatively minor.
- However, **small incidents** can lead to **large** ones down the road, especially if they are frequent and **breed personnel complacency**.
- Society, the government and upper management often decide **what constitutes a large or small incident**. It is then up to management to **determine to what extent resources should be allocated** toward an **incident response management system**.
- Because an **emergency** is simply a particular type of **incident**, an **Emergency Response System** will often form part of a **larger Incident Response System**.

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Notes:



Incident Response System

Group Exercise:

In your groups, spend **10 minutes** to develop a **definition for an Incident Response System?**

To help with this task, list all possible objectives of an Incident Response System on **sticky-notes** and place them on your **flip chart**.

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

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What is an Incident Response System?

Definition:

Objectives:


Introduction to Incident Management & Response

What is an Incident Response System?



Incident Response System


Every **Incident Response System** must be able to **alert to** an incident and **mobilize** a response.




```
graph LR; Alert[Alert] --> Mobilization[Mobilization]
```

This is the most **basic Incident Response System**.

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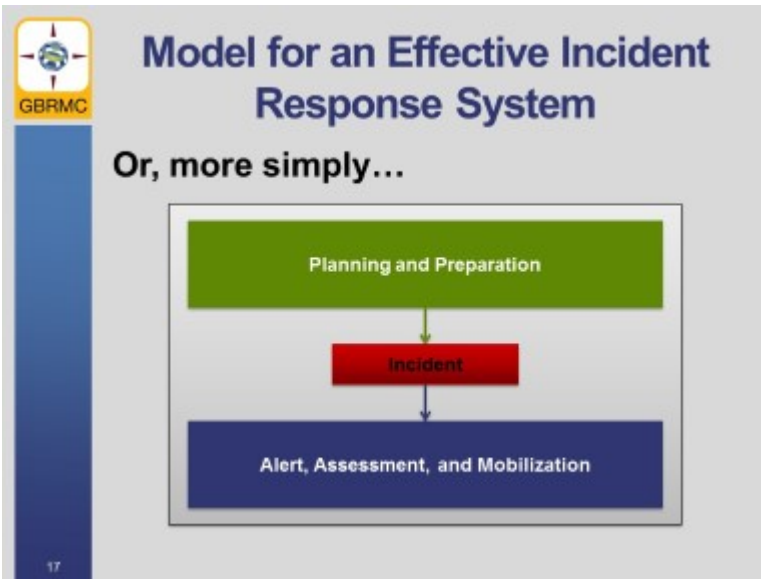


Model for an Effective Incident Response System




```
graph TD; subgraph Prep [ ]; direction LR; P[Planning] --> PR[Preparation]; end; Prep --> I{{Incident}}; I --> A[Alert]; A --> AS[Assessment]; AS --> M[Mobilization]
```

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The slide features a vertical blue bar on the left with the GBRMC logo at the top and the number 18 at the bottom. The main content area has a light gray background. At the top left is the GBRMC logo. To its right is the title "Incident Response System" in blue. Below the title is a paragraph of text: "The most **effective incident response systems** can **plan** and **prepare** for potential incidents, **alert** and **assess** actual incidents, and quickly **mount an effective response** if an incident occurs."



The Phases of an Incident Response System

Thus, we could consider an **effective incident response system** as concerning itself with three main phases:

- Planning and Preparation ■
- Incident ■
- Alert, Assessment, and Mobilization ■

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Examples:



Introduction to Planning and Preparation

We will now look more closely at the **planning and preparation** phase.

Planning and Preparation ■

Incident ■

Alert, Assessment, and Mobilization ■

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Planning and Preparation

Without proper **planning and preparation**, an **incident response system** would be unable to **alert** to an **incident** in a timely fashion, properly **assess** the **incident**, or **mobilize** effectively in response.

Why?

Hint: Think of an incident where there had not been any prior thought on how to respond. What was the outcome?

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Why are Planning and Preparation so important?



Planning

What exactly is **planning**?

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Planning

Planning is the development of mechanisms or procedures, in advance, to achieve a particular goal.

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Planning

In the case of **incident response**, **planning** is the process whereby a potential **incident** is **considered** and **evaluated**, and resources **are assigned**, in order to **generate** a response that will appropriately **mitigate** any adverse effects.

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Planning

Incident response planning is normally the responsibility of an institution's **management**.

Top level **decision-makers** must come together to determine the best approach for handling **incidents** in a particular institution.

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Planning

Management has the **authority** to make **medium** and **long-term decisions** and allocate appropriate **resources** towards an **incident management system**.

Management, however, needs the expertise and advise of other **personnel** in the institution to adequately make **plans**.

Why?

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What is the role of Management in Incident Management & Response?



Planning

Group Exercise:

In your groups, spend **10 minutes** to **identify all the personnel** in an institution who could contribute to management's decisions during the planning phase of an incident response management system?

- Put each answer on a **sticky-note** and place them on your **flip chart**.
- Next to each personnel group, **list their role/contribution** to the planning process

Be prepared to discuss with the rest of the class.

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Who can contribute to the Planning of an Incident Response System?

What is their contribution/role?

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Planning

Often, **management** can develop high-level policy and delegate details to those **personnel** more familiar with daily operations and technical work.


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Planning

Planning should result in a **document**, developed by **management** in cooperation with an institution's **personnel** (and others), that outlines, at a high-level, how the **incident management system** will operate.


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Planning

The **document** should also contain further, specific details on **preparation**, **alert**, **assessment**, and **response** to an incident.

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Preparation

What exactly is **preparation**?

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Preparation

Preparation derives directly from **planning**. It is the act of putting into effect an institution's **plans** prior to an **incident**, in order to be in a position to better handle that **incident** when it does occur.

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Preparation

The **Preparation** process includes **training of personnel**, acquisition of **equipment**, storing of **supplies**, and **physical modifications** to equipment and **buildings** when possible, and desirable.

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Preparation

Question:

What kind of information should be included in a **planning document** in order to properly guide the **preparation** process?


In your groups, please discuss for **5 minutes** and write your ideas on separate **sticky notes**.

The class will make a collection of **sticky notes** to review each group's responses.

Did everyone come up with similar types of information?

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What type of information would be useful to be included in a planning document to guide the preparation process?



Preparation

Think about the different types of **personnel** who work in a typical **lab** or **institution**.

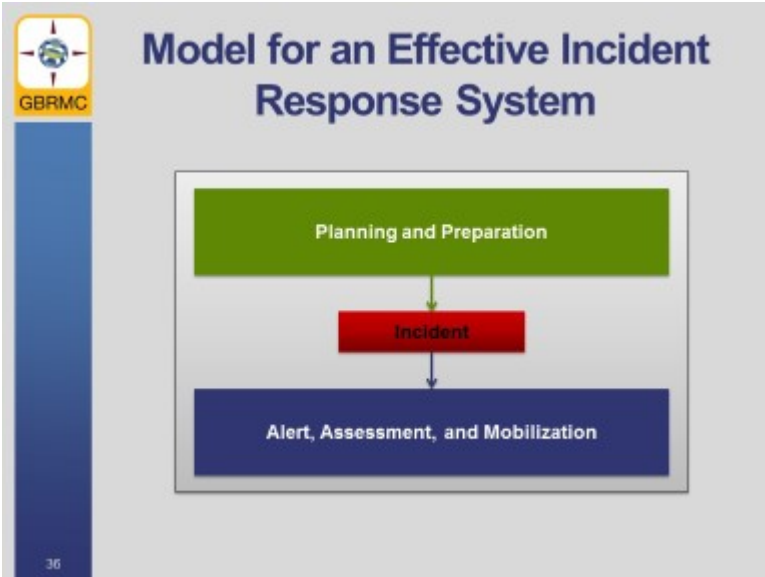
Question:
How should each of these be involved in the **preparation** process?

Please **discuss** for **5 minutes** at your **tables** and be prepared to share with the class.


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Who can contribute to the Preparation of an Incident Response System?

What is their contribution/role?



Notes:



How to Test an Incident Response System?

Question:

How do you make sure an **Incident Response System** is actually working?

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How can you test an Incident Response System?



How to Test an Incident Response System? - Drills

Question:


How do you make sure an **Incident Response System** is actually working?

One way is by conducting **drills**.

Drills allow verification of whether a system is prepared to respond adequately to an **incident**, without actually putting a **facility** and its **personnel** at risk.


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How do drills help to validate an Incident Response System?




Incident Response Systems

Thus, it is unreasonable to rely only on incidents to determine the effectiveness of an **Incident Response System**, instead Drills are used to simulate incidents.


Planning and Preparation 

Incident and Drills 

Alert, Assessment, and Mobilization 

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Notes:



Drills

Group Exercise:

Question:

What different kinds of **drills** can an **institution** use to test their **incident response system**, especially in terms of incidents impacting biorisk?

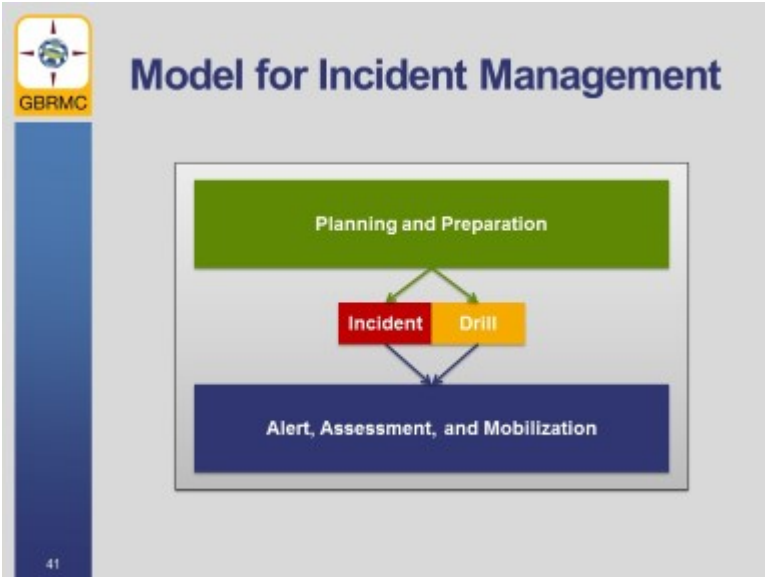
Take 5 minutes to discuss the question and make a table, on your **flip chart**, listing the **advantages** and **disadvantages** of each kind of drill. Be prepared to share your discussion with the class.

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List some different types of drills:

Advantages?

Disadvantages?



Notes:



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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Notes:



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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When does alerting happen during the incident?

When does alerting happen 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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How does Assessment play a role in an Incident Response System?



Assessment

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

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Who should conduct an Incident Assessment?



Assessment

Question:

How do you assess an **incident**?

In your tables, 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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How would you assess an incident?

What factors would you consider?

What are the criteria you would use?



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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Notes:



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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What is Mobilization?

What are some factors that determine the mobilization?



Mobilization

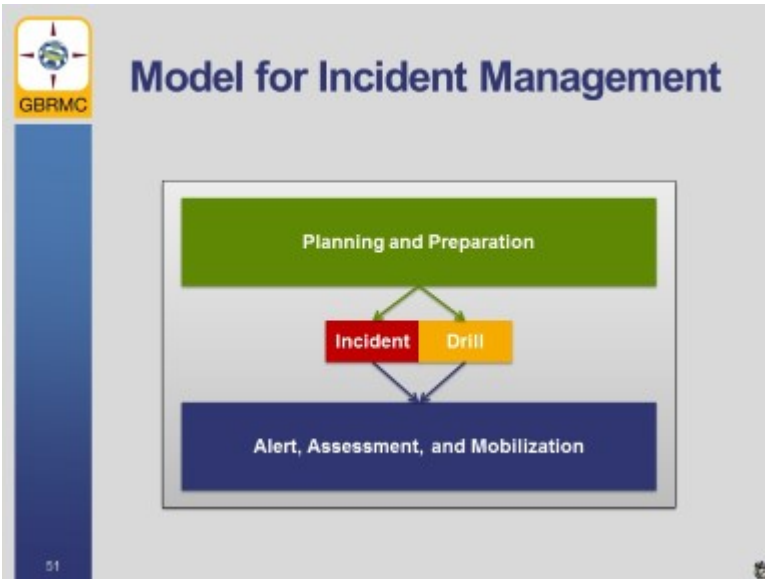
Questions:

1. When an incident is considered to be resolved?
2. 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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When and who determines when an incident is resolved?



Notes:




Feedback

Feedback is the use of **information** gathered from **drills** or **incidents** to inform and improve an **Incident Response System**.


Specifically, **feedback** informs the **planning and preparation** process, providing information to **management** and other **personnel** on what procedures were and were not effective in mitigating the adverse consequences of incidents (or drills).


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Feedback

Feedback could be considered a fourth phase of an **Incident Response System**.

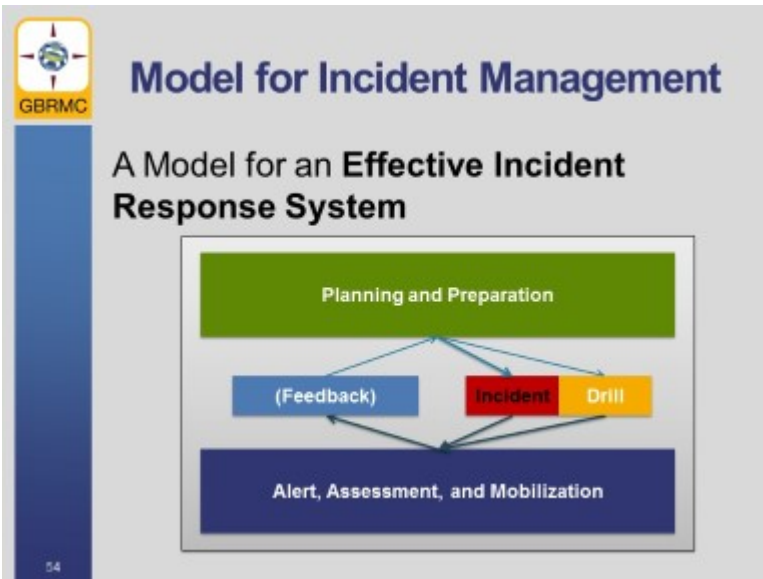
Planning and Preparation 

Incidents and Drills 

Alert, Assessment, and Mobilization 

Feedback 

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Notes:



Feedback

Question:

What types of information are necessary to provide **feedback** that addresses the strengths and weaknesses – success and failures – of the current **incident response system**?

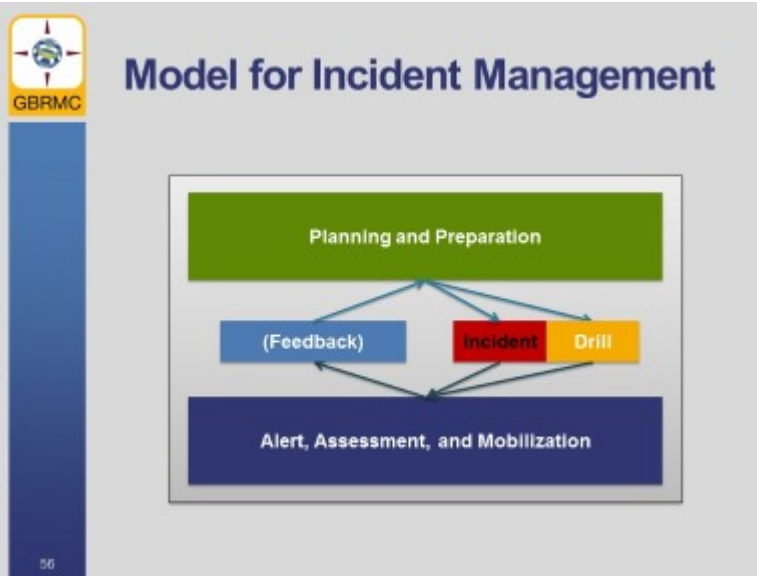
Please spend **10 minutes** discussing the question at **your table**, and be prepared to share your thoughts with the class.

Hint: List 7 to 10 questions you would ask after a drill or incident to help gather this information.

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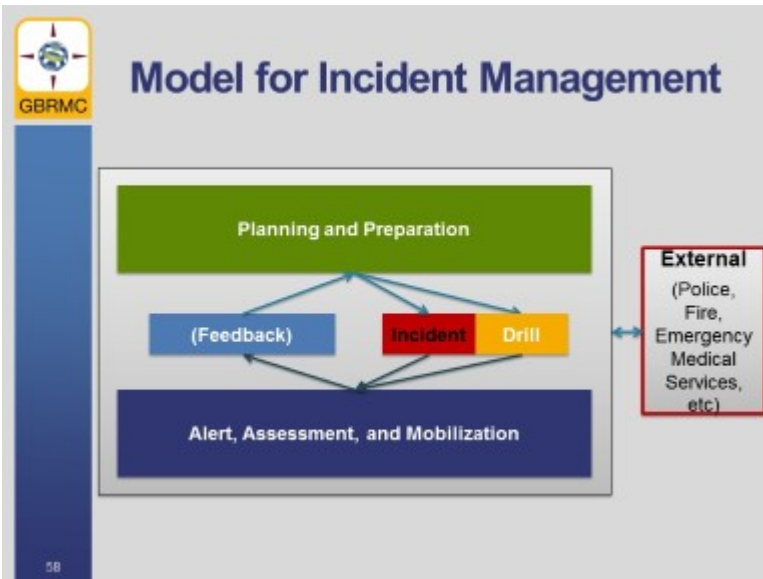
What types of feedback helps strengthen the Incident Response System?

What are some questions you would ask after a drill or incident?




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.



The text block, titled "Outside Responders", features a GBRMC logo in the top left. It contains three paragraphs of text. The first paragraph states: "It is often not economical for an **institution** to develop the capacity to respond to large, infrequent **incidents** and **emergencies** completely on its own." The second paragraph states: "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." The third paragraph states: "Thus, coordination with **police, fire brigades,** and **emergency medical services** are crucial for effective **incident response**." The number "59" is in the bottom left corner.



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**

At 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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How do outsiders interact with an institution during each of the Incident Response System Phases?

Planning and Preparation?

Alert & Assessment?


Mobilization?

Feedback?




Review

Question:
What are the four phases of an effective **Incident Response System**?



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Review

Question:
What is the difference between an **Emergency Response System** and an **Incident Response System**?

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Review

Question:

Do you agree with this table? Why or why not?

Responsibilities in an Incident Response System

	Management	Other Personnel
Planning and Preparation	Yes	No
Alerting, Assessment, and Response	Yes	Yes
Feedback	Yes	Yes

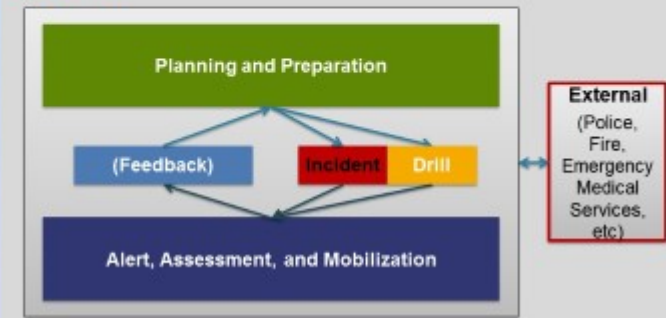
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Review

Question:

Which part of an incident response system is the most basic?



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Review

Question:

Why is **outside coordination** so important for an **incident response system**?

65

Notes:



Review

For **10 minutes**, let's discuss what we have learned about **incident response systems**.

What did we learn?

What does it mean?

Where do we go from here?

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Review - Key Messages

- An incident response system is broad in scope and complexity.
- An incident response system requires the input of many stakeholders – some internal and some external.
- Planning and preparation is essential to the success of an incident response system.
- To determine the effectiveness of an incident response system, it must be tested. Drills and other exercises are critical to measure how well as system has been designed and communicated and if it is the appropriate system.
- The right personnel must be notified as part of an effective incident management system.
- Providing feedback from drills and incident response and continually improving the system is imperative for success of the system.

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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?

Use space on back, if needed