## Scenario C15: Chemical incident in hospital laboratory

|  |  |
| --- | --- |
| **Scenario C15: Chemical incident in hospital laboratory** | |
| **Complexity of the scenario: easy** | |
| **Possible application of the scenario: Topics 4.1, 5.1, 5.2, 5.6 and 6.1** | |
| **Scenario description:** | |
| In the laboratory environment of a large university hospital, an intern is performing certain actions in a fume hood, but something goes wrong during one of the actions and he throws a chemical liquid over himself. The substance is hydrogen fluoride, and he has inhaled vapor and got liquid on him. His colleague in the lab takes him away from the fume hood, takes off his lab coat and rinses the chemical substance off his arms, legs and face as best he can by using an emergency shower. He then briefly reports to the responders of the hospital what has happened and supports the trainee in taking him to the EMS on the ground floor of the hospital. The responders of the hospital evacuate the lab room and the commander of the hospital responders warns the emergency services.  **Things to consider:** The response of the colleague of the victim as well as the hospital’s own responders has been very adequate, and the exposure risks of the EMS personnel should be limited. Thorough decontamination could be considered but is not strictly necessary. As the incident occurred in a laboratory with a high air exchange rate the risks of exposure in this room are also limited but protective equipment should be worn by responders entering the laboratory. Evacuation of the corridor or adjacent laboratories should not be necessary. The incident is likely to be considered an accident that does not require a formal forensic investigation. Internally the hospital will perform an investigation on the cause of the accident and review of safety procedures.  The trainer could consider adapting the scenario in such a way that the incident occurs in a regular laboratory and victims are either self-referring to the GP office (for GP target audiences) or wait at the incident scene for help (for AS target audiences).  Sources: Based on common laboratory accidents  https://www.ehs.ucsb.edu/labsafety/laboratory-accidents  https://www.researchgate.net/publication/337358227\_A\_review\_and\_critique\_of\_academic\_lab\_safety\_research | |
| **Application: First alarm (Topic 4.1)**  **Target audience: DO, (M)P, EMS, FB** | **Learning objective:** To recognize signs of a potential CBRN release and (initiate first) respond(ers).  **Aim:** The dispatch officer interacts with the caller to identify the likelihood of a possible CBRN release and to know which information should be shared with the chain of command. Use of METHANE and Four W’s protocols. |
| Example: |  |
| **Application: Arrival on scene (Topic 5.1)**  **Target audience: First responders on scene (EMS, FB, (M)P) (GP and AS target audiences can be included by adapting the scenario)** | **Learning objective:** To recognize how to carry out an on-site risk assessment, zoning of the area, and isolation and registration of victims.  **Aim:** The first responders arrive on scene, perform a risk assessment, talk with the caller, perform a reconnaissance of the incident scene and discuss actions. They apply METHANE, establish zoning, isolate people and pet animals, initiate evacuation, register persons. |
| **Example:** |  |
| **Application: Forensic awareness (topic 5.2)**  **Target audience: First responders on scene (FB, (M)P and EMS) GP and AS target audiences can be included by adapting the scenario)** | **Learning objective:** To recognize how to carry out your work without forensic disruption of the scene.  **Aim**: The responders discuss the possible forensic value of the materials found on the scene and preserve the evidence. |
| **Example:** |  |
| **Application: medical treatment and triage (topic 5.6)**  **Target audience: First responders on scene (EMS, (M)P and FB) GP and AS target audiences can be included by adapting the scenario)** | **Learning objective:** To recognize how to apply appropriate medical care towards patients involved in a CBRN incident.  **Aim:** The responders assess the medical conditions of the victims, perform triage on the victims and recommend possible treatment. |
| **Example:** |  |
| **Application: Alarm Protocol (topic 6.1)**  **Target audience: DO** | **Learning objective:** To differentiate a possible CBRN incident (from normal incident) and to carry out appropriate procedures & protocols.  **Aim:** The dispatch officer interacts with the caller and relays necessary information to the responders moving towards the scene. |
| **Example:** |  |