## Scenario C18: Chemical incident in garage

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| **Scenario C18: Chemical incident in garage** | |
| **Complexity of the scenario: moderate** | |
| **Possible application of the scenario: Topics 4.1, 5.1, 5.2, 5.6 and 6.1** | |
| **Scenario description:** | |
| A group of home-grown terrorists are experimenting with the production of chemical weapons in a small garage in an urban neighbourhood of a small town. During one of the experiments something went wrong, and a small explosion occurs. The two persons in the garage are exposed to hydrogen cyanide. The first collapses directly and remains unconscious in the garage, the second manages to escape from the garage and collapses on the street. Bystanders try to assist the person, but a bad odour (bitter almonds) prevents moving in too close. They decide to make an emergency call for an ambulance and the police are then alerted because the person might be seriously unwell, and resuscitation could be necessary.  Meanwhile residents from neighbouring flats are calling emergency services complaining of a bad smell. The fire department is called to what seems to be a regular odour nuisance. The vapour causing the odour nuisance is coming from the garage as a result of the failed experiment.  Symptoms of the victims are:  Victim 1 outside the garage: victim is unconscious and shows rapid breathing (Tachypnea), shortness of breath (dyspnea) and muscle spasms (in which neck and spine are arched backwards). His skin is cold and clammy. There is vomit present on his clothing and face.  Victim 2 inside the garage: victim is unconscious, has seizures, a disordered heart rhythm, dilated pupils and a very slow respiration.  Inside the garage different laboratory equipment is present and some of the equipment is still running causing a smouldering fire inside the garage. Production manuals for the production of hydrogen cyanide are present in the garage. Both victims carry a mobile phone.  **Things to consider:** In this scenario there are some serious risks for the first responders and the residents of the neighbouring buildings. It is essential to prevent further escalation of the incident and quick decision making is essential to save the person inside the garage and contain the spread of the smouldering fire. Evacuation of the downwind flat should be considered. Exposure risk to ambulance personnel and responders performing the evacuation is present and decontamination of the victim should be performed prior to medical treatment. Removal of the clothing of the victims should reduce the risks of secondary exposure significantly. Additionally, given the high volatility of hydrogen cyanide it is not expected that the risk of secondary exposure will remain present for a long time. Evacuation should be performed by personnel wearing respiratory protection. A thorough forensic investigation is expected to take place. Identity of the perpetrators and recent contacts in the mobile phones is of great interest. Manuals and production equipment will be considered evidence and loss due to the fire or extinguishing activities should be prevented.  The trainer could consider adapting the scenario in such a way that the victims are self-referring to the GP office or EMS to allow trainees from these target audiences to perform a risk assessment. | |
| **Application: First alarm (Topic 4.1)**  **Target audience: DO, (M)P, AS, 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 ((M)P, AS, FB) (GP and EMS target audiences can be added 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 ((M)P, AS, FB) (GP and EMS target audiences can be added 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 ((M)P, AS, FB) (GP and EMS target audiences can be added 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:** |  |