## Scenario 21-B: Intoxication at a music festival

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| **Scenario 21-B: Intoxication at a music festival** | |
| **Complexity of the scenario: moderate** | |
| **Possible application of the scenario: Topics 4.1, 5.1, 5.2, 5.6, 6.1 and 6.3** | |
| **Scenario description:** | |
| In a big city during the hot Summer months, an international music festival runs for 3 days and allows camping in the festival arena with a food and beverage court. 50.000 people are attending.  In the late afternoon of day 2, within few hours, a growing number of attendees starts requesting healthcare assistance for stomach cramps, diarrhea and fever. At the same time, several people who attended only on day 1 and are now back home in their country of origin are contacting the emergency numbers to request medical support for the same symptoms.  There is a possible contamination of food or beverage that can be either the result of a biological attack or the ingestion of contaminated food because of the lack of hygienic measures of a food truck. The first responders on the scene should be able to take into consideration these possibilities and start on-site risk assessment to guide the following actions to minimize the spread of further contamination to the attendees as well as considering the need for forensic investigations to isolate the source of the foodborne contamination.  It will be eventually found out that the outbreak was due to a malevolent event. One of the sponsors of the music festival is a pharmaceutical company. A well organized group of activists fighting against pharmaceutical companies decided to poison the 5kg Mayonnaise buckets of several food trucks with antimicrobial resistant *Salmonella thyphi* in the attempt to fake an accidental foodborne outbreak due to the lack of hygiene and cold chain maintenance.  Within 36 hours from the beginning of the music festival, many of those who had a meal with mayonnaise start manifesting salmonellosis symptoms. At this stage, the FR, and especially the medical personnel can not rule out that there are other reasons for the symptoms, but the high number of people reporting the same symptoms is a warning for common source poisoning. Law enforcement agencies should consider to start forensic investigations and evidences collection.  In total:  - more than 2000 people manifested food poisoning symptoms,  - more than 200 people requested advanced medical support  - 50 people (children, elderly, immunocompromised) requested hospitalization  - 2 affected cardiopathic subjects died because of hypovolemic shock while seeking for medical assistance in the overwhelmed point of care.  **Things to consider:** A common-source outbreak is one in which a group of persons are all exposed to an infectious agent or a toxin from the same source. Foodborne illness is caused by consuming contaminated foods or beverages. Many different disease-causing microbes or pathogens can contaminate foods, so there are many different types of foodborne illnesses. Most foodborne diseases are infections caused by a variety of bacteria, viruses, and parasites. Other diseases are poisonings caused by harmful toxins or chemicals that have contaminated food. Of note many foodborne pathogens also can be acquired through recreational or drinking water, from contact with animals or their environment, or through person-to-person spread.  Many microorganisms (bacteria, viruses, fungi, endoparasites) can be responsible for different foodborne disease [1]:  **Bacteria:** Campylobacter, Salmonella, Listeria, Pathogenic Escherichia coli (E. coli), Yersinia  **Bacterial toxins:** Toxins of Staphylococcus aureus, Clostridium perfringens, Clostridium botulinum and Bacillus cereus  **Viruses:** Calicivirus (including norovirus), rotavirus, hepatitis A virus, hepatitis E virus  **Parasites:** Trichinella, Toxoplasma, Cryptosporidium, Giardia  Food poisoning symptoms can be anywhere from mild to very serious. Symptoms may be different depending on the germ you swallowed, however most common symptoms of food poisoning are:  Upset stomach  Stomach cramps  Nausea  Vomiting  Diarrhea  Fever  After ingesting contaminated food or drink, it may take hours or days to develop symptoms. [2]  **Salmonella**  **Symptoms begin 6 hours to 6 days after exposure**: Diarrhea, fever, stomach cramps, vomiting  **Common food sources**: Raw or undercooked chicken, turkey, and meat; eggs; unpasteurized (raw) milk and juice; raw fruits and vegetables  Other sources: Many animals, including backyard poultry, reptiles and amphibians, and rodents (pocket pets)  Other relevant foodborne pathogens:  **Staphylococcus aureus (Staph)**  Symptoms begin 30 minutes to 8 hours after exposure: Nausea, vomiting, stomach cramps. Most people also have diarrhea.  Common food sources: Foods that are not cooked after handling, such as sliced meats, puddings, pastries, and sandwiches  **Vibrio**  Symptoms begin 2 to 48 hours after exposure: Watery diarrhea, nausea, stomach cramps, vomiting, fever, chills  Common food sources: Raw or undercooked shellfish, particularly oysters  **Clostridium perfringens**  Symptoms begin 6 to 24 hours after exposure: Diarrhea, stomach cramps. Usually begins suddenly and lasts for less than 24 hours. Vomiting and fever are not common.  Common food sources: Beef or poultry, especially large roasts; gravies; dried or precooked foods  **Norovirus**  Symptoms begin 12 to 48 hours after exposure: Diarrhea, nausea/stomach pain, vomiting  Common food sources: Leafy greens, fresh fruits, shellfish (such as oysters), or unsafe water  Other sources: Infected person; touching surfaces that have the virus on them  **Clostridium botulinum (Botulism)**  Symptoms begin 18 to 36 hours after exposure: Double or blurred vision, drooping eyelids, slurred speech. Difficulty swallowing and breathing, dry mouth. Muscle weakness and paralysis. Symptoms start in the head and move down as the illness gets worse.  Common food sources: Improperly canned or fermented foods, usually homemade. Prison-made illicit alcohol (pruno).  **Campylobacter**  Symptoms begin 2 to 5 days after exposure: Diarrhea (often bloody), stomach cramps/pain, fever  Common food sources: Raw or undercooked poultry, raw (unpasteurized) milk, and contaminated water  **E. coli (Escherichia coli)**  Symptoms begin 3 to 4 days after exposure: Severe stomach cramps, diarrhea (often bloody), and vomiting. Around 5-10% of people diagnosed with E. coli develop a life-threatening health problem.  Common food sources: Raw or undercooked ground beef, raw (unpasteurized) milk and juice, raw vegetables (such as lettuce), raw sprouts, unsafe water  **Cyclospora**  Symptoms begin 1 week after exposure: Watery diarrhea, loss of appetite, and weight loss. Stomach cramps/pain, bloating, increased gas, nausea, and fatigue.  Common food sources: Raw fruits or vegetables and herbs  **Listeria**  Symptoms begin 1 to 4 weeks after exposure: Pregnant women usually have a fever and other flu-like symptoms, such as fatigue and muscle aches. Infections during pregnancy can lead to serious illness or even death in newborns.  Other people (most often older adults): headache, stiff neck, confusion, loss of balance, and convulsions in addition to fever and muscle aches.  Common food sources: Queso fresco and other soft cheeses, raw sprouts, melons, hot dogs, pâtés, deli meats, smoked seafood, and raw (unpasteurized) milk  Based on the 1984 Dallas (Oregon USA) Salmonella outbreak  <https://jamanetwork.com/journals/jama/article-abstract/417893> JAMA. 1997;278(5):389-395. doi:10.1001/jama.1997.03550050051033 *JAMA.*  [1] European Food Safery Authority – Foodborne zoonotic diseases <https://www.efsa.europa.eu/en/topics/topic/foodborne-zoonotic-diseases>  [2] Centers for Disease Control and Prevention – Food Poisoning Symptoms - <https://www.cdc.gov/foodsafety/symptoms.html> | |
| **Application: First alarm (Topic 4.1)**  **Target audience: DO, FB, (M)P, AS** | **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: FB, (M)P, AS** | **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: FB, (M)P, AS, EMS, GP** | **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: FB, (M)P, AS, EMS, GP** | **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:** |  |
| **Application: Task Specific – Triage of victims (topic 6.3)**  **Target audience: AS, EMS, GP** | **Learning objective:** To familiarize with and carry out triage and provide medical care in relation to CBRN scenarios**.**  **Aim:** The responders assess the medical conditions of the victims and perform medical triage on the victims based on provided symptoms. |
| **Example:** |  |