## Scenario 19-C Outbreak at a celebration

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| **Scenario 19-C: Outbreak at a celebration** | |
| **Complexity of the scenario: complex** | |
| **Possible application of the scenario: Topics 4.1, 5.1, 5.2, 5.6, 6.1 and 6.3** | |
| **Scenario description:** | |
| The local African community is holding a day of celebration following the wedding of two important members of the community with dozens of people participating.  Wedding, Guinea, Conakry, Decoration, African  African Food, Wedding, Love, Date, Restaurant, MarriageDuring the day, many traditional dish and drinks are served, and the celebrations go on until the late hours of the night.    A few hours into the party, one participant starts feeling headache and nausea but relates it to the alcohol drank during the reception.  During the following hour other participants feel ill with headache, nausea, dizziness and abdominal pain. Many of the people involved begin vomiting, experiencing diarrhoea, shortness of breath and rapid heart rates.  Alerted by the large number of people showing symptoms, the owner of the venue where the wedding is being held calls the emergency services asking for medical assistance.  When the FRs arrived on the scene they found at least 30 people presenting symptoms. The medical staff suspected the outbreak to be caused by food poisoning.  2 people died before being admitted to the hospital.  Over the following hours more people presented the same symptoms and were admitted to the hospitals.  An investigation to determine the cause of the outbreak revealed that the outbreak resulted from consumption of a cassava dish made by combining hot water with cassava flour. The implicated batch of cassava flour was traced back to the retailer of the owner of the venue.  The laboratory investigation found high levels of cyanogenic glycosides in the implicated cassava flour, meaning that the cassava was not properly treated.  **Things to consider:**  Cassava is an edible tuberous root that is resistant to drought, diseases, and pests, is a major source of carbohydrates in tropical areas. It is often made into flour, contains cyanogenic glycosides, which can result in fatal cyanide poisoning if not properly detoxified by soaking, drying, and scraping before being consumed.  Common immediate symptoms of cyanide poisoning are: Headache, Dizziness, Nausea and Vomiting, Weakness, Rapid breathing, Rapid heart rate and Restlessness. Large amount of cyanide can even lead to death. Showing these signs and symptoms does not necessarily mean that a person has been exposed to cyanide. Ingested cyanide may allow a few hours to a couple of days for treatment. Emergency medical attention is critical. Lethal dose depends on the exact compound and several other factors. As a rough estimate, about half a gram of ingested cyanide will kill a 75kg adult.  Cassava is exported in three forms: as a human food, as a starch, and as an animal feed ingredient. The cassava export markets are primarily Europe and North America, where the driving force appears to be the ethnic community. It is the second most widely grown and consumed food in Uganda after bananas, and a staple in the diet for a large part of the Uganda population. It is therefore likely that cassava is consumed during a celebration held by an African community living in Europe or North America.  Although the cyanogenic content of sweet cassava is substantially less than that of wild cultivars (up to 100 ppm), the sweet cassava cultivars still require detoxification before they are consumed; this involves peeling the tubers, soaking them in water for 4–6 days, and sun-drying or roasting them. The outer layer is then scraped off and the remainder ground into flour. This process promotes enzymatic degradation of cyanogenic glycosides. If the soaking or drying time is too short, enzymatic degradation will be inadequate, and cyanogenic glycosides remain high.  In this scenario it is important to consider the possibility that the cassava provided by the retailer of the owner of the venue was not treated properly on purpose, making this incident an intentional event.  Sources:  Based on the Outbreak of Cyanide Poisoning Caused by Consumption of Cassava Flour —  Kasese District, Uganda, September 2017.  Alitubeera PH, Eyu P, Kwesiga B, Ario AR, Zhu B. Outbreak of Cyanide Poisoning Caused by Consumption of Cassava Flour — Kasese District, Uganda, September 2017. MMWR Morb Mortal Wkly Rep 2019;68:308–311. DOI: <http://dx.doi.org/10.15585/mmwr.mm6813a3>  <https://www.cdc.gov/mmwr/volumes/68/wr/mm6813a3.htm>  <https://emergency.cdc.gov/agent/cyanide/basics/facts.asp>  <https://www.thoughtco.com/overview-of-cyanide-poison-609287>  <https://www.ncbi.nlm.nih.gov/books/NBK507796/>  <https://www.fao.org/3/y5287e/y5287e0a.htm> | |
| **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:** |  |