

**Food Outbreak Challenge Master Scenario Exercise List**

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| **Inject #** | **Inject Delivery Method** | **Event** | **Inject Information**  | **Acceptable Answers** | **Resources Required** |
| Part 1: Pathogen |
| B-1 | Envelope Marked "OPEN FOR BONUS POINTS" | BONUS POINTS: NORS Form | Note in envelope: Foodborne outbreaks are reported to National Outbreak Reporting System (NORS) using the NORS report form. Receive bonus points by correctly completely a NORS report form for this outbreak. Your NORS form must be submitted to FOC headquarters by 12PM.  | Correctly Completed NORS form +5 | Envelope marked **OPEN FOR BONUS POINTS** “Information inject”NORS formNORS form instructions |
| B-2 | Envelope Marked "OPEN FOR BONUS POINTS" | BONUS POINTS: Epi curve | Note in envelope: Receive bonus points by creating an Epi curve for this outbreak. Your Epi curve must be submitted to FOC headquarters by 12PM. | Create Epi Curve with: Correct # of cases +2Descriptive title +1Labeled axis +1Histogram, not bar chart +1 | Envelope marked **OPEN FOR BONUS POINTS** “Information inject”Graph Paper (2 pieces) |
| Pathogen-1 | Email with video attachedEnvelope marked “QUESTIONNAIRE –DO NOT OPEN UNTIL INSTRUCTED”   | Interview possible cases | LIBSITE: Welcome to the Foodborne Outbreak Challenge! Open the video attached to begin. Video: “Hi there, it's Tami from the Denver Hospital. We had a 42 year old woman come in yesterday with what we presumed was pneumonia. However, when the nurse talked to her further it sounded like she had a case of diarrhea, fever, and abdominal cramps before her respiratory symptoms started. The patient also told our nurse that other people are also ill. It sounds like an outbreak so I knew I should report it to you. The woman and the two others are willing to talk to you. What key questions would you ask them? Open the envelope mark QUESTIONNAIRE to find out more ” Note in envelope: You have an opportunity to interview 3 possible outbreak cases. What should you ask them? What do you need to know to help determine if this is an outbreak? The CDC defines a foodborne outbreak as “an incident in which two or more persons experience a similar illness after ingestion of a common food, and epidemiologic analysis implicates the food as the source of the illness”.Submit completed “QUESTIONNAIRE” activity worksheet to the FOC headquarters to receive instructions on the next activity. Remember-- you have 2 more pathogen-related activities to complete before 10AM! Use your time wisely.  | Demographics +1Onset Date +1Are you sick +1Diarrhea +/- Vomiting +1Food history +1Group exposure +1 |   |
| Pathogen-2 | Envelope marked “FIND ADDITIONAL CASES” with note and 3 completed questionnaires  | Search for Additional Cases  | Note in envelope: It’s an outbreak! CDPHE has assigned the following outbreak number: (XX-XXX-XXX). Please tell us how you are going to find additional cases. List 5 approaches ranked in order of importance. Answers to the initial interviews with the 3 possible cases are enclosed here. Submit completed “FIND ADDITIONAL CASES” activity worksheet to the FOC headquarters to receive instructions on the next activity. Remember-- you have 1 more pathogen-related activity to complete before 10AM! Use your time wisely.  | Finding Cases: List of wedding attendees +2Know other ill individuals +2Ask hotel for guest list +2Review surveillance +1Local health departments +1Other +1BONUS: wedding attendees +1 |   |
| Pathogen-3ANDB-3 | Envelope marked “STOOL SAMPLE” with note and “PATHOGEN” worksheet.  | Stool sample collection | Note in envelope: Great work! You've identified 23 individuals that were part of the outbreak. And someone has agreed to give you a stool sample to test. Please prepare the stool sample for submission to the CDPHE lab with the completed lab form. CDPHE only tests for 5 pathogens at a time so choose wisely! Attached is a line list of the 23 individuals with their symptoms and information about their time at the hotel. Package and submit the stool sample and lab form to the FOC headquarters by 11AM to complete this piece of the puzzle! Submit completed “PATHOGEN” activity worksheet for bonus points. In person: Er hi, you asked if I would give you guys a stool sample. Well here ya go. *(Hand them a brown paper bag with "stool" cup in it.).* Ok well, I have an appointment I have to get too so call me if you need anything else.  | Lab FormName/DOB +1Date/time collected +1Outbreak # +1Test only enteric pathogens +1Submission Labeled +1No pudding on the outside and Sealed tightly +1 | Line list of 23 people stool kit, Styrofoam cooler container, modified lab form?Pathogen worksheet. Write down ONE pathogen you think is causing the outbreak.**.** |
| Part 2: Food |
| Food-1 | Email with video attached  | Pathogen Found!Choose study design, case definition, study questions. | Email: Congratulations! You've determined the pathogen causing this outbreak. Open the video attached to find out more.Video: The stool results came back and were positive for [disease]. Now we need to figure out what food caused this outbreak. The Hyperion Hotel has a list of all 60 guests that attended events during the time of interest. CDPHE wants you to carry out an epidemiological investigation. Open the envelope mark “STUDY DESIGN” to find out more”Note in envelope: CDPHE wants you to carry out a more thorough investigation. What type of epidemiologic study would you use to investigate this hypothesis? Give 2 reasons why? Submit completed “STUDY DESIGN” activity worksheet to the FOC headquarters and then open envelope marked “CASE DEFINITION”. Remember-- you have 2 more food-related activities to complete before 11AM! Use your time wisely.  | Cohort +2* List of existing people +2
* Manageable # +2

Case Control +1Reasons +1 each |  |
| B-4 | Give when submitting study design envelope | BONUS POINTS: Difficult Interviewee | Here is the name and cell phone number of someone who attended the event. Please demonstrate your interview skills by interviewing them by the end of the session (by 12PM).  | How many questions they can complete within the given timeframe. (3 minute max) +2 | Questionnaire (very basic) |
| Food-2 | Envelope marked “CASE DEFINITION– DO NOT OPEN UNTIL INSTRUCTED” and worksheet | Case definition | Note in envelope: What case definition would you use for your investigation?Submit completed “CASE DEFINITION” activity worksheet to the FOC headquarters to receive instructions on the next activity. Remember-- you have 1 more food-related activity to complete before 11AM! Use your time wisely.  | Person +1, place +1, time +1 Individual who attended events at the Hyperion Hotel since 3/20 +1 with diarrhea +1 (3 or more loose stools in 24 hours) and/or at least one other clinical symptom +1 |  |
| Food- 3And B-5 | Envelope marked “RESULTS” with line list “FOOD SAMPLE” worksheet and “FOOD” worksheet | Calculate RR's for items on linelist | Note in envelope: The Hyperion Hotel outbreak cohort study has been completed. Attached is all of the data we collected. Based on these data, decide what food samples to submit with testing. CDPHE only allows up to 2 food samples to be submitted at any one time so make sure you use the right measures of association to narrow down your choice. Submit completed “FOOD SAMPLE” activity worksheet to the FOC headquarters to receive instructions on the next activity. Remember-- you need to complete before 11AM! Submitted completed “FOOD” activity worksheet for bonus points. | Correct measure of association +2; correctly calculated +2; Choose correct foods +2.Correct Food +2 |   |
| \* | Email | REMINDER | Don't forget CDPHE would like a completed NORS form and Epi curve by the end of the investigation. |   |   |
| Part 3: Source of Contamination |
| B-6 | JOURNALIST: Will visit each group within the hour. |  | *In-Person:* This is Harriet Welsch from the Denver Post. We heard about an outbreak at the Hyperion Hotel and want to publish a story. One of our journalists will be there in 5 minutes to cover the story with you. Choose your spokesperson | Handles interview ok +2 | List of possible questions for interview. |
| Source-1 | Email with video attached  | Food Found! Environmental Assessment-Staff interviews | Email: Congratulations! You've determined which food was contaminated. Open the video attached to find out more.Video: The lab results came back and [food] was positive for [disease]. Now you need to figure out how the contamination occurred. It is time to carry out an environmental assessment of the hotel kitchen. While carrying out the environmental assessment you will need to interview staff members. Let us know what staff you would like to talk to at the hotel and what questions you would like to ask them.Note in envelope: While carrying out the environmental assessment you will need to interview staff members. Who do you want to interview? What questions do you want to ask them about the outbreak? Come up with 10 questions to ask hotel staff about the outbreak. Submit completed “STAFF INTERVIEW” activity worksheet to the FOC headquarters to receive instructions on the next activity. Remember—you have 2 more contamination activities to complete before 12PM! Use your time wisely.  | Staff - kitchen manager, kitchen staff, overall hotel manager, wait staff +2Questions - Are any food handlers sick? +1Diarrhea/vomiting/similar symptoms? +1Any questions about food prep +2Bonus – exclusion criteria of staff +1 | .  |
| Source-2 | Envelope marked “ENVIRONMENTAL ASSESSMENT RESULTS” | Determine Source | Note in envelope: Here are the results of your environmental assessment. At this point you will need to compile your data to determine the source of contamination. Do you think evidence implicates a food handler as the source of the outbreak? Give 3 compelling reasons for your decision.Submit completed “SOURCE” activity worksheet to the FOC headquarters to receive instructions on the next activity. Remember—you have 1 more contamination activities to complete before 12PM! Use your time wisely.  | Source - Not a food worker. +2Reasons - +2 eachNo workers sick before outbreak (epi curve)Sick workers did not handle contaminated food in any waySafe food handling practicesNo cross contaminationTemperatures of fruit are all within adequate range | Employee work log with prep jobs, sickness/call off log (maybe have one or two call off but unknown reason, if others got sick have been during outbreak (add to the epicurve)), violations report |
| Source-3 | Envelope marked “TRACEBACK” | Traceback | You've determined it was not a food worker that caused contamination. In that case, the food must have been contaminated when it arrived at the hotel. Other individuals could still be at risk. A traceback investigation is required. Use the materials provided to determine each of the missing pieces below.Submit completed “TRACEBACK” activity worksheet to the FOC headquarters. Remember—you only have until 12PM!What information on the implicated food item will facilitate the traceback process?Based on the information given identify the shipment that delivered the contaminated melon and the farm at which it was grown | Name of melon distributorCold storage locationMain facility locationCountry where food grownCity where food grown #1City where food grown #2Shipment DateFarm where contamination occured |  |
| END | Envelope | Source Determined! | Congratulations! You've determined that the source of contamination was [source]. You've solved the last piece of the outbreak puzzle. Now just be sure to complete your after action report and send it in before coming to the main room for lunch.  | Complete NORS, EpiCurve |   |