

NATIONAL OUTBREAK REPORTING SYSTEM

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CDC ID: 299157

STATE ID: POB2112MLEXK-1

REPORT STATUS: Finalized

FINAL TIME STAMP: 1/26/2022

@ - Indicates the full text or additional list/table items can be found in the appendix.

@@ - Indicates additional list/table items can be found in the NORS Interface.

General

National Outbreak Reporting System

Foodborne Disease Transmission, Person-to-Person Disease Transmission, Animal Contact, Environmental Contamination, Unknown Transmission Mode



This form is used to report investigations of foodborne disease outbreaks and enteric disease outbreaks transmitted by contact with persons, animals, or environmental sources, or by an unknown mode of transmission. This form has 5 sections, General, Etiology, Settings, Animal Contact, and Food, as indicated by tabs at the top of each page. Complete the General and Etiology tabs for all modes of transmission and complete additional sections as indicated by the mode of transmission. **Please complete as much as possible of all applicable sections.**

CDC USE ONLY

CDC ID

299157

State ID

POB2112MLEXK-1

Form Approved
OMB No. 0920-0004

General Section – complete for all modes of transmission except water

Primary Mode of Transmission (Check one)

- ☒ Food (complete General, Etiology, and Food tabs)
 ☐ Person-to-person (complete General, Etiology, and Settings tabs)
- ☐ Water (complete CDC 52.12)
 ☐ Environmental contamination other than food/water (complete General, Etiology, and Settings tabs)
- ☐ Animal contact (complete General, Etiology, and Animal Contact tabs)
 ☐ Other/Unknown (complete General, Etiology, and Settings tabs)

Investigation Methods (Check all that apply)

- ☒ Interviews only of ill persons
 ☐ Treated or untreated recreational water venue assessment
- ☐ Case-control study
 ☒ Investigation at factory/production/treatment plant
- ☐ Cohort study
 ☒ Investigation at original source (e.g., farm, water source, etc.)
- ☒ Food preparation review
 ☐ Food product or bottled water traceback
- ☐ Water system assessment: Drinking water
 ☒ Environment/food/water sample testing
- ☐ Water system assessment: Nonpotable water
 ☐ Other

Comments

Dates (mm/dd/yyyy)

Date first case became ill (required) 11/21/2021
 Date last case became ill 11/26/2021

Date of initial exposure _____
 Date of last exposure _____

Date of report to CDC (other than this form) 12/13/2021

Date of notification to State/Territory or Local/Tribal Health Authorities _____

Geographic Location (Case Counts can be found in the appendix)

Exposure state: Multistate

☒ Exposure occurred in multiple states
☐ Exposure occurred in a single state, but cases resided in another state or multiple states
 Other states: Minnesota, Washington
 (For multistate exposure or multistate residency outbreaks, enter the case count for each state)

Exposure county: _____

☐ Exposure occurred in multiple counties in exposure state
☐ Exposure occurred in a single county, but cases resided in another county or multiple counties
 Other counties: _____

City/Town/Place of exposure: _____
 (Do not include proprietary or private facility names)

Primary Cases

Number of primary cases				Sex (Number or percent of the primary cases)							
Lab-confirmed primary cases	4	#		Male	2	#	50.00	%			
Probable primary cases	0	#		Female	2	#	50.00	%			
Estimated total primary cases	4	#		Unknown	0	#	0.00	%			
Primary case outcomes	# Cases		Total # of cases for whom info is available	Age (Number or percent of the primary cases)							
Died	0	#	4	<1 year		#	0.00	%	20–49 years	2	# 50.00 %
Hospitalized	0	#	4	1–4 years		#	0.00	%	50–74 years		# 0.00 %
Visited Emergency Room		#	0	5–9 years		#	0.00	%	≥ 75 years		# 0.00 %
Visited health care provider (excluding ER visits)		#	0	10–19 years	1	#	25.00	%	Unknown	1	# 25.00 %

General

Incubation Period, Duration of Illness, Signs or Symptoms for Primary Cases Only

Incubation Period <i>(Select appropriate units)</i>			Duration of Illness <i>(Among recovered cases-select appropriate units)</i>		
Shortest		Min, Hours, Days	Shortest		Min, Hours, Days
Median		Min, Hours, Days	Median		Min, Hours, Days
Longest		Min, Hours, Days	Longest		Min, Hours, Days
Total # of cases for whom info is available			Total # of cases for whom info is available		
☒ Unknown incubation period			☒ Unknown duration of illness		

Signs or Symptoms *(*Refer to terms from appendix E, if appropriate, to describe other common characteristics of cases.)*

Sign or symptom	# cases with signs or symptoms	Total # cases for whom info is available
Vomiting		0
Diarrhea		0
Bloody stools		0
Fever		0
Abdominal cramps		0
HUS	0	4
*		
*		
*		
*		

Secondary Cases

Mode of secondary transmission <i>(Check all that apply)</i>	Number of secondary cases	
☐ Food	Lab-confirmed secondary cases	0 #
☐ Water	Probable secondary cases	0 #
☐ Animal contact	Estimated total secondary cases	#
☐ Person-to-person	Estimated total cases (Primary + Secondary)	4 #
☐ Environmental contamination other than food/water		
☐ Other/unknown		

Other CDC System IDs *(If applicable)*

NEARS ID: 1) _____ 2) _____ 3) _____ 4) _____
 OHHABS ID: 1) _____ 2) _____

Traceback *(For food and bottled water only, not public water)*

☒ Please check if traceback conducted

Source name <i>(if publicly available)</i>	Source type <i>(e.g., poultry farm, tomato processing plant, bottled water factory)</i>	Location of source		Traceback comments
		State	Country	
Romaine Lettuce	Leafy Greens	California	UNITED STATES	

Recall

☐ Please check if any food or bottled water product was recalled

Type of item recalled: _____

Comments: _____

Reporting Agency

Reporting site: CDC E-mail: NORSAdmin@cdc.gov
 Agency name: CDC Phone #: 555-5555
 Contact name: NORS Admin Fax #: 555-5555
 Contact title: Epidemiologist

General Remarks *Briefly describe important aspects of the outbreak not covered above. Please indicate if any adverse outcomes occurred in special populations (e.g., pregnant women, immunocompromised persons)*

Etiology

Etiology Section – complete for all modes of transmission except water

Clinical and Environmental Testing

1. Were any samples collected and tested? ☒ Yes ☐ No ☐ Unknown (If no or unknown, skip to Q6)

2. How many samples of each type were tested?

Type of sample	Tested? (yes/no/unknown)	Number of samples tested
Human specimen	Yes	4
Animal specimen	No	
Food	No	
Water	No	
Other environmental (specify in general remarks)	No	

3. What were they tested for? (check all that apply)

- ☒ Bacteria (or bacterial toxins)
☐ Viruses
☐ Parasites
☐ Chemicals/Toxins
☐ Unknown

4. Test types (select all test types used for clinical specimens)

- ☐ Chemical testing
☒ Culture
☐ DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR)
☐ Microscopy (e.g., Fluorescent, EM)
☐ Serological/immunological test (e.g., EIA, ELISA)
☐ Tissue culture infectivity assay
☐ Other (specify in general remarks)
☐ Unknown

5. Was antimicrobial susceptibility testing (AST) performed? ☒ Yes ☐ No ☐ Unknown

If yes, where was AST performed? ☐ Clinical lab ☐ Public health lab ☒ CDC-NARMS ☐ Other ☐ Unknown

If yes, were any antimicrobial resistant isolates associated with the outbreak? ☐ Yes ☒ No ☐ Unknown

6. Is there at least one confirmed* or suspected outbreak etiology(s)?

- ☒ Yes ☐ No (unknown etiology) If no, skip to next section

*See http://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/confirming_diagnosis.html

Etiology (Name the bacterium, chemical/toxin, virus, or parasite. If available, include the serotype and other characteristics such as phage type, virulence factors, and metabolic profile.)						
Genus	Species	Serotype/genotype	Other characteristics	Etiology confirmed or suspected	# of lab-confirmed cases	Detected in~
Escherichia	coli, Shiga toxin-producing	O121:H19		Confirmed	4	1

~Detected in (choose all that apply): 1 – patient specimen; 2 – food specimen; 3 – environmental specimen; 4 – food-worker specimen; 5 – water sample; 6 – animal specimen

Isolates/Strains (For bacterial pathogens, provide a representative for each distinct pattern. For norovirus outbreaks, provide CaliciNet key, @@ outbreak number, sequenced region, and genotype for each distinct strain.)

CDC system	State lab ID/Accession ID/CaliciNet key/PulseNet Key	CDC PulseNet cluster code or CaliciNet outbreak number	CDC PulseNet pattern designation for enzyme 1	CDC PulseNet pattern designation for enzyme 2	CaliciNet sequenced region/whole genome sequencing ID	CaliciNet genotype/other molecular designation
PulseNet	(b)(6)	POB2112MLEXK-1			(b)(6)	O121:H19
PulseNet		POB2112MLEXK-1				O121:H19
PulseNet		POB2112MLEXK-1				O121:H19

Settings		Animal Contact	
Settings Section – complete for person-to-person, environmental contamination, and other/unknown primary mode of transmission			
Major Setting of Exposure <i>(choose one)</i>			
☐ Camp ☐ Child day care ☐ Event space ☐ Festival/fair	☐ Hospital ☐ Hotel/motel ☐ Long-term care/nursing home/assisted living facility	☐ Office/indoor workplace ☐ Other healthcare facility ☐ Other <i>(specify)</i> ☐ Prison/jail	☐ Private home/residence ☐ Religious facility ☐ Restaurant ☐ School/college/university
☐ Shelter/group home/transitional housing ☐ Ship/boat ☐ Unknown			
Specify setting _____			
Attack Rates for Major Setting of Exposure			
Group <i>(based on setting)</i>	Estimated exposed in major setting*	Estimated ill in major setting	Crude attack rate <i>[(estimated ill / estimated exposed) x 100]</i>
Residents, guests, passengers, patients, etc.			
Staff, crew, etc.			
*e.g., number of persons on ship, number of residents in nursing home or affected ward			
Other Settings of Exposure <i>(choose all that apply)</i>			
☐ Camp ☐ Child day care ☐ Event space ☐ Festival/fair	☐ Hospital ☐ Hotel/motel ☐ Long-term care/nursing home/assisted living facility	☐ Office/indoor workplace ☐ Other healthcare facility ☐ Other <i>(specify)</i> ☐ Prison/jail	☐ Private home/residence ☐ Religious facility ☐ Restaurant ☐ School/college/university
☐ Shelter/group home/transitional housing ☐ Ship/boat ☐ Unknown			
Specify setting _____			
Additional Shigella Questions <i>(Complete this section for Shigella outbreaks)</i>			
1. Did any case-patients report travel prior to illness onset? ☐ Yes ☐ No ☐ Unknown If yes, was travel international, domestic, or both? ☐ International ☐ Domestic ☐ Both ☐ Unknown			
2. Were any confirmed, suspected, or probable case-patients immunocompromised (e.g., HIV/AIDS)? ☐ Yes ☐ No ☐ Unknown			
3. Were there any confirmed, suspected, or probable cases among men who have sex with men? ☐ Yes ☐ No ☐ Unknown			
Animal Contact Section – complete for animal contact primary mode of transmission			
☐ Animal vehicle undetermined	Reason(s) animal contact, but undetermined vehicle <i>(enter all that apply from list in appendix E):</i> _____		
Animal	1	2	3
Animal Type <i>(select from list in appendix E)</i>			
Animal Type <i>(specify)</i>			
Confirmed or suspected vehicle			
Reason(s) confirmed or suspected <i>(enter all that apply from list in appendix E)</i>			
1. Settings of exposure <i>(check all that apply)</i> ☐ Agricultural feed store ☐ Animal shelter or sanctuary ☐ Camp ☐ Child day care ☐ Farm/dairy ☐ Festival or fair ☐ Hospital ☐ Laboratory ☐ Live animal market ☐ Long-term care/nursing home/assisted living facility ☐ Pet store or other retail location ☐ Petting zoo ☐ Prison/jail ☐ Private home/residence ☐ School/college/university ☐ Veterinary clinic ☐ Zoo or animal exhibit ☐ Other <i>(specify*)</i> ☐ Unknown	2. Was pet food or animal feed implicated as a potential source of the outbreak? ☐ Yes ☐ No ☐ Unknown If yes, please specify: ☐ Prepackaged pet food ☐ Pet treats or chews ☐ Homemade pet food ☐ Commercially prepared 'raw' pet food ☐ Frozen or fresh feeder rodents ☐ Blended feed ☐ Other <i>(specify*)</i> ☐ Unknown		
3. Did any cases have exposure to livestock or household pets that were experiencing diarrhea? ☐ Yes ☐ No ☐ Unknown	5. What prevention measures or recommendations were used to stop the outbreak and prevent additional infections? (check all that apply) ☐ Handwashing ☐ Quarantine/stop movement ☐ Venue or event closure ☐ Removal of animals from setting ☐ None ☐ Other <i>(specify*)</i> ☐ Unknown		
4. Was the "Compendium of Measures to Prevent Disease Associated with Animals in Public Settings" used in the investigation? ☐ Yes ☐ No ☐ Unknown			
Animal contact remarks <i>(*If "Other" was chosen, specify here):</i> 			

Food

Food Section – complete for foodborne primary mode of transmission

☐ Food vehicle undetermined Reason(s) foodborne, but undetermined vehicle (enter all that apply from list in appendix E): _____

Food	1	2	3
Name of food (excluding any preparation)	romaine lettuce, unspecified		
Confirmed or suspected vehicle	Confirmed		
Reason(s) confirmed or suspected (enter all that apply from list in appendix E)	1 - Epidemiologic; 3 - Traceback, and/or environmental investigation;		
Ingredient(s) (enter all that apply)	romaine lettuce;		
Contaminated ingredient(s) (enter all that apply)	romaine lettuce;		
Total # of cases exposed to implicated food	4		
Method of processing (enter all that apply from list in appendix E)	3 - Shredded or diced produce;		
Method of preparation (select one from list in appendix E)	2 - Ready to eat food - No manual preparation, No cook step.;		
Level of preparation (select one from list in appendix E)	1 - Foods eaten raw with minimal or no processing.;		
Contaminated food imported to US?	☐ Yes, country _____ ☐ Yes, unknown ☒ No ☐ Unknown	☐ Yes, country _____ ☐ Yes, unknown ☐ No ☐ Unknown	☐ Yes, country _____ ☐ Yes, unknown ☐ No ☐ Unknown
Was product <i>both</i> produced under domestic regulatory oversight <i>and</i> sold?	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown
Location where food was prepared (check all that apply)		Location of exposure (where food was eaten) (check all that apply)	
☐ Banquet facility (food prepared and served on-site)	☐ Other healthcare facility	☐ Banquet facility (food prepared and served on-site)	☐ Other healthcare facility
☐ Camp	☐ Prison/jail	☐ Camp	☐ Prison/jail
☐ Caterer (food prepared off-site from where served)	☐ Private home/residence	☐ Caterer (food prepared off-site from where served)	☐ Private home/residence
☐ Child day care	☐ Religious facility	☐ Child day care	☐ Religious facility
☐ Fair, festival, other temporary or mobile services	☐ Restaurant- Buffet	☐ Fair, festival, other temporary or mobile services	☐ Restaurant – Buffet
☐ Farm/dairy	☒ Restaurant – ‘Fast-food’ (drive up service or pay at counter)	☐ Farm/dairy	☒ Restaurant – ‘Fast-food’ (drive up service or pay at counter)
☐ Grocery store	☐ Restaurant – Other or unknown type	☐ Grocery store	☐ Restaurant – Other or unknown type
☐ Hospital	☒ Restaurant – Sit-down dining	☐ Hospital	☒ Restaurant – Sit-down dining
☐ Hotel/motel	☐ School/college/university	☐ Hotel/motel	☐ School/college/university
☐ Long-term care/nursing home/assisted living facility	☐ Ship/boat	☐ Long-term care/nursing home/assisted living facility	☐ Ship/boat
☐ Office/indoor workplace	☐ Unknown	☐ Office/indoor workplace	☐ Unknown
☐ Other (specify in ‘where prepared remarks’)		☐ Other (specify in ‘where eaten remarks’)	
Where prepared remarks:		Where eaten remarks:	
Was there a kitchen manager certified in food safety at the location of preparation? ☐ Yes ☐ No ☒ Unknown			

Food

Contributing Factors (check all that contributed to this outbreak)☒ Contributing factors unknown**Contamination factor**☐ C1 ☐ C2 ☐ C3 ☐ C4 ☐ C5 ☐ C6 ☐ C7 ☐ C8 ☐ C9 ☐ C10 ☐ C11 ☐ C12 ☐ C13 ☐ C14 ☐ C15 ☐ C-N/A**Proliferation/amplification factor** (bacterial outbreaks only)☐ P1 ☐ P2 ☐ P3 ☐ P4 ☐ P5 ☐ P6 ☐ P7 ☐ P8 ☐ P9 ☐ P10 ☐ P11 ☐ P12 ☐ P-N/A**Survival factor**☐ S1 ☐ S2 ☐ S3 ☐ S4 ☐ S5 ☐ S-N/A**Confirmed or Suspected Point of Contamination** (check one)☐ Before preparation ☐ Preparation ☒ Unknown
If 'before preparation': ☐ Pre-Harvest ☐ Processing ☐ Unknown**Reason suspected** (check all that apply)☐ Environmental evidence ☐ Laboratory evidence
☐ Epidemiologic evidence ☐ Prior experience makes this a likely source**Was food-worker implicated as the source of contamination?**☐ Yes ☒ No ☐ Unknown**If yes, please check only one of the following:**☐ Laboratory and epidemiologic evidence ☐ Epidemiologic evidence
☐ Laboratory evidence ☐ Prior experience makes this a likely source**School Questions**

(Complete this section only if "school" is checked in either sections "Location where food was prepared" or "Location of exposure (where food was eaten)").

1. Did the outbreak involve a single or multiple schools?☐ Single ☐ Multiple (number of schools: _____)**2. School characteristics** (for all involved students in all involved schools)**a.** Total approximate enrollment: _____ (number of students) ☐ Unknown or undetermined**b.** Grade level(s)☐ Grade school (grades K-12)Please check all grades affected: ☐ K ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th ☐ 5th ☐ 6th ☐ 7th ☐ 8th ☐ 9th ☐ 10th ☐ 11th ☐ 12th☐ College/university/technical school☐ Unknown or undetermined**c.** Primary funding of involved schools☐ Public ☐ Private ☐ Unknown**3. Describe the preparation of the implicated item:**

(check all that apply)

☐ Heat and serve (item mostly prepared or cooked off-site, reheated on-site)
☐ Served a-la-carte
☐ Serve only (preheated or served cold)
☐ Cooked on-site using primary ingredients
☐ Provided by a food service management company
☐ Provided by a fast-food vendor
☐ Provided by a pre-plate company
☐ Part of a club or fundraising event
☐ Made in the classroom
☐ Brought by a student/teacher/parent
☐ Other (specify in General Remarks)
☐ Unknown or undetermined**4. How many times has the state, county or local health department inspected this school cafeteria or kitchen in the 12 months before the outbreak?***☐ Once
☐ Twice
☐ More than two times
☐ Not inspected
☐ Unknown or undetermined

*If multiple schools are involved, please answer for the school with the most cases.

5. Does the school have a HACCP plan in place for the school feeding program?*☐ Yes
☐ No
☐ Unknown or undetermined

*If multiple schools are involved, please answer for the school with the most cases.

6. Was implicated food item provided to the school through the National School Lunch/Breakfast Program?☐ Yes
☐ No
☐ Unknown or undeterminedIf **yes**, was the implicated food item donated/purchased by:☐ USDA through the Commodity Distribution Program
☐ The state/school authority
☐ Other (specify in General Remarks)
☐ Unknown or undetermined

Ground Beef

1. What percentage of ill persons, for whom information is available, ate ground beef raw or undercooked? _____ %
2. Was ground beef case-ready?
☐ Yes ☐ No ☐ Unknown
(Case-ready ground beef is meat that comes from a manufacturer packaged for sale that is not altered or repackaged by the retailer.)
3. Was the beef ground or reground by the retailer?
☐ Yes ☐ No ☐ Unknown
 If yes, was anything added to the beef during grinding *(e.g., shop trim or any product to alter the fat content)?*: _____

Eggs

- | | |
|--|---|
| <p>1. Were eggs <i>(check all that apply)</i></p> <p>☐ in shell, unpasteurized</p> <p>☐ in shell, pasteurized</p> <p>☐ packaged liquid or dry</p> <p>☐ stored with inadequate refrigeration during or after sale</p> <p>☐ consumed raw</p> <p>☐ consumed undercooked</p> <p>☐ pooled</p> | <p>2. Was <i>Salmonella</i> Enteritidis found on the farm?</p> <p>☐ Yes ☐ No ☐ Unknown</p> <p>Egg comment
 <i>(e.g., eggs and patients isolates matched by phage type):</i></p> <p>_____</p> |
|--|---|

Public reporting burden of this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC, Project Clearance Officer, 1600 Clifton Road, MS D-24, Atlanta, GA, 30333, ATTN: PRA (0920-0004) <--DO NOT MAIL CASE REPORTS TO THIS ADDRESS-->

Close Out Summary

Close Out Date: 1/21/2021

CDC Primary Contact: Zach McCormic

Outbreak, romaine lettuce

Hello Colleagues,

The investigation for this *E. coli* O121 cluster, POB2112MLEXK-1, is now closed. The outbreak included 4 cases from 2 states. Isolation dates ranged from 11/21/2021 to 11/26/2021, and reported onset dates ranged from 11/24/2021 to 11/30/2021. Ages ranged from 18 to 32 years (median 21), and 50% of cases were female. No cases were hospitalized, developed HUS, or died. All isolates were indistinguishable from each other by cgMLST.

This was first reported by WA on 12/13, when they reported a trio of isolates with a matching allele code, 2 in WA, one in MN. On 12/15, a second MN case was identified. Both WA cases reported Panera, one case had a cobb salad on 11/19 and onset of illness 11/21, and the second had a Caesar salad on 11/19 and onset of illness 11/23. Both cases ate at different Panera locations. The MN cases both reported Chipotle. The first MN case reported a burrito bowl on 11/23 that had steak and chicken, lettuce, cheese and sour cream, and tacos on 11/25 that had steak and chicken, lettuce, cheese and sour cream. This case's onset was 11/26. The second case had Chipotle on 11/20, and their meal was a chicken and brisket bowl, with rice, lettuce, cheese, salsa and sour cream. These Chipotle locations were different as well. WA and MN collected records and did on-site investigations at the Panera and Chipotle locations, and provided records to FDA through their Rapid Response Teams. A meeting to discuss investigational findings was held on 12/21, and a POB code was assigned at this time. The only 2 commonalities among the 4 cases was romaine lettuce and chicken, with initial traceback pointing to Taylor Farms as the grower of this romaine lettuce.

Romaine lettuce traced from Taylor Farms to Merrill Farms, particularly Los Coches Ranch. Four harvest dates from 11/7 through 11/9 were identified as dates of interest. Farm was identified in 2019 and 2020 investigations, FDA to prioritize for inspection later this year.

CDC has closed this investigation as of 01/21/2022, noting that romaine lettuce is the confirmed source of this outbreak. This outbreak has been reported to NORS, ID POB2112MLEXK-1. Thank you all for your help with this investigation!