



General

# National Outbreak Reporting System



## Foodborne Disease Transmission, Person-to-Person Disease Transmission, Animal Contact

This form is used to report enteric foodborne, person-to-person, and animal contact-related disease outbreak investigations. 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 of all sections as possible.

CDC USE ONLY

CDC Report ID  
270727

State Report ID  
MI2221

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

#### Investigation Methods (check all that apply)

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

Comments [Change Text Size](#)

#### Dates (mm/dd/yyyy)

Date first case became ill (required) 08/08/2016 Date last case became ill 08/20/2016  
 Date of initial exposure 08/05/2016 Date of last exposure \_\_\_\_\_  
 Date of report to CDC (other than this form) \_\_\_\_\_  
 Date of notification to State/Territory or Local/Tribal Health Authorities \_\_\_\_\_

#### Geographic Location

Exposure state: Michigan  
 Exposure occurred in multiple states  
 Exposure occurred in a single state, but cases resided in another state or multiple states  
 Other states: \_\_\_\_\_  
 (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 #	100 %	3 #	75 %
Probable primary cases	0 #	0 %	1 #	100 %
Estimated total primary cases	4 #	100 %	0 #	0 %

  

Primary Case Outcomes	# Cases	Total # of cases for whom info is available	Age (number or percent of the primary cases)			
			#	%	#	%
Died	0 #	4 #	0 #	0 %	0 #	0 %
Hospitalized	2 #	4 #	0 #	0 %	0 #	0 %
Visited Emergency Room	#	#	0 #	0 %	0 #	0 %
Visited health care provider (excluding ER visits)	#	#	0 #	0 %	0 #	0 %

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

Incubation Period (circle appropriate units)					Duration of Illness (among recovered cases-circle appropriate units)				
Shortest	3.0	Min	Hours	Days	Shortest	5.0	Min	Hours	Days
Median	3.0	Min	Hours	Days	Median	5.0	Min	Hours	Days
Longest	3.0	Min	Hours	Days	Longest	5.0	Min	Hours	Days
Total # of cases for whom info is available					Total # of cases for whom info is available				
1					1				
<input type="checkbox"/> Unknown incubation period					<input type="checkbox"/> Unknown duration of illness				

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

Feature	# Cases with signs or symptoms	Total # of cases for whom info is available
Vomiting	4	4
Diarrhea	4	4
Bloody stools	3	4
Fever	0	3
Abdominal cramps	3	4
HUS	1	4
Asymptomatic	0	4
* Nausea	3	4
* Fatigue	3	4
* Body ache	3	4

**Secondary Cases**

Mode of secondary transmission (check all that apply)	Number of secondary cases	
<input type="checkbox"/> Food	Lab-confirmed secondary cases	0#
<input type="checkbox"/> Water	Probable secondary cases	2#
<input type="checkbox"/> Animal contact	Estimated total secondary cases	2#
<input checked="" type="checkbox"/> Person-to-person	Estimated total cases (Primary + Secondary)	6#
<input type="checkbox"/> Environmental contamination other than food/water		
<input type="checkbox"/> Other/Unknown		

**Environmental Health Specialists Network (if applicable)**

EHS-Net Evaluation ID: 1.) \_\_\_\_\_ 2.) \_\_\_\_\_ 3.) \_\_\_\_\_ 4.) \_\_\_\_\_

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

Please check if traceback conducted

Source name (if publicly available)	Source type (e.g., poultry farm, tomato processing plant, bottled water factory)	Location of source		Traceback Comments
		State	Country	
	dairy farm	MI	United States	dairy farm is on the national recall program

**Recall**

Please check if any food or bottled water product was recalled

Type of item recalled: \_\_\_\_\_

Comments: \_\_\_\_\_

**Reporting Agency**

Reporting state: Michigan E-mail: arendsk@michigan.gov

Agency name: Michigan Department of Health and Human Services Phone no.: 517-335-8165

Contact name: Katie Arends Fax no.: 517-335-8263

Contact title: Infectious Disease 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, men, immunocompromised persons.) Change Text Size

**Additional Reporting Agency:** Michigan Department of Agriculture and Rural Development

**Etiology Section** -- complete for all modes of transmission except Water

1. Were any specimens collected and tested?  Yes  No  Unknown (If no or unknown, skip to Q5.)

2. How many specimens of each type were tested?

Type of sample	Tested? (Yes/No/Unknown)	No. specimens tested
Human specimen	Yes	4
Animal specimen		
Food	Yes	4
Water		
Other environmental, specify in general remarks		

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)

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

5. 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](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	# Of Lab-Confirmed cases	Detected In <sup>~</sup> <small>Use the Control key to make multiple selections.</small>	Etiology confirmed or suspected
Escherichia	coli, Shiga toxin-producing		STX2 positive	4	1 - patient specimen 2 - food specimen	Confirmed
					1 - specimen	
					1 - specimen	
					1 - specimen	

<sup>~</sup>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 viral pathogens, provide CaliciNet key, outbreak number, sequenced region, and genotype for each distinct strain.)

State Lab ID/ Accession ID/ CaliciNet 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/Other Molecular Designation 1	CaliciNet Genotype/ Other Molecular Designation 2
CL16- [redacted]		EXHX01.6470	EXHA26.4727		
CL16 [redacted]		EXHX01.6470	EXHA26.4727		
CL16 [redacted]		EXHX01.6470	EXHA26.4727		

**Settings Section** – complete for person-to-person, environmental contamination, and other/unknown primary mode of transmission

Major setting of exposure (choose one)

- |   |   |  |  |
|---|---|--|--|
| <input type="checkbox"/> Camp           | <input type="checkbox"/> Hospital   | <input type="checkbox"/> Other healthcare facility | <input type="checkbox"/> Religious facility        |
| <input type="checkbox"/> Child day care | <input type="checkbox"/> Hotel/motel  | <input type="checkbox"/> Other, specify: _____     | <input type="checkbox"/> Restaurant                |
| <input type="checkbox"/> Event space    | <input type="checkbox"/> Long-term care/nursing home/assisted living facility | <input type="checkbox"/> Prison/jail               | <input type="checkbox"/> School/college/university |
| <input type="checkbox"/> Festival/fair  | <input type="checkbox"/> Office/indoor workplace                              | <input type="checkbox"/> Private home/residence    | <input type="checkbox"/> Ship/boat                 |

**Attack rates for major setting of exposure**

Group (based on setting)	Estimated exposed in major setting*	Estimated ill in major setting	Crude attack rate ((estimated ill / estimated exposed) x 100)
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 (choose all that apply)**

- |   |   |  |  |
|---|---|--|--|
| <input type="checkbox"/> Camp           | <input type="checkbox"/> Hospital   | <input type="checkbox"/> Other healthcare facility | <input type="checkbox"/> Religious facility        |
| <input type="checkbox"/> Child day care | <input type="checkbox"/> Hotel/motel  | <input type="checkbox"/> Other, specify: _____     | <input type="checkbox"/> Restaurant                |
| <input type="checkbox"/> Event space    | <input type="checkbox"/> Long-term care/nursing home/assisted living facility | <input type="checkbox"/> Prison/jail               | <input type="checkbox"/> School/college/university |
| <input type="checkbox"/> Festival/fair  | <input type="checkbox"/> Office/indoor workplace                              | <input type="checkbox"/> Private home/residence    | <input type="checkbox"/> Ship/boat                 |

**Animal Contact Section** – complete for animal contact primary mode of transmission

Setting of exposure	Type of animal	Animal Contact Remarks

**Food Section** – complete for foodborne primary mode of transmission

Food vehicle undetermined

Food	1	2	3
Name of food (excluding any preparation)	milk, unpasteurized		
Ingredient(s) (enter all that apply)	milk, unpasteurized		
Contaminated ingredient(s) (enter all that apply)	milk, unpasteurized		
Total # of cases exposed to implicated food	2		
Reason(s) suspected (enter all that apply from list in appendix) <small>Use the Control key to make multiple selections.</small>	1 – Statistical evidence from epidemiology 2 – Laboratory evidence (e.g., confirmation) 3 – Compelling supportive information	1 – Statistical evidence from epidemiology 2 – Laboratory evidence (e.g., confirmation) 3 – Compelling supportive information	1 – Statistical evidence from epidemiological investigation 2 – Laboratory evidence (e.g., confirmation of agent in food) 3 – Compelling supportive information
Method of processing (enter all that apply from list in appendix)	1 – Pasteurized 2 – Unpasteurized 3 – Shredded or diced	1 – Pasteurized 2 – Unpasteurized 3 – Shredded or diced	1 – Pasteurized 2 – Unpasteurized 3 – Shredded or diced
Method of preparation (select one from list in appendix)	2 – Ready to eat food: No manual preparation, No cook step.		
Level of preparation (select one from list in appendix)	1 – Foods eaten raw with minimal or no processing		
Contaminated food imported to US?	<input type="checkbox"/> Yes, Country _____ <input type="checkbox"/> Yes, Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes, Country _____ <input type="checkbox"/> Yes, Unknown <input type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes, Country _____ <input type="checkbox"/> Yes, Unknown <input type="checkbox"/> No <input type="checkbox"/> Unknown
Was product both produced under domestic regulatory oversight and sold?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Location where food was prepared (check all that apply)		Location of exposure (where food was eaten) (check all that apply)	
<input type="checkbox"/> Banquet facility (food prepared and served on-site)	<input type="checkbox"/> Other healthcare facility	<input type="checkbox"/> Banquet facility (food prepared and served on-site)	<input type="checkbox"/> Other healthcare facility
<input type="checkbox"/> Camp	<input type="checkbox"/> Prison/jail	<input type="checkbox"/> Camp	<input type="checkbox"/> Prison/jail
<input type="checkbox"/> Caterer (food prepared off-site from where served)	<input checked="" type="checkbox"/> Private home/residence	<input type="checkbox"/> Caterer (food prepared off-site from where served)	<input checked="" type="checkbox"/> Private home/residence
<input type="checkbox"/> Child day care	<input type="checkbox"/> Religious facility	<input type="checkbox"/> Child day care	<input type="checkbox"/> Religious facility
<input type="checkbox"/> Fair, festival, other temporary or mobile services	<input type="checkbox"/> Restaurant- Buffet	<input type="checkbox"/> Fair, festival, other temporary or mobile services	<input type="checkbox"/> Restaurant- Buffet
<input type="checkbox"/> Farm/dairy	<input type="checkbox"/> Restaurant - 'Fast-food' (drive up service or pay at counter)	<input type="checkbox"/> Farm/dairy	<input type="checkbox"/> Restaurant - 'Fast-food' (drive up service or pay at counter)
<input type="checkbox"/> Grocery store	<input type="checkbox"/> Restaurant - Other or unknown type	<input type="checkbox"/> Grocery store	<input type="checkbox"/> Restaurant - Other or unknown type
<input type="checkbox"/> Hospital	<input type="checkbox"/> Restaurant - Sit-down dining	<input type="checkbox"/> Hospital	<input type="checkbox"/> Restaurant - Sit-down dining
<input type="checkbox"/> Hotel/motel	<input type="checkbox"/> School/college/university	<input type="checkbox"/> Hotel/motel	<input type="checkbox"/> School/college/university
<input type="checkbox"/> Long-term care/nursing home/assisted living facility	<input type="checkbox"/> Ship/boat	<input type="checkbox"/> Long-term care/nursing home/assisted living facility	<input type="checkbox"/> Ship/boat
<input type="checkbox"/> Office/indoor workplace	<input type="checkbox"/> Unknown	<input type="checkbox"/> Office/indoor workplace	<input type="checkbox"/> Unknown

<input type="checkbox"/> Other (describe in Where Prepared Remarks)	<input type="checkbox"/> Other (describe in Where Eaten Remarks)
Where Prepared Remarks: <span style="float: right;">Change Text Size</span>	Where Eaten Remarks: <span style="float: right;">Change Text Size</span>

**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

**The confirmed or suspected point of contamination** (check one)

Before preparation     Preparation    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

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 (describe 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 according to the most affected school.

**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 according to the most affected school.

**6. Was implicated food item provided to the school through the National School Lunch/Breakfast Program?**

- Yes
- No
- Unknown or Undetermined

If yes, was the implicated food item donated/purchased by:

- USDA through the Commodity Distribution Program
- The state/school authority
- Other (describe 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 [Change Text Size](#)
- If yes, was anything added to the beef during grinding (such as shop trim or any product to alter the fat content)? \_\_\_\_\_

**Additional Salmonella Questions**  
 (Complete this section for Salmonella outbreaks)

1. Phage type(s) of patient isolates:  
 \_\_\_\_\_ if RDNC\* then include # \_\_\_\_\_ if RDNC\* then include # \_\_\_\_\_  
 \_\_\_\_\_ if RDNC\* then include # \_\_\_\_\_ if RDNC\* then include # \_\_\_\_\_

\* Reacts, Does Not Conform

**Eggs**

1. Were eggs (check all that apply)
- in shell, unpasteurized?
  - in shell, pasteurized?
  - packaged liquid or dry?
  - stored with inadequate refrigeration during or after sale?
  - consumed raw?
  - consumed undercooked?
  - pooled?
2. Was Salmonella enteritidis found on the farm?  Yes  No  Unknown [Change Text Size](#)
- Egg Comment (e.g., eggs and patients isolates matched by phage type): \_\_\_\_\_

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 (6020-0004) --DO NOT MAIL CASE REPORTS TO THIS ADDRESS--

**For Internal Use Only**

Check PHEP elements

Background  Initiation  Methods  Results  Discussion  Report info  
 Recommendations Element Score: 7

## Michigan Departments of Health & Human Services and Agriculture and Rural Development After-Action Report on *Escherichia coli* O157: H7 Investigation linked to Raw Milk Consumption

**Investigation/Outbreak Title:** *E coli* O157:H7 Outbreak Linked to Raw Milk from Dairy Delight, Livingston County

**Location of case(s):** [REDACTED]

**Location of facility(ies):** Dairy Delight, Livingston County

**Exposure/event Date(s):** Aug 2016

**Investigation Date(s):** From Aug 19 to Nov 15, 2016

**Report Date:** Nov 15, 2016

**Jurisdictions:** [REDACTED] Livingston, [REDACTED]

**Pathogen/vehicle:** *E coli* O157:H7

**Investigators:** MDHHS, MDARD, [REDACTED], Livingston, [REDACTED] Counties

### Investigation key points

- 4 cases of STEC O157:H7 with illness onset dates from Aug 8 to 20, 2016
- 3 had exposure to raw milk from Dairy Delight (2 LTF)
- [REDACTED]
- [REDACTED]
- All with same PFGE pattern – Xba1 and Bln1 patterns are unique in MI; no national matches found
- Site visit to Dairy Delight Aug 26 by MDARD & Livingston County
- On Sept 1 and 2, MDARD & Livingston County visited Dairy Delight with a warrant and law enforcement and seized food they were selling without a license and took samples of raw milk from the bulk tank to be tested
- Herd-share members contacted by phone and email Sept 2-5 by LHDs and MDHHS
- MDHHS sent letter to herd-share members Sept 9 to ensure everyone was notified
- Milk samples tested were negative for STEC, Campy, and Listeria.

### Epidemiologic timeline

Aug 19, 2016 [REDACTED] alerted MDHHS about two *E coli* O157:H7 STX 2 positive cases tested at [REDACTED]

[REDACTED]. PFGE results received in the pm from BOL – both cases have the same PFGE pattern. [REDACTED] LHDs were notified of the match.

Aug 22 Extended STEC questionnaire was completed and uploaded to MDSS on Friday, Aug 19 by [REDACTED]. The two cases are [REDACTED]

[REDACTED] household are raw milk consumers. [REDACTED] made with raw milk at [REDACTED] place.

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Check PHEP elements

Background  Initiation  Methods  Results  Discussion  Report info  
 Recommendations Element Score: 17

- Aug 23 [REDACTED] provided the name of the dairy: Dairy Delight Cow Boarding in Howell that provided the raw milk to the [REDACTED] household. Livingston County HD notified by Regional Epi. Extended questionnaire for the [REDACTED] was uploaded to MDSS. [REDACTED]
- Aug 24 Livingston County HD willing to contact dairy but requesting guidance from DHHS on what they should cover with the dairy. Investigation escalated to Bureau Chief because of past history of this dairy. MDARD not clear on role with Dairy Delight at this point, as they do not regulate or inspect this operation. May serve consultative role. If there was a known violation of the raw milk herd share agreement, then MDARD would become involved.
- Aug 25 DHHS pm call with MDARD and Livingston about situation and next steps. Food history of [REDACTED] indicated household also received butter from Dairy Delight – they are not licensed to sell butter. They cannot make products from raw milk. Preparing joint press release to warn public about these illnesses from drinking raw milk.
- Aug 26 Joint press release and HAN issued. Third case matches outbreak strain – household received raw milk from Dairy Delight. Late afternoon call with MDARD re visit to Dairy Delight. MDARD left dairy with a list of requests including a members' list, distribution schedules, other products that they sell. Required by Monday, Aug 29<sup>th</sup> at 9:00am. MDARD preparing to get access to farm through warrant to be ready for Monday morning. A warrant in the accompaniment of law enforcement was needed to access the farm and records.  
Reg Epi (Reg 2S) contacted [REDACTED] household – they receive 2 gallons of raw milk weekly from Dairy Delight. [REDACTED] willing to provide a sample of [REDACTED] milk – not the same milk the [REDACTED] drank from. Plans made to pick up milk on Aug 30<sup>th</sup>. [REDACTED] trying to reach third case to administer extended questionnaire.
- Aug 29 No response from Dairy Delight
- Aug 30 [REDACTED] collected raw milk sample from [REDACTED] household and brought to BOL for testing
- Sept 1 MDARD & Livingston staff visited Dairy Delight in the am and seized a number of food items that were for sale. Raw milk samples were also collected, but due to small amount collected more was needed. Call with MDARD & Livingston re visit to Dairy Delight on this day. Member list received. Cover letter and survey planned for distribution to herd-share members to gauge scope of illness.
- Sept 2 HAN sent to Dairy Delight herd-share members re advisory about STEC linked to consumption of Dairy Delight raw milk. Member list distributed through Regional Epis to their LHDs with members that needed to be contacted and surveyed for illness.
- Sept 7 [REDACTED] household milk sample and Dairy Delight bulk tank milk samples all negative for STEC, Listeria, and campy. Bulk tank samples also negative for inhibitory substances (e.g., penicillin), which was performed at Geagley Lab.
- Sept 9 Mailing of letter and survey went out to all herd-share members today



**For Internal Use Only**

Check PHEP elements

Background    Initiation    Methods    Results    Discussion    Report info  
 Recommendations

Element Score: 17

Environmental timeline**Things that worked well**

- First time we have used the HAN to alert a group about their exposure to a high risk food. However, of the 233 emails sent out, only 9% responded that the message was received. The other 91% did not open the email.
- Rapid response by MDARD and LCHD to get the warrant and law enforcement to visit the farm. This was due to the fact that the coop was selling other foods for which they didn't have a license
- Also first time that we have been able to obtain a list of herd-share members with contact information to use in our investigation
- Reg Epis filled in to contact by phone herd-share members without email and administer surveys when LHDs could not.
- MDARD set up a hotline to take calls from consumers
- Of 288 herdshare members, 222 had email addresses and 62 had to be contacted by phone; 4 had no phone number. Everyone who had a mailing address received a letter from DHHS. 19 of 62 people (30.6%) contacted by phone completed the survey and none reported illness in their households.

**Things that need improving**

- Limited testing on bulk tank samples due to small amounts collected.
- Didn't anticipate that herd-share members would call MDHHS and Livingston and ask for Dairy Delight lab results. Advised them to call the Dairy, but not sure whether/when MDARD had informed the Dairy.
- 2/4 cases lost to follow-up

**Other comments**References

The sale of raw milk for human consumption is prohibited in Michigan; however, raw milk may be obtained through herd-share agreements.

<http://milk.procon.org/sourcefiles/michigan-raw-milk-code.pdf>