

9 June 2020

Via Email: [REDACTED]

Response to a request for official information

Dear [REDACTED]

Thank you for your request for official information received 13 March 2020 by Nelson Marlborough Health (NMH)¹, followed by the necessary extension of time 14 April 2020, where you seek clarification of evidence used in establishing that consumption of raw milk was either the cause of the illness, or the most likely cause of illness, for two identified outbreaks in the Nelson Marlborough region:

- **Outbreak one:**
This outbreak was identified with a "report date" 14 December 2016, causing illness (Campylobacter) to five people, aged 1 and 74 years. The comment provided regarding the source of the outbreak was "Cases consumed raw milk purchased from the same raw milk producer".
- **Outbreak two:**
This outbreak was identified with a "report date" 28 June 2018, causing illness (Campylobacter) to four people, aged from 51 to 74 years. The comment provided regarding the source of the outbreak was "Cases consumed raw milk purchased from the same raw milk producer".

For each of the above "outbreaks", please provide the answers to the following questions.

NMH response

Please see our response below each of your seven question, for each outbreak.

Outbreak One in 2016

1. What information was sought from the "cases", themselves?

The Institute of Environmental Science and Research Ltd (ESR), under contract with the Ministry of Health (MoH), contributes to the national public health surveillance effort. ESR operates the national notifiable disease surveillance database, EpiSurv, on behalf of the MoH.

Cases of enteric illness such as Campylobacter and Giardia are interviewed using standard case report forms on EpiSurv. A copy of the Enteric Disease Case Report Form is attached. On occasion, further information may be requested to clarify the answers given during the interview, for example what treatment they have been given by their doctor, regularity of attendance at child care centres, and treatment of private water supplies.

2. What information was sought from other sources, and what were these other sources?

Information sought from cases is collected during the interview process using the standard Case Report Form. The Public Health Service is required to report any suspect or confirmed

¹ Nelson Marlborough District Health Board

foodborne illness to MPI. MPI investigate issues and risk factors relating to food and/or food premises where appropriate.

3. *What tests were used to establish that raw milk was the cause, or probable cause, of the illness?*

- For the three Giardiasis cases a PCR faecal parasite test was taken with positive results for Giardia Intestinalis.
- For the two Campylobacteriosis cases a culture laboratory test identified a campylobacter species in both cases.
- No water test results were received in relation to this outbreak.
- The food premises used AsureQuality as their verifier and microbiological sampling was carried out on milk.

4. *What evidence did you rely on to ascertain that raw milk was the cause, or probable cause, of the illness?*

Evidence relied on includes:

- a. Microbiological test results, for example faecal specimens and food analysis. Five confirmed cases consumed raw milk/raw milk products from the same supplier within the incubation period of the disease. There was no leftover food products available for testing.
- b. Epidemiological evidence, where two or more cases are linked to a common source, in particular where the common source is exposure at a common event, or to food or water dispersed in a community, an environmental source or a source in an institutional setting. Five confirmed cases became ill during November 2016 after consuming raw milk/raw milk product sold from the same premises.
- c. Environmental investigations of food premises. Any inspections or investigations of a specific premises are carried out by MPI and/or the premises' verifier.

5. *What other foods did the "cases" consume that may have caused the illness?*

One case had consumed a chicken and chips meal from a food premises. This person had also consumed a chicken nasi goreng meal from a takeaway outlet. There was no left over food available for testing.

6. *What non-food sources were investigated as possible causes of the illness?*

Non-food source investigations are based around the Case Report Form. Information is sought to identify possible risk factors such as drinking water, recreational water contact (swimming pool, beach, river), human contact (school, preschool, nappy changing), animal contact (farm, pets) and overseas travel.

7. *What other possible sources of the illness were investigated to ascertain that they were not the cause, or probable cause, of the illness?*

Case interviews are carried out using the standard Case Report Form. The form includes a large range of risk factors and interviewers can explore other risk factors if they believe they could be applicable; refer OTHER on the form where the question says "Other risk factor for disease (specify)". All risk factors are collected for analysis and comparison with other cases of illness where necessary.

If cases are referred to MPI for further investigation of food as a possible source, MPI are informed as to whether the case had any other risk factors.

Outbreak two in 2018

1. What information was sought from the "cases", themselves?

ESR, under contract with the MoH, contributes to the national public health surveillance effort. ESR operates the national notifiable disease surveillance database, EpiSurv, on behalf of the MoH.

Cases of enteric illness such as Campylobacter and Giardia are interviewed using standard case report forms on EpiSurv. On occasion, further information may be requested to clarify the answers given during the interview, for example what treatment they have been given by their doctor, regularity of attendance at child care centres, and treatment of private water supplies.

In response to a referral that was made to MPI, additional questions were requested by MPI to be sought from a case. The questions were;

1. When and how often is raw milk purchased from the location?
2. How is it purchased (e.g. vending machine, home delivery)?
3. Does the case take their own bottle? Is it sterilised?
4. How is the milk consumed by the case (e.g. on cereal, in coffee, by the glass)?
5. Is any heat treatment or scalding of the milk completed before consumption?
6. Is there any leftover milk remaining?

2. What information was sought from other sources, and what were these other sources?

Certain diseases are required to be notified to Public Health Services by General Practitioners and Laboratories under the Health Act 1956. These diseases can then be investigated by the DHB.

Information sought from cases is collected during the interview process using the standard Case Report Form. The Public Health Service is required to report any suspect or confirmed foodborne illness to MPI. MPI investigate issues and risk factors relating to food and/or food premises where appropriate.

In this outbreak the Public Health Service requested information from MPI on the registration of the operator, any compliance issues, results of tests, and quantities sold by operator.

3. What tests were used to establish that raw milk was the cause, or probable cause, of the illness?

- Faecal specimen tests – culture/pcr/antigen (giardia and campylobacter)
- For the 4 cases of confirmed Campylobacteriosis there was a laboratory faecal PCR test positive for Campylobacter
- Water testing was carried out on a private drinking water supply.
- The food premises usedASUREQuality as their verifier and microbiological sampling was carried out on milk.

4. What evidence did you rely on to ascertain that raw milk was the cause, or probable cause, of the illness?

Evidence relied on includes:

- a. Microbiological test results, for example faecal specimens and food analysis. Four confirmed cases consumed raw milk/raw milk products within the incubation period of the disease. There was no leftover raw milk/raw milk products available for testing.
- b. Epidemiological evidence, where two or more cases are linked to a common source, in particular where the common source is exposure at a common event, or to food or water dispersed in a community, an environmental source or a source in an institutional setting.
- c. Environmental investigations of food premises. Any inspections or investigations in relation to the operator are carried out by MPI and/or the premises' verifier.

5. What other foods did the "cases" consume that may have caused the illness?

- One case ate a meal of tapas, fries and calamari at a restaurant.
- One case ate a lamb kebab meal from a takeaway.
- One case ate a burger from a takeaway.

There was no leftover food available for testing.

6. What non-food sources were investigated as possible causes of the illness?

Non-food source investigations are based around the Case Report Form. Information is sought to identify possible risk factors such as drinking water, recreational water contact (swimming pool, beach, river), human contact (school, preschool, nappy changing), animal contact (farm, pets) and overseas travel.

7. What other possible sources of the illness were investigated to ascertain that they were not the cause, or probable cause, of the illness?

Case interviews are carried out using the standard Case Report Form. The form includes a large range of risk factors and interviewers can explore other risk factors if they believe they could be applicable; refer OTHER on the form where the question says "Other risk factor for disease (specify)". All risk factors are collected for analysis and comparison with other cases of illness where necessary.

If cases are referred to MPI for further investigation of food as a possible source, MPI are informed as to whether the case had any other risk factors.

This response has been provided under the Official Information Act 1982. You have the right to seek an investigation by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or free phone 0800 802 602.

If you have any questions about this decision please feel free to email our OIA Coordinator OIArequest@nmdhb.govt.nz. I trust that this information meets your requirements. NMH, like other agencies across the state sector, supports the open disclosure of information to assist the public's understanding of how we are delivering publicly-funded healthcare. This includes the proactive publication of anonymised Official Information Act responses on our website from 10 working days after they have been released. If you feel that there are good reasons why your response should not be made publicly available, we will be happy to consider.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'P Bramley', with a stylized flourish at the end.

Dr Peter Bramley
Chief Executive

Encl: Enteric Disease Case Report Form v8 2017

CASE REPORT FORM

Enteric Disease

Enteric Disease		EpiSurv No. _____	
Disease Name			
<input type="radio"/> Gastroenteritis - unknown cause <input type="radio"/> Gastroenteritis/foodborne intoxication - specify _____ <input type="radio"/> Campylobacteriosis <input type="radio"/> Cholera <input type="radio"/> Cryptosporidiosis <input type="radio"/> Giardiasis <input type="radio"/> Paratyphoid fever <input type="radio"/> Salmonellosis <input type="radio"/> Shigellosis <input type="radio"/> Typhoid fever <input type="radio"/> Yersiniosis			
Reporting Authority			
Name of Public Health Officer responsible for case _____			
Notifier Identification			
Reporting source* <input type="radio"/> General Practitioner <input type="radio"/> Hospital-based Practitioner <input type="radio"/> Laboratory <input type="radio"/> Self-notification <input type="radio"/> Outbreak Investigation <input type="radio"/> Other			
Name of reporting source _____		Organisation _____	
Date reported* _____		Contact phone _____	
Usual GP _____	Practice _____	GP phone _____	
GP/Practice address Number _____	Street _____	Suburb _____	
Town/City _____		Post Code _____	<input type="checkbox"/> GeoCode _____
Case Identification			
Name of case* Surname _____		Given Name(s) _____	
NHI number* _____		Email _____	
Current address* Number _____		Suburb _____	
Town/City _____		Post Code _____	<input type="checkbox"/> GeoCode _____
Phone (home) _____		Phone (work) _____	
Phone (other) _____			
Case Demography			
Location TA* _____		DHB* _____	
Date of birth* _____		OR Age _____ <input type="radio"/> Days <input type="radio"/> Months <input type="radio"/> Years	
Sex* <input type="radio"/> Male <input type="radio"/> Female		<input type="radio"/> Indeterminate <input type="radio"/> Unknown	
Occupation* _____			
Occupation location <input type="radio"/> Place of Work <input type="radio"/> School <input type="radio"/> Pre-school			
Name _____			
Address Number _____		Suburb _____	
Town/City _____		Post Code _____	<input type="checkbox"/> GeoCode _____
Alternative location <input type="radio"/> Place of Work <input type="radio"/> School <input type="radio"/> Pre-school			
Name _____			
Address Number _____		Suburb _____	
Town/City _____		Post Code _____	<input type="checkbox"/> GeoCode _____
Ethnic group case belongs to* (tick all that apply)			
<input type="checkbox"/> NZ European	<input type="checkbox"/> Maori	<input type="checkbox"/> Samoan	<input type="checkbox"/> Cook Island Maori
<input type="checkbox"/> Niuean	<input type="checkbox"/> Chinese	<input type="checkbox"/> Indian	<input type="checkbox"/> Tongan
<input type="checkbox"/> Other (such as Dutch, Japanese, Tokelauan) *(specify) _____			

Basis of Diagnosis**CLINICAL CRITERIA**

Fits clinical description* Yes No Unknown

LABORATORY CRITERIA (refer to case definition)

Meets laboratory criteria* Yes No Unknown

Isolation (culture) of organism* Yes No Not Done Awaiting Results

Specify site* Faeces Blood Other site (*specify) _____

Detection of organism nucleic acid (eg PCR)* Yes No Not Done Awaiting Results

Specify site* Faeces Blood Other site (*specify) _____

Detection of organism antigen* Yes No Not Done Awaiting Results

Specify site* Faeces Blood Other site (*specify) _____

Demonstration by microscopy of oocysts/cysts/
trophozoites* Yes No Not Done Awaiting Results

Specify site* Faeces Blood Other site (*specify) _____

Detection of toxin* Yes No Not Done Awaiting Results

Specify site* Faeces Blood Other site (*specify) _____

Other positive test (e.g. serology), specify test and result* _____

Specify site* Faeces Blood Other site (*specify) _____

Organism / toxin isolated or detected from linked food or
water* Yes No Not Done Awaiting Results

EPIDEMIOLOGICAL CRITERIA

Contact with a confirmed case of the same disease* Yes No Unknown
(If yes also record details in risk factors section)

Part of an identified common source outbreak* Yes No Unknown
(If yes also record details in outbreak section and risk factors section)

CLASSIFICATION* Under Investigation Probable Confirmed Not a case

ADDITIONAL LABORATORY DETAILS

Organism species /serotype / phage toxin
etc* _____

ESR Updated Laboratory _____

Date result updated _____

Sample Number _____

Was whole genome sequencing / genotyping done? Yes No Unknown

If yes, laboratory where done _____

Date _____

ASSOCIATED FOOD/WATER/ENVIRONMENTAL SAMPLES

Were there any food, water or environmental samples associated with this case? Yes No Unknown

If yes, specify type(s) and results

Sample Type	Sample Number	Result
_____	_____	_____
_____	_____	_____
_____	_____	_____

Risk Factors continued

DRINKING WATER

Current address* water supply code _____ or specify _____

Work/school/pre-school* water supply code _____ or specify _____

Did the case consume water other than regular supply (home or work / school / pre-school) during the incubation period?~ Yes No Unknown

If yes, specify address* _____ Water supply code _____
_____ Water supply code _____

Did the case consume untreated surface water, bore water or rain water during the incubation period?~ Yes No Unknown

If yes, specify water source:~ _____

RECREATIONAL WATER CONTACT

Did the case have recreational contact with water during the incubation period?~ Yes No Unknown

If yes, nature of contact

Swimming in public swimming pool, spa pool or in other pool (e.g. school, hospital, motel, private pool)

1. Name of pool

Address Number _____ Street _____ Suburb _____

Town/City _____ Post Code _____ GeoCode _____

Comments _____ Date of exposure _____

2. Name of pool

Address Number _____ Street _____ Suburb _____

Town/City _____ Post Code _____ GeoCode _____

Comments _____ Date of exposure _____

3. Name of pool

Address Number _____ Street _____ Suburb _____

Town/City _____ Post Code _____ GeoCode _____

Comments _____ Date of exposure _____

Swimming in streams, rivers, sea etc

1. Name of stream/river/beach

Address Number _____ Street _____ Suburb _____

Town/City _____ Post Code _____ GeoCode _____

Comments _____ Date of exposure _____

2. Name of stream/river/beach

Address Number _____ Street _____ Suburb _____

Town/City _____ Post Code _____ GeoCode _____

Comments _____ Date of exposure _____

3. Name of stream/river/beach

Address Number _____ Street _____ Suburb _____

Town/City _____ Post Code _____ GeoCode _____

Comments _____ Date of exposure _____

Risk Factors continued**RECREATIONAL WATER CONTACT**

Other recreational contact with water _____ Date of exposure _____
 Location of other recreational contact with water _____

HUMAN CONTACT

Attendance at school, preschool or childcare~ Yes No Unknown

Did the case have contact with other symptomatic people during the incubation period?~ Yes No Unknown

If yes, specify type of contact _____

If yes, give names of people _____

Did the case have contact with children in nappies, sewage or other types of faecal matter or vomit during the incubation period?~ Yes No Unknown

If yes, specify what they had contact with _____

ANIMAL CONTACT

Did the case have contact with farm animals during the incubation period?~ Yes No Unknown

If yes, specify type of animal _____

Did the case have contact with sick animals during the incubation period?~ Yes No Unknown

If yes, specify type of animal and illness _____

OVERSEAS TRAVEL

Was the case overseas during the incubation period for this disease?* Yes No Unknown

If yes, date arrived in New Zealand* _____

Specify countries visited* Country _____ Date Entered _____ Date Departed _____

Last (most recent):* _____

Second last:* _____

Third last:* _____

If the case has not been overseas recently, is there any prior history of overseas travel that might account for this infection?* Yes No Unknown

If yes, specify* _____

OTHER

For shigellosis in males aged ≥ 15 years, did the case have sexual contact with another male/other males during the incubation period? Yes No Unknown

Other risk factor for disease (specify)~ _____

Source**Was a source confirmed by***

a) Epidemiological evidence* Yes No Unknown

e.g. part of an identified common source outbreak (also record in outbreak section) or person to person contact with a known case

b) Laboratory evidence* Yes No Unknown

e.g. organism or toxin of same type identified in food or drink consumed by case

Source continued**Specify confirmed source(s)***

From consumption of contaminated food or drink, specify food or drink _____

From consumption of contaminated drinking water, specify supply _____

From contact with infected animal, specify type of animal _____

Person to person contact with another case, specify relationship to case _____

From other confirmed source, specify source _____

If not confirmed, were any probable sources identified?*

Yes No Unknown

Specify probable source(s)*

From consumption of contaminated food or drink, specify food or drink _____

From consumption of contaminated drinking water, specify supply _____

From contact with infected animal, specify type of animal _____

Person to person contact with another case, specify relationship to case _____

From other probable source, specify source _____

Management**CASE MANAGEMENT**

Case excluded from work or school/preschool/childcare until well? Yes No NA Unknown

Does the case fit any of the following high risk categories?

Early childhood centre work Yes No Unknown

Food handler Yes No Unknown

Water supply worker Yes No Unknown

Intellectually/physically impaired Yes No Unknown

Healthcare/rest-home worker Yes No Unknown

If yes, to any of the above, was the case excluded from work until microbiological clearance achieved? Yes No NA Unknown

CONTACT MANAGEMENT

Number of contacts identified _____

Number of contacts followed up according to national or local protocols _____

Comments*

Enteric Disease		EpiSurv No. _____	
Food Premises			
4. Name of premise _____			
Address	Number _____	Street _____	Suburb _____
	Town/City _____	Post Code _____	<input type="checkbox"/> GeoCode _____
Foods eaten _____	Date consumed _____		
Comments _____	Status <input type="radio"/> Suspected <input type="radio"/> Confirmed <input type="radio"/> Exonerated		
5. Name of premise _____			
Address	Number _____	Street _____	Suburb _____
	Town/City _____	Post Code _____	<input type="checkbox"/> GeoCode _____
Foods eaten _____	Date consumed _____		
Comments _____	Status <input type="radio"/> Suspected <input type="radio"/> Confirmed <input type="radio"/> Exonerated		
6. Name of premise _____			
Address	Number _____	Street _____	Suburb _____
	Town/City _____	Post Code _____	<input type="checkbox"/> GeoCode _____
Foods eaten _____	Date consumed _____		
Comments _____	Status <input type="radio"/> Suspected <input type="radio"/> Confirmed <input type="radio"/> Exonerated		
7. Name of premise _____			
Address	Number _____	Street _____	Suburb _____
	Town/City _____	Post Code _____	<input type="checkbox"/> GeoCode _____
Foods eaten _____	Date consumed _____		
Comments _____	Status <input type="radio"/> Suspected <input type="radio"/> Confirmed <input type="radio"/> Exonerated		
8. Name of premise _____			
Address	Number _____	Street _____	Suburb _____
	Town/City _____	Post Code _____	<input type="checkbox"/> GeoCode _____
Foods eaten _____	Date consumed _____		
Comments _____	Status <input type="radio"/> Suspected <input type="radio"/> Confirmed <input type="radio"/> Exonerated		

Version 8 December 2017

* core surveillance data, ~ optional data