



**Guidelines for the
epidemiological investigation of
multi-jurisdictional outbreaks
that are potentially foodborne**

Version 2.0 Public

(not including operational templates and appendices)

Endorsed by the Australian Health Protection Principal Committee

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Contents

Executive Summary	4
Abbreviations	5
Definitions	6
1. Introduction	9
1.1 Background.....	9
1.2 OzFoodNet.....	9
1.3 Purpose and scope	10
2. Legislative framework.....	12
2.1 International legislation	12
2.2 National legislation	12
2.3 State and territory legislation.....	13
2.4 National Focal Point and the National Incident Room	13
3. Epidemiological investigation	14
3.1 External Agencies	14
3.2 Consensus and agreement.....	15
3.3 Confidentiality and information sharing.....	15
3.4 Roles and responsibilities	16
3.5 Phases of an OzFoodNet MJOI	16
4. Phase 1 – Alert.....	17
4.1 Identification of a potential multi-jurisdictional outbreak	17
4.2 Preliminary information sharing.....	17
4.3 OzFoodNet initial MJOI teleconference.....	17
4.4 Multi-jurisdictional Outbreak decision trigger questions	18
4.5 Multi-jurisdictional Outbreak Investigation decision trigger questions	18
4.6 OzFoodNet’s initial teleconference outcome.....	19
4.7 Notification under IHR (2005).....	20
4.8 Roles and responsibilities in the Alert Phase	21
5. Phase 2 – Investigation	22
5.1 Initial scoping	22
5.2 Roles and responsibilities	22
National Coordinator	23
Lead Agency	23

Lead Epidemiologist.....	24
State and territory OzFoodNet epidemiologists will:.....	24
Human Laboratory Liaison Officer(s)	25
Environmental Liaison Officer	26
OzFoodNet Working Group members (FSANZ, PHLN and Agriculture) will:	26
Other participating agencies, organisations and technical experts	26
5.3 Conducting the epidemiological investigation.....	27
5.4 Communication	27
5.4.1 Outbreak Investigation Team	27
5.4.2 Communicable Diseases Network Australia.....	28
5.4.3 Bi-national Food Safety Network.....	28
5.4.4 Australian Government agencies	28
5.4.5 International	28
5.4.6 Industry	29
5.4.7 Public	29
5.5 Escalation.....	29
6. Phase 3 – Stand down	31
6.1 OzFoodNet MJOI declared over.....	31
6.2 Roles and responsibilities in the stand down phase.....	31
6.3 Final report and publication	32
6.4 Structured audit.....	32
6.5 Review of these guidelines.....	33

Executive Summary

The purpose of the OzFoodNet *Guidelines for the epidemiological investigation of multi-jurisdictional outbreaks that are potentially foodborne* (the *Guidelines*) is to provide clear guidance to members of OzFoodNet for coordinating the national epidemiological investigation component of multi-jurisdictional outbreaks potentially linked to contaminated food sources (MJOs) in a timely, appropriate, consistent and coordinated manner.

OzFoodNet is an Australian Government funded programme. It is a member of the Communicable Disease Network Australia (CDNA) which is in turn a standing committee of the Australian Health Protection Principal Committee (AHPPC). OzFoodNet multi-jurisdictional outbreak investigations (MJOIs) require the endorsement of CDNA to commence and proceed under the guidance of both CDNA and AHPPC.

The National Incident Room (NIR) at the Australian Government Department of Health (Health) is an enabling mechanism which can assist in the management and coordination of a national health emergency, including MJOIs. In the event of declaration of a Communicable Disease Incident of National Significance (CDINS) for a food or water borne disease, OzFoodNet will perform the epidemiological investigation component of the overall outbreak response.

Regular and effective communication between OzFoodNet epidemiologists and food safety agencies is essential. OzFoodNet will share Situation Reports and the outcomes of all OzFoodNet MJOI teleconferences with food safety agencies via the Bi-national Food Safety Network (BFSN). The food safety agency in the same state or territory as the Lead Agency is invited to all OzFoodNet MJOI teleconferences. Representatives of other relevant food safety agencies are also invited to participate in OzFoodNet MJOI teleconferences.

The outcomes of epidemiological investigations conducted under these guidelines vary depending on the strength of the association with a food source, and what that source may be. When epidemiological (descriptive or analytical), or human laboratory evidence gathered during an OzFoodNet MJOI implicates a specific food source/type/product, OzFoodNet shares that evidence with food safety agencies via the BFSN.

Abbreviations

Agriculture	Australian Government Department of Agriculture and Water Resources
AHPPC	Australian Health Protection Principal Committee
BFSN	Bi-National Food Safety Network
CDINS	Communicable Disease Incident of National Significance
CDNA	Communicable Diseases Network Australia
CD Plan	<i>Emergency Response Plan for Communicable Disease Incidents of National Significance</i>
Health	Australian Government Department of Health
FSANZ	Food Standards Australia New Zealand
IHR (2005)	<i>International Health Regulations 2005</i>
INFOSAN	International Network of Food Safety Authorities
MJO	Multi-jurisdictional outbreak
MJOI	Multi-jurisdictional outbreak investigation
NatHealth Arrangements	National Health Emergency Response Arrangements
OHP	Office of Health Protection
OzFoodNet Central	The team in Health led by the Coordinating Epidemiologist
NFP	National Focal Point
NIR	National Incident Room (in Health)
NHS Act (2007)	<i>National Health Security Act 2007</i>
NNDSS	National Notifiable Diseases Surveillance System
PHLN	Public Health Laboratory Network
WHO	World Health Organization

Definitions

Bi-national Food Safety Network (BFSN)	A network of all Australian state and territory food safety and enforcement/regulatory agencies, Food Standards Australia New Zealand, and the New Zealand Ministry for Primary Industries.
Case definition	A set of criteria defining a person as an outbreak case based on person, place and time. Case definitions evolve during the outbreak investigation, from all-inclusive (sensitive) to more specific as information becomes available.
Outbreak Case	Person who meets the current outbreak case definition. Case numbers may increase or decrease during the OzFoodNet MJOI as case definitions evolve to be more specific.
Definitive Typing	The most appropriate pathogen specific laboratory typing available to distinguish outbreak cases from sporadic cases.
Control measures	Actions aimed to prevent ongoing transmission of the outbreak pathogen and/or to stop further outbreak illness.
Epidemiological investigation	The investigation of human cases to: describe the illness and its transmission; develop hypotheses for the source; and conduct studies to test these hypotheses.
Incubation period	The time period between exposure to an infectious disease and the appearance of the first symptoms. Usually reported as a range and median.
Human laboratory investigation	The testing of human specimens and/or isolates, to detect and characterise the agent causing illness.
Guidelines	<i>Guidelines for the epidemiological investigation of multi-jurisdictional outbreaks that are potentially foodborne.</i>
Multi-jurisdictional outbreak	For the purposes of these guidelines, an outbreak that utilises substantial resources from more than one state or territory to detect, investigate, and mitigate. Including but not limited to: <ul style="list-style-type: none"> • an increase in cases, or related outbreaks, in more than one state or territory; • an outbreak in one state or territory related to a food product produced in another state or territory; or

	<ul style="list-style-type: none"> • a large point source outbreak with many cases from multiple jurisdictions.
Office of Health Protection	A division within Health with responsibilities including OzFoodNet Central, the NIR, surveillance, health emergency management, immunisation and CDNA and PHLN secretariat
OzFoodNet Central	The unit within Health overseen by the Coordinating Epidemiologist, that provides leadership and support for the OzFoodNet program.
OzFoodNet MJOI	The overall OzFoodNet epidemiological investigation of the MJO, which may include evidence from the epidemiological, human laboratory, and environmental investigations, and may involve other agencies and committees.
OzFoodNet Outbreak Register	A register of data on outbreaks of gastrointestinal and foodborne disease that was established in 2000, contributed to by sites, and maintained by OzFoodNet Central.
State and territory OzFoodNet Epidemiologists	Located within state and territory health departments, OzFoodNet Epidemiologists investigate outbreaks and collect, collate, manage and coordinate the transfer of information across and within jurisdictions for the purposes of contributing to national data on the incidence of foodborne disease.
OzFoodNet Working Group	<ul style="list-style-type: none"> • OzFoodNet Central • State and territory OzFoodNet Epidemiologists • PHLN • FSANZ • Agriculture • Food and Nutrition Policy Section at Health • National Centre for Epidemiology and Population Health (NCEPH) at the Australian National University
Point source outbreak	An outbreak that results from a group of persons being exposed to a contaminated food from a common source over a relatively brief period of time (i.e. all cases occur within an incubation period). Cases may occur over several incubation periods if the contaminated food is served over several days.

Environmental
investigation

The food and environmental investigations by food safety agencies into the source, mode and extent of food contamination.

Implicated food products consumed or purchased by individual cases are compared to determine any similarities in the origin of the product between cases. This includes information on where the product was consumed or bought, and the supply and distribution chain of that product. For example, tracing the origin of an item of primary produce consumed by cases to determine if these originated from the same retailer, supplier and/or farm.

This may include laboratory testing of food/s to detect and characterise the agent causing illness.

The environmental investigation seeks to identify where and how the contamination may have occurred and to institute corrective action to avoid similar occurrences in the future. For example, investigating the source of primary produce back to the farm, conducting site visits at the farm to determine how contamination occurred and providing advice on corrective actions. This may include laboratory testing of the environment to detect and characterise the agent causing illness.

1. INTRODUCTION

1.1 Background

Foodborne illness imposes a significant burden on society with the total cost of foodborne illness in Australia estimated at \$1.25 billion per annum.¹ Trends in global food production, processing, distribution and preparation present new challenges to food safety. The nature of foodborne disease investigations has changed significantly, with more complex and wide-ranging investigations becoming more common. The modern nature of food production, distribution and retailing, as well as food preferences increases the possibility that a foodborne outbreak will occur across a number of jurisdictions and even internationally. Consequently, multi-jurisdictional foodborne disease investigations may involve several government and non-government agencies, requiring a well-coordinated process.

Surveillance and control of foodborne illness in Australia is a collaboration of Australian Government agencies, state and territory governments, laboratories and local governments.

1.2 OzFoodNet

OzFoodNet is an Australian Government funded national network of foodborne disease epidemiologists and surveillance officers. The Australian Government established OzFoodNet in 2000 in partnership with state and territory health authorities. The mission of OzFoodNet is to apply concentrated effort at a national level to investigate and understand foodborne disease, to describe more effectively its epidemiology and to identify ways to minimise foodborne illness in Australia. OzFoodNet is the focal point for national foodborne disease surveillance and epidemiological outbreak investigation, and one of its aims is to collaborate nationally to coordinate epidemiological investigations into foodborne disease outbreaks, particularly those that cross state, territory and country borders.

Health coordinates OzFoodNet nationally via OzFoodNet Central and funds epidemiologists in each state and territory. OzFoodNet is a member of the Communicable Diseases

¹ Abelson *et al* (2006) [The annual cost of foodborne illness in Australia](http://www.ozfoodnet.gov.au/internet/ozfoodnet/publishing.nsf/Content/annual-cost-foodborne-illness.htm). Health (webarchive.nla.gov.au/gov/20150413005929/http://www.ozfoodnet.gov.au/internet/ozfoodnet/publishing.nsf/Content/annual-cost-foodborne-illness.htm)

Network Australia (CDNA) and conducts national epidemiological investigations of foodborne illness with their endorsement.

Additional members of the OzFoodNet Working Group include representatives from:

- Australian Government Department of Agriculture and Water Resources (Agriculture);
- Food Standards Australia New Zealand (FSANZ);
- Public Health Laboratory Network (PHLN);
- Food and Nutrition Policy Section at Health; and
- National Centre for Epidemiology and Population Health (NCEPH) at the Australian National University

1.3 Purpose and scope

These guidelines provide clear guidance to members of OzFoodNet for coordinating the national epidemiological investigation of multi-jurisdictional outbreaks (MJOs) of enteric pathogens potentially linked to contaminated food sources in a timely, appropriate, consistent and coordinated manner. These guidelines assign roles and describe functions and communication procedures undertaken by OzFoodNet during an epidemiological investigation. Methodological aspects of MJO investigation are out of scope.

Epidemiological evidence is one aspect of the total evidence required to successfully investigate a multi-jurisdictional foodborne disease outbreak. Also required are human laboratory evidence, which is the responsibility of PHLN members, and involves the testing of clinical specimens from ill individuals to assist in defining the outbreak case definitions and ruling cases in or out. Environmental evidence, is the responsibility of the food enforcement agencies (BFSN members). There is ISFR guidance available to facilitate timely, appropriate, consistent and coordinated environmental investigations and cover:

- Collection of information from businesses
- Sampling and testing
- Traceback procedures
- Transfer of information between jurisdictions
- Transfer of information between jurisdictions and industry
- Documentation and reporting

It is important to note that each MJO presents unique challenges. Hence these guidelines are not prescriptive and do not override the existing responsibilities of individual agencies or states and territories. These guidelines are a “living document” and are routinely reviewed, and amended if necessary, to incorporate recommendations from the structured audit process conducted at the end of every OzFoodNet MJOI, as described in Section 6.5.

2. LEGISLATIVE FRAMEWORK

2.1 International legislation

The *International Health Regulations 2005* (IHR [2005])² enable the WHO and member states to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade. As a signatory to the IHR (2005), Australia is mandated to develop, strengthen and maintain core surveillance and response capacities to better detect, assess, notify and report public health events to the WHO and respond to public health risks and public health emergencies. Australia also has responsibility, through the National Focal Point (NFP, section 2.4), for notifying and reporting public health events of international significance to the WHO within 24 hours of assessment of the event. Australia through the focal point at FSANZ also notifies the WHO auspiced international network of food safety authorities (INFOSAN) of any food safety issues of international importance.

2.2 National legislation

The *Biosecurity Act 2015*³ authorises activities used to prevent the introduction and spread of target diseases into Australia. The Governor-General has the power to authorise a broad range of actions to respond to an epidemic (within the scope of the Act).

The *National Health Security Act 2007*⁴ (NHS Act) provides legislation for national public health surveillance, including the exchange of public health surveillance information between Australian Government and state and territory bodies, the sharing of information with the WHO and other countries, Australia's roles under the IHR (2005) and the designation of Australia's NFP within Health.

² [International Health Regulations 2005 Third Edition. WHO, 2016.](http://www.who.int/ihr/publications/9789241580496/en/) (www.who.int/ihr/publications/9789241580496/en/)

³ [The Biosecurity Act 2015 No. 61 2015.](http://www.legislation.gov.au/Details/C2015A00061/Download) (www.legislation.gov.au/Details/C2015A00061/Download)

⁴ [National Health Security Act 2007 No. 174, 2007.](http://www.legislation.gov.au/Details/C2016C00847) (www.legislation.gov.au/Details/C2016C00847)

The *National Health Security Agreement*,⁵ (NHS Agreement) signed by Australian Government and state and territory Health Ministers in 2008, provides the operational arrangements for national communicable disease surveillance and response through the Australian Health Protection Principal Committee (AHPPC) and defines the role of the NFP. CDNA and the PHLN are sub-committees of AHPPC.

2.3 State and territory legislation

State and territory health departments collect notifications of communicable diseases from doctors and/or laboratories in accordance with their relevant public health legislation and have primary responsibility for surveillance, investigation and management of these cases. Under the NHS Agreement, states and territories forward data to the National Notifiable Diseases Surveillance System (NNDSS) for the purpose of national surveillance, and interact with the NFP as required. States, territories, and local governments also have responsibility for food regulation and safety through state and territory specific food legislation.

2.4 National Focal Point and the National Incident Room

Under the NHS Act (2007), the NFP is defined as being the Secretary of Health, and the persons, officers or positions nominated in writing by the Secretary. The functions of the NFP include liaising with the responsible Australian Government, state or territory agencies in relation to public health events that are potentially of national significance, and to liaise with WHO and responsible Australian Government, state or territory agencies to give effect to the IHR (2005). The NIR is the operational arm of the NFP. The NIR is contactable on (02) 6289 3030 or health.ops@health.gov.au. The NIR is permanently staffed. The NIR collects, assesses and responds to information relating to public health events that are potentially of national significance and (if required) supports a coordinated national public health response to public health events of national or international concern. National coordination of MJOIs may be escalated to the NIR if the outbreak is declared a Communicable Disease Incident of National Significance (CDINS) under the *Emergency Response Plan for Communicable Disease Incidents of National Significance* (Section 5.5).

⁵ [National Health Security Agreement](http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-nhs-agreement.htm) (www.health.gov.au/internet/main/publishing.nsf/Content/ohp-nhs-agreement.htm)

3. EPIDEMIOLOGICAL INVESTIGATION

The OzFoodNet epidemiological investigation is undertaken by the OzFoodNet Outbreak Investigation Team (OIT), the membership of which is specific for each MJOI and is determined at the initial and subsequent MJOI teleconferences. The OIT usually consists of a: National Coordinator; Lead Agency; Lead Epidemiologist; state and territory OzFoodNet epidemiologists; Human Laboratory Liaison Officer(s); Environmental Liaison Officer; OzFoodNet Working Group members; and may include other participating agencies, organisations and technical experts as required.

OzFoodNet's epidemiological investigation of multi-jurisdictional outbreaks which are potentially foodborne concentrate on the design and conduct of the epidemiological investigation, to find an association between human illness and a particular food source and to provide this evidence to the relevant food safety/enforcement agencies via the Bi-national Food Safety Network (BFSN) who can coordinate public health interventions/ control measures to prevent further illness (e.g. food recall, premises closures, public alerts/communications). The epidemiological investigation may also incorporate any human laboratory and/or environmental evidence gathered during the investigation by collaborating agencies and networks.

3.1 External Agencies

Depending on the circumstances of an MJO, multiple agencies and governments or industry groups/committees are potentially involved in OzFoodNet's epidemiological investigation and in conducting concurrent separate investigations of the same MJO. Other agencies may also be involved if there are international implications.

These agencies include, but are not limited to:

- Australian, state and territory government agencies responsible for human health, agriculture, animal health, environment, consumer affairs or trade;
- Australian, state and territory government agencies responsible for food safety;
- Enteric reference laboratories; and
- Local government authorities.

3.2 Consensus and agreement

These Guidelines have been developed in a spirit of cooperation with the aim of facilitating a consistent response to the epidemiological investigation of MJOs. However, because public health in Australia is implemented through state and territory legislation there may be occasions where a consistent outcome is not possible or appropriate.

This may be due to:

- Legislative differences between state and territory agencies;
- Public interest;
- Differences in opinion on the level of risk posed; or
- Differences in opinion on the appropriate response measures.

In the case of a diversity of view regarding the response, every endeavour should be made to form a common position by involving the most senior representatives of the parties involved. For some issues, the OzFoodNet OIT may seek guidance from CDNA and/or PHLN. Issues which have become contentious during an outbreak investigation should be discussed at the structured audit (Section 6.4).

3.3 Confidentiality and information sharing

To facilitate OzFoodNet epidemiological investigations, information shared in OzFoodNet MJOI teleconferences or via email during the investigation is treated as confidential and in accordance with such confidentiality obligations. Once personal information is provided to the NFP, it becomes 'protected information' as defined by the NHS Act (2007). 'Protected information' includes identified patient data, patient laboratory results and commercial information and other laboratory results (to the extent they contain personal information), as they relate to the notification of a case and/or outbreak of disease which may have a multi-jurisdictional impact. The NHS Act then provides authorisation for the making of a record, disclosure or use of this information by officers, employees, instrumentalities of the Commonwealth, states, territories or persons engaged on their behalf to perform public health work, provided the making of a record, disclosure or use of the information is for a permissible purpose. While the NHS Act provides authorisation for the disclosure or use of the above information, it does not provide a basis to compel the disclosure of such information from states and territories.

Commercial information (to the extent it does not contain personal information) will not fall within the meaning of 'protected information'. There are two types of commercial information which are likely to be relevant to the epidemiological investigations of foodborne illnesses: business information; and laboratory results relating to food testing. Both types of commercial information may be disclosed to the NFP on behalf of a responsible Commonwealth, state or territory body under the NHS Act (2007) depending on the legislation under which the information was gathered. How this information can then be used will depend on whether such information is, in fact, confidential as a matter of law.

Assuming such commercial information is not otherwise in the public domain, is not obtained by force of statute and is provided by entities (e.g. the retailers, distributors etc.) to the epidemiological investigation on the assumption it will be kept confidential, it is likely that the entity receiving the information (e.g. a state) is subject to a legal obligation to keep that information confidential. However, there are likely to be public interest grounds to support the disclosure of such information to the Commonwealth or other states or territories involved in a multi-jurisdictional epidemiological investigation. The Commonwealth or other state or territory recipients of such information are obliged to treat the information confidentially.

3.4 Roles and responsibilities

During OzFoodNet MJOs a number of tasks must be assigned. Formalising these tasks as functions gives flexibility for organisations with the best capability and resources at the time to contribute to an OzFoodNet epidemiological investigation. Roles and responsibilities are described for each OzFoodNet MJO phase in sections 4, 5 and 6.

3.5 Phases of an OzFoodNet MJO

There are three main phases within an epidemiological investigation of a MJO:

1. Alert phase – detection and declaration of a MJO;
2. Investigation phase – investigation of the MJO; and
3. Stand down phase – investigation is reviewed and finalised.

An outline of the steps involved in the OzFoodNet epidemiological investigation of a MJO are described in Sections 4–6.

4. PHASE 1 – ALERT

4.1 Identification of a potential multi-jurisdictional outbreak

OzFoodNet identifies a potential MJO through a number of sources, which may include:

- Regular OzFoodNet communications including:
 - Monthly OzFoodNet teleconferences with OzFoodNet Working Group members;
 - Electronic correspondence (emails and fortnightly reports) between OzFoodNet epidemiologists
- Routine analyses of the NNDSS data;
- CDNA review of NNDSS data;
- Overseas intelligence;
- Information sharing via email or teleconference involving food safety agencies; via the BFSN;
- Surveillance of enhanced laboratory testing of human and/or food specimens.

4.2 Preliminary information sharing

Upon identification of a potential MJO, OzFoodNet Central will collate all available epidemiological information regarding the incident or increase in cases and will send an information sharing email to present this information to all OzFoodNet Working Group members. This preliminary information sharing step should involve representatives of relevant food safety agencies if a specific food source is suspected.

4.3 OzFoodNet initial MJOI teleconference

After the preliminary information sharing step, by general agreement or if requested by an affected state or territory, OzFoodNet Central will convene and chair an initial OzFoodNet MJOI teleconference, with the aim of determining if an OzFoodNet MJOI should be recommended.

OzFoodNet may invite representatives from other agencies and organisations, or technical experts, to participate in the initial teleconference and/or the investigation. Such

groups/individuals should include representatives of relevant food safety agencies if a specific food source is suspected.

At the initial MJOI teleconference each OzFoodNet epidemiologist will report on the incident as it applies to their state or territory. This will be followed by input from any attending experts and a discussion as to whether the incident meets the criteria for an MJO and whether an OzFoodNet MJOI should be recommended.

4.4 Multi-jurisdictional Outbreak decision trigger questions

The following trigger questions are used for deciding if an MJO is occurring:

- Are there more cases* of the same syndrome, pathogen, serotype/phage type/molecular type than usual for the same reporting period? YES/NO
 - If YES, are cases occurring in more than one state or territory? YES/NO
 - IF YES, then an MJO is occurring.

*consider using an appropriate statistical measure for measuring the increase in common pathogens/syndromes

If the answer to either of the above questions is NO an MJO is not occurring. OzFoodNet Central distributes summary notes from the teleconference to the OzFoodNet Working Group members and briefs CDNA at their next regularly scheduled teleconference. OzFoodNet returns to routine surveillance.

4.5 Multi-jurisdictional Outbreak Investigation decision trigger questions

If an MJO is occurring, consider the following questions to decide whether an OzFoodNet MJOI would be the most effective approach to investigate the outbreak and help identify an implicated food source:

- Is there evidence to support transmission by food?
- Is the syndrome/infection severe and/or unusual?
- Is further laboratory characterisation of the agent required?
- Is non-standard laboratory characterisation of the agent (e.g. whole genome sequencing) required which may involve additional costs and interstate transportation of isolates?
- Is further clinical characterisation of the syndrome or cases required?

- Is it likely that substantial epidemiological resources will be required in the affected jurisdictions to rapidly investigate this MJO?
- Is it likely that many state and territory and/or national agencies will be stakeholders?
- Is it likely that there will be significant national or international implications from this MJO?

All MJOs are different so an exact weighting for these questions cannot be documented. Therefore after answering these questions a majority vote by OzFoodNet epidemiologists decides the outcome.

4.6 OzFoodNet's initial teleconference outcome

1. Not an MJO

There is no evidence to proceed with a MJOI. OzFoodNet Central distributes summary notes from the teleconference to OzFoodNet Working Group members and briefs CDNA at their next regularly scheduled teleconference. OzFoodNet returns to routine surveillance.

2. MJOI not recommended at this time

There is evidence of an MJO occurring but at this stage an investigation by the affected jurisdictions without national coordination is the most efficient and effective way to proceed. OzFoodNet Central distributes summary notes from the teleconference to OzFoodNet Working Group members and briefs CDNA at its next regularly scheduled teleconference. OzFoodNet remains in the alert phase performing enhanced surveillance and communicating regularly until the incident or increase is over or there is sufficient evidence for recommending an OzFoodNet MJOI.

3. MJOI recommended

OzFoodNet agrees that there would be benefit in commencing an OzFoodNet MJOI. OIT roles should also be provisionally assigned (refer to 5.2) pending CDNA endorsement of activation. OzFoodNet Central distributes summary notes from the teleconference to OzFoodNet and incident@foodstandards.gov.au. FSANZ then circulates summary notes to the BFSN. OzFoodNet epidemiologists brief their CDNA members and food safety agencies that OzFoodNet

recommends that an MJOI be commenced. An “OzFoodNet recommendation to CDNA to commence an MJOI” is provided by OzFoodNet Central to CDNA out of session or at an extraordinary meeting seeking endorsement for OzFoodNet to conduct an MJOI. If OzFoodNet also recommend non-standard laboratory characterisation, a case must be made for this, including estimated costs, in the recommendation to CDNA.

If CDNA endorsement is received, the OzFoodNet MJOI moves to the investigation phase.

Direction to undertake an MJOI

Please Note: OzFoodNet can be directed to undertake an MJOI by:

- **CDNA** - the Chair of CDNA can convene an extraordinary meeting and with the agreement of the CDNA Jurisdictional Executive Group (JEG) members direct OzFoodNet to initiate an MJOI.
- **AHPPC** - the Chief Medical Officer of Australia can convene an extraordinary meeting of AHPPC and with the agreement of state and territory Chief Health Officers direct CDNA to initiate an MJOI.

In the event of a direction to undertake an MJOI, OzFoodNet convenes an initial MJOI teleconference to assign roles and plan activities.

4.7 Notification under IHR (2005)

At OzFoodNet’s initial teleconference, the MJO will be assessed with the *Decision instrument for assessment and notification of events that may constitute a public health emergency of international concern* from the IHR (2005).

- If OzFoodNet agrees that the WHO should be notified formally, OzFoodNet Central will provide this advice to the NIR for the consideration of the NFP.
- If OzFoodNet agrees that the MJO does not meet the criteria for notification but still has some potential international impacts, OzFoodNet Central will provide this advice to the NIR for the consideration of the NFP.

- If OzFoodNet agrees that no notification is required at this stage, OzFoodNet Central will provide this advice to the NIR for the consideration of the NFP, and the decision instrument must be reassessed at later teleconferences.

The NFP will make the ultimate decision on whether to:

- a. make a formal notification to the WHO under Article 6 of the IHR (2005);
- b. make an informal notification to the WHO under Article 8 of the IHR (2005); or
- c. make no notification.

4.8 Roles and responsibilities in the Alert Phase

OzFoodNet Central will:

- Assign an MJOI outbreak number
- Monitor communications regarding the potential MJO
- Collate available information and share with OzFoodNet via email and the BFSN (if a specific food source is suspected)
- Convene and chair the initial OzFoodNet MJOI teleconference
- Inform CDNA of outcome of initial MJOI teleconference and if an MJOI is recommended forward “OzFoodNet recommendation to CDNA to commence an MJOI” to CDNA.Secretariat@health.gov.au and incident@foodstandards.gov.au (as per 4.6)
- Inform the NIR of the outcome of the IHR decision tree assessment

State and territory OzFoodNet epidemiologists will:

- Collate local evidence and conduct enhanced surveillance on the incident or increase
- Participate in the initial OzFoodNet MJOI teleconference
- Provide a summary report from their state or territory
- Inform their CDNA representative and food safety agency of the outcome of the teleconference

OzFoodNet Working Group members (FSANZ, PHLN and Agriculture) will:

- Participate in the initial OzFoodNet MJOI teleconference
- Inform their networks of the outcome of the teleconference (as per 4.3)
- FSANZ to circulate summary notes to the BFSN

5. PHASE 2 – INVESTIGATION

In this phase, an epidemiological investigation into the MJO is conducted by the OzFoodNet OIT. Although each investigation will be different, the coordination and management of the epidemiological investigation should follow similar steps.

The extent of OzFoodNet's response depends on the extent and type of MJO. For example, if a well-defined point source salmonellosis outbreak occurs in one state or territory with cases in multiple jurisdictions, an MJOI may be recommended so that the Lead Epidemiologist can develop a single outbreak case definition and questionnaires to ensure a coordinated response. Other coordination roles including human laboratory and/or environmental liaison officers may not be required to be assigned for this investigation. However, if an MJO has large numbers of cases occurring in multiple jurisdictions with an unknown source, then every aspect of the guidelines might be actioned and all roles assigned. Not all response activities will be required for every OzFoodNet epidemiological investigation, and activities may not occur in the sequence presented.

The Lead Epidemiologist will determine which response activities are relevant to each investigation.

5.1 Initial scoping

Once an MJOI has been initiated the investigation can begin immediately based on the provisional roles decided at the initial teleconference, however these roles should be confirmed formally as soon as possible at MJOI teleconference no. 2 which is convened and chaired by the National Coordinator. The CDNA members of affected agencies may be involved in these discussions and CDNA should be informed of outcomes. An epidemiological summary of the MJO and actions conducted to date at the state and territory level will be reviewed and an OzFoodNet epidemiological investigation plan will be discussed.

5.2 Roles and responsibilities

Roles within the OIT will have been provisionally assigned at the initial teleconference (refer to 4.6). These roles should be confirmed at MJOI teleconference no. 2 and revised as appropriate.

National Coordinator

The National Coordinator for an MJOI will be either the OzFoodNet coordinating epidemiologist, or another epidemiologist from Health. Duties will include:

- Providing national administrative support.
- Assisting with developing and managing the national outbreak database and helping to source additional epidemiological resources.
- Convening and chairing national OzFoodNet MJOI teleconferences and/or face-to-face meetings.
- Assisting the Lead Epidemiologist to collect, analyse, report and disseminate national epidemiological data.
- Preparing and circulating MJOI teleconference summaries.
- Preparing and distributing an OzFoodNet investigation summary to CDNA, the OIT, and to participating agencies as appropriate, prior to each scheduled or extraordinary CDNA meeting.
- Coordinating communication activities as required, including international liaison and provision of advice to the NIR re: notifications under the *IHR (2005)*
- Providing feedback from CDNA to the OIT and vice versa
- Providing the first point of contact for national and international agencies, and communicate with all relevant national and international agencies during the OzFoodNet MJOI.
- Maintaining a record of key dates and actions throughout the MJOI, and providing a timeline to OzFoodNet MJOI teleconferences as required.

Lead Agency

A Lead Agency will be recommended by OzFoodNet at the initial MJOI teleconference. The recommendation will take into consideration state and territory preferences, available resources and skills. Preference may be given to the health department of the state or territory with the largest number of cases at the commencement of the MJOI or the health department of the state or territory where the outbreak originated or the state or territory which first identifies the outbreak. The duties will vary depending on the type of outbreak incident and may include providing the lead role in the epidemiological investigation. Duties include:

- Providing the first point of contact for each state or territory, and communicating with all relevant state and territory agencies during the OzFoodNet MJOI.

Lead Epidemiologist

The Lead Epidemiologist will usually be the OzFoodNet epidemiologist from the Lead Agency. However it may be appropriate for an epidemiologist from a less affected state or territory to undertake, or provide support with, this role to allow for better distribution of resources. Duties include:

- Oversee and direct the OzFoodNet epidemiological investigation including the development and revision of a case definition(s), questionnaires and the protocol/analytic study design, in consultation with the OIT and relevant experts.
- Co-ordinate interviews and data entry at the national level.
- Liaise with the National Coordinator to collect, analyse and report on national data.
- Act as the data custodian for all outbreak data.
- At an agreed upon time period (e.g. daily or weekly), and using outbreak data collated from OzFoodNet state and territory epidemiologists, prepare a Situation Report containing summary data on the investigation that can be used by agencies for developing coordinated public health messaging. The National Coordinator will then disseminate the Situation Report to OzFoodNet, CDNA, BFSN and participating agencies. In the event of escalation (refer to 5.5), the data collated by the Lead Epidemiologist will form the epidemiological component of the NIR Situation Report.

State and territory OzFoodNet epidemiologists will:

- Provide input to decisions regarding the direction of the OzFoodNet MJOI.
- Check whether resources are adequate to enable timely data entry of relevant notifications within the state or territory, and if not, consider requesting assistance from within the state or territory or via the National Coordinator.
- Conduct epidemiological investigation of local cases, following the agreed protocol of the current MJOI.
- Enter and update epidemiological data into the national outbreak database as soon as possible and inform Lead Epidemiologist.
- Seek approval from state and territory laboratories for results to be shared with the Human Laboratory Liaison Officer.

- Liaise with state and territory food safety agencies on environmental information to inform the epidemiological investigations, and report results to the environmental liaison officer, if relevant.
- Liaise with laboratories to request that all outbreak specimens are fast-tracked, and request additional laboratory testing/typing as required. Request and coordinate additional laboratory testing as required.
- Submit completed laboratory request forms to testing laboratory(ies).
- Report on state or territory actions at all OzFoodNet MJOI teleconferences.
- Ensure state or territory outbreak team including CDNA members and food safety agencies are informed about the progress of the OzFoodNet MJOI.

Human Laboratory Liaison Officer(s)

Will usually be the OzFoodNet PHLN representative or a representative of a PHLN laboratory in the same state or territory as the Lead Agency. The Human Laboratory Liaison Officer provides a single point of contact with the PHLN laboratories testing human specimens. In larger outbreaks it may be necessary to appoint more than one Human Laboratory Liaison Officer. Duties will include:

- Consulting with PHLN and laboratories regarding testing methodologies (for human samples), resources and sharing of laboratory results (including to international databases) as appropriate.
- Advising on alternative arrangements where state and territory laboratory capacity is limited.
- Completing the laboratory liaison summary template and providing to the OzFoodNet OIT.
- Working with state and territory OzFoodNet epidemiologists to facilitate the timely arrival of specimens and samples at the testing laboratory and ensuring the OzFoodNet epidemiologist has requested the results be shared with the Human Laboratory Liaison Officer.
- Reporting on human laboratory matters at OzFoodNet MJOI teleconferences.
- Collecting and collating human specimen laboratory results from jurisdictions, including details of specimens and samples tested, and providing collated results to the OIT on a regular basis.

Environmental Liaison Officer

The Environmental Liaison Officer will be from a state or territory food enforcement agency, or a non-regulatory representative of the BFSN (FSANZ or Health). The Environmental Liaison Officer will provide a single point of contact for the environmental investigations.

Duties will include:

- Working closely with the Lead Epidemiologist and the Human Laboratory Liaison Officer.
- Reporting environmental investigations, including food and environmental sampling results at OzFoodNet MJOI teleconferences.
- Developing and maintaining the data collection templates, recording all food and environmental samples that are sent for testing.

OzFoodNet Working Group members (FSANZ, PHLN and Agriculture) will:

- Attend MJOI teleconferences and provide updates on agency and BFSN activities.
- Actions as agreed at teleconferences.
- FSANZ to circulate Situation Reports and teleconference summaries to the BFSN.

Other participating agencies, organisations and technical experts

Other participating agencies, organisations and technical experts may be invited to work with the OzFoodNet OIT (as per 4.3).

- Attend teleconferences as required and provide updates on activity.
- Actions as agreed at MJOI teleconferences.

5.3 Conducting the epidemiological investigation

Under the assistance and direction of the Lead Epidemiologist, the OzFoodNet OIT will:

- Develop an agreed outbreak case definition and modify during the investigation as required.
- Conduct hypothesis generating interviews with cases to establish an hypothesis as to the source of the outbreak.
- Test the hypothesis by designing and conducting an appropriate analytic study (where required), including study protocols and questionnaires.
- Conduct analyses of epidemiological data (descriptive and analytical).
- Summarise and interpret the epidemiological data for the BFSN and other agencies to inform actions to prevent further transmission.

The OzFoodNet epidemiological investigation continues as described until the stand-down phase (described in Section 6).

5.4 Communication

During OzFoodNet MJOIs it is essential that there is effective communication within and between all participating agencies. As there is potential for considerable public and political interest, communication needs to be accurate and timely, particularly between government bodies.

There should be close liaison between the jurisdictional OzFoodNet epidemiologists and the food enforcement agency undertaking the environmental investigation. This liaison should include regular communication as the investigation progresses and importantly jointly participating in the relevant OzFoodNet and BFSN teleconferences/meetings.

5.4.1 Outbreak Investigation Team

Communication within the OzFoodNet OIT will mainly occur through:

- Situation Reports containing summary data for use in briefings and media releases, prepared by the Lead Epidemiologist or other designated epidemiologist.

- Under escalation (refer to 5.5), Situation Reports will be collated and released by the NIR. The data collated by the Lead Epidemiologist will form the epidemiological section of the NIR Situation Report.
- OzFoodNet MJOI teleconferences (template for agenda and summary notes is at Appendix 11).
- OzFoodNet investigation summaries – documents prepared by the National Coordinator throughout the investigation for each CDNA meeting containing a summary of the outbreak to date, actions since the last summary and outstanding action items (template for investigation summary is at Appendix 5).

5.4.2 Communicable Diseases Network Australia

- The National Coordinator will circulate Situation Reports and the outbreak investigation summaries to CDNA.Secretariat@health.gov.au. Members of CDNA may also be invited to attend OzFoodNet MJOI teleconferences.

5.4.3 Bi-national Food Safety Network

- All Situation Reports and teleconference summaries will be shared with the BFSN (coordinated by FSANZ; incident@foodstandards.gov.au).
- Representatives from relevant food safety agencies will be invited to participate in OzFoodNet MJOI teleconferences.

5.4.4 Australian Government agencies

Individual government departments will be responsible for briefing their own ministers and senior executives regarding the status of the investigation. The National Coordinator may also circulate Situation Reports, the OzFoodNet outbreak investigation summaries and the MJOI Timeline to other Commonwealth agencies, especially if there are international or trade implications. The National Coordinator will also inform the OzFoodNet OIT of such information sharing.

5.4.5 International

International agencies will be advised of the details of any outbreaks if necessary via communications sent to the NIR. During OzFoodNet MJOIs the National Coordinator may also advise international public health agencies including INFOSAN to share information on MJOIs of international concern. All international communications are copied to the NIR

(health.ops@health.gov.au). The National Coordinator will also inform the OzFoodNet OIT of such information sharing.

5.4.6 Industry

Communication with industry is the responsibility of the BFSN. OzFoodNet can contribute epidemiological evidence for communication with industry on request from the BFSN.

5.4.7 Public

OzFoodNet can contribute epidemiological evidence to inform public health messages. Situation Reports, and public health alerts should be distributed to CDNA, the BFSN, and the OzFoodNet OIT to ensure that any resulting public messages are accurate and consistent.

When endorsing commencement of an OzFoodNet MJOI CDNA agrees to a Lead Agency. The Lead Agency should take the lead in public statements regarding the epidemiological investigation, in consultation with all members of the MJOI. All case numbers for such statements should come from the Lead Epidemiologist. Media releases or public statements relating to state and territory issues should be consistent with the public statements issued by the Lead Agency and cleared by the relevant state/territory as per usual. All public statements during an OzFoodNet MJOI should be shared with CDNA and BFSN members prior to any statement being made. The Lead Agency will also support the preparation of public statements by food safety agencies by sharing with them the key epidemiological findings and public health messages. All public statements should be shared with CDNA and BFSN members prior to public release.

However, in the case of Escalation (refer to 5.5) the release of any statement would need to be agreed with CDNA and the AHPPC. Once agreed, public statements or media releases will be prepared by the Department of Health's media unit with an appropriate degree of urgency and an agreed nominated spokesperson.

5.5 Escalation

The national health emergency response arrangements (NatHealth Arrangements) articulate the strategic arrangements and mechanisms for the coordination of the Australian

health sector in response to emergencies of national consequence.⁶ These Guidelines sit under the communicable disease pillar of the NatHealth Arrangements the *Emergency Response Plan for Communicable Disease Incidents of National Significance* (CD Plan). Under the CD Plan, the Australian Government Chief Medical Officer of Australia (CMO) as Chair of the Australian Health Protection Principal Committee (AHPPC) can declare an outbreak to be a Communicable Disease Incident of National Significance (CDINS) and escalate coordination and response measures. This decision is made in conjunction with advice from CDNA, AHPPC and the Office of Health Protection.

If a CDINS is declared during an OzFoodNet MJOI (requiring implementation of national policy and public messaging, or deployment of Commonwealth or inter-jurisdictional resources to assist affected jurisdictions) Health is responsible for coordinating the national health sector response. The Lead Agency and Lead Epidemiologist will be informed of this declaration and any resulting changes in roles will be clarified. The OzFoodNet OIT will continue to conduct the epidemiological investigation.

Once de-escalation occurs, the OzFoodNet MJOI will either continue on or will move to stand down if the conditions described in 6.1 are met.

⁶ [National Health Emergency Response Arrangements: November 2011](#)

(www.health.gov.au/internet/main/publishing.nsf/content/ohp-response-arrangement-nov11)

6. PHASE 3 – STAND DOWN

6.1 OzFoodNet MJOI declared over

In this phase, the OzFoodNet epidemiological investigation will conclude when CDNA agrees to a recommendation from the OzFoodNet OIT that an MJOI is no longer required or has reached its conclusion. An endpoint may be when two incubation periods after the onset of the last case have passed and/or the epidemiological curve indicates that case numbers have returned to background levels.

6.2 Roles and responsibilities in the stand down phase

National Coordinator will:

- Assist the Lead Epidemiologist in developing the final report.
- Organise the OzFoodNet structured audit (Appendix 13) and complete a structured audit report.
- Ensure a summary of the OzFoodNet MJOI is included in the relevant OzFoodNet quarterly and annual report.

Lead Agency

- Nil.

Lead Epidemiologist will:

- Complete the final OzFoodNet outbreak investigation report (Appendix 12).
- Present details of the epidemiological investigation at the OzFoodNet structured audit (Appendix 13).
- May complete a final publication in a peer-reviewed journal in collaboration with the OzFoodNet OIT.
- Ensure final MJOI data are entered into the OzFoodNet outbreak register at the next quarterly update.

State and territory OzFoodNet epidemiologists will:

- Provide data/information from their state or territory for the final report.
- Participate in the OzFoodNet structured audit.

Human Laboratory Liaison Officer(s) will:

- Provide human laboratory data and information for the final report.

- Participate in the OzFoodNet structured audit.

Environmental Liaison Officer will:

- Provide food and environmental traceback information for the final report.
- Participate in the OzFoodNet structured audit.

OzFoodNet Working Group members (FSANZ, PHLN and Agriculture) will:

- Participate in the OzFoodNet structured audit.
- FSANZ to circulate the final report to the BFSN.

Other participating agencies, organisations and technical experts will:

- Participate in the OzFoodNet structured audit as required.

6.3 Final report and publication

Once the OzFoodNet MJOI has ceased, a report (Appendix 12), summarising all aspects of the OzFoodNet MJOI will be written. This will be circulated to all relevant agencies after the OzFoodNet investigation is closed.

The Lead Epidemiologist may coordinate the writing of a scientific paper for peer reviewed publication on the OzFoodNet epidemiological outbreak investigation, in consultation with participating agencies, to be published in *Communicable Diseases Intelligence* or a similar journal. This would require agreement from all members of the OzFoodNet OIT and early consensus should be sought regarding authors and their roles and responsibilities for the writing. All members of the OzFoodNet OIT and participants in the jurisdictions should be acknowledged and authorship based on sufficient contribution to the paper.

6.4 Structured audit

All OzFoodNet members that participated in the MJOI, as well as relevant technical experts and representatives of participating agencies and organisations, will be invited to attend a structured audit as part of the stand down phase of each OzFoodNet MJOI to assess the effectiveness of the epidemiological investigation (Appendix 14).

The main objectives of the OzFoodNet structured audit are to:

- Summarise the epidemiological, human laboratory and environmental investigations as appropriate;

- Discuss the investigation process and the timeline for the steps in the investigation;
- Discuss the evidence obtained for attributing a source to the outbreak;
- Evaluate the collaborative response efforts with regards to the epidemiological investigation;
- Evaluate communications between agencies;
- Discuss recommendations that might reduce the recurrence of similar outbreaks;
- Assess the usefulness of these Guidelines in guiding the epidemiological investigation; and
- Identify any improvements or adjustments that could be made to the guidelines to best meet the OzFoodNet epidemiological objectives.

Responsibility for arranging the OzFoodNet structured audit lies with the National Coordinator in consultation with the Lead Epidemiologist. The facilitator for the audit discussion should ideally not have been directly involved in the epidemiological investigation but should be familiar with similar epidemiological investigations. It is also the responsibility of the National Coordinator to provide a summary report of the structured audit (including action items) to all participants.

6.5 Review of these guidelines

Recommendations for changes or enhancements to these guidelines may be suggested during the structured audit and these will be included in the audit report. Suggestions for other changes or enhancements to the guidelines can be forwarded to ozfoodnet@health.gov.au. OzFoodNet Central is responsible for reviewing the guidelines in consultation with the OzFoodNet MJOI Guidelines Working Group.