

CANADA
FOODBORNE ILLNESS OUTBREAK RESPONSE
PROTOCOL
TO GUIDE A MULTI-JURISDICTIONAL RESPONSE

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Preamble

The first edition of the Foodborne Illness Outbreak Response Protocol (FIORP) was developed in 1999 by Health Canada (HC) and the Canadian Food Inspection Agency (CFIA), in consultation with the provinces and territories (P/T). In May 2002, as part of a special session on Emergency Preparedness, the F/P/T Committee on Food Safety Policy (FPTCFSP) recognized the FIORP as a key procedural document in national emergency preparedness and agreed that there was a need to review it and seek senior endorsement. HC and CFIA facilitated the initial revision of the document as well as cross-country regional consultations during 2003. An FPT Working Group collaborated to produce this current Protocol, based on comments received during these consultations. The FIORP was endorsed by the FPTCFSP on May 19, 2004, by the Council of Chief Medical Officers of Health on May 20, 2004, and by the F/P/T Deputy Ministers of Health on July 15, 2004. The contributions of all the individuals who participated in the revision and consultation process are gratefully appreciated.

Contact for the Protocol:

Associate Director
Interagency Program
Bureau of Food Regulatory, International and Interagency Affairs
Food Directorate, Health Products and Food Branch
Health Canada
Building No. 7, Tunnel's Pasture
Ottawa, Ontario
K1A 0L2
Tel: (613) 957-1829
Fax: (613) 941-3537

1. INTRODUCTION

Human illness may occur as sporadic cases or as outbreaks involving two or more individuals. Investigations of human illness outbreaks need to take into account the potential link to a common food. Identified foodborne illness outbreaks usually affect members of more than one household, and most are associated with defined communities.

Foodborne illness may result from the natural, accidental or malicious contamination of foods by microbiological or chemical substances. Impacts of foodborne illness may include morbidity and mortality, increased health care costs, loss of consumer confidence, economic losses, and lost productivity to industry.

Changes in food distribution networks and the increased globalization of trade in food have resulted in larger volumes of raw and processed products moving across domestic and international boundaries. As a consequence, foodborne illness outbreaks associated with widely distributed foods are resulting in cases of human illness that cross local, provincial/territorial (P/T) and international boundaries. Regulatory bodies responsible for human health and food safety are responding to these events through the development of enhanced foodborne illness surveillance networks, and through collaboration in multi-jurisdictional outbreak investigations.

In Canada, responsibility for responding to foodborne illness outbreaks is shared among the responsible local and regional health authorities, P/T governments and federal officials (the Partners). Under their respective constitutional and legislative mandates, and pursuant to the various existing framework agreements, each level of government has a significant role to play. Effective response to a potential or confirmed foodborne illness outbreak requires cooperation and collaboration among these Partners to ensure the timely mitigation of risk and prevention of further illness.

The Foodborne Illness Outbreak Response Protocol to Guide a Multi-Jurisdictional Response (the Protocol) is for the benefit of this knowledgeable group of government officials, and as such, is not intended to provide detailed instructions on how to conduct investigations.

The principles outlined in the Protocol can serve as a guide when human illnesses are caused by non-food sources (e.g., contaminated pet treats, petting zoo animals, pets, etc.) or other food hazards requiring prompt collaboration and coordination (e.g. physical hazards).

2. OBJECTIVE

The objective of the Protocol is to formalize established practices between the Partners in responding to potential multi-jurisdictional foodborne illness outbreaks, in order to enhance the collaboration and coordination among them.

To meet this objective, the Protocol lists guiding principles, describes roles and responsibilities, provides general operating procedures, establishes clear lines of communication and provides guidance for post outbreak reviews.

3. SCOPE

- 3.1** The Protocol describes the guiding principles and operating procedures agreed to by the Partners to help coordinate the response to potential foodborne illness outbreaks that may have multi-jurisdictional implications.
- 3.2** The Protocol is intended to be followed during the response to potential foodborne illness outbreaks including those resulting from the natural, accidental or malicious contamination of foods by microbiological or chemical substances.
- 3.3** The Protocol describes activities beginning with the determination of a potential for foodborne illness outbreak and ending with either the containment of the risk that triggered the outbreak or resolution of the outbreak, including the optional post outbreak review process.
- 3.4** The Protocol does not address the broader risk assessment process that contributes to policy and standard setting.
- 3.5** The Protocol is intended to complement agreements and procedures established in individual P/T's and can be incorporated in agreements between various Partners. If the principles of the Protocol are respected in existing agreements and procedures, then these do not need to be modified.

4. GUIDING PRINCIPLES

- 4.1** The primary objective of the surveillance and investigation activities described in the Protocol is to mitigate or contain the effects of a foodborne illness outbreak in a timely fashion, thereby protecting the health of Canadians.

- 4.2 The Partners implementing the Protocol will, subject to their respective privacy and access to information laws as well as applicable P/T and/or municipal legislation, exchange information relevant to the investigation and control of a foodborne illness outbreak in a timely fashion. Activities related to an outbreak will be duly documented. Various systems may be in place to exchange this information, however, Annex 1 provides a template that may be of assistance.
- 4.3 Public disclosure of food product information may be required once a reasonable link to a food source has been identified. Until such has been established, the confidentiality of any shared food product information will be respected.
- 4.4 Laboratory, epidemiological or food safety investigation evidence are all accepted for establishing the association between a particular food or foods, with human illness.
- 4.5 Whenever possible, the Partners implementing the Protocol will provide assistance, including laboratory support, as requested during an epidemiological investigation or food safety investigation.
- 4.6 Where memoranda of understanding (MOUs) or other agreements between the Partners, regarding food safety surveillance, investigation or control, may exist or are negotiated, these will be shared and respected.
- 4.7 The Protocol is not intended to substitute for the on-going relationships between the Partners necessary to discharge other responsibilities and to manage issues as they arise.

5. DEFINITIONS

The following definitions are provided to ensure a common understanding of the terms used in this document.

Epidemiological investigation: Investigation made to determine the existence of an outbreak, to characterize it as to time, space and personal characteristics, to develop and test a hypothesis explaining the specific exposure that caused disease. The investigation may result in recommendations towards the implementation of appropriate prevention and mitigation measures.

Evidence: That which demonstrates or shows an association between events. Evidence of an association between a consumed food and human illness may be

epidemiological and/or based on the results of food safety investigations or laboratory analysis.

- Epidemiological evidence: In the absence of other types of evidence, epidemiological evidence must show a statistically significant association between human illness and consumption of specific food(s).
- Laboratory evidence: Evidence shown by the isolation/identification of the same pathogen, toxin or contaminant from cases of human illness and the suspect food.

Food: Any raw, cooked or processed substance, including (but not limited to) ice, beverage or ingredients used or intended for use, in whole or in part, for human consumption. For the purpose of the Protocol, it excludes non-bottled water per say, as it is under P/T jurisdiction and would not be the cause of multi-jurisdictional outbreaks. However, it does include food made with non-bottled water.

Foodborne illness: A human illness, with evidence indicating a food was the common source of exposure to the contaminant causing illness.

Food safety investigation: Refers to inspection and related activities undertaken by regulatory officials to verify whether or not a food hazard exists and to determine the nature and extent of the problem. In the case of a foodborne illness outbreak, information gathered during the food safety investigation and epidemiological investigation provides the basis for risk assessment and for the development of appropriate risk management strategies to control affected food products.

Hazard: A biological, chemical or physical agent in, or condition of, food with the potential to cause and adverse health effect.

Outbreak: An outbreak is an incident in which two or more persons experience similar illness after a common source exposure. An outbreak is identified through laboratory surveillance or an increase in illness that is unusual in terms of time and/or place. An outbreak is confirmed through laboratory and/or epidemiological evidence.

Response: In the context of foodborne illness outbreaks, response includes activities related to the determination, investigation, mitigation and containment of such outbreaks, as well as related communication activities.

6. ROLES AND RESPONSIBILITIES

Responsibilities for responding to foodborne illness outbreaks may be shared between federal, P/T, regional and local jurisdictions. The response to such situations involves collaboration and cooperation among all those involved. Annex 7 describes the legislative authorities within each of the P/T and the federal government.

6.1 Provincial/Territorial Authorities

P/T regional and local health officials generally have the mandate to investigate human illness outbreak that occur within their boundaries. However, in certain P/Ts, other departments may have a role in foodborne illness investigations. Should an outbreak span regional boundaries or have serious human health implications, a leadership role in investigation may be assumed by the P/T Chief Medical Officer of Health. P/T food regulatory officials are often called to participate and may lead the response. During their investigations, the various authorities take steps to control potential causes of foodborne illness.

Local/regional or P/T officials may also, in some cases, request the assistance of Health Canada, the Public Health Agency of Canada or the Canadian Food Inspection Agency in the response to a potential foodborne illness outbreak.

6.2 Federal Authorities

At the federal level, the Public Health Agency of Canada, Health Canada (HC) and the Canadian Food Inspection Agency (CFIA) have legal responsibilities for responding to foodborne illness related events. The interaction between HC and CFIA are detailed in the Memorandum of Understanding between Health Canada and the Canadian Food Inspection Agency (July 1999) and the Roles and Responsibilities Framework for Federal Food Safety and Inspection Activities, Health Canada and Canadian Food Inspection Agency (June 1999)¹. Following is a summary of the respective federal responsibilities regarding foodborne illness response.

6.2.1 Public Health Agency of Canada

The Public Health Agency of Canada (PHAC) has been created to deliver on the Government of Canada's commitment to help protect the health and safety of all Canadians. Its activities focus on preventing chronic diseases, preventing injuries and responding to public health emergencies and infectious disease outbreaks.

¹ Both documents are available from the contact identified in the Contact section.

Within the Government of Canada, the **usual first point of contact** for issues related to actual or potential foodborne illness outbreaks is the Centre for Infectious Disease Prevention and Control (CIDPC), within PHAC. It is responsible for public health surveillance and applied epidemiological studies, and manages the Canadian Integrated Outbreak Surveillance Centre (CIOSC) (Annex 3).

The Canadian Field Epidemiology Program (CFEP), in the Centre for Surveillance Coordination, provides specialized training for health professionals in the practice of applied epidemiology. Field Epidemiologists may be deployed to assist in field investigations of foodborne disease outbreaks within the jurisdiction of their placement or as an Epidemiology Aid to local/provincial/territorial public health authorities. Field Epidemiologists may also assist international outbreak investigations.

The National Microbiology Laboratory (NML) provides reference services for strain differentiation, national laboratory based surveillance, dissemination of information through PulseNet Canada and the National Enteric Surveillance Program (NESP).

6.2.2 Health Canada

Health Canada has the mandate to establish policies and standards related to the safety and nutritional quality of food sold in Canada, to assess the effectiveness of the CFIA's activities related to food safety, and to contribute to the investigation and control of foodborne illness outbreaks.

Four organizations within Health Canada may be involved or assist with investigations of foodborne illness:

- ▶ Within the Health Products and Food Branch, the Food Directorate and the Veterinary Drugs Directorate are responsible for providing, upon request, health risk assessments to the CFIA.
- ▶ The Healthy Environments and Consumer Safety Branch (HECSB), through its Workplace Health and Public Safety Program (WHPSP), is responsible for the prevention and control of foodborne illness on common carriers (e.g., cruise ships, airlines, passenger ferries and passenger trains) and their ancillary services (e.g. flight kitchens). It is the first point of contact for these issues. WHPSP also has an advisory and consultative role with regard to food and water safety and the investigation of foodborne illness outbreaks to other federal

departments. Programs and services are implemented based on voluntary Memoranda of Understanding (MOUs) agreements with these parties.

- ▶ The First Nations and Inuit Health Branch (FNIHB) delivers public health services (including investigation and control for foodborne illness outbreaks) to the First Nations who live on non-transferred federal reserves. In communities where these services are transferred, FNIHB provides the funding for these services but First Nation communities are responsible for providing these services. In these transferred communities, there are a variety of public health service delivery models. For instance, First Nations can hire their own public health staff, make arrangements with provincial public health to get service, or choose to purchase back some of the public health services from FNIHB. Provision of health services including public health services to Inuit populations in settlements is primarily the responsibility of the territorial governments.
- ▶ The Pest Management Regulatory Agency (PMRA) is responsible for providing, upon request, health risk assessments to the CFIA and assisting the CFIA, upon request, with investigations involving pesticides.

6.2.3 Canadian Food Inspection Agency

The CFIA delivers all federal inspection and enforcement services related to food. The CFIA administers and enforces 13 federal acts that address all stages of the food continuum. The CFIA inspects not only foods, but also the seed, livestock feed, fertilizers, plants and animals on which a safe food supply depends.

The CFIA contributes to the investigation and control of foodborne illness outbreaks through its food safety investigation and recall activities, as well as its regulatory compliance and enforcement activities.

Within CFIA there are three groups that play key roles in the food safety response to foodborne illness outbreak situations:

- ▶ Inspection staff including Area Recall Coordinators (ARCs) involved in food safety inspection activities. The ARCs are also the **usual first point of contact for local/regional and P/T foodborne illness outbreaks** (refer to [Annex 2](#) for a list of contacts);

- ▶ The Office of Food Safety and Recall (OFSR) is the **usual first point of contact for national and international foodborne illness outbreaks** and is responsible for the coordination and consistency of decision making on food safety issues and recalls;
- ▶ The Division of Food Microbiology and Chemical Evaluation (FMCE) is responsible for providing scientific analysis and guidance to CFIA staff as well as being the link with Health Canada for obtaining health risk assessments as appropriate.

Under the *Canadian Food Inspection Agency Act*, the Minister of Agriculture and Agri-Food may, if a food product poses a risk to public health, order that the product be recalled. The need to evoke a mandatory recall is usually considered only when a voluntary recall is not initiated.

6.3 Other Agencies or Organizations

Expertise from other F/P/T or international agencies may be sought to provide advice in the control of outbreaks caused by unusual pathogens or toxic substances in foods.

If an outbreak is suspected to be related to criminal activity (e.g., tampering and terrorism), law enforcement agencies (local police or the Royal Canadian Mounted Police (RCMP)) assume the responsibility for the law enforcement response and the criminal investigation ([Annex 4](#)).

7. OPERATING PROCEDURES

The following sections outline the general operating procedures for coordinating the response to a foodborne illness outbreak. [Annex 7](#) provides more information on specific roles and responsibilities within each jurisdiction and [Annex 2](#) provides contacts for key individuals within each jurisdictions. Figure 1 provides a general overview of these operating procedures.

7.1 Determination of a Potential Foodborne Illness Outbreak

A potential foodborne illness outbreak may come to the attention of public health or regulatory authorities either through:

- ▶ reports of human illness (surveillance), or
- ▶ the identification of a foodborne hazard.

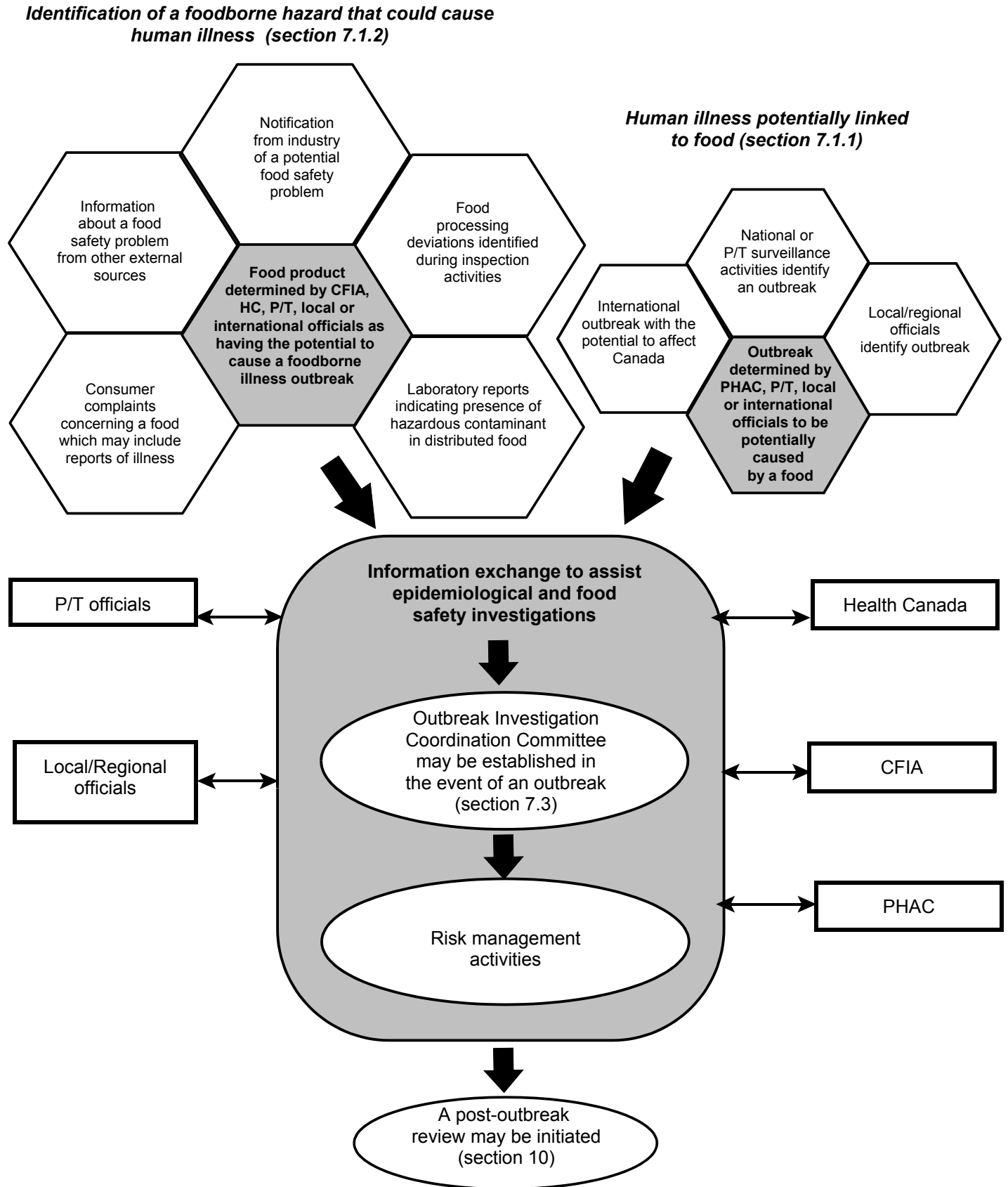
The following sections describe possible scenarios which would trigger the implementation of the Protocol.

7.1.1 Human Illness Potentially Linked to Food

Human health surveillance activities occur at the local/regional, P/T, federal and international levels. Increased or unusual cases of human illness will trigger investigations to determine a common source. Identification of human illnesses which may potentially be linked to food may originate from the following sources:

- i) Outbreaks recognized by the local/regional officials through increased reporting of a particular pathogen or complaints of illness linked to a common event or food product.
- ii) Routine surveillance activities at the national or P/T level indicating that a P/T or national outbreak, potentially foodborne in nature, is in progress.
- iii) International outbreaks possibly linked to food, and with the potential to affect Canada may be identified through CIDPC's network activities with international groups (e.g., ENTERNET, the Center for Disease Control and Prevention, media, notification from foreign bodies, etc.).

Figure 1. Illustration of potential flow of information during an outbreak investigation



7.1.2 Identification of a Foodborne Hazard that Could Cause Human Illness

A food may be identified as having the potential to cause human illness through the inspection activities of regulatory agencies. Food safety investigations may be triggered by the following situations leading to the identification of a problem with the potential to become a foodborne illness outbreak:

- i) Consumer complaints concerning a food which may involve reports of illness
- ii) Food processing deviations identified during inspection activities
- iii) Laboratory reports indicating the presence of a hazardous contaminant (biological or chemical) in a distributed food
- iv) Notification from industry (manufacturer, processor, distributor, importer, common carrier, etc.) of a potential food safety problem
- v) Information about a food safety problem from other external sources (e.g., foreign health officials, industry or public health associations, academia, etc.).

7.2 Notification of a Potential Foodborne Illness Outbreak

When a foodborne illness is suspected, it is critical that information is shared between jurisdictions early in the process to reduce exposure, prevent secondary cases and eliminate the source of the outbreak as quickly as possible. Given the nature of domestic and international travel, the agencies involved should endeavour to notify all other jurisdictions and agencies that may need to be involved in the subsequent response activities. Annex 3 provides a description of the Canadian Integrated Outbreak Surveillance Centre (CIOSC) Enteric Alerts, which is a proven effective communication tool among FPT officials. Annex 1 provides a template that may be used for sharing available information or soliciting further information from implicated P/Ts.

7.2.1 Illness Outbreaks Contained Within a Local Region

It is advantageous for all jurisdictions to have established protocols outlining guiding principles to recognize the travel of affected individuals. Illness outbreaks determined by local/regional officials to be contained within their locality will follow their established protocols for notification of, and response to the outbreak.

If epidemiological or laboratory evidence suggests that a local illness outbreak may be linked to a contaminated food, and the local/regional officials determine that the food was manufactured and sold locally but may also have been transported, available for sale or consumed outside of the local boundaries, they should directly notify the appropriate P/T officials and the CFIA.

Where the suspect food is distributed in a locale or at an event of known high volume tourism, or the firm conducts product sales via the internet, the product should be deemed to be distributed nationally and the CFIA and P/T should be notified.

7.2.2 Illness Outbreaks Contained Within a Province or Territory

P/T officials advised of a local outbreak(s) potentially linked to food distributed within or beyond P/T boundaries should endeavour to inform CFIA and CIDPC, as well as other food regulatory agencies within their boundaries as appropriate (refer to Annex 2 for list of contacts).

P/T officials should also notify CFIA and CIDPC when they determine, through their public health surveillance activities, that an outbreak of foodborne illness may be in progress.

P/T officials, at their discretion, may also wish to notify their U.S. counterparts, especially if the outbreak is occurring in border communities.

7.2.3 National or International Illness Outbreaks

When CIDPC becomes aware that a multi-jurisdictional outbreak of foodborne illness may be in progress, it will then examine P/T and national surveillance data to determine if similar increases have been noted in other areas.

CIDPC will alert the identified P/Ts of the outbreak and act as a liaison with other P/Ts or foreign countries. CIDPC will issue and update information bulletins to all P/Ts. If appropriate, CIDPC will also issue P/T or nation-wide alerts to public health officials. International counterparts may also be notified by CIDPC, as required. Additional notification to public health networks should be made by the CIDPC or P/T officials involved when appropriate.

If at any time CIDPC determines that an outbreak may be linked to a food source, CIDPC will immediately notify CFIA. If the outbreak may be linked to a food source on a common carrier, CIDPC should also immediately notify HECSB (via WHPSP).

7.2.4 Identification of a Foodborne Hazard that Could Cause Human Illness

If an investigation reveals that a food has the potential to cause a foodborne illness outbreak, the investigating Party will endeavour to proceed with notification as follow:

- Investigation by local/regional officials: Notification of P/T and/or CFIA and P/T
- Investigation by P/T: Notification of CFIA and CIDPC
- Investigation by CFIA: Notification of CIDPC. As part of the determination process, CFIA may request that a Health Risk Assessment be carried out by Health Canada.
- Investigation by HECSB (WHPSP): Notification of CIDPC
- When CFIA or CIDPC are aware of a foodborne hazard that could cause human illness, they will endeavour to notify P/T officials.

7.3 Outbreak Investigation Coordination

During all epidemiological and food safety investigations, communications take place as required among the Parties involved for the purpose of sharing information and coordination activities.

7.3.1 Outbreak Investigation Coordination Committee

An outbreak Investigation Coordination Committee (OICC) may be created at the discretion of any Partners involved in an epidemiological or food safety investigation where evidence exists to show a food product is the cause or has the potential to be the cause of an outbreak. The following factors may trigger the need to establish an OICC:

- ▶ complexity of investigations
- ▶ gaps in information and jurisdictional mandates
- ▶ severity of illnesses
- ▶ extent of product distribution

The OICC provides a forum for sharing and reviewing information and for coordinating activities. However, the OICC should recognize that each organization within the committee has a different mandate, which must be respected.

An OICC will be comprised of representatives of each Partner involved in the epidemiological investigation or food safety investigation. The lead organization responsible for coordinating an OICC is identified as follows:

- ▶ If an outbreak is determined to be contained within a single P/T, the affected P/T would generally be considered the OICC lead.
- ▶ If an outbreak involves more than one P/T or has an international dimension, CIDPC will be considered the OICC lead.
- ▶ CIDPC may defer the OICC lead to a P/T or to another country upon agreement by all OICC representatives, should an outbreak be occurring primarily within that province, territory or country, and a formal outbreak investigation team has already been established.

It is the responsibility of the lead organization to chair and organize meetings or conference calls and to record, track and circulate to the Partners involved summaries of discussions, decisions taken and next steps, in a timely fashion.

7.3.2 Outbreak Resolution

After reviewing the status of containment of a foodborne illness outbreak, the lead organization will be responsible to declare the resolution of the outbreak. The lead organization should evaluate all available evidence describing the progression of the outbreak in order to determine if it is resolved. Ongoing cases may need to be investigated for a period of time in order to determine if they are attributed to the source product subject to a recall.

If an OICC was formed, the OICC will be dismantled once the outbreak is declared to be resolved. It is the responsibility of the lead organization to advise other representatives that the OICC has been dismantled.

7.4 Epidemiological Investigation

When a food related outbreak is limited to a local region or a P/T, the epidemiological investigation will be led by an officer from the appropriate officials within the P/T. When human illness is recorded in two or more P/T, or there is exposure to a common food distributed to more than one P/T, CIDPC will coordinate the epidemiological investigation, in collaboration with the affected Partners. In international foodborne illness outbreak situations, CIDPC will act as the main liaison.

7.5 Food Safety Investigation

When the source of an outbreak is suspected to be a food, a food safety investigation will be conducted to determine whether the food may be responsible for the outbreak. When a food product is produced under P/T authority or where CFIA has signed an MOU with a P/T concerning shared responsibilities for inspections, the appropriate P/T officials will conduct the food safety investigation. The CFIA may be requested to assist. If the food is imported or shipped interprovincially or manufactured in an establishment registered or licensed by the CFIA, the CFIA will coordinate the investigation.

7.6 Recall Activities

If the food safety investigation and/or epidemiological investigation confirms that the product poses a health risk, risk management actions, which may include a food recall, will be taken. The responsibility for the recall of any food may be shared between CFIA and the P/T officials or may be independently carried out according to established MOUs.

7.7 Tampering and Terrorism

In the event of an incident that may be related to tampering or terrorist activity, the local/regional law enforcement agency shall be immediately notified, as they have the responsibility for law enforcement response and criminal investigations. Regardless of police jurisdiction, the **RCMP National Operations Centre** should also be contacted at **613-993-4460**.

Following notification of the appropriate authorities, the food safety and epidemiological investigations will continue to be carried out in collaboration with the said authorities. Annex 4 provides further information on the counter-terrorism arrangements in Canada. Should the National Counter-Terrorism Plan be activated, it would take precedence over the Protocol. The Partners involved in the foodborne illness epidemiological and food safety investigations would continue to collaborate while informing their respective officials involved in the counter-terrorism response.

7.8 Laboratory Support

Both epidemiological and food safety investigations usually involve laboratory testing. Each investigating organization is responsible for conducting the appropriate laboratory analyses as part of their investigation and mandate. If an

OICC is in place, it should coordinate laboratory analyses in order to avoid overlap, duplication and to discuss methodology issues.

In some cases the lead investigating organization may not have the necessary capacity or expertise to test for the suspect agent. It should then contact supporting laboratories (refer to Annex 2) in order that samples may be transferred to a laboratory which has the required expertise and appropriate methodology. The use of PulseNet² or other existing laboratory networks should facilitate communication among FPT laboratories.

If *Clostridium botulinum* is suspected, clinical, food and environmental samples should be sent directly to the Botulism Reference Service as per the instructions outlined in Annex 5, unless botulism testing is available within the P/T.

8. INFORMATION EXCHANGE WITH INDUSTRY

During an epidemiological or food safety investigation, the implicated company or, where appropriate, industry, should be kept fully informed to the extent possible of developments and should be encouraged to participate in the outbreak investigation. The company actually or potentially responsible for supplying a contaminated food which could be a source of human illness, should be kept informed of decisions taken by CFIA, or responsible P/T agency or local authority. The CFIA is the prime contact with processors and importers operating under federal jurisdiction. For processors operating under P/T jurisdiction or where CFIA has signed an MOU with a P/T concerning shared responsibilities for inspections, the appropriate P/T officials would be the prime contact for company(ies) within their jurisdiction. The CFIA may be requested to assist.

The responsible inspection authority (federal, P/T, regional or local) will endeavour to obtain current information from the food establishment which may be related to the outbreak, in accordance with their legislative authority. Such information includes private company food test results which have a bearing on the outbreak, employee records of illness and employee test results, accurate HACCP food processing records noting any deviations and thorough, up-to-date and expeditious food distribution information, etc.. The responsible inspection authority should endeavour to share product information received from industry with other investigating Parties, as appropriate.

² PulseNet, the National Molecular Subtyping Network for Foodborne Disease Surveillance, is the U.S. Center for Disease Control and Prevention's (CDC) network of public health laboratories. PulseNet North consists of 6 provincial Canadian laboratories and the Canadian national laboratory. For more information: <http://www.cdc.gov/pulsenet/>

The provision of information from governments, between or among governments will be done in accordance with federal, or P/T access to information and privacy legislation.

9. COMMUNICATION WITH THE PUBLIC

9.1 Responsibility

Each organisation and level of government has the responsibility for public communications activities within its jurisdiction (See [Annex 6](#) for further explanation). Due to the dynamics of an outbreak situation, however, all involved Partners have a responsibility to ensure coordinated communications activities and complementary messaging.

9.2 Public Communications Activities and Content

Public communications activities and content in the event of a foodborne illness outbreak will be guided by several key objectives:

- To develop prepared communications products, aimed at reducing the time required to respond publicly in the event of an outbreak;
- To develop relationships and information sharing process among communications staff of involved Partners;
- To ensure after-hours availability of communications/media relations staff of the involved Partners during an outbreak;
- To engage in a range of public communications activities in the event of an outbreak;
- To ensure the communications response reflects general risk communications and crisis communications principles.

[Annex 6](#) (Communication with the Public - Guidelines) should act as the framework for public communications activities of the involved Partners.

10. POST OUTBREAK REVIEW

Post outbreak reviews may be conducted at the request of the OICC lead or any other organization involved in the response. The goals of the post outbreak review should include, but are not limited to:

- the confirmation of the cause of the outbreak
- the evaluation of the collaborative response efforts

- a discussion or action plan towards preventing the recurrence of similar outbreaks
- the usefulness of the Protocol in guiding the response efforts, and the identification of any improvements or adjustments that could be made in order to best meet its objectives. Any recommendations to that effect should be provided to the contact identified in the Contact section.

Post outbreak reviews should be conducted in a timely manner after the resolution of the outbreak in order to benefit from the lessons learned. Unless otherwise agreed upon by other participants, the participants making the request will chair the post outbreak review. It is the chair's responsibility to provide a summary report to all other participants. The participants may also further distribute the report to other officials within their organizations who would benefit from the information.

11. ADMINISTRATIVE REVIEW

The Protocol will be reviewed periodically to ensure the accuracy of organizational names, roles and responsibilities, and to assess the recommendations received through the post outbreak reviews.

12. REFERENCES

1. *Food Emergency Response Manual*. The Canadian Food Inspection Agency, 59 Camelot Drive, Nepean, Ontario, Canada, K1A 0Y9.
(available by contacting the CFIA's Office of Food Safety and Recall)
2. *Compendium of Analytical Methods - Volumes 1 to 4*. 1998. Polyscience Publications, P.O. Box 148, Morin Heights, Quebec, Canada J0H 1H0. Tel: (514) 226-5870 fax: (514) 226-5866.
(available at: http://www.hc-sc.gc.ca/food-aliment/mh-dm/mhe-dme/compendium/e_index.html)
3. *Procedures to Investigate Foodborne Illness, Fifth Edition - 1999*. International Association of for Food Protection, 6200 Aurora Avenue, Suite 200 W, Des Moines, Iowa 50322-2863, USA.
(available through:
<http://www.foodprotection.org/imageup/Booklet%20Order%20Form.pdf>)
4. *Cruise Ship Inspection Program*, 2004, Workplace Health and Public Safety Programme, Health Canada
(available upon request from: phb_bsp@hc-sc.gc.ca)

13. LIST OF ACRONYMS

ARC	Area Recall Coordinators (CFIA)
CFIA	Canadian Food Inspection Agency
CIDPC	Centre for Infectious Disease Prevention and Control (HC)
CIOSC	Canadian Integrated Outbreak Surveillance Center
FMCE	Food Microbiology and Chemical Evaluation (CFIA)
F/P/T	Federal/Provincial/Territorial
HACCP	Hazard Analysis Critical Control Points
HC	Health Canada
HECSB	Healthy Environment and Consumer Safety Branch (HC)
MOU	Memorandum of Understanding
NESP	National Enteric Surveillance Program (HC)
NML	National Microbiology Laboratory (HC)
OFSR	Office of Food Safety and Recall (CFIA)
OICC	Outbreak Investigation Coordination Committee
PHAC	Public Health Agency of Canada
PMRA	Pest Management Regulatory Agency (HC)
P/T	Provincial/Territorial
RCMP	Royal Canadian Mounted Police
WHPSP	Workplace Health and Public Safety Programme (HC)

ANNEX 1 - SUGGESTED TEMPLATE FOR INFORMATION SHARING DURING OUTBREAKS

Note: This template can be used to share available information with other Partners. It is not necessary to have all fields completed prior to sharing. As more information becomes available, an updated template may be shared.

Date: _____ Outbreak designation: _____
 Provider's name: _____ Provider's organization: _____
 Provider's phone #: _____ Provider's e-mail: _____
 Provider's fax #: _____

Summary information on the outbreak

Data Items	Details
case definition(s)	
demographics	total number of cases age distribution (mean, median, range) gender ratio detailed table of case info (<i>if available and useful</i>)
at risk population	
geographic distribution	by province/territory within province(s)/territory(ies) map (<i>attach, if useful</i>)
time distribution	date of onset (earliest, latest; incubation period <i>if known</i>) epidemiology curve (<i>attach histogram</i>)
clinical spectrum (of cases)	major symptoms any complications : severity, hospitalization, death

suspect foods (if any)	<p><u>list of suspect food stuff</u>: type, presentation, brand name, product name, UPC, code date, size of package, quantity purchased (<i>if known</i>)</p> <p><u>samples</u>: available? opened/unopened? frozen/refrigerated? label available? where/when/who from/how purchased?</p> <p><u>epidemiologic/microbiological evidence</u>:</p> <ul style="list-style-type: none"> • If beneficial to other P/Ts, send summary of food history from patients (without revealing patient I.D.). • If beneficial to the investigation, send other P/Ts an outbreak-specific questionnaire. • Include any other information/evidence that would be beneficial to the investigation.
lab test results	<p>on cases on food/water any case-food match(es)?</p>
Additional comments	

ANNEX 2

FOODBORNE ILLNESS OUTBREAK RESPONSE PROTOCOL CONTACT LISTINGS

This list is maintained by the Centre for Infectious Disease Prevention and Control. It is updated monthly to ensure that it is accurate and current, and then distributed electronically to F/P/T government representatives involved with the implementation of the Protocol.

To obtain a current copy of the list, please contact:

Valerie Johnston, Executive Assistant
Foodborne, Waterborne and Zoonotic Infections Division
Centre for Infectious Disease Prevention and Control
Public Health Agency of Canada
Bldg.#6, Tunney's Pasture
Ottawa, ON
K1A 0L2
Postal Locator 0602C
valerie_johnston@phac-aspc.ca
(613) 952-8227

ANNEX 3

Canadian Integrated Outbreak Surveillance Centre (CIOSC): Enteric Alerts *Previously known as Canadian Enteric Outbreak Surveillance Centre (CEOSC)*

Public health surveillance is a systematic method for tracking and forecasting health events through the collection, integration, analysis and interpretation of data followed by dissemination of the information through reports, advisories and warnings. This systematic approach improves the understanding of health events and allows for early detection of outbreaks. The best forms of surveillance provide real-time information and increased communication and information sharing between all Partners.

In response to these needs, the CIOSC Alerts were established to improve the surveillance and identification of multi-jurisdictional outbreaks, including enteric outbreaks. CIOSC is a secure web based application that provides information to local, P/T health departments as well as the Public Health Agency of Canada and affiliated organizations involved in public health surveillance and/or outbreak response. Because surveillance is a responsibility held across all levels of public health, a dedicated forum for information sharing on key issues such as CIOSC Enteric Alerts is an effective tool. It is used for posting alerts concerning confirmed or suspected enteric outbreaks under investigation and allows for public health authorities to read the alerts and make contact with those responsible for the investigation. By sharing information between all public health authorities, enteric outbreaks or potential outbreaks can be identified and a collaborative approach to response can occur.

CIOSC is designed to detect outbreaks early through the recognition of identical cases across jurisdiction and bringing them to public health attention. Identical cases may be found in neighbouring jurisdictions or across Canada, consequently the ability for a diverse group of public health authorities from across Canada to access the information is essential. Currently CIOSC is accessed by every province and territory in Canada. This demonstrates that CIOSC, through enteric alerts, is an effective tool for the early identification of multi-jurisdictional enteric outbreaks.

When a outbreak or potential enteric outbreak is identified, an alert may be submitted. This initial submission is then passed to the appropriate P/T reviewer who can approve, ask for edits or delete the alert. Once the alert is approved it can be posted to the CIOSC Enteric Alert site and an email goes to all users to notify them of a new posting. Each alert contains information on contact information for the person who issue the alert as well as information specific to each outbreak and investigation such as timelines, suspected source or organism, location and the number of people involved.

The CIOSC Enteric Alert site has proven itself as an effective surveillance communication tool. The number of alert each year continues to increase as do the number of users. All new users are screened and sponsored by a senior public health official for their jurisdiction prior to obtaining access to CIOSC. Although CIOSC Enteric

Alerts was originally designed for reporting domestically acquired food or waterborne outbreaks, it also allows for the notification of other types of enteric events such as those related to overseas travel. The ability of CIOSC to share information in real-time across Canada and among multiple public health jurisdictional authorities, demonstrates the concept of a national surveillance resource.

ANNEX 4

COUNTER-TERRORISM ARRANGEMENTS IN CANADA

The Office of Solicitor General Canada is the federal department responsible for ensuring that Canada has adequate counter-terrorism arrangements in place. The Office of the Solicitor General has developed the **National Counter-Terrorism Plan (NCTP)**, which is a set of arrangements that guides the police, municipal, P/T and federal government response to terrorist incidents in a coordinated and cooperative manner. The Office of the Solicitor General is also responsible for maintaining the NCTP. The plan:

- establishes lines of communication and policy direction to guide responders and senior government officials in resolving a terrorist incident;
- establishes the federal public communications framework;
- describes the authorities and responsibilities of federal departments and agencies with counter-terrorism roles;
- provides a comprehensive overview of the counter-terrorism legislative framework and international conventions and agreements to which Canada is a party;
- focuses on the aspect of **incident management**, which involves neutralizing a terrorist's capability to perpetrate an act, apprehending suspected terrorists, and collecting evidence that will lead to a conviction;
- addresses terrorist use of nuclear, biological and chemical (NBC) devices; and
- creates a response framework that involves the Royal Canadian Mounted Police (RCMP) and Department of National Defence (DND) elements in both armed and technical response roles.

With regard to the response framework, the RCMP and DND's Joint Task Force 2 (JTF2) act as armed respondents and the RCMP and Canadian Forces form a Joint Biological Chemical Response Team (JBCRT) that acts as a technical respondent where NBC devices are encountered or are likely to be encountered.

In the event of a NBC event, the NCTP foresees that a Special Threat Assessment Group (STAG) will be convened under a chair provided by Health Canada.

Consequence management involves implementing measures to mitigate the damage, loss, hardship and suffering caused by acts of terrorism. Federal arrangements for consequence management may be found in Counter-Terrorism Consequence Management Arrangements published by Public Safety and Emergency Preparedness Canada.

Provinces and territories are responsible for law enforcement and public safety within their jurisdictions and may have counter-terrorism response plans, which should be read in conjunction with federal counter-terrorism plans. A listing of P/T emergency measures organizations is available on the website of Public Safety and Emergency Preparedness Canada.
(http://www.ocipep.gc.ca/info_pro/fact_sheets/general/EM_can_emerg_man_sys_e.asp)

In the event of an incident that may be related to tampering or terrorist activity, the local/regional law enforcement agency shall be immediately notified, as they have the responsibility for law enforcement response and criminal investigations. Regardless of police jurisdiction, the **RCMP National Operation Centre** should also be contacted at **613-993-4460**.

ANNEX 5

BOTULISM REFERENCE SERVICE FOR CANADA

The Botulism Reference Service (BRS) for Canada, established at the Health Protection Branch in Ottawa in 1974, has the following objectives:

- ▶ to assist physicians and P/T officials when botulism is suspected;
- ▶ to examine suspect foods and clinical specimens submitted for analysis;
- ▶ to rapidly alert responsible agencies when commercial foods are involved;
- ▶ to maintain reference cultures of *Clostridium botulinum* and;
- ▶ to maintain liaison with centres that have similar interests and responsibilities in Canada and abroad.

Symptoms of foodborne botulism include ptosis, visual disturbance, vomiting and diarrhea, dry mouth and sore throat, followed by descending symmetrical flaccid paralysis in an alert febrile person. Similar symptoms are associated with wound botulism, but vomiting does not occur. The earliest and most frequently observed symptom of infant botulism is constipation followed by lethargy, poor feeding, ptosis, difficulty swallowing, hypotonia, and generalized weakness (“floppy baby”). In cases of foodborne or wound botulism, specific antitoxin is administered as soon as possible. For all types of botulism, accessibility to respiratory support is essential.

When botulism is suspected, a member of the BRS should be called immediately, day or night. The possible diagnosis of botulism should be validated by checking the case history, and plans for transporting suspect food and clinical specimens to Ottawa for laboratory analysis can be finalized. The food samples may be leftovers or unopened containers. When commercial foods are involved, it is important to retrieve the label, the manufacturer’s lot number, codes embossed on the can or package, etc. Suitable clinical specimens for analyses include faecal samples (approximately 10g) or enema fluid, gastric contents (adjusted to approximately pH 6.0 with 1N NaOH, if possible) and serum (from 20 ml of blood collected **BEFORE** administration of antitoxin). When infant botulism is suspected, the essential material for analysis is the infant’s faeces. If necessary soiled parts of diapers may be submitted.

For safe shipment, the specimens must be in a watertight primary receptacle, in a watertight secondary container, with sufficient absorbent material between the 2 containers to absorb the entire contents of the primary receptacle. The preferred method of preserving the material during shipment is by cooling rather than freezing, i.e., by including commercial cooling packs in the parcel. In urgent cases, the parcels are picked up immediately upon arrival, usually at the airport.

Botulism Reference Service: J.W. Austin, Ph.D., Chairman (office (613) 957-0902, home (613) 841-7621); B. Blanchfield, Analyst (office (613) 957-0885, home (613) 225-4969), Health Products and Food Branch, Health Canada, Banting Research Centre, Ross Avenue, Ottawa, Ontario, K1A 0L2, Postal Locator 2204A2.

Botulism antitoxin: In the past, Botulism antitoxin was available through the Health Canada's Special Access Programme (SAP). Aventis Pasteur has notified Health Canada that they will no longer be able to supply the botulism antitoxin through the SAP as they have discontinued manufacturing the product. Aventis Pasteur has offered an opportunity to the provinces and territories to each secure a supply of the product. Health Canada has advised the Council of Chief Medical Officers of Health that, in order for each province or territory to obtain the product, a Chief Medical Officer of Health or designate must place a request with the SAP. The SAP would then authorize Aventis Pasteur to sell botulism antitoxin ((Type E) and (Type A + B)) to each province or territory for future use. As it is the responsibility of each province and territory to determine storage location(s) of the Botulism Antitoxin, the prescribing physician should contact the Chief Medical Officer of Health within his/her province or territory for access.

COMMUNICATION WITH THE PUBLIC - GUIDELINES

A. Lead Responsibility for Public Communications

Note: In an outbreak situation, despite designation of lead for public communications, all involved Partners will likely engage in public communications activities based on their respective mandates. Every effort will be made to have coordinated communications activities and complementary messaging.

Responsibility for public communications activities should mirror responsibility for the outbreak response:

- ▶ If a situation is determined to be contained within a single P/T, the affected P/T will be considered the public communications lead.
- ▶ If a situation involves more than one P/T, or has an international dimension, the federal government will be considered the public communications lead. Where the federal government has the lead, the Public Health Agency of Canada (CIDPC) will handle communication with the public as it relates to the public health implications of the epidemiological investigation. Once a food source has been implicated, the CFIA will have the lead for public communications as it relates to the food safety investigation and any necessary food safety recall activities.

B. Coordination among involved Partners

Public communications coordination among involved Partners should happen as follows:

- B1. Communications staff from all involved Partners will be integrated into the OICC, if there is one in place, as soon as the need for public communication is identified by any one participating organization.
- B2. Regular conference calls or e-mail updates of communications staff of all involved Partners may be arranged by the lead organization for public communications in the event of an outbreak. If an organization decides to take action which was not agreed to or discussed within the OICC, it should advise the OICC members prior to the release of the information or as soon as feasibly possible.

C. Communications Activities

C.1 External “Briefings”

In an outbreak situation, there will be a need to provide information and regular updates to the media, public, and other stakeholders. The need to inform officials in the United States should be considered when an outbreak is occurring in Canadian border communities. It will be up to involved communications staff to assess the need, timing, and appropriate vehicle for these “briefings”. They may take the form of a news conference/media availability/technical briefing, or through a news release, media advisory, information bulletin posted to the website, etc..

The responsibility for these “briefings” should mirror the responsibility for the outbreak response as follow: NOTE: As mentioned in Section A, despite designation of the lead for public communications, all involved Partners will likely engage in public communications activities based on their respective mandates.

- a) If an outbreak is within a local/regional authority boundary and involves only food that has been mishandled at the local/regional level, local/regional and possibly P/T officials will have the lead for any external briefings.
- b) If an outbreak is not contained at the local/regional level and may have an impact on other P/T communities, local/regional and P/T officials will have the lead for any external briefings, with federal representatives participating as appropriate.
- c) In an outbreak emerges in more than one P/T, the appropriate federal authority will have the lead for any external briefings, with P/T representatives participating as appropriate.

C.2 First Response/Key Messages

C.2.1 Human Illness Potentially Linked to Food (Section 7.1.1)

In very serious, high profile outbreak scenarios, quick response capacity is imperative. The following standard messages may be used to speed the response within, for example, the first news cycle. They should not necessarily replace documents already in use for more common outbreak occurrences.

- a) (Statement on the current situation): There have been (number) of (the type of pathogen, if known) illnesses reported in (city/provinces).

- b) (Name of lead organization) is working closely with its (P/T, municipal, and/or federal counterparts) to identify the source of the infection.
- c) (Name of Partner(s)) is/are investigating a number of possible sources. The necessary action will be taken to protect Canadian consumers.
- d) More information will be provided as soon as it becomes available.
- e) Some infections can be spread by hand-to-hand contact with an infected person or even from surfaces he or she may have touched. Frequent handwashing with warm water and soap will help to reduce the possibility of spreading the infection from person to person.

C.2.2 Identification of a Foodborne Hazard that Could Cause Human Illness (Section 7.1.2)

NOTE: Should it be determined that a particular food has caused the illnesses, the CFIA or other P/T authority would likely be moving to recall products and would therefore be using existing messages and channels for communicating with the public. In other cases, the following standard messages may be used:

- a) (Name of Partner) is currently investigating the cause of illnesses from (name of pathogen, if known) that has affected people in (provinces).
- b) The cause of illnesses is unconfirmed at this time.
- c) (Give advice on how to properly handle and cook the food in question, if it will minimize the risk, for example, ground beef).
- d) (Name of Partner) is investigating in cooperation with (other federal, P/T territorial, or municipal) counterparts.
- e) More information will be provided as soon as it becomes available.
- f) Some infections can be spread by hand-to-hand contact with an infected person or even from surfaces he or she may have touched. Frequent handwashing with warm water and soap will help to reduce the possibility of spreading the infection from person to person.

C.3 Toll-Free Line

To respond to specific questions from the public in regards to an outbreak situation, it may be necessary to set up a toll-free information line. Discussion of the options for setting up such a line, including cost-sharing arrangements,

should be discussed among communications staff from all involved Partners to ensure common information is being released.

In the case of a national outbreak situation, having one central toll-free line is the preferable option. However, should local/regional or P/T officials decide to set up their own toll-free line, every effort should be made to provide the public with consistent information.

Background information and the event specific material should be forwarded to toll-free information line managers and operators for use in responding to questions. An official should be tasked with briefing the operators and providing regular updates to the information as required.

C.4 Spokespersons

Spokespersons of all involved Partners should be identified and trained as part of the planning process. These spokespersons can be identified in the FIORP contact list (see Annex 2), upon request by F/P/T officials already listed. Updating of spokespersons should be integrated into the ongoing review process.

C.5 Stakeholder and Opinion Leader Contact

Key stakeholders as well as those individuals or Partners likely to be quoted in media stories should be informed of the outbreak situation and the actions of the involved Partners as soon as possible and on an ongoing basis. Because of the potential cross-over in stakeholder contact, involved Partners should coordinate activity and ensure information is consistent.

ANNEX 7 FPT ROLES AND RESPONSIBILITIES IN FOODBORNE ILLNESS RESPONSE

Prince Edward Island

Summary: The PEI Department of Health & Social Services is involved in the investigation of foodborne illness outbreaks. Outbreak investigations would be coordinated through the office of the Chief Health Officer. Provincial government departments with jurisdiction as well as the CFIA would be involved.					
Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Health & Social Services	Health & Social Services	Public Health Act	Eating Establishments & Licensed Premises Regulations	Food safety investigations	All types
			Slaughterhouse Regulations		Slaughterhouses
			Guidelines for Poultry Killing facilities		Poultry killing facilities
			Cottage Industry Guidelines		Manufacturing
	Canadian Food Inspection Agency (CFIA)	Already Outlined	MOU is being discussed Agreement with CFIA	Food safety investigations Food Recalls	Registered plant manufacturing
	Pest Management Regulatory Agency (PMRA)	As already outlined		Food safety investigations involving pesticides	All establishments
	Department of Agriculture, Fisheries and Aquiculture and Forestry	Dairy Industry Act	Dairy Industry Act, Regulations	Food safety investigations	Dairy plants, dairy farms
		Fish Inspection Act Fisheries Act	Fish Inspection Act Regulations	Food safety investigations	Fish plants

Nova Scotia

Summary: In Nova Scotia, the role of investigating and control of foodborne illness outbreaks is the responsibility of both Food Safety Section of Agriculture and Fisheries and Public Health Services of Department of Health. The usual first point of contact is with Health. Investigation and management of an outbreak follows the General Guidelines for Investigation and Management of Outbreaks as contained in the NS Communicable Disease Control Manual. Food Safety Section contributes through its food safety investigation as well as enforcement and regulatory control. Public Health Services contribute through epidemiological investigation and management control.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Agriculture and Fisheries	Food Safety Section	Health Act Meat Act	Eating Establishment Regulations Food Retail Regulations (various municipal) Meat Inspection Regulations MOU between Agriculture and Fisheries and Health General Guidelines for Investigation and Management of Outbreaks	Food Safety investigations	all establishment types
Health	Public Health Services	Health Act	General Guidelines for Investigation and Management of Outbreaks Notifiable Diseases Reporting System in Nova Scotia	Public health surveillance Epidemiological investigations	

New Brunswick

Summary: The Department of Health and Wellness maintains surveillance and investigation and control programs for foodborne illness in the province. The usual first point of contact is one of our Regional Public Health Offices where reports are received from the public, laboratories and health care providers. The department has developed Standard Operating Procedures (SOPs) for investigation and control. The SOPs articulate the role of the Provincial Epidemiology Service as well as an Outbreak Response Team that may include federal members.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Health and Wellness	Public Health	Health Act	General Regulation 88-200 CD SOPs Policy directives as required National Guidelines where applicable and available	Notifiable Disease listing reporting requirement investigation and control authority	CD investigation is not limited to a type of establishment but to the outbreak. Should a suspected food source be from an establishment under regulatory jurisdiction of another agency, that agency would be involved.

Quebec

Summary: In Quebec, two departments are responsible for public health protection: the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation (MAPAQ) and the Ministère de la Santé et des Services Sociaux (MSSS). MAPAQ is involved in food investigations and control of foodborne illnesses originating in bio-food establishments in Quebec. An agreement signed in 1996 with the public health network (regional public health branches) allows stakeholders to exchange information for a more in-depth investigation in their field of expertise, i.e. persons who are ill (public health) or food and food establishments (MAPAQ). In addition, an agreement has been reached with the Quebec regional CFIA for all products from outside Quebec or products that are from Quebec but liable to be destined for sale internationally. As well, an agreement has been reached with the Ministère de l'Environnement concerning bottled water or water available in bio-food establishments.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Agriculture, Pêcheries et Alimentation (MAPAQ)	Centre québécois d'inspection des aliments et de santé animale (CQIASA)	Food Products Act (P29) Environment Quality Act (Q2)	Acts and Regulations CFIA-MAPAQ Memorandum of Understanding concerning inspection activities Protocol for Collaboration and Communication of Information on Foodborne Illness and Zoonotic Diseases between RRSSS and MAPAQ	Provincial coordination of FBIs Food investigation Inspection of food establishments Food analyses Food recalls Closure of establishments	All tertiary sector establishments (retail, restaurants, food services, etc.) Production establishments (milk, eggs, sea products, processing, provincial slaughterhouses) All types of FBIs All types of pathogens
	Agences de développement de la santé et des services sociaux (Direction de santé publique)	Public Health Protection Act	Acts and Regulations Protocol between RRSSS and MAPAQ	Epidemiological investigation Biological sample analyses	

Ontario

Summary: The Government of Ontario is involved in the investigation and control of foodborne illness outbreaks. The lead and coordinating agency for foodborne illness outbreaks is the Ministry of Health and Long-Term Care (MOHLTC). Its role in food safety inspection is delegated to the 37 public health units located across the Province. These health units are responsible for inspecting over 83,000 food premises at a rate commensurate with the risk as defined by MOHLTC. The Health Unit program responsibilities include *inter alia*, inspection of non-federally registered food processing plants, food retail establishments (including restaurants, nursing homes and hospitals) and responding to food-related complaints. Health units also have broad powers to take action (i.e. condemn food, issue tickets under the Provincial Offences Act, lay charges and order an establishment closed under the Health Protection and Promotion Act) to protect public health. The Ontario Ministry of Agriculture and Food (OMAF) and the Ministry of Natural Resources (MNR) contribute to the prevention, investigation and control of foodborne illness outbreaks through their regulatory administration, compliance and enforcement activities. OMAF is responsible for legislation dealing with a variety of matters, but its role is limited to conducting inspection and compliance activities, while enforcement activities are carried out by MNR on OMAF's behalf.

NOTES:

1. OMAF is responsible for the *Food Safety and Quality Act, 2001*, which is not yet in force. The Act contains the authority to investigate anything that is or may be a food safety risk that constitutes a significant risk to public health or safety. Use of this power is restricted to designated foods or commodities and any thing that would affect them. The regulation that would designate these products has yet to be developed.
2. The numbering of the consolidated regulations is as of 1990. It is anticipated that these numbers, but not the title, will change when the current regulations are consolidated for the year 2000.
3. Statutes and regulations may be viewed electronically on the E-Laws website – (<http://www.e-laws.gov.on.ca/>)

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
MOHLTC	MOHLTC and Health Units (HUs)	Health Protection and Promotion Act (HPPA)	<ul style="list-style-type: none"> - Regulation 562 (Food Premises) - Regulation 554 (Camps in Unorganized Territory) - Regulation 568 (Recreational Camps) - Meat Inspection MOU between OMAF and MOHLTC - Food Safety Mandatory Program under the HPPA e.g., food recalls, routine inspection frequencies, HACCP, consumer complaint response. 	Inspection and enforcement of food safety in 83,000 food premises in Ontario.	Premises include food service, food retail and butcher shops. Camps and Camps used for recreational activities

Agriculture and Food (OMAF)	Food Inspection Branch	Dead Animal Disposal Act	- Regulation 263 - General		Any premise on which there is a dead animal of the species to which the Act applies, and the premises of collectors, receivers, brokers, renderers handling or processing any parts of them
		Edible Oil Products Act	- Regulation 282 - General		Any premise where a designated edible oil product is manufactured, stored, held for transport or delivery or sold and any conveyance used to transport the same.
		Farm Products Grades and Sales Act	- Regulation 685/94 - Beef - Regulation 378 - Grades - Fruit and Vegetables - Regulation 379 - Grades - Hog Carcasses - Regulation 380 - Grades - Lamb and Mutton Carcasses - Regulation 381 - Grades - Poultry - Regulation 382 - Grades - Veal Carcasses - Regulation 384 - Honey - Regulation 386 - Maple Products		Premises of producers, packers, distributors and retailers and any premise where grading is carried out

		Livestock and Livestock Products Act	- Regulation 724 - Eggs - Regulation 726 - Processed Eggs - Regulation 318/99 - Livestock and Livestock Products; - Regulation 732/94 - Transporting Non-Ambulatory Animals		Premises where eggs are graded or processed, any place handling non-ambulatory livestock, abattoirs
		Livestock Community Sales Act	- Regulation 729 - General		Any premise where community sales of livestock are conducted
		Meat Inspection Act (Ontario)	- Regulation 632/92 - General		Any premise where livestock are slaughtered
		Milk Act	- Regulation 753 - Grades, Standards, Designations, Classes, Packing And Marking - Regulation 761 - Milk And Milk Products		Any premise where milk or dairy products are produced, manufactured, processed, graded or sold

Manitoba

Summary: Manitoba Health, Manitoba Conservation (public health inspectors) and the City of Winnipeg (public health inspectors) may be involved in foodborne illness investigations pursuant to *The Public Health Act*. Additionally public health nurses with Regional Health Authorities also play a significant role in interviewing and case follow up. Cadham Provincial Laboratory conducts testing on human isolates and an accredited private laboratory conducts food sample testing funded by Manitoba Health. Manitoba Agriculture and Food provides inspection and testing for dairy products and various livestock products.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Health	Public Health Branch and Office of the Chief Medical Officer of Health	The Public Health Act	Food Regulation 388/88R. Disease and Dead Bodies Regulation 388/88R. Communicable Disease Management Protocol. Canada Manitoba Meat Inspection Agreement.	Policy and Legislation. Laboratory MOHs Meat Inspection services provided by CFIA under contract	All food establishments. Coordination of FBI investigation. MOHs responsible for FBI investigation. Fund Meat Inspection in provincial abattoirs
Conservation	Public Health Inspectors	The Public Health Act	Food Regulation 388/88R Disease and Dead Bodies Regulation 388/88R	Routine food safety inspection. FBI & complaint investigation	All food handling facilities except provincial abattoirs.
City of Winnipeg	Public Health Inspectors	The Public Health Act City of Winnipeg Act	City of Winnipeg Food Service Bylaw	Routine food safety inspection. FBI & complaint investigation	All food handling except provincial abattoirs.
Manitoba Agriculture, Food and Rural Initiatives	Animal Industry Branch	Manitoba Dairy Act	Manitoba Dairy Regulation	Food safety investigations in dairy in cooperation with other regulatory agencies.	Inspection of dairy processing plants & dairy farms and testing of raw milk & dairy products.
	Animal Industry Branch	Manitoba Livestock and Livestock Products Act	Manitoba Livestock and Livestock Products Regulation	Food safety investigation concerning, livestock, primary livestock, products, dairy products and dead livestock in cooperation other regulatory agencies.	Production units as defined in the Safe Livestock and Livestock Products Regulation.

Saskatchewan

Summary: Regional Health Authorities, Saskatchewan Health and partner agencies are responsible for investigation and mitigation of foodborne illness outbreaks. First point of contact for an outbreak within a geographic area is the regional health authority. Disease Control Unit of Saskatchewan Health will assist in co-ordinating a multi-jurisdictional outbreak. Other agencies, including Saskatchewan Agriculture, Food and Rural Revitalization, CFIA and Health Canada (e.g. Population and Public Health Branch, First Nations and Inuit Health Branch, Healthy Environments and Consumer Safety Branch), contribute to investigations through their food safety inspection, investigation and food recall activities.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Health	Regional Health Authorities/Sask. Health	The Public Health Act, 1994	<ul style="list-style-type: none"> - Disease Control Regulations - Public Eating Establishment Regulations - Milk Pasteurization Regulations - Bakeshop Regulations - CD Control Manual - MOUs to be develop with CFIA, HECSB, and FNIHB and others to cover food processing and First Nation and Federal Lands (National Park, RCMP Depot, etc.) 	Food safety investigations and Epidemiological investigations	All facilities for which regional health authorities is the lead jurisdiction

Alberta

Summary: Alberta Health and Wellness coordinates the investigation and control of foodborne and waterborne illness outbreaks. The first point of contact is the Environmental Public Health program within the Disease Control and Prevention Branch. Other Alberta Health and Wellness branches may be involved according to the nature of the respective outbreak.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Alberta Health and Wellness	Environmental Health program	Public Health Act	Food and Food Establishments Regulation; Communicable Disease Regulation	Food safety investigations; Provincial coordination of multi-region enteric outbreaks.	All retail establishment types under regional health authority jurisdiction. Should a suspected food source be from an establishment under regulatory jurisdiction of another agency, that agency would be involved.

British Columbia

Summary: The Ministry of Health, and partner agencies are responsible for the investigation and mitigation of foodborne illness outbreaks. The first contact for outbreaks within a geographic region is local Health Authorities. Coordination of multiple jurisdiction outbreaks is the responsibility of Epidemiology Services, BC Centre For Disease Control (BCCDC). Other agencies including Food Protection Service of BCCDC, MAFF, CFIA and Health Canada contribute to investigations through their food safety investigation and recall activities, as well as their regulatory compliance and enforcement activities.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Health (MOH)	Health Authorities	Health Act	Communicable Disease Regulations, Food Premises Regulation	Foodborne illness investigations, food safety investigations	All food premises
	Food Protection Services, BCCDC	Meat, Milk and Fish Acts	Meat, Milk and Fish Regulations	Food safety investigations, Coordination of provincial response to recalls and multiple jurisdiction outbreaks	Provincially licensed meat, milk and fish plants
	Epidemiology Services, BCCDC	Health Act	Communicable Disease Regulations MOU from provincial Health Officer to BCCDC	Epidemiological surveillance, coordination, investigation, reporting. Coordination with Health Canada and provinces for inter provincial outbreaks	All types of foodborne illness outbreaks.
	Laboratory Services, BCCDC			Lab testing for food implicated in outbreaks. Surveillance for abnormal/clustered confined cases reports	All types of foodborne pathogens.

Agriculture, Food and Fisheries (MAFF)	Food Safety & Quality Branch (in collaboration with Ministry expertise and resources in other Branches)	Animal Disease Control; Plant Protection; Fish Inspection; Agri-Food Choice and Quality; Acts - share responsibility with CFIA and MOH	Canada - B.C. Implementation Agreement of the Agricultural Policy Framework: HACCP systems, hazard surveillance, consumer confidence; market impacts; risk mitigation	Plant, animal, fish disease diagnostics and surveillance; professional & analytical services; production data; dairy farm inspection; economic analyses	Plant, animal, fish & seafood production and processing; direct farm marketing
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Northwest Territories

Summary: The Office of the Chief Medical Health Officer, within the Department of Health & Social Services, is involved in the investigation and control of foodborne illness outbreaks in the Northwest Territories. The usual first point of contact is the Office of the Chief Medical Health Officer and regional Environmental Health Offices.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Department of Health & Social Services	Office of the Chief Medical Health Officer	Public Health Act	Eating or Drinking Places Regulations (under review to be replaced by NWT version of model regulations and code)	- Food safety and epidemiological investigations	Any establishment where food is prepared, cooked, stored, or served.
			General Sanitation Regulations;	- Food safety and epidemiological investigations	All establishment types
			Meat Inspection Regulations;	- Food safety and epidemiological investigations	Abattoirs
			Milk Regulations;	- Food safety and epidemiological investigations	Dairy Plants
			Communicable Diseases Regulations	- Food safety and epidemiological investigations	All establishment types

Yukon

Summary: Communicable Disease Officer is involved in investigation of foodborne illness outbreaks. Communicable Disease Officer is usually first point of contact. Environmental Health Services and other allied health departments (Health and Social Services, Whitehorse General Hospital) as required assist in investigation according to their respective mandates.

Ministry Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Health and Social Services	Yukon Communicable Disease Control	<i>Public Health and Safety Act</i>	<i>Communicable Diseases Regulations</i>	Foodborne illness investigations Public health surveillance Epidemiological investigations	All establishment types
	Environmental Health Services	<i>Public Health and Safety Act</i>	Eating or Drinking Regulations <i>Public Health Regulations</i>	Food safety inspections Sampling	Food Service /Retail Facilities (permanent & temporary) Care Facilities Institutional Facilities

Government of Canada

<p>Summary: The Government of Canada is involved in the investigation and control of foodborne illness outbreaks. The usual first point of contact is the Centre for Infectious Disease Prevention and Control (CIDPC), within the Public Health Agency of Canada. Health Canada Branches and Agencies may also be involved according to their respective mandates. The CFIA contributes to the investigation and control of foodborne illness outbreak through its food safety investigation and recall activities, as well as its regulatory compliance and enforcement activities.</p>					
Ministry/Agency Responsible	Lead Agency	Legislation	Regulations, Policies, MOUs	Activity Type	Establishment Type / Scope
Public Health Agency of Canada	Public Health Agency of Canada			Public health surveillance; Epidemiological investigations	
Health Canada	Healthy Environments and Consumer Safety Branch (HECSB)	Department of Health Act	Potable Water Regulations; Guidelines for Drinking Water Quality International Health Regulation; MOU with conveyance industries	Food safety and epidemiological investigations	Common carriers (cruise ships, airlines, passenger ferries and passenger trains) and their ancillary services (e.g. Flight kitchens)
Health Canada	First Nations and Inuit Health Branch (FNIHB)			Investigations involving First Nations on primarily non-transferred federal reserves	All establishment types located in First Nations communities on primarily non-transferred federal reserves
Health Canada	Health Products and Food Branch (HPFB)	Food and Drugs Act	Food and Drug Regulations	Food safety investigations involving foods and veterinary drugs (provision of health risk assessments to CFIA upon request)	All establishment types
Health Canada	Pest Management Regulatory Agency (PMRA)	Pest Control Products Act	MOU between the CFIA and the PMRA	Food safety investigations involving pesticides (assistance to CFIA upon request)	All establishment types

Health Canada	Canadian Food Inspection Agency	Food and Drugs Act	Food and Drug Regulations re food and veterinary drugs, Roles and Responsibilities Framework for Federal Food Safety and Inspection Activities - HC and CFIA	Food safety investigations	All establishments types
Canadian Food Inspection Agency	Canadian Food Inspection Agency	<ul style="list-style-type: none"> - Canada Agricultural Products Act - Consumer and Packaging Labelling Act - Fish Inspection Act - Health of Animals Act - Meat Inspection Act 	<ul style="list-style-type: none"> - Dairy products, Egg, Fresh Fruit and Vegetable, Honey, Maple Products, Processed Egg, and Processed Products Regulations - Consumer Packaging and Labelling Regulations - Fish Inspection Regulations - Health of Animals, Honeybee Prohibition, Reportable Diseases, Reportable Diseases Order (Varroasis, Pseudorabies, BSE, Avian Influenza) - Meat Inspection Regulations 	Food safety investigations	Registered food processing establishments, growers, packers, importers.