



Ontario Veterinary Biosecurity Initiative

Protocol 3

Emergency Preparedness and Response Plan for Veterinarians

This document was developed with generous financial assistance from Agriculture and Agrifood Canada through the Agricultural Adaptation Council's CanAdvance Program, and the Ontario Ministry of Agriculture, Food and Rural Affairs. Its development was coordinated by eBiz Professionals Inc. and the Ontario Veterinary Advisory Forum.

Protocol 3- Emergency Preparedness and Response Plan for Veterinarians

Purpose

This document outlines the emergency preparedness and response plan steps that veterinarians should follow to contain the spread of a foreign animal disease (FAD) or other major disease outbreak.

Preparation for an On-Farm Visit with a Possible Reportable Disease Present - Enhanced Biosecurity Procedures

Ensure your vehicle is stocked with a biosecurity kit with the following supplies and equipment:

1. Rubber over-boots that allow easy disinfection and do not collect organic debris, and/or disposable boots of heavy plastic at least 3 millimeters thick
2. Washable coveralls that can be easily cleaned and disinfected and/or disposable coveralls of reinforced paper
3. Tyvek® or single use coveralls for use in high risk situations
4. Disposable head coverings, N95 respirator masks, and disposable gloves
5. Polyethylene bags to store and dispose of used coveralls and contaminated PPE articles
6. Disinfectant with equipment pail, plastic or non-porous boot brush and/or smaller spray or squeeze container filled with disinfectant solution for small equipment cleaning
7. Hand sanitizer
8. Paper towels
9. At least four liters of water
10. Plastic non-permeable tool box(es) or kit(s) that can be easily cleaned and disinfected and that contains only required testing equipment and postmortem tools for that visit.
11. Separate compartment or separate box for soiled tools or samples for submission sealed in plastic bags
12. Sharps container that is disposable or readily sanitized
13. Plastic clipboard for records keeping.

Preliminary Disease Diagnosis

Complete the clinical examination and record all relevant findings. Clearly describe and discuss the preliminary diagnosis with the farm owner/manager.

It is important for the veterinarian to report any suspicion that the animal(s) is exhibiting signs that may be consistent with a reportable disease. Given that many reportable diseases are highly contagious, it is important to follow practices that will contain the possible spread of disease to other animals on the subject facility and those on other premises. The veterinarian should suggest to his client that a self-quarantine should be put in place.

Disease Control Strategy

Once a preliminary clinical diagnosis has been made, the veterinarian needs to implement appropriate control measures to reduce the possibility of further disease spread. Containment is

vital to ensuring the least possible disruption and the fastest return to pre-disease status. The veterinarian should:

1. Ensure that all farm personnel, farm service personnel and visitors are notified and advised to remain on the premises and adopt necessary enhanced biosecurity protocols.
2. Advise any individuals on the farm who might have had contact with the diseased animal(s) to avoid other premises containing susceptible species of animals or birds.
3. Remain on the premises, if possible, until inspectors from the CFIA have arrived and implemented adequate controls and disinfection procedures to contain the site.
4. Ask the producer to ensure the availability of a list of people who have visited the premises in the past seven days.

When a CFIA representative arrives, he/she will start a containment strategy which includes erecting barriers at the farm gate and posting signs prohibiting the entry of additional personnel. The veterinarian will transfer the care of the animal(s) and control of the situation over to the CFIA veterinarian and should follow the instructions of the CFIA.

Once a reportable disease is confirmed, the CFIA veterinarian has and will use the powers vested in the Health of Animals Act to do whatever is necessary to contain the outbreak. This may include quarantining areas, vehicles, facilities and animals. The veterinary practitioner should ask the CFIA veterinarian for guidance regarding leaving the area, returning to his/her clinic and home, sanitizing his/her vehicle and equipment and what can and cannot be communicated. When returning to the practice, follow the anteroom protocol contained in the Veterinary Facility Biosecurity Protocol 2 (in-clinic biosecurity procedures).

Communications

Taking into consideration all freedom of information and privacy laws, the CFIA veterinarian will decide on the appropriate communication process. The audience will include industry organizations, the OVMA and OMAFRA. Before the disease is confirmed, the producer can choose whether to have his name released publicly or not. If the owner does not want the information released, the CFIA is restricted to internal communications and only a generalized location of the incident can be communicated externally. If the owner releases his/her name publicly or gives permission to the CFIA to release his/her name publicly, the OVMA, OMAFRA, Species-Specific Organizations and the industry should be notified of the suspected disease and location. Once a reportable disease is confirmed the name and location will be revealed to all stakeholders.

The veterinarian should contact his/her own clinic advising clinic personnel and colleagues of a suspected disease and instructing them to enact elevated biosecurity protocols. He/she should also contact neighbouring clinics to advise them of the situation and the need to increase their biosecurity. The veterinarian should not release identification details of the owner and farm location unless agreed by the owner.

Once the CFIA confirms a reportable disease, the names and locations of all affected farms are released to the industry and the media.

Emergency Contacts

In the event of a suspected foreign animal disease outbreak, it is mandatory to contact the CFIA. The Ontario Veterinarian Medical Association should also be advised so they can notify their members to be prepared and vigilant about biosecurity and disease spread. The veterinarian practitioner should also inform the OMAFRA Food and Agriculture Emergency Management System. Contact information for these organizations is provided below.

| Emergency Contacts | | Phone Number | |
|--|---------------------|------------------------------------|---------------------|
| Canadian Food Inspection Agency – 24-hour number | | 1.877.814.2342 | |
| CFIA District Office | Phone Number | CFIA District Office | Phone Number |
| Barrie | 705.739.0008 | Niagara Falls | 905.937-7434 |
| Belleville | 613.969.3320 | North Bay | 705.495.5995 |
| Brockville | 613.342.3682/2740 | Ottawa | 613.274.7374 |
| Fort Francis | 807.274.5214 | Owen Sound | 519.376.9772 |
| Guelph | 519.837.5817 | Peterborough | 705.742.6917 |
| Hamilton | 905.572.2201 | Port Parry | 905.985.1870 |
| Kingston | 613.384.1230 | Sarnia | 519.332.3031 |
| London | 519.691.1300 | Thunder Bay | 807.475.7761 |
| Markham | 905.513.2851 | Walkerton | 519.881.2431 |
| Mississauga | 905.795-6434 | Windsor | 519.969.1121/1128 |
| Mitchell | 519.348.0433 | Woodstock | 519.539.8505/8506 |
| Ontario Veterinarian Medical Association | 1.800.670.1702 | OMAFRA Emergency Management System | 1.800.268.6060 |

Reportable Diseases:

From the CFIA website:

| | |
|--|----------------------------|
| African Horse Sickness | African Swine Fever |
| Anaplasmosis | Anthrax |
| Avian Influenza | Bluetongue |
| Bovine Cysticercosis | Bovine Tuberculosis |
| Bovine Spongiform Encephalopathy (BSE) | Brucellosis |
| Chronic Wasting Disease | Classical Swine Fever |
| Contagious Bovine Pleuropneumonia | Contagious Equine Metritis |
| Equine Infectious Anemia | Equine piroplasmiasis |
| Fowl typhoid | Foot and Mouth Disease |
| Lumpy Skin Disease | Newcastle Disease |
| Peste des petits ruminants | Pseudorabies |
| Pullorum disease | Rabies |
| Rinderpest | Rift Valley Fever |
| Scrapie | Sheep and Goat Pox |
| Swine Vesicular Disease | Trichinellosis |
| Venezuelan Equine Encephalomyelitis | Vesicular Stomatitis |

Role of Private Veterinarians and Government Agencies in the Diagnosis and Control of and Recovery from Foreign Animal Diseases

Foreign Animal Disease Relevance

Canada is one of a few countries which remain free from a number of serious epizootic animal diseases. It is a high priority of the Canadian Food Inspection Agency that Foreign Animal Diseases, especially a rapidly spreading disease such as Foot and Mouth Disease, be recognized and then eradicated as soon as possible. The consequences will depend on the size and nature of the outbreak, and can be greatly minimized by early identification, containment and elimination.

Veterinary practitioners are most likely to be the first to encounter and recognize a Foreign Animal Disease once it has gained entry into Canada. Early recognition by veterinarians may prevent widespread transmission and great expense to the Canadian public.

When should you suspect a Foreign Animal Disease?

Foreign Animal Diseases of concern to the Canadian Food Inspection Agency are those which would have severe economic consequences in Canada, primarily associated with the loss of our export markets. It is essential to be aware of the possibility of Foreign Animal Diseases. The spectrum of pathogenicity of Foreign Animal Diseases has changed significantly. Traditional expectations of dramatic clinical manifestations of foreign animal diseases in our highly susceptible livestock must be discarded. Changes in pathogenicity induced by accidental release of modified strains, or alterations included by passage through partially immune hosts, has resulted in a generation of agents whose clinical signs closely mimic common diseases of Canadian livestock.

The challenge for the clinician then becomes - **when do I refer a case to the District Veterinarian?** This must remain the judgment of the attending clinician. However, there are a couple of guidelines which may be useful. First, a history of a possible recent contact, such as visitors or people or livestock returning from abroad, should raise suspicions. This should be a key factor in the decision to refer. Second, a syndrome which does not follow expected clinical or treatment and response patterns should also be questioned. During the last 30 years, outbreaks of Hog Cholera, Anaplasmosis, Avian Pneumoencephalitis (Newcastle Disease), and Bluetongue have all occurred in Canada. Although clinicians are unlikely to encounter such diseases, they should be aware that they exist.

The following examples may be a useful reminder of some of these:

- a. Hemolytic anemia with no hemoglobinuria, affecting adult cattle - consider Anaplasmosis.
- b. Mature cattle affected with oral lesions and diarrhea; morbidity and mortality high or low - consider rinderpest.
- c. Pigs with severe systemic illness; morbidity high, or low and increasing (insidious) - have the possibility of African Swine Fever and Hog Cholera in mind. History and gross necropsy may be most useful.
- d. Reproductive problems in sows - always include Pseudorabies, Hog Cholera and African Swine Fever, at least in initial list of rule-outs.

- e. Horse with vesicles or papules on tongue - definitely call the Canadian Food Inspection Agency on suspicion of Vesicular Stomatitis.
- f. Several bred mares return to heat with mucopurulent vaginal discharge; cultures are negative - search in breeding/travel history for possibility of Contagious Equine Metritis.
- g. Sheep with stomatitis, lameness - suspect Bluetongue, Vesicular Diseases.
- h. Poultry
 - i. depression, neurological signs, head edema, diarrhea, variable morbidity and mortality, hemorrhagic enteritis - consider Newcastle Disease, Highly Pathogenic Avian Influenza, possibly Fowl Typhoid
 - ii. if restricted to chicks and poults - consider Pullorum Disease
- i. Cattle over 3 years of age exhibiting a progressive neurological disease of two to three months duration, consider Bovine Spongiform Encephalopathy (BSE).

You are encouraged to request printed material from your District CFIA Office to keep updated on clinical signs and postmortem findings of serious Foreign Animal Diseases.

What should you do if you suspect the presence of an FAD?

Veterinarians are required by law (see *Health of Animals Act* Sec. 5(1) (2)) to immediately notify the District Veterinarian of reasonable suspicion of any serious Foreign Animal Disease, **regardless of whether it is reportable**. African Horse Sickness, Rift Valley Fever, Sheep Pox and Contagious Bovine Pleuropneumonia are examples of serious Foreign Animal Diseases that are not reportable.

Once a firm suspicion is established, it is important that the practitioner remain on the suspect premises until relieved by the Canadian Food Inspection Agency Veterinarian.

If the District Veterinarian is of the opinion that a Foreign Animal Disease is a serious possibility, the clinician must consider very carefully the risks associated with continued contact with livestock on other premises without extensive personal and equipment disinfection. Many Foreign Animal Disease agents are resistant and spread readily by fomites. The danger of transmission by veterinarians from premises to premises is real and must be recognized along with the potentially tragic consequences and possible liability to the veterinarian should such an incident occur.

Individuals should maintain a list of alternative contacts, in case you are unable to reach local District Veterinarians (e.g. neighbouring District Veterinarian, Area Office Personnel). Be discrete when discussing a tentative diagnosis with clients especially on party telephones lines. For example, use the term "Possible Exotic Disease" rather than "Foot and Mouth Disease". If confirmed, eradication measures would involve at least quarantine of the premises, and an epidemiologic investigation (e.g. Vesicular Stomatitis confined to horses at one stable). Further action would depend on other factors such as extent of spread (e.g. involvement of wildlife), legal mandate and industry support and could extend to a quarantine of an entire area and involve depopulation of affected premises.

In the case of an outbreak of a Foreign Animal Disease, a predetermined Emergency Response Team would be mobilized to a Field Operations Centre (FOC) to control the spread and eradicate the disease. Operationally, this Team is made of units having very specific tasks to do: Diagnostic, Trace-out, Movement Control, Evaluation, Slaughter and Disposal, and Cleaning

and Disinfection. Veterinary practitioners could be requested to give assistance in one of these areas.

The control and eradication activities would begin by controlling movements of animals and people in zones where the disease has been diagnosed. There would be one **infected zone** (or more) containing the infected premises. Depending upon the disease, the perimeter of the infected zones(s) would extend a finite distance beyond all known infected premises and would follow, when possible, natural barriers and roadways to facilitate implementation of disease control procedures. Surrounding this (these) infected zone(s) would be a **security zone** extending from the perimeter of the infected zone(s) to a certain distance, which could vary according to the disease. A **buffer zone** would extend from the outer limit of the security zone to the limit of the control area. The three zones would constitute a **control area** where certain measures would be applied according to a pre-approved disease control/ eradication strategy. During an outbreak, practitioners receiving information suggestive of the Foreign Animal Disease in question would notify the FOC in the outbreak area. In the case of an FAD emergency, appropriate information concerning the location and the telephone number(s) of the FOC, the limits of the control area, the movement restrictions, disinfection procedures, etc., would be made available at that time to all practitioners through the appropriate channels.

Disinfectants routinely used by a practitioner may not be effective against the agent of a suspected disease. The veterinary practitioner should consult with a District Veterinarian to determine what products are acceptable in the disinfection of himself, his equipment and vehicle.

Client education is an integral part of the practicing veterinarian's role in Foreign Animal Disease prevention and control. Owners will turn to their veterinarian as a primary source of information in the event of an outbreak. Control procedures such as disease reporting, quarantine and disinfection will be effective only with the element of owner co-operation and participation. This results from an understanding of the procedures and their rationale.

The involvement of practicing veterinarians with respect to Foreign Animal Disease may be summarized as follows:

- a. Prevention:
 - i. Maintain current knowledge of the Foreign Animal Diseases most likely to enter Canada. These include, Anaplasmosis, Highly Pathogenic Avian Influenza, Bluetongue, Velogenic Newcastle Disease, Pseudorabies, Vesicular Stomatitis, Foot and Mouth Disease, Hog Cholera, African Swine Fever and Bovine Spongiform Encephalopathy. The District Veterinarian has information on such diseases.
 - ii. Be aware of clinical/necropsy findings which should alert suspicion. Routinely include Foreign Animal Diseases in differential diagnoses.
- b. Reporting:
 - i. Immediately report any suspicion of the existence of a Foreign Animal Disease to the nearest District Veterinarian.
- c. Control:
 - i. If you have been physically present on the farm, **stay on site until the District Veterinarian arrives** and encourage others not to leave the premises.
 - ii. During an outbreak, continue to refer suspicious calls.
 - iii. Communication with livestock owner:

- § Inform the owner of your suspicions of an exotic animal disease without specifying the disease.

Controlling Disease Outbreaks

Some diseases can be controlled by vaccination and some by antibiotics. Others rely on strict isolation and sometimes destruction of the affected animals. The centralized coordination group (DCC) would help the industry decide what vaccination procedures or medications to use in each situation. Humane euthanasia and environmentally-responsible disposal of carcasses will be a major challenge for the affected farmers, and the service teams will be available to assist in carrying out these procedures.

Section 80 of the Health of Animals Regulations prohibits movement of animals, and other risk objects within, into or out of the Control Area. All movements within, into, or out of a Control Area **can only be with permission of an inspector** or other person designated by the Minister. All such movement is only allowed with permits issued at the time of the emergency.

Once a disease is confirmed there will be total control on movement of animals, animal products and by-products and things contacting them off and onto the infected premise. Infected animals will be destroyed and disposed of and the premise(s) will be cleaned and disinfected before being declared **Not Infected**. Movement will be curtailed until the disease status in the zone is assessed and it will be necessary to identify all premises with susceptible species. Permission for animal movement will be dependent on the disease involved. In the security zone the restrictions are reduced. A permit is still necessary for movement of animals and other materials (usually general). If a high-risk premise, for example a sales barn or show, is located in the zone, there may be some additional restrictions. Movement out of the restricted area is very limited with no susceptible livestock or vectors and only some products allowed to be moved. For movement control there will be checkpoints, licences and permits, signage on farms and roadways and public notification on radio, in newspapers and over the internet. Movement restrictions may be put on animals, susceptible captive species, animals that can be sectors, animal products from live animals, eggs, milk, semen, animal by-products, meat, blood, hides, offal, litter, manure, feed, fomites, apparel, vehicles and equipment.

Respective Federal and Provincial Roles

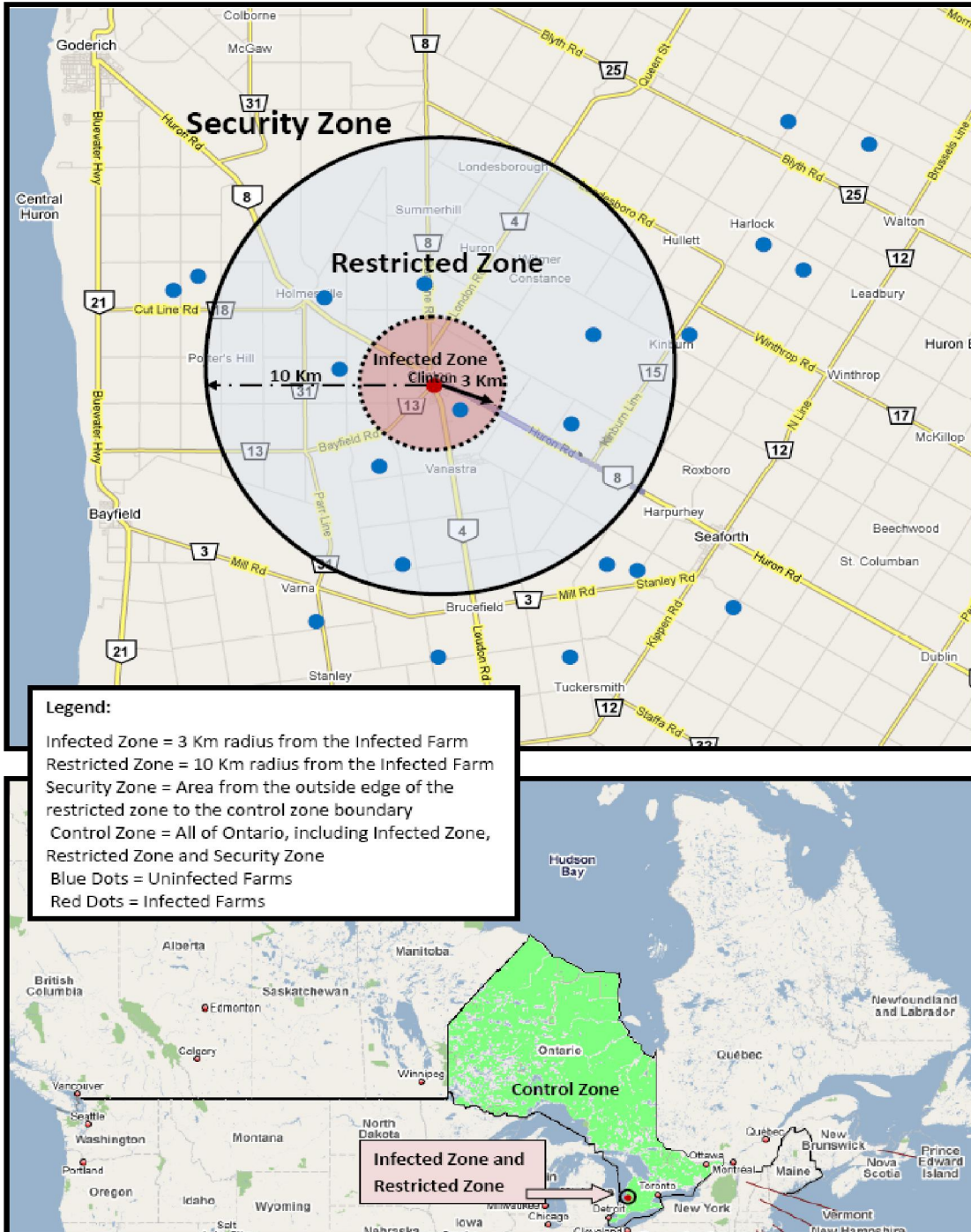
The Federal and Provincial governments have signed a Foreign Animal Disease Emergency Response (FADER) document to ensure that each agency knows who does what in the event of an outbreak.

Unfortunately, in Ontario there is no provincial legislation to deal with non reportable diseases or to cover the grey area before the CFIA confirms an outbreak of one of the 32 diseases listed on page 34. The province is presently looking into developing legislation to help fill this gap.

In Ontario province wide emergencies are coordinated by Emergency Management Ontario (EMO). EMO coordinates the response from all provincial ministries and requests for federal resources. In the event of a major emergency, including an outbreak of disease, the EMO will

establish the Provincial Emergency Operations Centre to coordinate the provincial response to the emergency.

The maps below demonstrated the zones as established under the CFIA's direction under a foreign animal disease outbreak.



Recovery

As mentioned above, CFIA may order the destruction of animals or birds to help control an outbreak. It will pay a set fee for any animal or bird they order destroyed but do not pay for euthanasia, disposal or cleaning and disinfection. All farms that have had the infection must meet CFIA “green” standard before any are allowed to resume production.

Humane euthanasia will be carried out if destruction is ordered and it will be either contracted out or performed by CFIA. Methods for the humane euthanasia of large numbers of animals need to be developed as are techniques for disposing of carcasses in an environmentally responsible way.

Cleaning and disinfection (C&D) is a time-consuming and labour-intensive process which is the responsibility of each farmer, but which must meet the established standards of the CFIA in a reportable disease situation. There will be ongoing surveillance of all farms in the area to ensure that the disease has been eliminated. Once the C&D process has been completed through the red, orange and green inspections the farm is ready to restock. In the case of Avian Influenza, for example, twenty-one days after the last farm in a zone passes its green inspection restocking can begin. There may be a need to coordinate the restocking process if the area involved was large, to protect the market from being flooded with products a few months after everyone re-enters production.

Carcass disposal is a major function. A decision on whether the disposal will be on the farm, at a central location, and by composting, burial or incineration needs to be made. A location needs to be selected and teams need to be trained and made available. Specific equipment may also be needed to carry out the transportation and/or disposal. Welfare slaughter of animals or birds not infected by the disease but which either are a threat for spreading the infection or can't be fed or managed because of the disruption in the area may be necessary. The cost of this welfare slaughter is not covered by the CFIA and so must be dealt with by industry.