

AUSTRALIAN VETERINARY EMERGENCY PLAN

AUSVETPLAN

1996

Enterprise Manual

Veterinary practices

INTERIM DOCUMENT

AUSVETPLAN is a series of technical response plans that describe the proposed Australian approach to an exotic animal disease incursion. The documents provide guidance based on sound analysis, linking policy, strategies, implementation, coordination and emergency-management plans.

Agriculture and Resource Management Council of Australia and New Zealand

This Enterprise Manual forms part of:

AUSVETPLAN Edition 2.0, 1996

[AUSVETPLAN Edition 1.0, was published in 1991]

This strategy will be reviewed regularly. Suggestions and recommendations for amendments should be forwarded to the AUSVETPLAN Coordinator (see Preface).

Record of amendments to this manual:

There are occasional minor differences in the page breaks between the paper and this electronic version which we can unfortunately not avoid.

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PREFACE

This **Enterprise Manual** for **veterinary practices** forms part of the **Australian Veterinary Emergency Plan**, or AUSVETPLAN (Edition 2.0). AUSVETPLAN is an agreed management plan and set of operational procedures which would be adopted in the event of an exotic animal disease outbreak in Australia. The procedures are briefly outlined in the **Summary Document** and details are given in the individual **Disease Strategies**. The manuals are written with specific reference to certain animal industries where a greater than normal risk of harm could be expected from an exotic disease outbreak.

The manual is directed at providing information, assistance and guidance to all personnel associated with the operations or services provided by veterinary practitioners. It also provides specialised data on the activities of the profession for those implementing a control or eradication program in the event of an outbreak of an exotic disease.

This manual is being released as an interim document to allow for full industry/government consultation before it is approved by the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).

Detailed instructions for field implementation of the strategies are contained in the AUSVETPLAN **Operational Procedures Manuals** and **Management Manuals**. Cross-references to strategies, manuals and other AUSVETPLAN documents are expressed in the form:

Document Name, Section no.

For example, **Decontamination Manual, Section 3**.

The resource book *Exotic Diseases of Animals: A Field Guide for Australian Veterinarians* by W.A. Geering, A.J. Forman and M.J. Nunn, Australian Government Publishing Service, Canberra, 1995 (**Exotic Diseases Field Guide**) has been a source for some of the information about the aetiology, diagnosis and epidemiology of the diseases. It should be used as a field guide for veterinarians and other animal health personnel associated with exotic disease diagnosis and management in livestock enterprises.

The manuals will be revised and updated from time to time to ensure that they keep pace with the changing circumstances of the particular industry they cover. Comments and suggestions are welcome and should be addressed to:

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1 NATURE OF THE ENTERPRISE

Risk enterprises are defined as those with a high potential for disease spread. This is certainly the case for veterinary practices. Not only are veterinarians likely to visit several properties consecutively, but they are frequently doing so to attend sick animals, which could be suffering from the exotic disease of concern. They come into close contact with the animals and depart from each property with potentially contaminated equipment and specimens. At the clinic, there is the potential for direct and indirect contact between infected and susceptible animals. By virtue of their professional knowledge and responsibilities, there is a greater expectation that veterinarians should avoid work practices that unnecessarily increase the risk of disease transmission.

On the other hand, veterinarians are also in a position to assist in exotic disease prevention and control. By maintaining an awareness of exotic diseases, they may be the first to recognise a possible outbreak. In the event of an outbreak, they can assist in disease surveillance and actively encourage compliance with disease control requirements by livestock owners and others in the industry. Consequently, they have a dual responsibility :

- to avoid increasing the risk of disease spread by their own activities; and
- to assist in disease control efforts by maintaining awareness and acting as a source of professional advice to others in the livestock industries and to companion animal owners.

Australia has about 60 exotic disease investigations each year. Most are ultimately shown to be common endemic diseases. Some are genuine exotic disease incursions and some are diseases of unknown aetiology or even new diseases. While the emphasis in this manual is on the major exotic diseases, veterinarians should keep in mind that they cannot expect to recognise every disease by its classical signs and that unknown or new diseases should often be managed in the same manner as an exotic disease incursion.

1.1 Veterinary practice in Australia

1.1.1 Some data on veterinary practices

There are approximately 6350 veterinarians registered in Australia and about 66% of them are in private practice. There is an average of about three veterinarians in a practice, with about 30% of practices having one veterinarian only and the larger practices having five or six veterinarians. Some 43% of practices are small animal only and another 46% are mixed small and large animal. The remainder are specialist large animal, equine consultative or other specialist practices. About 20% of practices are located in rural areas and most rural practices are mixed companion animal and farm animal practices, operating from a clinic where most of the small animal work is conducted. About 10% of practices have more than one clinic or hospital, a small number of which are used for large animal procedures as well. Often, the larger mixed practices will have clinicians specialising in small animal, equine or farm animal work. A small number of rural practices specialise in one area, such as horses, pigs or artificial breeding work. While the larger rural cities and towns may have several practices, many practices — often with a single veterinarian — are in small, relatively isolated towns.

1.1.2 Veterinary practices and exotic disease

Australia has a reputation for excellence in veterinary medicine in both the private and the government spheres. In recent years there has been a general contraction in the provision of veterinary services by State governments and this has led to a greater involvement in farm animal disease investigations by private practitioners. There has also been an increasing involvement of the veterinary profession in preventive medicine and integrated farm advisory services. From the traditional rural practice that handles anything and everything, there has been a trend towards specialisation on the basis of species or discipline. This often means that individual veterinarians will operate over large areas of a State, or even interstate or overseas, potentially increasing the risk of their activities in the event of an exotic disease.

In general, veterinarians are well placed to have an excellent understanding of exotic diseases affecting the livestock species with which they are involved, their implications nationally and on an individual farm basis. Often, they are an important source of information for livestock owners and the general community. **They have a professional responsibility to be aware of the risks of transmission of disease** — not only in the event of an exotic disease outbreak but as a part of their daily activities. Most practices are involved with many different livestock species and all are at risk from exotic diseases (including dogs and cats). Transmission of disease could result from veterinarians visiting properties or from owners presenting animals at the clinic.

The management and conduct of veterinary practices is controlled by State legislation. While there is variation between States, they all require practices to be owned and staffed by registered veterinary surgeons. However, other support staff are also involved in interactions with clients and it is essential that they should have an appreciation of the implications of exotic disease.

1.1.3 Legal responsibilities of veterinarians

Legislation both at the Commonwealth and State/Territory level has been enacted for the purpose of controlling exotic animal diseases. The Commonwealth legislation is primarily concerned with preventing the introduction and establishment of disease or of things that may carry disease. Legislation exists in all States/Territories aimed at the control and eradication of disease in animals, and establishes controls over the whole field of animal movement, treatment, decontamination, slaughter and compensation. Wide powers are conferred on government inspectors, including the power to enter premises, to order stock musters, to test animals and order the destruction of animals and products that are suspected of being infected or contaminated.

Veterinarians have legal responsibilities in three areas:

- their obligations as registered veterinarians to satisfy professional standards;
- requirements under State or Territory exotic disease legislation to notify any suspicion of exotic disease; and
- common law obligations to avoid loss or destruction of property as a result of their actions.

All practising veterinary surgeons must be registered with a State or Territory veterinary board and are subject to the relevant veterinary surgeons legislation. Veterinary boards have guidelines that, among other things, recommend minimum standards for veterinary

premises. Although not directed specifically to the control of exotic disease, these standards serve to ensure hygienic premises that would mitigate against the transmission of disease.

State/Territory exotic disease control legislation requires a veterinarian to report immediately to an inspector any animal or animal product suspected of being infected with an exotic disease by the quickest means of communication available. Some legislation may include similar reporting obligations for a new or an unknown disease. There are large penalties for not reporting disease, for being in possession of an exotic disease agent and for contravening an area restriction order.

Common law requirements make it in the veterinarian's best interests to ensure that they comply with acceptable practices to avoid of the inadvertent spread of exotic diseases.

1.2 Exotic diseases of concern

A brief summary of each of the major exotic diseases is provided below (Section 1.2.1). Table 1 shows an indication of the major risks of transmission from disease investigation, treatment or control activities undertaken by veterinarians. The potential for human infection is also indicated.

The disease of most concern is *foot-and-mouth disease*, in particular because of the devastating effect it would have on our export of livestock and livestock products and thereby on the national economy. FMD affects all cloven-hoofed animals (ruminants and swine). *Swine vesicular disease* and *vesicular exanthema of swine* cause essentially identical disease in pigs only, while *vesicular stomatitis* affects pigs, ruminants and horses. The diseases produce vesicles in and around the mouth, on the feet and on the teats. When the vesicles rupture, erosions are produced that generally heal over a period of 7–10 days. **Any signs of vesicles or erosions in ruminants, horses or swine should be treated as suspicious and, if no immediate explanation is forthcoming, reported to a government veterinarian.**

Bluetongue is regarded as a high-risk disease, since we have strains in Australia that are known to be pathogenic in laboratory experiments. While primarily a disease of sheep, the virus is transmitted through cattle by insect vectors. Clinical bluetongue in Australia would affect both sheep and cattle industries. The disease could occur in the north of Australia, down the east coast of Queensland and as far south as central New South Wales.

The two exotic horse diseases of particular concern are *African horse sickness* and *equine influenza*. African horse sickness is transmitted by *Culicoides* insects, in the same way as bluetongue, and its introduction into Australia could well be by insects introduced from areas to the north of Australia. Equine influenza could be introduced with imported horses. **Disease in recently introduced animals should always be viewed with concern, even if they are officially out of quarantine.**

In chickens and some other bird species, *Newcastle disease* and *avian influenza* both cause high morbidity and mortality. Birds with Newcastle disease may show respiratory or nervous signs, or death may occur with few premonitory signs. Those with avian influenza may show signs of swollen heads and cyanosis of the wattles and combs.

The two exotic pig diseases of major concern are *classical swine fever (hog cholera)* and *African swine fever*. Both can cause high morbidity and mortality and have similar, but variable clinical signs. These include high fever, depression, diarrhoea and respiratory

distress. Both diseases are highly contagious and can be spread by indirect means, including illegally imported food products.

As Australia has about 60 exotic disease investigations each year, the chances of a veterinary practitioner having a legitimate reason for such a concern, at some time throughout their career, is therefore quite high and they need to be prepared for it. New diseases arise from time to time (such as the morbillivirus outbreak, acute equine respiratory syndrome in Queensland in 1994) and other exotic diseases can occur with atypical clinical signs (see Section 2.1 for further information on training resources available).

Any unexplained sickness or death in livestock should be treated as potentially an exotic disease, where the epidemiology suggests that it is infectious in nature, even if classical signs of known exotic disease are not evident.

1.2.1 Major exotic diseases for which AUSVETPLAN strategies have been developed

African horse sickness

An infectious insect-borne viral disease of horses and mules with other equines only slightly affected. It is frequently fatal in susceptible horses, with clinical signs and lesions resulting from selective increased vascular permeability, resulting in an impairment of the respiratory and circulatory systems. In nature the virus is transmitted by midges (*Culicoides* spp) causing a seasonal incidence in temperate climates.

African swine fever

A highly contagious, generalised virus disease of pigs. No other mammalian hosts occur. It is transmitted by direct contact, inanimate objects and ticks. The virus is very resistant to inactivation. The acute form of the disease is characterised by pronounced haemorrhage of internal organs and a mortality of up to 100% in infected herds. Milder forms of the disease also occur.

Aujeszky's disease

Also known as pseudorabies, this disease is caused by a herpesvirus that infects the nervous system and other organs such as the respiratory tract in virtually all mammals except humans and the tailless apes. It is primarily associated with swine, which may remain latently infected following clinical recovery.

Virulent avian influenza (fowl plague)

A lethal generalised disease of poultry caused by specific types of avian influenza virus. Disease outbreaks occur most frequently in chickens and turkeys. Many wild bird species, particularly waterbirds, are also susceptible, but infections in these birds are generally subclinical.

Bluetongue

A viral disease of ruminants transmitted only by specific species of biting midges (*Culicoides* spp). Sheep are the most severely infected, the disease being characterised by inflammation of the mucous membranes, widespread haemorrhages and oedema. Naturally occurring disease has not been seen in Australia, although some serotypes of the virus, some pathogenic, have been detected in northern and eastern Australia.

Bovine spongiform encephalopathy (BSE)

A fatal, neurological disease of adult cattle, characterised by a long incubation period, followed by progressive degeneration. Typical signs are abnormal posture, development of

violent behaviour, heightened sensory perception, decreased milk production, weight loss (despite a good appetite), and death.

The disease was first recognised in the United Kingdom in 1986, and probably arose because changed practises in processing meatmeal permitted transmission of the scrapie agent to cattle.

Classical swine fever (hog cholera)

A highly contagious disease capable of spreading rapidly in susceptible pig populations. In the acute form, the disease is characterised by fever, severe depression, multiple haemorrhages, and rapid deaths. Strains of the virus of lower virulence cause subacute and chronic forms of the disease that include complications of pneumonia and diarrhoea.

Equine influenza

An acute respiratory viral disease, that may cause rapidly spreading outbreaks in congregated horses. It is caused by two members of the genus *Influenzavirus*. Other equines are susceptible, but the disease is seen mainly in horses.

Foot-and-mouth disease

An acute, highly contagious viral infection of domestic and wild cloven-hoofed animals. It is characterised by fever and vesicles in the mouth nose, feet and teats. Serious production losses can occur, but deaths are unlikely except among young animals.

Lumpy skin disease

An acute, generalised viral skin disease of cattle. It is highly infectious and is characterised by fever, ocular and nasal discharges, the eruption of cutaneous nodules, swelling of superficial lymph nodes and oedema of the limbs. It is caused by the same virus — capripox — that causes sheep and goat pox.

Newcastle disease

A highly contagious lethal viral disease of chickens, turkeys and other birds. Virus strains vary widely in their virulence. Severe strains cause rapid death and are characterised in chickens by respiratory distress and swelling of the head around the eyes.

Peste des petits ruminants (PPR)

PPR in sheep and goats resembles rinderpest of cattle and is caused by a virus closely related to the virus of rinderpest. It is characterised by fever, enteritis, high morbidity and mortality.

Rabies

An almost invariably fatal viral encephalitis affecting all warm blooded animals. It has a long and variable incubation and is transmitted by the bite of a rabid animal. The main reservoir hosts include members of the Canidae (dogs, foxes).

Rift Valley fever

This is a mosquito-borne disease of cattle, sheep, goats and humans, characterised by high rates of abortions and high rates of mortalities in young animals. Severe disease can occur in humans requiring special safety precautions.

Rinderpest

An acute highly contagious disease principally of cattle ('cattle plague'). Characterised by high fever, nasal and ocular discharges, laboured breathing, severe often bloody diarrhoea and death. The virus is related to measles, canine distemper, and peste des petits ruminants. The virus is not stable in the environment.

Scrapie

Scrapie occurs in sheep and goats. Infection is usually passed from ewe to lamb and can occur between unrelated animals, especially when lambing occurs in confined areas. Scrapie has a prolonged incubation from 1–3 years or longer. Clinical signs of pruritus and incoordination progress to depression, recumbency and death. Animals that never develop clinical signs can still be a source of infection to others.

Screw-worm fly

Myiasis caused by larvae of the screw-worm fly is characterised by larvae feeding on **living** tissues in open wounds of any warm-blooded animal host, resulting in debility and some deaths. The flies prefer warm moist conditions and a temperature range from 16–30°C.

Sheep and goat pox

Highly contagious skin diseases of small ruminants, characterised by fever, excess nasal and eye discharges, papules and pustules on exposed body surfaces, often with a high mortality rate. The virus is very resistant to inactivation in the environment, but the degree of host specificity does vary.

Swine vesicular disease

Swine vesicular disease is caused by an enterovirus closely related to the human Coxsackievirus B5. It is characterised by fever and lameness due to vesicles and erosions on the feet. It is clinically indistinguishable from foot-and-mouth disease.

Transmissible gastroenteritis

An enteric virus disease of pigs, caused by a coronavirus that results in rapid dehydration, profuse diarrhoea and rapid death in piglets under three weeks of age.

Vesicular exanthema

An acute disease characterised by vesicles on the snout, in the mouth and on the feet. The clinical disease is indistinguishable from foot-and-mouth disease. The vesicular exanthema virus is very closely related to viruses isolated from marine animals and an outbreak in pigs was associated with the feeding of contaminated food scraps containing marine animal product.

Vesicular stomatitis

Vesicular stomatitis is principally a disease of cattle, horses, and pigs. It can cause signs indistinguishable from foot and mouth disease, except horses are infected. The disease has only been seen in North, Central and South America. The epidemiology of the disease is still unclear, but transmission cycles between insects and small wild ruminants is known to occur.

1.2.2 Potential occupational health issues

Rabies and Rift Valley fever have major human health implications. Veterinarians are at particular risk because they examine sick animals and because they are undertaking invasive procedures that may expose them to high levels of contamination.

Rabies in particular needs special consideration as outlined in Section 3.3.5. It is spread by contamination of broken skin or mucosa with infectious saliva or other body fluids. This is generally caused by biting, but can also be due to licking of damaged skin, by aerosol infection through the conjunctiva or exposure to infectious brain tissue during removal of the brain or spinal cord. Appropriate precautions must be taken by veterinarians, their staff and their clients (see section 3.3.5).

Table 1 Major transmission risks and other considerations for the more important exotic diseases

Disease	Transmission considerations
African horse sickness	Insect transmitted but could also be transmitted by parenteral procedures; meat infectious for dogs
African swine fever	Direct contact, animal products, fomites
Aujeszky's disease	Direct contact, aerosol and fomites
Avian influenza	Mainly direct contact; possibly fomites
Bluetongue	Insect transmitted but could be spread by parenteral procedures
BSE	Spread essentially by ingestion but could be transmitted by parenteral procedures and possibly in embryos
Sheep and goat pox	Direct contact and fomites
Classical swine fever	Direct contact, animal products and fomites—probably transmissible in washed embryos
Equine influenza	Mainly direct contact
Foot-and-mouth disease	Highly contagious — direct contact, animal products, fomites, aerosols, semen; survives for several hours in human respiratory tract; washed embryos are safe
Newcastle disease	Direct contact and fomites
Rabies	Exposure of abraded skin or mucosa to infected saliva; clinical disease in humans is invariably fatal
Rinderpest	Generally direct contact
Rift Valley fever	Spread by insects but also by exposure to uterine contents and to body fluids (especially blood) on autopsy; human infection can be fatal
Scrapie	Spread essentially by ingestion but could be transmitted by parenteral procedures and possibly in embryos
Swine vesicular disease	Direct contact, animal products and fomites
Vesicular stomatitis	Spread generally by insects but could be transmitted by parenteral procedures; human infection causes an influenza-like disease

Rift Valley fever is generally transmitted by mosquito bites. However, it is also spread by aerosol exposure from infectious body fluids, during calving/lambing operations or postmortem examinations.

There are other exotic animal diseases that can cause infection in humans and the possibility should always be kept in mind of a new disease that may cross a species barrier. The equine morbillivirus outbreak (acute equine respiratory disease syndrome) in Queensland in 1994 is an example of a zoonotic infection occurring in unexpected circumstances and for unexplained reasons.

Foot-and-mouth disease virus uncommonly causes disease in humans but can be passively retained in the upper respiratory tract.

Newcastle disease virus can cause a mild conjunctivitis in humans. People can act as mechanical vectors in the transmission of many diseases and this risk should not be disregarded.

1.2.3 AUSVETPLAN strategies and OIE requirements for each disease

Table 2 provides a concise summary of the proposed strategy in Australia if there is an outbreak of one of the exotic diseases covered by AUSVETPLAN. More details are provided in the individual **Disease Strategies**. Some of the exotic diseases are covered by a cost-sharing agreement whereby the Commonwealth, States, and Territories share the eradication and compensation costs (see the AUSVETPLAN **Summary Document, Appendix 3**).

The Office International des Epizooties (OIE) is the world organisation for animal health. The OIE, established in 1924 in order to promote world animal health, provides guidelines and standards for health regulations in the international trade of animals and animal products. Diseases that spread rapidly, have particularly serious socioeconomic or public health consequences and are of major importance in international trade, have been designated by OIE as List A diseases. List B diseases are similar to List A, but are considered less invasive across political borders, and to be 'significant' diseases only for international trade considerations. The OIE International Animal Health Code for each disease is shown in the Disease Strategy, Appendix 3.

Table 2 OIE classification, cost-sharing agreement and eradication strategies for the AUSVETPLAN diseases.

DISEASE	OIE	CSA	ERADICATION STRATEGY*						
African horse sickness	A		S				I	V	H
African swine fever	A	✓	S			D			
Aujeszky's disease	B			L		D		(V)	
Virulent avian influenza	A	✓	S			D			
Bluetongue	A	✓					I	V	H
Bovine spongiform encephalopathy	B				C				
Classical swine fever	A	✓	S			D		(V)	
Equine influenza	B					D		V	H
Foot-and-mouth disease	A	✓	S			D		(V)	
Lumpy skin disease	A		S			D	I	(V)	
Newcastle disease	A	✓	S			D		(V)	
Peste des petits ruminants	A		S			D			
Rabies	B	✓			C			V	
Rift Valley fever	A						I	V	
Rinderpest	A	✓	S			D			
Scrapie	B				C				
Screw-worm fly	B	✓					I		H
Sheep and goat pox	A		S			D	I	(V)	
Swine vesicular disease	A	✓	S			D			
Transmissible gastroenteritis	B			L		D		(V)	
Vesicular exanthema		✓	S			D			
Vesicular stomatitis	A	✓		L		D	I		H

* Quarantine and movement controls are part of all the eradication procedures.

KEY:

OIE	List A or List B disease
CSA	Cost- sharing agreement
S	Slaughter infected and at risk animals to remove the major source of the virus
L	Eradication program including limited slaughter according to circumstances
C	Slaughter of clinically affected or dangerously exposed animals
D	Decontamination essential to eliminate the presence of the virus on infected premises
I	Insect vector control
V	Vaccination of susceptible animals to prevent the disease
(V)	Vaccination may be considered
H	Husbandry, including treatment of affected animals that will assist the eradication program

1.3 The risk of spreading disease

The potential for the spread of specific diseases is indicated in Table 1, above. Outlined below is a consideration of the kinds of activities that could involve transmission of disease. They need to be considered together with the specific disease risks indicated in Table 1. Appropriate precautions that should be taken are addressed in Sections 2 and 3. For most contagious diseases, the movement of live animals must be regarded as the highest risk, followed by the movement of dead animals, specimens or other animal tissues. The next category of risk is instruments used for invasive procedures and other materials that could become contaminated as a result of such procedures and subsequently be used again with susceptible animals.

1.3.1 Movement of animals and materials off an infected property

In the course of normal veterinary activities, veterinarians will travel between livestock premises and other premises, including their clinic. The following possibilities of movements off the property need to be considered as a disease transmission risk. Specific recommendations are made in Section 2.2.

- *Removal of an animal for slaughter at the recommendation of the veterinarian* — a sick animal removed for slaughter as pet food, or for rendering of the carcass, could represent a means of indirect spread of disease.
- *Removal of an animal to a clinic for treatment or further examination* — clinics, like stockyards, are areas of transient movement where contact between animals from different sources can occur.
- *Collection of semen or embryos for artificial breeding purposes* — untreated genetic material represents a special risk.
- *Removal of dead stock for disposal* — vehicles employed for such work move from farm to farm and could be implicated in disease transmission.
- *Removal of carcasses or specimens for diagnostic purposes* — this could represent a risk at the destination but also during transport, if improperly dispatched.
- *Instruments used for examination, surgery or specimen collection* — invasive activities circumvent natural infection barriers and carry a higher level of risk.
- *Personal items of clothing* — especially where they are grossly contaminated.
- *Vehicle and other equipment* — together with clothing, the perception of taking care with hygiene and cleanliness can convey a positive message to clients.

- *Potentially infectious waste resulting from examination, treatment and specimen collection* — consider the risk of spreading contamination, during transport and at the point of final disposal.

1.3.2 Movement of potentially infectious material into and out of the clinic

The clinic represents a special risk as a point of potential disease transmission. The risks associated with owners presenting animals infected with exotic disease are difficult for the veterinarian to control and considerations need to include the design of premises and the manner in which clients are encouraged to control their animals. The possible movements that should be considered are listed below. Specific recommendations are in Section 2.3.

- Presentation of sick or incubating animals at the clinic, by the owner.
- Presentation of susceptible animals by other owners; the need to maintain separation between animals in public access areas.
- Housing of animals in kennels, yards or other accommodation; the need to maintain appropriate separation.
- Contamination of the premises by specimens, contaminated instruments or personal effects; avoidance of practices that could allow indirect transmission of disease.
- Dispatch of potentially contaminated specimens to laboratories; the need in particular to consider the safety of postal or courier personnel.
- Disposal of potentially infectious material at the clinic in a way that will avoid the risk of contaminated effluent or solid waste leaving the property in an uncontrolled manner.
- Disinfection of instruments and equipment.
- Laundering of protective clothing.

2 RISK REDUCTION AND CONTINGENCY PLANNING

There are distinct situations in which to consider the risk of exotic disease transmission and steps that can be taken to avoid it. The first is in the normal course of activities, when there is no identified exotic disease outbreak. It is unrealistic to expect all possible steps to be taken in this situation. However, **there are procedures that can be undertaken that need not affect the efficient operation of a practice but can limit the everyday risk.** It is part of the professional responsibility of veterinarians to take reasonable precautions. It also sends a positive signal to clients and promotes awareness in them.

Veterinarians should keep in mind that Australia has a number of exotic disease alerts each year (see Section 1). Contingency planning is for an event in which practitioners are likely to be involved, at least once in their career.

2.1 Training and awareness

All vets must be aware of exotic disease threats, encourage their veterinary staff to attend practitioner workshops on exotic diseases, and consider possible exotic differential diagnoses when discussing cases. In particular, exotic diseases should be considered when there is a high morbidity or mortality, or when it is not possible to make a diagnosis.

Support staff also need basic training. Staff involved with handling animals must practise appropriate levels of hygiene and reception staff should take note of cases where large numbers of animals are sick or dying and advise clinicians accordingly.

Veterinary practitioners should promote exotic disease prevention to clients and other community members. For example, it should be made clear in appropriate circumstances that swill feeding is banned. If a practitioner suspects that someone may have brought in genetic material or biologicals from overseas they should question them about it.

All the staff of the practice must know who to contact if there is an exotic disease concern. Generally this will be the local State government veterinary office — the telephone numbers of State/Territory chief veterinary officers are in Appendix 3. There is also a 24-hour freecall exotic disease hotline that can be used — **the number for the *Disease Watch* Hotline is 1800 675 888.**

Every veterinarian in the practice should carry a copy of the reference *Exotic Diseases of Animals: A Field Guide for Australian Veterinarians*, (**Exotic Diseases Field Guide**; Geering et al 1995). There is no charge for an exotic disease laboratory or field investigation undertaken by a State government veterinary authority and vets should not be embarrassed about a genuine false alarm. It would be more embarrassing to miss an exotic disease diagnosis. Further information on training materials including videos and slide sets is included in the AUSVETPLAN **Summary Document**.

2.2 Farm visits

Ideally, veterinarians should wear protective clothing on a farm visit and disinfect their footwear and remove coveralls before leaving the property. Apart from exotic disease considerations, there are other reasons for doing this, not the least being to avoid possible

legal liability if there is some implication of a veterinarian in any suspected disease transmission. As an absolute minimum vets should always carry a change of outer clothing and suitable disinfectant that can be used in a situation where an exotic, or other infectious disease is suspected. **A suitable disinfectant is Virkon®, available in sachets to make 5 litres of a 1% solution in water.** This is suitable for disinfection for any exotic disease, with the exception of scrapie/BSE. The powder is easy to carry around and has a shelf life of one year. A supply of heavy duty plastic bags should always be carried to enable potentially contaminated clothing or other materials to be transported without spreading the contamination.

Some owners insist on visiting veterinarians changing boots and putting on coats or overalls on entering their premises. This is an excellent policy and should be supported and practised.

The possibility of exotic disease should be considered before sending a sick animal off the property for slaughter, or before recommending a means of disposal of dead stock. Burial on the property is generally the safest procedure.

Semen and unwashed embryos can be contaminated with many pathogens. Instillation into donors carries a risk. Exotic diseases that can probably be transmitted by artificial insemination include:

- foot-and-mouth disease
- rinderpest
- bluetongue
- Rift Valley fever
- swine vesicular disease
- classical swine fever (hog cholera)

Embryo washing removes the risk of transmission of most, but not all, exotic pathogens. For example, Aujeszky's disease virus can be transmitted in washed embryos. Refer to the **Artificial Breeding Centres Manual** for a detailed consideration of these issues.

Diagnostic specimens should be collected and packed safely, so that vehicles and equipment do not become contaminated. Many screw-capped containers leak. Many containers become contaminated on the outside during the process of specimen collection. It is a good idea to place collected specimens in a second container, which may be an ice-box or a sealed plastic bag, for transport to the clinic.

Equipment that has been in direct contact with sick animals (eg thermometers, gags, stomach tubes, surgical instruments, syringes and needles, catheters, halters) can carry particular risks. It does not take long to make up a bucket of Virkon® or other disinfectant and give everything a wash down. It is worthwhile in any situation where the diagnosis is uncertain and an infectious disease is suspected. Any potentially infectious waste, including disposable equipment, must be appropriately disposed of, whether on or off the property.

Practitioners should maintain a diary recording all visits and the order in which they were made. This could be very useful for any subsequent tracing of movements.

2.2.1 Reporting your suspicions

Where there are grounds for suspicion of an exotic disease the investigating veterinarian should:

- take immediate steps to limit spread of disease by disinfection of themselves, instruments, attendants and any objects used near the suspect animals;
- limit the movement of stock, people, produce and other fomites into, and out of, the suspect premises, consistent with requirements for the specific disease; and
- immediately notify¹ either the District Veterinary Officer, Regional Veterinary Laboratory, Disease Watch Hotline or State/Territory CVO of the provisional diagnosis and provide details of:
 - the owner's name, address, telephone number,
 - the nature of the disease suspected,
 - the exact location of the suspected case(s),
 - the numbers of affected and at-risk animals,
 - any urgent tracings, people, produce or animals which have recently left the suspect premises.

2.3 Risk reduction at the clinic

This needs to be considered at the design stage, whether in a new building or one in which modifications can be made. The premises (including outdoor areas such as holding pens) must be secure, preventing escape or removal of animals from the site and avoiding access to animals, including wildlife and vermin, from outside. Opportunities for contact between animals should be minimised. For example, all companion animals presented at the clinic could be required to be on a lead or in a cage. There should be separate areas for public waiting rooms, examination of animals, 'aseptic' and 'contaminated' procedures and holding facilities. Veterinary clinic and hospital operations should be completely separate from any other activities undertaken on the site (eg boarding of healthy animals). State veterinary boards have guidelines indicating minimum standards. Consideration of where *effluent* goes and what is in it is important. In principle, no infectious waste should go down the drain. If the waste goes to a local soakage area, it should not be an area that can be grazed.

All clinic areas should be clean and hygienic. The need for additional disinfection of areas must be considered if there has been a case of infectious disease of unknown cause.

All potentially *infectious waste* must be separated and disposed of appropriately. Ideally, this should be by collection by authorised infectious waste disposal companies. Otherwise, the veterinarian must be satisfied that it is being incinerated or removed to a tip for immediate burial. In a situation where an exotic disease is suspected on the premises, all potentially contaminated materials must be retained on the site until a decision is made about their disposal, in discussion with the government veterinarian.

Diagnostic specimens must be properly packed for dispatch to laboratories. There are strict regulations for the dispatch of infectious material by post, air, or commercial carrier.

¹ Notify directly, do not leave a message on an answering machine.

The responsibility is with the sender. If there are any concerns about how to send specimens, the laboratory receiving the specimens should be contacted for advice.

Instruments and equipment must be disinfected between procedures on individual animals.

As far as possible, some separation should be maintained between hospitalised animals. Any animals that appear to be suffering from infectious disease must be isolated. Where practicable, separate staff should attend to them or make them the last on the list to be treated each day. Potentially contaminated areas and equipment must be carefully disinfected.

2.4 Veterinary pathology laboratories

Diagnostic laboratories are at risk of contamination from submitted specimens. Being one step further removed from the sick animal, they have less opportunity to make judgments about individual cases and therefore need to observe high standards of contamination control on a continuing basis. The following principles should be regularly practised:

- encourage submitters to observe regulations in regard to dispatch of potentially infectious materials;
- treat all specimens as potentially contaminated and observe good laboratory procedures to avoid contamination of the laboratory or infection of personnel; and
- ensure that liquid effluent and solid waste are treated and disposed of appropriately—no potentially infectious material should be disposed of down the drain and all solid laboratory waste should be disposed of by an approved infectious waste disposal organisation.

Further information on exotic disease aspects of laboratory operations is contained in the **Laboratory Preparedness Manual**.

It is important to maintain a general awareness of exotic disease threats and know whom to contact if there is a concern. The *Disease Watch Hotline* is freecall 1800 675 888. Veterinarians have a responsibility to disease control authorities as well as to clients.

2.5 Clinic personnel

Staff who keep pets or have livestock of their own might handle these animals before and after work. For this reason, staff must be educated to the dangers of spreading animal disease back to their own animals at home and vice versa.

Basic disinfection techniques must be practised at the close of work each day. If there is suspicion of infectious animal disease occurring in the clinic, all staff should be thoroughly checked to ensure that they have adequately decontaminated themselves, clothing and personal belongings before returning home. They should arrange for other people to attend to their own animals during the danger period.

Furthermore, each staff member should have alternative accommodation arrangements (where there are no susceptible animals present) in case the risk is too great to return home. This could be the situation where a vesicular disease has been diagnosed at the clinic and the staff member has a hobby farm with susceptible ruminants.

Alternatively, if the index disease case is suspected in animals on the premises of a staff member, the person should immediately ring the practice manager, report the situation and request confirmation that they may come to work.

2.6 What to do if an exotic disease is suspected — summary

These are the main actions for a veterinary practitioner to follow if an exotic disease is suspected:

- contact a government veterinarian immediately — use disease watch hotline, if appropriate;
- do not leave the premises unless it is essential;
- do not remove any livestock or livestock product from the premises and discourage others from doing so (anyone who does not comply may be committing an offence);
- keep suspect infected animals separate from others;
- if you must leave the premises, disinfect yourself, your equipment and your vehicle; leave any potentially contaminated materials on the premises or transport them in sealed plastic bags; and
- do not go onto a property with other susceptible livestock until you have discussed the situation with a government veterinarian.

3 RISK REDUCTION IN A DECLARED AREA

3.1 Introduction

This section discusses the situation that occurs when an exotic disease has been diagnosed, but the veterinary practice itself is not infected or under suspicion. The clinic itself may or may not be in the declared area, but some of its clients may be.

3.1.1 Declared areas

The term *declared area* is used to cover both *restricted* and *control areas*. These are defined below but it should be noted that the definitions may vary in particular situations or that such areas may not necessarily be declared for specific diseases.

A *restricted area* (RA) is a relatively small area around an infected premises that is subject to intense surveillance and movement controls. Movement out of the area will in general be prohibited, while movement into the restricted area would only be by permit. Multiple *restricted areas* may exist within one *control area* (CA). Guidelines for establishing restricted areas are provided in each **Disease Strategy, Appendix 1** and the OIE Animal Health Code.

A CA will be a buffer between the RA and areas free of disease, where restrictions will reduce the chance of the disease spreading further afield. The CA should reduce in size as confidence about the extent of the outbreak becomes clearer (generally to a minimum 10 km radius for an intensive livestock-raising region and 50 km for an extensive livestock-raising region). In principle, animals and specified product will only be able to be moved out of the CA into the free area by permit.

3.1.2 Local disease control centre

In the event of an outbreak of exotic disease, each State or Territory is responsible for its own disease control activities under the direction of the State/Territory CVO. A local disease control centre (LDCC) will be established and will be responsible for all activities within the declared area, including disease investigation, collection of specimens, quarantine of properties, valuation, slaughtering and disposal of livestock, and decontamination of properties. The controller (or delegated veterinarian) of the LDCC would be the contact for veterinary practitioners, in relation to their activities and how they might impact on disease control.

Veterinarians should be aware of their ethical and legal responsibilities. It is the veterinarian's responsibility to know where restricted areas are and to ensure that they do not move potentially contaminated materials into or out of them. It may be necessary for the practitioner to contact the LDCC, rather than assuming that the required information will always come from the LDCC.

3.1.3 Media and public relations

Veterinarians need to be very careful about providing information to the media, either directly, or indirectly through advice to clients (see also Section 4.7). Advice to clients should not involve revealing any specific information or rumours about other reported

disease outbreaks. For further information on the importance of public relations and the media see the **Public Relations Manual, Section 1.1**.

3.2 Can a veterinary practice continue to operate if in a declared area?

Unless the clinic or hospital is designated an infected premises or suspicious contact, the practice should be able to continue to operate. However, there will probably be increased controls required and the extent of practice operations may be limited. The extent to which a practice is affected will vary with different exotic diseases, their ability to be transmitted by indirect means and the species of animals affected. It will also depend on the kind of practice. With a highly contagious disease such as foot-and-mouth disease, all farm visits would be expected to be prohibited in an RA, apart from those required for animal welfare reasons. It may be necessary to consider arrangements for staff to take leave, if a general reduction in activity is anticipated. It can generally be expected that in the event of an exotic disease outbreak, tracing and surveillance operations will require a large number of skilled personnel. It is very likely that disease control authorities would use as many private practitioners as were available to assist with this work. So, as an exotic disease escalates, practice activities become progressively more difficult to maintain. It is probable that practitioners would find ample alternative employment by being recruited into the disease control activities. This could be an option for temporarily underutilised private practice veterinarians and could be discussed with the LDCC controller.

There are good reasons why veterinary practices should continue to operate if at all possible. In particular, provided appropriate precautions are taken to avoid the risk of disease transmission, private practitioners can be an important source of additional information to the LDCC in reporting on the status of properties they are visiting. They can also assist in encouraging the compliance of their clients with movement restrictions. In addition, continuation of veterinary services may be essential for animal welfare reasons and for the maintenance of efficient livestock production on uninfected properties. It is likely that in a moderate or large outbreak of exotic disease, the LDCC controller would have specific briefing meetings with private practitioners to keep both the controller and the practices informed of developments. These meetings would allow the opportunity to inform them of the situation, discuss implications for their practices and make arrangements for ongoing dialogue.

Veterinary practitioners must maintain contact with the LDCC, know their contact numbers and ensure that the LDCC personnel know how to contact the veterinary clinic. The LDCC may wish to be advised in advance of planned visits to clients and may require reports of negative findings from such visits, as well as any suspicious disease circumstances. They will certainly advise on what precautions should be taken and what restrictions will apply to the veterinary clinics in restricted and control areas. **All veterinarians and support staff should be made fully aware of LDCC requirements and of all other arrangements to avoid the spread of disease.**

3.3 Minimisation of risks associated with continued operation

3.3.1 Movement of staff into and out of declared areas

Veterinary practitioners must arrange farm visits so that the level of movement in and out of restricted and control areas is minimised. Individual veterinarians could be assigned to either work inside or outside the areas. Alternatively, visits should be scheduled as far as possible so that clients outside of the declared areas are visited first each day, followed by clients inside the control area but outside the RAs. Practitioners must discuss their proposed arrangements with the LDCC controller.

If the veterinary clinic is within an RA, visits to clients outside the restricted or control area should be arranged before going to the clinic on that day. If the practice has more than one clinic, it may be possible to undertake farm animal activities from a clinic outside the RA.

Reception staff must be familiar with the declared areas and the arrangements made to limit the risk of disease transmission, so that they can advise clients accordingly.

Non-urgent visits in restricted areas should, where possible, be cancelled or postponed.

3.3.2 Movement of staff onto and off properties

Before visiting a property vets should contact their clients on the telephone. If there are suspicious signs of exotic disease, the practitioner must discuss this with the LDCC **before** visiting.

Properties are only at risk if they have livestock that are susceptible to the particular disease. It is therefore important for the veterinarian to know what stock are on a property and what degree of contact he/she will have with them. Visits to properties with non-susceptible livestock should be scheduled to extend the time between visits to susceptible properties. **Remember that susceptible animals can be infectious during the incubation period of a disease. It cannot be assumed that they are clear of disease just because they are not showing signs.**

It may be possible to leave vehicles off the property. If this is impractical, the practitioner should drive to the house or other unstocked area and carry what is required from there. Even if this is not essential for disease control, it creates a good image for the client and reduces the risk of the vet being wrongly accused of spreading disease. Daily cleaning of practice vehicles would reduce risk and promote a positive image of risk reduction.

As an absolute minimum, waterproof boots should be worn, and disinfected before leaving the property. Hands (preferably with gloves), all instruments and equipment that have been in direct contact with susceptible livestock should also be disinfected. Outer clothing should be changed between visits to properties with susceptible livestock. It is good practice to disinfect onto, as well as off, each property and this can emphasise the care being taken.

The LDCC may recommend the use of a particular disinfectant for the disease that is occurring. Otherwise, Virkon® is easy to prepare and effective against all exotic diseases, except scrapie/BSE.

3.3.3 Procedures on a susceptible property

The owner should be questioned before examining any susceptible livestock. If there is any history that suggests exotic disease, the LDCC should be contacted *before* proceeding.

Be aware of the routes of transmission of the particular disease in question, so that you can judge the risks associated with the procedure if the animal happens to be infected.

As well as avoiding movement of disease from a property, the need to reduce the risk of spreading disease within a herd should be considered. Groups of animals should not be moved or mixed more than necessary. There is a risk of spreading disease with contaminated syringes and needles or other equipment.

All steps practicable to minimise contamination of vehicles, equipment, drugs and personal effects should be taken. Other people should be discouraged from attending if their presence is not necessary and the veterinarian should try to anticipate what he or she will want and only take those items to the examination area.

Disinfectant should be prepared before starting procedures and waterproof protective clothing should be worn, especially for procedures that will expose the practitioner to contamination.

Safe disposal of all waste and disposable materials must be arranged on, or off, the property.

Any suspicious signs of exotic disease must be reported to the LDCC immediately and movement of livestock off the property discouraged. If possible, the practitioner should stay on the property until advice has been obtained from the LDCC.

Practitioners should completely disinfect themselves, their equipment and, if necessary, their vehicle before departing from the property. If clothes are contaminated, they must be changed. If the veterinarian is concerned about possible contamination, he or she should go home, have a shower and put on clean clothes.

It must be emphasised to the owner/manager that during the time his or her stock are not under suspicion, all means of direct and indirect contact with other livestock must be minimised, in order to *prevent* transmission of disease. If his or her stock comes under suspicion, the owner/manager and the attending veterinarian then has legal obligations to notify an inspector of stock and to keep the stock separate from other livestock.

3.3.4 Procedures at the clinic or hospital

Most practices do not commonly undertake large animal procedures at the clinic. Where this is done, however, the veterinarian must carry out the following procedure for livestock susceptible to the disease in question:

- as far as possible, elect to visit a property rather than having an animal brought to the clinic;
- ensure that the animal is not showing evidence of the exotic disease at the time of arranging a consultation; advise the owner of the need for caution to avoid spread of disease;
- take all steps to avoid contact between susceptible animals at the clinic;

- at the end of a procedure, ensure that all potentially contaminated areas are thoroughly disinfected;
- maintain a record of all consultations and the order in which they were conducted;
- advise the LDCC of any cases that have suspicious signs — discourage such animals from being removed from the premises until you have discussed it with the LDCC; and
- ensure that all livestock holding areas are secure, both from accidental or deliberate removal of animals from the area, and from the entry of other animals, including wild animals, birds and vermin.

Companion animals could also be implicated in exotic disease concerns, for example, pet birds in the case of Newcastle disease.

3.3.5 Procedures in the case of rabies

Rabies demands particular consideration because of the risk of human infection. It is the major exotic disease concern for dogs and cats and it also has implications for all other animals. Transmission of rabies is generally by contamination of broken skin or mucosae with infectious saliva. An affected animal is not necessarily ‘furious’ — it may be paralytic or have other signs of abnormal behaviour or temperament. Appropriate steps must be taken to ensure that practitioners are not exposing themselves, their staff, the owner, or other members of the public.

The important points are listed below.

- At the commencement of an outbreak, disease control authorities will determine what people are at high risk of exposure — this would include veterinary practitioners and staff in affected areas. All staff at risk of being exposed should be vaccinated. A complete course of immunisation takes 4 weeks. Particular care must be taken during that time. Even after a complete course of vaccination, precautions must continue to be taken. The extent of precautions required will depend on the nature of the outbreak and the kinds of animals involved.
- Dogs can be required to be muzzled and cats to be caged before entering the premises. A supply of muzzles and cages should be available to provide to clients.
- Practitioners should be very careful about the common practice of having clients hold their animals — while on the premises, the veterinarian may be legally responsible for their client's safety. It may be better to have clinic staff restrain animals.
- Eye protection must be worn to avoid contamination with saliva. Heavy gloves are also advisable, if it is possible to wear them without hampering activities.
- Any concerns should be reported to the LDCC and suspect animals held at the clinic until a decision is made on appropriate action.
- Veterinarians need to be well informed so that they can provide advice to their clients on avoiding exposure and on immunisation.

4 RESPONSE PLANS ON AN INFECTED OR DANGEROUS CONTACT PREMISES

4.1 Introduction

If the veterinarian finds him or herself on an infected farm property, or if the clinic becomes an infected premises, the procedures to be followed will be determined by the LDCC (see Section 3.1.2). However, it is important for practitioners to be aware of the general requirements so that they can plan accordingly and hence reduce the likelihood of inadvertently taking incorrect action.

Declared premises proclaimed in the event of an outbreak of an exotic disease by the State/Territory CVO under the relevant State diseases or exotic diseases legislation are described below.

Infected premises (IP): defined as the area (which may be all or part of a property) in which an exotic disease exists, is believed to exist, or in which the infective agent of that exotic disease exists or is believed to exist.

Dangerous contact premises (DCP): defined as premises containing animals showing no clinical signs of disease but which, by reason of its probable exposure to disease, will be subjected to disease control measures.

Suspect premises (SP): defined as an area containing animals that have possibly been exposed to an exotic disease through possible contact with infected animals or facilities, people, equipment, semen or embryos, and currently show no symptoms; or where the disease symptoms are evident, but the diagnosis is as yet to be confirmed.

The declaration by the CVO of an IP, DCP or SP is determined by the AUSVETPLAN **Disease Strategies** in order to minimise the spread of disease.

The response will vary according to the particular disease. The descriptions below relate to an outbreak of a highly contagious disease, such as foot-and-mouth disease, which would require complete decontamination of a premises. For other diseases that are not transmitted by indirect contact, the implications would be less severe for a veterinary practice. However, consideration must be given to the fact that invasive procedures could cause contamination of the practice by body fluids or tissue samples.

4.2 What should occur if a veterinarian is on an infected or suspect property?

Veterinarians do not have the powers of a stock inspector to impose quarantine. However, it is an offence for someone to move livestock from a property when the animals are suspected of suffering from an exotic disease. It should be made clear to the owner/manager that **no livestock or products should leave the property**. As far as possible, all other movements off the property should be discouraged.

The veterinarian should contact a government veterinarian or the LDCC and, if possible, stay on the property until the veterinary officer or diagnostic team arrives. If it is necessary to leave the property, all appropriate steps must be taken for personal disinfection and disinfection of equipment, and vehicle. It is important not to go onto other premises containing susceptible livestock.

Arrangements must be made for the affected group of animals to be kept separate from other stock and, if appropriate, to move them away from property boundaries. In general, the stock should be held in yards to allow inspection and specimen collection.

It would generally not be appropriate for the private practitioner to slaughter animals. In some circumstances he or she may be requested to do so by the LDCC. It is quite possible that in some circumstances the LDCC may request the practitioner to take samples and consign them for laboratory testing.

Delays may occur and it may be necessary to reschedule the rest of the day, or even the next few days. The practitioner may not be able to go to another property with susceptible livestock for a period of time, which may be as long as 3 days in the case of foot-and-mouth disease.

4.3 Can the veterinary clinic/hospital continue to operate if declared infected?

While the clinic is an infected property, no susceptible livestock can enter or leave the premises. This does not necessarily mean that the practice cannot continue to operate. It depends on the disease and the nature of the practice. In general, the clinic/hospital will be closed at least until it has been decontaminated to the satisfaction of the LDCC. It may then be able to operate on a limited basis, with no entry of susceptible animals and practitioners working from the premises barred from coming into contact with susceptible stock. Alternative arrangements may need to be made until decontamination is complete.

4.4 Decontamination of the clinic

Decontamination procedures will possibly involve the destruction of all susceptible livestock on the property. It may also require the destruction of other animals if their removal represents a risk of spreading disease. Decontamination of practice vehicles and other vehicles on the premises may be required.

There will then be a process of complete decontamination of all areas exposed to infected animals and all equipment and materials that are actually or potentially contaminated. The exact procedures for cleaning and disinfection will be discussed with the owner/manager of the practice. Most accommodation and equipment can be disinfected in ways that will not cause permanent damage. For instance, if properly supervised, electrical equipment may be fumigated with formaldehyde. Vehicles will possibly be steam cleaned on the outside, and vacuumed and wiped down with liquid disinfectant on the inside. Clothing, towels and surgical drapes can be laundered on-site. Animal accommodation areas may be hosed down with hot water and then washed with disinfectant solution. Outside animal yards and pens may be hosed down, washed with disinfectant and possibly 'spelled' for a period of time before the property is released from quarantine.

Slaughtered animals and other contaminated materials may be disposed of on-site by burial, if a suitable area is available. Otherwise it may be necessary for all such materials to be securely removed from the site, for burial or incineration elsewhere.

Decontamination procedures in the case of rabies would be different, since the risk of indirect spread is very low. It is unlikely that other animals in the clinic/hospital would be destroyed. Rather, the option may be offered to owners for any animals considered to have been at risk, to be vaccinated and possibly held in quarantine, at the clinic or

elsewhere, until the duration of time assured that they were not infected. More information is available in the **Rabies Disease Strategy, Section 2.2, Table 4**.

Under the Commonwealth/States cost-sharing agreement for certain exotic animal disease, compensation may be available for animals officially destroyed (see Table 2, Section 1.2.3).

4.5 Getting back to work

It is possible that the practice could continue operating, at least at some level, before the clinic itself is released from quarantine. However, it is likely that the premises could only be used on a very restricted basis and the possibility of carrying out farm visits from another temporary base or from a branch practice may need to be considered.

4.6 Tracing requirements

In the event that a veterinarian may have become contaminated by being on an infected property, or if the clinic has become infected, the LDCC will need to trace the movement of people, equipment and vehicles, to try to determine the source of infection and to assess the risk that the infection may have been further spread from the premises or as a result of practice activities. The veterinarian would be asked to provide detailed records of staff movements to enable this tracing to be undertaken. Movement of susceptible livestock into and out of the clinic would need to be traced. Any submissions of specimens to diagnostic laboratories would also need to be considered as a possible risk for transmission of disease.

4.7 Proof of freedom

If the clinic/hospital has been an infected premises, it may take some time to ensure that it is free of contamination following disinfection procedures. As indicated above, some restricted use of the property may be allowed before the whole property is released from quarantine. For example, a decision may be made at some stage to release office, surgery and inside animal accommodation areas but to require outside yards or paddocks to be 'spelled' further, because of the difficulty of disinfecting open areas. Where the property has extensive pasture or other holding areas, a decision might be made to introduce sentinel animals for a period of several weeks, before releasing the area from quarantine. Because of the potential threat of dissemination from the site if it was still infected, a conservative approach must be expected.

4.8 Contact with the media

Maintaining an appropriate channel of communication with the media is an important function of the LDCC. It is made very difficult if other information is coming from elsewhere that may appear to conflict with advice given by the LDCC. The practice will need to advise clients of the situation, as it affects their provision of services. Advice to the media should be restricted to activities directly affecting the practice. General inquiries about the particular disease or the control activities that are being undertaken in the area must be directed to the Public Relations Unit in the LDCC. For further information see the **Public Relations Manual, Section 2.1**.

APPENDIX 1 List of AUSVETPLAN diseases

African horse sickness
African swine fever
Aujeszky's disease
Avian influenza
Bluetongue
Bovine spongiform encephalopathy (BSE)
Sheep and goat pox
Classical swine fever (hog cholera*)
Equine influenza
Foot-and-mouth disease
Lumpy skin disease
Newcastle disease
Peste des petits ruminants
Rabies
Rift Valley fever
Rinderpest
Scrapie
Screw-worm fly
Swine vesicular disease
Transmissible gastroenteritis
Vesicular exanthema
Vesicular stomatitis
Bee diseases:
 Braula fly (*Braula coeca*)
 tracheal mite (*Acarapis woodi*)
 tropilaelaps mite (*Tropilaelaps clarae*)
 Varroa mite (*Varroa jacobsoni*)

* this term is not used in AUSVETPLAN

APPENDIX 2 Summary role statements for key personnel

Role descriptions for positions within the direct administrative control of the relevant government department are given in the **Control Centres Management Manual**. In addition, the position described below is for a coordinator within the practice, in the event that the clinic/hospital becomes a suspected infected premises, or that staff within the practice are suspected of being contaminated, as a result of visiting an infected premises.

Clinic manager

Skills

Full knowledge of the practice and its operation.

Ability to direct operations necessary for assisting the infected premises operations team (IPOT).

Line relationships

Responsible for liaison with the IPOT site supervisor (appointed by the LDCC controller) on the infected premises.

Responsible for all practice personnel on the premises.

Responsible for liaison with other practice personnel as required.

Roles and responsibilities

Ensure that the site supervisor is given the full cooperation of the practice staff.

Ensure that all practice staff are adequately briefed on the disease outbreak and their responsibilities.

Client and media liaison

Skills

Knowledge of the practice client base and current appointments.

Line relationships

Responsible to the practice management for scheduling of appointments and services.

Roles and responsibilities

Arrange for the cancellation or rescheduling of appointments as required by LDCC.

Provide advice to clients on alternative arrangements for veterinary services.

Ensure that clients arriving at the premises are properly redirected.

Provide advice to the local media, as appropriate, on the implications of the outbreak for practice operations.

NB Media inquiries about all other aspects of the outbreak and campaign must be referred to the LDCC PR unit.

Individual veterinarian

Skills

Knowledge of the exotic disease of concern, the clinical signs, gross pathological lesions, epidemiology and transmission.

Knowledge of the known and suspected distribution of the disease and, in particular, the current restricted and control areas within the operating area of the practice.

Line relationships

Responsible to the practice management for the undertaking of farm visits and clinic consultations.

Responsible to the practice management and directly to the LDCC for the reporting of any suspicions of exotic disease in animals under his or her care.

Roles and responsibilities

In the event of exotic disease being suspected on a visited property or at a clinic:

- report the concern immediately to an inspector of stock or the LDCC;
- as far as practicable, remain on the property until a government veterinarian arrives;
- request that no animals or animal products leave the property;
- if you must leave the property, ensure that personal, vehicle and equipment disinfection has been thoroughly undertaken; and
- assist the LDCC by providing professional help on the property, by advising of your movements to and from properties with susceptible stock and by complying with requests **of government veterinarians for subsequent visits**.

In addition, in the event of *rabies* being suspected:

- ensure that the animal is adequately isolated and restrained and that all precautions have been taken to avoid contact of any unauthorised people with the animal(s);
- ensure that authorities are advised that a suspected case of rabies has occurred;
- make a preliminary assessment as to whether any person may have been exposed during the period that the animal may have been infectious; and
- provide people who may have been exposed with advice on obtaining appropriate medical assistance and stress the urgency in doing so.

APPENDIX 3 Key telephone numbers

If you are suspicious of exotic disease:

- ring and report it immediately
- do not leave messages
- you *must* speak to a government veterinarian at one of the following contact points

1 Your local District Veterinary Officer phone
number _____

if you cannot contact him/her, ring

2 your Regional Veterinary Laboratory phone
number _____

if you cannot make contact, ring

3 24-hour Disease Watch Hotline (freecall) phone number **1800 675 888**
(mobile phones Australia-wide will connect with NSW Agriculture)

if you cannot get voice contact, ring

4 Your State/Territory Chief Veterinary Officer phone numbers as of 23.10.95

AUSTRALIAN CAPITAL TERRITORY

CVO

ACT Veterinary Officer

ACT Veterinary Services Telephone (06) 207 2357

PO Box 7097 Facsimile (06) 207 2361

CANBERRA MAIL CENTRE ACT 2610

NORTHERN TERRITORY

CVO

Chief Veterinary Officer

Department of Primary Industry and Fisheries

GPO Box 990 Telephone (089) 89 2131

DARWIN NT 0801 Facsimile (089) 89 2089

NEW SOUTH WALES

CVO

Chief Veterinary Officer

Division of Animal Industries, NSW Agriculture

Locked Bag 21 Telephone (063) 91 3717

ORANGE NSW 2800 Facsimile (063) 61 9976

QUEENSLAND

CVO

Director

Animal Health Bureau, Department of Primary Industries

GPO Box 46 Telephone (07) 239 3546

BRISBANE QLD 4001 Facsimile (07) 239 3558

SOUTH AUSTRALIA**CVO**

Chief Veterinary Officer

Department of Primary Industries

GPO Box 1671

ADELAIDE SA 5000

Telephone (08) 207 7970

Facsimile (08) 207 7852

TASMANIA**CVO**

Chief Veterinary Officer

Department of Primary Industry & Fisheries

GPO Box 192 B

HOBART TAS 7001

Telephone (002) 33 3004

Facsimile (002) 34 9687

VICTORIA**CVO**

Chief Veterinary Officer

Agriculture Victoria

PO Box 500

EAST MELBOURNE VIC 3002

Telephone (03) 9651 7137

Facsimile (03) 9651 7005

WESTERN AUSTRALIA**CVO**

Chief Veterinary Officer

Division of Animal Industries

Department of Agriculture

Box S1400 GPO

PERTH WA 6151

Telephone (09) 368 3342

Facsimile (09) 367 6248

APPENDIX 4 Disinfection on a suspected infected property

These are recommendations for the disinfection and removal from a suspected infected property of personnel, vehicles, equipment, specimens and infectious waste. It is intended as a guide to be followed when it is necessary for people or materials to be moved from the property, before a government veterinarian can be contacted. Where a government veterinarian issues specific instructions at the time, these should be followed rather than depending on the general guidelines shown here.

1 Choice of disinfectant

There are a number of disinfecting chemicals that can be used for different exotic diseases. A specific one may be recommended in the event of a particular disease outbreak or for a particular purpose. Details are provided in the **Exotic Diseases Field Guide** (Geering et al 1995) and the AUSVETPLAN **Decontamination Manual**.

A good broad-spectrum disinfectant is Virkon®, which is available in 50 gram sachets suitable for preparing 5 litres of a 1% solution. Do not mix different disinfectants — you may render them both ineffective!

2 Sequence of disinfection procedures

If you are disinfecting yourself, vehicles, equipment and diagnostic specimens, there is a risk of recontaminating the first thing you started with. To avoid this, you first need to clean everything to a reasonable extent and remove it to a clean area for final disinfection. No surface disinfection operation will be effective in the presence of a high organic load (dirt). First, wash your hands, remove heavily contaminated outer clothing, prepare a bucket of disinfectant and proceed as follows:

- put on a pair of disposable gloves;
- clean equipment and materials as appropriate (eg by rinsing in clean water) and assemble items in a clean area for disinfection;
- surface disinfect all items to be removed;
- disinfect your vehicle;
- place items in your vehicle and then remove your gloves and disinfect yourself;
- place your contaminated clothing and all other potentially infected materials or specimens in double plastic bags or other plastic containers before placing them into your vehicle; and
- ensure all contaminated materials are adequately labelled.

3 Personal disinfection

The degree and method of disinfection you undertake will depend on the extent of your contamination, the contagious nature of the disease of concern and the facilities available. The most effective way is to take a full body shower. Alternatively, take off contaminated outer clothing and wash in warm soapy water.

- Remove clothing and place it into a clean plastic bag.
- Take particular care in washing hands, hair and exposed skin.
- You do not need to (and generally should not) use disinfectant—ordinary soap and shampoo is sufficient.
- Use a brush to remove organic matter from under fingernails.

- Put on clean clothing, at least the outer clothing, if at all possible — even if you have to borrow some.

4 Instrument and equipment disinfection

- After cleaning surfaces with clean water, disinfect items by immersion in disinfectant solution (eg 1% Virkon®).
- Remove after 5 minutes and rinse in clean water — prolonged immersion in Virkon® will result in some corrosion of metal surfaces.
- Where total immersion is impractical, swab surfaces down with disinfectant solution.
- Place waste materials in a plastic bag or other watertight container. Swab down the outside surface with disinfectant solution. Then place into another container, such as a clean plastic bag. Ensure that each bag or other container is separately sealed.

In general, do not remove waste from the property unless you judge that it is the best option and that you can transport and dispose of it safely. Where possible, refer to the government veterinarian first.

5 Disinfection of vehicle

On the outer surfaces of the vehicle, concentrate on removing any organic matter, such as faeces, or potentially contaminated mud, from the tyres, under surface of the vehicle and the body panels. This is best done with a high pressure water spray (taking care not to create an aerosol), together with brushing and wiping with a cloth.

Inside the vehicle, surface disinfect any area that is potentially contaminated. This may include driving controls, mobile phone, door handles, internal panels and upholstery, floor mats, drug chests and refrigerators.

6 Packaging of diagnostic specimens

You would generally collect diagnostic specimens at the request of a government veterinarian. In general, you would transport specimens to the clinic and package them there for safe dispatch to the laboratory. For exotic disease diagnosis, this would normally be a government veterinary laboratory. Ensure specimens are collected into watertight containers and appropriately labelled (using a waterproof marker) with:

- the owner's name
- date of collection
- type of specimen
- animal identification

Swab the outside surface of each container. Place all containers into a clean secondary container and swab the outside of this before placing it into your vehicle.

Specimens being transported to the laboratory by a third party (eg by air, Australia Post or commercial courier) must be packed according to strict requirements. If they are suspected to be contaminated with an infectious disease agent they are classified as dangerous goods. Purpose-designed specimen transport containers have been developed at AAHL for the transport of exotic disease specimens. However, normally veterinary practitioners would deliver such specimens to the State government veterinary laboratory themselves, for final packing and dispatch to AAHL.

Where possible, discuss the situation with a government veterinarian before collecting diagnostic specimens and despatching them to a laboratory.

GLOSSARY

ANEMIS	Animal Health <i>Emergency Information System</i> . A system for the collection, assimilation, actioning and dissemination of essential disease control information using paper documentation and a computer data base.
AUSVETPLAN	A series of documents that describe the Australian response to exotic animal diseases linking policy, strategies, operations, coordination and emergency-management plans.
Chief Veterinary Officer	The senior veterinarian of each State or Territory animal health authority who has responsibility for exotic animal disease control in that State or Territory.
Chief Veterinary Officer of Australia	The nominated senior Commonwealth veterinarian in the Department of Primary Industries and Energy who manages Australia's international animal health commitments and the Commonwealth's response to an exotic animal disease incursion.
Control area	A larger area than a restricted area (possibly initially as big as the State) where restrictions will reduce the chance of the disease spreading further afield. The control area may reduce in size as confidence about the extent of the outbreak becomes clearer but must remain consistent with OIE Codes. In principle, animals and specified product will only be able to be moved out of the control area into the free area by permit.
Cost-sharing agreement	Commonwealth/States cost-sharing agreement for the eradication of certain exotic animal diseases.
Dangerous contact animal	An animal showing no clinical signs of disease but which, by reason of its probable exposure to disease, will be subjected to disease control measures (which may require slaughter of all or some of such animals).
Dangerous contact premises	Premises that contains a dangerous contact animal(s) or other serious contact.
Declared area	A defined tract of land for the time being subject to disease control restrictions under exotic disease legislation. Types of declared areas include <i>restricted area</i> ; <i>control area</i> ; <i>infected premises</i> ; and <i>dangerous contact premises</i> .
Disposal	Sanitary removal of animal carcasses and things by burial, burning or some other process so as to prevent the spread of disease.
Enterprise	<i>see</i> Risk enterprise.
Exotic animal disease	A disease affecting animals that does not normally occur in Australia. Also called foreign animal disease.
Forward command post	A field operations centre, subsidiary to a local disease control centre.
Infected premises	A defined area (which may be all or part of a property) in which an exotic disease or agent exists, or is believed to exist.

Job card	A written list of tasks to be carried out by an individual in the early stages of an emergency response.
Local disease control centre	An emergency operations centre responsible for the command and control of field operations in a defined area.
Movement control	Restrictions placed on movement of animals, people and things to prevent spread of disease.
National disease control headquarters	A centre established in Canberra from which national disease control actions are coordinated in an exotic animal disease emergency.
Quarantine	Legal restrictions imposed on a place, animal, vehicle or other things limiting movement.
Restricted area	A relatively small declared area (compared to a <i>control area</i>) around an infected premises that is subject to intense surveillance and movement controls. Movement out of the area will in general be prohibited, while movement into the restricted area would only be by permit. Multiple restricted areas may exist within one control area.
Ring vaccination	Vaccination of susceptible animals around a focus of infection to provide a buffer against the spread of disease.
Risk enterprise	Livestock-related enterprise with a high potential for disease spread or economic loss.
Role description	Statement of functions of a position within the overall operation.
Sentinel animals	Animals of known health status monitored for the purpose to detect the presence of a specific exotic disease agent.
Spell	Keep unused for a period of time until there is no risk of disease agent remaining.
Stages of activation and deactivation	The four stages of an exotic disease emergency plan are investigation, alert, operational, stand-down.
– investigation	exists when a report assessed as being a low probability of an exotic disease is being investigated by animal health authorities;
– alert	exists when a high probability that an exotic disease is present or is confirmed in another State;
– operational	when the CVO determines that an animal disease emergency exists in the State, and operations to contain control or eradicate the disease are implemented;
– stand-down	when the CVO determines that an animal disease emergency no longer exists.
State disease control headquarters	The emergency operations centre that directs the disease control operations to be undertaken in the State.
Stamping out	Eradication procedures based on quarantine and slaughter of all infected animals and animals exposed to infection.
Surveillance	A systematic examination and testing of animals or things to determine the presence or absence of an exotic disease.

Suspect animal	An animal that is may have been exposed to an exotic disease such that its quarantine and intensive surveillance, but not pre-emptive slaughter, are warranted; OR, an animal not known to have been exposed to a disease agent but showing clinical signs requiring differential diagnosis.
Suspect materials or things	Materials or things suspected of being contaminated by an exotic disease agent.
Suspect premises	Premises containing suspect animals that will be subject to surveillance.
Tracing	The process of locating animals, persons or things that may be implicated in the spread of disease.
Vector	A living organism (frequently an arthropod) that transmits an infectious agent from one host to another. A <i>biological</i> vector is one in which the infectious agent must develop or multiply before becoming infective to a recipient host. A <i>mechanical</i> vector is one that transmits an infectious agent from one host to another but is not essential to the life cycle of the agent.
Vector control area	An area in which the containment, control or reduction of specified vector populations is conducted.
Zoonosis	A disease that can be spread between animals and people.
Zoning	The process of defining disease-free and infected zones, based on geopolitical boundaries and surveillance, in accord etc as above.

Abbreviations

ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
AHC	Animal Health Committee
ANEMIS	Animal health emergency information system
AUSVETPLAN	Australian Veterinary Emergency Plan
BSE	Bovine spongiform encephalopathy
CA	Control area
CCEAD	Consultative Committee on Exotic Animal Diseases
CVO	Chief veterinary officer
DCP	Dangerous contact premises
EDSC	Exotic Diseases Sub-Committee of AHC
FMD	Foot-and-mouth disease
IP	Infected premises
LDCC	Local disease control centre
NDCHQ	National disease control headquarters
OIE	Office International des Epizooties [World Organisation for Animal Health]
PPR	Peste des petits ruminants
RA	Restricted area
SDCHQ	State disease control headquarters

References

Geering, W.A., Forman, A.J. and Nunn, M.J. (1995) *Exotic Diseases of Animal; A Field Guide for Australian Veterinarians*. Australian Government Publishing Service, Canberra.

Hare W.C.D. (1985). Diseases transmissible by semen and embryo transfer techniques. *Off. Int. Epizooties Tech. Ser.* No 4, Paris. 117 pages.

Training resources

Video resources — *Exotic disease awareness series; Recognising exotic livestock diseases series; and Controlling an exotic disease outbreak series*. AAHL 1991–93 (available from the Animal Diseases/Incidents Section, DPIE, Canberra; or AAHL)

See the **Summary Document, Appendix 2** for a full list of training resources.

OIE publications

OIE Code (1992). *International Animal Health Code* (6th edition), OIE, Paris, France.

OIE Manual (1992). *Manual of Standards for Diagnostic Tests and Vaccines* (2nd edition), OIE, Paris, France.

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