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Risk management for zoonoses

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Workplace health and safety legislation places a duty on persons conducting a business or undertaking to ensure the workplace health and safety of workers and others. This duty includes ensuring workplace health and safety where workers may be exposed to zoonoses (diseases that are spread from animals to humans) at work. Some zoonoses can cause serious illness including Australian bat lyssavirus, Hendra virus, Q fever and leptospirosis.

Occupational zoonoses can be managed using a risk management approach.

Step 1 of risk management is to identify hazards, including zoonoses. These may vary depending on the species of animals that the person provides cares for. For example Q fever is commonly associated with cattle, sheep and goats, psittacosis is associated with birds, toxoplasmosis and cat scratch disease are associated with cats and hydatid disease is associated with dogs.

Step 2 of risk management is to assess the risk associated with each hazard. Risk is a product of both the likelihood and consequences of acquiring a zoonotic disease. The likelihood of a worker acquiring a zoonotic disease is affected by factors such as the frequency and duration of exposure, the workplace and its workers and the effectiveness of existing control measures. The consequences of acquiring a zoonotic disease includes the immediate health effects but may also include chronic health effects (e.g. Q fever fatigue syndrome), adverse reproductive effects (e.g. congenital toxoplasmosis), psychological effects (e.g. anxiety from potential exposure to a serious disease like Hendra virus) and other adverse outcomes such as disruption of services (e.g. from staff sickness).

Step 3 of risk management is to decide on risk controls. When deciding on risk controls the hierarchy of control should be considered. This is a method of considering risk controls according to their level of effectiveness. Higher order controls tend to provide more effective and long lasting risk control. This includes elimination (e.g. eliminate Australian bat lyssavirus risks by referring bats to an immunised wildlife carer), substitution (e.g. substitute an unsafe practice such as recapping sharps with a safer method such as not recapping sharps or using a safety engineered sharp), isolation (e.g. isolating infectious animals) and redesign and engineering controls (e.g. ensuring proper placement of hand washing basins in animal care areas). Lower order controls include administrative controls like policies and procedures and providing information, instruction, training and supervision, as well as personal protective equipment. Where practicable, both higher and lower order controls should be adopted to properly control the risk.

Step 4 of risk management is to implement the controls that have been decided upon. Step 5 is to monitor and review the effectiveness of the controls to ensure that these are working properly and are adequately controlling the risk, that workers are following the controls, and that the controls are not creating any new hazards.

What can animal management businesses do to put this into practice?

- Ensure risk management for all foreseeable zoonoses.
- Consult with staff about zoonoses and associated risk controls.
- Include occupational health and safety (OHS) as a standing item at staff meetings and encourage staff to report and discuss OHS and infection control issues.
- Ensure a safe and hygienic work environment, for example by providing adequate hand hygiene amenities, and having a dedicated area for the cleaning of animal equipment that is separate from staff food preparation and eating areas.
- Develop policies and procedures for infection control and hygiene. These should be based on the principles of standard precautions, which are work practices which provide a basic level of infection control. Standard precautions should be used as a standard work practice for contact with an animal's blood, non-intact skin (e.g. wounds) and mucous membranes (e.g. inside the mouth). Standard precautions include hand hygiene (e.g. using soap and running water or

alcohol based hand rub) and personal protective equipment (PPE). PPE includes disposable gloves but may also include eye or face protection (e.g. safety eyewear/face shield) where there is a risk of splashes of blood and body substances to the eyes and face. and protective clothing (e.g. overalls) where there is a risk of splashes of blood and body substances to the clothing. Standard precautions provide a high level of protection against zoonoses but sometimes additional transmission based precautions may be needed if the zoonotic disease is not prevented by standard precautions alone. Additional precautions may include isolation of the animal and/or additional PPE (e.g. respiratory protection to protect against psittacosis in infected birds). Advice about additional precautions should be sought from a veterinarian. .

- Ensure the safe and hygienic handling, storage, transport and disposal of biological materials (e.g. animal waste, soiled bedding and animal carcasses).
- Ensure adequate cleaning and maintenance of the work environment, animal transport vehicles, equipment, animal pens and cages, litter trays, etc.
- Isolate sick animals and ensure that they are assessed by a veterinarian.
- Provide staff with appropriate PPE and provide training in its correct use.
- Ensure sharps safety and safe disposal.
- Store animal food hygienically to discourage pests and implement pest control programs.
- Provide adequate hand hygiene and first aid amenities (including for field staff).
- Provide staff with induction and ongoing training on zoonoses and associated risk controls.
- Record and investigate incidents of work-caused zoonotic illness in staff and notify the OHS authority.
- Ensure that staff are immunised against vaccine-preventable zoonotic diseases. This includes rabies vaccination to protect staff who handle bats against Australian bat lyssavirus, and Q fever immunisation for staff who have contact with at-risk animals such as cattle, sheep, goats and kangaroos.

For more information contact Workplace Health and Safety Queensland on 1300 369 915 or visit www.worksafe.qld.gov.au, or contact the workplace health and safety authority in your state or territory.

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