

Infection Control Policy - Animals as Patients in Health Organisations

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Summary This document outlines strategies to reduce risks associated with the animals as patients in health organisations

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Applies to Area Health Services/Chief Executive Governed Statutory Health Corporation, Board Governed Statutory Health Corporations, Affiliated Health Organisations - Non Declared, Affiliated Health Organisations - Declared, Public Health System Support Division, Public Hospitals

Audience All clinical staff

Distributed to Public Health System, Dental Schools and Clinics, Government Medical Officers, Health Professional Associations and Related Organisations, NSW Ambulance Service, NSW Department of Health, Public Health Units, Public Hospitals, Private Hospitals and Day Procedure Centres

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Director-General

This Policy Directive may be varied, withdrawn or replaced at any time. Compliance with this directive is **mandatory** for NSW Health and is a condition of subsidy for public health organisations.

INFECTION CONTROL POLICY ANIMALS AS PATIENTS IN HEALTH ORGANISATIONS

ASSOCIATED POLICY DOCUMENTS

This Policy Document should be read in conjunction with the following NSW Health Department Policy Directives and Guidelines:

PD2007_006	<i>Occupational Assessment, Screening & Vaccination Against Specified Infectious Diseases</i>
PD2007_036	<i>Infection Control Policy</i>
PD2005_204	<i>Animal Research - Responsibilities of AHS and NSW Animal Research Act 1985</i>
PD2005_132	<i>Waste Management Guidelines for HealthCare Facilities</i>
GL2008_017	<i>Health Facility Guidelines - Australasian Health Facility Guidelines in NSW</i>
GL2006_012	<i>Animals Therapy Companion in Public and Private Hospitals</i>
	<i>NSW Health Cleaning Service Standards, Guidelines and Policy for NSW Health Facilities 1996</i>

DEFINITIONS

In this document the term:

must: indicates a mandatory practice required by law or by departmental directive. A departmental directive is only issued where it is considered necessary in the interests of patient and healthcare worker safety;

NSW public health system: consists of all Area Health Services, all statutory health corporations, all affiliated health organisations in respect of their recognised services, the Ambulance Service of NSW, Institute of Medical Education and Training and Health Support Services.

organisation: refers to any entity that is part of the NSW public health system and private hospitals and day procedure centres; and

should: indicates a strongly recommended practice.

1. INTRODUCTION

Animals are present in human health organisations for a variety of reasons – primarily companion and therapy animals and research animals. Animals have been used for health research for many years and have traditionally accessed health organisations through laboratories and research areas.

Generally, veterinary facilities do not have available high cost diagnostic equipment required to diagnose animals with conditions such as tumours of the brain. In these instances veterinarians may negotiate with a health organisation to access diagnostic equipment when it is not in use for humans and outside of standard operational times.

It is recognised that zoonoses can be transmitted from animals to humans either directly or indirectly via bites, scratches, aerosols, ectoparasites, accidental ingestion, or with contaminated soil, food, water, or unpasteurised milk. Animals may potentially serve as reservoirs for antibiotic resistant microorganisms, for example methicillin resistant *Staphylococcus aureus* (MRSA) and vancomycin resistant enterococcus (VRE).¹

In instances where it is determined that an animal needs to use facilities within a health organisation, infection prevention and control measures must be implemented.

2. POLICY STATEMENTS

Animals must not be routinely treated in a health organisation if there is an alternative veterinary facility that can perform the required diagnostic procedure(s).

Infection prevention and control measures must be used to ensure that there is no risk of disease transmission to human patients or healthcare workers.

Animals must not be treated where invasive procedures on humans are performed, for example operating rooms, cardiac catheterisation laboratories or invasive nuclear medicine areas.

Reusable medical instruments, for example laryngoscopes that are used on an animal must be dedicated to animal use only and must not be used on humans.

¹ Sehulster LM, Chinn RYW, Arduino MJ, Carpenter J, Donlan R, Ashford D, Besser R, Fields B, McNeil MM, Whitney C, Wong S, Juraneck D, Cleveland J, 2004, *Guidelines for environmental infection control in health-care facilities*. Recommendations from CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC), Chicago IL; American Society for Healthcare Engineering/American Hospital Association

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Health organisations must develop a local policy prior to any diagnostic procedure on an animal within the organisation. A risk assessment must be performed to support the policy making process. The policy must include the approved diagnostic procedures and associated infection prevention and control measures.

Selected recommendations from the Centers for Disease Control and Prevention (CDC), 2003, *Guidelines for Environmental Infection Control in Health-Care Facilities – Animals as Patients in Human Health-Care Facilities*, pp 105-112 & 141-143¹ as set out in sections 3 and 4 of this Policy Directive, must be implemented by the NSW public health system. The full CDC document, which includes references, may be accessed via: http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Enviro_guide_03.pdf

3. ANIMALS AS PATIENTS IN HUMAN HEALTH ORGANISATIONS

The potential for direct and indirect transmission of zoonoses must be considered when rooms and equipment in human health organisations are used for the medical or surgical treatment or diagnosis of animals. Inquiries should be made to veterinary medical professionals to determine an appropriate facility and equipment to care for an animal.

The central issue associated with providing medical or surgical care to animals in human health organisations is whether cross-contamination occurs between the animal patient and the human healthcare workers and/or human patients. The fundamental principles of infection control and aseptic practice should differ only minimally, if at all, between veterinary medicine and human medicine. Healthcare associated infections can and have occurred in both patients and workers in veterinary medical facilities when lapses in infection control procedures are evident. Further, veterinary patients can be at risk for acquiring infection from veterinary healthcare workers if proper precautions are not taken.

The issue of providing care to veterinary patients in human health organisations can be divided into the following areas of infection control concerns:

- whether the room/area used for animal care can be made safe for human patients; and
- which disinfecting or sterilizing procedures need to be done for these purposes.

Studies addressing these concerns are lacking. However, with respect to disinfection or sterilization in veterinary settings, only minimal evidence suggests that zoonotic microbial pathogens are unusually resistant to inactivation by chemical or physical agents (with the exception of prions). Ample evidence supports the contrary observation (i.e., that pathogens from human and animal sources are similar in their relative intrinsic resistance to

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inactivation). Further, no evidence suggests that zoonotic pathogens behave differently from human pathogens with respect to ventilation. Despite this knowledge, an aesthetic and sociologic perception that animal care must remain separate from human care persists. Health organisations, however, are increasingly faced with requests from the veterinary medical community for access to human health organisations for reasons that are largely economical (e.g., costs of acquiring sophisticated diagnostic technology and complex medical instruments). If hospital guidelines allow treatment of animals, alternate veterinary resources (including veterinary hospitals, clinics, and universities) should be exhausted before using human healthcare settings. Additionally, the hospital's public/media relations should be notified of the situation. The goal is to develop policies and procedures to proactively and positively discuss and disclose this activity to the general public.

An infection control risk assessment must be undertaken to evaluate the circumstances specific to providing care to animals in a human health organisation. Individual hospital policies and guidelines should be reviewed before any animal treatment is considered in such organisations. Animals treated in human health organisations should be under the direct care and supervision of a licensed veterinarian; they also should be free of known infectious diseases, ectoparasites, and other external contaminants (e.g., soil, urine, and faeces). Measures should be taken to avoid treating animals with a known or suspected zoonotic disease in a human health-care setting.

In Australia *Coxiella burnetii* (Q Fever) is maintained in the wild by bush animals such as kangaroos, bandicoots and rodents and their attendant ticks. Mutually coexistent ticks may involve feral and domestic goats, cattle or sheep, which in turn infect their attendant ticks.² For this reason these animals must not be treated in health organisations.

If human health organisations are to be used for animal treatment or diagnostics, general infection control practices include:

- must not use Operating Theatres or other rooms used for invasive procedures (e.g., cardiac catheterization labs and invasive nuclear medicine areas);
- the procedure should be scheduled late in the day as the last procedure for that particular area such that patients are not present in the department/unit/area;
- environmental surfaces should be thoroughly cleaned and disinfected after the animal is removed from the care area;

² 'Q Fever Information Kit for the Australian Meat Industry' pages 4 to 7, prepared for the Meat Research Corporation (now Meat and Livestock Australia) by Julie O'Neill, 1997.

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- sufficient time should be allowed for adequate air changes to help prevent allergic reactions by human patients;
- only specific equipment on animals that can be thoroughly and easily cleaned, disinfected, or sterilized should be used; and
- standard precautions must be followed.

4. RESEARCH ANIMALS IN HEALTH ORGANISATIONS

The risk of acquiring a zoonotic infection from research animals has decreased in recent years because many small laboratory animals (e.g., mice, rats, and rabbits) come from quality stock and have defined microbiologic profiles. Larger animals (e.g., nonhuman primates) that are obtained from the wild may harbour pathogens transmissible to humans. Primates, in particular, benefit from vaccinations to protect their health during the research period provided the vaccination does not interfere with the study of the particular agent. Animals serving as models for human disease studies pose some risk for transmission of infection to laboratory or healthcare workers from percutaneous or mucosal exposure. Exposures can occur either through:

- direct contact with an infected animal or its body substances and secretions; or
- indirect contact with infectious material on equipment, instruments, surfaces, or supplies.

Uncontained aerosols generated during laboratory procedures can also transmit infection.

Infection control measures to prevent transmission of zoonotic infections from research animals are largely derived from the following basic laboratory safety principles:

- purchasing pathogen-free animals;
- quarantining incoming animals to detect any zoonotic pathogens;
- treating infected animals or removing them from the facility;
- vaccinating animal carriers and high-risk contacts if possible;
- using specialised containment caging or facilities; and
- using protective clothing and equipment (e.g., gloves, face shields, gowns, and masks).

The animal research unit within a health organisation should be engineered to provide:

- adequate containment of animals and pathogens;

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- daily decontamination and transport of equipment and waste;
- proper ventilation and air filtration, which prevents recirculation of the air in the unit to other areas of the facility; and
- negative air pressure in the animal rooms relative to the corridors.

To ensure adequate security and containment, no through traffic to other areas of the health organisation should flow through this unit. Access should be restricted to animal-care staff, researchers, environmental services, maintenance, and security personnel.

Occupational health programs for animal care staff, researchers, and maintenance staff should take into consideration the animals' natural pathogens and research pathogens. Components of such programs include:

- prophylactic vaccines;
- TB skin testing when primates are used;
- baseline serums; and
- hearing and respiratory testing.

The organisation's occupational or employee health clinic should be aware of the appropriate post-exposure procedures involving zoonoses and have available the appropriate post-exposure biologicals and medications.

Animal research area staff should also develop standard operating procedures for:

- daily animal husbandry (e.g., protection of the employee while facilitating animal welfare);
- pathogen containment and decontamination;
- management, cleaning, disinfecting and/or sterilizing equipment and instruments; and
- employee training for laboratory safety and safety procedures specific to animal research worksites