HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER MATERNITY AND CHILDREN HOSPITAL

Department:	Infection Prevention and Control Department		
Document:	Multidisciplinary Policy and Procedure (MPP)		
Title:	Rabies Exposure Management		
Applies To:	Nurses and Technician		
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1. PURPOSE:

1.1 To provide guidelines on pre-exposure prophylaxis for employees who work in the animal facility as well as guidelines on management of patients with exposure to possibly rabid animals.

2. DEFINITONS:

2.1 Rabies infection varies with the nature and extent of exposure, which may fall into one of two categories: bite and non-bite. Human-to-human transmission is rare. The virus is introduced into bite wounds, open cuts in the skin, or onto mucous membranes. Once it enters the central nervous system of the human, it causes encephalomyelitis, which is 100% fatal.

2.2 Types of exposure include:

2.2.2 Bite: Any penetration of the skin by teeth constitutes a bite exposure. All bites, regardless of location, represent a potential risk for rabies transmission. Bites by some animals such as bats can inflict minor injury and thus be undetected.

2.2.2 Non-bite

2.2.2.1 Non-bite exposures from terrestrial animals cause rabies and rarely require post-exposure prophylaxis.

2.2.2.2 The non-bite exposure of highest risk appears to be among persons exposed to large amounts of aerosolized rabies virus.

2.2.2.3 The contamination of open wounds, abrasions, mucous membranes, or (theoretically) scratches with saliva or other potentially infectious material (such as neural tissue) from a rabid animal also constitutes a non-bite exposure

2.2.2.4 Other contact, by itself, such as petting a rabid animal and contact with blood, urine, or feces (e.g., guano) of a rabid animal does not constitute an exposure and is NOT an indication for prophylaxis.

2.3 Human-to-human transmission:

2.3.1 Human-to-human transmission has occurred among eight recipients of transplanted corneas. Stringent guidelines for acceptance of donor corneas have been implemented to reduce the risk.

3. POLICY:

3.1 People exposed to rabies require timely prophylaxis including wound cleaning, vaccines and sometimes rabies immunoglobulins.

3.2 Effective delivery of postexposure prophylaxis relies on good public awareness of rabies, and access to treatment.

3.3 Use standard precautions (wear gloves, aprons/gowns and masks) when handling the rabid/ suspected animal/animal parts/animal specimens. Animal specimens should be double bagged for handling using the infectious waste bag.

4. PROCEDURE:

4.1 Pre-exposure Prophylaxis

4.1.1 Pre-exposure prophylaxis is administered for several reasons:

4.1.1.1 It simplifies therapy by eliminating the need for rabies immunoglobulin (RIG).

4.1.1.2 It decreases the number of doses of vaccine needed post exposure.

4.1.1.3 It may protect persons whose post-exposure therapy is delayed.

4.1.1.4 It may provide protection to persons at risk for unapparent exposure to rabies.

4.1.2 Pre-exposure vaccination should be offered to: See appendices 7.1

4.1.2.1 Persons in high-risk groups, such as veterinarians, animal handlers, and certain laborator workers.

4.1.2.2 Persons whose activities bring them into frequent contact with the rabies virus or potentially rabid bats, raccoons, skunks, cats, dogs, or other species at risk for having rabies.

4.1.2.3 International travelers to areas where dog rabies is enzootic and immediate access to appropriate medical care, including biologics, may be limited.

4.2 Serological testing follow pre-exposure prophylaxis

4.2.1 Routine serologic testing to confirm seroconversion is not necessary except for persons suspected of being immunosuppressed or being in a high risk group

4.3 Post exposure therapy for previously vaccinated persons

4.3.1 Previously vaccinated persons should receive rabies vaccine as a booster. RIG is unnecessary and should not be administered to these persons.

4.4 Post-exposure prophylaxis: The type of animal, circumstances of the biting incident and vaccination status of the animal affect the need for post-exposure prophylaxis

4.4.1 An unprovoked attack by an animal is more likely than a provoked attack to indicate that the animal is rabid.

4.4.2 Bites inflicted on a person attempting to feed or handle an apparently healthy animal should generally be regarded as provoked.

4.4.3 A currently vaccinated dog, cat, or ferret is unlikely to become infected with rabies

4.4.4 A healthy domestic dog, cat, or ferret that bites a person may be confined and observed for 10 days. A veterinarian should evaluate any illness during confinement or before release. If signs suggestive of rabies develop during the observation period, the animal will be euthanized and its head removed and shipped under refrigeration for examination by the laboratory at the Regional Central Laboratory.

4.4.5 If the biting animal is stray or unwanted, it should either be observed for 10 days or be euthanized immediately and submitted for rabies examination. See appendices 7.2

4.5 Wound Management and Vaccination

4.5.1 Wash all bite wounds and scratches immediately and thoroughly with soap, water and a virucidal agent such as povidone-iodine solution.

4.5.2 Persons who have been bitten by animals suspected or proven to be rabid should begin post-exposure prophylaxis immediately

4.5.3 When a documented or likely exposure has occurred, post-exposure prophylaxis is indicated REGARDLESS of the length of delay of the clinical signs of rabies.

4.5.4 Tetanus prophylaxis and measures to control bacterial infection should be administered as indicated. The decision to suture large wounds is case dependent.

4.5.5 Post-exposure anti-rabies vaccination should always include the administration of both passive antibodies and vaccine. THE EXCEPTION to this rule is persons who have previously received complete vaccination regimens (pre-exposure and post-exposure) with a cell culture vaccine or persons who have been vaccinated with other types of vaccines and have documented rabies antibody titers; these persons should receive the VACCINE ONLY. See appendices 7.3 Rabies post exposure prophylaxis schedule.

4.6 Management of adverse reactions

4.6.1 Once initiated, rabies prophylaxis should not be interrupted or discontinued because oflocal or mild systemic adverse reactions to the rabies vaccine.

4.6.2 When a person with a history of hypersensitivity to the rabies vaccine must be revaccinated, antihistamines can be administered. Epinephrine should be readily

available to counteract anaphylactic reactions, and the person should be observed carefully immediately after vaccination.

4.7 Precautions and contraindications

4.7.1 Immunosuppression:

4.7.1.1 Corticosteroids, other immunosuppressive agents, anti-malarials, and immunosuppressive illnesses can interfere with the development of active immunity after vaccination. For such patients, pre-exposure prophylaxis should be administered with the awareness that the immune response might be inadequate.

4.7.1.2 Persons who are immunosuppressed due to disease or medication should postpone

pre-exposure vaccination and consider avoiding activities for which rabies pre-exposure prophylaxis is indicated. When this is not possible, persons who are immunosuppressed and at risk for rabies should be vaccinated by the IM route, and their antibody titers should be checked. Failure to seroconvert after the third dose should be managed in consultation with an Infectious Diseases Consultant.

4.7.1.3 Immunosuppressive agents should not be administered during post-exposure therapy unless they are essential for the treatment of other conditions.

4.7.2 Pregnancy: Pregnancy is NOT considered a contraindication to post-exposure prophylaxis if the risk of rabies is substantial.

4.8 Investigation of contacts Search for other persons who may have been exposed to the infected animal.

4.9 Isolation of hospitalized patients Standard precautions are recommended for the duration of illness.

4.10 Confirmed rabies in patients is a reportable disease. Notify Infection Control.

4.11 Pest Control

4.11.1 Captures and impounds the suspected rabid animal.

4.11.2 Decapitates the animal.

4.11.3 The animal's brain needs to be secured for testing by the Ministry of Agriculture Laboratory. The specimen should be packed and kept frozen in an appropriate insulated container.

4.11.4 The animal's body is to be double-bagged at all times. Take animal remains to the incinerator and make sure they are disposed of. Also, dispose of all PPE (gowns, gloves, mask, etc.).

4.11.5 Ship the specimen via overnight/same-day courier to the Ministry of Agriculture Laboratory.

4.11.6 Disinfect the area of the decapitation.

5. MATERIALS AND EQUIPMENT:

5.1 **Forms and Records:**

5.1.1 N/A

5.2 **Materials and Equipment**

5.2.1 N/A

6. RESPONSIBILITIES:

6.1 Emergency Department :Notifies the Infection Prevention and Control Department

6.2 Emergency Department: Notifies the Infection Prevention and Control Department

7. APPENDICES:

7.1 Rabies pre-exposure prophylaxis schedule

7.2 Rabies post-exposure prophylaxis guide

7.3 Rabies post-exposure prophylaxis schedule

8. REFERENCES:

8.1 GCC-Infection-Prevention-and-Control Manual 3rd Edition, 2018. file:///C:/Users/SPawar/Downloads/The-GCC-Infection-Prevention-and-Control-Manual-3rd-Edition.pdf

9. APPROVALS:

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Attachment:

7.1 Rabies pre-exposure prophylaxis schedule

Type of Vaccination	Route	Regimen
Primary cell culture rabies vaccine	Intramuscular (IM)	1 ml on days 0, 7,21 or 28
Booster	Intramuscular	1 ml every 2 years

NB: 1. For those travelers receiving anti-malaria prophylaxis, only the IM route should be used.
2. Dosage may vary depending on the manufacturer; see package insert.

7.2 Rabies post-exposure prophylaxis guide

Animal Type	Evaluation and Disposition of Animal	Post-Exposure Prophylaxis Recommendations
Dogs, cats, and ferrets	Healthy and available for a 10-day observation Rabid or suspected to be rabid Unknown (e.g., escaped)	Persons should not begin prophylaxis unless animal develops clinical signs of rabies.* Immediately vaccinate. Consult Infectious Diseases for advice.
Skunks, raccoons, foxes and most other carnivores, and bats	Regarded as rabid unless animal proven negative by laboratory tests**	Consider immediate vaccination.
Livestock, small rodents, lagomorphs (rabbits and hares), large rodents (woodchucks and beavers), and other mammals	Consider individually	Consult Infectious Diseases for advice. Bites of squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice, other small rodents, rabbits, and hares almost never require anti-rabies post-exposure prophylaxis.
Camels, sheep, and other livestock	Consider individually	Consult Infectious Diseases for advice.

* During the 10-day observation period, begin post-exposure prophylaxis at the first sign of rabies in a dog, cat, or ferret that has bitten someone. If the animal exhibits clinical signs of rabies, it should be euthanized immediately and tested.
** The animal should be euthanized and tested as soon as possible. Holding for observation is not recommended. Discontinue vaccine if immunofluoresence test results of the animal are negative.

7.3 Rabies post-exposure prophylaxis schedule

Vaccination Status	Treatment	Regimen*
Not previously vaccinated	Wound cleansing	All post-exposure treatment should begin with immediate, thorough cleansing of all wounds with soap and water. If available, a virucidal agent such as a povidone-iodine solution should be used to irrigate the wound(s).
	RIG*	Administer 20 IU/kg body weight. If anatomically feasible, the *full dose* should be infiltrated around the wound(s) and any remaining volume should be administered IM at an anatomical site distant from the vaccination site. Also, RIG should not be administered in the same syringe as the vaccine. Because RIG may partially suppress the active production of antibodies, no more than the recommended dose should be given.
	Rabies vaccine	Administer 1.0 ml IM in the deltoid area on each days 0, 3, 7, and 14. For persons with immunosuppression, rabies PEP should be administered using all 5 doses of vaccine on days 0,3,7,14, and 28. Day 0 is the day of dose 1 of vaccine is administered.
Previously vaccinated**	Wound cleansing	All post-exposure treatment should begin with immediate, thorough cleansing of all wounds with soap and water. If available, a virucidal agent such as a povidone-iodine solution should be used to irrigate the wounds.
	RIG	RIG should not be administered.
	vaccine	HDCV or PCECV 1.0 ml, IM (deltoid) 1 each days 0 and 3. Deltoid area is the only acceptable site of vaccination for adults and older children. For younger children, the outer aspect of the thigh may be used. Vaccine should never be administered in the gluteal area. Day 0 is the day of dose 1 of vaccine is administered.

* These regimens are applicable for all age groups, including children.
** Any person with a history of pre-exposure vaccination with HDCV, RVA, or PCECV; prior post-exposure prophylaxis with HDCV, RVA, or PCE CV; or previous vaccination with any other type of rabies vaccine and a documented history of antibody response to the prior vaccination.