



Unless otherwise stated the content of this guideline has been adapted from  
BCCDC Communicable Disease Control Management of Specific Diseases:  
Rabies November 2018 and Yukon Rabies Risk Management Guideline October 2011, revised 2015

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## 1.0 AUTHORITY

Yukon Public Health and Safety Act (2009) - Available at [www.hss.gov.yk.ca/ifo\\_professionals.php](http://www.hss.gov.yk.ca/ifo_professionals.php). This Act provides legal authority to the Chief Medical Officer of Health (CMOH) or their delegate (i.e., Deputy CMOH or MOH on call) to act when public health is at risk due to the presence of a potentially rabid animal within a community. The CMOH role is conducted by a team including the CMOH, Yukon Communicable Disease Control (YCDC) and Environmental Health Services (EHS).

Animal Health Act – The Yukon Animal Health Act gives the Chief Veterinary Officer (CVO) or inspectors under the Act the authority to issue quarantine orders and the CVO can order destruction of animals to address any hazard from animals that can impact animal or human health.

Federal Legislation – Health of Animals Act

Under the Federal Health of Animals Act, rabies is a reportable disease in animals and the Canadian Food Inspection Agency (CFIA) confirms all positive cases of rabies in animals in Canada. Rabies is prescribed as a "reportable" disease under the Reportable Disease Regulations. Samples that test positive for rabies at a non-CFIA lab must be submitted to the CFIA for confirmation and variant typing.

## 2.0 GOAL

The goal of the Yukon Rabies Risk Management Team is to prevent the acquisition of human rabies. The team includes: CVO, CMOH, YCDC and EHS. Prevention of human rabies disease is undertaken through:

- Evaluation of human exposure to animals for the risk of rabies transmission.
- Provision of post-exposure immunoprophylaxis to persons exposed or potentially exposed to rabies virus.
- Provision of pre-exposure immunization of persons at increased risk of exposure to animal rabies.
- Collaboration and consultation with territorial animal health authorities regarding rabies incidence and control strategies in Yukon.

The intent of this guideline is to provide direction on human-animal encounters among people presenting in Yukon, regardless of where the encounter occurred. In particular it addresses:

- Risk assessment (including determining the rabies status of animals involved in an exposure).
- Risk management (post-exposure prophylaxis).
- Reporting exposures.
- Ordering biologicals.

### 3.0 DEFINITIONS

**Direct contact:** contact with a rabid or potentially rabid animal whereby rabies virus present in undessicated saliva or neural tissue could be introduced through contact with a person’s eyes or mucous membranes, or through a break in the skin by means of a bite or scratch.

**Enzootic:** consistently present in an animal population (equivalent to endemic in human population).

**Epizootic:** greater than expected occurrence in an animal population (equivalent to epidemic in human population).

**Provoked Exposure:** A provoked attack is one in which the human does something to “provoke” the animal (even if the action was unintentional) and the attack would be the animal’s normal response to such a human action. See page 2 of [Rabies Risk Investigation Form A](#) for list of examples.

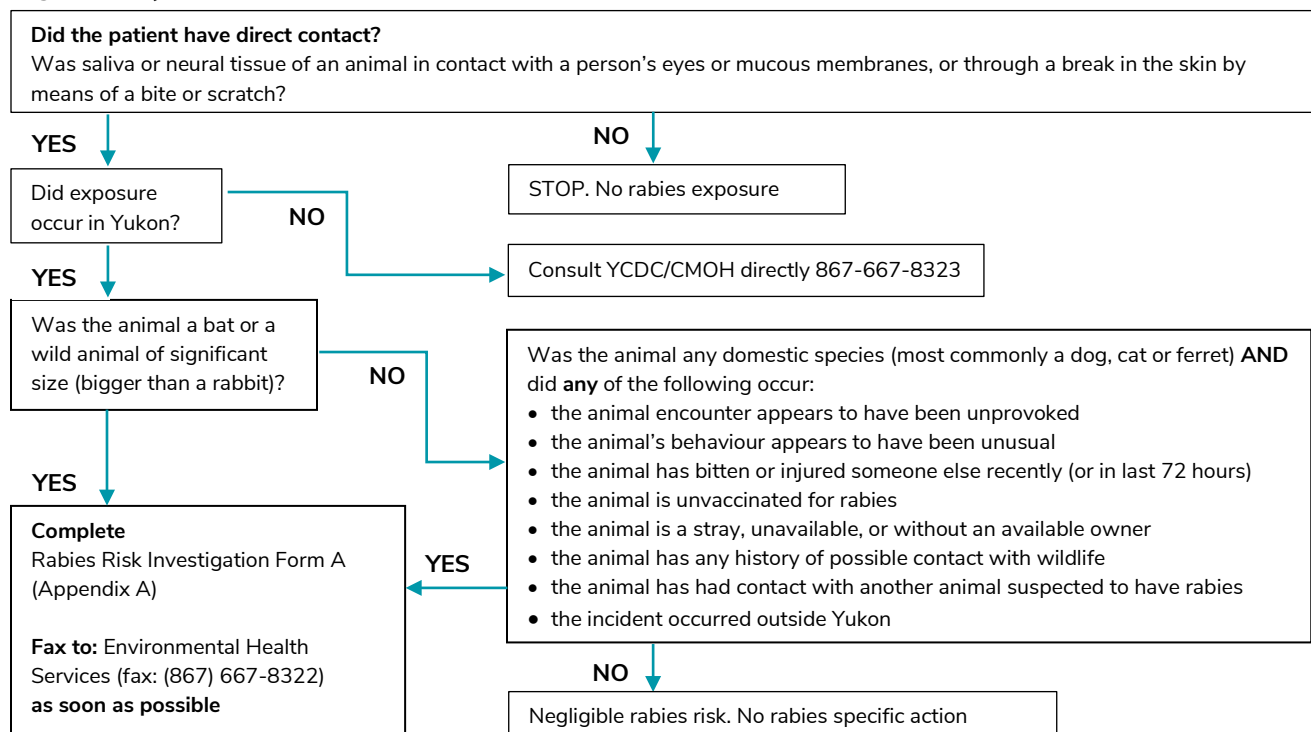
**RPEP:** Rabies post-exposure prophylaxis is accomplished through the administration of rabies immune globulin (Rablg) and/or rabies vaccine. Rablg provides rapid, short-term protection. Rabies vaccines contain inactivated virus and induce an active immune response beginning 7 to 10 days post-immunization.

**Unprovoked Exposure:** An unprovoked attack is one in which the person did not surprise, antagonize or threaten the animal or enter its territory.

### 4.0 RISK ASSESSMENT

The following flow chart (Figure 1) is a quick guide to assess whether a patient is at risk for rabies and if the Rabies Risk Investigation Form A needs to be completed

**Figure 1: Quick Guide to Rabies Assessment**



## 4.1 Exposure History

The exposure information gathered is essential for assessing the need for RPEP.

Direct contact (see the definition in [Section 3.0](#)) with a potentially rabid animal is necessary for transmission of the rabies virus. When assessing the risk of rabies, the following need to be considered:

- Animal species and Geographic location ([Section 4.1.1](#))
- Animal behavior ([Section 4.1.2](#))
- Animal rabies vaccination status ([Section 4.1.3](#))
- Type of exposure (bite vs other) ([Section 4.1.4](#))
- Body part exposed ([Section 4.1.5](#))

### 4.1.1 Animal Species and Geographic Location

#### 4.1.1.1 Yukon

Certain species of animals are more likely to carry the rabies virus. In Yukon, these include:

domestic animals, such as dogs, cats, ferrets and livestock; and wild animals, such as bats, arctic fox, red fox and any wild carnivore.

If the animal involved is wild or feral the risk of rabies is considered to be higher. Additionally, exposure incidents involving stray domestic animals are also considered higher risk for rabies.

For domestic animals that are indoor pets only, the risk of rabies is lower because there would be few opportunities for the animals to interact with other animals, either domestic or wild. It should be noted that animals such as rodents, small caged pets, rabbits, squirrels, moles, muskrats, shrews and voles are not considered likely to carry rabies and, therefore, contact with these types of animals is not considered a risk.

#### 4.1.1.2 Bats in Yukon or Globally

These recommendations apply to all bat exposures that occur in Yukon or globally.

For bat exposures, intervene (testing and/or RPEP) when both of the following conditions apply:

- There has been direct contact with a bat ([Section 3.0](#)); **AND**
- A bite, scratch or saliva exposure into a wound or mucous membrane cannot be ruled out (NACI 2009).

Evidence for direct bat contact may include observation of physical contact, verbal history of physical contact. Consult the NACI statement on bat behavior and exposure (NACI, 2009).

In children and other people whose histories are less reliable (cannot accurately report bites or

scratches), any direct contact with a bat may require RPEP. While clothing may act as a barrier to direct contact, it can also mask exposure. NACI recommends that children who have contact with a bat through clothing may require RPEP because their histories are less reliable (NACI, 2009). RPEP is not indicated if there is no history of direct contact; for example, if a bat was found in the house, or if someone woke up with a bat in the bedroom, without any evidence it touched someone. When a bat is found in the room with a child or an adult who is unable to give a reliable history, assessment of direct contact can be difficult. Factors indicating that direct contact may have occurred include the individual waking up crying or upset while the bat was in the room or observation of the bat in close proximity to the individual (e.g., in or on the bed).

#### **4.1.1.3 Outside of Yukon**

##### **Domestic animals (pets and livestock)**

In some countries, rabies is enzootic in domestic animals or they are frequently infected with rabies. Dog bites provide the greatest risk of rabies transmission in most developing countries. The risk is higher in Asia and Africa. Consider risk of rabies exposure on a case-by-case basis, taking into account the behavior of the animal and the geographic location.

In 2000-2010, the total human rabies deaths due to domestic animal exposure outside of Asia and Africa was 19. For Asia and Africa, for the years 2000-2002 and 2003-2009 the total was 2177

(WHO, 2010). For information on the risk of rabies in other countries, consult the WHO publication "International Travel and Health" available at: [www.who.int/ith/en](http://www.who.int/ith/en). To help assess the risk in specific countries, refer to the WHO map at:

[gamapserver.who.int/mapLibrary/Files/Maps/Global\\_Rabies\\_ITHRiskMap.png](http://gamapserver.who.int/mapLibrary/Files/Maps/Global_Rabies_ITHRiskMap.png)

##### **Wild animals**

Rabies is enzootic to varying degrees in wild animals in Canada east of the Rockies and in other countries. Consider skunk, raccoon, coyote, bobcat, fox and other wild animals to be rabid unless tested and shown to be negative (except in rabies-free countries). For animal rabies activity in Canada, see the CFIA website at:

[www.inspection.gc.ca/english/anima/disemala/rabrag/statse.shtml](http://www.inspection.gc.ca/english/anima/disemala/rabrag/statse.shtml)

##### **Rodents and lagomorphs**

Rabies is extremely rare in small rodents and lagomorphs (rabbits and hares). Rabies risk is considered negligible unless the animal is behaving unusually or local epidemiology suggests that rabies is present in these animals. For example, woodchucks have been found to be rabid in parts of the US in association with raccoon rabies expansion and occasionally an infected rodent is reported in other parts of the world (Moro, 1991; Childs, 1997; Kamoltham, 2002; Wang, 2009). However, no rodent-human transmission of rabies has been reported.

#### **4.1.2 Animal behavior**

An animal showing one of more of the clinical signs listed is suggestive of rabies. (Refer to [Rabies Risk Investigation Form A](#), page two for clinical signs consistent with rabies). While it is possible for other diseases or conditions to produce similar signs, it is essential that any suspect animal that is showing these signs either be confined for 10 days for observation or euthanized for rabies testing to support a decision for RPEP. A suspect animal that is showing any clinical signs suggestive of rabies will justify an official quarantine by the Yukon Chief Veterinary Officer if the animal is not euthanized. Quarantine in this instance would be under veterinary supervision and euthanasia is often required for humane reasons if the animal has rabies because its condition will deteriorate rapidly. The signs of rabies infection can vary considerably among species. An animal exhibiting behavior that is considered unusual for that particular species could potentially be rabid (Yukon Rabies Risk Management Guideline, 2015).

Entering an animal's territory or close interactions, especially hand feeding, could be considered provocation, however this determination is made by EHS and CVO. When an animal attacks for no known reason this may be considered an unprovoked attack. An unprovoked attack may support administering RPEP when combined with other information. Refer to [Rabies Risk Investigation Form A](#), page two for definitions and examples of provoked and unprovoked exposure.

If an animal had physical contact with a rabid animal (e.g., a cat played/fought with a bat which is later determined to be rabid) and then had direct contact with a person, it is unlikely that rabies would be transmitted. The minimum time for animal rabies to incubate is 2 weeks; transmission of rabies will not occur until the virus is being shed in the animal's saliva. There are no known incidents of rabies transmission via this route.

#### **4.1.3 Vaccination status of animal**

The vaccination status of a domestic animal is important because it identifies the level of risk the animal poses for the transmission of rabies. Animals that have valid proof of vaccination against rabies that has not expired, are considered low risk for the transmission of rabies. It is important to have a veterinary certificate of vaccination, or the animal will be assessed as if it had not been vaccinated and the animal may need to be observed or may be ordered to be euthanized.

Animals that have no proof of vaccination, or have an out-of-date vaccination, are considered higher risk for the transmission of rabies. The animal should be observed by the owner for 10 days and any additional aggression or illness reported to the Chief Veterinary Officer.

#### **4.1.4 Type of exposure**

In a potentially infected animal, the following body substances/tissues may be infectious:

- Saliva and salivary glands
- Neural fluid and tissue

As such, the highest risk exposure is from the bite of an infected animal that breaks the skin. Scratches from an infected animal can theoretically introduce rabies virus if, for example, the animal had licked its nails prior to the scratch. In practice, very few cases of human rabies have been reported secondary to this route of transmission (Afshar, 1979).

Virus can rarely be found in urine, muscle and lungs. Contact with such materials has not been documented to lead to transmission of rabies. Fresh bat feces (guano) may also contain virus. There is theoretical risk of airborne transmission of rabies virus from bat feces (Brown, 1971; Heymann, 2015). RPEP should only be considered for an aerosol exposure where the number of bats in an enclosed area is very high, the exposure is prolonged and the appropriate personal protective equipment was not used. **Blood is considered non-infectious, as infected animals are not viremic.**

#### **4.1.5 Human body part exposed**

Exposure to the face and hands increases the risk of rabies because these body parts are highly innervated, providing greater and faster opportunity for virus to enter the nervous system. Although the distance of the exposed body part to the brain affects the incubation period, it does not affect the time available to provide RPEP (i.e., once the virus enters the peripheral nervous system, RPEP is no longer of use).

## **4.2 Observation and Testing of Animals (What Will Happen to the Animal)**

The decision to confine and observe the animal rests with the Environmental Health Officer (EHO), Chief Veterinary Officer (CVO) and Chief Medical Officer of Health (CMOH) and is based on the level of risk.

### **Domestic Animals**

If the suspect animal has been vaccinated for rabies and the vaccination status can be confirmed by the investigating CVO as adequate to provide protection, and the animal is exhibiting normal behavior then there is usually no further action taken.

If the suspect animal does not have a valid vaccination status, the owner will be asked to confine the animal for observation for 10 days. If the animal remains healthy, rabies vaccination is recommended and there is no further action. If the confined animal develops any signs of disease, this must be reported to EHS, the MOH and the CVO for further investigation because euthanasia and testing for rabies may be required.

In circumstances where the animal's behavior is strongly suggestive of rabies, the CVO may order an official quarantine. The owner always has the option to euthanize the animal based on its behavior. In some instances, local animal control by-laws or the RCMP may require confinement of animals for observation or may require that the animal be euthanized for public protection. Further advice can be obtained from the CVO on possible rabies testing. (Yukon Rabies Risk Management Guideline, 2015)

### **Wild Animals**



If the suspect animal is a wild, feral or stray animal, it often cannot be confined or held for observation. The course of action and recommendations will be decided on a case-by-case basis by the CVO, drawing information and support from the MOH, EHS, the conservation officers and other local officials.

## 5.0 IMMEDIATE MANAGEMENT OF ANIMAL BITES FOR RABIES RISK EVALUATION

### 5.1 Primary Wound Management: The first and immediate action

Wash with a mild soap and flush the wound with copious amounts of water under moderate pressure. Expert opinion states that washing should be done for at least 15 minutes (PHAC, 2012). Some authorities recommend disinfecting the wound with an iodine-containing or alcohol solution or other topical virucidal disinfectant to further decrease the viral load. (PHAC, 2012).

The wound should not be sutured unless indicated for cosmetic or tissue support reasons. Sutures, if required, should be placed after local infiltration of Rablg. They should be loose and not interfere with free bleeding and drainage (Heymann, 2015). As appropriate, follow-up wound care should be undertaken by or in consultation with a physician. Although the risk of rabies may be small, there is a risk of other infections at the wound site. Tetanus-diphtheria vaccination should be updated as required and administration of antibiotics should be based on the clinical picture.

### 5.2 Initiating a Rabies Risk Investigation

Complete Rabies Risk Investigation Form A ([Appendix A](#)). Fax to Environmental Health Services (fax: (867) 667-8322) as soon as possible if the following criteria are fulfilled:

Patient had direct contact with the saliva or neural tissue saliva of an animal that could be introduced through contact with a person's eyes or mucous membranes, or through a break in the skin by means of a bite or scratch **AND**

- the animal was a bat or a wild animal of significant size (bigger than a rabbit) **OR**
- the animal was any domestic species, most commonly a dog, cat or ferret **AND ANY** of the following have occurred:
  - the animal encounter appears to have been unprovoked
  - the animal's behavior appears to have been unusual
  - the animal has bitten or injured someone else recently (or in last 72 hours)
  - the animal is unvaccinated for rabies
  - the animal is feral or stray, unavailable, or without an available owner
  - the animal has any history of possible contact with wildlife
  - the animal has had contact with another animal suspected to have rabies
  - the incident occurred outside Yukon

*NOTE: Contact with animals the size of a rabbit or smaller (other than bats), such as rodents or squirrels, has a negligible risk of rabies and does not typically require further investigation.*

### 5.3 What to Tell the Client/Patient

Provide client with the “Animal Bites and Rabies” fact sheet from the Animal Health Program.  
[www.env.gov.yk.ca/publications-maps/documents/rabies\\_risk\\_eval\\_fact\\_sheet\\_april\\_2015.pdf](http://www.env.gov.yk.ca/publications-maps/documents/rabies_risk_eval_fact_sheet_april_2015.pdf)

For any significant encounter that triggers the Rabies Risk Investigation Form, the client should be advised that they may be contacted by EHS to obtain further information about the incident. It is important that EHS is able to gather complete information in order that the MOH and CVO can determine the level of risk of rabies and whether any action is needed to prevent further risk in the community. Most instances in Yukon are dog bites that are single occurrences with minimal risk of rabies, but each event needs to be individually assessed.

The client should be told that they will be informed of the outcome of the rabies risk investigation and if further treatment (RPEP) is required they will be notified as soon as possible. A phone number at which they can be contacted over the next two days should be requested.

The owner of the suspect animal will be contacted to obtain information on whether the animal is vaccinated for rabies and whether it is showing any abnormal behavior. Recommendations for the animal will be based on the information gathered and provided to the animal owner by EHS (e.g. 10 day observation period), refer to [Section 4.2](#).

### 5.4 What the Health Care Provider can Expect:

- An EHO will coordinate the rabies risk evaluation with the MOH and CVO.
- If the MOH determines that rabies post-exposure prophylaxis (RPEP) is required, the HCP will be notified within 48 hours.
- The HCP, the client and/or the animal owner may be contacted to obtain further information on the incident to determine whether animal control measures or community warnings are required.
- If the rabies risk evaluation indicates no need for RPEP, the HCP will be notified and the investigation is finalized (typically within four working days).

### 5.5 Who to Contact if you have Questions:

- Completion of [Form A](#); Rabies Assessment Questions  
Environmental Health Services: Main Office (867) 667-8391
- Animal Health Questions  
Animal Health Unit: Main Office (867) 667-5600
- RPEP questions and bites that occur outside of Yukon  
Yukon Communicable Disease Control: YCDC Main Office (867) 667-8323.

## 6.0 ROLES AND RESPONSIBILITIES

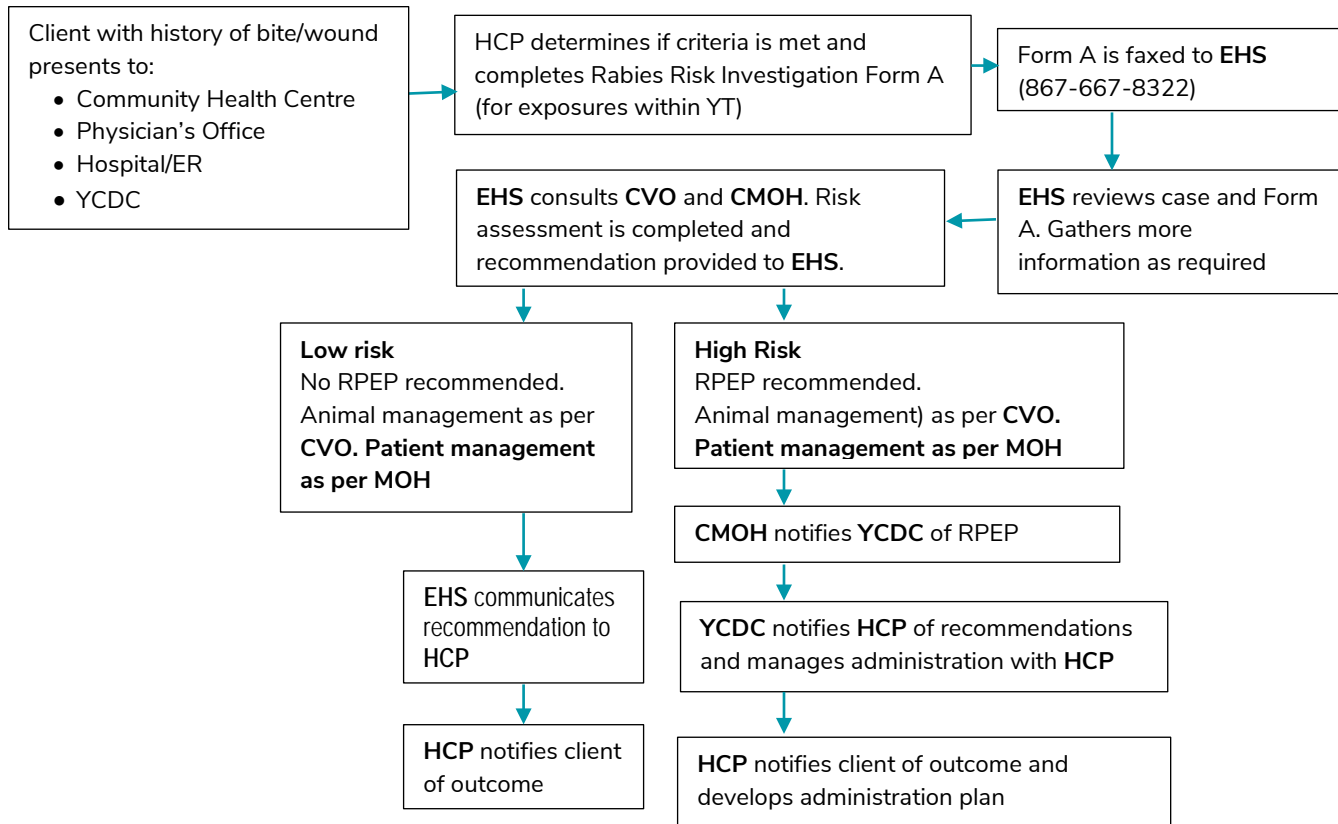
A rabies risk assessment involves the Yukon Rabies Management Team. The team consists of the Primary Health Care Provider, Environmental Health Services, Chief Veterinary Officer, Chief Medical Officer of Health and Yukon Communicable Disease Control. The following table reviews roles and responsibilities of the Rabies Management Team.

**Table 1: Roles and Responsibilities**

HCP (Health Care Provider)	EHS (Environmental Health Services)	CVO (Chief Veterinary Officer & Animal Health Inspector)	C/MOH (Chief/Medical Officer of Health)	YCDC (Yukon Communicable Disease Control)
Responsible for patient care	Responsible for environmental health investigation.	Responsible for animal health.	Responsible for decision to administer RPEP.	Responsible for RPEP administration and case management.
Gathers exposure information essential for assessing the need for RPEP through Rabies Investigation Form A.	Receives and reviews Form A. Gathers more information if needed to support RPEP and animal management decisions. Provides information to MOH and CVO.	Evaluates risk of rabies. Authorises and coordinates rabies control strategies for animals.	Evaluates risk of rabies exposure to human. Determines whether RPEP is needed.	Facilitates the shipping and administration of RPEP throughout Yukon.
Educates and communicates with the client in regards to rabies risk, recommendations and outcome of consultation.	Responsible for public communication	Gives recommendations for animal management and is authorized to issue quarantine orders and animal euthanasia.	Notifies YCDC when RPEP advised.	
Collaborates with YCDC to administer RPEP if recommended.			Provides input into animal control when population health is at risk.	

The following flow chart (Figure: 2) illustrates the investigation and follow-up process in Yukon.

**Figure 2: Rabies Management Process in Yukon**



## 7.0 RABIES POST EXPOSURE PROPHYLAXIS (RPEP) RISK MANAGEMENT

### 7.1 Situations when risk of rabies exposure is greatest and RPEP is more likely to be recommended

Typically, the risk of rabies exposure is higher when:

- The animal
  - exhibited clinical signs suggestive of rabies
  - was not provoked prior to the attack
  - is wild or feral.
  - is a domestic animal with no or unknown vaccination status.
- The wounds:
  - are severe
  - involve the head, neck or hands
- The attack occurred outside Yukon in a rabies endemic area and animal testing was not done or results of animal tests cannot be confirmed.

The RPEP decision is based on information gathered from the Rabies Investigation Form A (completed by the HCP) and further information obtained by EHS.

## 7.2 Rabies Post-Exposure Prophylaxis (RPEP)

Expert opinion recommends that if RPEP is indicated, it should not be delayed beyond 48 hours.

Based on the recommendation from CMOH, direction will be provided by YCDC to the primary HCP and the following will occur:

- YCDC will arrange transport of RPEP to communities or for the client to receive RPEP in another community ([Section 7.6](#))
- YCDC will provide the instruction sheet for the “Administration of Rabies Vaccine and Rabies Immune Globulin RPEP”, [Appendix B](#) and “Dosage by Bodyweight Protocol”, [Appendix C](#) to the primary HCP who will be administering the RPEP series.

As per all immunizing and Ig agents in Yukon, documentation of RPEP (Rabies Immune Globulin and/or Vaccine) will be entered into Panorama by the HCP. Where the administrator is not a provider in Panorama, YCDC will enter this information.

Note:

- The “Record of Rabies Vaccine and Rabies Immune Globulin Administration” form, [Appendix D](#) is intended to serve as a tool for health care providers in reminding and scheduling subsequent vaccinations for the client.
- See Yukon Immunization Manual for product information: Section 8, Biological Products for specific information on rabies immune globulin and rabies vaccine.  
[www.hss.gov.yk.ca/pdf/im\\_manual\\_section8.pdf](http://www.hss.gov.yk.ca/pdf/im_manual_section8.pdf)

RPEP is a series of 1 dose of rabies immune globulin given on day 0 and 4 doses of rabies vaccine, administered on days 0, 3, 7 and 14 for immunocompetent individuals. This is based on evidence that the most critical element of prophylaxis is the rapid administration of Rablg and the first dose of vaccine. In most cases, when this series is followed, rabies antibody levels reach > 0.5 IU/ml before the last vaccination thus providing adequate protection. **However, RPEP may be in the form of rabies immune globulin (Rablg) and rabies vaccine or vaccine alone, on direction of the CMOH.**

RPEP will be offered to exposed individuals, upon direction of the CMOH regardless of the elapsed interval since exposure. The longest incubation periods for rabies have been reported to be 6 years.

### 7.3 Administering Rablg

The purpose of Rablg is to give rapid short term protection until the vaccine-induced antibodies begin to appear within one week.

- Rablg (20 IU/kg body weight) is given on day 0 at the same time as the first dose of vaccine, or within 7 days of the first vaccination.
- Rablg should be infiltrated in every wound site. If necessary, it can be diluted with normal saline to ensure there is sufficient volume to infiltrate all wounds; if there is no obvious wound or there is too much Rablg to infiltrate the wound, any remaining Rablg should be administered IM at a site distal to the vaccination site.
- Large volumes of immune globulin for IM injection should be divided and injected at two or more sites (PHAC, 2013).
- For details on dosage and administration use the following resources:
  - Yukon Immunization Manual, Section 8, Biological products:  
[www.hss.gov.yk.ca/pdf/im\\_manual\\_section8.pdf](http://www.hss.gov.yk.ca/pdf/im_manual_section8.pdf)
  - Rabies PEP instruction sheet, [Appendix B](#) and the dosage sheet, [Appendix C](#).
  - Recommended maximum volume to be administered per site according to age see Immune Globulins Preparations (HBIG, Ig, TIg, Varlg, Rablg) page 28 from the BCCDC Immunization Manual, Section VII  
[www.bccdc.ca/NR/rdonlyres/528C4C20-F2F8-4333-9927-E8DC455A5E76/0/SectionVII\\_BiologicalProducts\\_October2014.pdf](http://www.bccdc.ca/NR/rdonlyres/528C4C20-F2F8-4333-9927-E8DC455A5E76/0/SectionVII_BiologicalProducts_October2014.pdf)

### 7.4 Administering Rabies Vaccine

Rabies vaccine contains inactivated virus and induces an active immune response beginning in 7 – 10 days.

- Is given on days 0, 3, 7 and 14. Every effort should be made to administer doses on time (PHAC, 2012). If the day falls on a weekend arrangements need to be made to maintain the recommended schedule.
- Rabies vaccine should be administered by the intramuscular route (IM), but not in the gluteal region. For details on dosage and administration see the Yukon Immunization Manual, Section 8 [www.hss.gov.yk.ca/pdf/im\\_manual\\_section8.pdf](http://www.hss.gov.yk.ca/pdf/im_manual_section8.pdf)

### 7.5 Special Considerations for RPEP Administration

#### 7.5.1 RPEP and Chloroquine

Chloroquine, an antimalarial, has been found to decrease the antibody response to rabies vaccine. As such, individuals taking chloroquine should receive Rablg (20 IU/kg body weight) on day 0 or within 7 days of the first vaccination and 5 doses of vaccine (1.0 ml IM) given on days 0, 3, 7, 14 and 28.

### **7.5.2 RPEP in Immunocompromised Persons**

- Immunocompromised individuals should receive Rablg (20 IU/kg body weight) on day 0 or within 7 days of the first vaccination and 5 doses of vaccine (1.0 ml IM) given on days 0, 3, 7, 14 and 28 (PHAC 2012).
- In immunocompromised individuals, serology should be checked 7-14 days after the series completion. If the titre is <0.5 IU/mL, give a second series of rabies vaccine; Rablg should not be repeated. (PHAC, 2012).
- If titres remain <0.5 IU/ml after a second series, next steps will be decided by the CMOH.

### **7.5.3 RPEP in Persons Immunized Against Rabies**

If a person has completed a course of rabies pre/post-exposure prophylaxis at any time in the past using a WHO approved rabies vaccine and schedule OR has had a rabies antibody titre  $\geq 0.5$  IU/mL in the past:

- Do not give Rablg
- Give 2 doses of rabies vaccine: on day 0 and on day 3

If a person has completed a course of rabies pre/post-exposure prophylaxis using a non-WHO approved vaccine or schedule, the individual should be managed as non-immunized.

- Give Rablg on day 0
- Give 4 doses of rabies vaccine: on day 0, 3, 7, and 14

### **7.5.4 RPEP started in other Countries**

When travelers are exposed to an animal in a rabies-enzootic country, they may be started on RPEP in that country.

Travelers who have been treated should try to obtain detailed, written information on the type of Rablg and vaccine they received, and the vaccination schedule. It would also be advisable to obtain a label of the biologicals they received. This will help determine the validity of the vaccine used which will be determined by CMOH and YCDC.

For various reasons, the RPEP received may not be adequate. In determining the value of biologicals administered overseas, a case by case assessment must be made by CMOH/YCDC. This includes:

- Assess the risk of rabies
  - Based on the rabies epizootology and WHO category of contact, where possible, as the risk of rabies exposure
- Assess whether regulated products and WHO-approved schedules were used, and administered via appropriate routes and sites. The list of WHO pre-qualified vaccines is found at:

[www.who.int/immunization\\_standards/vaccine\\_quality/PQ\\_vaccine\\_list\\_en/en/](http://www.who.int/immunization_standards/vaccine_quality/PQ_vaccine_list_en/en/)

- Review available information on the products used, dosage and route of administration from the client (e.g. written documentation such as product label, receipts and medical documents)
- Other sources (e.g. Internet, product monograph)
- Review the location of the medical assessment and RPEP provision (a developed region or country, a hospital, a clinic listed with the International Society of Travel Medicine, etc. are all more likely to use regulated products and approved schedules and to maintain cold chain)

If the RPEP series begun in another country is deemed valid by the MOH, continue the series in Canada.

In general, the local risk assessment and decision can be accepted unless there is overwhelming evidence to the contrary, as local health authorities are more likely to know the local rabies epidemiology.

If a WHO-approved vaccine series was started overseas, the series can be completed with another WHO-approved vaccine licensed in Canada (WHO, 2010). If the vaccine series was started using the ID route, it should be completed using the IM route. The opposite is not recommended. If a different, but WHO-approved dosing schedule was used overseas, attempt to continue with this schedule. If the schedule used is not WHO-approved, consider re-initiation of the series.

If no Rablg was administered, provide Rablg if within 7 days of first vaccine dose. If more than 7 days have passed since the first dose of vaccine, do not provide Rablg. In the latter case, there is no need to repeat vaccination and no need to test antibody titres.

If the validity of the RPEP series given or begun in another country is in question the CMOH may recommend serum for rabies antibody titres and start a new series of RPEP. Allow for at least one to two week turn around for lab results.

- If the titre returns an Ab level of  $\geq 0.5$  IU/mL and the client has had a complete series of vaccinations, the new series can be discontinued. If the titre is  $< 0.5$  IU/mL the series started in Canada should be completed.
- If the person has NOT received Rablg **and** less than 8 days have passed since the first valid vaccine, provide Rablg.
- If the person has NOT received Rablg **and** a NON-valid vaccine was administered, consider providing Rablg regardless of time elapsed since the first vaccine.
- If the person received Rablg of questionable validity, consider providing another dose of Rablg.

If a new exposure occurs and a previous RPEP or pre-exposure prophylaxis regime was given in the last 3 months, there may not be a need to repeat RPEP (SAGE 2017, Sudarshan 2011). This should be assessed on a case-by-case basis, taking into account the risk of rabies and the validity of the previous regime received. Wound washing is still required.



## 7.6 Release of Biologicals for Rabies Post-Exposure Prophylaxis (RPEP)

The Medical Officer of Health must authorize all releases of Rablg and/or rabies vaccine in Yukon.

Release of Rablg and/or Rabies Vaccine

Monday-Friday (0800-1600hrs):

- YCDC or assigned designate will phone the WGH pharmacy to request the urgent release of the products (request Rabies vaccine and Rablg) at (867) 393-8737.

After hours, statutory holidays and weekends:

- The CMOH or assigned designate will phone WGH Admitting and Discharge and request that the pharmacist on call be paged. Phone: (867) 393-8700. Depending on the situation, transportation of Rablg is feasible or whether it is preferable to have the client come to Whitehorse.

Administration Arrangements

Whitehorse:

- The administration of the initial dose of vaccine along with Rablg should occur in the WGH ER or as arranged by YCDC.
- WGH ER phone: (867) 393-8926
- Subsequent doses of vaccine will be arranged through YCDC. Potential sites include: YCDC, Whitehorse Health Centre or WGH ER.

Communities:

- Old Crow Health Centre has a stock of RPEP (Vaccine and Rablg).
- For all other communities YCDC will make arrangements to have RPEP sent as soon as possible to the community from WGH hospital, where the administration of RPEP will be done by the Primary Health Care Nurse, Community Health Nurse or Hospital Nurse/Physician at the health centre or hospital. If the initial dose is required on the weekend, a decision between the health centre nurse/attending MD, hospital and CMOH will be made as to whether transport of RPEP is feasible or whether it is preferable to have the client come to Whitehorse.

## 8.0 PRE-EXPOSURE RABIES IMMUNIZATION

Pre-exposure rabies immunization is elective and should be offered to persons at potentially increased risk of contact with rabid animals. Refer to the Yukon Immunization Program Manual, Section 8: Biological Products [www.hss.gov.yk.ca/pdf/im\\_manual\\_section8.pdf](http://www.hss.gov.yk.ca/pdf/im_manual_section8.pdf) for details regarding vaccine indications and administration.

## 9.0 CLINICAL PRESENTATION IN HUMANS and EPIDEMIOLOGY

**Clinical description:** The first signs of illness are non-specific and include fever, anxiety, and malaise. Often there is tingling and severe pruritus at the site of the animal bite. After 2 – 10 days, frank neurological signs appear, ranging from hyperactivity to paralysis. The disease is divided into encephalitic (“furious rabies”) and paralytic (“dumb rabies”) forms:

- In the encephalitic form, signs of irritation of the CNS predominate, including agitation, confusion, hydrophobia, aerophobia, hyperventilation, hypersalivation, priapism, and convulsions. After a few days to a week, the person may experience a stage of excitement that lasts only a few days before the person lapses into coma and death.
- The paralytic form of rabies differs in that the person does not experience a stage of excitement, but retreats steadily and quietly downhill, with some paralysis, to coma and death.

Once the virus enters the nervous system, treatment rarely affects the rapid progression to death. In 2004, a teenager who had not received RPEP developed rabies disease but survived following aggressive treatment (Willoughby, 2005). This is the only known instance of survival following disease.

**Incubation period:** After inoculation, the virus may persist and replicate at the inoculation site for hours to weeks before progressing to nerve endings at the site of the bite. As the virus does not travel through the bloodstream or lymph system, it does not readily induce an immune response prior to entering the nerves. Once the virus enters the nerves, it is virtually impossible to treat it. The virus slowly travels up the nerves to reach the CNS where it replicates and then disseminates through nerves to many body sites including the cornea, hair follicles, and salivary glands where there is further replication.

The incubation period is usually 3 – 8 weeks, rarely as short as a few days or as long as several years. The length of the incubation period depends on the severity of the wound, site of the wound in relation to the richness of the nerve supply and its distance from the brain, and the amount and strain of virus introduced, and other factors (Heymann, 2015).

**Infectious agent:** The rabies virus is a rhabdovirus belonging to the genus *Lyssavirus*.

**Mode of transmission:** Infection occurs by percutaneous introduction of the virus-laden saliva or cerebral spinal fluid of a rabid animal through a bite or scratch, or into a fresh break in the skin, or by contact with intact mucous membranes. Transmission has been reported through the transplantation

of organs taken from persons who died of undiagnosed rabies. Also, wild animals may bite and infect domestic animals which in turn may infect humans.

Airborne transmission has been reported in 2 instances in a laboratory setting, where there was significant aerosolization and possible lack of personal protection. Also, there have been 2 reports of rabies acquired in a bat infested cave attributed to aerosol transmission, but there is no proof in either case that a bite or wound contamination did not occur (Irons, 1957; Humphrey, 1960). No well-documented natural transmission of rabies by aerosols has occurred (Gibbons, 2002).

**Susceptible animals:** Rabies virus can cause acute encephalitis in all warm-blooded hosts, including pets, livestock, wildlife and humans, and the outcome is almost always fatal. Although all species of mammals are susceptible to rabies virus infection, only a few species are important as reservoirs for the disease, with bats and foxes being the most probable reservoirs in northern climates (Alaska Rabies Prevention and Control Manual, 2016). Skunks and raccoons are important vectors where they occur but they do not range through Yukon currently.

#### **Reservoirs:**

##### Yukon

At the time of writing this guideline, there have been no reports of human rabies in Yukon. From 1955 to 2004 there were 88 animal specimens submitted for laboratory testing. In the 1970s, there were four dogs, one cat and one fox head submissions which tested positive for rabies. There have been several high-suspicion animal submissions from the Yukon between 1999 and 2016, including a bat, bears, a cat, lynx, wolf, fox and dogs and one unspecified species. All tested negative. (Yukon Rabies Risk Management Guideline, 2015)

There have been no other rabies-positive animal results since 1975. Of note, Yukon conducts a rabies surveillance program for wild carnivore species. Rabies samples are collected from carnivores submitted to the Animal Health Unit through various channels. Over 200 wild carnivores have been tested for rabies since 2010 and all have tested negative but this number remains low and because rabies is such a significant disease, it is important to understand that it remains a risk in Yukon wildlife. (Yukon Rabies Risk Management Guideline, 2015)

##### Northwest Territories (NWT)

The arctic fox is the primary, permanent reservoir for rabies virus in the NWT and dogs (sled dogs) are the secondary reservoir. The virus has been found in red foxes, bears and caribou. Although there has never been a case of human rabies in the NWT, northern residents living in remote communities and leading traditional lifestyles that embrace hunting and trapping face a relatively high risk of rabies exposure. (Yukon Rabies Risk Management Guideline, 2015)

##### Alaska

Wildlife reservoirs for rabies in Alaska are red and arctic foxes. Rabies is enzootic (always present at a certain level) among the fox populations in northern and western coastal Alaska. Additionally, there

have been five bats from southeastern Alaska confirmed to have rabies. (Alaska Rabies Prevention and Control Manual, 2016)

#### British Columbia

In BC, bats are the only known reservoir. Over the past 10 years, approximately 4 to 8% of the BC bats submitted for testing each year have been shown to be infected (Kush J, CFIA, personal communication, 2010). Bats submitted for testing have a higher likelihood of being infected.

#### Canada

In other parts of Canada, bats, skunks, raccoons and foxes may be reservoirs.

Rabies is a fatal disease of mammals most often transmitted through the bite of a rabid animal. Monoclonal antibodies have revealed that there are distinct variants or strains of rabies virus. Some rabies variants occur within terrestrial wildlife reservoirs in geographically discrete regions. Virus transmission is primarily between members of the same species but there are exceptions. Outbreaks of arctic fox rabies have involved arctic foxes (*Alopex lagopus*), red foxes (*Vulpes vulpes*) and striped skunks (*Mephitis mephitis*) as active vectors (MacInnes et. al., 2001). Other rabies variants are found in many bat species without geographic boundaries. Several bat variants occur in a single bat species, and the geographical distribution of variants is overlapping. Spillover to terrestrial animals is observed frequently (WHO, 2004).

Although rabies virus can infect many animal species, each strain is perpetuated within populations of a certain species that acts as a viral reservoir. In Canada, rabies persists throughout most arctic regions with the arctic fox serving as the main host for this rabies virus variant. The arctic variant of the rabies virus has been present in the red fox populations in Ontario. (Nadin-Davis et. al., 2006). Bat rabies is found throughout Canada. In Canada, the big brown bat is the most commonly diagnosed species; other bats species include the little brown bat, the silver-haired bat, the hoary bat and the red bat (NACI, 2009).

#### Developing World

In the developing world, dogs are a major source of infection, responsible for up to 99% of rabies deaths (WHO, 2014).

In all geographic jurisdictions, squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice and other rodents, rabbits and hares are only rarely infected with rabies. They are not known to have caused human rabies in North America.

**Human epidemiology:** In Canada, there have been 23 human cases reported since 1924 and only 1 of these occurred in BC. Of the eleven cases that occurred since 1950, 6 were due to bat strain of rabies. Among them, a 25 year old male, Alberta resident was infected by a bat while in Alberta and died in BC in 1983, and a 60 year old male BC resident was infected by bat variant rabies virus in BC, and died in 2003 (DeSerres, 2008).

## 10.0 RECORDING AND REPORTING

Potential rabies exposures and the administration of Rablg and rabies vaccine are reported to monitor the occurrence of potentially rabid animal contacts, support rabies risk assessment, and monitor the utilization of RPEP in Yukon.

1. Complete [Form A](#) – Rabies Risk Investigation Form and fax to Environmental Health Services.
2. Record the administration of rabies vaccine and Rablg in Panorama as per data entry standards.

If a non-public health site (e.g. hospital) is administering the RPEP, YCDC should fax the “Record of Rabies Vaccine and Rabies Immune Globulin Administration” ([Appendix D](#)) to the person who will be administering the Rablg. Instruct this person to fax the completed record back to YCDC after the Rablg and vaccine has been administered. YCDC then enters the data in Panorama.

If the exposed client refuses RPEP or discontinues RPEP prior to completion, contact YCDC immediately.

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## 13.0 CONTACT INFORMATION

### Yukon Communicable Disease Control

Hours: Monday- Friday (08:30 to 16:30)  
#4 Hospital Road, Whitehorse, YT Y1A 3H8  
**Telephone:**  
Local (867) 667-8323  
Within Yukon 1-800-661-0408, ext. 8323  
**Fax:** (867) 667-8349

### Whitehorse General Hospital

(Ambulatory Care)  
#5 Hospital Road, Whitehorse, YT Y1A 3H7  
**Telephone:**  
(867) 393-8700  
**Fax:** (867) 393-8772  
**WGH Laboratory telephone:** (867) 393-8739

### Animal Health Unit

Dr. Mary VanderKop  
Chief Veterinary Officer  
#10 Burns Road, Whitehorse, YT, Y1A 3H8  
**Telephone:**  
Office: (867)667-5600  
Cell: (867)335-7339  
**Fax:** (867)456-6124

### Dr. Brendan E. Hanley MD CCFP (EM) MPH

Chief Medical Officer of Health, Yukon  
204 Lambert Street, 4<sup>th</sup> Floor, Whitehorse, PO  
Box 2703 (H-2)  
**Telephone:**  
Office: (867) 456-6136  
Cell: (867) 332-1160  
**Fax:** (867) 667-8349

### Environmental Health Services

Hours: Monday- Friday (08:30 to 16:30)  
#2 Hospital Road, Whitehorse, YT, Y1A 3H8  
**Telephone:**  
Office: (867) 667-8391  
**Fax:** (867) 667-8322



### 13.0 APPENDICES

#### Appendix A: Rabies Risk Investigation Form A

Date Reported: <input type="text" value="YYYY-MM-DD"/>		Health Care Provider: <input type="text" value="PLEASE PRINT NAME"/>		Phone: <input type="text"/>	
Location: (Medical Clinic/ER/Health Centre): <input type="text"/>					
Email: <input type="text"/>					
CLIENT INFORMATION –EXPOSED PERSON					
Name: <input type="text" value="LAST"/> <input type="text" value="FIRST"/>		DOB: <input type="text" value="YYYY-MM-DD"/>		Gender: <input type="text"/> YHCIP#: <input type="text"/>	
Address: <input type="text"/>			City or Community: <input type="text"/>		
Province/Territory: <input type="text"/>			Postal Code: <input type="text"/>		
Phone #: Home Work: <input type="text"/>		Cell: <input type="text"/>		Present Weight (kg): <input type="text"/>	
***** Thorough Completion of These Questions will Expedite Human Treatment and Animal Management *****					
1) Where did the exposure occur? <input type="checkbox"/> Yukon <input type="text" value="LOCATION/ADDRESS"/> <input type="text" value="CITY OR COMMUNITY"/>					
<input type="checkbox"/> Outside Yukon <input type="text" value="LOCATION/ADDRESS"/> <input type="text" value="CITY OR COMMUNITY"/>					
Date of exposure: <input type="text" value="YYYY-MM-DD"/> Time: <input type="text"/>					
2) Type of exposure: <input type="checkbox"/> Bite <input type="checkbox"/> Saliva –contact with non-intact skin or mucous membrane			Physical location of exposure on client <input type="checkbox"/> Head/Neck <input type="checkbox"/> Torso <input type="checkbox"/> Finger/Hand <input type="checkbox"/> Extremities <input type="checkbox"/> Mucosa Describe exact location: <input type="text"/> Describe severity of wound(s) if present: <input type="text"/>		
3) Client vaccinated against rabies? <input type="checkbox"/> No <input type="checkbox"/> Yes, date: <input type="text" value="YYYY-MM-DD"/> Vaccine type: <input type="text"/> Proof of vaccination? <input type="checkbox"/> No <input type="checkbox"/> Yes					
ANIMAL INFORMATION / IDENTIFICATION					
4) Type of animal involved: Domestic <input type="checkbox"/> Dog <input type="checkbox"/> Cat <input type="checkbox"/> Ferret <input type="checkbox"/> Livestock <input type="checkbox"/> Other <input type="text"/>					
<input type="checkbox"/> Household pet -indoor <input type="checkbox"/> Household pet - outdoor <input type="checkbox"/> Stray					
Wild <input type="checkbox"/> Bat <input type="checkbox"/> Fox, Arctic Fox, <input type="checkbox"/> Red <input type="checkbox"/> Other <input type="text"/>					
Description of animal (e.g., species, colour, size): <input type="text"/>					
5) If a domestic animal, is the identity of the owner known? <input type="checkbox"/> No <input type="checkbox"/> Yes					
<input type="text" value="NAME"/> <input type="text" value="ADDRESS"/> <input type="text" value="PHONE"/>					
6) If a domestic animal, is it vaccinated against rabies? <input type="checkbox"/> No <input type="checkbox"/> Yes, date: <input type="text" value="YYYY-MM-DD"/> Vaccine type: <input type="text"/> Proof of vaccination? <input type="checkbox"/> No <input type="checkbox"/> Yes					
7) Is the animal showing clinical signs consistent with rabies? (see reverse) <input type="checkbox"/> No <input type="checkbox"/> Yes, consistent with # <input type="text"/>					
8) Was the exposure: <input type="checkbox"/> Unprovoked or <input type="checkbox"/> Provoked (see reverse for examples), consistent with # <input type="text"/>					
Description of exposure: <input type="text"/>					
9) Where is the animal located now? <input type="checkbox"/> Alive <input type="checkbox"/> Dead <input type="checkbox"/> Unknown					
Description of location: <input type="text"/>					
Fax this form to Environmental Health Services at (867) 667-8322					
Advise the client that they may be contacted by Environmental Health Services & the Chief Medical Officer of Health					
Information is collected under the authority of the Health Act and the Public Health & Safety Act for purposes of providing health services and public health services. Queries should be directed to the Manager of Yukon Communicable Disease Control, at (867) 667-8323 or toll free, at 1-800-661-0507.					

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CLINICAL SIGNS CONSISTENT WITH RABIES
<p>Is (did) the animal showing clinical signs consistent with rabies?  <i>(record all that are applicable under question 7 on the front of this form)</i></p> <ol style="list-style-type: none"> <li>1. Inability to swallow, slack jaw, drooling, foamy saliva</li> <li>2. Staggering, walking without purpose, partial paralysis, weakness</li> <li>3. Atypical vocalizations; change in voice tone; excessive vocalizations</li> <li>4. Change in mental state either agitated/aggressive or depression</li> <li>5. Rapid progression of clinical illness, especially weakness to paralysis</li> <li>6. Unprovoked, sustained aggression that is 'mindless' and intense</li> <li>7. Confusion wandering aimlessly; excessive boldness</li> <li>8. Behaviour not typical of the species (e.g., nocturnal animals out in daytime)</li> </ol>
DEFINITIONS - PROVOKED AND UNPROVOKED EXPOSURE
<p><b>Provoked exposure:</b> A provoked exposure (attack) is one where the human did something to "provoke" the animal (even if the action was unintentional) and the attack would be the animal's normal response to such a human action. Examples include: <i>(record all that are applicable under question 8 on the front of this form)</i></p> <ol style="list-style-type: none"> <li>1. Attempting to corner or trap an animal</li> <li>2. Entering an area that the animal considers its territory</li> <li>3. Approaching an animal's litter</li> <li>4. Coming too close to an injured animal</li> <li>5. Coming between two fighting animals</li> <li>6. Picking up an animal or petting an unfamiliar animal</li> <li>7. Interfering with an animal's food</li> <li>8. Interfering/wrestling with an animal's owner</li> <li>9. Teasing an animal</li> </ol> <p><b>An unprovoked exposure</b> is one where the person did not surprise, antagonize or threaten the animal or enter its territory.</p> <p>Note: when the circumstances are in doubt, an exposure is always classified as being unprovoked.</p>
COMMENTS / NOTES

additional notes and/or documents attached



**Appendix B: Rabies PEP Instruction Sheet**

(YCDC to complete and forward to administering HCP)

**Instructions for the Administration of Rabies Vaccine and Rabies Immune Globulin**

Dear Physician/Nurse: \_\_\_\_\_ Date: \_\_\_\_\_  
 (yyyy/mm/dd)  
 Re: \_\_\_\_\_ D.O.B: \_\_\_\_\_  
 (yyyy/mm/dd)

The following outlines the protocol for rabies post-exposure prophylaxis (RPEP). RPEP consists of a series of rabies vaccine and one dose of rabies immune globulin. See Yukon Immunization Guideline for additional information for these products.

**RABIES IMMUNE GLOBULIN (Rablg) - given if not previously immunized against rabies:**

**Series:** A single dose of Rablg is given as soon as possible after exposure (day 0) for those who have not been previously immunized against rabies.

**Dose:** The dose of rabies immune globulin is calculated based on weight in kilograms. The calculated volume should not be exceeded because of possible interference with active antibody production.

**The dose of Rablg (in ml) is calculated as:**

$$\frac{[20 \text{ (IU/kg)} \times \text{Weight (kg)}]}{150 \text{ IU/ml}}$$

We have calculated Rablg dose for this client to be \_\_\_\_\_ ml, using \_\_\_\_\_ kg as the weight. You have been shipped \_\_\_\_\_ vials of Rablg (each vial contains 2 ml).

The client's weight should be confirmed prior to Rablg administration.

**Site: Infiltrate as much Rablg as possible deep into and around the wound(s) in order to neutralize the virus.** Inject the remaining amount intramuscularly (IM) in the ventrogluteal area (in those > 7 months of age) or in the vastus lateralis. When more than one wound site exists, each should be locally infiltrated with a portion of the Rablg using a separate syringe and needle for each infiltration. If there are extensive wounds, where the calculated dose of Rablg (by weight) is not adequate in volume to infiltrate all wounds, dilute the Rablg 2-3 fold in normal saline to create an adequate volume to infiltrate all wounds. When there is no wound site, the Rablg should be given IM in the ventrogluteal site (in those > 7 months of age) or in the vastus lateralis. The deltoid should not be used for rabies immune globulin administration. Both deltoid sites should be reserved for the administration of rabies vaccine. **Under no circumstances should rabies immune globulin be administered in the same syringe or at the same site as rabies vaccine.**

**RABIES VACCINE:**

**Person not previously immunized for rabies:** Give the first dose of rabies vaccine as soon as possible after exposure (day 0). Give subsequent doses on **days 3, 7 and 14** after the first dose given on day 0. A fifth dose on day 28 should be given for immunocompromised individuals and those on chloroquine.

**Dose: Each dose is 1 ml intramuscularly (IM).**

**Site:** Vaccine should be administered into the vastus lateralis for infants less than 12 months of age and into the deltoid muscle for children ≥12 months of age and adults (**never in the gluteal region**).

**Person previously immunized for rabies:**

- Refer to section 7.5.3 of Rabies Guidelines
- Consult Yukon Communicable Disease Centre or Chief Medical Officer of Health (see Below)

**TETANUS:**

Tetanus is also an important consideration and the opportunity to update tetanus-diphtheria immunization should not be missed.

**QUESTIONS:** If you have any further questions, please contact Yukon Communicable Disease Centre at: 867-667-8323, or the Chief Medical Officer of Health at: 867-456-6136, on call after hours at: 867-332-1160.



**Appendix C: Rabies Immune Globulin (Rablg) Dosage by Bodyweight**

**Rabies Immune Globulin (Rablg) Dosage by Bodyweight**

Rablg: 1 vial = 2 ml = 300 IU

Dose (ml):  $20(\text{IU per kg}) \times \text{wt (kg)} / 150(\text{IU per ml})$

Infiltrate as much Rablg as possible deep into and around the wound(s) in order to neutralize the virus. Inject the remaining amount intramuscularly (IM) in the ventrogluteal area (in those > 7 months of age) or in the anterolateral thigh. When more than one wound site exists, each site should be locally infiltrated with a portion of the Rablg using a separate syringe and needle for each infiltration. If there are extensive wounds, where the calculated dose of Rablg (by weight) is **not** adequate in volume to infiltrate all wounds, dilute the Rablg 2-3 fold in normal saline to create an adequate volume to infiltrate all wounds. When there is no wound site, the Rablg should be given IM in the ventrogluteal site (in those > 7 months of age) or in the anterolateral thigh.

Rablg should not be given in the deltoid. Both deltoid muscles should be reserved for the administration of rabies vaccine.

***Do not exceed the recommended dose***

**POST-EXPOSURE RABIES VACCINE :**

**Not previously immunized:**

- 1 ml IM days 0,3,7,14 (Rablg on day 0) for immunocompetent
- 1 ml IM days 0,3,7,14,28 (Rablg on day 0) for immunocompromised and those on chloroquine

**Previously immunized:**

- Refer to ( ) in persons previously immunized against rabies

Weight (pounds)	Weight (Kg)	Dose (IU)	# of vials	Dose (ml)
10	4.5	91	1	0.6
12	5.4	109	1	0.7
15	6.8	136	1	0.9
20	9.1	181	1	1.2
22	10.0	200	1	1.3
25	11.3	227	1	1.5
30	13.6	272	1	1.8
35	15.9	318	2	2.1
40	18.1	363	2	2.4
45	20.4	408	2	2.7
50	22.7	454	2	3
55	24.9	499	2	3.3
60	27.2	544	2	3.6
65	29.5	590	2	3.9
70	31.8	635	3	4.2
75	34.0	680	3	4.5
80	36.3	726	3	4.8
85	38.6	771	3	5.1
90	40.8	816	3	5.4
95	43.1	862	3	5.7
100	45.4	907	3	6
105	47.6	953	4	6.4
110	49.9	998	4	6.7
115	52.2	1043	4	7
120	54.4	1089	4	7.3
125	56.7	1134	4	7.6
130	59.0	1179	4	7.9
135	61.2	1225	5	8.2
140	63.5	1270	5	8.5
145	65.8	1315	5	8.8
150	68.0	1361	5	9.1
155	70.3	1406	5	9.4
160	72.6	1452	5	9.7
165	74.8	1497	5	10
170	77.1	1542	6	10.3
175	79.4	1588	6	10.6
180	81.6	1633	6	10.9
185	83.9	1678	6	11.2
190	86.2	1724	6	11.5
195	88.5	1769	6	11.8
200	90.7	1814	6	12.1
205	93.0	1860	7	12.4
210	95.3	1905	7	12.7
215	97.5	1950	7	13
220	99.8	1996	7	13.3
225	102.1	2041	7	13.6
230	104.3	2087	7	13.9
235	106.6	2132	8	14.2
240	108.9	2177	8	14.5
245	111.1	2223	8	14.8
250	113.4	2268	8	15.1



**Appendix D: (OPTIONAL worksheet for Facilities) Record of Rabies Vaccine and Rabies Immune Globulin Administration**

Information must be entered into Client's Electronic Public Health Record (Panorama) For facilities without Panorama Access please fax completed to YCDC.

Once RPEP series is completed please Fax this record to YCDC at 867-667-8349

**CLIENT INFORMATION**

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Gender: ( ) YHCIP# \_\_\_\_\_  
Last First YYYY-MM-DD

Address: \_\_\_\_\_ City or Community: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone Numbers: Home: \_\_\_\_\_ Work: \_\_\_\_\_ Cell: \_\_\_\_\_ Message: \_\_\_\_\_

RABIES VACCINE			
<b>Dose 1:</b> (day 0)	Due: _____ <small>YYYY-MM-DD</small> Given: _____ <small>YYYY-MM-DD</small>	Lot #: _____ Site: _____	#1 _____ <small>(Provider)</small>
<b>Dose 2:</b> (day 3)	Due: _____ <small>YYYY-MM-DD</small> Given: _____ <small>YYYY-MM-DD</small>	Lot #: _____ Site: _____	#2 _____ <small>(Provider)</small>
<b>Dose 3:</b> (day 7)	Due: _____ <small>YYYY-MM-DD</small> Given: _____ <small>YYYY-MM-DD</small>	Lot #: _____ Site: _____	#3 _____ <small>(Provider)</small>
<b>Dose 4:</b> (day 14)	Due: _____ <small>YYYY-MM-DD</small> Given: _____ <small>YYYY-MM-DD</small>	Lot #: _____ Site: _____	#4 _____ <small>(Provider)</small>
<b>Dose 5:</b> (day 28)	Due: _____ <small>YYYY-MM-DD</small> Given: _____ <small>YYYY-MM-DD</small>	Lot #: _____ Site: _____	#5 _____ <small>(Provider)</small>

(dose 5 needed only if immunocompromised and those on chloroquine or other antimalarials).

**RABIES IMMUNE GLOBULIN**

Date administered: \_\_\_\_\_  
YYYY-MM-DD

Lot #(s): \_\_\_\_\_

Provider: \_\_\_\_\_

(dose 5 needed only if immunocompromised and those on chloroquine)