INTERIM Guidelines on Post-exposure Assessment and Treatment of Rabies-prone Exposures (July 2025)

The HSE: National Health Protection Office wishes to acknowledge that this document is based on and adapted from Public Health Scotland's *Rabies: guidance on pre-exposure and post-exposure measures for humans in Scotland* and draws upon UKHSA's *Guidelines on managing rabies postexposure (January 2023)*.

Contents

Document history

Version	Date	Summary of Updates
1.0	1/7/2025	Initial version

This guidance document, although based on best available evidence on the safe management of rabies post-exposure prophylaxis, remains Interim until it has been signed off by the National Health Protections Office's Health Protection Advisory Committee - Infectious Diseases (HPAC-ID).

1. Background

1.1 Rabies is a viral infection that results in acute encephalitis. The natural reservoirs of rabies virus are primarily carnivores and bats, but almost all mammals, including humans, are susceptible to rabies infection. All mammals, once infected with rabies, invariably die from the disease (with the possible exception of vampire bats). Similarly, in humans, rabies is invariably fatal once symptoms develop.

1.2 Rabies is caused by members of the *Lyssavirus* genus, of which there are 17 species. The most important species - from the perspective of human infection - are Rabies virus (*Lyssavirus rabies* – RABV) responsible for 'classical' rabies seen primarily in terrestrial animals, European bat lyssaviruses (EBLV-1 and EBLV-2), and to a lesser extent Australian bat lyssavirus (ABLV). All members of the *Lyssavirus* genus have clinical presentations and severity profiles that are indistinguishable.

1.3 Rabies virus is readily excreted in the saliva of infected animals, and transmission occurs either by salivary inoculation via bites or scratches to the skin, or salivary contamination of exposed mucous membranes, especially those of the eyes and mouth. Rabies virus has been detected in the bladder epithelium of infected bats; consequently; bat urine is therefore considered theoretically infectious and capable of transmitting infection following contact with exposed mucosal surfaces or across breached skin. The risk of direct transmission of rabies from infected bat urine is probably extremely low, but direct urine contamination may be considered a proxy for close contact warranting a precautionary approach to management. Other mammalian body fluids such as faeces and blood are considered minimal risk and therefore contact with such fluids – in the absence of direct physical contact with a bat - is not considered hazardous.

1.4 Documented cases of rabies have arisen from organ transplantation, during aerosol exposure while spelunking (cave exploration) and laboratory accidents. Fomite transmission of rabies has not been reported. Person to person transmission is extremely rare and appears only to occur in the context of organ transplantation.

1.5 Each year, rabies causes at least 60,000 deaths globally, most especially in Asia and Africa where 95% of human deaths occur. India is considered to have the highest levels of rabies with an estimated 20,000 deaths annually.

1.6 Rabies is preventable if the potential **rabies-prone exposure (RPE)** is identified and treated early and aggressively, with **post exposure treatment (PET)** using

rabies vaccine, with or without human rabies immunoglobulin (HRIG). Because of its cost, a number of counties in Asia, Africa and South America may use rabies equine/horse immunoglobulin (ERIG) instead of HRIG, as ERIG can be produced at a fraction of the cost of HRIG. The WHO considers HRIG and ERIG to be equally efficacious. PET is highly effective in preventing disease if given correctly and early. **Previous rabies immunisation (for travel or occupational purposes) provides only partial protection against rabies.**

1.7 Approximately 120 potential RPEs require assessment in Ireland each year, following exposure to:

- **Domestic dogs** (and to a lesser extent cats, and foxes) encountered overseas (these represent the great majority - >95% - of exposures),
- **Bats**, in Ireland, and very occasionally, in the UK (these represent less than 3-5% of exposures), and
- **Imported animals** from endemic countries (these exposures are rare).

1.8 People travelling to rural areas in endemic countries, especially in areas with large numbers of stray domestic dogs are at highest risk of exposure. In endemic countries, children (boys more than girls) are four times as likely as adults to develop rabies - they are more likely to be bitten and less likely to report it.

1.9 **The UK Health Security Agency maintains an up to date country rabies risk ranking for terrestrial animals.**[1] This is the **definitive source of rabies risk information for every country in the world and is used throughout this document**.

1.10 *Infectious period:* this has been reliably described in dogs. Infectiousness usually begins 3-10 days before clinical onset and persists until death. The infectious period in bats is not known.

1.11 *Incubation period*: for rabies virus infection in humans is 5 days to several years (usually 2-3 months, rarely more than 1 year). The length of the incubation period depends on many factors including wound severity, wound location in relation to nerve supply, proximity to the brain, size of inoculum and the degree of protection provided by previous vaccination, use of PPE, clothing and other host factors.

[1] NB: UKHSA's Country Rabies Risk ranking relates **only** to terrestrial animals. There is no country anywhere in the world that is 'No Risk' for bat exposure (See Section 2.2.4)

2. Sources of Rabies

2.1 Terrestrial Animals

2.1.1 All mammals are susceptible to rabies so should be considered potentially a risk. Domestic dog bites (including domesticated stray dogs) account for 95% of rabies infections in humans worldwide. Human rabies cases have occasionally occurred as a result of bites/scratches from cats, mongooses, jackals, foxes, wolves and other carnivorous animals.

2.1.2 Monkeys and rats rarely transmit rabies to humans although bites or scratches from these animals still require assessment. Rabid monkeys tend to die very quickly.

2.1.3 Herbivores such as cattle can also transmit rabies although this is more likely to be through contact with saliva. Experimentally birds have been shown to become infected but do not develop disease. Reptiles do not carry rabies.

2.1.4 Viral shedding generally occurs in the later or terminal phases of infection, although dogs and cats shed rabies virus in their saliva before symptoms have developed. Infected animals will frequently behave abnormally, but normal behaviour is not necessarily a guarantee of non-significant risk.

2.1.5 The last case of animal rabies in Ireland was in 1903, and since then Ireland has been considered free of rabies in terrestrial animals.

2.2 Bats

2.2.1 Tropical and subtropical bats are well recognised reservoirs for rabies. In 1996, European bat 2 lyssavirus (EBLV-2) was first identified in Daubenton's bats (*Myotis daubentonii*) in Great Britain (GB). Since then, authorities in GB identify about two Daubenton's bats infected with EBLV-2 each year. EBVL-2 is, therefore, considered endemic in the GB's Daubenton's population. In 2002, an unvaccinated bat handler died of rabies following unprotected exposure to a Daubenton's bat in Scotland.

2.2.2 In 2018, European bat 1 lyssavirus (EBLV-1) was detected for the first time in serotine bats (*Eptesicus serotinus*) in southern England. A soprano pipistrelle (*Pipistrellus pygmaeus*) tested positive for lyssavirus antigen in 2020 in the UK, but there was insufficient RNA to type the virus.

2.2.3 Daubenton's bats are native to Ireland and given the potential for their movement between Great Britain and Ireland, the assumption is that Irish Daubenton's bats (at a minimum) are infected with EBLV-2. As there is not enough information about the likelihood of pipistrelle bats – the commonest

bat species in Ireland - being infected with EBLV-2 in the UK or Ireland, this species must be assumed to pose a risk of rabies as well. Serotine bats are not native to Ireland. For the above reasons, **all bats in Ireland – regardless of species - must be assumed to pose a potential risk of rabies**.

2.2.4 **Moreover, bats, anywhere in the world, are considered to pose a potential risk of rabies. As a result, no county in the world is considered 'No Risk' for bat-borne rabies.** Any individual who has a potential RPE involving a bat, whether in Ireland, the UK or anywhere else in the world should be rapidly assessed for the necessity for PET, and any reported bat exposure should be treated, whether the skin is visibly broken or not. As bats anywhere in the world may carry Lyssaviruses, the country where the potential RPE occurred will not affect the decision as to whether to give PET.

2.2.5 It is important to remember that although infected bats are more likely to behave abnormally, Lyssavirus infected bats can be apparently healthy. Therefore, the bat's state of health or observed behaviour does not form part of the risk assessment in determining the need for PET.

2.2.6 Bats in Ireland and the UK are protected species and cannot be euthanised to determine their rabies status. If the bat has died, laboratory investigation may help confirm rabies infection. If testing of bats is undertaken, commencement of PET must begin regardless – **PET must never be delayed pending results of any animal testing.**

2.3 Non-indigenous animal species

2.3.1 If there are concerns about a potential RPE in Ireland or the UK involving a terrestrial mammal or bat, in a zoo or similar centre, or one that has been imported, then categorisation of exposure will involve an assessment of the animal involved, including country of origin, where it was bred, its vaccination history and the results of any postmortem examination. Contact regional and Public Health for advice.

2.3.2 For further information, see HPSC Rabies website.

3. Purpose and scope

3.1 The aim of this document is to provide a practical guide to undertaking a clinical and public health risk assessment of potential RPEs and the correct use of PET. It is intended for clinicians in Emergency Medicine, Infectious Diseases, Clinical Microbiology, and Primary Care, as well as Public Health and other health professionals who may be involved in the assessment and management of RPEs. Please refer to the Pathway for potential rabies exposure risk

assessment and Post Exposure Treatment (PET), for patients (adults and children) who present to primary care or the Emergency Department, local protocols for accessing vaccine and immunoglobulin as appropriate.

3.2 Requests for clinical and public health advice on a suspected case of human rabies or for pre-exposure vaccine are outside the scope of this document:

1. Suspected case of clinical rabies. This is most likely to be reported from hospital. Immediate advice should be sought from the National Isolation Unit and the National Virus Reference Laboratory. Regional and National Health Protection should be informed as a matter of urgency.
2. Pre-exposure prophylaxis is dealt with in NIAC Rabies Guidelines:
    a. Prior to travel – this should be referred to GPs providing this service and Travel Medicine specialists who are providing a travel vaccination service
    b. Where potential for Occupational exposure to *Lyssavirus* – this should be accessed through an individual's employer.

4. Post-exposure assessment

- In Ireland, the majority of significant potential RPEs occur as a result of exposure to a terrestrial animal (primarily domestic/tame/stray dogs) overseas. Uncommonly exposure is to a bat in Ireland/UK and rarely exposure is to an imported dog other animal. Individual risk assessment of potential RPEs should be undertaken rapidly, so that post-exposure treatment (PET) can be initiated if required. The medical response to potential rabies exposure becomes increasingly urgent the longer the interval between exposure and presentation.

- PET should be started promptly, as soon as possible after a potential RPE has been identified. Treatment can be initiated, and further advice sought from appropriate experts the next day (but ***not*** in instances as indicated the bullet point below).

- **The exception to the above are bite wounds to the head and neck, where there is a danger of rapid transfer/inoculation of virus into cranial nerves which require immediate referral and expert surgical, infectious disease and virological assessment**.

4.1 General principles

4.1.1 The following general principles should guide management of potential RPEs:

- **Immediate Identification**: Rapid recognition of a potential RPE exposure is essential to initiate timely PET and prevent death.
- **Immediate Risk Assessment**: ideally on day of presentation and always within 24 hours of presenting. An immediate risk assessment should be

carried out regardless of the amount of time which has elapsed since the reported potential RPE. ***The incubation period for rabies in humans can be as long as many years.***

- **Immediate wound toilet** (see 4.2).
- The risk assessment must consider the 1) **type of exposure**, **2) animal species** involved, **3) country of exposure**, and **4) wound severity.**
- Any assessment and management should be based on the detailed history, being proportionate to the risk but where **data are unclear/uncertain then, practitioners should err on the side of caution and adopt a precautionary approach** in deciding management.
- Post-exposure management should **commence as soon as possible after exposure,** ideally immediately on presentation but **always within 24 hours of presenting**. If indicated, HRIG should be commenced at the same time as vaccine, and **never more than 7 days after commencing vaccine** due to potential interference with vaccine mediated immune response.
- **PET Delay and Contraindications**:
    - Rabies vaccine should never be delayed or withheld, regardless of whether or not HRIG is available.
    - If a course of PET has already been commenced and there is concern about possible delay in vaccination, refer to *Risk Assessment for Patients who have commenced Rabies PET in Another Country* here.
    - Because of the life-threatening risk due to rabies, there are no contraindications to the administration of HRIG.
    - In general, there are no contraindications to rabies vaccine. If this is a possibility, urgent seek expert opinion.

4.1.2 **Post-exposure management** consists of:

- immediate **wound care** (if there is a wound) and
- **risk assessment for appropriate PET**. PET comprises active immunisation with rabies vaccine, with or without passive immunisation with HRIG.
- HRIG is indicated for individuals who have had a high-risk exposure (see Section 4.3.8 on Composite Risk Rating below) and are not previously fully vaccinated. HRIG is not indicated if more than seven days have elapsed since commencement of active PET immunisation.

4.2 Wound care

The first step in managing a potential RPE should be immediate wound care, if appropriate:

- **Wound washing is the most effective immediate first-aid treatment against rabies.**
- It is recommended that for all patients with a potential acute/recent RPE, the wound, or site of exposure (including mucous membranes) should be cleaned immediately and thoroughly with soap or detergent and flushed with

running water for 10–15 minutes. A virucidal agent such as povidone-iodine solution or 40–70% alcohol should be applied, and the wound covered with a simple dressing. Mixing of disinfectant and soap should be avoided.

- When irrigating mucous membranes that have been exposed (e.g. eyes, nose, mouth) wash thoroughly with clean water as soon as possible.
- Primary suture may cause further damage to the wound and may increase the risk of inoculation of rabies virus into the nerves. It should be avoided or postponed where possible.
- Tetanus prophylaxis and measures to control bacterial infection should be administered as indicated.
- Occasionally a patient may present with a history of previous exposure/wound which has healed but will still need post-exposure assessment.
- In the case of a Category 3 exposure (see Section 4.3.7) in in those not fully vaccinated, HRIG should be infiltrated into the depth of the wound and around the wound.

4.3 Post-exposure risk assessment

4.3.1 The risk assessment to determine necessity for PET is based on information obtained from a detailed clinical history from the patient. Following this detailed history the following are ascertained:

- How long ago the exposure occurred
- The category of exposure, based on a) the animal[2] and b) the severity of the exposure (Table 1).
- A composite rabies risk (CRR) based on the category of exposure and the country in which the potential RPE occurred (or country or origin of the animal) (Table 2).
- On the basis of the latter estimate, and the patient's previous history of rabies vaccination, one can then decide how best to manage the patient (Table 3).

4.3.2 About 80% of patients requiring rabies PET in Ireland, will have already been assessed and commenced on treatment in the country of exposure, and will require completion of their course of PET. For management of these patients, please refer to the guidance document *Risk Assessment for Patients who have commenced Rabies PET in Another Country* available here.

[2] This may require liaison with veterinary colleagues (private/DAFM veterinary practitioners and animal laboratory staff)

4.4 Clinical history

4.4.1 The following are the minimum data that should be collected, as completely as possible for each individual with a potential RPE (please use the RPE Management Form available here):

- **Patient Core Details**:[3] demographic and clinical details of the patient, ability to provide/recount reliable history.
- **Date of exposure**: how long ago was the potential RPE?
- **Country of Exposure**: **risk categorisation for terrestrial animals** (Ireland and the UK are **no risk** for **indigenous** terrestrial animal exposures but **low risk for all bat exposures**)
- **Animal of exposure:**
    - *Species*: a key distinction in in identifying whether exposure was to a terrestrial animal or a bat - terrestrial animal exposures and bat exposures are managed differently.
    - *Behaviour*: for terrestrial mammals, unprovoked bites carry a higher risk of rabies compared with bites resulting from provocation.
    - *State of health*: any information on the health of an animal, including results of laboratory tests and vaccination status are useful. In the case of dogs and cats, where it is possible to observe the suspect animal, and a period of 15 days elapses without the development of abnormal behaviour, then any PET that has been started may be stopped. Bites from previously vaccinated animals still need to be risk assessed unless there is documented evidence of both current vaccination status and immunity in the animal concerned.
    - *Number of people potentially exposed*: it may be necessary to determine this if the possibility exists that a number of people were exposed to/attacked by the suspected animal.
- **Nature of exposure including:**
    - The presence, or otherwise of a breach in the patient's skin
    - Whether any breach was caused by a bite or a scratch
    - If there was a single wound, or multiple lacerations
    - If, in the absence of a wound, the saliva from the animal could have come in contact with the patient's mucous membranes

  Important:
    - Bites and scratches on the head, neck, face, hands and genitals are high risk exposures because of the rich innervation of these areas.
    - Head and neck bites and scratches, as well as those in other areas where rabies virus is inoculated directly into nerve tissue (most especially cranial nerves), may have a short, or very short incubation period (down to as few as 4-5 days).
- **Patient's immune/vaccination status:**
    - Has the patient received a full course of rabies vaccine? Do they have a well-documented appropriate course of PrEP or PET or a recent

[3] This must be collected for all exposed individuals if a cluster of individuals have been exposed

documented rabies antibody titre of at least 0.5 IU/ml?[4] If in doubt patients should be managed as if they were not fully vaccinated.

- If the patient is not fully vaccinated, it is important to establish whether:
  - they have never received PrEP, or
  - they have received incomplete/inadequate PrEP which may include having been started on PET in another country as a result of the potential RPE
- Is the patient immunosuppressed? If yes, specialist advice should be sought as they might require specialist clinical care. (See NIAC Immunisation Guidelines Chapter 3).

[4] NVRL will arrange referral of human blood/serum to the APHA laboratories in Weybridge, Surry UK

4.5 Category of exposure

4.5.1 Category of exposure is determined separately depending on whether the exposure was to 1) a terrestrial animal overseas (or to an imported terrestrial animal in Ireland/UK) or 2) a bat, given differences in the way risk is assessed for terrestrial animals and bats.

Table 1 Category of Exposure

Category	Terrestrial mammals	Bats
1	**No physical contact with saliva** For example: • touching, stroking, or feeding animals • Animal licks on intact skin • Exposure to animal blood, urine or faeces	**No direct physical contact with bat's saliva or urine (NB when there is a reliable exposure history)** For example: • touching a dead bat • touching a bat where the person was protected by a barrier capable of preventing saliva contact, such as a boot, shoe, or appropriate protective clothing
2	**Minimal contact with saliva, with no evidence of transdermal inoculation or mucosal exposure** For example, suspected salivary contamination via: • Bruising or abrasions/ scratches without bleeding • Nibbling uncovered skin • licks to broken skin (e.g. over insect bites or scratches) • bites which do not break the skin	**Uncertain or potentially unrecognised physical contact (i.e. no observed direct physical contact as above but where it may have occurred).** For example: • handling a live bat without appropriate protective clothing (e.g. gloves) • A bat becoming tangled in hair • Anyone (adult or child) who wakes to find a bat in the room (in Ireland/UK or elsewhere in the world) • Potential contact with a bat in Ireland or the UK in someone who is unable to give an accurate history of an exposure (that is, intoxicated individual, younger child, individual with mental impairment)
3	**Direct contact with saliva** For example: • Cuts / lacerations • bites that break the skin • contamination of mucous membranes with saliva (for example, licks)	**Direct physical contact with bat's saliva or urine** For example: • all bites or scratches • contamination of mucous membrane with saliva or urine

4.6 Composite Rabies Risk (CRR)

4.6.1 The CRR is estimated using the exposure category estimated above (Table 1) along with a combined country/animal risk (Table 2); estimated by using information on the country in which the potential RPE occurred and the mammal species using UKHSA Rabies risks in terrestrial animals by country table.[5]

4.6.2 These two estimates are used to define the CRR as green, amber or red and therefore what level of PET is indicated.

Table 2: Estimation of CRR

Combined Country/ Animal risk	Category 1 exposure	Category 2 exposure	Category 3 exposure
No risk[§]	Green	Green	Green
Low risk	Green	Amber	Amber
High risk	Green	Amber	Red
Confirmed rabid animal*	Green or amber	Red	Red

[§] **NB**: No risk refers to countries that have no risk for terrestrial rabies – all countries are at least **low risk** for bat rabies

* Urgent advice should be sought from the Public Health who will work with DAFM in the assessment and managing the incidents.

4.6.3 The CRR ranks exposures into one of three risk levels, green, amber or red. PET is administered on the basis of the risk ranking, taking into consideration the assessed level of immunity/immunosuppression of the patient.

[5] **NB:** The UK and Ireland are currently classified as 'No risk' for terrestrial animal rabies, but 'Low risk' for bat rabies. There is no country in the world that is considered 'No risk' for bat rabies.

Table 3: PET Recommendations based on CRR

CRR (based on Table 2)	Non-immunised	Partially immunised[a, b]	Fully immunised	Immunosuppressed[6]
Green	None	None	None	None
Amber	4 doses of vaccine on days 0, 3, 7, 14-28	4 doses of vaccine on days 0, 3, 7, 14-28	2 doses of vaccine days 0 and 3	HRIG[c] and 5 doses of vaccine on days 0, 3, 7, 14 and 28[d]
Red	HRIG[c] and 4 doses of vaccine on days 0, 3, 7 and 14-28	4 doses of vaccine on days 0, 3, 7 and 14-28	2 doses of vaccine days 0 and 3	HRIG[c] and 5 doses of vaccine on days 0, 3, 7, 14 and 28[d]

Notes:

a. Where a person has incomplete pre- or post-exposure course of rabies vaccine then seek specialist advice.
b. HRIG is not generally advised for those who are partially immunised.
c. HRIG is not required more than seven days after the first dose of vaccine, or more than one day after the second dose of vaccine of a post-exposure course. HRIG is not indicated if the exposure is over 12 months previous, although vaccine may be indicated.
d. Carry out rabies antibody testing taking blood sample on same day as last vaccine dose to ensure adequate response.

5. Post-exposure treatment

Full details of dosing are available in NIAC Rabies Guidelines. For rabies vaccine, each dose is ≥2.5IU (the entire contents of a vial of vaccine). For HRIG, the total dose is 20 IU/kg. The shelf life of rabies vaccine is at least 3 years, provided they are stored at +2°C to +8°C and protected from sunlight. Full details on ordering and use of rabies vaccine and HRIG is available here.

5.1 Rabies Vaccination

Rabies vaccination is a safe and effective intervention, and its use should be considered in all potential RPEs.

- **Contraindications**: There are no contraindications for rabies vaccine or HRIG when giving PET. For anyone with evidence of hypersensitivity to either rabies vaccine or a component of rabies vaccine, then PET should be carried out under close medical supervision. [7] For full details please refer to NIAC Rabies Guidance.

[6] For categorisation of immunosuppressed patients, please refer to Chapter 3 (Immunisation of Immunocompromised Persons) in Immunisation Guidelines for Ireland.
[7] As rabies infection is generally fatal, there are no contraindications to post-exposure vaccination. Consider using an alternative Rabies vaccine. Facilities should be in place to monitor the vaccinated person and recognise and treat severe allergic reactions. Seek expert advice if there are any indications of potential adverse reaction.

- **Precautions**: PET should never be withheld from pregnant or lactating women; any of the WHO-recommended regimens can be used.
- **For non-immunised staff carrying out animal control activities where there is an outbreak**: Where the rapid PrEP schedule (day 0,3,7 as outlined in Table 4) has been implemented, this can be converted into PET if staff report a potential RPE.
    i. If potential RPE occurs before day 21 then this schedule can be converted into the four-dose PET schedule in Table 4.
    ii. If potential RPE occurs after day 21 then 2 doses are required as per the PET schedule outlined in Table 4 (day 0, day 3-7).
    iii. If staff have received the three-dose rapid schedule and booster at 1 year prior to potential RPE, then they should be considered fully immunised and should receive the two-dose schedule in Table 4.

5.2 Human Rabies immunoglobulin (HRIG)

5.2.1 HRIG may provide short-term immunity and, where indicated, should be given as soon as possible after it has been recommended by the risk assessment. Where there have been severe/multiple bites to the face, head, neck, hands or genitals, or where the bite is from an animal with confirmed rabies, then **treatment should begin within 12 hours of reporting**.

5.2.2 HRIG should not be given more than seven days after the first dose of rabies vaccine or, as a general principle, to anyone fully immunised as the antibody level induced by active immunisation (vaccine) is orders of magnitude greater than that induced by passive immunisation (HRIG). See Table 3 for when HRIG is recommended, including immunocompromised individuals.

5.2.3 HRIG can be directly acutely administered directly into wounds where there is a high likelihood that direct inoculation into neural or perineural tissue may have occurred.

Annex 1. Summary of Rabies Risk Assessment for PET

1. Determine the combined country or animal risk.

2. Determine the category of exposure

Category	Terrestrial mammals	Bats
1	No physical contact with saliva	No direct physical contact with bat's saliva or urine (**NB** if there is a reliable exposure history)
2	Minimal contact with saliva, with no evidence of transdermal inoculation or mucosal exposure	Uncertain or potentially unrecognised physical contact (i.e. no observed direct physical contact as above but where it may have occurred, for example adults and children who waken to find a bat in their room)
3	Direct contact with saliva	Direct contact with saliva

3. Determine the composite rabies risk

Combined Country/ Animal risk	Category 1 exposure	Category 2 exposure	Category 3 exposure
No risk[§]	Green	Green	Green
Low risk	Green	Amber	Amber
High risk	Green	Amber	Red
Confirmed rabies	Green or amber	Red	Red

[§] **NB**: No risk refers to countries that have no risk for terrestrial rabies – all countries are at least **low risk** for bat rabies

4. Determine the post-exposure treatment required

Composite rabies risk	Non-immunised	Partially immunised	Fully immunised	Immunosuppressed
Green	None	None	None	None
Amber	4 doses of vaccine days 0, 3, 7, 14-28	4 doses of vaccine days 0, 3, 7, 14-28	2 doses of vaccine days 0 and 3	HRIG[c] and 5 doses of vaccine days 0, 3, 7, 14 and 28
Red	HRIG[c] and 4 doses of vaccine days 0, 3, 7 and 14-28	4 doses of vaccine days 0, 3, 7 and 14-28	2 doses of vaccine days 0 and 3	HRIG[c] and 5 doses of vaccine days 0, 3, 7, 14 and 28

NOTE: HRIG is not required if more than 7 days has elapsed since first vaccine dose, or more than one day has elapsed since the second vaccine dose. HRIG is not indicated if the exposure occurred more than 12 months previously.