

Increased public and clinician awareness of rabies after UK death

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Abstract

Aims

To identify trends within rabies Post Exposure Treatment (PET) product use for 2025 compared with previous years and highlight potential underlying causes.

Methods

Data from the National Immunisation Office (NIO) was analysed retrospectively. The years 2020-2022 had low ordering due to COVID-19 so the years 2019, 2023 and 2024 were averaged in a 'baseline year'. Statistical analyses calculated absolute and percentage increases of rabies PET product use in 2025 compared to previous years.

Results

Ireland saw a sharp increase of 643 units (249%) in rabies vaccine and 103 units (368%) Human Rabies Immunoglobulin (HRIG) use in 2025 compared to the baseline year.

Conclusion

This trend may be associated with heightened clinician and public awareness of rabies prone exposure (RPE) and recent changes to service delivery. External factors including resurgence of travel following COVID-19, a UK rabies related death in June 2025 and global rabies product shortage may compound this.

Introduction

Rabies is a viral zoonotic disease, which leads to progressive paralysis, acute encephalitis and coma.¹ Globally, rabies causes about 59,000 deaths annually, predominantly in rabies endemic countries.¹ Ireland's last case of human rabies was in 1902.² In the UK, there were 6 travel-associated human rabies cases from 2000-2024.³ Rabies prone exposure (RPE) refers to contact with the saliva of a potential rabies carrier.⁴ Rabies is preventable with rapid PET

using rabies vaccine with or without HRIG.⁴ Without these interventions, following symptom onset, rabies is almost universally fatal.⁵

The Irish RPE PET pathway changed in July 2025 from a centralised to a regionalised service.

The National Immunisation Office (NIO) procures, stores and distributes all rabies vaccine and HRIG for PET in Ireland. The commencement of the Regional PET services coincided with a large increase in orders for rabies vaccine and HRIG, significantly over the anticipated amounts and during a global shortage.⁶

This study analyses recent increases in demand for rabies PET and the resultant challenges to service provision, to help inform future service planning.

Methods

This retrospective review analyses the trend in rabies PET product usage in Ireland. The years 2020 to 2022 were excluded due to the impact of reduced travel during COVID-19. Data from 2019, 2023 and 2024 were averaged to create a more typical pooled estimate-the 'baseline year'-for comparison with 2025.

Orders in the baseline year were compared to 2025 in terms of absolute and percentage change. A Wilcoxon signed-rank test compared the number of rabies vaccines ordered per month of the baseline year with 2025, as data did not meet assumptions for parametric testing.

Results

Ordering trends declined during the COVID-19 pandemic, with a sharp increase in ordering from mid-2025 (Figure 1).

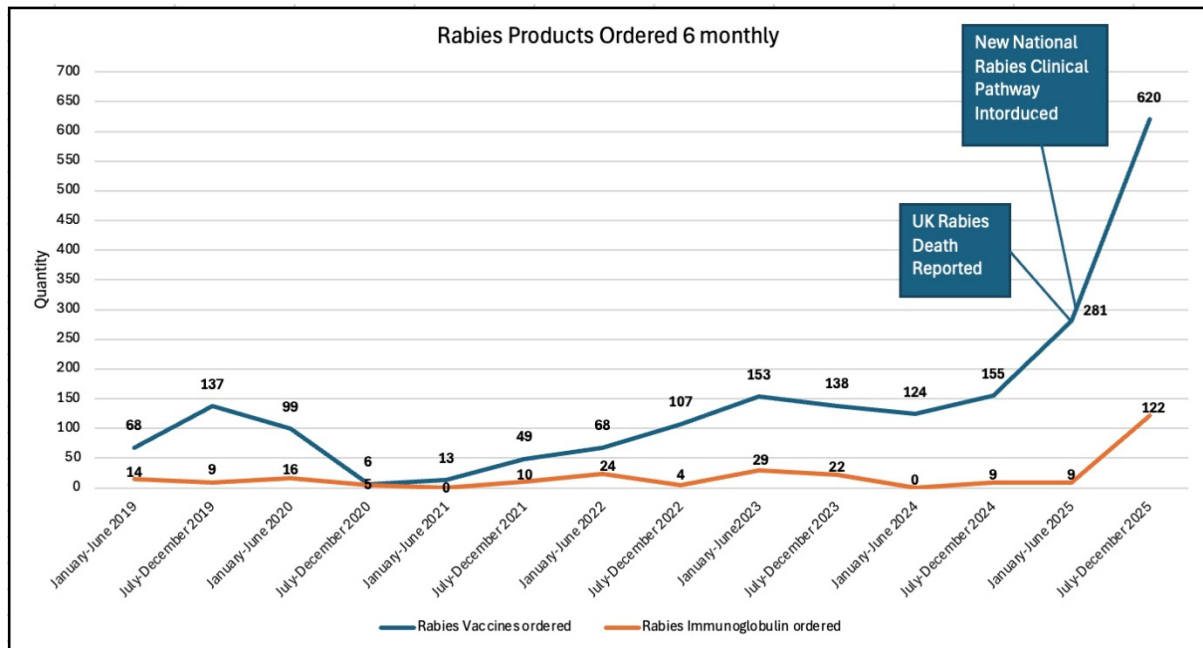


Figure 1. The quantity of rabies vaccine and immunoglobulin ordered from all sites during the period from 2019-2025.

There were 258 rabies vaccine doses (31 total orders) ordered during the baseline year, the majority of these (175) were through the national rabies service. Other sites included GPs (40), Hospitals (23) and others (20). In 2025, there were 901 vaccines (242 orders) ordered. Of these, 210 were through the national rabies service, 179 GP's, 501 hospitals and 11 others. This represents an increase of 249% in the number of doses of vaccines ordered in 2025 compared to the baseline year. Multiple vaccines and HRIG syringes may be needed per patient, depending on the assessment of the patient, their immune status and previous vaccine history.

Comparison of paired monthly vaccine orders using the Wilcoxon signed-rank test demonstrated a statistically significant increase in monthly ordering in 2025 compared with the baseline year ($p < 0.05$), with all months except January showing higher demand.

In terms of HRIG, there were 28 prefilled syringes (300 IU /2ml) ordered on average for the baseline year. In 2025 this increased to 131, an absolute increase of 103 and percentage increase of 368%.

Discussion

The year 2025 was not a typical year in terms of rabies PET product demand. Several factors may have contributed to this.

High rates of international travel from rabies endemic countries may influence potential RPE rates. Increased public awareness from media coverage from the UK of a rabies death related to travel in June 2025 was significant.³ This may have led to heightened clinician and public concern about potential RPE, contributing to increased PET demand.

This increase in product requirements came at a time of global shortage of PET products.⁶ Although challenging, the NIO secured supplies to ensure all who required it received PET.

The impact of recent changes to the RPE treatment pathway is reflected both in the rising numbers of PET product orders and the change in distribution of orders across sites. The national RTE PET service ceased to operate (and to order products) on 7/7/2025.

No additional resourcing was provided to meet the increased demands of the service as it underwent changes. The increased workload may put pressure on both frontline clinicians and services involved in the ordering and distribution of products.

The new interim HPSC guidelines are available on the HPSC website at <https://www.hpsc.ie/a-z/zoonotic/rabies/guidance/>. Public awareness and healthcare provider education on rabies and the post exposure pathway is crucial in protecting the public.

Declarations of Conflicts of Interest:

None declared.

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References:

1. World Health Organisation. WHO Expert Consultation on Rabies: Third Report [Internet]. Geneva: WHO Press; 2018 [Accessed 20 January 2026]. Available from:

<https://iris.who.int/server/api/core/bitstreams/dc122df7-62bd-4ca4-bbb0-31c74cdc92d8/content>

2. Health Protection Surveillance Centre. Rabies Factsheet [Internet]. HPSC; 2025 [Updated 3 July 2025; Accessed 19 January 2026]. Available from: <https://www.hpsc.ie/a-z/zoonotic/rabies/factsheet/>.
3. UK Health Security Agency. News story: Rabies case confirmed following contact with animal abroad [Internet]. UKHSA; 2025 [Updated 18 June 2025; Accessed 21 January 2026]. Available from: <https://www.gov.uk/government/news/rabies-case-confirmed-following-contact-with-animal-abroad>.
4. Health Protection Surveillance Centre. Rabies PET Guidelines V1.2 [Internet]. Dublin: HPSC; October 2025 [Updated 23 October 2025; Accessed 19 January 2026]. Available from: <https://www.hpsc.ie/a-z/zoonotic/rabies/guidance/>
5. Schneider MC, Pereira LRM. Substantial reductions in rabies, but still a lot to be done. The Lancet Global Health. 2017;5(10):e957-e8.
6. Luka MM, Ferguson EA, Rees E, Hoffu H, Chagalucha J, Lushasi K, et al. Optimising human rabies vaccine supply chains: A modelling study. Vaccine. 2025;54:127108.