Tetanus vaccination and travel:

clinical and practical considerations

Tetanus is a rare – thanks to effective immunisation – but potentially life-threatening disease in the UK, however, the risk increases for travellers visiting regions with limited medical care

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Tetanus remains a rare but potentially fatal disease in the UK, largely due to the success of the national immunisation programme.[1] However, the risk profile changes for individuals travelling abroad, particularly to areas where access to timely and appropriate medical care may be limited. General practice nurses play a central role in ensuring travellers are adequately protected against tetanus while navigating the clinical, logistical and financial complexities surrounding vaccine provision in the NHS.

This article reviews the disease and historical perspective, epidemiology, the UK tetanus immunisation schedule, explores the rationale for additional tetanus-containing vaccines for travellers, clarifies NHS funding arrangements, and discusses practical considerations including pregnancy, vaccine procurement and the management of tetanus-prone wounds.

HISTORICAL CONTEXT

Tetanus had caused significant mortality in soldiers with soil contaminated wounds in World War I so the adoption of routine tetanus toxoid vaccination was commenced in the late 1930s. This had such an impact that by the time of World War II (WWII), tetanus was very rare amongst fully immunised troops. A vaccine called TAB (typhoid–paratyphoid A&B) was already in use and then tetanus was added to it, creating TABT. It was given routinely to military personnel as a course which caused fever and local reactions, but the protection was thought worth it. TABT was given to UK Army recruits in WWII *en masse*, often by platoon or company. The syringes and needles were made of metal and glass, and were used on multiple soldiers, with the equipment boiled or autoclaved between batches. Needles were typically changed when they became visibly damaged or blunt, but in busy sessions several injections may have been given per needle, contributing to the discomfort of the vaccine. At that time, hepatitis B and C were not recognised and HIV didn't exist. Those who received such vaccines in that period of time would be nearing centenary age today. In the past few decades, knowledge of this past history was important if there was any recording of immunisations in the patient records. Women of similar ages were not protected in this way and their vaccine history may have been vague in terms of documentation.

Source: *Cook GC. Tropical medicine: an illustrated history of the pioneers. London: Wellcome Trust Centre for the History of Medicine; 2001.*

BACKGROUND

Tetanus is a serious, potentially life-threatening disease caused by the bacterium *Clostridium tetani*, which is everywhere in the environment, particularly in soil, dust and animal faeces. Around the world, risk of tetanus will be greater in resource-poor countries and where healthcare may not be so readily available.

Infection occurs when bacterial spores enter the body through a break in the skin, most commonly via contaminated wounds, puncture injuries (e.g., gardening injuries), burns, certain animal bites and scratches or injecting drug use. In anaerobic conditions, usually in a deep wound, the bacteria grow over an incubation period of 4–21 days but symptoms most commonly present at about 10 days. A potent neurotoxin is produced, which affects the central nervous system, resulting in the characteristic clinical features of tetanus. These include trismus (lockjaw), painful generalised muscle rigidity and spasms, difficulty in breathing, dysphagia, and in severe cases autonomic dysfunction such as sweating, fever, tachycardia and labile blood pressure.[2,3]

Historically, tetanus was a significant cause of morbidity and mortality in the UK, particularly following traumatic injuries, childbirth (maternal and neonatal tetanus) and during wartime. The introduction of tetanus toxoid vaccination in the 1940s – initially for military personnel and subsequently as part of the routine childhood immunisation programme – led to a dramatic and sustained decline in cases.[4] From the mid-1950s tetanus was introduced in some localities as part of the primary immunisation of infants, then nationally in 1961. Today, tetanus is rare in the UK, with most cases occurring in unvaccinated or inadequately immunised individuals, particularly older adults, illustrating the importance of vaccination and appropriate wound management.[1]

EPIDEMIOLOGY IN ENGLAND

Although rare, tetanus continues to occur in England. UKHSA surveillance data published in December 2025 reported six cases of tetanus between January and December 2024, including two fatalities.

Four cases were associated with domestic injuries. Most cases involved individuals with unknown vaccination status, while one individual was partially vaccinated. These data highlight the value of vaccination vigilance and accurate record keeping.[5]

ROUTINE TETANUS IMMUNISATION SCHEDULE

In the UK, long-term protection against tetanus is achieved through completion of five doses of a tetanus-containing vaccine delivered as part of the national childhood and adolescent immunisation programme.[6] These five doses are considered sufficient to provide lifelong protection for most individuals.

As tetanus vaccination forms part of the routine national programme, it is always provided free of charge to NHS patients. No patient should ever be charged for doses given to complete or maintain protection within this routine schedule.[7]

TETANUS RISK IN TRAVELLERS

Although five doses provide long-term protection, additional considerations apply to individuals travelling abroad. For travellers visiting countries where appropriate treatment of tetanus-prone wounds may not be readily available (e.g., immunoglobulin), national guidance recommends administration of a further tetanus-containing vaccine if it has been at least 10 years since the last dose.[1,2]

This booster is not part of routine immunisation but is risk-based, following a travel health risk assessment that considers destination, planned activities, likelihood of injury and access to medical care.

Where travel is frequent or higher-risk activities are anticipated, further boosters may be advised at 10-year intervals, provided there remains a clear clinical indication.[1]

TETANUS VACCINES AVAILABLE IN THE UK

Currently, tetanus-only vaccines are not available in the UK. Adult protection is provided via combination vaccines. For travellers, the only available vaccine is Revaxis, which contains tetanus toxoid, diphtheria toxoid and inactivated poliomyelitis vaccine (IPV).[8] This combination has important implications for funding and charging arrangements in NHS settings.

CHARGING FOR TETANUS VACCINATION GIVEN FOR TRAVEL

A common area of confusion relates to whether GP practices can charge travellers for tetanus vaccination provided for travel purposes. In an NHS GP surgery, tetanus-containing vaccines administered at 10-year intervals for travel must be provided as an NHS service and cannot be charged for.[7,9] This is because poliomyelitis vaccination is funded by the NHS as a public health intervention, and tetanus is only available in a combined vaccine containing polio and diphtheria.

As a result, when Revaxis is administered, all components of the vaccine must be provided on the NHS, regardless of the travel context. GP practices are therefore unable to offer this vaccination privately.

OBTAINING REVAXIS FOR TRAVEL USE

Vaccines obtained via ImmForm must not be used for travel-related tetanus boosters unless the dose is required to complete the individual's five-dose national schedule.[10]

In England, the most common approach is for GP practices to purchase the vaccine directly and reclaim the cost through NHS Prescription Services, administered by the NHS Business Services Authority.[11] Some practices issue an NHS prescription instead. In this situation, the pharmacy dispenses the vaccine and the patient returns to the surgery for administration. Unless exempt, the patient must pay the standard NHS prescription charge. This approach is generally discouraged as it places the cold chain at risk, requires multiple appointments and is inconvenient for both patients and practices. A useful vaccine storage poster is available to remind practitioners about keeping vaccines in good condition at https://www.gov.uk/government/publications/keep-your-vaccines-healthy-poster.

Sometimes Revaxis is required for a traveller because of the Public Health Emergency of International Concern (PHEIC) for polio, if a traveller is visiting one of the affected areas for four weeks or more.[12] If this is the case, then evidence of vaccination must be shown on exit from the affected country. A booster dose of inactivated polio vaccine (IPV) is recommended in the UK for the following travellers if they have not had a polio-containing vaccine within a year of their planned departure from this country:

- Immunosuppressed individuals and their household contacts, pregnant women, or others for whom live oral polio vaccine is contraindicated, who plan to travel to the affected country for 4 weeks or more.
- Travellers to settings with extremely poor hygiene (e.g. refugee camps), or likely to be in close proximity with cases (e.g. healthcare workers).

In this situation, the traveller may be receiving the tetanus protection offered by Revaxis in less that the ten-year timescale. Early revaccination may result in tenderness of the injection site which can be managed with appropriate analgesia.

Travellers outside these risk groups can receive oral polio vaccine on exit from the risk country. Although a live vaccine, it should do them no harm. If they do not want to be vaccinated abroad, they could obtain a dose of Revaxis pre-departure, from a private travel clinic and pay for the service.

TETANUS VACCINATION AND TRAVEL: CPD ASSESSMENT

Question 1

Tetanus is caused by which organism?

A. *Clostridium botulinum*
B. *Clostridium tetani*
C. *Staphylococcus aureus*
D. *Streptococcus pyogenes*

Question 2

Which wound environment is most likely to allow tetanus spores to germinate?

A. Clean superficial wounds
B. Heavily bleeding wounds
C. Deep wounds, poorly oxygenated
D. Surgical incisions

Question 3

Under the UK routine immunisation programme, how many doses of a tetanus-containing vaccine are required to provide long-term protection?

A. Three
B. Four
C. Five
D. Ten

Question 4

Which group is most commonly affected by tetanus cases in England today?

A. Fully immunised children
B. Recently vaccinated travellers
C. Unvaccinated or inadequately vaccinated adults
D. Healthcare workers

Question 5

When is an additional tetanus-containing vaccine recommended for travellers who have previously completed the five-dose course?

A. Before every overseas trip
B. If travelling to Europe only
C. If it has been at least 10 years since the last dose and access to care may be limited
D. Only following an injury abroad

Question 6

Which tetanus-containing vaccine is currently available for adult travellers in the UK?

A. Tetanus toxoid alone
B. Td vaccine
C. Revaxis (Td/IPV)
D. Boostrix only

Question 7

Why can GP practices not charge patients for Revaxis when it is given for travel-related tetanus protection?

A. Tetanus boosters are always private
B. Revaxis contains poliomyelitis vaccine funded by the NHS
C. Travel vaccines must be free
D. Charging rules vary by practice

Question 8

Which statement about vaccine procurement for travel tetanus boosters is CORRECT?

A. ImmForm stock can be used freely for travel
B. Revaxis should always be prescribed on an FP10
C. ImmForm vaccines must not be used for travel unless completing the routine schedule
D. Cold chain requirements do not apply to Revaxis

Question 9

A pregnant woman received Adacel at 20 weeks' gestation. How does this affect her tetanus protection for travel?

A. It does not count as tetanus protection
B. She must wait 10 years before travel
C. The tetanus component can be counted as valid protection
D. She requires Revaxis immediately

Question 10

Which guidance should general practice nurses follow when managing tetanus-prone wounds?

A. Local practice policy only
B. The latest Green Book Chapter 30 and UKHSA wound guidance
C. WHO guidance only
D. Hospital trust protocols

Further information can be found on this topic by searching 'PHEIC' on TravelHealthPro and looking at the specific polio vaccinations recommendations on the individual country pages at https://travelhealthpro.org.uk/countries.

PREGNANCY AND TETANUS-CONTAINING VACCINES

Pregnant women in the UK are routinely offered a pertussis-containing vaccine from 16 weeks' gestation to protect newborns against whooping cough.[13] Currently recommended vaccines include Tdap formulations, such as Adacel. The Summary of Product Characteristics (SmPC) for Adacel confirms that it contains not less than 20 International Units (IU) of tetanus toxoid, equivalent to the tetanus content in Revaxis.[8,14] If a pregnant woman has received Adacel as part of the national pertussis programme and later attends for travel advice, the tetanus component of that vaccine can be counted as valid tetanus protection for travel purposes. The same principle applies to previously used vaccines such as Boostrix-IPV and Repevax.[1] Accurate vaccination history assessment is therefore essential to avoid unnecessary repeat vaccination.

MANAGEMENT OF TETANUS-PRONE WOUNDS

Guidance on tetanus-prone wound management is available in the Green Book[1] and on the UKHSA website, at https://www.gov.uk/government/publications/tetanus-advice-for-health-professionals/guidance-on-the-management-of-suspected-tetanus-cases-and-the-assessment-and-management-of-tetanus-prone-wounds.[15] Tetanus is a notifiable disease and details about this can be found in section 7 of the guidance and on the specific page for reporting notifiable diseases.[16]

UKHSA has also produced two posters to support clinical practice.[17]

Tetanus-prone wounds

- Puncture-type injuries acquired in a contaminated environment and likely therefore to contain tetanus spores e.g., gardening injuries
- Wounds containing foreign bodies
- Compound fractures
- Wounds or burns with systemic sepsis
- Certain animal bites and scratches – although smaller bites from domestic pets are generally puncture injuries, animal saliva does not generally contain tetanus spores

unless the animal has been rooting in soil or lives in an agricultural setting.

Note: individual risk assessment is required and this list is not exhaustive: for example, a wound from discarded needle found in a park may be a tetanus-prone injury but a needle stick injury in a medical environment is not.

High-risk tetanus-prone wounds

Any of the above, with either:

- Heavy contamination with material likely to contain tetanus spores e.g. soil, manure
- Wounds or burns that show extensive devitalised tissue
- Wounds or burns that require surgical intervention that is delayed for more than six hours are high risk even if the contamination was not initially heavy.

Thorough cleaning of the wound is essential.

The poster 'Post-exposure management for tetanus-prone wounds' is an invaluable tool to display in your clinical practice area. It not only describes in detail what constitutes a clean wound, but also lays out the treatment pathways for different types of wounds and age groups. The groups of greatest significance are those who completed a full course of tetanus vaccine more than ten years ago, children aged 5-10 years who have yet to complete the full five doses of tetanus immunisation, and especially those who have not received an adequate priming course of tetanus vaccine.

In situations such as these, treatment may include tetanus immunoglobulin, injected intramuscularly (IM-TIG), together with a booster dose of vaccine. It is important that either IM-TIG administration or active boosting occurs promptly following an exposure.

Extra caution is also described for individuals who are immunosuppressed. It would be of great value to download both posters from https://www.gov.uk/government/publications/tetanus-prone-wounds-posters and use in conjunction with the Green Book and the guidance on the UKHSA. Ensuring all clinical staff are up to date on the current guidance is important.

General practice nurses should ensure they are using the most up-to-date guidance, particularly in relation to wound classification, vaccination history assessment and the use of tetanus immunoglobulin.

CONCLUSION

Tetanus vaccination in the context of travel presents both clinical and practical challenges for practice nurses. Understanding when additional boosters are indicated, recognising valid tetanus protection from pregnancy vaccination, and navigating NHS funding arrangements are essential to safe and compliant practice.

By applying current guidance and maintaining awareness of evolving recommendations, general practice nurses play a crucial role in preventing this serious but avoidable disease. ♦

CPD ASSESSMENT – ANSWERS

Q1: B. Tetanus is caused by *Clostridium tetani*, an anaerobic, spore-forming bacterium found widely in the environment.

Q2: C. Anaerobic conditions in deep or contaminated wounds favour toxin production.

Q3: C. Five doses are considered sufficient to provide lifelong protection for most individuals.

Q4: C. Most UK cases occur in people with unknown or incomplete vaccination histories, often older adults.

Q5: C. This is a risk-based decision linked to destination, activities and access to medical care.

Q6: C. Tetanus-only vaccines are not available in the UK; Revaxis is the standard adult option.

Q7: B. Poliomyelitis vaccination is a public health intervention funded by the NHS, so all components must be provided on the NHS.

Q8: C. ImmForm vaccines are for routine NHS use only, not discretionary travel boosters.

Q9: C. Adacel contains an equivalent tetanus toxoid dose to Revaxis and can be counted as protection.

Q10: B. UKHSA guidance and the Green Book provide the definitive national recommendations.

RESOURCES

NaTHNaC Tetanus
https://travelhealthpro.org.uk/disease/168/tetanus

UKHSA Collection, Tetanus: guidance, data and analysis
https://www.gov.uk/government/collections/tetanus-guidance-data-and-analysis

NHS website
https://www.nhs.uk/conditions/tetanus/

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