

Guideline

Tetanus Prophylaxis in Wound Management

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Applicable to	All Children's Health Queensland Staff				
Authorisation	Executive Director Clinical Services				

Purpose

This guideline is to aid in the prescription of tetanus prophylaxis for tetanus prone wounds in children and adolescents according to the [Australian Government Department of Health Immunisation Handbook](#).

Scope

This guideline relates to Children's Health Queensland (CHQ) staff involved in the assessment and treatment of tetanus prone wounds. Refer to the Australian Government Department of Health Immunisation Handbook ([Tetanus](#)) for more information.

This guideline is not intended to be a substitute for specific professional or clinical advice, or to replace consultation with senior staff, which should always be sort if clinically relevant.

This material is published by Children's Health Queensland with the intention of providing a guideline for use at the Queensland Children's Hospital (QCH). Anyone wishing to use this guideline outside of the QCH should refer to their local Medicines Advisory Committee before using.

Related documents

Procedures, Guidelines, Protocols

- [Medicines and Poisons Act 2019 \(MPA\)](#)
- [CHQ-HMP Vaccination Program – Health Management Protocol](#)
- [CHQ-PROC-01000 Substance Management Plan \(Medicines\)](#)
- [CHQ-PROC-01039 Medication - Administration](#)
- [CHQ-PROC-01017 Adverse Drug Reaction – Documentation and Reporting](#)
- [CHQ-PROC-01001 Medication – Prescribing](#)
- [CHQ-GDL-63000 Management of Water-immersed Wound Infections in Children](#)

- [CHQ-GDL-01202 CHQ Paediatric Antibiocard: Empirical Antibiotic Guidelines](#)
- [CHQ-WI-02924 Immunoglobulin: NHIg, HBIg, TIg and Zig \(passive immunisation\)](#)

Guideline

Definition of Tetanus Prone Wound¹

Any wound other than a clean, minor cut is 'tetanus-prone.' Tetanus may occur after a seemingly trivial injury and it is possible to have no obvious signs of injury.

Certain types of injuries can favour the growth of *Clostridium tetani*, including:

- compound fractures (fractures associated with a break in the skin),
- bite wounds,
- deep, penetrating wounds,
- wounds that contain foreign bodies (especially wood splinters),
- wounds that are complicated by pyogenic infections,
- wounds with extensive tissue damage (for example contusions or burns),
- any superficial wound that is obviously contaminated with soil, dust or horse manure (especially if topical disinfection is delayed more than four hours),
- reimplantation of an avulsed tooth, because the tooth undergoes minimal washing and cleaning to increase the likelihood of successful reimplantation, or
- depot injections, either subcutaneous or intradermal, in people who inject drugs.

Management of Tetanus Prone Wound¹



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Tetanus immunoglobulin and/or tetanus-containing vaccine should be administered via intramuscular route as soon as practically possible after the injury

Antibiotics do not prevent or treat tetanus. All tetanus-prone wounds must be disinfected and, where appropriate, have surgical treatment.

Tetanus Prone Wound Prophylaxis

People who have a tetanus prone wound should receive tetanus immunoglobulin (TIG) for passive protection if either:

- they have not previously received three or more doses of a tetanus-containing vaccine, or
- there is doubt about their tetanus vaccination status, or
- they have a humoral immune deficiency, Human Immunodeficiency Virus (HIV) or immunocompromised

Tetanus Immunoglobulin Administration

Dose of tetanus immunoglobulin for tetanus prophylaxis:

- 250 International Units if 24 hours or less since injury,
- 500 International Units if more than 24 hours since injury,

Note: tetanus immunoglobulin dosage is not weight or age based

- Tetanus immunoglobulin provides immediate protection that lasts for 3 to 4 weeks.
- Tetanus immunoglobulin is to be prescribed as per [CHQ-PROC-01001 Medication - Prescribing](#) and administered in line with [CHQ-PROC-01039 Medication - Administration](#).
- Patients receiving tetanus immunoglobulin should also receive a tetanus-containing vaccine at the same time in the opposite limb with a separate syringe (see [Tetanus Vaccination](#)); for infants under 6 weeks of age seek ID advice.
- Appropriate tetanus prophylaxis should be administered as soon as possible following a wound but should also be given to patients who present late for medical attention. TIG should be administered up to 21 days following the injury⁶.

For more information on tetanus immunoglobulin see [CHQ-WI-02924 Immunoglobulin: NHlg, HBIg, TIg and Zlg \(passive immunisation\)](#).

Immunisation History Assessment

The Australian Immunisation Register (AIR) is a national register that aims to record all vaccines given to all people in Australia. The AIR should be used to access an individual's immunisation record, and to ensure its accuracy. Other immunisation records such as documentation from previous immunisation providers, any printed record including Personal Health Record (e.g. Red Book), Immunisation History tab in ieMR, My Health Record available from The Viewer tab in ieMR and the Vaccination Information and Vaccine Administration System (VIVAS) should be reviewed. The AIR should be updated to support the accuracy of an individual's immunisation record. A Medicare immunisation medical exemption form should be completed for contraindicated vaccines online via [PRODA](#).

Tetanus Vaccination

A primary course of tetanus containing vaccine is included on the [National Immunisation Program](#) (NIP) at 2, 4 and 6 months of age. Booster doses of tetanus-containing vaccine are included on the NIP at 18 months of age, 4 years of age and in Year 7 of schooling.

Patients less than 9 years of age who have received 3 or more doses of tetanus-containing vaccine as per the [NIP](#) are not recommended additional doses of tetanus containing vaccine; the exception to this is for those who are immunosuppressed or immunocompromised (seek Infectious Diseases Specialist advice).

A tetanus containing vaccine is recommended for patients who have NOT:

- completed a primary tetanus vaccination course (e.g. 3 dose course), OR

- received a booster dose of tetanus-containing vaccine within the last 5 years or as per [National Immunisation Program](#) (NIP). See above for timing of NIP booster dose above.

For patients requiring a tetanus-containing vaccine:

- Completion of tetanus vaccination course is highly recommended.
- If vaccination is refused, this should be documented in the medical notes and signs and symptoms of tetanus explained.
- Patient should be provided written information of when next tetanus-containing vaccine is recommended (e.g. more than 5 years).

Tetanus Vaccines

- **Less than 10 years of age:** who are due a primary course or booster dose of tetanus-containing vaccine should be recommended a DTPa containing vaccine (e.g. Infanrix-IPV/Quadracel [DTPa-IPV] or Infanrix-Hexa [DTPa-IPV-Hib-HepB]).
- Note: Infanrix/Tripacel (DTPa) vaccine can be used for those due or overdue this vaccine as per the **NIP at 18 months of age**. Infanrix/Tripacel (DTPa) vaccine is not funded for use for catch-up or those choosing not to receive the recommended DTPa containing vaccine offered on the NIP.
- **10 years of age and over:** who are due a primary course or booster dose of tetanus-containing vaccine should be recommended a dTpa containing vaccine e.g. Boostrix/Adacel (dTpa) vaccine.

ALERT – use flowchart for those who are:



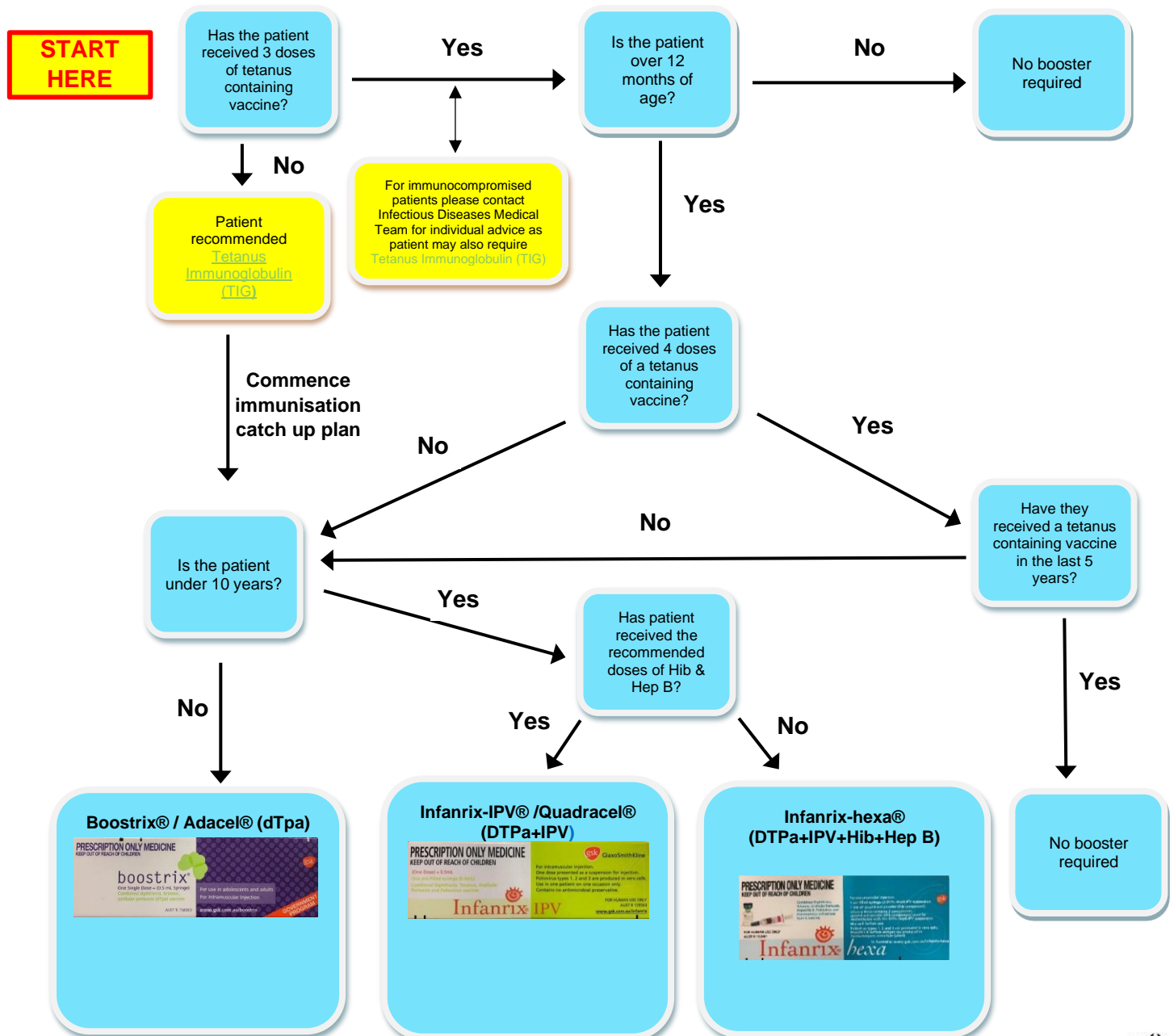
- Unvaccinated (excludes under 6 weeks – seek advice from ID)
- Not vaccinated as per [NIP](#)
- 9 years of age or older, previously vaccinated as per [NIP](#)

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- Please read [Tetanus Vaccination](#) prior to using this algorithm aid
- If due **18-month-old** vaccine as per National Immunisation Program see [Tetanus Vaccines](#)

Flowchart 1 - Algorithm to Aid in the Prescription of Tetanus Wound Prophylaxis



Consultation

Key stakeholders who reviewed this version:

- Director, IMPS, Allergy/Immunology, Rheumatology, QCH
- Infectious Diseases Consultant, Queensland Specialist Immunisation Service (QSI) Medical Lead, QCH
- Nurse Practitioner, QSI, QCH
- Nurse Practitioner, Emergency Department, QCH
- Senior Clinical Pharmacist team – Immunisation, QSI, QCH
- Director of Pharmacy, QCH
- Clinical Pharmacist Lead - Antimicrobial Stewardship, QCH
- Nurse Manager, Blood Management, QCH
- Senior Medical Officer, Paediatric Emergency Medicine, QCH

Definition of terms

Term	Definition	Tetanus containing vaccine brands
DTPa	Child dose: Diphtheria, tetanus, pertussis	Infanrix-IPV® or Quadracel® (DTPa+IPV) Infanrix-Hexa® (DTPa+IPV+Hib+Hep B) Infanrix® (DTPa)
dTpa	Adult dose: Diphtheria, tetanus, pertussis	Boostrix® (dTpa) Adacel® (dTpa)
Hep B	Hepatitis B	Infanrix-Hexa® (DTPa+IPV+Hib+Hep B)
Hib	<i>H. influenzae</i> type b	Infanrix-Hexa® (DTPa+IPV+Hib+Hep B)
IPV	Inactivated polio vaccine	Infanrix-IPV® or Quadracel®(DTPa+IPV)
TIG	Tetanus Immunoglobulin	Tetanus Immunoglobulin

References and suggested reading

1. Australian Technical Advisory Group on Immunisation (ATAGI). The Australian Immunisation Handbook, Australian Government Department of Health and Aged Care, Canberra, 2022, immunisationhandbook.health.gov.au
2. [Australian Government Department of Health - Questions about vaccination](#)
3. [National Centre for Immunisation Research & Surveillance \(NCIRS\)](#)
4. [NCIRS - SKAI Project: Sharing Knowledge About Immunisation](#)
5. [Australian Government Department of Health Immunisation Handbook online - Fundamentals of Immunisation](#)
6. [Wound management and tetanus prophylaxis - UpToDate](#) 2022. Version 34.0. Accessed 8/11/2022

Guideline revision and approval history

Version No.	Modified by	Amendments authorised by	Approved by
1.0	Andrew Paton	Executive Director Medical Services	General Manager Operations
2.0 05/08/2016	Nurse Practitioner, Immunisation; and Pharmacist	Executive Director Medical Services	Executive Director Clinical Services (QCH)
3.0 28/0/2019	Nurse Practitioner, Immunisation; and Pharmacist	Executive Director Medical Services	Executive Director Clinical Services (QCH)
4.0 25/10/2019	Nurse Practitioner, Senior Medical Officer	Medical Director, Division of Medicine	Executive Director Clinical Services (QCH)
5.0 21/10/2022	Senior Pharmacist – Immunisation	Queensland Specialist Immunisation Service (QSI) Medical Lead	A/Divisional Director Medicine

Keywords

Immunisation, prescribing, tetanus, vaccination, vaccine, wound management, Prophylaxis, 01023

Accreditation references

NSQHS Standards (1-8): 3 Preventing and controlling healthcare associated infections and 4 Medication Safety
ISO 9001:2015 Quality Management Systems: (4-10):