Bwrdd Iechyd Addysgu Powys
Powys Teaching Health Board

Bronllys, Brecon, Powys, LD3 0LU

This Patient Group Direction (PGD) must only be used by registered health professionals who have been named and authorised by their organisation to practice under it. The most recent and in date final signed version of the PGD should be used. Health professionals should always access the PGD via the PTHB intranet to ensure that they are always working to the most up to date version

Patient Group Direction

for the administration and supply of

Metronidazole 400mg tablets

(must be used with doxycycline via separate PGD0029)

by registered nurses

following an animal or human bite to

Adults and Children aged over 12 years of age

in Powys Teaching Health Board Minor Injury Units

Version number: PGD0031-B

Bwrdd Iechyd Addysgu Powys yw enw gweithredol Bwrdd Iechyd Lleol Addysgu Powys

Powys Teaching Health Board is the operational name of Powys Teaching Health Board

Reference number: PGD0031B
Valid from: 16/10/2021
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Change history

Version number	Change details	Date
PGD0031	Initial issue	09/03/2006
PGD0031_A	Review issue- updated in line with CKS guidance July 2015 (Bites-human and animal)	03/05/2018
PGD0031_B	Review issue, new PTHB template, NICE guidelines update and SPC update	16/10/2021

PGD authorisation

Name	Job title and organisation	Signature	Date
Senior doctor **Dr Jeremy Tuck**	Lead doctor for PTHB	DocuSigned by: Jeremy Tuck 6DD4C906B75B48B...	10/22/2021
Chief Pharmacist **Jacqui Seaton**	Chief Pharmacist for PTHB	DocuSigned by: Jacqui Seaton 71E8089DE3634C4...	10/15/2021
Senior representative of professional group using the PGD **Alison Davies**	Executive Director of Nursing for PTHB	DocuSigned by: Alison Davies D336EA91715840E...	10/15/2021
Clinical Governance Lead **Dr Kate Wright**	Clinical Governance Lead for PTHB – Medical Director	DocuSigned by: Kate Wright 1F267952823F473...	10/15/2021

Training and competency of registered health professionals

Qualifications and professional registration	• Nurses currently registered with the Nursing and Midwifery Council (NMC) and working in a Minor Injury Unit in PTHB Practitioners must also fulfil the Additional requirements listed below. Check Appendix A – Staff Authorised to use this Patient Group Direction
Initial training and knowledge requirements	• The administration and supply of metronidazole tablets and knowledge of its uses, contraindications and adverse effects • The management and reporting of adverse drug reactions • An understanding of NICE CKS- Bites- human and animal Additionally, practitioners: • must be authorised by name as an approved practitioner under the current terms of this Patient Group Direction before working to it • must have undertaken appropriate training for working under PGDs for supply/administration of medicines • must be competent in the use of PGDs (see NICE Competency framework for health professionals using patient group directions) • must have completed Patient Group Directions training- available via ESR • must be familiar with the product and alert to changes in the BNF and Summary of Product Characteristics • must have undertaken training appropriate to this PGD as required by local policy • must have undertaken and completed at least level 3 Safeguarding of Children, Young People and Vulnerable Adults - Training and Competency Passport, as applicable to the role • must be competent in the recognition and management of recognised adverse reactions, including anaphylaxis. Must be competent in the administration of adrenaline and have up to date Intermediate Life Support (ILS) skills. • must have access to the Patient Group Direction and associated online resources **THE PRACTITIONER MUST BE AUTHORISED BY NAME, UNDER THE CURRENT VERSION OF THIS PGD BEFORE WORKING ACCORDING TO IT.**

Competency assessment	• Evidence of ongoing PGD training to be submitted to Line Manager annually. • Practitioners must be competent, recognise their own limitations and personal accountability and act accordingly. • Practitioners must make a self-declaration of competency in their Personal Appraisal and Development Review (PADR).
Ongoing training and competency	• Update at least every 2 years, or earlier in response to new local/national guidance, on the use of PGDs, metronidazole and the treatment of human and animal bites • Practitioners must ensure they are up to date with relevant clinical skills and management of anaphylaxis, ILS, with evidence of appropriate Continued Professional Development (CPD). • Evidence of appropriate Continued Professional Development (CPD) must be retained and made available on request. **It is the responsibility of the healthcare professional to maintain their own competency to practice within this PGD.**

Clinical condition

Clinical condition or situation to which this PGD applies	Prevention and treatment of infection in adults and children from 12 years old and presenting with an animal or human bite and allergic to penicillin or if co-amoxiclav is unsuitable, in accordance with NICE guidance. See Appendix B. Metronidazole must be used in combination with doxycycline (PGD0029) for this indication. **Note:** For all bites assess the risk of tetanus, rabies or a bloodborne viral infection and take appropriate action, following MIU guidelines. **NB:** If the wound is infected, before cleaning, send a pus or a deep wound swab for culture, state on the form that the swab is from an infected human/animal bite as appropriate. Topical cleaning, thorough irrigation and debridement should be completed as necessary- follow MIU Guidelines.

Inclusion criteria see Appendix B	• Adults and Children aged from 12 years old with:
	  • **An infected human or animal bite** (traditional pet including cats and dogs) if there are symptoms or signs of infection, such as increased pain, inflammation, fever, discharge or an unpleasant smell
	  • **A human bite at risk of causing infection**:
	  ○ that has broken the skin and drawn blood
	  ○ that has broken the skin but not drawn blood in a person at risk of a serious wound infection because of a co-morbidity such as diabetes, immunosuppression, asplenia, or decompensated liver disease
	  ○ that has broken the skin but not drawn blood if it is in a high-risk area (includes the hands, feet, face, genitals, skin overlying cartilaginous structures, or an area of poor circulation)
	  • **A cat bite at risk of causing infection**:
	  ○ that has broken the skin and drawn blood
	  ○ that has broken the skin but not drawn blood if the wound could be deep
	  • **A dog or other traditional pet bite (excluding cat) at risk of causing infection**:
	  ○ that has broken skin and drawn blood and
	  ▪ is visibly contaminated (for example, if there is dirt or a tooth in the wound) or
	  ▪ is a bite in a high-risk area (e.g. hand, feet, face, genitals, skin overlying cartilaginous structures or an area of poor circulation) or the patient is considered at high risk of a serious wound infection because of a co-morbidity such as diabetes, immunosuppression, asplenia or decompensated liver disease
	• Medical and drug history taken, no reason for exclusion
	• Informed consent, from the individual or a person legally able to act on the person's behalf, must be obtained prior to supply.
	
	Note. The patient should also meet the inclusion criteria for doxycycline capsules (PGD0029) which must be used in combination with metronidazole for this indication.
	
	NB. If there is a discharge (purulent or non-purulent) from the area of bite, take a swab for microbiological testing. Antibiotics may be administered/supplied via this PGD, if appropriate, based on inclusion/exclusion criteria, however the patient must be informed that treatment may change once the results are received.

	Refer to exclusion criteria for wounds that must be referred to hospital. **NB** Refer to PTHB Consent to Treatment and Examination Policy. In case of any doubt, contact medical team or emergency services. Any vulnerable adult or child protection concerns should be referred to Safeguarding and PTHB safeguarding policies and the Minor Injury Unit guidelines followed, where appropriate. Where there are safeguarding concerns (Child Protection or Protection of Vulnerable Adults, POVA) advise from the local Safeguarding team should be sought (see below). **It is the responsibility of the administering and supplying healthcare professional to ensure that the patient is within the inclusion criteria, and that there are no reasons for exclusion before proceeding with the treatment. If there is any reason for concern, seek medical advice.**

Exclusion criteria (Exclusion under this Patient Group Direction does not necessarily mean the medication is contraindicated, but it would be outside its remit and another form of authorisation will be required)	• Conditions outside of the clinical situations criteria
	• No valid consent or Patient/representative refuses treatment
	• Individuals for whom valid consent, or 'best-interests' decision, in accordance with the Mental Capacity Act 2005, has not been obtained or received. Refer to sections "Action to be taken if patient is excluded" or "Action to be taken if patient declines treatment".
	The following patients are excluded from this PGD:
	• aged under 12 years old – refer to PGD0180 Co-trimoxazole
	• with known hypersensitivity to metronidazole, nitroimidazole or to any of the excipients in the medicinal product(s)
	• with known hypersensitivity to doxycycline or tetracyclines (refer to PGD0029) – doxycycline must be used in combination with metronidazole for this indication
	• pregnant/breastfeeding
	• with lymphangitis
	• with an infection after prophylactic antibiotics
	• who cannot swallow or take oral antibiotics
	• bites from a wild or exotic animal (including birds and non-traditional pets) and farm animal or bat bites because the spectrum of bacteria involved may be different
	• with bites with signs of a serious illness (such as severe cellulitis, abscess, osteomyelitis, septic arthritis, necrotising fasciitis or sepsis), or a penetrating wound involving bones, joints, tendons or vascular structures NB these patients must be referred to hospital
	• with bites that do not start to improve with 24 hours to 48 hours of starting antibiotic treatment
	• are systemically unwell or are at risk of a serious wound infection because of a pre-existing medical condition
	• with NO penicillin / cephalosporin allergy. Refer to PGD0028 Co – amoxiclav.
	• with Cockayne syndrome — cases of severe hepatotoxicity/acute hepatic failure have occurred following initiation with metronidazole in these patients.
	• with active or chronic severe peripheral and central nervous system disease, as there is a risk of neurological aggravation.
	• with severe liver disease or hepatic encephalopathy
	• Who are taking (refer to Drug Interaction section):
	  ○ warfarin and other coumarins (e.g. acenocoumarol, phenindione)
	  ○ lithium
	  ○ phenobarbital and phenytoin
	  ○ busulfan
	  ○ cyclosporin

	○ 5-fluorouracil and capecitabine ○ Disulfiram.
Cautions /reasons for seeking further advice from a prescriber	• Discuss the following patients with a doctor: ○ Patients who are alcohol dependant ○ Severe liver disease or hepatic encephalopathy —one-third of the daily dosage once daily would need to be prescribed via a PSD [not covered by this PGD] • Check for any other medications that the patient is taking, including topical or inhaled products, food supplements and herbal or homeopathic products. Refer to BNF/SPC for full list. Under Section 128 and 130 of the Social Services and Wellbeing (Wales) Act 2014, staff have a duty to inform the Local Authority if they have reasonable cause to suspect that an adult or child is at risk. Any vulnerable adult or child protection concerns should be referred to Safeguarding and the Minor Injury Unit guidelines followed, along with PTHB safeguarding policies. Consider discussing with GP. Any safeguarding concerns need to be directed to Safeguarding Hub: • to generic email address: PowysTHB.Safeguarding@wales.nhs.uk and • Central Safeguarding number: 07387 064356. • Out of hours: 0845 0544847. Advise can also be sought from local Safeguarding Leads: • CNS for Safeguarding North Powys Office: 01686 617468; mobile: 07964 132698 • CNS for Safeguarding South Powys Office: 01597 828747; mobile: 07973 686520.
Arrangements for referral for medical advice	• Refer to hospital if there are signs of a serious illness (such as severe cellulitis, abscess, osteomyelitis, septic arthritis, necrotising fasciitis or sepsis), or a penetrating wound involving bones, joints, tendons or vascular structures • Take a swab for microbiological testing to guide treatment, if there is discharge (purulent or non-purulent) from the human or animal bite wound - follow MIU Guidelines • Seek microbiologist advice for unfamiliar domestic or farm animal bites • Seek specialist advice from a microbiologist for bites from a wild or exotic animal (including birds and non-traditional pets) • Contact GP or microbiologist for advice or refer to DGH if applicable. Document advice given

Action to be taken if patient excluded	• The first line, alternative choice oral antibiotics for adults and young people over 12 years are doxycycline (PGD0029) in combination with metronidazole. If the patient is excluded from either of these antibiotics, please refer to microbiologist. If appropriate refer to GP / DGH /OOH, offer alternative management if appropriate. • If a woman is pregnant/breastfeeding, specialist advice should be sought for an alternative antibiotic. • If patient is taking coumarins, e.g. warfarin, acenocoumarol and if the latest INR is out of date, out of range or unknown - refer to a doctor. • Record reason and seek medical advice. • Explain reason to patient/carer.
Action to be taken if patient declines treatment	Explain consequences of refusing treatment. Make patient or their representative aware of alternative sources of treatment (DGH or GP as appropriate). Offer alternative management if appropriate. Document refusal and any advice given. Complete a Discharge Against Advice Form if appropriate. Inform or refer to GP/follow local procedures as appropriate. Where appropriate, complete the letter on the WPAS system and send to the GP.

Details of the medicine

Name, form and strength of medicine *Include ▼for black triangle medicines*	Metronidazole 400 mg tablets
Legal category	POM
Indicate any off-label use (if relevant)	Yes, when used prophylactically for bite wounds at high risk of infection, however its use in in line with NICE guideline recommendations
Route/method of administration	Oral Tablets should be swallowed with a full glass of water (not chewed). It is recommended that the tablets be taken during or after a meal.

Dose and frequency	Adults and children aged over 12: For treatment: 400 mg THREE TIMES A DAY for **5 days. Total course length = 5 days.** For prophylaxis: 400 mg THREE TIMES A DAY for **3 days. Total course length = 3 days.** ○ Ideally at 8 hourly intervals. **NB.** To be taken along with Doxycycline which is taken once daily (refer: PGD0029)
Quantity to be administered and/or supplied	A single pre-labelled MIU pack of 21 tablets should be supplied. The patient's name and the date of supply should be written on the label. Insert number of days of treatment (see guidance below). MUST be supplied with Doxycycline (PGD0029) which is taken in combination.
Maximum or minimum treatment period	In both adults and children over 12 years old: • treatment of infected bite for **5** days • prophylaxis of infection for **3** days
Storage	Store in the original packaging in accordance with the manufacturers' instructions outlined on the packaging. Protect from light.
Drug interactions	**NB.** In regards to following drug interactions, refer to a prescriber (see exclusion criteria): • Warfarin type oral anticoagulants (i.e.: acenocoumarol, phenindione) – a potentiation of anticoagulant therapy has been reported; reduction in dosage may be required and INR times should be monitored. • Alcohol – a risk of a disulfiram-like reaction with alcohol. Warn the person that they might experience this reaction if they drink alcohol whilst on metronidazole and for at least 48 hours afterwards. • Disulfiram

	• Lithium - increases the risk of lithium toxicity; retention accompanied by evidence of possible renal damage has been reported in patients treated simultaneously with lithium and metronidazole. Lithium treatment should be tapered or withdrawn before administering metronidazole. • Phenobarbital or phenytoin - metabolism of metronidazole increased significantly; dose of metronidazole may need to be increased. • Busulfan — plasma levels of busulfan may be increased leading to toxicity. Avoid high doses of busulfan. If conventional doses of busulfan are given, monitor blood count weekly. • 5-fluorouracil - metronidazole reduces the clearance of 5-fluorouracil, increasing the risk of toxicity. • Capecitabine – metronidazole is predicted to increase the risk of capecitabine toxicity. • Ciclosporin - risk of elevated ciclosporin serum levels. Serum ciclosporin and serum creatinine should be closely monitored when co-administration is necessary. **NB.** This list is not exhaustive. Refer to BNF/SPC for full details. Call medical cover for advice and document advice given **NB**. Oral hormonal contraception — additional contraceptive precautions are not required during or after courses of metronidazole. However, women should be advised about the importance of correct contraceptive practice if they experience vomiting or diarrhoea. [see verbal instructions to patient section]
Adverse Effects	Metronidazole tablets are very well tolerated and side effects have been observed rarely. Serious adverse reactions occur rarely with standard dose regimens. **Rare or very rare (≥1/10,000 to <1/1000):** • Blood disorders: agranulocytosis, thrombocytopenia • Hepatic disorders • Skin reactions (urticaria, rash) • Transient vision disorders • Nervous system disorders: ataxia, confusion, drowsiness, dizziness, headache

Adverse effects	**Unknown frequency:**
	• Gastrointestinal — nausea, vomiting, anorexia, epigastric pain, taste disturbances, furred tongue, oral mucositis
	• Tinnitus
	
	This list may not represent all reported side-effects of this medicine. Refer to the most current SPC for more information.
	• This list is not exhaustive. Refer to BNF or SPC via medicines.org.uk for complete list.
	• Report any suspected adverse reactions to a doctor.
	• If serious adverse effects are noted, complete a Yellow Card (found in the BNF) or submit online through the MHRA website. www.mhra.gov.uk/yellowcard
	
	In case of an acute anaphylactic reaction occurring, adequate treatment provision must be available for immediate use:
	• Anaphylaxis and resuscitation equipment including adrenaline (1 in 1000) injection and a telephone must be available for immediate use.
	• In case of anaphylaxis:
	  ○ Refer to adrenaline (epinephrine) PGD and anaphylaxis policy
	  ○ Request medical assistance urgently. If the GP is not immediately available dial 999 to transfer to A&E
	  ○ Ensure reaction is fully documented in patient notes
	  ○ Ensure all patient records are marked **ALLERGIC TO METRONIDAZOLE.**
	  ○ The patient may be advised to wear a MedicAlert or similar device to alert other healthcare providers
	  ○ Report via the Once for Wales Reporting System

Records to be kept	Record consultation details as required by local procedures. In addition, record: • That valid informed patient consent to treatment was obtained. Record name of representative who gave consent, if appropriate. • If individual not treated under PGD record action taken. • Name of individual, address, date of birth. • GP contact details, where appropriate. • Relevant past and present medical history, including medication history. • Any reasons for exclusion or referral, including actions taken. • Examination or microbiology finding/s where relevant. • Any known allergies and nature of reaction. • Name of registered health professional responsible for administration and for supply

	For administration, record: • Date and time of administration • Name, form, strength and dose of drug administered • Route of administration • Expiry date(s) • Details of any adverse reactions and actions taken For supply, record: • Date and time of supply • Name, form, strength, dose, frequency and quantity of medication supplied • Batch number and expiry date of medicine supplied • Advice given about the medication including side effects, benefits, and when and what to do if any concerns, including advice given if excluded or declines treatment • Details of any adverse drug reactions and actions taken • Any advice received from medical cover and advice given to patient / carer. • Recorded that the medication supplied/administered via Patient Group Direction (PGD), record PGD version number Records should be signed and securely kept for a defined period in line with local policy. All records should be clear, legible and contemporaneous. A record of all individuals receiving treatment under this PGD should also be kept for audit purposes in accordance with local policy.

Patient information

Written/verbal information to be given to patient or carer	Supply pre-labelled MIU pack(s) of 21 tablets as per instructions above. Write the patients name and the date of supply onto the label. Insert number of days of treatment and instruct the patient about the course length (i.e. 3 or 5 days, as appropriate). Draw the patients/carers attention to the label and patient information leaflet. Explain the indications, contra-indications and cautions. Advise: • Take regularly at the prescribed intervals and complete the course, even if the wound looks better. • Tablets should be swallowed with a full glass of water (not chewed). • It is recommended that the tablets be taken during or after a meal.

	• As the full pre-labelled pack is supplied, advise that the remainder of the tablets must be returned to the Community Pharmacy or GP for a safe disposal. • Microbiological overgrowth: the use of antibiotics may occasionally result in the over-growth of non-susceptible organisms including Candida. • Patients should be warned that metronidazole may darken urine. • Patients should be advised not to take alcohol during metronidazole therapy and for at least 48 hours afterwards because of the possibility of a disulfiram-like (antabuse effect) reaction. • Patients should be warned about the potential for drowsiness, dizziness, confusion, hallucinations, convulsions or transient visual disorders, and advised not to drive or operate machinery, if these symptoms occur. • Women of child bearing age should be asked whether they are taking the **combined oral contraceptive pill.** Additional contraceptive precautions are not required during or after courses of metronidazole. However, women should be advised about the importance of correct contraceptive practice if they experience vomiting or diarrhoea. For further information refer to the sections on vomiting or diarrhoea in the CKS topics on Contraception - combined hormonal methods and Contraception - progestogen-only methods. • Advise about appropriate oral pain relief. • Patient to seek medical advice immediately if overdose occurs. For all patients should be advised to seek medical review / contact their GP, if: • There is no improvement in their condition within 24 to 48 hours of starting treatment • Symptoms or signs of infection develop or worsen rapidly or significantly at any time • The person becomes systematically unwell • If the complaint worsens after 2 to 3 days of antibiotic treatment • There is severe pain that is out of proportion to the infection • If the boundaries of the soft tissue infection continue to expand • If the condition has not completely cleared towards the end of the treatment course • If there are signs of complications from secondary infections, e.g. fever, chills, muscle pain, vomiting, diarrhoea, abdominal pain.

	Patient to discontinue medication and contact GP or go to hospital urgently/call 999: • if there are signs of an allergic reaction, eg swelling of hands, feet, face, lips, throat, difficulty breathing, skin rashes • if there are symptoms of encephalopathy, eg fever, stiff neck, headache, confusion, hallucinations • signs of meningitis • blistering or bleeding of the skin • symptoms or signs of SJS, TEN or DRESS
Follow-up advice to be given to patient or carer	• Refer to MIU guidelines. • If wound was infected, patient should be advised to contact their GP for review at 24 and 48 hours to ensure infection is responding to treatment. • If metronidazole is given for prophylaxis, advise patient to check for signs of infection-if these develop advise patient to attend urgently for review. • A 5-day treatment course is appropriate for treating most infected human or animal bites, but course length may be increased to 7 days (with review) based on clinical assessment of the wound, for example, if there is significant tissue destruction, joint, tendon or vascular structures. **NB**. the treatment beyond 5 days is not covered by this PGD and is to be supplied by GP/non-medical prescriber. • In case of a discharge take a swab to guide treatment. Once the results are received, contact the parent/carer of the patient and GP/prescriber and also inform if the alternative antibiotic is required. • Inform individual of possible side effects and their management. Advise to seek medical advice immediately if they have any unexpected reaction or other cause for concern. Contact GP via surgery or emergency on call service.

Key references

- British National Formulary (BNF) - accessed September 2021
- Metronidazole 400 mg tablets, Aurobindo Pharma Limited:
  - Summary Product Characteristics, last updated 01/05/2019
  - PIL, last updated 04/2019
- NICE guideline [NG184] - Human and animal bites: antimicrobial prescribing, published: 04 November 2020
- NICE CKS Prescribing information: Metronidazole | Prescribing information | Bites - human and animal | CKS | NICE – accessed 29th September 2021

Appendix A Staff authorised to use this Patient Group Direction

Authorising Manager: I confirm that the practitioners named below have declared themselves suitably trained and competent to work under this PGD. I give authorisation on behalf of Powys Teaching Health Board or a Powys GP practice for the named healthcare professionals below who have signed the PGD to work under it.

Practitioner: *By signing this PGD you are indicating that you agree to its contents and that you will work within it. PGDs do not remove inherent professional obligations or accountability. It is the responsibility of each professional to practise only within the bounds of their own competence and professional code of conduct*.

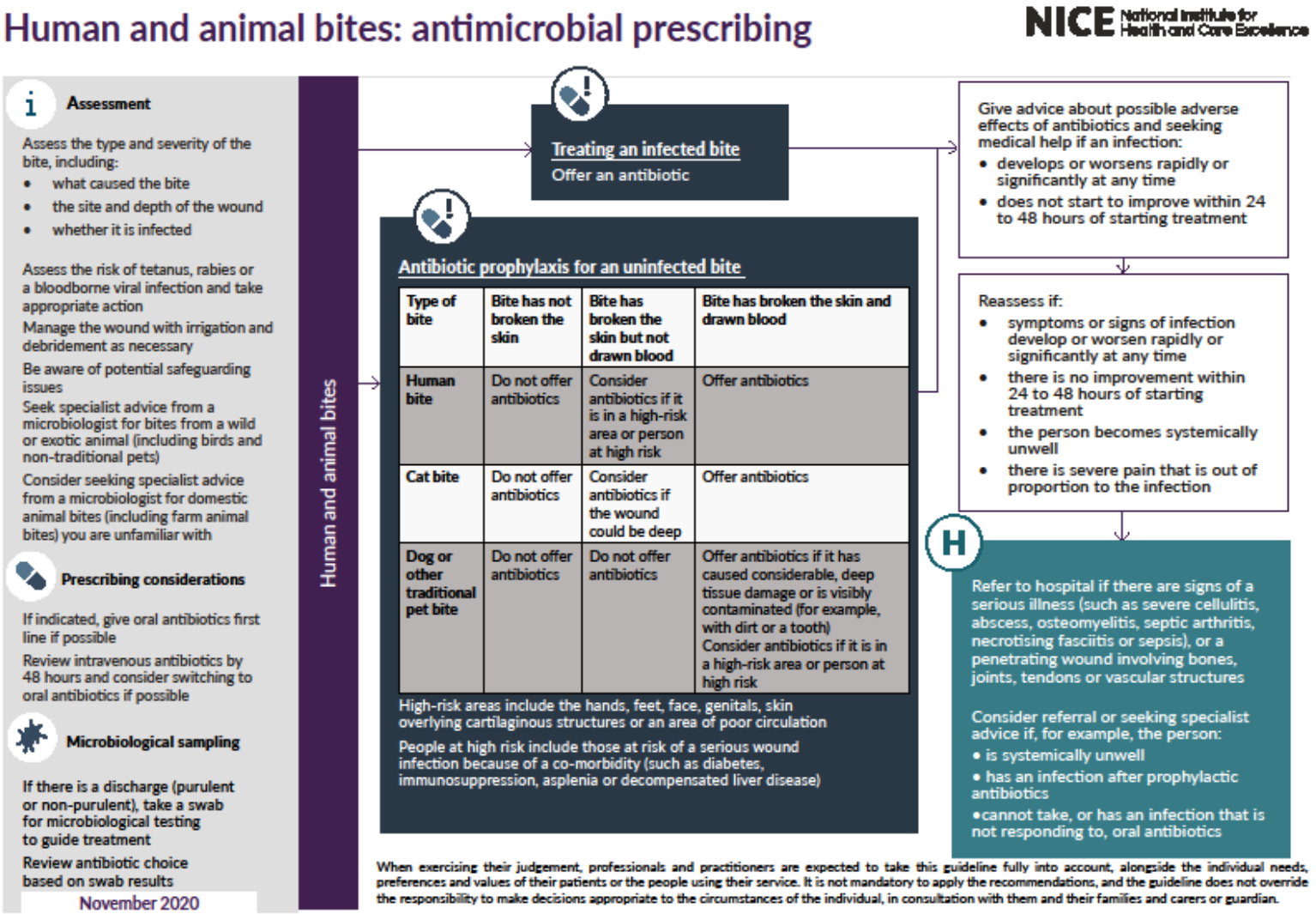
I confirm that I have read and understood the content of this Patient Group Direction and that I am willing and competent to work to it within my professional code of conduct.

Name of health professional	Signature	Senior representative authorising health professional (Authorising Manager)	Date

The authorising manager should retain a copy of the list and a copy must be sent to the Medicines Management Team, PTHB, Basil Webb Hall, Bronllys Hospital, Powys LD3 0LU for audit purposes.

The healthcare professional should retain a copy of the document after signing.

Appendix B



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Human and animal bites: antimicrobial prescribing

Choice of antibiotic for prophylaxis and treatment: adults aged 18 years and over

NICE National Institute for Health and Care Excellence

Prophylaxis and treatment	Antibiotic, dosage and course length for prophylaxis (3 days) and treatment (5 days)
First-choice oral antibiotic	**Co-amoxiclav**: 250/125 mg or 500/125 mg three times a day
Alternative first-choice oral antibiotics for penicillin allergy or if co-amoxiclav is unsuitable	**Doxycycline**: 200 mg on first day, then 100 mg or 200 mg daily With **Metronidazole**: 400 mg three times a day
Alternative first-choice oral antibiotics in pregnancy for penicillin allergy or if co-amoxiclav is unsuitable	Seek specialist advice
First-choice intravenous antibiotic (if unable to take oral antibiotics or severely unwell)	**Co-amoxiclav**: 1.2 g three times a day
Alternative first-choice intravenous antibiotics for penicillin allergy or if co-amoxiclav is unsuitable If a cephalosporin is not appropriate, seek specialist advice	**Cefuroxime** (caution in penicillin allergy): 750 mg three times a day (increased to 750 mg four times a day or 1.5 g three or four times a day if infection is severe) With **Metronidazole**: 500 mg three times a day **Ceftriaxone** (caution in penicillin allergy) 2 g once a day With **Metronidazole**: 500 mg three times a day

See the BNF and summary of product characteristics for appropriate use and dosing in specific populations, for example, for hepatic or renal impairment, in pregnancy, when breastfeeding and when administering intravenous (or, if appropriate, intramuscular) antibiotics.

A 5-day course is appropriate for treating most human or animal bites, but course length can be increased to 7 days (with review) based on clinical assessment of the wound, for example, if there is significant tissue destruction or it has penetrated bone, joint, tendon or vascular structures.

Human and animal bites: antimicrobial prescribing

NICE National Institute for Health and Care Excellence

Choice of antibiotic for prophylaxis and treatment: children and young people under 18 years

Prophylaxis and treatment	Antibiotic, dosage and course length for prophylaxis (3 days) and treatment (5 days)
Choice for children under 1 month	Seek specialist advice
First-choice oral antibiotic for children aged 1 month and over	**Co-amoxiclav**: 1 month to 11 months: 0.25 ml/kg of 125/31 suspension three times a day 1 year to 5 years: 0.25 ml/kg or 5 ml of 125/31 suspension three times a day 6 years to 11 years: 0.15 ml/kg or 5 ml of 250/62 suspension three times a day 12 years to 17 years: 250/125 mg or 500/125 mg three times a day Co-amoxiclav 400/57 suspension may also be considered to allow for twice-daily dosing
Alternative first-choice oral antibiotic for children under 12 years for penicillin allergy or if co-amoxiclav is unsuitable	**Co-trimoxazole** (off-label use; see the BNF for Children for information on monitoring): 6 weeks to 5 months: 120 mg or 24 mg/kg twice a day 6 months to 5 years, 240 mg or 24 mg/kg twice a day 6 years to 11 years, 480 mg or 24 mg/kg twice a day For off-label use, follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's good practice in prescribing and managing medicines and devices for information.
Alternative first-choice oral antibiotics for young people aged 12 to 17 years for penicillin allergy or if co-amoxiclav is unsuitable	**Doxycycline**: 200 mg on first day, then 100 mg or 200 mg daily **With metronidazole**: 400 mg three times a day
Alternative first-choice oral antibiotics in pregnancy for penicillin allergy or if co-amoxiclav unsuitable	Seek specialist advice
First-choice intravenous antibiotic (if unable to take oral antibiotics or severely ill)	**Co-amoxiclav**: 1 month to 2 months: 30 mg/kg twice a day 3 months to 17 years: 30 mg/kg three times a day (maximum per dose 1.2g)
Alternative first-choice intravenous antibiotics for penicillin allergy or if co-amoxiclav is unsuitable If a cephalosporin is not appropriate, seek specialist advice	**Cefuroxime** (caution in penicillin allergy): 1 month to 17 years: 20 mg/kg three times a day (maximum 750 mg per dose), which can be increased to 50 mg/kg to 60 mg/kg three or four times a day (maximum per dose 1.5 g) **With metronidazole**: 1 month: loading dose 15 mg/kg, then (after 8 hours) 7.5 mg/kg three times a day 2 months to 17 years: 7.5 mg/kg three times a day (maximum per dose 500 mg) **Ceftriaxone** (caution in penicillin allergy): 1 month to 11 years (up to 50 kg): 50 mg/kg to 80 mg/kg once a day (maximum 4 g per day) 9 years to 11 years (50 kg and above) and 12 years to 17 years: 1 g to 2 g once a day **With metronidazole**: 1 month: loading dose 15 mg/kg, then (after 8 hours) 7.5 mg/kg three times a day 2 months to 17 years: 7.5 mg/kg three times a day (maximum per dose 500 mg)

See the BNF for Children and summary of product characteristics for appropriate use and dosing in specific populations, for example, for hepatic or renal impairment, in pregnancy, when breastfeeding and when administering intravenous (or, if appropriate, intramuscular) antibiotics.

A 5-day course is appropriate for treating most human or animal bites, but course length can be increased to 7 days (with review) based on clinical assessment of the wound, for example, if there is significant tissue destruction or it has penetrated bone, joint, tendon or vascular structures

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