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1 Rationale

The purpose of this Clinical Protocol is to provide a guiding framework for Hospital at the Home team members.

The current update of the protocol occurred as a response to an Antimicrobial Stewardship Audit which provided excellent opportunities for improvement in AMS within HATH services, one of which was the need for a review of this protocol against national guidelines and outcomes of clinical reviews.

2 Scope

The Clinical Protocol applies Nationally for HATH clients treated for cellulitis.

3 Acceptance to HATH - criteria and pathway

<p>RED</p> <p>Unacceptable for community admission to HATH</p> <p>Refer to ED/ Inpatient management.</p> <p>(May become suitable for HATH after ED or inpatient stabilisation)</p>	<ul style="list-style-type: none"> • Rapidly progressive soft tissue infection, skin necrosis or changes suggestive of possible of sepsis (including but not limited to fever >38.5°C, Systolic BP <100 mmHg, and HR >90/min) • Uncontrolled pain • Necrotic changes to skin or other signs of acute vascular insufficiency • Suspected deep tissue (e.g. fasciitis, myositis) bone or joint involvement (septic arthritis, osteomyelitis) • Co-existing medical conditions requiring hospital admission or likely to affect compliance or creating risk factors for rapid progression of infection (such as poorly controlled diabetes or significant immune compromise). • Pregnancy beyond 20 weeks gestation • A collection or abscess requiring surgical drainage • Limb compromise from swelling is deemed a significant risk • Active IV drug user
<p>ORANGE</p> <p>Requires discussion with Medical Governor and/or Infectious</p>	<ul style="list-style-type: none"> • Suspected abscess/collection* • Suspected bursitis* • Immunosuppressed/Immunocompromised* • Diabetic foot ulcer*

<p>Diseases Physician prior to acceptance.</p>	<ul style="list-style-type: none"> • Cellulitis post*: • Water immersion (seawater/brackish/fresh) • Human or animal bite/clench fist injuries • Post traumatic wounds • Burns <p>*Above situations all need ID specialist input re: appropriate antibiotic regime and this needs to be documented</p> <ul style="list-style-type: none"> • Obesity (weight >120kg**). <p>**Clarification with Infectious Diseases Physician is required regarding potential need for BD dosing due to poor tissue penetration</p> <ul style="list-style-type: none"> • Underlying lymphoedema or lipo-lymphoedema which may require longer courses of antibiotics to prevent further lymphatic damage • Cellulitis involving <ul style="list-style-type: none"> ▪ Face, neck or perineum ▪ Over or near joint areas ▪ Chronic ulcers (may require investigation for underlying bone involvement and/or vascular insufficiency) ▪ Both legs ▪ Upper limb ▪ Surgical wound ▪ PH of IVDU. Discussion needs to occur about risk of relapse
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	<ul style="list-style-type: none"> • Suspected or confirmed immediate Penicillin allergy or hypersensitivity (e.g. anaphylaxis, angioedema and/or urticaria) or Cephalosporin hypersensitivity • Clinical suspicion or laboratory confirmation of multi-resistant organisms (i.e. previous infection or colonisation with Methicillin Resistant Staphylococcus Aureus [MRSA]) • Aged between 13 and 18, suitable for adult dosing who are not under the care of a paediatrician.
<p>GREEN</p> <p>Accepted for HATH Cellulitis protocol</p>	<p>All criteria must be met:</p> <ul style="list-style-type: none"> • Client’s medical condition has been assessed as stable, has a clear diagnosis/prognosis and is at low risk of deterioration • Patient has failed a trial of oral antibiotics, <p>OR</p> <ul style="list-style-type: none"> • intravenous antibiotics are deemed the only appropriate choice <p>OR</p> <ul style="list-style-type: none"> • patient unable to take oral medication (noting that oral medication can be given in liquid form). • Required pathology has been collected and results provided: <ul style="list-style-type: none"> ▪ FBC, U+E, LFT, CRP, BSL (if diabetic) ▪ Wound swab M C and S (if discharging wound) ▪ Blood culture (if fever 38.5°C or over) ▪ Adults 18 years or over

4 Pathology requirements

Verify if any recent pathology has been ordered and access results prior to considering if the following are also required:

- Blood cultures if temp $\geq 38.5^{\circ}\text{C}$.
- Urea and electrolytes, LFTs, full blood picture, CRP, and blood glucose level (if diabetic).
- Wound swab if open wound or purulent discharge.
- INR if on warfarin to obtain baseline and then discuss with medical governance around frequency of monitoring as can be affected by antibiotic treatment.
- For cellulitis complicating chronic ulcers, consider imaging to investigate for underlying osteomyelitis and/or vascular insufficiency, and to assess the need for advanced wound care, such as nonsurgical/surgical debridement, and optimisation of vascular supply. Note that bacteria found in chronic ulcers are likely to be colonisers.
- If microbiology investigations indicate organism other than *Streptococcus pyogenes*, or *Methicillin Sensitive Staphylococcus aureus*, consult an Infectious Diseases Physician.

5 General Management

- Note that oral therapy is usually adequate for cellulitis and erysipelas, **not associated with systemic features** of infection, and is usually suitable for clients with a single systemic feature of infection.
- Initial intravenous therapy is usually required for adults with **two or more of the following systemic features** of infection:
 - temperature more than 38°C or less than 36°C
 - heart rate more than 90 beats/minute
 - respiratory rate more than 20 breaths/minute

- white cell count more than $12 \times 10^9/L$ or less than $4 \times 10^9/L$, or more than 10% immature (band) forms.
- Intravenous therapy (IVT) is also used for clients
 - who are not responding to oral antibiotics, and/or
 - unable to tolerate oral therapy.
- IVT may also be required for immunocompromised clients or those with comorbidities that increase the risk of rapid disease progression or sepsis (e.g. diabetes), even if they do not have two or more systemic features of infection.
- Access pathology results from referral source and if necessary, organise blood cultures, wound swab if indicated, CRP and full blood picture.
- Collaborate with medical governance doctor regarding abnormal pathology results.
- Measure creatinine clearance using Cockcroft-Gault (CG) calculation for all clients as below: -
 - Measure the client's height and weight.
 - Ascertain the Ideal body weight for the height and gender using the table in Appendix B.
 - CG calculation is based on actual or ideal body weight (whichever is less).
 - If the client's weight is at or below the estimated ideal body weight, then use the actual measured body weight in the CG formula to calculate Creatinine clearance.
 - If the measured body weight is above the ideal body weight for the height, use the Ideal body weight for the CG calculation of Creatinine clearance.
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- Initiate oral antibiotics if there are no systemic features and or if a trial of oral treatment has not occurred
- If oral treatment has failed or systemic features are present-gain intravenous access and commence intravenous therapy as prescribed.
- Nursing assessment as per Limb Assessment Tool BC-FRMC-0084
- Nursing care as per Clinical Pathway – Cellulitis BC-FRMC-0304
- Mark the margins of cellulitis and upload photos at least every 48 hours for ongoing monitoring of response to treatment.
- Advise client to rest with limb elevated.
- Advise client on the use of oral Probenecid if prescribed.
- Advise client on the use of oral analgesia/antipyretic medication as directed.
- Monitor and advise client on psychological wellbeing and refer to other agencies if evidence of de-compensating mental health.

6 Medical management / treatment plan

- Note that the principles of appropriate antimicrobial prescribing, and antimicrobial stewardship apply in community-based parenteral and oral antimicrobial therapy programs.
- As part of medical assessment consider risk factors for deterioration and complications, such as diabetes, peripheral vascular disease, immune suppression.
- Consider if at risk for illicit IV drug use through the venous access device

6.1 Oral antibiotics

Initiate oral antibiotics if there are no systemic features and/or if a trial of oral treatment has not occurred.

For **Erysipelas**, or where **Strep. pyogenes** is the suspected organism (e.g spontaneous, recurrent, rapidly spreading, **non-purulent**), use:

- Phenoxyethylpenicillin 500 mg (child*: 12.5 mg/kg up to 500 mg) orally, 6-hourly for 5 days

For **purulent** cellulitis (eg associated abscess), or if **Staph aureus** is otherwise suspected based on clinical presentation (eg penetrating trauma, associated ulcer), use:

Dicloxacillin 500 mg (child: 12.5 mg/kg up to 500 mg) orally, 6-hourly for 5 days

OR

- Flucloxacillin 500 mg (child*: 12.5 mg/kg up to 500 mg) orally, 6-hourly for 5 days.

Flucloxacillin can cause cholestatic hepatitis (increased risk in >55 year old; females and courses >2 weeks). **CAUTION:** Contraindicated with history of cholestatic hepatitis caused by Flucloxacillin/Dicloxacillin. Pre-existing hepatic impairment is NOT a risk factor.

*Cefalexin is often preferred to Dicloxacillin or Flucloxacillin in children because the liquid formulation is better tolerated.

For **septic bursitis** (olecranon/pre-patellar), use:

- **Dicloxacillin 1g (child: 25mg/kg up to 1g) orally 6-hourly** until resolution of symptoms, can be up to 2 weeks.
 - OR
- **Flucloxacillin* 1g (child: 25mg/kg up to 1g) orally 6-hourly** until resolution of symptoms, can be up to 2 weeks.

*Flucloxacillin can cause cholestatic hepatitis (increased risk in >55 year old; females and courses >2 weeks). **CAUTION:** Contraindicated with history of cholestatic hepatitis caused by Flucloxacillin/Dicloxacillin. Pre-existing hepatic impairment is NOT a risk factor.

For patients with **delayed non-severe** hypersensitivity to Penicillins, Cefalexin can be used in most cases

Cefalexin 500 mg (child: 12.5 mg/kg up to 500 mg) orally, 6-hourly for 5 days.

For patients with immediate (severe/non severe) or severe delayed hypersensitivity to Penicillin use:

- **Clindamycin 450mg (child 10mg/kg up to 450mg) orally, 8 hourly for 5 days.**

For patients at risk of **MRSA** (See Appendix A), use:

- Trimethoprim + Sulfamethoxazole 160+800 mg (child 1 month or older: 4+20 mg/kg up to 160+800 mg) orally, 12-hourly for 5 days

OR

- Clindamycin 450mg (child 10mg/kg up to 450mg) orally, 8 hourly for 5 days

6.2 Intravenous therapy at home

- If oral treatment has failed or is not suitable due to extent of cellulitis;

or

- systemic features are present;

assess whether the patient is stable, low risk and suitable for IV treatment in the home. See traffic light system for guidance.

- Consider if client is at risk of illicit IV drug use and IV access is appropriate.
- Home hospital management of cellulitis is generally once daily, to a maximum twice daily visits in the home for administration of IV **cefazolin +/- probenecid** (see table below and section 6.3).

*Note that community guidelines support the use of cefazolin in the community even if four times daily penicillin would usually be given in a tertiary hospital.

<i>Calculated eGFR (Cockcroft Gault)</i>	<i>Cefazolin* and Probenecid^ dose</i>
>40ml/min	Cefazolin 2g IV once daily + Probenecid 1g orally daily OR

	Cefazolin 2G IV BD, No probenecid (see section 6.3)
20-40ml/min	Cefazolin 500mg-1G IV twice daily, No probenecid
<20ml/min	Cefazolin 500mg- 1G IV once daily, No probenecid

*Dosing known to be effective up to weights of 120kg. Liaise with ID for higher weights as dose may need to be increased.

^Probenecid to be taken 30 minutes before IV cefazolin dose.

6.3 Suitability for oral Probenecid

- No known allergy to Probenecid.
- Absence of blood dyscrasia, renal urate stones and acute gout.
- Renal function, reduced efficacy at creatinine clearance <50ml/min and to avoid if creatinine clearance <30mL/min. Not nephrotoxic.
- Stable liver function.
- Insufficient data to support safe use in pregnancy and breastfeeding – avoid.
- If nausea/vomiting, try Probenecid 500mg twice daily rather than 1g once daily.
- Keep hydrated on probenecid to avoid development of urinary tract stones.
- Do not use in elite athletes as listed on banned substances on World anti-doping code.

Drug interactions with Probenecid:

- Use of methotrexate concurrently is contraindicated
- Caution with sulfonylureas (monitor blood glucose levels) and benzodiazepines as they will have increased plasma levels
- Being on allopurinol is not a contraindication to taking probenecid- but dose of allopurinol may need to be reduced whilst on probenecid in some cases– discuss with pharmacist before adjusting/ ceasing.

NB: The following situations require discussion with an Infectious Diseases Physician prior to acceptance for HATH.

See Section 7, Table 2 below for general management approach to these situations:

- Human and animal bites/clenched fist injuries
- Post traumatic wounds
- Cellulitis following contact with water.
- Cellulitis complicating chronic ulcers.
- Obese patients >120kg
- Cellulitis complicating lipo-lymphoedema
- Immunosuppressed/immunocompromised
- Upper limb cellulitis

For **erysipelas or non-purulent cellulitis** where *Strep pyogenes* is suspected, ideal inpatient management is:

- Benzylpenicillin 1.2gm IV 6hrly

For **purulent cellulitis**, ideal inpatient management is:

- Flucloxacillin 2gm 6hrly (child: 50mg/kg up to 2gm)

7. Monitoring

- As soon as clinical improvement occurs (resolution of systemic features, fever, pain) – start oral therapy.
- Note that redness may persist and decisions regarding response to antibiotics should be based on multiple features and parameters including symptoms like pain, swelling, observations and biochemical markers like FBC and CRP.

- If not responding as expected especially by day five of IV antibiotics, discuss the case with Infectious Disease Physician regarding further management options.
- If patient is on Warfarin, check with medical governance about plan for frequency of monitoring of INR as this will be affected by antibiotics.
- If clinical deterioration occurs (see below) – discuss with medical governor and consider hospital transfer.
- Indicators for urgent medical re-assessment or hospital admission:
 - Persistent fever > 37.8°C after 72 hours of IV antibiotic therapy
 - Tachycardia, HR > 100/min
 - Hypotension (systolic BP < 90, and/or diastolic BP <60)
 - Extension of skin erythema or development of skin necrosis
 - Increasing pain uncontrolled by prescribed analgesia.
 - Evidence of fluctuation or a collection suggestive of an abscess.

8. Switching to oral therapy

Switch to oral therapy as soon as systemic symptoms resolve.

Note only one or two doses of intravenous therapy may be sufficient.

For **cellulitis**, a total duration of therapy of 5 to 10 days (intravenous + oral) is recommended.

For **septic bursitis**, total duration of treatment (intravenous and oral) is until resolution of swelling and redness which can sometimes which can be up to 2 weeks.

8.1 Recommended oral antibiotics (post initial IV therapy)

For **Erysipelas** or where *Strep. pyogenes* is the suspected organism (e.g spontaneous, recurrent, rapidly spreading, **non-purulent**) switch to:

- Phenoxymethylpenicillin 500 mg (child[^]: 12.5 mg/kg up to 500 mg) orally, 6-hourly

For **purulent** cellulitis (eg associated abscess, furuncle), or if Staph aureus is otherwise suspected based on clinical presentation (eg penetrating trauma, associated ulcer), switch to

- Dicloxacillin 500 mg (child[^]: 12.5 mg/kg up to 500 mg) orally, 6-hourly

OR

- Flucloxacillin* 500 mg (child[^]: 12.5 mg/kg up to 500 mg) orally, 6-hourly.

***CAUTION:** Contraindicated with history of cholestatic hepatitis caused by Flucloxacillin/Dicloxacillin. Flucloxacillin can cause cholestatic hepatitis (increased risk in >55 year old; females and courses >2 weeks). Pre-existing hepatic impairment is NOT a risk factor.

Check dose adjustments on eTG for severe renal impairment.

For **septic bursitis** (olecranon/pre-patellar), switch to:

- Dicloxacillin 1g (child: 25mg/kg up to 1g) orally 6-hourly

OR

- Flucloxacillin* 1g(child: 25mg/kg up to 1g) 6-hourly

***CAUTION:** Contraindicated with history of cholestatic hepatitis caused by flucloxacillin/dicloxacillin. Flucloxacillin can cause cholestatic hepatitis (increased risk in >55 year old; females and courses >2 weeks). Pre-existing hepatic impairment is NOT a risk factor.

Check dose adjustments on eTG for severe renal impairment.

For patients with **delayed non-severe** hypersensitivity to penicillins, Cefalexin can be used in most cases

- Cefalexin 500 mg (child: 12.5 mg/kg up to 500 mg) orally, 6-hourly.

NB In the case of septic bursitis – Cefalexin 1g (child: 25mg/kg up to 1g) orally, 6-hourly is recommended.

For patients with **immediate (severe/non severe) or severe delayed hypersensitivity** to penicillin use:

- Clindamycin 450mg (child 10mg/kg up to 450mg) orally, 8 hourly

For patients at risk of **MRSA** (See Appendix A), use:

- Trimethoprim + Sulfamethoxazole 160+800 mg (child 1 month or older: 4+20 mg/kg up to 160+800 mg) orally, 12-hourly

OR

- Clindamycin 450mg (child 10mg/kg up to 450mg) orally, 8 hourly

^Cefalexin is often preferred to Dicloxacillin or Flucloxacillin in children, because the liquid formulation is better tolerated.

7 Management of specific high-risk situations

All specific high-risk situations require discussion with medical governance and advice from Infectious Diseases Physician to decide:

- whether suitable for Home Hospital management (eg risks for deterioration, risk of illicit drug use through venous access device etc) ,
- medical governance responsibilities, and
- most appropriate antibiotic regimes based on M C and S, clinical scenario, local guidelines etc and
- monitoring and follow up.

NB: The information below from eTG guidelines is only to be used as a guide and any antibiotic regime needs to be discussed and reviewed by Infectious Diseases Physician and medical governance.

Table 2: High Risk situations:

Human and animal bites/clenched fist injury

For bites and clenched-fist injuries that are **not infected**, antibiotic therapy is usually not necessary for otherwise healthy individuals if the risk of wound infection is low (eg small

wounds not involving deeper tissues that present within eight hours and can be adequately debrided and irrigated).

Give presumptive therapy however, if the risk of wound infection is high, including if:

- presentation to medical care is delayed by eight hours or more
- the wound is a puncture wound that cannot be debrided adequately
- the wound is on the hands, feet, or face
- the wound involves deeper tissues (eg bones, joints, tendons)
- the wound involves an open fracture—see eTG [Open Fractures](#) for management
- the patient is immunocompromised (eg due to asplenia or immunosuppressive medications), or has alcoholic liver disease or diabetes
- the wound is a cat bite.

For wounds on the hands, feet or face, or if infection progresses despite antibiotic therapy, consider surgical consultation. Surgical advice may also be sought on the appropriateness of primary versus delayed wound closure.

General management	eTG Recommended antibiotic regimen
<ul style="list-style-type: none"> • Assessment of extent of infection and the possibility of involvement of underlying tendon, joint or bone and or possibility of retained foreign bodies eg small animal teeth • Any concerns with the above needs to be referred back to referring team • Wound swab to be taken. • Wound debrided and irrigated. • Assessment of tetanus immunisation and need for 	<p>If infecting organism clearly identified use the antibiotic based on culture and sensitivity.</p> <p>If antibiotic therapy is indicated, not associated with systemic features nor involving deeper tissues:</p> <p>Amoxicillin/Clavulanic acid 875mg/125mg PO twelve hourly for five days.</p> <p>If there is a delay in commencing antibiotics given procaine benzylpenicillin 1.5gm as a single</p>

<p>additional tetanus toxoid/immunoglobulin</p> <ul style="list-style-type: none"> Assessment of need for rabies or lyssa virus post exposure prophylaxis eg bat bites If human bite, consider need for assessment and prevention of blood borne viral diseases (eg HIV, Hep B and C), discuss with medical governance doctor and/or ID Physician. 	<p>dose whilst awaiting oral antibiotic commencement</p> <p>If immediate penicillin hypersensitivity use: Metronidazole 400mg PO twelve hourly, for five days</p> <p>PLUS EITHER</p> <p>Doxycycline 100mg BD PO for five days.</p> <p>OR</p> <p>Trimethoprim + Sulfamethoxazole 160mg/800mg PO twelve hourly, for five days.</p> <p>OR</p> <p>Use combination of Ciprofloxacin 500mg PO twelve hourly, for five days</p> <p>PLUS</p> <p>Clindamycin 450mg PO TDS for five days</p> <p>Longer than five days may be required based on clinical picture.</p> <p>If systemic features, not responding to PO antibiotics or deeper tissue involvement (e.g. bone, joint or tendon), IV treatment regimes (under the advice of ID Physician) recommended are:</p> <p>IV Amoxicillin+Clavulanic Acid (1st line) six to eight hourly depending on if bone involvement.</p>
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	2 nd line if IV Amoxicillin +Clavulanic Acid not available, IV Piperacillin +Tazobactam eight hourly.
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Cellulitis following water immersion (seawater/ fresh, brackish, aquarium, soil or sewage contaminated)

Preventative antibiotics are not routinely required for wounds that have been immersed in water. Prophylaxis is required for traumatic water-immersed wounds that require surgical management or are significantly contaminated.

General management	eTG Recommended antibiotic regimen
<p>Assessment of severity of infection, co-morbidities (eg malignancy, iron overload), accurate history of type of water exposure.</p> <p>Wound swab to be taken.</p> <p>Careful cleaning, and debridement, if necessary, of wounds that have been immersed in water is important to prevent infection.</p> <p>For patients with traumatic water-immersed wounds, ensure that tetanus immunisation is up to date</p> <p>Discuss culture results with ID/Micro specialist.</p>	<p><u>Seawater</u></p> <p>Localised infection, lack of systemic features, no deep tissue involvement: -</p> <p>Doxycycline orally 12 hourly (adult :100mg; children use only >8 years, dosing according to weight)</p> <p>PLUS</p> <p>Flucloxacillin 500mg (child 12.5mg/kg up to 500mg) orally six hourly</p> <p>OR</p> <p>Dicloxacillin 500mg (child 12.5mg/kg up to 500mg) orally, six hourly</p> <p>Freshwater, brackish, aquarium, soil/sewage contaminated water:</p>

<p>Liaise with referring medical governor regarding appropriate antibiotics and/or confer with eTG</p> <p>Consider more prolonged duration of therapy (eg 14 days) depending on response.</p>	<p>Trimethoprim + Sulfamethoxazole 320+1600 mg (child >1month 8+40mg/kg up to 320+1600mg) orally, 12 hourly</p> <p>OR</p> <p>Ciprofloxacin 500mg (child 12.5mg/kg up to 500mg) orally, 12 hourly</p> <p>PLUS</p> <p>Flucloxacillin 500mg (child 12.5mg/kg up to 500mg) orally six hourly</p> <p>OR</p> <p>Dicloxacillin 500mg (child 12.5mg/kg up to 500mg) orally six hourly.</p> <p>If systemic features, deeper tissue involvement, risk factors for severe disease, not responded to oral, needs discussion with ID Physician and medical governance regarding ongoing management.</p> <p>eTG IV treatments (doses to be advised by ID Physician)</p> <p><u>Sewage/soil contaminated water +/- significant trauma wound:</u></p> <p>IV Cefepime eight hourly plus Metronidazole IV, 12 hourly.</p> <p><u>Not sewage/soil contaminated water, no significant traumatic wound:</u></p>
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	IV Flucloxacillin/Dicloxacillin six hourly plus IV Ciprofloxacin eight hourly
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Cellulitis complicating chronic ulcers

All chronic ulcers and wounds are colonised with bacteria. Do not perform microbiological investigations or start antibiotic therapy unless there are clinical signs of infection.

Systemic antibiotics should only be used for chronic wounds where there are clinical signs of spreading or systemic infection.

Antimicrobials should always be in combination with optimal local wound management, debridement and cleansing.

Choice of antimicrobial will be based on suspected pathogen, location of infection, patient characteristics (e.g. previous microbiology results, colonisation with a multi drug resistant organism, recent hospitalisation, diabetes history) and severity of infection.

If there are clinical signs of infection, collect samples of pus (which must be distinguished from ulcer exudate) or infected tissue for culture.

Note culture of a superficial swab may identify organisms that are colonising the wound rather than causing infection (eg *Pseudomonas Aeruginosa* identified by culture of a superficial swab of a lower limb ulcer).

General management	Recommended antibiotic regimen
<ul style="list-style-type: none"> Assessment of underlying cause of ulcer (eg arterial/venous/lymphatic dysfunction), diabetes history possibility of involvement of underlying muscle, tendon, joint or bone. 	<p>Antibiotic therapy should ideally be guided by culture results; however, wound swab cultures often indicate bacterial colonisation rather than causative pathogen.</p> <p>For mild venous ulcer infections, treat as per cellulitis and erysipelas without systemic features.</p>

<ul style="list-style-type: none"> • May require appropriate imaging. • Wound swab to be taken as per above infection indications • Wounds/chronic oedema/venous insufficiency/lipo-lymphoedema to be managed as per Silverchain wound care guidelines. 	<p>Empiric therapy:</p> <p>Cephazolin 2g IV daily</p> <p>PLUS</p> <p>Probenecid 1g PO daily</p> <p><u>For diabetic foot infections:</u></p> <p>Mild foot infections with no recent antibiotic course(s) and low risk of MRSA:</p> <p>Flucloxacillin 500mg orally six hourly</p> <p>OR</p> <p>Dicloxacillin 500mg orally six hourly</p> <p>If mild diabetic foot infection, low risk of MRSA but recent antibiotic course:</p> <p>Amoxicillin and Clavulanic Acid 875mg + 125mg orally 12 hourly</p> <p>If moderate diabetic foot infection:</p> <p>IV Amoxicillin and Clavulanic Acid six-eight hourly</p> <p>OR</p> <p>IV Cefazolin eight hourly with IV Metronidazole 12 hourly.</p> <p>Severe diabetic foot infections:</p> <p>IV Piperacillin and Tazobactam</p>
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Traumatic wound infections	
<p>The following advice applies to extremity wounds. For penetrating wounds seek specialist advice.</p> <p>Prophylaxis of traumatic wounds is not routinely required for example if not significantly contaminated or surgical intervention not required.</p>	
General management	Recommended antibiotic regime
<p>Careful cleaning and debridement of traumatic wounds is important to prevent infection.</p> <p>Immobilisation and elevation can be helpful too.</p> <p>Traumatic injury through footwear requires specialist input to ensure cover for pseudomonas.</p> <p>Check tetanus immunisation status is up to date.</p> <p>Wound swab to be taken and sent for culture.</p>	<p>Significantly contaminated wounds but no surgical intervention, no systemic features/deeper tissue involvement:</p> <p>Dicloxacillin 500mg (child 12.5mg/kg up to 500mg) orally six hourly</p> <p>OR</p> <p>Flucloxacillin 500mg (child 12.5mg/kg up to 500mg) orally six hourly.</p> <p>Traumatic wounds with systemic features, deeper tissues involvement, low risk of MRSA need discussion with ID Physician and medical governance. IV antibiotic regimes (to be advised by ID Physician):</p> <p>IV Cefazolin eight hourly.</p> <p>Traumatic wounds with systemic features, deeper tissues involvement, low risk of MRSA with heavy contamination requiring anaerobe cover:</p>

	<p>IV Amoxicillin with Clavulanic Acid six to eight hourly</p> <p>OR</p> <p>IV Cefazolin eight hourly plus IV Metronidazole 12 hourly</p> <p>If surgical intervention needed:</p> <p>IV Cefazolin 2g, eight hourly</p> <p>If surgical intervention needed and heavily contaminated severe injury</p> <p>IV Cefazolin 2g, eight hourly</p> <p>PLUS</p> <p>IV Metronidazole 500mg 12 hourly</p>
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For patients with purulent cellulitis in whom *S. Aureus* is suspected based on clinical presentation, who are at increased risk of methicillin-resistant *S. Aureus* (**MRSA**) infection, use

- Vancomycin (see Silverchain Vancomycin protocol BC-CP-0024)

In some regions/communities, based on local community associated MRSA (CA-MRSA) susceptibility patterns, Clindamycin or Lincomycin is a suitable alternative to Vancomycin

- Clindamycin 600mg IV 8hrly (child 15mg/kg up to

OR

- Lincomycin 600mg IV 8hrly (child 15mg/kg

8 Medical governance

- The client must have access to medical governance support for 24 hours per day, 7 days per week
- Primary medical governance can be by referring medical specialists, credentialed referring GPs or by Silverchain medical officer
- Care delivery is planned and provided in consultation with the client, medical practitioner/specialist holding medical governance and nursing staff
- Where the primary medical governor is unavailable the Silverchain medical practitioner will provide the medical governance.
- In the instance when a client's condition deteriorates the Silverchain medical officer or nursing staff will confer with the referring doctor or an emergency department medical officer.
- When governance is retained by a Silverchain medical officer the client will have a medical review within 24 hours of admission and the medical officer will determine when the scheduled follow up and discharge will occur.
- A summary of the episode of care is sent to the referrer or the client's GP at discharge.
- The discharge summary is to highlight any clinical risks that have been identified during the admission and include any significant investigation results

9 Discharge planning

- Refer back to client's GP
- Ensure a follow up appt has been made with the usual GP for review and that any clinical risks or concerns are handed over.

10 Supporting documents

Silverchain Group documents that directly relate to and inform this Clinical Protocol are available with this document in the Policy Document Management System (PDMS).

Other documents that directly relate to and inform this Clinical Protocol are as follows:

- Skin and Soft Tissue Infections: Published April 2019. Amended December 2019. © Therapeutic Guidelines Ltd (eTG March 2021 edition)

11 Document Details

Document Owner	Executive Medical Director, East Coast
Document Type	CP – Clinical Protocol
Consumer Participation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable
Functional Area	Acute
Risk Rating	Moderate
Periodic Review	36 months

Silver Chain Group’s policies align with relevant legislation and standards and are based on providing a fair, inclusive and safe working environment free from bullying and discrimination and one that enables equal opportunity for all Silver Chain staff. Our policies embody our values of Care, Community, Integrity and Excellence.

Appendix A: Risk factors for infection with methicillin-resistant *Staphylococcus Aureus*

A patient with one or more of the risk factors below is at increased risk of methicillin-resistant *Staphylococcus aureus* (MRSA) infection. However, patients at increased risk will not necessarily be colonised or infected with MRSA.

Consider whether to modify empirical therapy on an individual patient basis, considering the severity of infection.

Risk factors for infection with MRSA include:

- residence in an area with a high prevalence of MRSA (eg Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberly and Pilbara)
- previous colonisation or infection with MRSA, particularly if recent or associated with the current episode of care [NB1]
- frequent stays, or a current prolonged stay, in a hospital with a high prevalence of MRSA, particularly if associated with antibiotic exposure or recent surgery
- residence in an aged-care facility with a high prevalence of MRSA, particularly if the patient has had multiple courses of antibiotics.
- Current residence, or residence in the past 12 months, in a correctional facility

If modifying empirical therapy based on the presence of risk factors, consider local MRSA epidemiology and susceptibility patterns (particularly of community-associated MRSA).

Appendix B: Ideal body weight for height and gender

Height		Ideal body weight in kg	
cm	Feet (') & Inches (")	Female	Male
155	5'	48	53
160	5' 2"	53	57
165	5' 4"	57	62
170	5' 6"	62	66
175	5' 7"	66	71
180	5' 9"	71	75
185	6'	75	80
190	6' 2"	80	84
195	6' 4"	84	89
200	6' 6"	89	93
205	6' 7"	93	98
210	6' 9"	98	102
215	7'	102	107
220	7' 2"	107	111

**Adapted from eTG complete. 2023. Therapeutic Guidelines. CCG and Ideal body weight tables eTG