CPO ED Back Referral Cellulitis Pathway- Adult

Purpose

To provide support for IV therapy management in primary care following assessment at Te Whatu Ora-Hawkes Bay. The below information is to be used for guidance only and should not replace clinical judgment. This pathway includes Bacterial cellulitis and Erysipelas.

Eligibility Criteria

- Suitable for Patients with cellulitis requiring IV Therapy that can be safely managed in Primary Care, including patients seen under ACC
- Hawke's Bay resident
- Age 15 years and over
- Can be managed safely in primary care
- Initiated by ED staff at Te Whatu Ora-Hawkes Bay, referring patient back to general practice or Urgent Care

Consider

- General health especially cognitive capacity is suitable
- Pain level
- Social circumstances are supportive of CPO IV therapy
- Access to a telephone
- Agrees to home elevation of affected limb

Pathway

- Patients presenting to the Te Whatu Ora – Health New Zealand Te Matau a Māui, Hawke's Bay (Te Whatu Ora – Hawke's Bay) Emergency Department (ED) with cellulitis who require IV antibiotics will be assessed and a decision made as to the appropriateness of the patient completing IV therapy in primary care.
- An IV line will be sited, the first dose of antibiotic (cefazolin) administered, and the patient referred back to their GP/NP or an Urgent Care Centre
- **The GP/NP or Urgent Care Centre will be required to complete the CPO referral in Halcyon for claiming purposes, as ED has no access to Halcyon.**
- Patients receive the remainder of their treatment as per the CPO Guidelines
- An electronic discharge summary (EDS) will be sent to the patients GP/NP, or the Urgent Care Center where the patient has been advised to attend
- 8am-5pm: Phone call to GP/practice nurse to discuss the patient and request the GP continuation of treatment under the CPO Cellulitis Pathway
- 5pm-8am: the patient will be asked to attend the nominated GP surgery or Urgent Care, whichever is most appropriate, the following day for their next dose of antibiotic and continuation of treatment under the CPO Cellulitis Pathway
- A probenecid 'take home pack' will be provided to the patient from ED

Funding

Referral and Claiming is through the **Halcyon Provider Portal > CPO Programmes > Acute Care > Cellulitis**. Funding is fee for service.

Electronic Discharge Summary

An electronic discharge summary (EDS) will be sent to the patients GP/NP, or Urgent Care where the patient has been advised to attend. The patient will also be provided with a copy of their discharge summary.

EDS to Include

- IVAB plan of care, dose and time of administration
- provide patient with information about cellulitis
- Cannula to remain insitu for further IV treatment at GP practice. Document date, size and insertion site, plus secure cannula and document on EDS

Medications

CPO will fund the prescription fee for patients for the specified medications prescribed under this pathway. These are cefazolin and probenecid.

No Charge to Patient

As the patient has had their first consultation at ED all subsequent care for the patient while they are receiving IV treatment for cellulitis is provided free of charge with fees being charged to the CPO programme according to the current scheme.

CPO Cellulitis Pathway- Adult

Purpose

To provide support for IV therapy management in primary care following failure of oral antimicrobial therapy. The below information is to be used for guidance only and should not replace clinical judgment. This pathway includes Bacterial cellulitis and Erysipelas

Eligibility Criteria

- Hawke's Bay resident
- Age 15 years and over
- Would normally have been referred to Te Whatu Ora-Hawkes Bay acutely
- Can be managed safely in primary care
- Completed adequate trial of oral antibiotics (as above)

Consider

- General health especially cognitive capacity is suitable
- Pain level
- Social circumstances are supportive of CPO IV therapy
- Access to a telephone
- Agrees to home elevation of affected limb

Exclusions

- Red Flags-as below
- Complex diabetic foot infections
- eGFR <35
- BMI >40 or weight >150kg, discussion with Infectious Disease physician for advice
- Mild cellulitis (suitable for oral antibiotic- first choice or boosted. See recommendations for oral antibiotics below)
- Abscess- needs surgical debridement
- Concern for sepsis

RED FLAGS

Use SIRS criteria below to screen for sepsis: if >2 positive criteria or there is clinical concern, contact Te Whatu Ora – Hawke's Bay and refer to appropriate service below:

Refer to:
Medical registrar on-call via pager 3610
AAU physician ext. 5499 or Surgical/orthopaedic specialty via switchboard

Patient meets SIRS criteria if they exhibit two or more of the following:
Temperature <36°C or >38°C
Heart Rate > 90
Respiratory rate > 20
WCC > 12 (x10(9)/L)

- Unstable co-morbidities
- Limb-threatening infection due to vascular compromise
- Severe life-threatening infection such as necrotising fasciitis
- Suspected necrotising fasciitis (see note below)
- Compartment syndrome
- Post-operative surgical wounds
- Severe systemic illness, e.g. fever, or nausea, and vomiting
- Co-morbidity that may complicate or delay healing e.g. peripheral vascular disease, chronic venous insufficiency, morbid obesity, immunosuppression, intravenous drug use
- Periorbital infection
- Cellulitis that has spread from an adjacent structure (e.g. osteomyelitis) or through the blood (bacteraemia) is a serious concern

NOTE: Necrotising fasciitis or Myonecrosis

Generalised signs of necrotising fasciitis or myonecrosis can be indistinguishable from cellulitis, but is strongly suggested by:

- Dusky purple or black discolouration
- Tense odema
- Cutaneous numbness
- Skin necrosis with or without crepitus
- Pain - out of proportion to clinical signs

Oral Antibiotic Treatment

Oral Antibiotic Treatment- First Choice: (dosing for normal renal function)
(NOT FUNDED THROUGH CPO)

- Flucloxacillin- 500mg to 1g, four times daily, for seven days
  OR (if penicillin-related rash))
- Cefalexin- 500mg, four times daily, for seven days

Antibiotic Treatment if type 1 penicillin allergy:

- Erythromycin ethinyl succinate - 800mg, twice daily, for seven days OR
- Roxithromycin - 150mg, twice daily or 300mg daily for seven days

OR If MRSA present:

- Co-trimoxazole - 160+800mg (two tablets), twice daily, for five to seven days OR
- Clindamycin- 450mg three times daily (authorization required from Infectious Disease Physician)

Boosted Antibiotic Treatment:
(NOT FUNDED THROUGH CPO)

If No Improvement Following Oral Antibiotic Treatment- First Choice as above:

Consider using probenecid in combination with antibiotics.

- Probenecid 500mg three times daily for seven days

WITH

- Flucloxacillin 1g, three times daily, for seven days

OR

- Probenecid 500mg three times daily for seven days

WITH

- Cefalexin 1g, three times daily, for seven days

OR

Start IV Cefaxolin as per the CPO Cellulitis pathway if appropriate (Funded under CPO)

Check contraindications for Probenecid

IV Management

- Outline area of erythema and daily reassessment to check not extending. Area of erythema may be slow to reduce but check for other signs of improvement, less oedema, less heat, less pain
- Discontinue oral antibiotics when IV cefazolin commenced.
- Intravenous Injection: Administer solution directly into vein or through tubing. Dilute the reconstituted 2g of Cefazolin in a minimum of 10 mL of Sterile Water for Injection. Inject solution slowly over a period of 3 to 5 minutes. Do not inject in less than 3 minutes. (https://www.medsafe.govt.nz/profs/datasheet/c/cefazolinaftinj.pdf
- Arrange oral antibiotic to begin with final dose of IV antibiotic. (Generally flucloxacillin, 1g 6 hourly if normal renal function, 1 hour before or 2 hours after meals)
- Emphasise the importance of rest, elevation and not going to work while receiving treatment
- Transport available through Hastings Taxis if patient requires transport to general practice for IV therapy- provide CPO number to taxi company

Cefazolin Dosage

	eGFR	
Weight	**>50mL/min**	**30-50mL/min**
Not obese (Weight <120kg or BMI<40)	• Cefazolin: 2g ONCE daily • Probenecid: 500mg TWICE daily	• Cefazolin: 2g ONCE daily • Probenecid: 500mg ONCE daily
Obese (Weight >120kg or BMI>40)	• Cefazolin: 3g ONCE daily • Probenecid: 500mg TWICE daily	• Cefazolin: 2g ONCE daily • Probenecid: 500mg TWICE daily

If the patient has a contra-indication to probenecid administer:

	eGFR	
Weight	**>50mL/min**	**30-50mL/min**
Not obese (Weight <120kg or BMI<40)	• Cefazolin: 2g TWICE daily	• Cefazolin: 2g TWICE daily
Obese (Weight >120kg or BMI>40)	• Cefazolin: 3g TWICE daily	• Cefazolin: 2g TWICE daily

Non- response to IV Antibiotics

Three days is the standard length of antibiotic administration for cellulitis in the CPO guideline.
If patient not responding:

- Consider extending IV therapy for a further 3 days.
- Consider blood tests for FBC and creatinine to help guide management, particularly for elderly or high-risk patients.
- Do not exceed more than six days without consultation with Infectious Diseases Physician at Te Whatu Ora – Hawke's Bay
- Consider alternative diagnoses.

Preventing Recurrent Cellulitis

People who experience frequently recurring cellulitis, such as those with lymphoedema may consider a trial of prophylactic antibiotics (e.g. amoxicillin 500mg twice daily or doxycycline 100mg daily) on a long-term basis to protect against further infection. This must be seen as an option of last resort; as long term antibiotics are not without obvious risks.

Medications

1. CPO will fund the prescription co-payment for patients for the specified medications prescribed under this pathway. These are cefazolin and probenecid.
2. **All prescriptions MUST include the CPO reference number HB…...**