NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINE

Plastics and Burns Unit guideline for Empirical Treatment of Infections on Wards

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

Version Number:	1
Does this version include changes to clinical advice:	N/A
Date Approved:	13th May 2025
Date of Next Review:	31st May 2028
Lead Author:	Scott Gillen
Approval Group:	Antimicrobial Utilisation Committee

Important Note:

The online version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

Guideline for Empirical Antibiotic use for **Treatment of Infections** in the Plastics and Burns Unit

Plastics and Burns (Canniesburn) Unit and
Antimicrobial Utilisation Committee May 2025
Review Date May 2028

Introduction

Prudent use of antimicrobials is essential with limitation of antimicrobials to those where there are clear symptoms or suspicion of infection. Prudent antimicrobial use is also important in surgical prophylaxis where post-operative antibiotics should only be given to treat active/ongoing infection unless specifically recommended against the surgical procedure. This guideline aims to provide antibiotic use recommendations for the Plastics and Burns (Canniesburn) Unit clinical teams.

Please also be aware of additional guidelines for:

- Plastics and Burns Unit Guideline for Pre-operative Prophylactic Antibiotic use (Theatres)
- Plastics and Burns Unit Guideline for Prophylactic Antibiotic use on Wards

Please contact the authors of this guideline if there are sections that you think could be improved or updated in view of new evidence. We welcome your thoughts and comments to: scott.gillen@ggc.scot.nhs.uk Telephone: 0141 201 3246.

Prepared by:
Mr John Scott, Consultant Plastic Surgeon, Glasgow Royal Infirmary
Dr Padmaja Polubothu, Consultant Microbiologist, Glasgow Royal Infirmary
Scott Gillen, Antimicrobials Pharmacist, Glasgow Royal Infirmary
Siobhán Simpson, Clinical Pharmacist, Glasgow Royal Infirmary

SPARED: Good antibiotic prescribing practice

Samples	• Send samples for culture, sampling pre-antibiotics whenever possible. • **A minimum of 2 blood culture sets (4 bottles in total) and ensuring that each bottle is filled with 10ml of blood should be obtained in any patient with suspected blood stream infection and preferably before starting antibiotics.** • Check the culture results & review therapy when you have them. Can you NARROW THE SPECTRUM?
Policy	• Comply with local policies (see Clinical Guidelines Platform & GGC Medicines App) for antibiotic CHOICE, ROUTE & DURATION. • Check for drug interactions & cautions (e.g. clarithromycin, rifampicin). • Complete Protected Antibiotic Forms. • Discuss complex or difficult cases with microbiology/ID.
Allergies	• Check & document the patient's allergy status before prescribing. • Document & consider the nature of any 'allergies'. • A blank allergy status DOES NOT = NKDA.
Reason	• Record the indication when starting any antibiotic. • Document other reasoning, for example: ▪ Rationale for any policy deviation ▪ Details of any microbiology/ID discussion
End date	• Document the intended duration and specify duration on HEPMA prescription • Check the GGC Empirical Infection Management Guideline and IVOST policy via Clinical Guidelines Platform for recommended durations.
Daily review	• Monitor & document patient response. • Check culture results & narrow the spectrum if possible. • Review the need for IV therapy DAILY (refer to GGC IVOST guideline). Document a formal review of IV within 72 hours with the outcome (e.g. stop, IVOST, continue IV with reason). • Observe indicated duration & stop if an alternative non-infectious diagnosis is made. • Avoid prolonged (>4 days) gentamicin courses.

NHS Greater Glasgow and Clyde, Canniesburn Plastic Surgery and Burns Unit recommendations for empirical antibiotic therapy in adults

- Assess severity of infection. Document in patient's notes presence of:
- Systemic Inflammatory Response Syndrome (SIRS) score (indicates severe infection if SIRS ≥ 2).
- Whenever possible, collect all culture specimens prior to administration of antibiotics. Review therapy as per culture results.
- Post-op antibiotics should only be given to treat active/ongoing infection unless specifically recommended in the antibiotic prophylaxis section of this guideline.
- Record antibiotic duration on HEPMA.

Indication	Antibiotic therapy	Penicillin allergy
Mild soft tissue infection	Oral Flucloxacillin 1g 6 hrly	Oral Doxycycline* 100 mg 12 hrly
	Duration 5 days	
Moderate cellulitis/erysipelas Consider OPAT/ambulatory care	IV Flucloxacillin 2 g 6 hrly	IV Vancomycin (dosing info here) Also use vancomycin if MRSA colonised
	Duration 7 days (total IV/oral)	
Acute burns	Refer to separate guideline: Burns patients (adults): Antibiotic recommendations (1168)	

▪Ciprofloxacin: risk of serious drug interactions and may prolong the QTc interval. Avoid if other QTc risk factors. See BNF (appendix 1) or seek advice from pharmacy.

*Doxycycline/Ciprofloxacin: absorption reduced with oral iron, calcium, magnesium and some nutritional supplements. See BNF (appendix 1) or seek advice from pharmacy.

Indication	Antibiotic therapy	Penicillin allergy
Suspected necrotising fasciitis or any rapidly spreading or life or limb threatening infection Seek urgent surgical/orthopaedic review, urgent debridement/exploration may be required (discuss with microbiology)	IV Flucloxacillin 2 g 6-hrly + IV Benzylpenicillin 2.4 g 6 hrly + IV Metronidazole 500 mg 8 hrly + IV Clindamycin 1.2g 6 hrly + IV Gentamicin (dose as per **treatment** guidelines – dosing info here)	IV Vancomycin (dosing info here) + IV Metronidazole 500 mg 8 hrly + IV Clindamycin 1.2g 6 hrly + IV Gentamicin (dose as per **treatment** guidelines – dosing info here)
	Duration 10 – 14 days total or as per Microbiology/ID (discuss to consider earlier IVOST/rationalisation)	
Mild infected human or animal bite (if no signs of infection please refer to antibiotic prophylaxis section)	Co-amoxiclav oral 625 mg 8 hrly	Doxycycline* oral 100 mg 12 hrly + Metronidazole oral 400 mg 8 hrly
	Duration 5 days **Duration if no signs of infection** 3 days	
Severe infected human or animal bite (discuss with microbiology) (if no signs of infection please refer to antibiotic prophylaxis section) Consider rabies risk (especially bat bite)	Co-amoxiclav IV 1.2 g 8 hrly	Metronidazole oral 400 mg 8 hrly + Ciprofloxacin* oral 500 mg 12 hrly + Vancomycin IV (dosing info here)
	Duration 7 days (total IV/oral) **Duration if no signs of infection:** 3 days	

Indication	Antibiotic therapy	Penicillin allergy
Post-operative infection Treat empirically as per anatomical source and review cultures. Discuss antibiotic choice with microbiology.		
• Mild	Oral Flucloxacillin 1g 6 hrly	Oral Doxycycline* 100 mg 12 hrly
• Severe (discuss with microbiology)	IV Flucloxacillin 2 g 6 hrly **Duration** 7 days (total IV/oral) but dependent on clinical review	IV Vancomycin (dosing info here) **Duration** 7 days (total IV/oral) but dependent on clinical review
• Involving groin/gynae/major head and neck/general surgery o Mild	Oral Co-amoxiclav 625 mg 8 hrly	Oral Ciprofloxacin▪* 500 mg 12 hrly + oral Clindamycin 600 mg 8 hrly
o Severe (discuss with microbiology)	IV Co-amoxiclav 1.2 g 8 hrly if more severe infection **Duration** 7 days (total IV/oral) but dependent on clinical review	IV Vancomycin (dosing info here) + IV Gentamicin (dose as per **treatment** guidelines – dosing info here) + IV Metronidazole 500 mg 8 hrly **Duration** 7 days (total IV/oral) but dependent on clinical review

▪Ciprofloxacin: risk of serious drug interactions and may prolong the QTc interval. Avoid if other QTc risk factors. See BNF (appendix 1) or seek advice from pharmacy.

*Doxycycline/Ciprofloxacin: absorption reduced with oral iron, calcium, magnesium and some nutritional supplements. See BNF (appendix 1) or seek advice from pharmacy.