Doncaster and Bassetlaw Teaching Hospitals
NHS Foundation Trust

IV to ORAL SWITCH & 5 DAY STOP POLICY

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Date: May 2023

Approved by: The Drugs & Therapeutics Committee
Date: June 2023

Implementation Date: November 2023

For Review: June 2026

This document is part of antibiotic formulary guidance.

Formulary guidance holds the same status as Trust policy

Summary of changes

Date	Changes	Author
May 2023	• Change of IVOS tool from ABCD to ACED • Table 1 split into 48hr IVOS and 5 day stop exclusions; indications consolidated. • Table 2 – Description for frequency of antimicrobial doses rationalised.	Larissa Claybourn

Introduction

There is a clear association between antibiotic use and the development of antibiotic-resistant infections and *Clostridium difficile* infection

IV to oral switch (IVOS) is an integral part of the UK Start Smart then Focus strategy and is one of the 'antimicrobial prescribing decisions' options at 48-72 hours of starting antibiotics.

Benefits of Early IVOS

- Decreased risk of line-associated infections and thrombophlebitis
- Reduced costs (i.e. drug & equipment costs and medical & nursing time)
- Patient satisfaction (patient friendly and earlier discharge)

Most infections can be adequately treated with 5-7 days of therapy (3 days for a simple UTI in females). Exceptions to this are listed in Table 1 below.

Aim of policy

To rationalise antibiotic use within the Trust by having a 5-7 day policy for all antibiotics and a 48 hour review policy for parenteral antibiotics. Patients with certain conditions will be excluded from this as outlined in the Table 1.

Critical Care units are exempt from this policy due to daily input from an infection specialist.

Appropriate samples must be sent, ideally before empiric treatment begins (do not delay antibiotics in life threatening situations) and ensure antibiotics are changed according to sensitivities.

IV to Oral Switch of Antibiotics

- All intravenous antibiotics should be reviewed within 48 hours of the first administered dose and daily thereafter. This should be documented clearly in the medical notes.
- If the patient has been afebrile for 24 hours and shown significant improvement, then an IV to oral switch should be considered. See chart below.

Considerations for IV to oral switch – ACED tool

A - **A**febrile >24 hours (haemodynamically stable with no signs of fever)

- patients temperature between 36-38°C in last 24 hours

C - **C**linically improving

- Improving signs and symptoms of infection
- Clinical markers improving (in past 24 hours)
  - Observations stable (BP, HR, RR) and reduction in NEWS2 score
  - WCC trending towards the normal range
  - Falling CRP

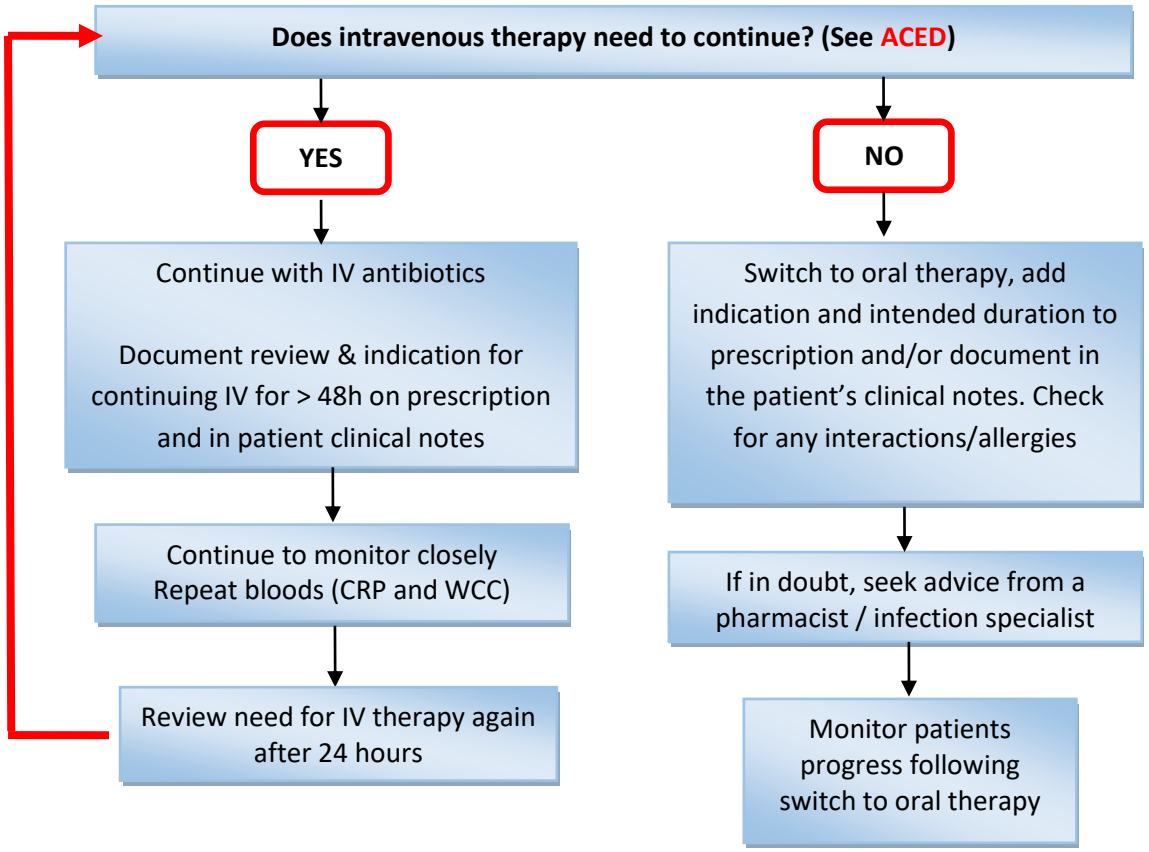
E - **E**ating and drinking,

- have a functional GI tract with no malabsorption
- suitable enteral antimicrobial available

D - **D**eep-seated/high risk infection not present (see table 1)

Exceptions to the above include the infections in the table 1
(Oral switch may be appropriate in some of these infections on a case by case basis)

Intravenous to Oral Antimicrobial Therapy Review and Switch Process



To access a national IVOS decision aid tool which can be printed for individual patients, please go to:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1133525/Final_IV_to_Oral_Switch_Decision_Aid_based_on_NationalCriteria_UKHSA.pdf

Table 1: Infections requiring special consideration

EXCEPTIONS TO 48hr IVOS	EXCLUSIONS FROM 5 DAY STOP POLICY
• Undrained abscess • Bone/joint infection (e.g. osteomyelitis, discitis, septic arthritis) • Empyema • Bloodstream infection • Severe necrotising soft tissue infection • Meningitis / encephalitis • Endocarditis	• Diabetic foot infection • Prostatitis, Epididymo-orchitis • Pyelonephritis • Pelvic inflammatory disease • Clostridium difficile • Infected implants/prosthesis • Exacerbation of cystic fibrosis/bronchiectasis • Atypical pneumonia /severe lobar pneumonia • Liver abscess • CR-BSI with line salvage strategy • All infections listed in left hand column

Table 2: Suggested IVOS antimicrobials

Always check for allergy, interactions, antibiotic sensitivity results and any monitoring requirements prior to prescribing.

Note: This list is not exhaustive. For IV antibiotics with no oral formulations, the switch should be guided by advice from an infection specialist or as per antibiotic sensitivities.

IV ANTIBIOTIC	ORAL OPTION (Adjust dose according to renal and hepatic function)
Amoxicillin	Amoxicillin 500mg-1g, tds
Aztreonam	Switch depends on source of infection and should be based on sensitivities or discussion with infection specialist.
Benzylpenicillin	Amoxicillin 500mg-1g, tds or phenoxymethylpenicillin (Penicillin V) 500mg qds, only for Streptococcal throat infections
Cefuroxime	**Switch based on sensitivities**. If no sensitivities: Cefaclor m/r 375mg bd (for respiratory tract indications) Cefalexin 500mg bd – tds (for other indications)*

	***If treating a complex or deep-seated infection or infection involving an abscess, bone or joints, discuss with Infection specialist.**
Ceftazidime	Switch depends on source of infection and should be based on sensitivities or discussion with infection specialist.
Ceftriaxone	
Cefotaxime	
Ciprofloxacin	Ciprofloxacin 500-750mg, bd (higher does if Pseudomonas spp. isolated)
Clarithromycin	Clarithromycin 500mg, bd
Clindamycin	Clindamycin 300-450mg, qds. Maximum dose 450mg qds in severe infection
Co-amoxiclav	**Switch to narrow spectrum where possible,** e.g. amoxicillin Co-amoxiclav 625mg tds
Co-trimoxazole	Co-trimoxazole – use same dose
Flucloxacillin	Flucloxacillin 500mg-1g qds (doses above 2g daily unlicensed)
Fluconazole	Fluconazole – use same dose
Gentamicin	Seek Infection specialist advice or as per antibiotic sensitivities. Consider if gram negative cover still required.
Levofloxacin	Levofloxacin – use same dose Doxycycline or co-trimoxazole may be a more appropriate oral option based on sensitivities (less risk of Clostridium difficile). Doses dependent on indication.
Linezolid	Linezolid – use same dose
Meropenem	Seek Infection specialist advice or as per antibiotic sensitivities.
Metronidazole	Metronidazole 400mg tds
Piperacillin/ Tazobactam	**Switch based on sensitivities. There may not be an appropriate oral option.** **Seek Infection specialist advice** if any of the following apply: • recent course of co-amoxiclav; • pseudomonas species suspected; • piperacillin/tazobactam is being used outside of Trust guidelines If these do not apply and no sensitivities are available, co-amoxiclav may be used where an oral agent is required/appropriate
Rifampicin	Rifampicin - use same dose. Should **NEVER** be used as a single agent, due to the risk of developing resistance.

Teicoplanin	Seek Infection specialist advice or as per antibiotic sensitivities.
Temocillin	Switch depends on source of infection and should be based on sensitivities or discussion with infection specialist.
Vancomycin	Seek Infection specialist advice or as per antibiotic sensitivities. NB: Oral vancomycin NOT suitable for systemic infection (only indicated for Clostridium difficile Infection)

5 day Stop for Antimicrobials

- Most oral antibiotics on the electronic prescribing system have a default course length of 5 days, some are excluded from this.
- When changing from IV to oral therapy, ensure this course length is changed to account for the number of days of IV therapy to give a total course length of 5 days.
- Antibiotics should be stopped if a non-infective diagnosis is made, even if the course has not been completed.
- If in doubt about the course length required, discuss with a senior member of your team in the first instance or else the Consultant in Infection.
- The conditions listed in table 1 will require more than 5 days of treatment. The indication should be documented in the clinical notes and antimicrobial prescription annotated.

References:

1. UKHSA: Guidance - National antimicrobial intravenous-to-oral switch (IVOS) criteria for early switch. Published 1 November 2022

   Accessed online via [https://www.gov.uk/government/publications/antimicrobial-intravenous-to-oral-switch-criteria-for-early-switch/national-antimicrobial-intravenous-to-oral-switch-ivos-criteria-for-early-switch#special-considerations-] on 10/1/23