

IV to ORAL SWITCH & 5 DAY STOP POLICY

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*This document is part of antibiotic formulary guidance.
Formulary guidance holds the same status as Trust policy*

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 a Consultant Microbiologist.

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.

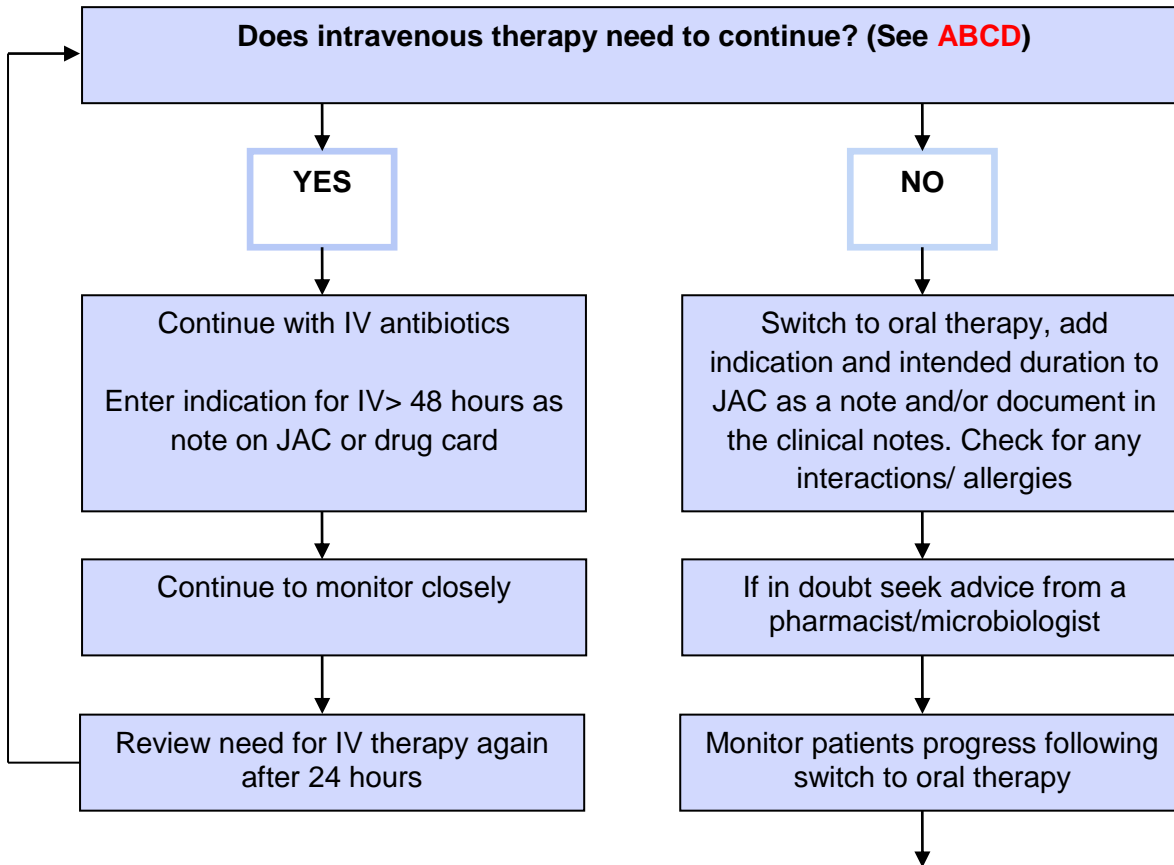
IV to Oral Switch of Antibiotics

- All intravenous antibiotics should be reviewed after 48 hours and daily thereafter, and 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 on next page.

5 day Stop for Antimicrobials

- Most oral antibiotics on the JAC system have a default course length of 5 days, excluding vancomycin, doxycycline, nitrofurantoin, pivmecillinam and trimethoprim.
- 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 Microbiologist.
- The conditions listed in table 1 will require more than 5 days of treatment. The indication should be entered as a note on JAC for that antibiotic to prevent accidental discontinuation.

Intravenous to Oral Antimicrobial Therapy Review and Switch



Considerations for IV to oral switch - ABCD

- A** - **A**febrile >24 hours (haemodynamically stable with no signs of fever)
 - patients temperature between 36-38°C for 24 hours
- B** - **A**ble to take oral medications, have a functional GI tract with no malabsorption and no interaction with other medications
 - suitable enteral antimicrobial drug available
- C** - **C**linically improving (markers normalising)
 - Improving signs and symptoms of infection and patients general condition getting better
 - Clinical markers improving
 - No unexplained tachycardia (heart rate <90 /min in past 12 hours)
 - BP stable (in past 24 hours)
 - Respiratory rate <20/min (in past 24 hours)
 - WCC 4-12 x 10⁹/L or a high WCC is falling
 - Falling CRP
- D** - Not suffering from certain **d**eep-seated/high risk infections (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)

Table 1: EXCEPTIONS TO THE 5 DAY STOP POLICY

- Liver abscess
- Bone/joint infection (e.g. osteomyelitis, discitis, septic arthritis)
- Inadequately drained abscesses or empyema
- Staphylococcus aureus bacteraemia
- Severe necrotising soft tissue infection
- Severe infections during chemotherapy related neutropenia
- Infected implants / prosthesis
- Meningitis / encephalitis
- Intracranial abscesses
- Endocarditis
- Exacerbation of cystic fibrosis / bronchiectasis
- Deteriorating clinical condition
- Atypical pneumonia / severe lobar pneumonia
- Diabetic foot infection
- Prostatitis, Epididymo-orchitis
- Pyelonephritis
- Pelvic inflammatory disease
- Clostridium difficile
- Deep seated abscess/tissue infection

Table 2: SUGGESTED IVOS CHANGES

Always check for allergy, interactions and antibiotic sensitivity results.

For IV antibiotics with no oral formulations the switch should be guided by Microbiology advice or as per microbiology sensitivities.

IV antibiotic	Oral Option (adjust dose according to renal and hepatic function)
Amoxicillin	Amoxicillin 500mg-1g, 8 hourly
Benzylpenicillin	Amoxicillin 500mg-1g, 8 hourly or phenoxymethylpenicillin (Penicillin V) 500mg, 6 hourly only for Streptococcal throat infections
Cefuroxime	<p>Switch based on sensitivities. If no sensitivities:</p> <p>Cefaclor m/r 375mg bd (for respiratory tract indications)</p> <p>Cefalexin 500mg bd – tds (for other indications)*</p> <p>*If treating a complex or deep-seated infection or infection involving an abscess, bone or joints, discuss with Microbiologist.</p>

Ciprofloxacin	Ciprofloxacin 500-750mg, 12 hourly (higher does if Pseudomonas spp. isolated)
Clarithromycin	Clarithromycin 500mg, 12 hourly
Clindamycin	Clindamycin 300-450mg, 6hourly. Maximum dose 450mg 6 hourly in severe infection
Co-amoxiclav	Switch to narrow spectrum where possible , e.g. amoxicillin Co-amoxiclav 625mg, 8 hourly
Co-trimoxazole	Co-trimoxazole – use same dose
Flucloxacillin	Flucloxacillin 500mg-1g, 6 hourly (doses above 2g daily unlicensed)
Fluconazole	Fluconazole – use same dose
Gentamicin	Seek microbiologist advice or as per microbiology 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)
Linezolid	Linezolid – use same dose
Meropenem	Seek Microbiologist advice or as per microbiology sensitivities.
Metronidazole	Metronidazole 400mg, 8 hourly
Piperacillin/ Tazobactam	Switch based on sensitivities. There may not be an appropriate oral option. Seek Microbiologist advice if any of the following apply: <ul style="list-style-type: none"> • recent previous course of co-amoxiclav; • pseudomonas species suspected; • pip/taz 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 Microbiologist advice or as per microbiology sensitivities.
Vancomycin	Seek Microbiologist advice or as per microbiology sensitivities. NB: Oral vancomycin not suitable for systemic infection (only indicated for Clostridium difficile Infection)