

Antibiotic Stop/Review Date and Indication Policy

Introduction

Correct use of antimicrobial agents requires that prescriptions are reviewed on a regular basis to ensure that the selected agent is still appropriate, continuation of therapy is still necessary and the route is still appropriate.

There have been incidences where patients have received unnecessarily long and excessive treatment, as a result of therapy not being reviewed. This can have an impact on:

- increased selection of resistant organisms
- antibiotic treatment related illnesses e.g. *Clostridium difficile* diarrhoea
- increased risk of adverse effects
- increased expenditure

The Trust has a clear mandate to reduce infections from drug resistant pathogens e.g. MRSA and *Clostridium difficile* (*C.diff*). A major part of this battle is the reduction of unnecessary antibiotic use. A recently published study¹ confirmed the increased risk of *C. diff.* diarrhoea with longer duration for many of the commonly used antibiotic classes. **In general 1-3 days caused a lower risk than 4-6 days which caused a lower risk than 7 or more days, for some classes these differences were significant.** This policy aims to prevent unintended long duration of therapy and hence reduce *C.diff* risk for patients.

¹ Pépin et al Clin. Inf. Diseases 2005;41:1254-1260.

The addition on the medicine chart of a stop date or intended duration of treatment every time an order for an antimicrobial agent is made, has worked successfully in many hospitals. Pharmacists and nurses facilitate the policy as part of their role on the wards.

The indication for an antimicrobial agent is often not clear or easy to find in the notes and makes monitoring for appropriateness by other clinicians and health professionals difficult. In many cases the prescriber initiating the antimicrobial may not be available to regularly review it (due to shift working). It would therefore be very beneficial to have the indication written on the medicine chart for all orders of antimicrobial agents.

Overall, documenting the indication and intended stop date/duration on the drug chart will be beneficial to all and help prevent unnecessarily extended antibiotic courses.

The Policy

All prescribers must write a **stop/review date** and **indication** on the medicine chart for all orders of **antimicrobial agents**.

Standard

An indication and a stop/review date or intended duration should be specified on the medicine chart at the point of prescribing any antimicrobial agent (when an order for antimicrobial therapy is made.)

Audit

This will be an ongoing campaign monitored by the six monthly Point Prevalence Studies.

Outcome measures: % compliance, changes in antibiotic usage, changes in mean duration and savings on antibiotic expenditure.

APPENDIX 1

A. Actions For Doctors

- Write the indication and stop/review date or intended duration in the 'additional instructions' box on the medicine chart for each antimicrobial agent prescribed.
 - The abbreviated indication (e.g. UTI) should be as specific as is known at the time of prescribing e.g. "sepsis ?cause" maybe appropriate if there really are no clinical features. This should be updated as more information is available.
 - Rarely, for confidentiality reasons, it is not deemed appropriate for the indication of the antimicrobial to be written on the drug chart (e.g. HIV). In these cases, please ensure it is written clearly in the medical notes and add "see notes" along with the stop or review date on the drug chart.

- The majority of IV antibiotics will require a "review" rather than "stop" date prior to being converted to oral.
- Review doses should be targeted for lunchtime doses where possible and should avoid weekends unless the patient is due for daily consultant review.
- Antibiotic review should be documented on the chart e.g. crossing through "r/v" and writing "give" plus endorsing a new review date.
 - For some infections, e.g. empyema, it may be difficult to endorse a definite stop date until the patient's condition begins to improve. Antibiotics in these circumstances should have review dates about twice a week (e.g. at consultant ward rounds and/or Fridays).

- Following an IV to PO switch. Please indicate the duration as either:
 - "... days more" i.e. ... days of oral following IV therapy,
 - "... days total" i.e. the total required duration of IV and PO together
 - or put a stop date (e.g. "stop 14/6/06").

- Antibiotics should be stopped/reviewed earlier than the specified date if clinically indicated.

Example with stop date (mostly appropriate for oral therapy):

DRUG APPROVED NAME PLEASE PRINT Trimethoprim				06.00	2/8 /07	3/8 /07	4/8 /07	5/8 /07												Continue On TTO
				08.00																
DOSE 200	Other e.g. ml	Directions bd	Additional instructions UTI 3 days	12.00																
Mcg (mg) g		Route po		14.00																
Start Date 2.8.07	Stop Date 5.8.07	Signature A.Dr	Bleep 1111	18.00																
PHARMACY USE				22.00																
																			Supply .. Days Advice to continue Y <input checked="" type="radio"/> N <input type="radio"/> Signature	

Example with review date (mostly appropriate for initial IV therapy):

DRUG APPROVED NAME PLEASE PRINT Flucloxacillin				06.00	2/8 /07	3/8 /07	4/8 /07	5/8 /07												Continue On TTO
				08.00																Supply Days Advice to continue Y (N) Signature
DOSE 1	Other e.g. ml	Directions qds	Additional instructions Cellulitis Review 48 hrs	12.00				R/V												
Mcg mg	(9)	Route IV		14.00																
Start Date 3.8.07	Stop Date	Signature A.Dr	Bleep 1111	18.00																
PHARMACY USE				22.00																

Typical standard course lengths (see also specific guidelines for further details)

Surgical prophylaxis (standard)	Single dose at induction
Surgical prophylaxis (involving implant)	no longer than 24 hours
Non severe pneumonia (CURB65 score 0-2)	5-7 days
Severe pneumonia of unknown aetiology (CURB65 score 3-5)	7-10 days
Atypical community acquired pneumonia	14 days
Legionella pneumonia	14-21 days
Severe Staphylococcus aureus / PVL pneumonia	14-21 days
Severe community acquired Gram negative pneumonia	14-21 days
Non-pneumonic LRTI/ Infective exacerbation of COPD	5 days (For severity C 7-10 days)
Infective exacerbation of bronchiectasis	14 days
Hospital Acquired pneumonia	7-8 days
Uncomplicated UTI (non-pregnant women)	3 days
Uncomplicated UTI (men and pregnant women)	7 days
Complicated UTI (including pyelonephritis)	10-14 days
Wound/soft tissue infection	7 days and then review
<i>Clostridium difficile</i> diarrhoea	10-14 days
Intra-abdominal sepsis	5-7 days and then review
Biliary sepsis	7 days
Spontaneous bacterial peritonitis	5-7 days and then review
Pelvic inflammatory disease	14 days
Post-operative gynaecological sepsis	5-7 days and then review
Bacterial meningitis	5 days minimum and then review
Viral encephalitis	10-21 days

NB Clinical judgement is still required, some patients/minor infections will not require the full standard course length detailed above - shorter courses of antibiotics equate to a lower risk of *C. difficile* diarrhoea.

- ✓ Please note the following conditions normally require an extended course
 - Acute Prostatitis
 - Osteomyelitis
 - Endocarditis
 - Meningitis/ Brain Abscess
 - Septic Arthritis
 - Empyema
 - *Staphylococcus aureus* bacteraemia
 - Tuberculosis
 - Prophylaxis for PCP/splenectomy
 - Necrotising soft tissue infections
 - Infected implants/prosthesis
 - Mediastinitis
 - Exacerbation of CF/bronchiectasis

Missed doses

Antibiotic doses may be missed for a number of reasons (e.g. no cannula, unable to swallow). Patients should be reviewed clinically and consideration given for represcribing additional doses if required.

B. Actions For Nurses

- ✓ Request the doctor to write the stop/review date and indication on the medicine chart for all orders of antimicrobial agents.
- ✓ Query all prescriptions continuing beyond the stop/review dates.
- ✓ Whilst awaiting review, continue to administer the antimicrobial.
- ✓ Ask doctor to review if a number of doses have been missed during the prescribed course, especially if the patient is still unwell or at a weekend where regular review is unlikely.

C. Action For Pharmacists

- ✓ All pharmacists should request a stop/review date and indication to be written in the 'additional instructions' box on the medicine chart for all antimicrobial agents.
- ✓ If the prescription is written in the presence of a pharmacist, request a stop/review date and indication as part of the prescription writing process.
- ✓ If a stop date has been documented the pharmacist may alter the administration boxes to ensure nurses do not give a longer course than was intended.

DRUG APPROVED NAME PLEASE PRINT Clarithromycin				06.00	2/8 /07	3/8 /07	4/8 /07	5/8 /07											Continue On TTO
				08.00	[Green bar spanning from 08.00 to 18.00]														Supply Days Advice to continue Y <input checked="" type="radio"/> N Signature
DOSE 500	Other e.g. ml	Directions bd	Additional instructions C.A.P. 7 days	12.00															
Mcg (mg) 9		Route po		14.00															
Start Date 3.8.07	Stop Date	Signature A.Dr	Bleep 1111	18.00															
PHARMACY USE				22.00															

- ✓ If a review date has been documented by the doctor, the pharmacist should highlight and endorse 'R/V' around the appropriate administration box. If

- possible, choose a weekday lunchtime dose:
- ✓ For all prescriptions already written, contact the prescriber and request a stop date and indication then endorse the chart appropriately. Inform the prescriber that the standard is to include a stop date and indication every time an order for an antimicrobial agent is made. This request should be made within **48-72 hours** of the prescription being written.
 - ✓ If this is not possible write in the notes requesting for a stop date and indication for the antimicrobial agent.
 - ✓ If the stop date has not been written by day 5 of treatment, inform the prescriber that this will be referred to the Antibiotic pharmacist/ Consultant microbiology ward round if the indication/stop date are not written on the medicine chart for the antibiotic on day 7 of treatment.
 - ✓ If the stop date has not been written by day 7 of treatment, refer the patient to the lead Antibiotic Pharmacist.

DRUG APPROVED NAME PLEASE PRINT Tazocin				06.00	2/8 /07	3/8 /07	4/8 /07	5/8 /07											Continue On TTO	
				08.00															Supply Days Advice to continue Y <input checked="" type="radio"/> N Signature	
DOSE 4.5	Other e.g. ml	Directions tds	Additional instructions H. A. P. Review 24hrs	12.00																
Mcg mg	<input checked="" type="radio"/> g	Route IV		14.00																
Start Date 3.8.07	Stop Date	Signature A.Dr	Bleep 1111	18.00																
PHARMACY USE				22.00																