Introduction

Correct use of antibiotics 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 instances where patients have received unnecessarily long and excessive treatment, as a result of therapy not being reviewed. This can result in:

- increased selection of resistant organisms
- more antibiotic treatment related illnesses e.g. *Clostridium difficile (C.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 *C.difficile*. A major part of this battle is the reduction of unnecessary antibiotic use. A published study\(^3\) confirmed the increased risk of *C. difficile* diarrhoea with longer course 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 an unintentionally long duration of therapy and hence reduce *C.difficile* risk for patients.

The addition on the medicine chart/e-Record of a stop date / review date or intended duration of treatment every time an order for an antibiotic is made has worked successfully in many hospitals\(^3\). Pharmacists and nurses facilitate the policy as part of their role on the wards.

The indication for an antibiotic is often not clear or easy to find in the patient’s notes and makes monitoring for appropriateness by other clinicians and health professionals difficult. In many cases the prescriber initiating the antibiotic therapy may not be available to regularly review it (due to shift working). It would therefore have clear advantages to have the indication written on the medicine chart/ e-Record for all orders of antibiotic agents at the point of prescribing.

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

This policy relates to the prescribing of all in-patient antibiotic prescriptions, whereby the responsibility of adhering to this policy is with the prescriber with the support of the nursing and pharmacy staff. Additional support in fulfilling the objectives of this policy can be found by referral to guidelines and the microbiology and infectious diseases department.

3 **Aims**

To direct prescribers to include both an indication and review or stop date at the point of prescribing an antibiotic, with the expectation that no unnecessarily extended antibiotic courses are prescribed.

4 **Duties (Roles and responsibilities)**

4.1 The Executive Team is accountable to the Trust Board for ensuring Trust-wide compliance with policy.

4.2 Directorate managers and heads of service are responsible to the Executive Team for ensuring policy implementation.

4.3 Managers are responsible for ensuring policy implementation and promoting awareness of this policy amongst their employees.

4.4 The Antimicrobial Steering Group (AMSG) is responsible for maintaining the Policy on behalf of the Trusts Medicines Management Committee.

5 **Definitions**

5.1 **Antimicrobial Steering Group** (AMSG) is a sub group of the Trusts Medicines Management Committee with the specific remit of promoting and monitoring prudent antimicrobial prescribing.

5.2 **Medicines Management Committee** (MMC) ensures that medicines are managed safely, effectively and economically through good practice, risk assessment and other control mechanisms, and to advise the Trust Board accordingly.

6 **Policy**

6.1 **Prescribing with the electronic prescribing system**

- All prescribers must specify a stop date and indication on the electronic medicine chart for all orders of antibiotics at the point of prescribing.
- For all prescribing of IV antibiotics and longer courses of oral antibiotics a review date must also be specified.
- For all prescribing of medical prophylactic antibiotics the reason for prophylaxis should be stated, e.g. ‘PCP prophylaxis’; a stop date is not indicated, hence not required.
6.2 Prescribing with paper medicine charts

- All prescribers must write a stop/review date and indication on the medicine chart for all orders of antibiotics at the point of prescribing.
- For all prescribing of prophylactic antibiotics the reason for prophylaxis should be stated, e.g. ‘PCP prophylaxis’; a stop date is not indicated, hence not required.

6.3 Target Clinical Areas

- All clinical areas

This policy will be audited to ensure that the indication, duration and review of antibiotics are clearly documented.

6.4 Guidance Notes

6.4.1 Prescribing with electronic prescribing system

Responsibilities for prescribers:

When prompted, write the indication in the “indication field” of the electronic medicine chart for each antibiotic prescribed.

- The indication should be as specific as possible at the time of prescribing, e.g. “sepsis ?chest” may be appropriate if source is suspected but not definitive. This should be updated as more information becomes available.

- Rarely, for confidentiality reasons, it may not be appropriate for the indication for the antibiotic to be written on the electronic medicine chart (e.g. HIV). In these cases enter into the indication field “see notes” together with the date so that it is easy to track in the notes; please ensure it is written clearly in the medical notes.

When prompted, write the duration in the “intended duration” field of the electronic medicine chart for each antibiotic prescribed.

In many cases IV antibiotics can be switched to oral at 48hours. However, to ensure that the antibiotic does not inappropriately stop abruptly without a review it is appropriate to prescribe a duration of up to 7 days, in anticipation of a review within 48hours. The minimum duration specified should be enough cover an entire weekend or 72hrs during the week.

- IV antibiotics have a mandatory review date and this automatically defaults to 48hrs. This can be altered, when prompted, at the point of prescribing.
- Review doses should be targeted for lunchtime doses where possible and should avoid weekends unless the patient is due for daily consultant review.
- If the review date has been reached but the patient still requires IV therapy then a new review and stop date should be added.
(the latter should include the prescribing of an oral alternative for the remainder of the clinical treatment as required).

- For long courses, such as those required for endocarditis, osteomyelitis cystic fibrosis, or brain abscess it is appropriate to prescribe the full duration of therapy. In these cases a weekly review is suggested.

- Where the prescriber is sure that only a short course of IV therapy is required before switching to oral therapy, it is essential that the prescriber ensures an oral course is prescribed to start immediately after the IV course is completed.

- For some infections 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).

- Please refer to the IV-Oral switch guideline (in the Trust Guideline to Antimicrobial Therapy)

When an antibiotic is being used on the advice Microbiology / Infectious Diseases this should be documented on the “special instructions” field of the electronic medicine chart by writing “micro advice” or “ID advice”.

**Standard course lengths for adults**

Standard order sets for adults are available for the conditions below and can be found by using terms such as pneumonia or COPD in the Physician Order Entry screen. These sets contain the standard regimens for total antibiotic prescription, e.g. 7 days for complicated hospital acquired pneumonia inclusive of IV and oral combined.

<table>
<thead>
<tr>
<th><strong>Surgical prophylaxis</strong></th>
<th>Single dose in most cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non severe community acquired pneumonia (CAP) (CURB65 score 0-2)</td>
<td>5 days</td>
</tr>
<tr>
<td>Severe community acquired pneumonia (CAP) (CURB65 score 3-5)</td>
<td>7 days</td>
</tr>
<tr>
<td>LRTI / Infective exacerbation of COPD</td>
<td>5 days</td>
</tr>
<tr>
<td>Uncomplicated hospital acquired pneumonia</td>
<td>5 days</td>
</tr>
<tr>
<td>Complicated hospital acquired pneumonia</td>
<td>7 days</td>
</tr>
<tr>
<td>Uncomplicated UTI</td>
<td>3 days</td>
</tr>
<tr>
<td>Complicated UTI (including male patients) excluding pyelonephritis</td>
<td>7 days</td>
</tr>
<tr>
<td>Non severe wound/soft tissue infection</td>
<td>5 days</td>
</tr>
<tr>
<td>Clostridium difficile diarrhoea</td>
<td>10 days</td>
</tr>
</tbody>
</table>

**Clinical judgment is still required; patients may require longer courses for more severe or complicated infections or when they fail to respond quickly. Note that shorter courses of antibiotics equate to a lower risk of C. difficile diarrhoea.**

**Notes:**

- If unsure about of the appropriateness of the standard course for a particular patient please contact microbiology for advice.
Conditions that normally require an individualised course:

- Acute Prostatitis
- Empyema
- Endocarditis
- Exacerbation of CF/bronchiectasis
- Infected implants/prosthesis
- Mediastinitis
- Meningitis/Brain Abscess
- Neutropenic sepsis
- Osteomyelitis
- Pyelonephritis
- Septic Arthritis
- Severe or necrotising soft tissue infections
- Staphylococcus aureus bacteraemia
- Tuberculosis

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 re-prescribing additional doses if required.

6.4.2 Responsibilities for Nurses

Query all prescriptions continuing beyond the review dates. Whilst awaiting review, continue to administer the antibiotic. If a patient were prescribed IV because they could not swallow but have subsequently improved their swallowing before the review date, ask a doctor to review with a view to doing an IV to oral switch.

Ask a doctor to review the duration/choice of antibiotic if doses have been missed at the beginning (e.g. if drug is not available) or during the prescribed course, especially if the patient is still unwell or it is over the weekend where regular review is unlikely.

6.4.3 Responsibilities for Pharmacists

For prescriptions of antibiotics that have already been written:

- Where a review date has been passed the pharmacist should contact the medical team looking after the patient and request that a new review date is added to the electronic medicine chart. The pharmacist may take a verbal order from the medical team looking after the patient, add the review date to e-Record and document this in the medical notes.

- Where the indication was not clear when initiated or has not been fully entered, the pharmacist may take a verbal order from the medical team looking after the patient, update the indication on e-Record accordingly and document this in the medical notes.
6.5 Prescribing with paper medicine charts

6.5.1 Responsibilities for prescribers

Write the indication and stop/review date or intended duration in the 'notes' box on the medicine chart for each antibiotic prescribed at the point of prescribing.

- The indication should be as specific as possible at the time of prescribing e.g. “sepsis?chest” may be appropriate if the source is suspected but not definitive. This should be updated as more information becomes available.
- In some cases the indication will be too large / complicated to fit in the notes section of the medicine chart. In these cases, please write “see notes” in the notes box of the kardex and also add the date so that it is easy to track in the notes; please ensure it is written clearly in the medical notes.
- Rarely, for confidentiality reasons, it may not be appropriate for the indication for the antibiotic to be written on the medicine chart (e.g. HIV) especially where charts may be seen by patients’ visitors. 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 medicine chart.
- Mark a stop or review date on the medicine chart (See figure 1 and figure 2 for examples)

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 medicine chart e.g. crossing through “rv” and endorse a new review date.

- For some infections 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).
- Please refer to the IV-Oral switch guideline (in the Trust Guideline to Antimicrobial Therapy)

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 14/6/12”).
If the antibiotic is being used on the advice Microbiology / Infectious Diseases this should be documented on the ‘notes’ section of the medicine chart by writing “micro advice” or “ID advice”.

Figure 1. Example with stop date (mostly appropriate for oral therapy):

<table>
<thead>
<tr>
<th>Please state Duration of Therapy for short course treatment e.g. antibiotics</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMOXICILLIN</td>
<td></td>
</tr>
<tr>
<td>Dose 1g</td>
<td></td>
</tr>
<tr>
<td>Route PO</td>
<td></td>
</tr>
<tr>
<td>Start Date 20/6</td>
<td></td>
</tr>
<tr>
<td>Duration of Therapy 7 days</td>
<td></td>
</tr>
<tr>
<td>Prescriber’s Signature</td>
<td></td>
</tr>
<tr>
<td>A. Doctor</td>
<td></td>
</tr>
<tr>
<td>Notes CAP</td>
<td></td>
</tr>
<tr>
<td>Name A. Doctor</td>
<td></td>
</tr>
<tr>
<td>Date Stopped Inhosp. Pharmacy use</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Example with review date (mostly appropriate for initial IV therapy):

<table>
<thead>
<tr>
<th>Please state Duration of Therapy for short course treatment e.g. antibiotics</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLUCLOxacillin</td>
<td></td>
</tr>
<tr>
<td>Dose 1g</td>
<td></td>
</tr>
<tr>
<td>Route IV</td>
<td></td>
</tr>
<tr>
<td>Start Date 20/6</td>
<td></td>
</tr>
<tr>
<td>Duration of Therapy</td>
<td></td>
</tr>
<tr>
<td>Prescriber’s Signature</td>
<td></td>
</tr>
<tr>
<td>A. Doctor</td>
<td></td>
</tr>
<tr>
<td>Notes Cellulitis REwiew 48hrs</td>
<td></td>
</tr>
<tr>
<td>Name A. Doctor</td>
<td></td>
</tr>
<tr>
<td>Date Stopped Inhosp. Pharmacy use</td>
<td></td>
</tr>
</tbody>
</table>

Standard course lengths

Please refer to the standard course lengths shown in section 6.4.1 table1.

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 re-prescribing additional doses if required.

6.5.2 Responsibilities for Nurses

Request that the doctor writes the stop/review date and indication on the medicine chart for all orders of antibiotic agents (if prophylaxis indicate in notes box reason, e.g. “prophylaxis PCP” Query all prescriptions continuing beyond the stop / review dates. Whilst awaiting review, continue to administer the antibiotic. If a patient were prescribed IV because they could not swallow but have subsequently improved their swallowing before the review date, ask doctor to review with a view to doing an IV to oral switch.

6.5.3 Responsibilities for Pharmacists

For prescriptions of antibiotics that have already been written:
- The pharmacist should contact the medical team looking after the patient and request that a stop / review date and an
indication are written in the ‘notes’ box on the medicine chart, if omitted. The pharmacist may take a verbal order from the medical team looking after the patient and add the stop / review date (see figure 3 and figure 4) and indication to the chart and document this in the medical notes.

For standard course lengths or where locally agreed protocols apply:
- The pharmacist may add the stop date and alter the administration boxes to ensure nurses do not give a longer course than was intended (see figure 4) and document that they have done this in the medical notes.

Figure 3. Example of pharmacist added review time

<table>
<thead>
<tr>
<th>Please state Duration of therapy for short course treatment e.g. antibiotics</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AMOXICILLIN</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dose</strong></td>
<td>1g</td>
</tr>
<tr>
<td><strong>Route</strong></td>
<td>PO</td>
</tr>
<tr>
<td><strong>Start Date</strong></td>
<td>20/6</td>
</tr>
<tr>
<td><strong>Duration of therapy</strong></td>
<td>7 days</td>
</tr>
<tr>
<td><strong>Prescriber’s Signature</strong></td>
<td>A. Doctor</td>
</tr>
<tr>
<td><strong>Name</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Date Stopped</strong></td>
<td>CP 23/6</td>
</tr>
</tbody>
</table>

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 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:

Figure 4. Example of where a pharmacist has endorsed a stop date

<table>
<thead>
<tr>
<th>Please state Duration of therapy for short course treatment e.g. antibiotics</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FLUCLOXACILLIN</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dose</strong></td>
<td>1g</td>
</tr>
<tr>
<td><strong>Route</strong></td>
<td>IV</td>
</tr>
<tr>
<td><strong>Start Date</strong></td>
<td>20/6</td>
</tr>
<tr>
<td><strong>Duration of therapy</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Prescriber’s Signature</strong></td>
<td>A. Doctor</td>
</tr>
<tr>
<td><strong>Name</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Date Stopped</strong></td>
<td>CP 21/6</td>
</tr>
</tbody>
</table>

7 Training

It is the responsibility of each Clinical Directorate to ensure that all relevant staff have training, as appropriate, on this policy; specifically those staff involved in the prescribing, administration and review of medications.
8 **Equality and Diversity**

The Trust is committed to ensuring that, as far as is reasonably practicable, the way we provide services to the public and the way we treat our staff reflects their individual needs and does not discriminate against individuals or groups on any grounds. This document has been appropriately assessed.

9 **Monitoring Compliance**

Compliance with this policy will be monitored by the Antimicrobial Steering Group on behalf of the Infection Prevention and Control Committee (IPCC). A Trust wide point prevalence audit will be undertaken every 12 months. The results will be fed back to the directorates; wards with compliance <90% will be audited on a 6 monthly basis, with inclusion of the medical staff on the ward at each audit to further raise awareness, until compliance is >90%, at which point the auditing programme will be reduced to every 12 months.

The Antimicrobial Steering Group and IPCC will develop action plans as appropriate to address any areas of non-compliance and continue to monitor the action until all issues are resolved.

<table>
<thead>
<tr>
<th>Standard / process / issue</th>
<th>Monitoring and audit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Method</td>
</tr>
<tr>
<td>Undertake annual audit of antibiotic prescribing ensuring there is a: •Stop or review date recorded on prescription •Indication recorded on prescription</td>
<td>Point prevalence audit of all actively prescribed antibiotics</td>
</tr>
</tbody>
</table>

10 **Consultation and Review**

This policy has been produced by the Antimicrobial Steering Group (AMSG) on behalf of the Medicines Management Committee.

11 **Implementation (including raising awareness)**

The AMSG will ensure that the all Clinical directorates are aware of this policy and liaise, as required, with the relevant individuals to ensure implementation.

12 **References**

1) Department of Health. Saving Lives, High Impact Intervention No 7, Care bundle to reduce the risk from *Clostridium difficile*. Department of Health, August 2007.

2) Antibiotic Stop / Review Date and Indication Policy, Nottingham University Hospitals, NHS Trust 2012

13  Associated Documents

4)  **Guide to Antimicrobial Therapy**  Newcastle Trust Microbiology Department  
    Version 1.8f, August 2014
The Newcastle upon Tyne Hospitals NHS Foundation Trust

Equality Analysis Form A

This form must be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval.

PART 1

1. **Assessment Date:** 30.12.14

2. **Name of policy / strategy / service:**
   Antibiotic Stop / Review Date and Indication Policy

3. **Name and designation of Author:**
   Kathy Gillespie, Antimicrobial Pharmacist

4. **Names & designations of those involved in the impact analysis screening process:**
   Steven Brice, Assistant Director of Pharmacy

5. **Is this a:**
   - Policy [x]
   - Strategy [ ]
   - Service [ ]

   **Is this:**
   - New [ ]
   - Revised [x]

   **Who is affected**
   - Employees [x]
   - Service Users [x]
   - Wider Community [ ]

6. **What are the main aims, objectives of the policy, strategy, or service and the intended outcomes?** (These can be cut and pasted from your policy)
   This policy relates to the prescribing of all in-patient antibiotic prescriptions, whereby the responsibility of adhering to this policy is with the prescriber with the support of the nursing and pharmacy staff.

7. **Does this policy, strategy, or service have any equality implications?**
   Yes [ ]
   No [x]

   If No, state reasons and the information used to make this decision, please refer to paragraph 2.3 of the Equality Analysis Guidance before providing reasons:
   This Policy states what is expected of all Trust staff involved with in-patient antibiotic prescriptions.
### Summary of evidence related to protected characteristics

<table>
<thead>
<tr>
<th>Protected Characteristic</th>
<th>Evidence, i.e. What evidence do you have that the Trust is meeting the needs of people in various protected Groups</th>
<th>Does evidence/engagement highlight areas of direct or indirect discrimination? If yes describe steps to be taken to address (by whom, completion date and review date)</th>
<th>Does the evidence highlight any areas to advance opportunities or foster good relations. If yes what steps will be taken? (by whom, completion date and review date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race / Ethnic origin (including gypsies and travellers)</td>
<td>Staff are expected to comply with policy irrespective of their race / ethnic origin.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sex (male/ female)</td>
<td>Staff are expected to comply with policy irrespective of their sex.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Religion and Belief</td>
<td>Staff are expected to comply with policy irrespective of their religion and belief.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sexual orientation including lesbian, gay and bisexual people</td>
<td>Staff are expected to comply with policy irrespective of their sexual orientation.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Age</td>
<td>Staff are expected to comply with policy irrespective of their age.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Disability – learning difficulties, physical disability, sensory impairment and mental health. Consider the needs of carers in this section</td>
<td>Staff with physical disabilities will be expected to comply with policy. Staff with learning difficulties, sensory impairment and mental health may be excluded from this policy.</td>
<td>Staff with learning difficulties, sensory impairment and mental health may be excluded from the policy; this is on the grounds of patient safety.</td>
<td>No</td>
</tr>
<tr>
<td>Gender Re-assignment</td>
<td>Staff who have had gender re-assignment are expected to comply with policy.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Marriage and Civil Partnership</td>
<td>Staff are expected to comply with policy whether they are married, in a civil partnership or single.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Maternity / Pregnancy</td>
<td>Staff are expected to comply with policy when pregnant.</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Are there any gaps in the evidence outlined above? If ‘yes’ how will these be rectified?

No

### Engagement has taken place with people who have protected characteristics and will continue through the Equality Delivery System and the Equality Diversity and Human Rights Group. Please note you may require further engagement in respect of any
significant changes to policies, new developments and or changes to service delivery. In such circumstances please contact the Equality and Diversity Lead or the Involvement and Equalities Officer.

Do you require further engagement?  
Yes ☐  No ☑

11. Could the policy, strategy or service have a negative impact on human rights? (E.g. the right to respect for private and family life, the right to a fair hearing and the right to education?)

No.

PART 2

Name:  
Steven Brice

Date of completion:  
30.12.14

(If any reader of this procedural document identifies a potential discriminatory impact that has not been identified, please refer to the Policy Author identified above, together with any suggestions for action required to avoid/reduce the impact.)