

Antimicrobial Stewardship Policy

V1.0

November 2015

Summary.

- Framework to ensure that antimicrobials are used appropriately and prudently within RCHT
- Overseen by the Antimicrobial Stewardship Management Committee, a subcommittee of the Medicines Practice Committee.
- See Antibiotic Prescribing Flowchart at [Appendix 3](#)
- The Trust Antimicrobial Guidelines (via Intranet) will need to be consulted for infection specific antimicrobial choices
<http://intra.cornwall.nhs.uk/Intranet/AZServices/A/AntimicrobialPrescribing/AntimicrobialGuidance.aspx>

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1. Introduction

1.1. The Trust Antimicrobial Guidelines will need to be consulted for infection specific antimicrobial choices.

1.2. Antimicrobial drugs include agents for treating bacterial, viral, fungal and parasitic infections. They represent some of the most important and effective pharmaceutical agents available to modern medicine. After a period of unrestricted use we are now entering an era in which antimicrobial resistance is a rapidly increasing problem and the number of new antimicrobial agents in development to counter resistance is minimal.

1.3. About 20% of the antimicrobial prescribing to humans takes place in hospitals and estimates suggest that anything between 20 – 50% of this use is unnecessary. As with all drugs, antimicrobials may cause adverse reactions. The use of antimicrobials to treat infection also modifies the normal bacterial flora, and can lead to the selection of resistant organisms. For example antibiotic use is a risk factor for colonisation and infection with meticillin resistant *Staphylococcus aureus* (MRSA). Diarrhoea or colitis caused by *Clostridium difficile* may follow use of antibacterials. These organisms can spread to other unaffected individuals. Thus inappropriate use of antimicrobials can affect not just the individual but also the health community, causing healthcare associated infections, a proportion of which are avoidable.

1.4. To preserve the effectiveness of our antimicrobials, reduce avoidable adverse effects, and minimize healthcare associated infections, antimicrobials should be used prudently and in line with the Department of Health's Start Smart then Focus document.

Key Points:

- Antimicrobial therapy must only be prescribed if clinically indicated according to the patient's clinical signs/ symptoms of infection and/ or sepsis.
- Empirical antimicrobial therapy should comply with the Trust's Antimicrobial Prescribing Guidelines. Prescribing that does not follow the Trust's guidelines must be justified. These guidelines can be found on the Trust Intranet; <http://intra.cornwall.nhs.uk/Intranet/AZServices/A/AntimicrobialPrescribing/AntimicrobialGuidance.aspx>
- Patients admitted with suspected and proven infections should be treated with antibiotics that cover resistant bacteria (MRSA, ESBL producing organisms) where they are known to have been colonised with these organisms in the past. It is the admitting doctors responsibility to search for evidence of prior resistant organisms on the lab computer system
- It is the prescriber's responsibility to ensure that patients with sepsis have the first dose of antimicrobial therapy prescribed and administered within one hour.
- Empirical antimicrobial therapy should be reviewed 48 hours after starting therapy, and no later than the 3rd day of treatment, with the view to de-escalate to narrower spectrum antimicrobial therapy where appropriate.

- Intravenous antimicrobial therapy should be switched to a suitable oral alternative as soon as clinically indicated (generally after 48 hours of treatment).
- Record a stop or a review date AND indication in the medical notes and on the drug chart.
- Relevant cultures need to be obtained prior to the initiation of antimicrobial therapy

1.5. This version supersedes any previous versions of this document.

2. Purpose of this Policy/Procedure

2.1. The purpose of this policy is to provide a framework to ensure that antimicrobials are used appropriately and prudently within the Royal Cornwall Hospitals Trust (referred to as the Trust). The framework will be overseen by the Antimicrobial Stewardship Management Committee, a subcommittee of the Medicines Practice Committee.

2.2. The framework will result in more effective treatment of infections so that patient outcomes are optimised. Appropriate antibiotic use will contribute to minimising the risk of healthcare-associated infections, benefiting patients, staff, service delivery, and clinical outcomes.

2.3. The framework enables the Trust to comply with the requirements of the Health and Social Care Act 2008, and the requirements for registration with the Care Quality Commission.

3. Scope

3.1. This policy applies to all employees of the Trust who prescribe, administer or monitor antimicrobials prescriptions.

4. Definitions / Glossary

Prudent antibiotic prescribing - The use of antimicrobials in the most appropriate way for the treatment or prevention of human infectious diseases, having regard to the diagnosis (or presumed diagnosis), evidence of clinical effectiveness, likely benefits, safety, cost (in comparison with alternative choices), and propensity for the emergence of resistance. The most appropriate way implies that the choice, route, dose, frequency and duration of administration follow best practice.

ASMC - Antimicrobial Stewardship Management Committee

MPC - Medicines Practice Committee

IP&C - Infection Prevention and Control team

DIPC – Director of Infection Prevention and Control

5. Ownership and Responsibilities

5.1. Role of the Managers

Line managers are responsible for:

- Ensuring that staff who prescribe antibiotics are aware of the policy and attend the appropriate training and update sessions.

- Ensuring staff that prescribe antibiotics adhere to the Trust policy and microbiology advice.

5.2. Role of the Antimicrobial Stewardship Management Committee

The Committee is responsible for:

- The development and review of antimicrobial policies and guidelines.
- Facilitate prudent prescribing across the Trust through a regular programme of audit, feedback, surveillance and education which will be discussed at the Antimicrobial Stewardship Management Committee meetings.
- The minutes from the Antimicrobial Stewardship Management Committee will be communicated to the Medicines Practice committee chaired by the Medical Director.
- The DIPC will communicate at a board level to promote prudent prescribing.

5.3. Role of Individual Staff

- Medical Microbiologists
Ensure advice given to ward areas are consistent with this policy
- Ward pharmacists
Ensure the practices outlined in this policy are carried out in their ward areas
- Prescribers
Are expected to adhere to this policy

6. Standards and Practice

6.1. A history of allergy to the relevant agent should always be sought.

Before prescribing any medication it is important allergies are identified and documented on the electronic prescribing system or medication chart along with the reaction. See Procedure for Allergies or Idiosyncrasies to Medicines and Food Policy on the document library.

6.2. Do not start antimicrobial therapy without clear clinical justification.

Patients who receive antimicrobial therapy are at increased risk of colonisation and infection with *Clostridium difficile*, MRSA and other multi-resistant pathogens. Patients should not be subjected to this increased risk without reasonable evidence of infection or established prophylactic benefit.

6.3. Before starting antimicrobial therapy make every effort to collect relevant specimens for microbiological investigations.

Cultures are needed to isolate the infecting organism and determine the presence of antimicrobial resistance. The sender of a specimen for culture is responsible for checking the culture result, whether they are medical or nursing staff, and antimicrobial therapy must be amended accordingly.

6.4. Antimicrobial therapy should be used solely as an adjunct in cases where surgery or wound management is the primary intervention.

The presence of foreign bodies has a profound effect on the activity of antimicrobial agents and it is often necessary to remove the foreign material to cure an infection in the vicinity of a foreign body such as a prosthetic heart valve or joint implant. Similarly, drainage of infected abscesses or empyema and debridement of necrotic tissue is critical to successful outcomes.

6.5. Document indications for all prescriptions for antimicrobial therapy in the medical notes including the indication for treatment, the drug, dose and route of administration.

Review of antimicrobial therapy by medical colleagues following transfer of care is facilitated by clear documentation of the reason for initiating prescribing and the original intended course length. Antimicrobial courses must be reviewed daily with a documented antimicrobial plan by day 3. In many cases intravenous antimicrobials can be switched to oral by 48hours.

6.6. Record a stop or review date AND indication in the medical notes and on the electronic prescribing system or drug chart

6.6.1. Ensure an indication is written on the electronic prescribing system or medicine inpatient chart for each antimicrobial agent.

6.6.2. Document a stop date against each oral antibiotic prescription and a review date against each intravenous antibiotic when the course length is unknown i.e. at initiation.

6.7. Prescribers must follow Trust guidelines for the treatment of infection.

Patients admitted with suspected and proven infections should be treated with antibiotics that cover resistant bacteria (MRSA, ESBL producing organisms) where they are known to have been colonised with these organisms in the past. It is the admitting doctor's responsibility to search for evidence of prior resistant organisms on the lab computer system or look for the alert triangle on Maxims.

Local guidelines are based on national guidelines where they are available and are consistent with local pathogen epidemiology and antimicrobial sensitivity patterns. Guidelines recommend antimicrobial agents known to penetrate the site of infection and supported by evidence of clinical efficacy for each indication.

If the indication you are treating is not covered by the guidelines, or the choices proposed by the guidelines are not appropriate for individual patients then microbiology advice should be sought and the advice documented in the medical notes.

Local guidelines can be found on the on the Trust Intranet or the following link;
<http://intra.cornwall.nhs.uk/Intranet/AZServices/A/AntimicrobialPrescribing/AntimicrobialGuidance.aspx>

6.8. Prompt antibiotic administration to patients with severe sepsis saves lives. If an infection is suspected antibiotics should be given within one hour. Every attempt should be made to collect appropriate cultures before administering antimicrobials.

6.9. Antimicrobial prophylaxis for surgery must not be prescribed beyond 24 hours for the majority of surgical procedures.

In the majority of cases single dose of perioperative antimicrobial is used for prophylaxis. Established infection discovered during surgery is an indication for converting antimicrobial prophylaxis into a treatment course.

6.10. Antimicrobial therapy must be prescribed at an appropriate dose, as recommended in Trust Antimicrobial guidelines or the BNF.

The dose must be appropriate for the patient's weight, renal and hepatic function. Consult a pharmacist if a patient has renal or hepatic impairment. Trust guidelines for dosing gentamicin and vancomycin must be followed to minimise the risk of treatment failure or toxicity.

6.11. Intravenous antimicrobial therapy must be reviewed daily with a clear antimicrobial plan documented in the medical notes by 48 - 72 hours.

Unnecessarily prolonged intravenous therapy exposes patients to risks of intravascular device-related infection, bacteraemia and thrombophlebitis, and has been shown to delay discharge from hospital. Switch to oral antimicrobial agents should be considered for patients who meet the criteria (see IV to oral switch guideline).

6.12. Empirical antimicrobials should be reviewed daily no later than 72 hours with a view to de-escalate to narrow spectrum agents promptly when appropriate.

Step-down to narrow spectrum therapy if a causative organism is identified and antimicrobial sensitivity data are available. Prolonged treatment with broad-spectrum antimicrobials increases selection pressure for multi-resistant microorganisms.

6.13. Prescribing Restricted Antibiotics

RCHT has a Restricted Antibiotic List which can be found in the RCHT Antimicrobial page on the Trust intranet and Appendix 4 of this document. The restricted classification of these antimicrobials means they can only be used outside of the indications listed on the guidelines following a discussion with a consultant microbiologist and by the issuing and documentation of a specific alphanumeric code. There are certain exceptions to this rule which are listed in the document (for example certain antifungal drugs can be used in haematology without the need for discussion).

6.13.1. Prescribing outside of RCHT antibiotic guidelines – (flow chart appendix 3)

For the prescription of antibiotics outside of RCHT antibiotic formulary and for non-formulary antibiotics, these agents will only be supplied and administered when accompanied by a code number issued by microbiology. It is the prescriber's responsibility to obtain this unique code alphanumeric code which will be issued following the discussion with a consultant microbiologist (who are available 24 hours a day via switchboard) a will be issued which must be printed on the drug chart next to the antibiotic or in the 'notes' function for electronic prescribing. Authorisation is not required for ear and eye preparations and topical preparations, however the formulary should be complied with.

6.13.2. Right antibiotic, right time

Please note that the aim of the restricted policy is to reduce inappropriate antibiotic prescribing and the associated harms to patients from resultant healthcare associated infection. There remains a need to rapidly prescribe and administer broad spectrum antibiotics in severely unwell patients with suspected or proven infections. This must not be compromised by the implication of this policy and the antibiotic guidelines continue to make provision for the

administration of appropriate antibiotics in severely unwell patients (for example ceftriaxone in suspected meningitis and meropenem in sepsis with known or suspected ESBL colonisation).

Be aware pharmacy will not supply the antibiotic if a microbiology authorisation code is not documented on the drug chart. When a prescriber receives such a query from a pharmacist, the responsibility is on the prescriber or the person covering the prescriber out of hours to contact microbiology to obtain authorisation. The expectation is that such queries are resolved within an hour to reduce risk to the patient of delayed administration.

6.13.3. Administering Antibiotics

When a restricted antibiotic is prescribed, check the indication against the restricted antibiotic list to ensure it is within RCHT Antimicrobial guidelines. This is available via the Trust's Intranet search facility by searching for 'antimicrobial' or via the Antimicrobial Prescribing web page in A-Z services or Microguide app. Where prescribing is outside of formulary there must be a microbiology issued alphanumeric authorisation code documented on the electronic prescribing system before you administer the antibiotic.

If there is no code then the prescriber must be contacted. The onus is on the prescriber or the person covering the prescriber out of hours to contact microbiology to obtain authorisation. The expectation is that such queries from the nursing team must be resolved within an hour to reduce risk to the patient of delayed administration.

For all antibiotics, the indication and course length / review date should be detailed on the drug chart (or in the 'notes' function for electronic prescribing). Where this is not the case the prescriber must be contacted.

6.13.4. Supplying Antibiotics

6.13.4.1. In-Hours

When a restricted antibiotic is prescribed, pharmacy will check the indication against the restricted antibiotic list. This is available via the Trust's Intranet (see link above). This applies to screening both in the dispensary and on the wards. Where prescribing is outside of guidelines there must be a microbiology authorisation code on the prescription before it can be supplied. If there is no code then the prescriber must be contacted to request they seek microbiology approval, or failing that, contact microbiology directly. Any supply requests for restricted antibiotics sent to the dispensary must be endorsed 'approved', even for an indication within guidelines. The dispensary will not supply a restricted antibiotic without this endorsement. For all antibiotics, the indication and course length / review date should be detailed on the drug chart or in the 'notes' function for electronic prescribing. Where this is not the case the prescriber must be contacted.

6.13.4.2. Out of Hours

All restricted antibiotics are stored in a dedicated out of hours cupboard that can only be accessed by the site co-ordinators. Ward staff should contact the site-coordinator out of hours for this supply, informing them of

the indication and where appropriate the microbiology authorisation code. The site coordinators will complete the supply paperwork (available inside the antibiotic cupboard) to ensure the supply can be followed up the next day by the pharmacy team and then supply the drug to the wards. The on-call pharmacist can also be contacted. Wards should not borrow restricted antibiotics from other wards for unapproved restricted antibiotic indications.

7. Dissemination and Implementation

- Dissemination of policy via all user email and through the Trust Governance meeting. It will be located in the document library on the Trust intranet.
- All new Foundation Year 1 and 2 doctors entering the Trust will be informed of the contents of this policy in their induction.
- Grand Round and audit meetings.

8. Monitoring compliance and effectiveness

- The Antimicrobial Stewardship Group will monitor compliance with the Antimicrobial policy. This will include reports from the antimicrobial ward rounds, antimicrobial point prevalence audits, and other audits in the group's annual programme or performed on an ad hoc basis.
- Governance continuity will be maintained through reporting to the Medicines Practice Committee, and the Hospital Infection Control Committee.

Element to be monitored	Compliance with the above standards of practice will be monitored
Lead	Antibiotic Pharmacist and Medical Microbiologist
Tool	<p>Monthly Antimicrobial Review Rounds (pharmacy and microbiology); Review appropriateness of antibiotic prescribing and compliance with the policy outlined above.</p> <p>Six monthly antibiotic point prevalence audit reviewing appropriateness of indication documentation, course length, compliance with antibiotic guidelines.</p> <p>Ad hoc audits as requested in response to incidences in the hospital (e.g. outbreaks of infection)</p>
Frequency	<p>Monthly Antimicrobial Review Rounds reports sent to clinicians in the areas being reviewed and yearly audit data collated and reported to the MPC and IP&C team</p> <p>Six monthly antibiotic point prevalence study data reported to IP&C, MPC, Grand Round and Surgical Audit Meeting</p> <p>A yearly report is sent to the Board via the DIPC</p>
Reporting arrangements	The report is sent to the DIPC who completes an annual report on Infection Prevention and Control practices in the Trust which includes a section around antimicrobial stewardship. The report is sent to the Board of Directors.

Acting on recommendations and Lead(s)	The Antimicrobial Stewardship Management Committee will undertake subsequent recommendations and action planning for any or all deficiencies quarterly.
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned immediately. The DIPC or Consultant Microbiologist will take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders

9. Updating and Review

9.1. This policy will be reviewed no less than every three years.

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ['Equality, Diversity & Human Rights Policy'](#) or the [Equality and Diversity website](#).

10.2. The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Document Title	Antimicrobial Stewardship Policy			
Date Issued/Approved:	30/10/15			
Date Valid From:	30/10/15			
Date Valid To:	30/10/18			
Directorate / Department responsible (author/owner):	Pharmacy and Microbiology Neil Powell and Sima Jog			
Contact details:	01872 252590 (pharmacy) 01872 254900 (microbiology)			
Brief summary of contents	Prudent antibiotic prescribing			
Suggested Keywords:	Antibiotics, antifungals, antivirals, antimicrobial, prescribing, policy			
Target Audience	RCHT ✓	PCH	CFT	KCCG
Executive Director responsible for Policy:	Medical Director			
Date revised:	NA			
This document replaces (exact title of previous version):	Antimicrobial Policy v1.0 Antibiotic Stewardship Protocol v1.5 Stop Review Date Policy for antimicrobials			
Approval route (names of committees)/consultation:	Antibiotic Stewardship Management Committee Medication Practice Committee (09.10.15) CSSC Governance DMB			
Divisional Manager confirming approval processes	Sally Kennedy, Divisional Director CSSC			
Name and Post Title of additional signatories	Dr Andrew Collinson (DIPC) Louise Dickinson (DIPC)			
Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings	{Original Copy Signed}			
	Name: Janet Gardner, Governance Lead CSSC			
Signature of Executive Director giving approval	{Original Copy Signed}			
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet & Intranet	✓	Intranet Only	

Document Library Folder/Sub Folder	Clinical / Pharmacy
Links to key external standards	<p>The Health and Social Care Act 2008: Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance.</p> <p><i>Clostridium difficile</i> infection: how to deal with the problem www.dh.gov.uk</p> <p>Antimicrobial Stewardship: “Start Smart then – Then Focus” Guidance for Antimicrobial Stewardship in Hospitals (England). Department of Health 2011 www.dh.gov.uk</p> <p>Department of Health (2005). Saving lives: a delivery programme to reduce health care associated infection (HCAI) including MRSA. London: DH, 2005.</p>
Related Documents:	<p>Wise et al. Antimicrobial resistance. <i>BMJ</i> 1998; 317:609 – 610</p> <p>Kumar et al. Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock. <i>Critical Care Medicine</i> 2006 Jun;34(6):1589-96).</p> <p>Start Smart then Focus 2014 (https://www.gov.uk/government/publications/antimicrobial-stewardship-start-smart-then-focus)</p> <p>Royal Cornwall Hospital Trust Procedure for Allergies or Idiosyncrasies to Medicines and Food Policy. Document library</p>
Training Need Identified?	Yes

Version Control Table

Date	Version No	Summary of Changes	Changes Made by (Name and Job Title)
Nov 15	1.0	New policy to replace three existing policies ‘ documents: Antimicrobial Policy v1.0 Antibiotic Stewardship Protocol v1.5 Stop Review Date Policy for antimicrobials	Neil Powell, Antimicrobial Pharmacist

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Initial Equality Impact Assessment Form

Name of the strategy / policy / proposal / service function to be assessed (hereafter referred to as <i>policy</i>) (Provide brief description): Antimicrobial Stewardship Policy	
Directorate and service area: Pharmacy / Microbiology	Is this a new or existing Policy? New
Name of individual completing assessment: Neil Powell	Telephone: 01872 252590
1. Policy Aim* Who is the strategy / policy / proposal / service function aimed at?	Promote prudent antibiotic prescribing
2. Policy Objectives*	Optimise antibiotic therapy while minimising the side effects and collateral damage associated with antimicrobial prescribing
3. Policy – intended Outcomes*	
4. *How will you measure the outcome?	Audit Hospital acquired infection rates
5. Who is intended to benefit from the policy?	Patients Trust
6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy? b) If yes, have these *groups been consulted? C). Please list any groups who have been consulted about this procedure.	No

7. The Impact			
Please complete the following table.			
Are there concerns that the policy could have differential impact on:			
Equality Strands:	Yes	No	Rationale for Assessment / Existing Evidence
Age		x	
Sex (male, female, trans-gender / gender reassignment)		x	

Race / Ethnic communities /groups		x	
Disability - Learning disability, physical disability, sensory impairment and mental health problems		x	
Religion / other beliefs		x	
Marriage and civil partnership		x	
Pregnancy and maternity		x	
Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian		x	
<p>You will need to continue to a full Equality Impact Assessment if the following have been highlighted:</p> <ul style="list-style-type: none"> • You have ticked “Yes” in any column above and • No consultation or evidence of there being consultation- this <u>excludes</u> any <i>policies</i> which have been identified as not requiring consultation. or • Major service redesign or development 			
8. Please indicate if a full equality analysis is recommended.		Yes	No
9. If you are not recommending a Full Impact assessment please explain why.			
No potential for differential impact identified			
Signature of policy developer / lead manager / director		Date of completion and submission	
Names and signatures of members carrying out the Screening Assessment	1. Neil Powell 2.		

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead,
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,
Truro, Cornwall, TR1 3HD

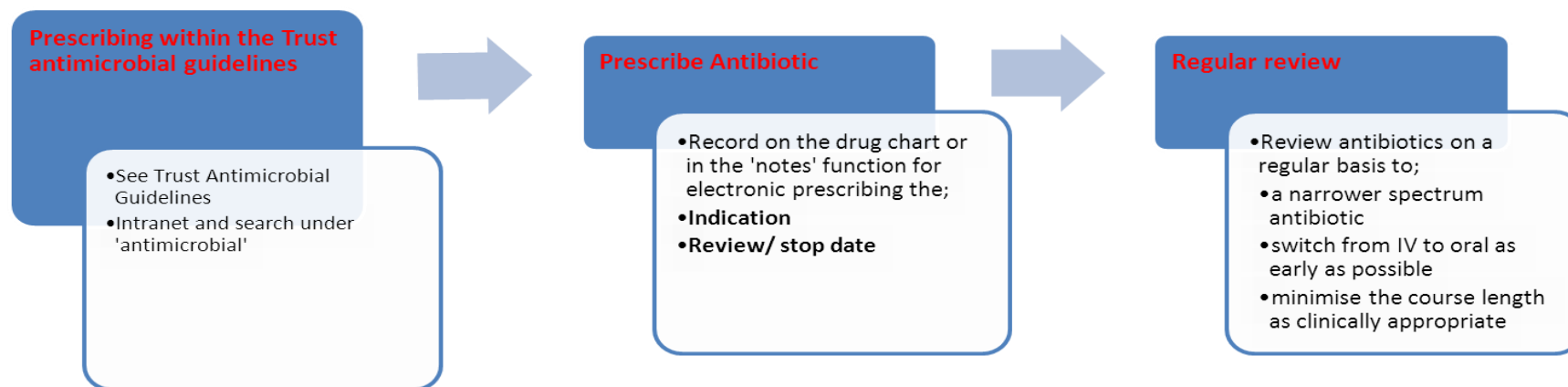
A summary of the results will be published on the Trust’s web site.

Signed _____

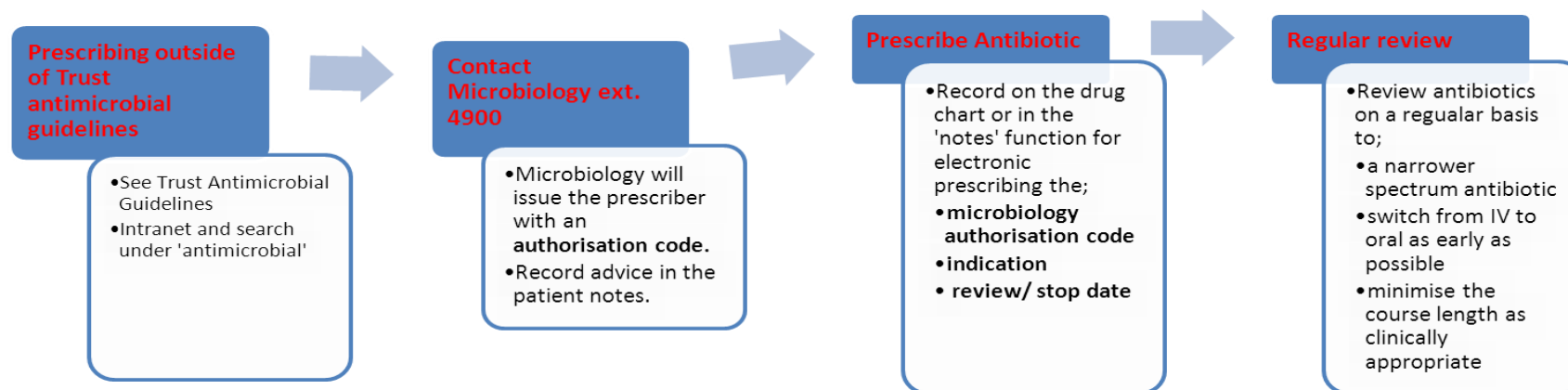
Date _____

Appendix 3. Antibiotic Prescribing Flowchart

Prescribing Within RCHT Antimicrobial Guidelines



Prescribing Outside of RCHT Antimicrobial Guidelines



Appendix 4. Restricted Antibiotic List

The following list of antibiotics are restricted for use in the Trust. Where these drugs are prescribed outside of guidance they MUST have prior microbiology approval.

Restricted Antibiotic	Approved Indications
Ambisome	Haematology patients
Amikacin	Cystic fibrosis (CF) patients, bronchiectasis
Aztreonam	Cystic fibrosis (CF) patients, bronchiectasis
Caspofungin	Haematology patients
Cefalexin	Gynae sepsis oral conversion, post pelvic surgery (oral conversion), UTI in pregnancy, pregnancy (oral conversion), chorioamnionitis as oral step down in pregnant patient, prophylaxis in fibroid embolisation in penicillin allergic patients
Cefotaxime	Paediatric patients only
Ceftazidime	CF, bronchiectasis, neutropenic sepsis in penicillin allergic patients, Paediatrics, oncology patients
Ceftriaxone	Meningitis, epiglottitis, Acute Care at Home, cerebral abscess, Enteric fever, UTI in pregnancy, chorioamnionitis, Caesarean section prophylaxis, GUM patients, PID, severe acute otitis media in penicillin allergic patients, severe complicated sinusitis infections in penicillin allergic patients, Complicated acute otitis media infection, Severe neck infections, orbital cellulitis .
Cefixime	GUM patients, Paediatric patients
Ciprofloxacin	Penetrating eye injuries, endophthalmitis, Enteric fever, prophylaxis for meningococcal infection, prostatitis if penicillin allergic, biliary sepsis if penicillin allergic, prophylaxis for prostate biopsy, prophylaxis for severe/prolonged predicted cytopenia, neutropenic sepsis for penicillin anaphylactic patients, Cystic fibrosis (CF) patients, bronchiectasis, Spontaneous bacterial peritonitis (SBP) in cirrhotics or patients with ascites (mild infection), Peritonitis (non SBP) oral step down, Spontaneous bacterial peritonitis (SBP) prophylaxis if co-trimoxazole allergy, or failure on co-trimoxazole, Cirrhosis and upper gastrointestinal bleeding, CAPD peritonitis in the outpatient setting, malignant otitis externa in penicillin allergy, oral switch acute pyelonephritis or urinary sepsis if no organism isolated
Clindamycin	Diabetic foot in moderate infection in penicillin allergic patients, Diabetic osteomyelitis mild to moderate infection in penicillin allergic patients, necrotising fasciitis (high doses up to 900 mg tds), prophylaxis for caesarean section if penicillin allergic, Group B Streptococcus prophylaxis in penicillin allergic pregnant patients, Gynae sepsis in penicillin anaphylactic patients, deep penetrating/lacerated injury, compound fractures in penicillin allergic patients, peri-orbital cellulitis in penicillin allergy, parotitis and severe neck infections in penicillin allergy, complicated sinusitis in penicillin allergy,

Co-amoxiclav (oral route only)	Otitis media in adults (severe infection), diabetic foot, diverticulitis and colo-rectal infections, biliary sepsis, gynae sepsis, peritonitis, bite related infections, dacrocystitis, compound fractures not requiring admission, deep penetrating/lacerated injury upon discharge, chorioamnionitis in non-pregnant patient, prophylaxis in fibroid embolization, Breast abscess in the outpatient setting, peri-tonsillar abscess/quinsy, complicated sinusitis, peri-orbital cellulitis.
Colistin (intravenous)	CF patients, bronchiectasis
Daptomycin	
Ertapenem	Acute care at home for ESBL infections
Fidaxomicin	
Levofloxacin	CAP and HAP if penicillin allergic, severe complicated sinusitis with history of penicillin anaphylaxis, Legionella pneumonia,
Linezolid	
Meropenem	Haematology patients, severe pancreatitis, patients with known ESBL colonisation, Cystic fibrosis (CF) patients, bronchiectasis, prophylaxis for cirrhosis and upper gastrointestinal bleeding in penicillin allergic patients, necrotising fasciitis, sepsis of undetermined focus in penicillin allergy.
Ofloxacin	GUM patients, epididymo-orchitis, PID
Posaconazole	Haematology patients
Rifampicin	TB, Deep seated Staphylococcal infections (as 2 nd agent only, never alone!), prophylaxis for meningococcal infection if intolerant to ciprofloxacin
Rifaximin	Hepatic encephalopathy
Tigecycline	
Tobramycin	CF patients, bronchiectasis
Voriconazole	Haematology patients

Eye and ear drops and topical antibiotics are excluded from these restrictions.

Non-formulary Antibiotics

Any non-formulary antibiotic must be treated in the same way as a restricted antibiotic and microbiology must be contacted for an authorisation code.

Contact number for Microbiology on x4900 or go through switchboard and ask for the duty microbiologist.

Out of hours go through switch board to speak to the on-call microbiologist.