

Trust Policy

Antimicrobial Prescribing Policy

Policy Summary

This policy provides the overarching policy for Antimicrobial Prescribing, setting out the background, the rationale, the core principles and the expectations of staff in relation to optimising the usage of antimicrobial agents and reducing the risk of healthcare-associated Infection

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1. Introduction

Antimicrobial agents, when used appropriately, can be life-saving therapies. However there is good evidence that these agents are often used inappropriately, and this misuse can introduce risks into patient care, such as adverse reactions, increased risk of antimicrobial resistance and increased risk of healthcare-associated infections. As the incidence of *Clostridium difficile*-associated disease has increased, and methicillin-resistant *Staphylococcus aureus* colonisation and infection has become more common, it has become clear that there is a need to optimise the use of antimicrobial agents in all areas of healthcare.

The publication of *Winning Ways* (2003), by the Chief Medical Officer, set out a strategy for controlling resistance to antimicrobials, and the introduction of the Code of Practice for Prevention and Control of Healthcare Associated Infections (in 2006) and subsequent modification as part of the Health and Social Care Act (in 2008) gives legal standing to this approach, requiring NHS bodies to have an antimicrobial prescribing policy in place.

This policy provides the background and rationale to the management of antimicrobial usage and sets the standards for Trust compliance with the Health & Social Care Act 2008.

2. Rationale

This policy is necessary to provide staff with clear guidance on the principles of appropriate usage of antimicrobial agents. It is supported by specific antimicrobial prescribing guidance, in Trust-wide protocols and speciality-specific guidelines, as well as operationally by the Antimicrobial Stewardship Committee (ASC). The ASC is a sub-committee of the Trust Infection Control and Decontamination Assurance Committee (TICDAC), working alongside the Infection Control Committee (ICC), Drugs and Therapeutics Committee (DTC), Joint Formulary Committee (JFC) and Clinical Guidelines Group (CGG) to oversee the production of guidelines and protocols involving antimicrobial agents, the introduction of new antimicrobial agents into the Trust and to monitor and assure good practice relating to antimicrobial usage.

While it is recognised that, from the institutional perspective, as many as 30% of inpatients will be receiving an antimicrobial agent at a given point in time, and that antimicrobials form a considerable proportion of hospital pharmacy budgets, it is also recognised that as much as 50% of antimicrobial use may be inappropriate. It is not only the acquisition cost of antimicrobials which plays a major role in healthcare finances, there are several reports linking inappropriate and unnecessary antimicrobial usage to increased selection of resistant pathogens and significant impact on patient morbidity and mortality. So, as well as impacting on healthcare costs, appropriate antimicrobial usage is a fundamental component of the patient safety agenda. Also, as inappropriate antimicrobial use can lead to increased adverse drug events (such as medication errors, allergy-related incidents, and drug-drug interactions), improving antimicrobial usage is clearly part of the medication safety agenda as well.

The primary goal of this policy and the Trust's philosophy on antimicrobial usage is to optimise clinical outcomes whilst minimising unintended consequences of antimicrobial use, such as toxicity, the selection of pathogenic organisms, and the emergence of resistance, with a secondary goal being to reduce health care costs without adversely impacting quality of care.

3. Scope

- 3.1 The Trust Antimicrobial Prescribing Policy applies to all Trust staff
- 3.2 Every person who prescribes, administers, dispenses and checks prescriptions for antimicrobials should understand the risks posed by inappropriate antimicrobial usage, know the principles and practices of antimicrobial stewardship relating to their own area of work, and ensure that they do not themselves contribute to inappropriate antimicrobial usage
- 3.3 Each clinical division executive should understand and take responsibility for antimicrobial management within their respective division and directorates
- 3.4 The roles and responsibilities of key staff groups are defined in section 5 in this document.

4. Principles

- 4.1 This policy is based on best-practice evidence from the UK and the US and provides guidance to enable the Trust to meet the requirements of the Health and Social Care Act 2008, and the recommendations found in Saving Lives: Antimicrobial Prescribing (2007) and *Clostridium difficile* infection: How to deal with the problem (2008).
- 4.2 The primary goal of antimicrobial stewardship is to optimize clinical outcomes while minimizing unintended consequences of antimicrobial use, including toxicity, the selection of pathogenic organisms (such as *Clostridium difficile*), and the emergence of resistance. The combination of effective antimicrobial stewardship with a comprehensive infection control program has been shown to limit the emergence and transmission of antimicrobial-resistant bacteria. Antimicrobial stewardship includes not only limiting inappropriate use but also optimizing antimicrobial selection, dosing, route, and duration of therapy to maximize clinical cure or prevention of infection. Given the association between antimicrobial use and the selection of resistant pathogens, rates of inappropriate antimicrobial use are considered as surrogate markers for the avoidable impact on antimicrobial resistance.
- 4.3 All prescriptions for antimicrobial agents should be clinically justified and consider in all cases:
- current Trust guidance,
 - previous antimicrobial history,
 - previous infection or colonisation with multi-resistant organisms,
 - allergies,
 - availability of, and absorption by, the oral route
- 4.4 All prescriptions for antimicrobial agents should include information on the indication for usage, documented on the medication chart. If there are felt to be confidentiality issues around having this information on the medication chart, then the chart should be annotated that the indication for prescribing is clearly documented in the patient's medical record
- 4.5 All prescriptions for antimicrobial agents should include information on either the intended total duration, or an intended initial prescribing period before a formal review, again documented on the medication chart
- 4.6 All prescriptions for antimicrobial agents should be reviewed on a daily basis by the prescribing team to assess clinical progress, microbiology results, and continued appropriateness

of therapy, including choice of agent(s), route, dose and frequency (including any necessary adjustments for worsening or improving organ function), and intended duration.

4.7 Redundant combination therapy must be stopped as soon as is appropriate (examples may include: co-amoxiclav or meropenem combined with metronidazole; co-amoxiclav combined with flucloxacillin; clindamycin combined with metronidazole).

4.8 Intravenous (IV) therapy should only be used for those patients with severe infections and/or who are unable to take oral antimicrobials. Prescriptions for IV antimicrobials should be reviewed on a daily basis (see 4.6 above) and, if appropriate, the patient switched to an oral alternative, as per Trust guidance.

4.9 All prescriptions for antimicrobial agents must be discontinued as soon as is reasonable.

4.10 Antimicrobials should generally be prescribed for a maximum of seven days, or a shorter period if this is clinically appropriate; however, some specific conditions require a longer course.

4.11 Prescribers should follow Trust Antimicrobial Prescribing Guidelines which have been written in order to minimise the risk of HCAs. As such, prescribers should avoid the widespread use of cephalosporins, clindamycin and quinolones, except where advised or approved by guidelines or specialist ID/Microbiology clinical advice.

4.12 Restricted antimicrobials should only be prescribed as advised or approved by guidelines or specialist ID/Microbiology clinical advice. They will not be held as routine ward stocks unless approved by the ASC.

4.13 Antimicrobial agents may be used for prophylaxis of infection, in both medical and surgical contexts. As in 4.4 above, the indication for use must be documented on the medication chart.

4.14 Antimicrobial agents used for surgical prophylaxis should only be prescribed as a single dose prior to the surgical incision unless specific Trust guidance indicates that further post-operative doses may be necessary. Intra-operative doses may be necessary in prolonged procedures or where there has been significant blood loss. Refer to individual Trust guidelines for more details.

4.15 All guidelines for the use of antimicrobial agents within the Trust must be approved by the ASC prior to introduction into clinical use. The ASC will consider the effect of the proposed guideline on incidence of healthcare-associated infection, Trust and department organism resistance patterns, Trust and department antimicrobial usage patterns, medication safety concerns, and impact on drug and other resource expenditure.

4.16 The supporting procedures, protocols and guidance to this policy are based on current knowledge and evidence in management of infection, and are published on the Trust Intranet.

5. Roles & responsibilities of key staff groups

All individual staff and staff groups will comply with the core principles of antimicrobial usage as listed above in section 4.

- 5.1 Director of Infection Prevention and Control (DIPC) / Chief Nurse & Chief Operating Officer
- To provide Trust wide leadership and support the programme of activities required for antimicrobial stewardship

5.2 Antimicrobial Stewardship Committee

- To meet on a monthly basis. The membership of the committee reflects the expertise required to manage antimicrobial usage within the Trust
- To oversee, commission, and ratify all antimicrobial-related guidelines
- To develop and review programmes to capture and feedback data on both antimicrobial consumption and HCAI rates for the whole Trust, including point prevalence surveys (at least annually) and Compliance Tool audits (at least monthly)
- To provide data on antimicrobial consumption to directorates on a regular basis (the frequency as determined by the ASC, but at least quarterly)
- To effectively manage and monitor all antimicrobial usage activity within the Trust
- To circulate minutes of meetings to the committee membership, DTC, CGG, ICC and TICDAC
- To carry out weekly antimicrobial stewardship ward rounds on selected wards (as identified by point prevalence surveys and/or compliance tool audits), via the Antimicrobial Management Team
- To carry out individual patient reviews as requested, via the Antimicrobial Management Team
- To provide training in appropriate antimicrobial usage for all relevant staff

5.3 Staff involved in prescribing antimicrobial therapy (including consultant staff)

- To be responsible for reviewing antimicrobial prescriptions on all of their ward rounds
- To be responsible for stopping unnecessary prescriptions and changing those that do not comply with guidelines
- To attend relevant training sessions on appropriate antimicrobial usage
- To refer complex patients to the Antimicrobial Management Team for review

5.4 Staff involved in administering and dispensing antimicrobial therapy

- To query with prescribers any prescriptions for antimicrobials that are outside of Trust guidelines or are not annotated with appropriate documentation (see section 4.4 and 4.5 above)
- To follow other relevant Trust policies with relevance to antimicrobial usage (such as Trust Allergy policy, etc.)

5.5 Clinical pharmacy staff

- To review medication charts on a daily basis to check compliance with Trust antimicrobial guidelines
- To query with prescribers any prescriptions for antimicrobials that are outside of Trust guidelines or are not annotated with appropriate documentation (see section 4.4 and 4.5 above)
- To follow other Trust policies relevant to antimicrobial usage (such as Trust Allergy policy, etc.)
- To query with prescribers any prescriptions for IV antimicrobials that could safely and appropriately be switched to a suitable oral equivalent
- To query with prescribers any prescriptions for restricted antimicrobial agents to ensure appropriate approval has been received
- To carry out monthly Compliance Tool audits on each ward to feed into the Trust's Infection Control dashboard
- To refer complex patients to the Antimicrobial Stewardship Committee for review

5.6 Department of Infection clinical staff

- To provide advice on antimicrobial usage (choice, dose, route, frequency and duration) when consulted

- To document any advice provided in the Department of Infection consult database
- To ensure that such advice complies with all Trust policies relevant to antimicrobial usage (such as Trust Allergy policy, etc.)

- 5.7 Matrons / Clinical Leads / Delivery Managers/ Heads of Nursing and Midwifery
- Review antimicrobial usage audit and consumption data and take immediate action to improve performance as required.
 - Monitor compliance with infection prevention and control policy
 - Support Ward Sister / Charge Nurse in reducing the risk of HCAI and acting upon any issues that may arise
 - Promptly escalate to Directorate Team areas of concern or where appropriate provide help and support as needed
 - Support the Consultant Leads for infection prevention and control

- 5.8 Clinical Directors
- Ensure that good antimicrobial practice becomes embedded at the patient level by designating consultant leads for Infection Prevention and Control – these physicians should be the person with whom ASC liaises regarding antibiotic guidelines, audit, and feedback of antibiotic use and CDI rates to junior staff

- 5.9 Consultant Leads for Infection Prevention and Control
- Receive and review the performance data on antimicrobial consumption and prescribing compliance audit data and meet with responsible staff to agree actions required
 - Report actions and response back to Clinical Directors
 - Liaise with the ASC on specific issues to ensure local needs are met

- 5.10 Infection Control Committee (ICC)
- Receive monthly reports from ASC on antimicrobial usage for the Trust and selected specialist areas

- 5.11 Trust Infection Control and Decontamination Assurance Committee (TICDAC)
- Receive quarterly reports from ASC on antimicrobial usage for the Trust and selected specialist areas, including Trust-wide audit results

6. Infection Prevention and Control Assurance Framework

- 6.1 The infection prevention and control assurance framework refers to the Health Act Assurance Framework, which defines the key controls and assurance for each duty contained within the Health and Social Care Act 2008.
- 6.2 The framework highlights any gaps in compliance with policy, action plans formulated to close those gaps, and the progress made with these action plans. Detailed action plans are captured in the Health Act Monitoring and Improvement Action Log.
- 6.3 These action logs are reviewed quarterly at Trust Infection Control and Decontamination Assurance Committee (TICDAC) meeting and the framework is reviewed quarterly at the Assurance and Risk Committee meeting.
- 6.4 TICDAC receives a quarterly ASC report, which includes the ASC annual work plan for the previous year and the forthcoming year, plus a quarterly progress report against ASC activity.

7. Core Clinical Care Protocols

- 7.1 The Antimicrobial Prescribing Policy is supported by a range of procedures, protocols and guidance located on the Trust's Intranet, including, but not limited to:
- Antibiotic Use in Adults
 - Guidelines for the use of Antimicrobial Agents in Adult Patients with Renal Impairment
 - Adult Drug Allergy Protocol
 - Recording of Allergic Hypersensitivity Reactions and Serious Adverse Drug Reactions to all Medicinal and Other Products
 - Clinical Management guideline in patients with Clostridium difficile diarrhoea
 - Antibiotic prophylaxis guidelines – various clinical specialities
 - Medicines Policy

8. Trust strategy on Promoting a positive culture for reducing the risk of Healthcare Associated Infections

- 8.1 It is the intention of the Trust to provide a strong visual reminder and consistent message to staff, patients, visitors and to the general public on the Trust's processes and arrangements for preventing and controlling HCAs.
- 8.2 The trust will provide a variety of information to patients, public, visitors and staff to promote appropriate antimicrobial usage via various communication media.

9. Infection Prevention and Control Training Requirements

- 9.1 To ensure that all Trust staff are aware of their responsibilities toward appropriate antimicrobial practice, and in accordance with the requirements of the Code of Practice, contained within the Health and Social Care Act 2008, and Standards for Better Health Care, 2005, appropriate antimicrobial usage is a component of the Trust mandatory training programme for doctors, nurses and pharmacists, with a requirement for repeat assessment every 3 years.
- 9.2 Appropriate antimicrobial usage is also covered, for doctors, nurses and pharmacists, at induction

10. Monitoring and assurance of this Policy

The ASC is responsible for monitoring the Trust's compliance with this Policy, as outlined below:

- 10.1 Compliance tool audit
- The Trust has implemented a version of monitoring compliance with the core principles of antimicrobial prescribing, based on the DH Saving Lives programme. The High Impact Interventions (HII) are employed as an educational tool, a record of compliance with best practice guidelines, a permanent record of antimicrobial management and enable audit of compliance and practice. The HII audits are undertaken every month and reported at the monthly ASC meetings. Progress is monitored by the ASC using run charts and improvement notices issued where appropriate. Action plans to address performance issues will be developed, reviewed and monitored by the clinical directorate lead and the ASC. The compliance tool will also be used to highlight areas for review by the Antimicrobial Management Team.

10.2 Antimicrobial consumption data

The Trust has developed a system for producing defined daily dose (DDD) data for the Trust as a whole, and for individual Directorates. This data is reported at least quarterly (monthly for the whole Trust data) to the ASC and is provided to the individual Directorate's Clinical Director and clinical directorate IPC lead with a commentary on the data. Significant deviations from prior performance will be discussed with the Directorate team and action plans to address deviations will be developed, reviewed and monitored by the clinical directorate lead and the ASC.

10.3 Point prevalence studies

Compliance with the Trust Antibiotic Guidelines in both Medicine and Surgery is monitored at least annually and results are reported back to prescribers through a variety of means, including written reports and verbal presentations. Action plans to address deviations from guideline will be developed, reviewed and monitored by the clinical directorate lead(s) and the ASC.

10.4 Speciality or indication-specific audits

The ASC will commission audits on antimicrobial use in specific specialities (e.g. use of surgical prophylaxis), or for certain indications (e.g. community-acquired pneumonia) and results of these audits will be reported back to the ASC by the audit team. Action plans to address deviations from standard practice will be developed, reviewed and monitored by the relevant clinical directorate lead(s) and the ASC.

11. Trust's Diversity Guide

This policy embraces the Trust's Diversity Guide. We acknowledge, recognise and value diversity across all people and their background. We will strive to treat everyone with respect, privacy and dignity and no one is excluded or disadvantaged in anyway shape or form.

12. References:

- Department of Health (2003): *Winning ways: Working together to reduce health care associated infection in England*. Report from the Chief Medical Officer. London: DH, 2003
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- Department of Health (2005): *Saving Lives; a delivery programme to reduce health care associated infection (HCAI) including MRSA*. London: DH, Revised Edition October 2007
- Department of Health (2006): *Health Act 2006 Code of Practice for the Prevention and Control of Healthcare Associated Infection*. London: DH, Revised January 2008
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