



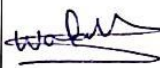
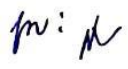







# Antimicrobial Stewardship Policy

AMRH/LAB/GEN/POL/001/Vers.02

Effective Date: June 2022

Review Date: June 2025

Institute Name: Al Masarra Hospital, 					
Document Title: Antimicrobial Stewardship Policy					
Approval Process					
	Name	Designation	Institution	Date	Signature
Written by	Dr. Nada Al Tamtami	Laboratory HOD	Al Masarra Hospital	June 2022	
	Ms. Wafa AL Balushi	Infection Control Department HOD		27/6/2022	
Reviewed by	Dr.Preeti Srivasta	General Medicine HOD	Al Masarra Hospital	02/08/2022	
	Ph.Najla Al-Zadjali	QMPSD HOD		26/6/22	
	Ph. Sharifa Al-Ruzaiqi	Pharmacy & Medical Store HOD		July 2022	
	Ph.Zainab Al-Wahibi	Pharmacist		Jun 2022	
Validated by	Ph.Najla Al-Zadjali	QMPSD	Al Masarra Hospital	June 2022	
Approved by	Dr. Bader ALHabsi	Hospital Director	Al Masarra Hospital	July 2022	





**Contents Table:**

<b>1</b>	<b>Acronyms .....</b>	<b>3</b>
<b>2</b>	<b>Introduction .....</b>	<b>4</b>
<b>3</b>	<b>Scope .....</b>	<b>4</b>
<b>4</b>	<b>Purpose .....</b>	<b>4</b>
<b>5</b>	<b>Definition .....</b>	<b>4-5</b>
<b>6</b>	<b>Policy .....</b>	<b>5-7</b>
<b>7</b>	<b>Responsibility .....</b>	<b>7-8</b>
<b>8</b>	<b>Document History and Version Control .....</b>	<b>8</b>
<b>9</b>	<b>Related Documents .....</b>	<b>8</b>
<b>10</b>	<b>References .....</b>	<b>10</b>
	<b>Appendices .....</b>	<b>11-13</b>
	<b>Appendix 1: Antimicrobial Categories .....</b>	<b>11</b>
	<b>Appendix 2. Document Request Form .....</b>	<b>12</b>
	<b>Appendix 3. Document Validation checklist .....</b>	<b>13</b>



**Acronyms:**

<b>AMRH</b>	Al Masarra Hospital
<b>ASP</b>	Antimicrobial Stewardship program
<b>HOD</b>	Head Of Department
<b>ID</b>	Infectious Diseases
<b>IV</b>	Intravenous
<b>LAB/ Lab</b>	Laboratory
<b>MDRO</b>	Multi-Drug Resistant Organism
<b>P&amp;P</b>	Policy & Procedure
<b>SOP</b>	Standard Operating Procedure
<b>Vers</b>	Version Number



## Antimicrobial Stewardship Policy

### 1. Introduction

The emergence of antimicrobial resistance is a major patient safety and public health issue. Infections by Mutli-drug resistant organisms (MDROs) are proven to be associated with increased morbidity and mortality and prolonged hospital stay. Antimicrobial stewardship supports prescribers and care givers with decision regarding the optimal selection, dose and duration of antimicrobial agents. The key objectives of this approach include optimizing prudent antimicrobial use, improving patient outcomes and reducing adverse consequences such as antimicrobial resistance and unnecessary cost.

### 2. Scope

- 2.1 This policy is applicable to the following healthcare workers at Al Masarra Hospital who prescribe, administer or monitor antimicrobial prescriptions:
  - 2.1.1 Doctors
  - 2.1.2 Pharmacist
  - 2.1.3 Infection Control Practitioner
  - 2.1.4 Microbiologist
- 2.2 This policy should be used in combination with Antimicrobial Prescribing Policy and Local pharmacy policies.

### 3. Purpose

- 3.1 To ensure that patients benefit from appropriate use of antimicrobial agent.
- 3.2 To minimize adverse consequences of antimicrobial use.

### 4. Definition

**4.1 Antimicrobial Stewardship (ASP):** is a coordinated program aiming to promote the appropriate use of antimicrobials, improve patient outcomes, reduce microbial resistance, and decrease the spread of infections caused by multidrug-resistant organisms.



**Antimicrobial Stewardship (ASP) Team:** This team is responsible to monitor adherence to the policy and suggest improvement in the ASP practice in the hospital.

The team consists of but not limited to:

1. Head of Physician,
2. A Psychiatrist,
3. Head of Infection Control,
4. Clinical Pharmacist and Head of Pharmacy,
5. Head of Quality.

The ASP Team will report directly to the Therapeutic and Drug Committee through Head of Pharmacy.

**4.2 Escalation:** Shifting to a broader-spectrum antimicrobial or adding an agent to widen antimicrobial spectrum.

**4.3 De-escalation:** shifting to a narrow-spectrum antimicrobial medication.

## 5. Policy

### 5.1 Restriction on Antimicrobial agents:

#### 5.1.1. Unrestricted antimicrobials :

5.1.1.1. Antimicrobials in this category, can be prescribed by all doctors including physicians and psychiatrist in accordance with the national Antimicrobial guideline.

5.1.1.2. Prescriptions are subject to monitoring and review by the clinical pharmacist/ concern pharmacist.

#### 5.1.2. Restricted antimicrobials :

5.1.2.1. Antimicrobial agents in this category are prescribed by general medicine team doctors in accordance with the national Antimicrobial guideline.

5.1.2.2. Review by clinical pharmacist should be done as soon as possible and should not exceed 48 hours.

5.1.2.3. If 48 hours' limit is completed during weekend or public holiday, the prescribed restricted antibiotic can be continued until prescription review is done during working days.



## **5.2. Principles of Antimicrobial prescribing:**

- 5.2.1. Antimicrobial therapy should be started with clear clinical justification.  
Treat infection and not colonization.
- 5.2.2. Therapeutic decisions regarding the prescription of antimicrobials will be based on best available evidence (national Antimicrobial Prescribing guideline, Microbiological culture and susceptibility report) for targeted treatment.
- 5.2.3. Before deciding on the most appropriate antibiotic, the followings should be considered:
  - 5.2.3.1. History of drug allergy: document allergy type - minor ( only rash) or major (e.g. anaphylaxis or angioedema)
  - 5.2.3.2. Recent cultures: review the previous culture reports, if patient is colonized or infected with an MDRO.
  - 5.2.3.3. Recent antibiotic use
  - 5.2.3.4. Potential Drug interactions
  - 5.2.3.5. Potential Adverse effects.
  - 5.2.3.6. Specific group: pregnancy, lactating mothers, pediatric.
  - 5.2.3.7. Dose adjustment may be required in renal failure or hepatic dysfunction.
- 5.2.4. Microbiology Specimens should be obtained from the patient before commencement of empiric antimicrobial treatment whenever possible.
- 5.2.5. Microbiology Specimens should be obtained from the patient before commencement of restricted antimicrobial treatment.
- 5.2.6. Prescribed antimicrobial will be of the narrowest spectrum possible.
- 5.2.7. Dosage, route and frequency of antimicrobials will be appropriate for individual patients, the site and type of infection
- 5.2.8. Duration of antimicrobial therapy will be defined and regularly reviewed based on guidelines and clinical improvement.
- 5.2.9. Monotherapy is adequate and should be used in most clinical indications.
- 5.2.10. Patient placed on empiric broad-spectrum antimicrobials should be



reviewed 48 to 72 hours after starting treatment for possible shifting to narrow-spectrum medication (De-escalation/ Streamlining) based on microbiology laboratory reports and clinical condition.

- 5.2.11. Escalation (shifting to a broader-spectrum antimicrobial or adding an agent to widen antimicrobial spectrum) should be done when clinically or microbiologically indicated.
- 5.2.12. Switch from IV administration to oral formulation when it is possible clinically as per the Antimicrobial prescribing policy.
- 5.2.13. Continuation of antibiotics prescribed from other health institution can be done by psychiatrist specialist in consultation with clinical / concern pharmacist.

## **6. Responsibility**

### **6.1. All Doctors (Prescribers) Shall:**

- 6.1.1. Adhere to the Antimicrobial Prescribing Policy in order to achieve requirement of this policy.
- 6.1.2. Clearly document the indication and expected duration for prescribing antimicrobial drugs.

### **6.2. Clinical / Concern Pharmacists Shall:**

- 6.2.1. Check all medicine charts and prescriptions for compliance with the antimicrobial policy for choice of antibiotic, route, frequency, and duration.
- 6.2.2. Promote use of policies at ward level and educate medical and nursing staff.
- 6.2.3. Liaise with clinical microbiology and physician to review and approve restricted antibiotic prescriptions.
- 6.2.4. Provide feedback to ASP Team on antibiotics consumption and adherence to policy.

### **6.3. Microbiologist Shall:**

- 6.3.1. Provide timely advice and feedback to prescriber e.g. appropriate choice of antimicrobials.
- 6.3.2. Provide advice and support to treating doctors and clinical pharmacists on infectious disease management.



**6.4. Microbiology Laboratory Shall:**

- 6.4.1. Provide timely and accurate culture and susceptibility reports to aid prescribers' decision process.

**6.5. Infection Prevention & Control Department Shall:**

- 6.5.1. Monitor transmission rates of MDROs at different clinical areas in the hospital.
- 6.5.2. Use data on use of antimicrobials to track resistance patterns.
- 6.5.3. Provide feedback and organize educational activities targeting health care workers.
- 6.5.4. Implement precautions to reduce healthcare associated infections.

**6.6. Antimicrobial Stewardship (ASP) Team Shall:**

- 6.6.1. Review and recommend any alterations to restrictions.
- 6.6.2. Monitor antimicrobial use and analyze antimicrobial resistance reported by Infection control, Microbiology laboratory, Clinical pharmacy or IT etc.
- 6.6.3. Decide on the need to act on inappropriate antimicrobial prescribing.
- 6.6.4. Has authority to report inappropriate prescribing practices to Drug and Therapeutic committee through Head of pharmacy.
- 6.6.5. Update the local policy according to the recommendations.
- 6.6.6. Oversee and organize educational activities for health care workers on antimicrobial prescribing and stewardship.
- 6.6.7. Conduct regular audits on antimicrobial prescribing in different clinical areas.





## 7. Document History and Version Control

<b>Document History and Version Control</b>			
<b>Version</b>	<b>Description of Amendment</b>	<b>Author</b>	<b>Review Date</b>
1	Initial Release	Dr. Nada Al Tamtami	Feb 2022
2	Second version	Dr Nada & Mrs Wafa Al Balushi	June 2025
<b>Written by</b>		<b>Reviewed by</b>	<b>Approved by</b>
Dr. Nada Al Tamtami		Antimicrobial Stewardship (ASP) Team	Dr. Badar Al Habsi

## 8. Related Documents

- 8.1. Appendix. 1 Antimicrobial categories
- 8.2. Appendix. 2 Audit Tool
- 8.3. Appendix. 3 Document Request Form
- 8.4. Appendix. 4 Validation Form



## 9. References

Title of book/Journal/Website	Author	Year of publication	page
National Guidelines on Antimicrobial Treatment and Prophylaxis	MOH	2016	
The GCC Infection Prevention and Control Manual, 3 <sup>rd</sup> edition	GCC Centre for Infection control, Ministry of National Guard.	2018	237- 243
Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America	Infectious Diseases Society of America	2016	
Oman National Formulary	MOH	2016	



Appendices

Appendix 1: Antimicrobial Categories

**Ordering of Antimicrobial agent**

**Unrestricted Group**

**Oral Route**

- 1- Amoxicillin
- 2- cloxacillin
- 3- Amoxacillin with clavulanic acid
- 4- Clarithromycin
- 5- Ciproflouxacin
- 6- Mitronidazole
- 7- Cotrimazole
- 8- Nitrofurantoin

Prescribed by general practitioner

Call pharmacy staff to inform and collect medication

**Restricted Group**

- 1. Penicilin
- 2. Tazobactam(Tazocin)IV
- 3. Amoxacillin with clavulanic acid I.V
- 4. Cloxacillin I.V
- 5. Metronidazole I.V
- 6. Meropenem I.V
- 7. Ceftazidime I.V

Prescribed by specialist and above

Call pharmacy staff to cross check the Referral form with prescription according to policy of antimicrobial stewardship

Pharmacy staff to handover the antibiotics to nurse in same time according to policy



## Appendix 2. Audit Tool

**Department:** \_\_\_\_\_

**Date:** \_\_\_\_\_

S. No	Audit Process	Description of Criteria	2	1	0	N/A	Comments
1	Interview	Staff is aware and knowledgeable about the policy of antimicrobial prescribing					
3	Observation	Evidence of review of broad spectrum antibiotics after 48 hours					
4	Observation	Evidence of Documentation of Antibiotics in patient notes by clinical pharmacist					

### AUDIT PROCESS:

1. Observation
2. Interview
3. Document Review



## Antimicrobial Stewardship Policy

AMRH/LAB/GEN/POL/001/Vers.02

Effective Date: June 2022

Review Date: June 2025

### Appendix 3. Document Request Form

Document Request Form			
<b>Section A: Completed by Document Requester</b>			
1. Requester Details			
Name	Dr.Nada Al-Tamtami	Date of Request	June 2022
Institute	Al Masarra Hospital	Mobile	99442469
Department	Laboratory	Email	—
The Purpose of Request			
<input type="checkbox"/> Develop New Document	<input checked="" type="checkbox"/> Modification of Document	<input type="checkbox"/> Cancelling of Document	
1. Document Information			
Document Title	Antimicrobial Stewardship Policy		
Document Code	AMRH/ LAB/ GEN /POL / 001 /Vers.02		
<b>Section B: Completed by Document Controller</b>			
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Cancelled	<input type="checkbox"/> Forward To:	
Comment and Recommendation: for implementation			
Name	Najla Al-Zadjali	Date	June 2022
Signature		Stamp	





### Appendix 4. Document Validation Checklist

Document Validation Checklist					
Document Title: Antimicrobial Stewardship Policy			Document Code : AMRH/ LAB/ GEN /POL / 001 /Vers.02		
No	Criteria	Meets the Criteria			Comments
		Yes	No	N/A	
<b>1.</b>	<b>Approved format used</b>				
1.1	Clear title – Clear Applicability	✓			
1.2	Index number stated	✓			
1.3	Header/ Footer complete	✓			
1.4	Accurate page numbering	✓			
1.5	Involved departments contributed	✓			
1.6	Involved personnel signature /approval	✓			
1.7	Clear Stamp	✓			
<b>2.</b>	<b>Document Content</b>				
2.1	Clear purpose and scope	✓			
2.2	Clear definitions	✓			
2.3	Clear policy statements (if any)	✓			
<b>3.</b>	<b>Well defined procedures and steps</b>				
3.1	Procedures in orderly manner			✓	
3.2	Procedure define personnel to carry out step	✓			
3.3	Procedures define the use of relevant forms	✓			
3.4	Procedures to define flowchart	✓			
3.5	Responsibilities are clearly defined	✓			
3.6	Necessary forms and equipment are listed			✓	
3.7	Forms are numbered			✓	
3.8	References are clearly stated	✓			
<b>4.</b>	<b>General Criteria</b>				
4.1	Policy is adherent to MOH rules and regulations	✓			
4.2	Policy within hospital/department scope	✓			
4.3	Relevant policies are reviewed	✓			
4.4	Items numbering is well outlined	✓			
4.5	Used of approved font type and size	✓			
4.6	Language is clear, understood and well structured	✓			
Recommendations ..... ✓ ..... For implementation ..... More revision ..... To be cancelled					
Reviewed by: <i>Najla A. Zaidi</i>			Reviewed by: <i>Qusayb</i>		

