## **Procedure**

# Antimicrobial: Prescribing, Management and Stewardship

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## **HUMAN RIGHTS**

This governance document has been human rights compatibility assessed. Limitations identified were deemed justifiable indicating reasonable confidence that, if adhered to, there are no implications arising under the *Human Rights Act 2019*.

## PURPOSE

The purpose of this procedure is to embed the implementation of an <u>Antimicrobial Stewardship programme</u> at CHQ within the <u>framework</u> established by the <u>Australian Commission on Safety and Quality in Health Care</u> (<u>ACSQHC</u>).

To align CHQ processes with the Australian Council on Healthcare Standards, in particular the key priority of <u>preventing and controlling Healthcare Associated Infections</u>. The goal is to provide safe quality health care within the framework of the <u>National Quality and Safety standards</u>.

This procedure supports a standardised approach to the appropriate use and prescribing of antimicrobial therapy at Children's Health Queensland Hospital and Health Service (CHQHHS) in order to:

- Optimise clinical outcomes.
- Minimise adverse consequences of antimicrobial use (toxicity, selection of pathogenic organisms and emergence of resistant organisms) and
- Support prudent management of antimicrobial associated health care costs.





#### SCOPE

This procedure relates to all CHQ staff involved in prescribing, dispensing, preparing and administering of antimicrobials.

Each staff member, including Agency, Locum or staff on rotation, is individually responsible and accountable for ensuring safe and appropriate use of antimicrobials (Antimicrobial Stewardship) in accordance with CHQ <u>Antimicrobial procedures, guidelines</u> and <u>antimicrobial restrictions</u>.

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## PROCEDURE

ANTIMICROBIAL PRESCRIBING AND MANAGEMENT

- All CHQ staff involved in the direct provision of antimicrobials to patients will follow the principles of use of antimicrobials as stated in the <u>Therapeutic Guidelines: Antibiotic</u>.
- Antimicrobials will be prescribed per evidence-based guidelines for antimicrobials as per CHQ, <u>Queensland</u> <u>Health List of Approved Medicines (LAM)</u>, CHQ Medicines Advisory committee (CHQMAC) endorsed departmental policies or guidelines and the current version of the <u>Therapeutic Guidelines: Antibiotic</u>.
  - Clinical departments, units and document authors will ensure that any document involving antimicrobials are reviewed by the CHQ Antimicrobial Stewardship team and align with the endorsed antimicrobial prescribing guidelines for CHQ.
  - All such endorsed policies and guidelines recommending antimicrobial use will be made available through the CHQ <u>AMS website</u> and the <u>CHQ eGovernance Catalogue</u> as per the CHQ <u>Procedure</u> <u>Management Framework</u>.
- The decision to prescribe an antimicrobial should always be clinically justified and the indication recorded on the electronic medication order in ieMR, Metavision®, Paediatric National Inpatient Medication Chart and outpatient (or discharge) prescription. In addition, the course length or review date for antimicrobial therapy should be clearly documented.
- The patient's <u>antimicrobial allergies</u>, <u>antimicrobial treatment</u> and microbiology results should be reviewed regularly by the treating medical team and antimicrobial therapy rationalised accordingly.
  - Parenteral antimicrobial therapy should only be used for those patients with severe infections or who are unable to take oral antimicrobials. Parenteral antimicrobials should be reviewed regularly (every 48 to 72 hours) and, if appropriate, the patient should be <u>switched to oral therapy</u>.
  - Surgical prophylaxis: Antimicrobials should be prescribed and administered in accordance with the <u>CHQ</u> <u>Surgical Antibiotic Prophylaxis guidelines</u> and the <u>Therapeutic Guidelines: Antibiotic.</u>
- Departmental and Unit Leads will ensure that all health care professionals (including doctors, nurses and pharmacists) involved in the direct provision of antimicrobials to patients under their care, are aware of and practice according to the <u>Antimicrobial: Prescribing</u>, <u>Management and Stewardship procedure</u>.
- The Antimicrobial Stewardship Steering Committee and the CHQ Medicines Advisory Committee will
  approve and publish <u>formulary restrictions</u> that limit the use of broad-spectrum antimicrobials to patients in
  whom their use is clinically justified.
  - Consultation and approval (in the form of an AMS code) from a Consultant in Paediatric Infectious Diseases / Microbiology consultant (or their delegate) will be required to prescribe, supply or administer restricted antimicrobials (see <u>CHQ Antimicrobial Approval Process Flow chart</u>). The AMS code will be documented on the medication order / prescription as per Figures 2,3,4.
  - A <u>decision support escalation process</u> (Appendix 1) will be utilised in instances where a prescriber is in disagreement with the approval or restriction of a particular antimicrobial for a particular patient (see flowchart below).

- The CHQ Antimicrobial Stewardship Steering Committee is responsible setting an audit schedule, auditing (in collaboration with clinical units), monitor the audit results and review outcome measures produced by the CHQ Antimicrobial stewardship programme.
  - The CHQ Antimicrobial Stewardship Steering Committee membership includes representation from across the organisation, including infectious diseases, microbiology, pharmacy, nursing, CHQ Executive, critical care, oncology, general paediatrics, surgery, informatics and junior medical workforce.
  - Point of care feedback will be provided by the CHQ AMS and ID team to health care professionals involved in the prescribing, supply and administration of antimicrobials to patients, with the aim to support teams in optimizing antimicrobial therapy for patients and auditing concordance with clinical guidelines based on <u>National Antimicrobial Prescribing survey</u> criteria.

#### ANTIMICROBIAL FORMULARY RESTRICTIONS

- Antimicrobials should be prescribed according to the <u>CHQ endorsed antimicrobial prescribing and infection</u> <u>management clinical guidelines</u> which are generally based on Therapeutic Guidelines: Antibiotic and comply with the <u>Queensland Health List of Approved Medicines (LAM)</u>.
- Some medicines listed on the LAM require the additional approval of the Infectious Diseases Physician (AMS approval) unless their use is already endorsed for use by Infectious Diseases and CHQ Medicines Advisory Committee (CHQMAC) as a unit-specific protocol.
  - o SAS antimicrobials: Special Access Scheme (SAS) · Custom Portal (health.gov.au)
  - Non-LAM antimicrobials/ off label/off license use: <u>Cgov non-LAM medicine IPA application portal</u> refer to <u>CHQ Medication approval process</u>
- Where AMS approval is required, the Prescriber will contact the Infectious Diseases consultant (or delegate) who will consider the antimicrobial's use.
  - Use of a restricted antimicrobial at CHQ can only be authorised by a CHQ Infectious Diseases Consultant, CHQ Infectious Diseases Fellow and Consultant Clinical Microbiologist (Pathology Queensland).
  - This consultation MUST be documented in the patient's medical notes, any approvals also documented in the medication order and communicated to Pharmacy before further stock will be supplied from the pharmacy.
  - This process also applies to the review and supply of antimicrobial supplies and quantities available on ward imprest at CHQ.

For a comprehensive list of antimicrobials and the level of approval required, including indication-specific exceptions, see the <u>QCH antimicrobial formulary</u> or ask your pharmacist for advice. Units are encouraged to develop protocols in consultation with the Infectious Diseases team when a restricted agent needs to be prescribed on a regular basis.

CHQ Antimicrobial formulary is divided into the following three levels of access:



<u>Green:</u> <u>Unrestricted</u> Antimicrobials are "free" to use for clinically appropriate indications (and duration) by all prescribers.



<u>Amber: Restricted</u> Antimicrobials may only be prescribed for certain indications (<u>listed</u>) under the direction of a consultant. Approval is required for use outside of these indications.



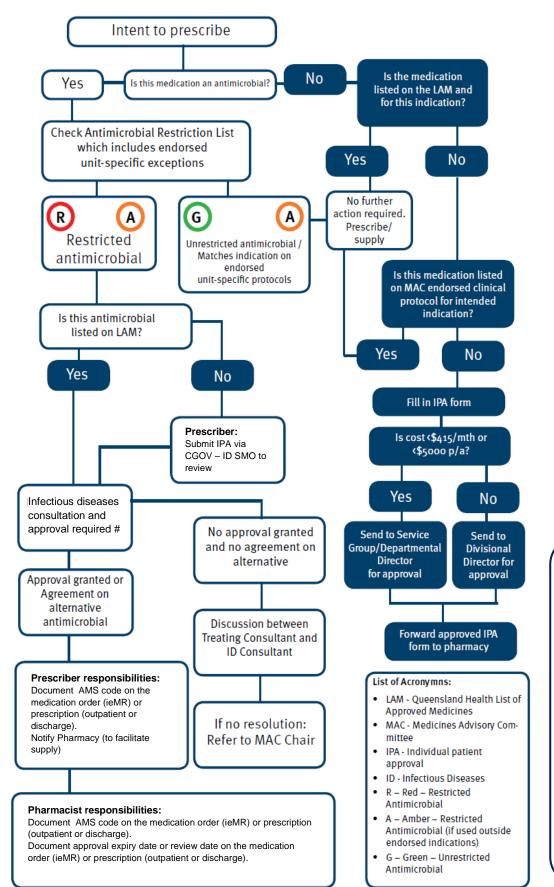
**<u>Red:</u>** <u>Approval Required</u> Antimicrobials may only be prescribed following authorisation by Infectious Diseases (ID) or Clinical Microbiology. The indication, name of the authorising clinician and unique AMS code must be annotated on the medication chart.

#### Clinical scenarios involving antimicrobials that require AMS approval:

- Hospital in the Home (HITH) Parenteral Antibiotics (excluding AMS approved HITH pathways for CF, Non CF bronchiectasis and specific conditions listed in the Emergency department HITH pathway).
- Antimicrobials which may require special aseptic compounding:
  - o Antimicrobial eye drops e.g. Ceftazidime, Vancomycin
  - o Antimicrobials for Intravitreal injections e.g. Amphotericin, Voriconazole
  - o Antimicrobials for Intrathecal or Intraventricular administration e.g. Vancomycin
  - o Antimicrobials for home parenteral administration (including Hospital in the home (HITH))

Note: Please contact the <u>CHQ Aseptic Production Unit Manager</u> directly to discuss arrangements for aseptic compounding of these products. Wherever possible, this should be organized in advance.

CHQ ANTIMICROBIAL APPROVAL PROCESS



antimicrobials Daylight hours: AMS code required at time of prescription. After hours: AMS code required by next day. Inpatient Non-LAM antimicrobials: All hours - AMS code required at time of prescription All other scripts (discharge/outpatient) approval at time of prescription before able to supply / dispense. Refer to Escalation pathway for Pharmacists

# Inpatient LAM

and Nursing staff on page 5

#### **ESCALATION PATHWAY FOR QCH PHARMACISTS AND NURSING STAFF**

- Contact the Treating team/prescriber and notify that AMS approval is required
- Document a Medication related intervention in ieMR detailing the request, including antimicrobial, date/time treating team contacted and the date, time and name of ID Team member the request is escalated to.

*Performed on: 06-	-Mar-2024 15:44 AEST	
Clinical Intervention	Medication Re	lated Interventions
	Intervention information (issue identified/proposed action)	
	IV meropenem - ID/AMS approval code required	
	Follow up (person responsible/result of action)	J
	Notified PSURG RMO Dr Knife - will contact ID team to discuss Pharmacist notified ID/AMS via eConsult	
	Medication (if applicable):	Contact details:
	Meropenem	Pharm Acist 1234
	Category/classification	
	Adverse Drug Event Instructions unclear     Incorrect force     Incorrect frequency No valid drug indication     Incorrect troute Not receiving a drug for condition     Incorrect rate Regular medication not chatted     Drug allergo omitted Storage inappropriate     Drug interactions (drug/tood/condition) System error	Drug information inquity Dptinisation of dosing regimen Patient counselling Financial (cost) Pharmacokinetic consult Dinical Intervention and Workload Other: ID/AMS approval required
	Clinical importance	
	Insignificant (no harm or injury, low financial cost)     Major (major temporary inj     Minor (minor injury, minor treatment)     Catastrophic (death, large     Moderate (moderate injury, loss)     V/A - workload activity	
	Time taken to complete intervention	
	C < 1 Minute I 1-5 minutes 6-15 Minutes 16-30 Minutes	> 30 Minutes Dther:
	Issue recognised by	
	Pharmacist Nurse Prescriber Other:	
	Pharmacist to complete - Intervention resolved:	C Yes

• Order a "Medical review" in ieMR for the Treating team – nominate urgency of request (ie within 2 hours) and nominate Treating team member who will be following up/communicated to.

		al Review						
	is order co	omments La Diagnoses						
+ 3	h. ↓×							
	*Priority:	2 - within 2 hours	×	*Reason for	r Referral:	Review/chart m	nedication ord 👻	
Additio		Meropenem ID/AMS approval required - please contact ID		*Requestor Name a	nd Phone:	A Nurse/ B Pha	rmacist 123	
		required - please contact to		*Requested Start D	ate/Time:	06-Mar-2024	• ~ 1545	AEST
Clini	ician Contacted:	DOCTOR «No Matches»	9					

Monday to Friday (business hours): Order "Consult to Infectious diseases" in ieMR – document "AMS approval request for xxxx (antimicrobial name), nominate ID Team member request is sent to.

Z Details for Consult to	Infectious Diseases				
🖀 Details 🛛 📴 Order Commen	ts 🕼 Diagnoses				
<b>+ 1</b> lh. ↓ ≥					
*Requested Start Date/Time:	08-Mar-2024	AEST	Priority:	Routine	*
Frequency:	ONCE only		Duration:		
Duration Unit:	•		Reason for Consult:	AMS approval - Meropenem	
Clinician Contacted:	CLARK, JULIA ELIZABETH SMO		Acknowledged:	🔿 Yes 🔿 No	
Special Instructions:	AMS approval request - Meropenem - escalated to PSURG MO		*Referral - To Specialty:	Infectious Diseases	~
	<no items=""></no>				

- Afterhours, Weekends and Public holidays: Contact the ID SMO on call via switchboard
- In addition to the abovementioned steps, the pharmacist/ nurse may also order a Consult to the Infection Management and Prevention service (IMPS) in ieMR.
- The prescriber is responsible for notifying pharmacy of AMS approval to allow timely supply of antimicrobial.

#### ANTIMICROBIAL SUPPLY

#### For inpatients:

- **During daylight hours:** Pharmacy will only be allowed to provide up to 24 hours initial supply of restricted antimicrobials pending Treating team discussion with the ID Team on service.
  - <u>No further supply</u> will be provided without appropriate ID consultation and documented AMS code.
  - Exceptions: Antimicrobials that are only available through Special access scheme, prescribed for off label use and/or compounding required: ID consultation and documented AMS code is required prior to ordering, compounding or supply of these antimicrobials.
    - SAS antimicrobials: <u>Special Access Scheme (SAS) · Custom Portal (health.gov.au)</u>
    - Non-LAM antimicrobials/ off label/off license use: <u>Cgov non-LAM medicine IPA</u> <u>application portal</u> – refer to <u>CHQ Medication approval process</u>
- Afterhours: ID consultation and AMS code is required before the On-call Pharmacist can be contacted to supply restricted antimicrobials.

**For outpatients:** ID consultation and AMS code is required before supply of restricted antimicrobials will be dispensed.

**If no approval is forthcoming (within 24 hours)**, this will be escalated to the primary treating Consultant and ID Consultant on call/ ID Fellow prior to supply.

• For ongoing supply requests in the absence of a documented AMS code, the pharmacist/ nursing staff will escalate directly to the ID consultant on service.

## DOCUMENTATION OF ANTIMICROBIAL PLAN ON THE MEDICATION ORDER AND/OR PRESCRIPTION

The antimicrobial order in Integrated Electronic Medical Record (ieMR), Metavision® or the National Inpatient Medication Chart (NIMC) must include the following information:

• The Indication for Antimicrobial Therapy

- o Mandatory field for all electronic medication orders in ieMR and should be as descriptive as possible
- o Document indication in the special instruction field in Metavision® medication order
- The order should include the antimicrobial therapy start date, scheduled review date, and proposed duration of therapy to assist with appropriate follow-up and review of therapy.
- The words <u>"AMS approved" with the unique AMS code</u> provided by the Approving ID Physician or Microbiologist
  - Where extension of antimicrobial therapy past the predetermined review date is clinically indicated, the order should be modified by the prescriber to reflect the most current plan and updated approval number where required.

#### Figure 2: Inpatient antimicrobial order documentation in ieMR:

≖ D	etails for meropenem					
r 🗗	Details 🗊 Order Comments 🕼 Diagnoses					
4	= 😭   h. 📽 🛛 🖡 😜				Review Schedule Remainin	ng Administrations: (Unknown) Stop: (Unknown)
	*Dose:	400 mg 👻		Drug form:	Vial	×
	*Route of administration:	IV 🗸		*Frequency:	8 hourly	~
	First dose priority:	NOW		First dose date/time:	17-Jan-2019 14:25 AEST	~
	Stop date/time:		🖨 AEST	PRN:		~
	Infuse over:	30		Infuse over unit:	minute(s)	·
	Duration:	~		*Indication:	Sepsis (BC + pseudomonas)	
Re	stricted antimicrobial approved by (name or co	MDN012345607			Day 1 effective therapy = 17/01/19 Review date 23/01/19	),
	Use patient's own med:	C Yes 🔘 No			Review date 25/01/19	
	Nurse Witness:					

#### Figure 3: Inpatient antimicrobial order documentation in Metavision®:

Create Order	Nil Known Allergies Reported		
Orderable Z-Drug Name	Meropenem inj		Find Orderable
Route	Intravenous		
Frequency	Set interval	Start	Date & time           17/01/2019
PRN indication:		Stop	No time limit
		Category:	*Antimicrobial Med Push PICU
Dose:	20 mg/kg 💌	Solution: Solution vol.	Sodium Chloride 0.9%
Comments: Day 1 = 1/1/2019, rev Indication: Sepsis (B ID approved: MDN0	riew Day 7 = 7/1/2019. C = Pseudomonas) 12345607	Tip: ID appro 1 week to ad Dosing weight	val. Dore 20.40mg/kg (ms.2g). 1st week of life: every 12h.> ut: every 8h. Adust dore for renal impairment. Reconstitute to 79
0			Save_Close Save Cancel

Figure 4: Inpatient antimicrobial order documentation on the Paediatric National Inpatient Medication Chart (P-NIMC) for use during ieMR Downtime:

## **REGULAR MEDICATIONS**

YEAF	R 20 SCRIBER MUST I	DATE & M		TIMES	1/1	2/1	3/1	4/1	5/1	6/1	7/1	8/1	
Date 1/1	Medicine (Print Gene MER(	ric Name) OPENEM	Tick d Stow Refease	Day	1	2	3	4	5	6	7	Please R/V	22
Route	400mg	Frequency & now every 8	hours	06:00	X	Ζ,	Z,	Ζ,	K,	Ζ,	4	/	Yes/No Yes/No
Pharmac	y / Additional Informatio		T IN	14:00	1	1	/	/		/	/		Color
		MDN01234560	7	22:00	1	1	/	/	1	/	1	1	den i
Indication (BC	Sepsis • pseudomonas)	20mg/k	g/dose	1	1	7	1	1	7		7		nue d ds nue d ds
	er Signature   Print Nar JD	ne J. Doe	Contact/Pager 4321		1		1	/	17	7	7		Date

The Outpatient (or Discharge) antimicrobial prescription should be annotated with the following information (in addition to standard legal requirements for any prescription):

- The Indication for Antimicrobial Therapy
- The Intended Duration or Review Date for Antimicrobial Therapy
- The PBS restriction/ authority number (If required)
- The unique AMS Approval number provided by the Approving ID Physician or Microbiologist

#### Figure 5: Example of Outpatient antimicrobial hospital prescription for use during ieMR Downtime:

charge delivery location:	Ward/	Discharge date:	/ / τ	ल्लानः	1	um / pm				
Hospital prescription ROYAL CHILDREN'S HOSPITAL HERSTON ROAD HERSTON OLD 4006 PHONE: (07) 3636 6111 Provider no. 00000000 televr's Medicare number 1 2 3 4 5 6 7 8 9 0 Tamaoulcal benefits entitlement or DVA number	Aufhority presorgion number	UR number: <u>C</u> Name: Joe Bo Address: 1234 <u>Brisbane 1</u> Fill in o	oggs Cinnar	non Do	road B: 1	3/09/05		Drugs discontinued during hospital step	/ Reason for discont	linuing
1 2 3 4 5 6 0 1	dent, RPES seneti	Print patient's name	um)					Pharmacist review by (name):		
Ballery Not entitlement Concessional or dependent or Sallery Not concession	on card holder	PSS PS	as 🗌	Acces	o Pat S Wet	ert 25kg	at	Compliance device needed?	No 🗌	
Drug name and form	Strength	Dose, route trequency, duration	Quantity	Rots of ent	Supply YN	Approval number if required	ien	Reasons for t	his medication	
Ciprofloxacin (250mg	tabs)	250mg bd PO (x 2 months)	56	1	y	Z6721PD Reg 24	it or ph	ID approved ( MDN0123455		tis)
EX		Wir					macist copy			
rescriber's name: Dr Jane D		Prescriber nu						Drug ADR/allergies etc	Reaction	Date
Prescriber type: MP Pager Signature: Sample only Please turn over for privacy note costs that the reserved the believed and the reference one	number: 4		Date: 0	1 /	01			Nil known		
/ / Patient	or agent's signi	iture	A	pert's ad	dress	4084 (05/11)		Dispensed by:	Dispensed date: Checked by:	

#### Figure 6: Example of printer Outpatient Antimicrobial Hospital Prescription (ieMR):

$\Lambda_{2}$	XXXXX				
		Pt. Name: D Address: 9 ALAN ST HERSTON QLD Australia Worker's comp s	4006	H, SLTEST UR #:	9008398
Medicare Number:	Concession Card of RPBS Card Holder	DOB: 05/05/2 Weight: 25.kg ( Unit/Consult: 0 Ward/Clinic: F	2012 16–JAN–19)	Ph: cal Sex	
ALLERGIES: No Known Allergies		4			
Drug Name, Strength and Form	Dose, Route a Frequency	nd	Qty	Rpts	Phone Approval Reg24/streamline code/Private item
cIPROFLOXAcin (cIPROFLOXAcin 250 mg oral tablet) PBS Authority Script No. 10002655	1 tab(s) Oral TWIC Comments: Do no iron, zinc or calciu within 2 hours of ta medicine. Take for ID Approved: Oste MDN01234556	t take antacids, m supplements aking this 2 months.	56 tab(s)	1	CZ123456 Reg 24
Handwritten alteration	ns or amendmer	nts to printed pre	escriptions a	re unauthor	
2 items ***	***********************Pa	ge: 3 of 4 *****	*****		
Prescriber Name: PA_DH, Ten DMC Signature:	Presci	riber #: Phone Contact Prescriber Type		Date of Pres	cribing: 16/01/2019

#### **ADMINISTRATION OF ANTIMICROBIALS**

As outlined in the <u>CHQ-PROC-01039 Medication Administration</u>: "all CHQ staff are individually responsible and accountable for ensuring safe and appropriate use of antimicrobials (Antimicrobial Stewardship) in accordance with CHQ Antimicrobial procedures, guidelines and restrictions."

At the point of checking, preparing and/or administration, staff can utilise the <u>CHQ AMS website</u> alongside standard dose references to ensure that the patient is prescribed antimicrobials appropriately.

#### Check list:

#### Is antimicrobial appropriate for the documented indication?

• Review of the <u>appropriate antimicrobial guideline</u> can ensure that the patient is receiving the right drug at the right dose via the right route and for the right duration, as per the <u>Six Rights of Safe Medication</u> <u>Administration</u>.

#### Is it a restricted antimicrobial?

- If yes, has <u>AMS Approval</u> been sought and documented, as shown in examples below.
- Should nursing staff notice in the process of reviewing an order that the review date for an antimicrobial has been exceeded without documentation of review or new approval number:
  - Daylight hours:
    - Escalate to the treating Medical team and the ward pharmacist.
    - If the decision is made to continue antimicrobial therapy, ID consultation and AMS code should be sought (and documented) during business hours to ensure appropriate antimicrobial supply can be dispensed for the patient.
  - After hours:
    - Escalate to the Nurse Team Leader or Safety CNC.
    - Ward Call Medical Officer should be contacted in the first instance to review the antimicrobial order and discuss plan with the On-call treating consultant.
      - If the decision is made to continue antimicrobial therapy, ID consultation and AMS code should be sought at the start of the next day-time shift.
        - Ward Call Medical Officer must provide handover to the day shift Treating Medical team to follow up ID consultation and AMS code.
        - Nurse Team Leader must provide handover to the day shift nursing team to follow up with the Treating team about seeking AMS code.
        - Day shift nursing team to contact pharmacy for further antimicrobial supply once AMS code is obtained.
      - If the On-call pharmacist is required to attend the hospital to supply a restricted antimicrobial, ID consultant approval will be required <u>prior</u> to supply.

#### Figure 7: Review of antimicrobial prescription in Medication administration wizard (MAW)

Medications	18-Jan-2019 6:25 AEST	17-Jan-2019 22:25 AEST	17-Jan-2019 14:25 AEST
Scheduled			
⊕ `n	400 mg	400 mg	NOW
meropenem	Not given	Not given	Not given
400 mg, Vial, IV, 8 hourly, start: 17/01/19 14:25:00 AEST, infuse over 30	within 5 days.	within 5 days.	within 5 days.
minute(s), Indication: Sepsis (BC + pseudomonas), Approval:			
MDN012345607, Day 1 effective therapy = 17/01/19, Review date			
23/01/19			
Target Dose: meropenem 25 mg/kg 17-Jan-2019 14:27			
meropenem			

date 23/01 Target Dos			mg/kg 17-Jan-20			17/01/19, Review
*Perform	ed dat	te / time :	17-Jan-2019	× •	1519	AEST 👻
•	Perfo	rmed by :	TESTER, TEST F	RN		
	Witn	essed by :				
*meroper	nem:	400	mg	▼ Volume:	0	ml
Diluent :	<nor< th=""><th>ie&gt;</th><th>•</th><th>r</th><th>nl</th><th></th></nor<>	ie>	•	r	nl	
*Ro	ute :	IV		▼ Site :		•
Total Volu	ime :	0	Infused Over	: 30	minute(s)	•
← 17-Jar 1400		17-Jan-20 1500 AES	019 17-Jan-2019 ST 1600 AEST	17-Jan-2019 1700 AEST	17-Jan-2019 1800 AEST	17-Jan-2019 1900 AEST

#### **REVIEW OF ANTIMICROBIAL USE**

Where extension of antimicrobial therapy past the predetermined review date is clinically indicated, the order should be amended to reflect the most current plan and updated approval number where required.

#### • Extension of course without dose change

- Prescriber or pharmacist modify original order to show the new AMS code and amended review date.
- Additionally, document in the patient's electronic medical record.

In certain cases (ie. Surgical antimicrobial prophylaxis) it may be appropriate for the prescriber to set a fixed stop date to the order to ensure that additional doses are not given inappropriately.

#### Figure 8: Example of ieMR Inpatient antimicrobial order with duration specified:

*Dose:	400 mg 🗸 🗸	·
'Route of administration:	₩	·
First dose priority:	Routine 🗸	·
Stop date/time:	24-Jan-2019 🚔 🖵 1559	🚔 AEST
Infuse over:	30	
Duration:	7 day(s) 🗸	·
approved by (name or c	MDN012345607	

Figure 8: Example of Inpatient antimicrobial order on P-NIMC with duration specified for ieMR Downtime:

## **REGULAR MEDICATIONS**

YEAF	R 20 CRIBER MUST E		& MONTH	Sellen and	IMES	1/1	2/1	3/1	4/1	5/1	6/1	7/1	8/1	
Date 1/1	Medicine (Print Gener MERC	ic Name) OPENEM		Tick # Slow Release	Day	X	2	3	4	5	6	7	Please R/V	22
Route	400mg	Frequency &	now enter time y 8 hours	s	06:00	X	2	Z,	Ζ,	Ζ,	4	4	/	Y Yes
Pharmacy / Additional Information ID approved		T	14:00	2	Z,	4	1	Z,	Ζ.	1		po? daysQ		
Indication	(For 7 days) Sepsis	- passante in the local division of	5607 see (if g mp/kgD		22:00	/	/		/			/		dischar
(BC	<ul> <li>pseudomonas)</li> </ul>		g/kg/dose			1		/	/	1	/	/		Course of
G - 20 - 21 - 20	er Signature Print Nam JD	J. Doe	Contact/P 432			7	$\overline{/}$	7	7	7	7	7		Cont

## **SUPPORTING DOCUMENTS**

- Australian Commission on Safety and Quality in Health Care. (ACSQHC). (2018), 'Stewardship in Australian Hospitals 2018,' In M. Duguid and M. Cruickshank, (eds). Australian Commission on Safety and Quality in Health Care: Sydney.
- Australian Commission on Safety and Quality in Healthcare. (ACSQHC). (2019), National safety and quality health service standards, Australian Commission on Safety and Quality in Healthcare website: Sydney, [online] Available at: <u>http://www.safetyandquality.gov.au/</u>
- Antibiotic expert group. (2020), 'Therapeutic guidelines: Antibiotic (2020)', *Therapeutic Guidelines Ltd* website: Melbourne, [online] Available at: <u>http://online.tg.org.au/ip/desktop/index.htm</u>

#### LEGISLATION AND OTHER AUTHORITY:

• Public Service Act 2008 (Qld)

**STANDARDS**:

- Australian Standard Medical and Surgical Equipment
- National Safety and Quality Health Service (NSQHS) Standards

## **CONSULTATION**

Key stakeholders who reviewed this version:

<ul> <li>Director, Infection Management and Prevention Service (IMPS, CHQ)</li> <li>Antimicrobial Stewardship Steering ( (QCH)</li> </ul>	<ul> <li>Pharmacist Advanced - Antimicrobial Steward (QCH)</li> <li>Medicines Advisory Committee – endorsed 20/03/2025</li> </ul>	ship
<ul> <li>Paediatric Infection Management Co Fellows and Registrars (QCH)</li> </ul>	sultants,	

#### REFERENCES

No.	Reference
1.	Australian Commission on Quality and Safety in Healthcare
2.	National Antimicrobial Resistance Strategy
3.	Antimicrobial Stewardship Clinical Care Standard: Evidence Sources
4.	Australian Society of Infectious Diseases
5.	National Antimicrobial Prescribing Survey (NAPS)
6.	Antimicrobial Use and Resistance in Australia (AURA)

## **ASSURANCE STRATEGY**

Strategy

Annual Point Prevalence audit, Regular AMS rounds (including point of care rounds; virtual AMS dashboard rounds), Quality improvement audits, Drug Use evaluations, Annual review of CHQ Antibiograms

Audit/review tools	Audit/review tools frequency	Key performance indicators
Nil	Bi-/Monthly reporting to Antimicrobial Stewardship Steering Committee	Benchmark CHQ Paediatric Point Prevalence data against National and International Paediatric hospitals through the National Antimicrobial Prescribing Survey (NAPS).
		<ul> <li>Percentage of patients undergoing specified surgical procedures that receive an appropriate prophylactic antibiotic regimen.</li> </ul>
		Percentage of patients with suspected sepsis receiving     appropriate parenteral antibiotics after blood culture
		<ul> <li>Percentage of patients with suspected sepsis receiving appropriate parenteral antibiotics within 60 minutes (septic shock).</li> </ul>
		Percentage of prescriptions for restricted antibiotics that are concordant with CHQ Antimicrobials Restrictions approved criteria.
		• Percentage of prescriptions that are concordant with CHQ Early IV to oral switch criteria.
		• Percentage of patients with a toxic or sub-therapeutic aminoglycoside or vancomycin concentration whose dosage has been adjusted or reviewed prior to the next aminoglycoside or vancomycin dose.
		Surveillance reporting outcomes on detection and management of Multi-resistant organisms.

## **PROCEDURE REVISION AND APPROVAL HISTORY**

Version No.	Modified by	Amendments authorised by	Approved by	Comments
1.0	Infectious Diseases Consultant- Antimicrobial Stewardship (Infection Management and Prevention Service)	Medicines Advisory Committee (MAC) Antimicrobial Stewardship Steering Committee (CHQ)	General Manager Operations	
2.0	Director- Infection Management and Prevention Service and	Medicines Advisory Committee (MAC)	Executive Director Hospital Services	

	Antimicrobial Stewardship Pharmacist (QCH)	Antimicrobial Stewardship Steering Committee (CHQ)		
3.0 (18/06/2020)	Director- Infection Management and Prevention Service, Antimicrobial Stewardship Pharmacist (QCH)	Medicines Advisory Committee (MAC) Antimicrobial Stewardship Steering Committee (CHQ)	Executive Director Clinical Services	
4.0 31/01/2023	Pharmacist Advanced- Antimicrobial Stewardship	Director- Infection Management and Prevention Service	Division Director Medicine	
4.1 15/04/2024	Director- Infection Management and Prevention Service Pharmacist Advanced- Antimicrobial Stewardship	Director, Infection Management and Prevention Services Medical Lead, Antimicrobial Stewardship	Executive Director Clinical Services	
5.0 19/03/2025	Pharmacist Advanced- Antimicrobial Stewardship	Director, Infection Management and Prevention Services Medical Lead, Antimicrobial Stewardship	Executive Director Clinical Services	Scheduled review

Key words	Antimicrobials, antibiotics, antifungals, antivirals, Antimicrobial Stewardship, AMS, Antimicrobial Prescribing and Management, restrictions, formulary, AMS approval process, escalation, appropriate use, infectious diseases consultation, documentation, 01036		
Accreditation references	<ul> <li>The National Safety and Quality Health Service (NSQHS) Standards (1-8):</li> <li>Standard 3: Preventing and Controlling Healthcare-Associated Infections</li> <li>Standard 4: Medication Safety</li> </ul>		

### **APPENDIX 1: DECISION SUPPORT PROCESS**

The decision support process is an escalation through a number of steps that are triggered when a request for a restricted antimicrobial is denied.

The process may be terminated if there is a consensus that the restricted antimicrobial or an alternative is appropriate.

