


ANTIBIOTICS POLICY



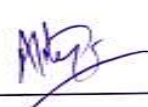

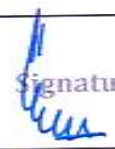
ASSOCIATED HOSPITAL
GOVERNMENT MEDICAL COLLEGE KATHUA

ANTIBIOTICS POLICY

	GOVT. MEDICAL COLLEGE, KATHUA JAMMU AND KASHMIR	Doc. No.	09
		Issue Date	15-06-2020
		Revision Date	15-12-2020
		Revision No.	
		Next Review	15-06-2020
		Total Pages	16

ANTIBIOTICS POLICY

Document Approval

Manual Name	<u>POLICY FOR ANTIBIOTICS IN HOSPITAL</u>	
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BACKGROUND

Rational use of medicines requires that patients receive medications appropriate to their clinical needs, in doses that meet their requirements, for an adequate period of time, and at the lowest cost to them and their community. Unfortunately, more than 50% of all medicines are prescribed, dispensed, or sold inappropriately on a global basis and 50% of patients fail to take their medicines correctly according to estimates based on various ad hoc reviews. Common types of inappropriate medicines use include polypharmacy (the use of too many medicines per patient), overuse of injections, inappropriate use of antimicrobials, failure to prescribe in accordance with clinical guidelines, and inappropriate self-medication, often with prescription-only medicines. Inappropriate use of medicines is harmful for patients in terms of poor patient clinical outcomes and avoidable adverse drug reactions. Overuse of antimicrobials exerts pressure to increase rates of antimicrobial resistance.

PURPOSE:

- To improve patient care by promoting the best practice in antibiotic prophylaxis and therapy.
- To ensure better use of resources by using cheaper drugs where possible.
- To retard the emergence and spread of multiple antibiotic – resistant bacteria.
- To improve education of newly recruited doctors by providing guidelines for appropriate therapy.
- To eliminate the use of unnecessary or ineffective antibiotics and restrict the use of expensive or unnecessarily powerful ones.
- To combat emergence of antibiotic resistance.

SCOPE:

Doctors and Paramedical Staff in a Hospital

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POLICY:

Our policy is to rationally and judiciously use the antibiotics for patient treatment.

Antibiotics are categorized under following categories and authorization to prescribe those antibiotics is given according to the qualification and designation of doctor.

- Assessment is done to know whether the patient actually requires an antibiotic or not. In general antibiotic therapy is not changed if the clinical condition is improving.
- If there is no clinical response within 72 hours, the clinical diagnosis, the choice of antibiotic and/or the possibility of a secondary infection should be reconsidered.
- Antibiotic are prescribed for the minimum length of time that is effective.
- Review the duration of antibiotic therapy is done after 5 days.
- For surgical prophylaxis antibiotics are started one day before induction of Anaesthesia and continue for a maximum of five days as per prescribed by treating surgeon.
- Pathogen is targeted first –cultures are obtained from the patient;
- Empiric therapy is targeted for likely pathogens;
- Definitive therapy is given for known pathogens.
- Standard infection control practices and isolation precautions are adopted to avoid hospital acquired infection.
- Medical audit is done to know who prescribed what.
- Training and education is provided to the antibiotic prescribers to keep them updated about judicious usage of antibiotics.

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Twelve core interventions recommended by WHO to promote more appropriate use of medicines-

1. A mandated multi-disciplinary national body – to coordinate medicines use policies.
2. Evidence-based clinical guidelines – to aid prescribers on how to treat patients.
3. Essential medicines lists based on treatment of choice – to be followed in procurement and distribution of medicines.
4. Medicines and therapeutic committees – to monitor quality of care in the districts and hospitals under their jurisdiction.
5. Problem-based pharmacology training in undergraduate curricula – to better equip future doctors in how to prescribe.
6. Continuing in-service medical education as a licensure requirement – in order to ensure that prescribers remain up-to-date with new treatments.
7. Supervision of health-care workers, audit of prescribing and feedback to prescribers – in order to help prescribers use medicines more appropriately.
8. Provision of independent information (such as clinical guidelines, drug bulletins) on medicines – in order to make sure that prescribers have sufficient unbiased information on medicines.
9. Public education about medicines to try and reduce inappropriate self-medication and demand for medicines and also to increase awareness about the importance of adherence.
10. Avoidance of perverse financial incentives such as prescribers earning money from the sales of medicines which encourages over-prescription of medicines.
11. Appropriate and enforced regulation, particularly concerning medicine promotional activities by the pharmaceutical industry, licensing of medicine outlets and healthcare workers, and the availability of prescription-only medicines without prescription.
12. Sufficient government expenditure to ensure availability of medicines and staff.

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Antimicrobial choice for disease conditions

GASTROINTESTINAL & INTRA-ABDOMINAL INFECTIONS

Condition	Likely Causative Organisms	Empiric (presumptive) antibiotics/ FirstLine	Alternative antibiotics/ Second Line	Comments
Acute Gastroenteritis	Viral, Entero-toxigenic & Entero- pathogenic	None	None	Rehydration(oral/ IV)essential
Food poisoning	E.coli S.aureus, B. cereus, C. botulinum			
Bacterial dysentery	Shigella sp., Campylobacter, Non-typhoidal salmonellosis	Ceftriaxone 2gm IV OD for 5days or oral cefixime 8 mg/kg/day x 5days	Azithromycin 1g OD x3days	For Campylobacter the drug of choice is azithromycin.
	Shiga toxin Producing E.coli	Antibiotic Treatment Not recommended		Antibiotic Use associated with development of hemolytic uremic syndrome
Amoebic dysentery	E.histolytica	Metronidazole 400mg Oral TDS for 7- 10days	Tinidazole 2gm Oral OD for 3days	Add diloxanide furoate 500mg TDS for 10d
Giardiasis	Giardia lamblia	Metronidazole 200- 400mg oral TIDx 7- 10d	Tinidazole 2gm oral x1dose	

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Enteric fever	S.Typhi, S. Paratyphi A	Outpatients: Cefixime 20mg/kg/day for 14 days or Azithromycin 500 mg BD for 7days. Inpatients: Ceftriaxone 2g IV BD for 2 weeks +/-Azithromycin 500mg BD for 7days	Cotrimoxazole 960mg BD for 2 weeks	Majority of strains are nalidixic acid resistant. Ceftriaxone to be changed to oral cefixime when patient is afebrile to finish total duration of 14 days
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SKIN & SOFT TISSUE INFECTIONS

Cellulitis	Streptococcus pyogenes (common), S.aureus	Amoxicillin Clavulanate 1.2gmIV TDS/625mgoral TDS or Ceftriaxone2gm IVOD	Clindamycin 600-900mg IV TDS	Treat for5-7days
Furunculosis	S.aureus	AmoxicillinClavulanate1. 2gmIV/Oral6 25TDS or Ceftriaxone2gm IVOD Duration-5- 7days	Clindamycin 600-900mg IV TDS	Get pus cultures before starting antibiotics

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RESPIRATORY TRACT INFECTIONS

Community acquired Pneumonia	S. pneumoniae, H. influenzae, Legionella, E. coli, Klebsiella sp., S. aureus	Mild cases: Amoxicillinclavulanic acid Moderate to severe cases If IV indicated, amoxicillinclavulanate 1.2g IV TDS or Ceftriaxone 1g IV BD + Levofloxacin 500mg OD x5-7 days	PiperacillinTazobactam 4.5gm IV 6hourly or Imipenem 1g IV 6hourly Or CefoperazoneSulbactam 3gm IV 12hourly	Reserve drugs: Linezolid + Vancomycin If MRSA is a concern, add Vancomycin If atypical pneumonia suspected, Azithromycin 500 mg oral/IV OD Or Doxycycline 100mg BD
Acute pharyngitis	Viral Group A β-hemolytic Streptococci (GABHS), GroupC, G Streptococcus	None Oral Penicillin v 500mg BD or Amoxicillin 500mg Oral TDS for 10days	In case of penicillin allergy: Azithromycin 500mg OD for 5 days Or Benzathine Penicillin 12 lac units IM	As most cases are viral no antimicrobial therapy required Antibiotics are recommended to reduce transmission rates and prevention of long term sequelae such as rheumatic fever
Acute bacterial Rhino sinusitis	Viral, S.pneumoniae H. influenza M. catarrhalis	Amoxicillin- Clavulanate 1gm Oral BD for 7day	Moxifloxacin 400 mg OD for 5-7 days.	
Acute bacterial exacerbation of COPD	S. pneumoniae H. influenzae M. catarrhalis	Amoxicillin-clavulanate 1gm oral BD for 7 days	Azithromycin 500mg oral OD × 3days	Treated as community acquired pneumonia
Acute bronchitis	Viral	Antibiotics not required	-	-

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URINARY TRACT INFECTIONS

Asymptomatic bacteriuria NOT to be treated except pregnant women and immunocompromised patients. All cases of dysuria may not be UTI. Refer to Obstetrics and gynaecology infections for treatment of asymptomatic bacteriuria in pregnant women

Acute uncomplicated Cystitis	E.coli, Staphylococcus saphrophyticus (in sexually active young women), Klebsiella pneumoniae	Nitrofurantoin 100mg BD for 7 days or Cotrimoxazole 960mg BD x 3-5 days or Ciprofloxacin 500mg BD for 3-5	Cefuroxime 250mg BD for 3- 5days	Get urine cultures before antibiotics & modify therapy based on sensitivities.
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OBSTETRICS AND GYNAECOLOGICAL INFECTIONS

- Fluoroquinolones are contraindicated in 1 sttrimester.
- Cotrimoxazole is contraindicated in 1 sttrimester.
- Doxycycline is not recommended in nursing mothers. If need to administer doxycycline discontinuation of nursing may be contemplated.

Syphillis			Refer to STD program guidelines
Tuberculosis in pregnancy	Similar to NON PREGNANT Population Some exceptions	Please refer RNTCP guideline Safe in pregnancy and can be used except streptomycin. SM causes significant ototoxicity to the fetus (Pyrazinamide not recommended by USFDA) 1. Mother and baby should stay together and the baby should continue to breastfeed. 2. Pyridoxine supplementation is recommended for all pregnant or breast feeding women taking isoniazid as well as to neonate who are being breastfed by mothers taking INH.	Very small chance of transmission of infection to fetus.

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VIRAL INFECTIONS (NO ANTIBIOTICS TO BE GIVEN)

<p>Influenza In pregnancy (seasonal And H1N1)</p>	<ol style="list-style-type: none"> 1. Tendency for severe including premature labor & delivery. 2. Treatment should begin within 48 hrs of onset of symptoms. 3. Higher doses commonly used in non pregnant population (150mg) are not recommended in pregnancy due to safety concerns. 4. Chemoprophylaxis can be used in significant exposures. 5. Live (nasal Vaccine) is contraindicated in pregnancy. 	<p>Oseltamivir 75 mg Oral BD for 5 days</p>	<p>Nebulization with Zanamvir respules (2) 5mg each, BD For 5 days</p>	<p>Direct fetal infection rare</p> <p>Preterm delivery and pregnancy loss. The best preventive strategy is administration of single dose of killed vaccine.</p>
<p>Varicella</p>	<p>>20 wks of gestation, presenting within 24 hours of the onset of the rash, >24hrs from the onset of rash, antivirals are not found to be useful.</p>	<p>Aciclovir 800mg Oral 5 times a day</p> <p>IV acyclovir recommended for the treatment of severe complications,</p> <p>VZIG should be offered to susceptible women <10days of the exposure.</p> <p>VZIG has no role in treatment once the rash appears.</p> <p>The dose of VZIG is 125units/10kg not exceeding 625 units, IM.</p>	<p>Chickenpox during pregnancy does not justify termination without prior prenatal diagnosis as only a minority of fetuses infected</p> <p>develop fetal varicella syndrome.</p>	

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PARASITIC INFECTIONS

Acute Toxoplasmosis in pregnancy	<18 weeks gestation at diagnosis	Spiramycin 1gm Oral qid until 16-18weeks/ Pyrimathamine+ sulphadizine. Alternate every two weeks-	
	>18weeks gestation and documented fetal infection by positive amniotic fluid PCR.	If PCR Positive - Pyremethamine 50 mg Oral BDx 2days then 50 mg OD + Sulphadiazine75 mg/kg Oral x 1dose then 50mg/kg bd + Folinic Acid (10-20 mg Oral daily) for minimum of 4 weeks or for duration of pregnancy.	
Malaria In pregnancy	As per national program		

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GENITAL TRACT INFECTIONS

Candidiasis	Candida species	Fluconazole oral 150 mg single dose For milder cases- Intravaginal agents as creams or suppositories clotrimazole, miconazole, nystatin. Intravaginal azoles, single dose to 7- 14days	Non-pregnant- If recurrent candidiasis, (4 or more episodes/year) 6 months suppressive treatment with fluconazole 150mg oral once a week or clotrimazole vaginal suppositories 500mg once a week.
Bacterial vaginosis	Polymicrobial	Metronidazole 500mg Oral BD x 7days Or metronidazole vaginal gel 1HS x 5days Or Tinidazole 2g orally ODx 3days Or 2% Clindamycin Vaginal cream 5gm HS x5 days	Treat the partner.
Trichomoniasis	Trichomonas vaginalis	Metronidazole 2gm single dose or 500mg Oral BD x 7days or Tinidazole 2gm Oral single dose For treatment failure -retreat with Metronidazole 500mg Oral	Treat sexual partner with metronidazole 2gm single dose
		BD x7Days, if 2nd failure Metronidazole 2gm Oral OD x3-5days	
Cervicitis /Urethritis Mucopurulent gonococcal	Polymicrobial	Ceftriaxone 250mg IM Single dose + Azithromycin 1gm single dose OR Doxycycline 100mg BD x7day	
Pelvic Inflammatory Disease (Salpingitis & tubo-ovarian abscess)	<i>S.aureus</i> , Enterobacteriaceae, gonococci, Gardenella	Out patient treatment Ceftriaxone 250mg IM/IV single dose plus+/- Metronidazole 500mg BD x14days Plus Doxycycline 100mg BD x 14Days Inpatient Treatment Clindamycin + ceftriaxone till patient admitted then change to OPD treatment	Drainage of tubo-ovarian abscess wherever indicated Evaluate and treat sex partner

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OPHTHALMIC INFECTIONS

External Hordeolum (Stye)	<i>S. aureus</i>	Hot pack Topical and oral antibiotic e/d and e/o in some cases incision and drainage of the stye.	Amoxicillin 500 mg PO QDS x 5 days Or Ampiclox (250 mg each) PO TDS x 5 days	if associated conjunctivitis Gatiflox 0.3% / Moxifloxacin 0.5% e/d QDS x 1 week
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EAR NOSE & THROAT INFECTIONS

<p>Acute otitis media</p>	<p><i>S.pneumoniae</i> <i>H.influenzae</i></p>	<p>Amoxicillin+ clavulante 90/6.4mg/kg/ day bid or cefpodoxim/ cefuroxime Axetil 250mg BD</p>	<p>Ceftriaxone 50mg/kg I/M for 3days</p>	<p>Treat children <2years If >2 years, a febrile and No ear pain- consider analgesics and defer Duration of treatment If age<2 years:10days If age>2years:5-7 days</p>
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