# GUIDELINES FOR ANTIMICROBIAL THERAPY AND PROPHYLAXIS



# Seth G.S Medical College and K.E.M Hospital

Reviewed DECEMBER 2022

Version 1.4

### Supported by :

Dean, Seth G.S Medical College & K.E.M Hospital

#### **Contributors**

#### Version 1.4

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#### **Disclaimer**

These guidelines have been prepared by consensus based on standard practices, published evidence, updated information, available data and individual experience of the experts. These guidelines are not exhaustive by themselves. Medicine is an ever changing science and users of this guideline are encouraged to refer to latest information. The final decision on the choice and use of antimicrobials rests with the treating clinician.

### Next Review : Jan 2024

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Foreword Dr. Sangceta Ravat Dean (G & K)

It is not difficult to make microbes resistant to penicillin in the laboratory by exposing them to concentrations not sufficient to kill them, and the same thing has occasionally happened in the body. The time may come when penicillin can be bought by anyone in the shops. Then there is the danger that the ignorant man may easily under dose himself and by exposing his microbes to nonlethal quantities of the drug make them resistant.

#### Alexander Fleming (1881-1955)

The concern expressed by Sir Alexander Fleming in early 20<sup>th</sup> century continues to be a significant concern even in the 21<sup>st</sup> century. These and other factors have contributed to the spiraling antimicrobial resistance to a great extent. Infections caused by resistant organisms are associated with higher adverse events including mortality.

Guidelines for antimicrobial therapy and prophylaxis will act as a means to control antimicrobial resistance while providing the clinicians at all levels with a handbook on rational antimicrobial use. National Treatment Guidelines for Antimicrobial Use in Infectious Diseases (NCDC,2016), Treatment Guidelines for Antimicrobial Use in Common Syndromes (ICMR, 2017), Government of India's National Action Plans for controlling Antimicrobial Resistance and The WHO AWaRe (Access, Watch, Reserve) antibiotic book (2022) provide directions for addressing the issue and develop guidelines.

The first version of the "Guidelines for antimicrobial therapy and prophylaxis" was published by MCGM in 2014/2015 and was a collective effort by the faculty of the three municipal medical colleges. The goal was to strengthen antimicrobial stewardship. The current version 1.4 has reviewed the existing guidelines and has been revised (as required) by the concerned departments of Seth G.S Medical College and K.E.M Hospital and I extend my appreciation for their efforts.

This recent version of the guideline will be more effective only if it is appropriately implemented and compliance is monitored with regular audits. I am sure that the heads of departments and unit heads will ensure that awareness and practice of appropriate antimicrobial prescriptions reaches all those who prescribe antimicrobials.

Any suggestions for improvement in these guidelines are welcome.

8 28/12/22 .

Dean (G & K) Dr. Sangeeta Ravat

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Guidelines for Respiratory Tract Infections			
Sr. No.	Conditions/ Expected pathogens	Revised MCGM recommendations	
1.	Acute pharyngitis	None indicated in viral infections	
	Majority viral, Suspect	Cefuroxime axetil PO 500 mg BD	
	bacterial –	Alternatives	
	Grp A Streptococci	Amoxycillin 500 mg PO TDS	
		Or Azithromycin 500 mg PO OD	
		Duration: 5-7 days	
2.	Acute bronchitis	OPD patients	
	Viral – ILI	Oseltamivir 75 mg PO BD	
		Duration: 5 days	
		For pregnant women in epidemic setting with pharyngitis and for severely ill patients with ARDS	
		Oseltamivir 150 mg PO BD	
		Duration: 5 days	
		Patients with persistent symptoms requiring admission, appropriate samples (nasopharyngeal+oropharyngeal) to be collected for influenza PCR.	
		Duration of treatment may be increased based on clinical response.	
3.	Acute bacterial	Amoxycillin+Clavulanic acid 625 mg PO TDS	
	exacerbation of COPD	Duration:7 days	
	bacterial pathogens and	Alternatives	
	viruses	Azithromycin 500 mg oral OD × 3 days	
	Occasional -Streptococci, Hemophilus spp. Morevella	Or	
	remophius spp, worazella	Doxycycline* 100 mg PO BD x % days	
		Or	

		Cefuroxime axetil*
		500 mg PO BD
		*Duration: 5-7 days
		Note
		Fluoroquinolones not to be used in outpatient settings.
		For hospitalized patients, injectable antibiotics to be administered.
4.	Community Acquired	OPD patients
	Pneumonia	Amoxycillin+Clavulanic acid 625 mg TDS x 7 days
	S.pneumoniae , Chlamydophila pneumoniae	Azithromycin 500 mg PO OD x 5 days
	Mycoplasma pneumoniae, Klebsiella pneumoniae,	As per CURB 65 criteria, admission maybe warranted.
	Mycobacterium tuberculosis,	IPD patients
	S.aureus Influenza viruses	Ceftriaxone 1 gm IV BD
	SARS-CoV-2	Or
	Donoly	Amoxycillin+Clavulanic acid 1.2 gm IV TDS
	Other Enterobacterales,	Duration - 7 days
	Moraxella catarrhalis, Pseudomonas aeruginosa.	+
	Haemophilus influenzae,	Azithromycin 500 mg IV OD x 5 days
		In patients who develop CAP associated complications, clinicians to decide further course of action.
		In epidemic settings,
		Oseltamivir 75 mg PO BD x 5 days for ILI
		If no response in 72 hours, upgrade as per culture and sensitivity report.
		Samples should be sent for SARS-CoV-2 detection for which treatment is symptomatic.
		Patients requiring admission should be tested for H1N1 and

In case of suspected allergy to betalactams, patients can be referred to allergy OPD (Dept. of Clinical Pharmacology) for allergy testing.

5.	Nosocomial pneumonia	Empiric therapy:
	(VAP/HAP)	Piperacillin-Tazobactam 4.5 gm IV TDS
	Gram negative bacilli	+/-
	<i>E.coli</i> , Klebsiella spp., Enterobacter, <i>P. aeruginosa</i>	Amikacin 500 mg IV OD
		Remarks:
		If no response in 72 hrs, then upgrade as per culture and sensitivity report.
		Amikacin dose to be adjusted as per renal correction.
		Therapeutic drug monitoring for amikacin maybe considered for optimizing the dose.
5	Pneumonia in transplant	Piperacillin + tazobactam 4.5 gm IV QDS
	recipients	Or
	S. pneumoniae, H. influenzae	Meropenem 1 gm IV TDS
	Legionella	Or
		Ceftazidime 1 gm IV TDS
		Duration: 14 days
		(with renal correction)
		Remarks:
		If no response in 72 hrs, then upgrade as per culture and sensitivity report
		If Pneumocystis jiroveci pneumonia is suspected add.
		Trimethoprim- Sulfamethaxazole 960 mg 2 tablets TDS
		Duration: 10-14 days

Empyema	Primary treatment is intercostal drainage with concurrent antibiotics	
S. aureus, H. influenzae Grp A Strep S. pneumoniae	The intercostal drainage fluid should be sent for culture sensitivity	
Oral anaerobes	Piperacillin-Tazobactam 4.5gm IV 6hourly	ł
	or <b>Cefoperazone-Sulbactam</b> 1.5 gm IV 8 hourly	
	+	
	Clindamycin 600-900mg IV 8hourly	
	Duration of treatment: Minimum 6 weeks	
	Remarks:	
	If no response in 72 hrs, then upgrade as per	
	Culture and sensitivity report	

8.	Pneumocystis jiroveci Pneumonia	Cotrimoxazole <b>DS</b> (800+160) PO 2 TDS <b>Duration</b> : 14 days In patients with associated hypoxia parenteral corticosteroids indicated
9.	Anaerobic pneumonia	Piperacillin + tazobactam 4.5 gm IV QDS + Metronidazole 500 mg IV TDS Duration: 14 days

10.	Bronchiectasis with	Amoxycillin+Clavulanic acid	
	infective exacerbation	625 mg PO TDS	
	H. influenzae, P. aeruginosa	If no response then,	
		Ceftriaxone 1 gm IV BD	]
		+	
		Amikacin 500 mg IV OD	
		<b>Duration:</b> 7-10 days	
		Remarks:	
		Upgrade antibiotics as per culture and sensitivity report	
		Amikacin dose to be adjusted as per renal correction.	
		Therapeutic drug monitoring for amikacin may be considered for optimizing the dose.	

11.	Pulmonary tuberculosis	As per NTEP guidelines	
12.	Invasive Broncho	Itraconazole 200 mg BD	
	pneumonia	Duration: 3 weeks	F
	(Immuno- compromised	Alternatives:	1
	patient)	Voriconazole 6 mg/kg IV BD day 1 followed by	
		4mg /kg IV BD	
		Duration : 2- 3 weeks	
		Voriconazole to be reserved for non-responsive cases	
		Pulmonologist and CVTS opinion to be sought for invasive management if indicated.	

	Conditions/ Expected	
Sr. No.	pathogens	
1.	Acute Bacterial Meningitis	Ceftriaxone 2gm / IV / BD +/-
	S.pneumoniae	Vancomycin
	N.meningitidis	1g (15 mg/kg) / IV / BD
	H.influenzae	Duration: 10-14 days
	CSF to be sent as early as possible for detecting the causative agent.	+ <u>Ini Dexamethasone</u> 8 mg stat followed by 4mg IV 8 hrly
	Treatment to be modified as per the result.	Duration : 5 days
		<u>Crvstalline Penicillin</u> –
		20 lakh units / IV / 2 hourly
		Remarks -
		Indications for <b>Vancomycin use</b> : 1.diabetics with skin & soft tissue infection
		2. patients with acute osteomyelitis
		3. neurosurgery/ shunt
2.	Acute Bacterial Meningitis	Ini Ampicillin 2gm IV 4 hrly
	(Elderly, alcoholics, immunocompromised)	Duration : 2 weeks
	Listeria mono-	
	cytogenes	
	5,55,6000	

5.	Brain Abscess	Ceftriaxone 2 g / IV / BD plus
	S.Aureus, anaerobes,	Metronidazole_500 mg IV / TDS
	Streptococci, Gram neg. bacilli, CoNS	2 <sup>nd</sup> line:
		Meropenem 2gm IVTDS Duration- 2-4 weeks
		Alternative/Remarks:
		Add Vancomycin if MRSA suspected
		If fungal etiology confirmed, add Amphotericin B/ Voriconazole
		Consult neurosurgery for abscess aspiration/ excision
4.	Neurocysticercosis	Albendazole_400 mg PO BD
	Taenia solium	+
		Prednisone 1 mg/kg PO OD
		Duration: 15 days
		Remarks:
		Consider
		antiepileptic therapy for seizures
5.	Spinal epidural abscess	1 <sup>st</sup> line:
	S.aureus, Streptococcus spp.,	<b>Ceftriaxone</b> 2gm /day IV BD
	organisms	+
		Metronidazole 1500-2000 mg/day, IV 6 hrly intervals
		+
		Vancomycin 1 gm /day IV BD
		2 <sup>nd</sup> line:
		Meropenem 2 gm IV 8 hrly

		+/-
		Vancomycin 1 gm /day IV BD
		Duration :3-4 weeks after surgical drainage
		Remarks:
		Consider Meropenem to be added as per C/S report.
5.	Subdural empyema	1 <sup>st</sup> line:
	Oral anaerobes, H. influenzae	<b>Ceftriaxone</b> 2gm /day IV BD
		+
		Metronidazole 1500-2000 mg/day, IV 6 hrly intervals
		+
		Vancomycin 1 gm /day IV BD
		2 <sup>nd</sup> line:
		Meropenem 2 gm IV 8 hrly
		+/-
		Vancomycin 1 gm /day IV BD
		<b>Duration :</b> 3-4 weeks after surgical drainage
		Remarks:
		Consider Meropenem to be added as per C/S report
7	Cavernous or sagittal sinus	1 <sup>st</sup> line:
	thrombosis, Intracranial	Ceftriaxone 2gm IV BD
	thrombophlebitis of infective nature.	Metronidazole 500 mg IV 8 hrly
	S.aureus, Grp A Streptococci, H.influenzae	

		2 <sup>nd</sup> line: Meropenem 2gm IV 8 hrly + Vancomycin 1gm/day IV/BD Duration: for 6 weeks or until there is radiographic evidence of resolution of thrombosis. Alternatives: I <sup>st</sup> line: Cefotaxime 12 gm/ day IV 4 hrly +	I
8.	Meningitis-Post-	Metronidazole <sup>500</sup> mg IV 8 hrly Meropenem 2gm IV 8 hourly	
	neurosurgery or Penetrating head trauma	+	
	S. epidermidis, S. aureus, Propionibacterium acnes, P. aeruginosa, A.baumanii	<u>Vancomycin</u> 15mg/kg IV 8 hourly For 14 days. Remarks: May need intra ventricular therapy in severe cases	

• Penicillins to be administered only after test dose. If allergy to beta lactams suspected, patient can be referred to Allergy OPD (Dept. of Clinical Pharmacology) for allergy testing.

Also, all parenteral beta lactams should be preferably administered as slow IV infusions over 2-3 hours (Avoid fast infusions)

• Vancomycin to be administered as a slow IV infusion over 1-2 hours (Rapid infusion can increase the risk of infusion reactions and red-man syndrome).

Also, the rapeutic drug monitoring for vancomycin is strongly recommended to maintain the rapeutic plasma levels between 15 and 20  $\mu$ g/ml (irrespective of the renal function status).

Sr. No.	Conditions/ Expected pathogens	Revised MCGM recommendations	
1.	Acute Sinusitis	Amoxycillin+Clavulanic acid	
	S. pneumoniae, H.influenzae	625 mg PO BD	
	M. catarrhalis	Duration: 10-14 days	
		Alternative:	
		Levofloxacin	
		500 mg PO OD	
		Duration: 7 days	
		Remarks	
		Levofloxacin not indicated in children	
		l	
2.	Acute pharyngitis	None indicated in viral	
	Majority viral	Bacterial:	
	Suspect bacterial- Grp A	Amoxycillin+Clavulanic acid 625 mg PO BD	
	Sucprococcus	+/- Azithromycin 500 mg PO OD	
		Duration: 5-7 days	
		Alternative:	
		Cotrimoxazole (DS) 800/160 mg PO,	
		ODOr	
		Doxycycline 100 mg PO, BD Or	
		<b>Cefuroxime axetil</b> 500 mg BD Or	
		Cefpodoxime 100 mg PO BD for 5-10 days	

	Acute epiglottitis	Amoxycillin+Clavulanic acid 625 mg PO BD
	H. influenzae, Anaerobes	Duration : 10 days
	Polymicrobial	+
		Metronidazole 500 mg PO TDS
		Duration: 2-3 weeks
		Alternative:
		Ceftriaxone 2g IV.
		BD
		Duration: 7-10 days
1	Oral Candidiasis	Eluconazole I. A. and 150, 200 mg PO, OD
+.	Candida ann	Duration: 2 works
	Candida spp	
		Remarks: If additional esophageal candidiasis detected, continue for 3-4 weeks.
5.	Ludwig's Angina, Vincent's angina	Amoxycillin+Clavulanic acid 1.2 gm IV BD
	Polymicrobial (Oral	Duration: 5–7 days
	anaerobes)	+
	anaerobes)	+ Metronidazole
	anaerobes) Surgical drainage as	+ Metronidazole 500 mg PO TDS
	anaerobes) Surgical drainage as indicated.	+ Metronidazole 500 mg PO TDS Duration : 2-3 weeks
	anaerobes) Surgical drainage as indicated.	+ Metronidazole 500 mg PO TDS Duration : 2-3 weeks (please check if duration for both is appropriate)
	anaerobes) Surgical drainage as indicated.	+ Metronidazole 500 mg PO TDS Duration : 2-3 weeks (please check if duration for both is appropriate) If patients cannot take orally,

6.	Acute Otitis Media	Amoxycillin+Clavulanic acid 625 mg PO BD	1
	S. pneumoniae, H.influenzae	Duration:	
	M. catarrhalis	uncomplicated - 5-7 days	
		severe complicated / <2 years for 10 days	
		Remarks:	
		Indications for antimicrobial therapy:	
		-High risk patients	
		-Patients with complicated disease	
		-Patients who do not improve after 48-72 hours	
		-Newborns	
		-Severely ill	
		-Immunodeficiency	
7.	Prophylaxis for recurrent Otitis Media	Amoxycillin+Clavulanic acid 625 mg PO BD /	
		375mg PO TDS/	
		1 gm PO BD depending upon age and body weight	
		Duration: 7 days	
		Alternatives:	
		Levofloxacin	
		500 to 750 mg/ day	
		Or	
		Cefpodoxime 200 mg BD	
		Or	
		Cefpodoxime with Clavulanic acid (200 /125) BD.	
		Avoid 3rd gen cephalosporins if possible, as they are	
		excellent ESBL inducers	

8.	Chronic Otitis Media	Topical antibiotics during drainage	1
	S.aureus,	Ciprofloxacin 500 mg PO BD	H 1
	Enterobacteriaceae. Pseudomonas Spp. anaerobes	Or	
		<b>Ofloxacin</b> 200 mg PO BD	
		Duration : 7 days	
		Alternative:	
		<b>Ceftazidime</b> 30-50 mg/kg IV TDS <u>(in proven</u> <u>Pseudomonas infection)</u>	
		not to exceed 6 g/day.	
		In children, use <b>Cefixime.</b>	
		Role of systemic antibiotics not proven.	
		In complicated cases, PiperacillinTazobactam	
		2.25/4.5 gm BD, or even TDS, or in some cases Meropenem if sensitive as per culture sensitivity report.	
Э.	Otomycosis	Fungal Otitis Externa	1
	Candida spp	Itraconazole 200mg BD daily	
		Duration: 2 weeks	
		Clotrimazole ear drops	
		+	
		Topical 2% salicylic acid	
		Suction evacuation	
		Remarks:	
		Recommended to do culture	
10.	Otitis externa	Amoxycillin+Clavulanic acid	1
	S. aureus	625 mg PO BD/	
		375mg PO TDS/	
		1 gm PO BD depending upon age and body weight	1

		Topical Ciprofloxacin ear drops
	Duration: 7 days	
		Alternative/Remarks:
	Doxycycline	
		100 mg PO BD Or
		Ciprofloxacin
		500 mg PO BD
		Cleansing external ear canal.
11.	Invasive/ Necrotising Otitis	<b>Ceftazidime</b> 1 g TDS
	Externa	Or
	Pseudomonas spp	Ciprofloxacin
		500 mg PO BD or 200 mg IV BD
		Early cases – oral & topical quinolones
		Duration to be adjusted based on severity and underlying condition such as Diabetes mellitus
		Diabetic – <b>Piperacillin</b> IV for 10-14 days
		Alternative:
		Piperacillin-Tazobactam
		4.5 g IV TDS
		+
		Aminoglycosides 500mg IV OD
		+
		Local Ciprofloxacin drops
		Duration:7 days
		<u>If severe,</u>
		Quinolone + Beta lactam beta lactamase inhibitor
		Duration: 6 weeks
		If diagnosed fungal aetiology, <b>Fluconazole</b> (Candida spp)and <b>Itraconazole</b> (Aspergillus spp)

12.	Diphtheria	Erythromycin
	C. diphtheria	40 mg/kg /day IV (max) OR 2gm/day
		+
		Penicillin G IV
		300000 IU/day (<10kg wt)/
		600000 IU/day (>10kg wt)
		Or
		Piperacillin/Tazobactam
		4.5 gm IV BD
		(preferably slow infusion over 2 hours)
		+
		Anti-diphtheria serum
		Duration: 14 days or
		Until patient is able to swallow
		Remarks:
		Penicillin should be administered only after test dose.
		Anti-diphtheria serum
		For children:
		Laryngeal:
		20-40,000 U
		Nasopharyngeal:
		40-60,000 U
		Extensive disease:
		60-80,000 U

3.	Laryngitis	Amoxycillin+Clavulanic acid	
		625 mg PO TDS	
	Viral (mainly), Rarely		
	Bacterial-	Duration:7 days	
	Streptococcus, Moraxella	Remarks:	ī
		Antibiotics are not recommended unless Grp A Strep is	2
		isolated.	

14.	Laryngotracheobronchitis	Amoxycillin+Clavulanic acid 625 mg PO TDS
		Duration:7 days
		Remarks:
		Levofloxacin
		400 mg PO BD
15.	Pre op prophylaxis –	Inj Cefazolin 2 gms (IV)
	Major head and neck surgery	1 <sup>st</sup> dose at induction
	including implant surgeries	or
		Inj Cefuroxime sodium 1.5 gm (IV)
		2 <sup>nd</sup> dose within 24 hrs

Penicillins to be administered only after test dose. If allergy to beta lactams suspected, patient can be referred to Allergy OPD (Dept. of Clinical Pharmacology) for allergy testing.
 Also, all parenteral beta lactams should be preferably administered as slow IV infusions over 2-3 hours (Avoid fast infusions)

Sr. No.	Conditions/ Expected pathogens	Revised MCGM recommendations	
1.	Blepharitis (Anterior and	Anterior :	
	S summer S amidamuidia	Chloramphenicol	
	Non infective causes	e/d or e/o (1%w/w);	
		<b>Duration</b> - 4 to 6 weeks	
		Posterior blepharitis:	
		above	
		+	
		Doxycycline 100mg PO BD	
		(Not given to pregnant women)	
		Duration: 1 week.	
		Or	
		Azithromycin 500 mg PO OD	
		Duration : 3 days	
		In addition -	
		1. Warm wet compress to the lid with 1:4 baby shampoo or with warm	
		3 % bicarbonate of soda lotion.	
		2.Eyelid hygiene.	
		3. Artificial tears if associated with dry eye.	
		Alternative: -	
		Topical sodium fusidic acid (1%)	

2.	Hordeolum (Stye)	Amoxicillin 500 mg PO QDS
	S. aureus	Duration: 5 days
		+
		Oral NSAIDs
		In addition
		1. Warm compresses
		2. Some cases require incision and drainage of the stye.
		Alternatives
		Ampicillin-Cloxacillin (250 mg each)PO TDS
		Duration: 5 days
		If associated conjunctivitis-
		Gatifloxacin 0.3% / Moxifloxacin 0.5% e/d QDS
		Duration: 1week
3	Epidemic keratoconjunctivitis (EKC)	(Antibiotics prescribed to prevent secondary bacterial infection)
	Viral – Adenovirus	Povidone Iodine e/d 5% solution QDS +
		Tropicamide 1% eye drop twice a day (if pupillary area is involved)
		e/d Fluorometholone 0.1% 1 drop 4 times a day in tapering fashion
		+
		Topical <b>Moxifloxacin 0.5% 1 hrly</b> +
		Oral NSAID
		Duration: Approximate 1 week
		In addition 1.Lid hygiene 2.Protective glasses
		3. Artificial tears

	Purulent Conjunctivitis	Povidone Iodine e/d 5% solution QDS +
	Bacterial – Chlamydia, S.	Topical Moxifloxacin 0.5% 1 hrly
	aureus, N. gonorrhoeae, S. pneumoniae	Duration: Approximate 1 week.
	1	In addition,
		Remarks:
		1.Lid hygiene
		2.Protective glasses
		3. Artificial tears if associated with dry eye.
		Alternatives
		Bacterial:
		Gatifloxacin 0.3%
		Or
		Levofloxacin 0.5%,
		Dose: 1-2 drops every 2hrs while awake during the first 2 days, then every 4-8hrs <b>Duration:</b> 7 days
5.	Inclusion Conjunctivitis	Topical Antibiotics
	(Trachoma)	e/o erythromycin 0.5% TDS
	Chlamydia trachomatis	e/o tetracycline 1%TDS
		+
		+ <b>Tab Azithromycin</b> 1000 mg POOD; repeat after 1 week
		+ Tab Azithromycin 1000 mg POOD; repeat after 1 week Duration: 3-4 weeks
		+ Tab Azithromycin 1000 mg POOD; repeat after 1 week Duration: 3-4 weeks Alternatives:
		+ Tab Azithromycin 1000 mg POOD; repeat after 1 week Duration: 3-4 weeks Alternatives: Erythromycin -
		+ <b>Tab Azithromycin</b> 1000 mg POOD; repeat after 1 week <b>Duration: 3-4 weeks</b> <b>Alternatives:</b> <b>Erythromycin -</b> 250 mg PO BD
		+ <b>Tab Azithromycin</b> 1000 mg POOD; repeat after 1 week <b>Duration: 3-4 weeks</b> <b>Alternatives:</b> <b>Erythromycin -</b> 250 mg PO BD or
		+ Tab Azithromycin 1000 mg POOD; repeat after 1 week Duration: 3-4 weeks Alternatives: Erythromycin - 250 mg PO BD or Ofloxacin
		+ Tab Azithromycin 1000 mg POOD; repeat after 1 week Duration: 3-4 weeks Alternatives: Erythromycin - 250 mg PO BD or Ofloxacin 400 mg PO OD

		Doxycycline
		100 mg PO BD
		or
		<b>Tetracycline</b> 250 mg PO QDS (avoid in pregnant women and in children)
		Duration: 3-4 weeks
		In addition
		1.Lid hygiene
		2. Artificial tears
		3. Antibiotics for secondary infections.
6.	Orbital Cellulitis	Start organism specific treatment after culture and sensitivity report.
	S.pneumoniae, H.influenzae,M.catarrhalis	Consider fungal culture
	<i>S.aureus, a</i> naerobes, Grp A Streptococci, Gram Negative bacilli, Post Trauma	Inj. Vancomycin 1 g iv BD
		+
		Levofloxacin 750 mg IV once daily
		+
		Metronidazole
		500mg IV TDS infusion
		<b>Duration</b> – 7 to 14 days
		Alternative:
		Cloxacillin 2 g IV 4 hrly
		+
		Ceftriaxone 2g IV 24 hrly
		+
		Metronidazole
		500mg IV TDS infusion
		<b>Duration</b> – 7 to 14 days

Corneal Ulcer/ Keratitis	Viral-
HSV	Topical Acyclovir 0.3% e/o
	5 times a day
	+
	Atropine 1% eye ointment twice a day
	+ Acyclovir 400 mg PO 5 times if accompanied by iritis
	Or
	<b>Ganciclovir</b> 0.15% ophthalmic gel 5 times a day until corneal ulcer heals, followed by one drop three times daily for 7 days
	Duration :3 weeks
	<b>Acyclovir</b> 400 mg PO BD in recurrent herpetic eye disease
	<b>Trifluridine ophthalmic solution</b> 1 drop 2 hourly, up to9times/day until reepithilealised,
	then 1 drop 4 hourly upto 5 times/day
	Total duration: 21 days
	Corneal scraping and
	Culture should be done whenever possible.
	Artificial eye drops to be used in case of dry eye
	Oral NSAID and e/d Homatropine may be added inselected cases.

8.	Corneal Ulcer/ Keratitis	Viral-
	Varicella zoster	Topical Acyclovir 0.3% e/o
		5 times a day
		+
		Atropine 1% eye ointment twice a day
		+
		Acyclovir 800 mg PO 5 times a day if accompanied by iritis
		Duration :3 weeks
		Acyclovir 400 mg PO BD in recurrent herpetic eye disease
		Alternative/Remarks:
		Famciclovir 500mg BD/TID Or
		Valacyclovir 1g oral TID
		Duration: 10 days.
		Corneal scraping and Culture should be done whenever possible.
		Oral NSAID and e/d Homatropine (2% TDS) may be added in selected cases for 2 weeks
9.	Corneal Ulcer/ Keratitis	<u>Bacterial-</u>
	<b>Bacterial -</b> S.aureus, H.influenza, S.pyogenes	Amikacin 3% / Moxifloxacin 0.5% 1 drop hourlye/d which is tapered according to response
		Or
		Tobramycin e/d 1.3% (fortified) 1 drop hourly
		And
		<b>Atropine 1%</b> eye ointment twice a day for 3 days
		Duration: 7-14 days
		<b>Catifloyagin 0.2</b> % and the logic Solution 1 drop 1 hourly

		In cases of virulent corneal ulcer:
		Fortified Cefazolin5% e/d one drop every half hour
		+
		<b>Fortified Tobramycin 1.3%</b> e/d1 drop hrly for the first 48 hrs and then reduce as per symptoms
		Duration: 2 weeks
10.	Corneal Ulcer/ Keratitis	Fungal-
	Fungal	<ol> <li>For filamentous fungi: Natamycin 5% e/d half hourly for the first two days after which it is reduced to one drop every hour</li> <li>For veasts: Amphotericin B 0.15% e/d</li> </ol>
		Atropine 1% eye ointment twice a day to be added in both cases
		Duration: 4 weeks
		Remarks:
		Voriconazole e/d 1% 1 drop hrly and gradually tapered
		over 8 weeks
		Duration: 8 weeks (Tapered as infection resolves)
		If liver function tests are within normal limits then add,
		Oral Ketoconazole 200 mg BD – dose to be titrated as per response as well as liver function tests
		Duration: 3-4 weeks
		Use artificial tears in case of dry eye

11. Eye infection in Contact	Polyhexamethylene biguanide (PHMB) (0.02%) hourly	
	Lens Users	+
	Acanthamoeba spp	Chlorhexidine (0.02%) hourly
		+
		Homatropine e/d 2% TDS
		<b>Duration</b> : 2 days, then tapered. Total duration of treatment is 3 weeks
		Remarks:
		Culture is mandatory.
		Consider Propamidine is ethionate $(0.1\%)$ as an alternative.
		In late cases, Therapeutic Penetrating Keratoplasty (TPK) may be needed.
12.	2. Eye infection in Contact	Pseudomonas keratitis
	Lens Users	(topical and systemic antibiotics)
	Pseudomonas spp	Tobramycin fortified e/d 1.3 % 1 drop 1 hourly
		Or
		Gentamicin 14 mg/ml 1 drop 1 hourly
		Duration: 15 days
		Alternative/Remarks:
		Culture is mandatory. If no response then Colistin e/d 0.19% 2 hrly
		Duration: 2 weeks
		Consider Propamidine isothionate $(0.1\%)$ as an alternative.
		In late cases, TPK may be needed.

3.	Dacrocystitis	Gatifloxacin 0.3% Or Moxifloxacin 0.5% e/o 6 times a
	H. influenza, S. aureus, S.	day
	pyogenes, P. aeruginosa	+
		Systemic Amoxycillin + Clavulanic acid 625 mg PO TDS
		Duration : 7 days
		In addition,
		<ul> <li>Hot fomentation and massage</li> <li>Oral NSAID's for 1 week</li> <li>DCR/DCT to be done after inflammation subsides in acute cases and can be done as a primary indication in chronic cases</li> </ul>
14.	Endophthalmitis	Intravitreal antibiotics:
	S. epidermidis S. aureus,	Vancomycin 1 mg in 0.1 ml
	Streptococcus spp,	+
	negative bacilli, anaerobes	Ceftazidime / Cefazolin 2.25 mg in 0.1 ml
		or
		<b>Amikacin</b> 400 μg in 0.1 ml
		or
		<b>Gentamicin</b> 200 µg in 0.1 ml
		Systemic antibiotics
		Vancomycin 1gm IV BD and Amikacin 240 mg IV TDS
		or
		Vancomycin 1 gm IV BD and Ceftazidime 2gm IV TDS
		<u>Topical antibiotics</u>
		<b>Fortified tobramycin</b> 1.3% <b>or fortified cefazolin</b> 5% 1 drop 1 hrly to be reduced according to response
		Duration: 2 weeks
		Important considerations
		<ul> <li>Atropine 1% eye ointment twice a day</li> <li>Intravitreal antibiotics to be repeated after 48 hrs in case of no response</li> </ul>

		<ul> <li>Pars plana vitrectomy or vitreous aspiration may be performed.</li> <li>Send specimen for culture – bacterial and fungal.</li> <li>Treatment is tailor made for the cause whether exogenous(post-op,/posttrauma) or endogenous</li> <li>If fungal, add Amphotericin B</li> </ul>
15	Endophthalmitis	Intravitreal antifungals:
	Candida sp, Aspergillus sp.	<ul> <li>Amphotericin B 5 µg in 0.1 ml</li> <li>or</li> <li>Voriconazole 0.1 ml/100 µg</li> <li>Pars plana vitrectomy or vitreous aspiration may be performed.</li> <li>Send specimen for culture – bacterial and fungal.</li> <li>Treatment is tailor made for the cause , whether exogenous(post-op,/posttrauma) or endogenous</li> <li>If fungal, add AmphotericinB</li> </ul>
16	<b>Retinitis</b> HSV Varicella Zoster Virus	<u>IV antiviral drugs</u> : <b>Acyclovir</b> IV 10 mg/kg 8 hrly for 10-14 days and then orally 800 mg five times a day for 6-12 weeks <b>Alternative/ Remarks:</b> Resistant cases require intra vitreal anti-viral agents.

7	Pre-operative Prophylaxis Clean cases	Moxifloxacin 0.5% e/d 3 times previous day of surgery.
	Cataract, terygium, glaucoma, strabismus, lid(entropion, exotropion,ptosis), corneal transplant	Instill Povidone Iodine 5% eye drops in conjunctiva (to remain for 3 minutes), immediate preoperative preparation
		<ol> <li>In addition,</li> <li>Trimming of eye lashes just before surgery</li> <li>Eye wash with 5% betadine prior to surgery</li> <li>Head bath and face wash prior to surgery</li> <li>Check patency of nasolacrimal duct before surgery</li> </ol>
18	Contaminated cases Endopthalmitis, corneal ulcer, post traumatic tear with infection,intraocular foreign body, lacrimal sac surgery, dacrocystitis	Systemic Cefotaxime 1 gm IV TDS Or Ceftriaxone 1.5 gm IV BD one day prior to surgery and continue 7 days post surgery + Topical Moxifloxacin 0.5% 4-6 times a day + Intracameral Moxifloxacin intra op at the end of surgery Systemic Cefotaxime 1 gm IV TDS Or Ceftriaxone 1.5 gm IV BD one day prior to surgery and continue 7 days post surgery + Topical Moxifloxacin 0.5% 4-6 times a day + Intracameral Moxifloxacin intra op at the end of surgery In addition,
		<ol> <li>Trimming of eye lashes just before surgery</li> <li>Eye wash with 5% betadine prior to surgery</li> <li>Head bath and face wash prior to surgery</li> <li>Check patency of nasolacrimal duct before surgery</li> </ol>

Corneal foreign body	Patch for 24 hrs for epithelisation after removal with chloramphenicol eye ointment applicap +cycloplegic eye drop.
	Antibiotic Chloramphenicol applicap
	Next day: Antibiotic drops Moxifloxacin/ Gatifloxacin X 3 days
	Homatropine 2% BD for 1-2 days
	In addition,
	<ol> <li>Trimming of eye lashes just before surgery</li> <li>Eye wash with 5% betadine prior to surgery</li> <li>Head bath and face wash prior to surgery</li> <li>Check patency of pagelogimed duet before</li> </ol>

• Penicillins to be administered only after test dose. If allergy to beta lactams suspected, patient can be referred to Allergy OPD (Dept. of Clinical Pharmacology) for allergy testing.

Also, all parenteral beta lactams should be preferably administered as slow IV infusions over 2-3 hours (Avoid fast infusions)

• Vancomycin to be administered as a slow IV infusion over 1-2 hours (Rapid infusion can increase the risk of infusion reactions and red-man syndrome).

Also, therapeutic drug monitoring for vancomycin is strongly recommended to maintain therapeutic plasma levels between 15 and 20  $\mu$ g/ml (irrespective of the renal function status).

• Acyclovir IV to be always administered as a slow infusion over one to two hours (faster infusions can increase the risk of nephrotoxicity)

2	<b>Guidelines for Bone And Joint Infections</b>
Sr. Conditions/ Expected No. pathogens	Revised MCGM recommendations
1 Acute osteomyelitis / Septic arthritis S.aureus, Streptococcus pyogenes Enterobacteriaceae	Amoxicillin + clavulanic acid <sup>1</sup> 1.2 g IV BD         Or         Cloxacillin <sup>1</sup> 1gm IV QDS         Or         Linezolid 600mg IV BD in proven MRSA         Duration         IV for 2-3 weeks followed by oral for a minimum of 6-8 weeks (maximum duration upto 3 months)
2 Chronic osteomyelitis <i>S.aureus,</i> Enterobacteriaceae, Pseudomonas	Primary treatment         Surgical debridement and then send sample for culture and sensitivity (bacterial, fungal, mycobacteria).         If culture positive then treat as per culture sensitivity report, until then start         Cloxacillin <sup>1</sup> 1g IV QDS         Or         Cefuroxime <sup>1</sup> 1.5gm IV 12 hrly         +         Amikacin <sup>2</sup> 500-750mg IV OD         If culture negative, then continue the above         treatment till recommended duration below         Duration         Minimum 3 wks IV and continued as per patients response then shift to oral.         Minimum duration of treatment – 6-8 wks and         extended asper clinical response for maximum 3

3	Open Injuries - Gram	Cefazolin <sup>1</sup> 2 gm IV 12 hrly	1
	Negative bacteria &	Or	
	S. aureus	Ceftriaxone <sup>1</sup> 2 gm IV OD	
		Or	
		Cefuroxime <sup>1</sup> 1.5gm IV 12 hrly	
		+	
		Amikacin <sup>2</sup> 500 -750 mg IV OD	
		+	
		Metronidazole 500 mg IV 8 hrly	
		To be given pre-op and upto 72 hrs post-op	
4	Prosthetic Joint         Infections - Grp A,B,G &         viridans Strep         S. aureusCoNS         Enterococcus Gram         Negative Bacilli	If clinical evidence of infection	1
		Debride and send for culture and start	
		Ceftriaxone <sup>1</sup> 2g IV OD	
		+	
		Linezolid 600 mg IV BD	
		Or	
		Vancomycin <sup>3</sup> 1gm IV BD	
		When culture reports available change as per culture sensitivity report.	
		If culture negative continue the above treatment	
		till recommended duration below.	
		Duration	
		Minimum 6 wks and upto maximum of 3 months.	

	Bursitis	No antibiotics if culture negative.
	S. aureus	If culture positive, Cloxacillin 500mg PO QDSor
		Amoxycillin + Clavulanic acid <sup>1</sup> 625mg PO TDS
		Duration : 5 days
		Alternatives:
		If septic bursitis then
		Flucloxacillin <sup>1</sup> 500mg, erythromycin or clarithromycin
6	Gas Gangrene- Clostridia	BD/ QID for 7 days Surgical debridement <u>is the</u> primary therapy.
		Hyperbaric oxygen debated
		Antibiotics
		Penicillin + Clindamycin
		Or
		<u>In Penicillin allergic patients.</u> Clindamycin + Metronidazole
		<b>Doses: Clindamycin</b> 600 - 1200 mg IV/day in divideddoses
		Penicillin G 24 million units/day divide 4-6hrly IV
		Metronidazole 500 mg IV TDS
		<b>Duration :</b> 2-4 weeks depending on patient's response
		Alternatives:
		Penicillin to be administered only after test dose.
		A combination of penicillin and metronidazole may be antagonistic and is not recommended.
		Ceftriaxone 2g IV BD
		Or
		Erythromycin 1 g QDS IV (not by bolus)
	Pre operative p	prophylaxis (revised MCGM guidelines)
----	---	--
1.	Clean soft tissue surgery	Single dose Cefazolin 2gm IV
	without implant.	Or
	Eg ; excision of benign soft tissue tumour.	Single dose Amoxycillin + Clavulanic acid 1.2gm IV
		Or
		Single dose Cefuroxime 1.5gm IV
		60 mins prior to incision.
2	Closed trauma requiring	Cefazolin 2gm IV
	open reduction and	Or
	Fixation with implant	Amoxycillin + Clavulanic acid 1.2gm IV
		Or
		Cefuroxime 1.5gm IV
		Given pre-op and IV 12hrly for 2 doses.
	Open trauma requiring	Cefazolin 2gm IV 12 hrly
	debridement and Internal or external fixation.	Or
		Ceftriaxone 2 gm IV OD
		Or
		Cefuroxime 1.5gm IV 12 hrly
		+
		Amikacin 500 -750 mg IV OD
		+
		Metronidazole 500 mg IV 8 hrly
		To be given pre-op and upto 72 hrs post-op

4	Primary joint replacement	Cefazolin <sup>1</sup> 2gm IV 12 hryly	
		Or	
		Amoxycillin + Clavulanic acid 1.2gm IV 12 hrly	
		or	
		Cefuroxime 1.5gm IV 12 hrly	·
		+	
		Amikacin 500 -750 mg IV OD	
		Pre-op and between 2-5 days post op	
5	Major spinal surgery	Cefazolin 2gm IV 12 hrly	
	lasting more than 8 hrs	Or	
		Amoxycillin + Clavulanic acid 1.2gm IV 12 hrly	
		Or	
		Cefuroxime 1.5gm IV 12 hrly	
		+	
		Amikacin 500 -750 mg IV OD	
		e e	

6	Minor spinal surgery	Cephazolin 2gm IV 12 hrly
		Or
		Amoxycillin + Clavulanic acid 1.2gm IV 12 hrly
		Or
		Cefuroxime 1.5gm IV 12 hrly
		+
		Amikacin 500 -750 mg IV OD
		Pre-op and upto 48 hrs post-op
	1	

	Revision joint surgery	Screen all patients for MRSA
	(for aseptic loosening)	If not MRSA carrier then start
		Cephazolin 2gm IV 12 hrly Or
		Amoxycillin + Clavulanic acid 1.2gm IV 12 hrly
		or
		Cefuroxime 1.5gm IV 12 hrly
		+
		Amikacin 500mg – 750 mg IV OD
		To be continued for 5 days post op.
		If MRSA carrier to the above add
		Vancomycin 1gm IV 12 hrly
		And treat for MRSA carriage
illins to	be administered only after tes	st dose. If allergy to beta lactams suspected, patient can be re
<u>ll parent</u>	eral beta lactams should be p	referable administered as slow IV infusions over 2-3 hours (.
<u>usions)</u>		
acin dos	e to be adjusted as per renal of	correction.
	g monitoring for amikacin n	naybe considered for optimizing the dose
eutic dru		
eutic dru	o be administered as a slow 1	V infusion over 1-2 hours (Rapid infusion can increase the
eutic dru omycin t n reactio	o be administered as a slow 1 ns and red-man syndrome).	V infusion over 1- 2 hours (Rapid infusion can increase the r

		6. Skin and soft tissue infections
Sr.No	Condition/ Expected pathogens	Current MCGM Guidelines
1	Acne vulgaris	Clindamycin (1%) gel/lotion to be applied locally BD
	Propionibacterium	Duration - 15days
	acnes	+/- (depending on severity)
		Cap. Doxycycline 100mg PO OD;
		Duration - 15 days
		Or
		Oral Azithromycin 500 mg OD for
		3days.Repeat after one week (for upto 6
		weeks)
		To follow up after 15 days for clinical evaluation and to assess response to treatment
		Alternatives:
		Ointment Erythromycin base (1.5%) to be applied locally BD;
		Duration - 15days
		+/- (depending on severity)
		Minocycline 100 mg PO OD
		Duration - 20 days
		Antibiotic sparing agents have proved effective. To be
		givenin addition to oral treatment:
		Topical benzoyl peroxide 2.5% gel or
		Tretinoin 0.025% cream
		Systemic-
		Oral contraceptives with anti androgenic progesterone

2	Furunculosis	Amoxycillin + Clavulanic acid 625 mg PO TDS
	S. aureus –	Or
	Methicillin	Cefadroxil <sup>1</sup> 250 / 500 mg PO BD
	susceptible	Duration : 7-10 days
		Chronic cases -
		Minocycline or Doxycycline
		100 mg PO BD
		In severe cases -
		Clindamycin 300–450 mg/kgTDS
		Alternatives:
		TMP-SMX 800/160 PO BD or
		Cloxacillin 250-500 mg QDS
		Duration: 7days
		<u>Local –</u>
		Sodium fusidate 2%
		twice daily for 3-4
		wks <b>Ur</b> Muningain 1%, twigg daily
		Or
		Povidone iodine ointment
3	Carbuncle	1. Incision drainage
	S. aureus, Gram	2. Amoxycillin + Clavulanic acid 625 mg PO TDS
	negative rods	Or
		Cefadroxil 500 mg PO
		BD <b>Duration :</b> 7 days
		Alternatives:
		T. Cephalexin
		S00 mg PO
		QDS Duration + 7 days
_		
4	Celluntis	Amoxycillin + Clavulanic acid 625 mg PO TDS
	Other	<b>ΤΜΡ/SMX</b> 800/160 mg PO RD
	streptococci.	Duration : 7-10 days
	S.aureus	Alternatives:
		<b>Cefazolin</b> , $1-2$ g TDS or
		Ampicillin/sulbactam, 1.5–3 g IV
		QDSor
		Clindamycin, 600–900 mg IV TDS

5	Erythrasma	Azithromycin 500 mg PO OD Duration : 3 days Or Erythromycin 500 mg PO QDS Duration: 5 days + Topical erythromycin / Clotrimazole 1%/ Miconazole 2%/ Clindamycin / Fusidic acid Duration : 2 weeks
6	Erysipelas S. pyogenes, other streptococci, S.aureus, (Facial- S.pneumonia ealso) In diabetics – maybe associated withEntero- bacteriaeceae	Amoxycillin + Clavulanic acid 625 mg PO TDS Duration : 7-10 days Or Erythromycin 500 mg QDSDuration : 7-10 days Alternatives: Cefazolin, 1–2 g TDS or Ampicillin/sulbactam, 1.5–3 g IV QDS or Clindamycin 600–900 mg IV TDS
7	<b>Folliculitis</b> S.aureus P.aeruginos a(Hot tub)	Amoxycillin + Clavulanic acid 625 mg PO TDS Duration : 7days Or Ciprofloxacin 500 mg PO BD +/- Local: 1% Mupirocin/ Sodium fusidate / Povidoneiodine/ neomycin containing ointment

	Chronic Folliculitis S.aureus P.aeruginosa (Hot tu	Doxycycline 100 mg PO OD         Duration: 2-4 weeks         b)         or	
		Dapsone 100 mg PO         ODDuration: 2-4         weeks Topical:         1% Mupirocin/ Sodium fusidate / Povidone iodine/neomycin containing ointment         Alternatives:	
		TMP/SMX 800/160 mg PO BD Duration: 2-4 weeks	
9 Hi su S.a Ai Ps	aureus, S.pyogenes, naerobes, seudomonas spp.,	Amoxychin + Clavulanic acid 625 PO TDS Duration:7days Or Azithromycin 500 mg PO OD	
Entero- bacteriaceae		Duration: 3days Alternatives: Minocycline 100 mg BD or	
		Doxycycline 100 mg BD or Clindamycin 300 mg QDS	
		Or <b>TMP/SMX</b> 800/160 mg PO BD <u>Antibiotic sparing agents are recommended (Retinoids and antiandrogens)</u>	

S. Aureus	Cefadroxil 250 / 500 mg PO BD Duration : 7-10 days
	Topical mupirocin ointment/ Sodium fusidate 2% is also effective.
	Alternatives:
	For minor lesion, those on dangerous area of face and in children
	Azithromycin 500 mg PO OD
	Duration: 3days
	Or <b>TMP/SMX</b> 800/160 mg PO BD
	Duration: 7-10 days
Madura foot, Actinomycotic-	Actinomycotic mycetoma:
mycetoma/	Inj Amikacin <sup>2</sup> 500 mg IM BD
Eumycetoma	+
Nocardia spp. Actinomadura spp./ Fungal causes	Inj Ampicillin <sup>1</sup> 500 mg IV QDS
	<b>Duration of injectable antibiotics</b> : 2 weeks (to be repeated at 2 week intervals for a total duration of three months)
	+
	TMP/SMX 800/160 mg PO BD
	Duration: 3 months
	Itraconazole 100 -200 mg BD
	Duration: 3 months
	Alternatives:
	Alternatives: Inj. Crystalline Penicillin 50,000units/kg body weight IV in 4 divided doses/ day
	Alternatives: Inj. Crystalline Penicillin 50,000units/kg body weight IV in 4 divided doses/ day Duration: 2 weeks

		Eumycetoma:	
		Itraconazole 100 -200 mg BD	
		Duration: 3 months	Ī
12	Muco-cutaneous	Correct the underlying predisposing condition	4
	candidiasis	Cutaneous Candidiasis	
	Candida albicans	Clotrimazole cream (1%) to be applied locally twice daily	
		Or	
		Miconazole 2% cream once daily	
		Duration: 2 weeks.	
		To follow up after 2 weeks to assess response to therapy.	
		Alternatives:	
		<b>Cap.Fluconazole</b> (100 mg) 2 capsules on day 1 followed by 1 capsule once daily for 2 weeks	
		Or	
		Nystatin Suspension 100000 Units to swish	
		around in themouth and then swallow four times	

13	Paronychia	<u>Acute:</u>	1
	(Acute/chronic)	Amoxycillin + Clavulanic aid 625 PO BD	
	Acute: Staphylococcal	and	
	infection	Incision and drainage to relieve pain	
	Chronic : Candida	Chronic	
		Oral fluconazole 150 g /wk	
		A kara stiros	
		Auernauves:	
		Or Econogele aream applied to affected area(a) PD/TID	
14	Localised	Topical Treatment:	
	Pyoderma	Sodium fusidate 2%	
		Or	
		Mupirocin 1%	
		Or	
		Povidone iodine ointment	
		Duration: 7-10 days	
		<u>Alternatives:</u>	
		Topical Nadifloxacin cream	
		Duration: 7-10 days	
	Other fungal	a) Tinea corporis/Tinea cruris	1
	infections of skin, hair	Systemic therapy	
		Terbinafine 250 mg OD/BD	
	1 mea	<b>Duration:</b> 14 days	
	Dermatophytes	Or	
		Itraconazole 100 -200 mg BD	
			1

To follow up after 2 weeks to check response to therapy
Topical therapy
Whitfield ointment
+
<b>Cream Clotrimazole</b> (1%) to be applied locally twice daily for 2 weeks
Or
Amorolfine cream 1%
Or
Luliconazole Cream
(1. corports/1 crurts)
Griseofulvin 250 mg PO BD
<b>Duration:</b> 6 weeks to 6 months
b) Tinea capitis/Tinea barbae/Tinea pedis/Tinea manuum
Systemic therapy <b>Terbinafine</b> 250 mg OD/BD <b>Duration:</b> 21 days Or
Itraconazole 100 -200 mg BD
Duration: 21 days
To follow up after 2 weeks to check response to therapy.
Topical therapy
Whitfield ointment
+
<b>Cream Clotrimazole</b> (1%) to be applied locally twice daily for 2 weeks
Or
Amorolfine cream 1%
Or Luliconazole Cream

L

	c) Other fungal infections of skin, hair and nails
	(Pityriasis/Tinea Versicolor of trunk/face)
	Systemic therapy
	Fluconazole 200 mg 2 tablets once a month
	Duration: 3 months
	Topical therapy
	Lotion Clotrimazole (1%)/ miconazole/ oxyconazole/ selenium sulfide applied locally twice daily for 6 weeks
	To follow up after 3 weeks to check response to therapy
Scabies	Permethrin 5% cream
Sarcoptes scabiei	OR
	GBH 1 % lotion (gamma benzene hexachloride)
	Apply Permethrin entire skin chin down to and including toes. Leave on for 8-14 hours
	Repeat application after 10 days
	Alternatives:
	Single Dose Ivermectin 200
	µg/kg PO Take 2nd dose of
	Ivermectin after 10 days

Ver	rsion 2022 (1.4)		
19	Onychomycosis	Itraconazole 100-200 mg BD	
	Fungal	Duration: 6-12 weeks	
		Or	
		<b>Terbinafine</b> 250-500 PO per day	Page
		Duration: 6-12 weeks	
		After 3 months, repeat testing	
		Alternative:	
		Griseofulvin 250-500 mg PO BD	
		Duration: 6-12 months	
<u>Amikacin d</u> onsidered fo	lose to be adjusted as per re or optimizing the dose	enal correction. Therapeutic drug monitoring for amikacin maybe	Formatted: Table Paragraph, Right: 0.26", Space Before: 0.05 pt, Line spacing: Multiple 1.15 li

		7 Guidelines for CVS Infections
Sr. No.	Condition/ Expected pathogens	Current MCGM Guidelines
No. 1.	Infective endocarditis (native valve) S. viridians, Enterococcus, MSSA, MRSA, Culture negative	<ul> <li>I. Inj Ceftriaxone <sup>1</sup> 2 gm IV / IM single dose</li> <li>Duration : 4 weeks</li> <li>+</li> <li>Inj Gentamicin 3 mg/kg/day IV or IM OD Duration : 2 weeks</li> <li>II.Inj Ampicillin 12gm/day(divided in 4-6 doses )</li> <li>+</li> <li>Inj Cloxacillin 12gm/day (divided in 4-6 doses )</li> <li>Duration :4 weeks</li> <li>+</li> <li>Inj Gentamycin 3 mg/kg/day OD dose.</li> <li>Duration: 2 weeks</li> <li>-For patients unable to tolerate beta lactams or beta lactam resistance</li> <li>Vancomycin 30 mg/kg/day IV in 2 doses</li> <li>+ Gentamicin (3 mg/kg/day IV. or i.m.)</li> </ul>
2	Infective endocarditis (prosthetic valve) MSSA, MRSA	<ul> <li>Early (&lt;12 months )</li> <li>Inj Vancomycin <sup>1</sup> 15-20 mg / kg /day IV in 2 doses</li> <li>Duration : 6 weeks</li> <li>+</li> <li>Gentamicin <sup>2</sup> (3 mg/kg/day IV or IMin OD dose )</li> <li>Duration : 2 weeks</li> <li>Late (&gt;12 months )</li> <li>Similar to Empirical Therapy for native valve</li> <li>Endocarditis with total duration of 6 weeks</li> <li>Remarks: <ul> <li>Inj Gentamicin is usually used for two weeks. The duration of treatment is 4-6 weeks of effective</li> </ul> </li> </ul>

2		Develop 1 and with a more	
3.	Расетакет/	Based on local antibiogram	
	Defibrillator infection		
	Local microbial		
	spectrum		
	speedam		

	RDIOVASCULAR SYST	EM INFECTIONS POST SURGERY IN ADULTS	
Sr. No	Condition/ Expected Pathogens	Revised MCGM recommendations	Page
1	CABG	Same as before	. 52
2.	Pacemaker/ Defibrillator Implantation S. aureus S. epidermidis Gram Negative Bacilli	<b>Amoxycillin-clavulanic acid</b> <sup>1</sup> 1.2 g IV. 60 min prior toskin incision and 12 hours after the procedure f/b 1g PO BD for 3 days	
3.	Cardiac Catheterization	<b>Amoxycillin-clavulanic acid</b> <sup>1</sup> 1.2 g IV. 60 min prior toskin incision and 12 hours after the procedure f/b 1g PO BD for 3 days	
Penic o Alle paren ions) ing of itamic in ma	illins to be administered or ergy OPD (Department of teral beta lactams should b f gentamicin is associated y cin dose needs to be adjuste by be considered for optimi	nly after test dose. If allergy to beta lactams suspected, patient Clinical Pharmacology) for allergy testing be preferable administered as slow IV infusions over 2-3 hours with a lesser risk of nephrotoxicity than divided doses in a day ed as per renal condition. Therapeutic drug monitoring for zing the dose	<u>s (Avoid</u> <u>y.</u> Formatted: Table Paragraph, Right: 0.26", Spac Before: 0.05 pt, Line spacing: Multiple 1.15 li
	to be administered as a slo ons and red-man syndrome tic drug monitoring for var	w IV infusion over 1-2 hours (Rapid infusion can increase the <u>c).</u> hereomycin is strongly recommended to maintain therapeutic pla	<u>lasma_</u>

Versi	on 2022 (1.4)		
		Guidelines for Intra-abdominal infections	
Sr. N o	Conditions/ Expected Pathogens	Revised MCGM guidelines	
1.	Abscess-Liver Pyemic	Ampicillin + Sulbactam	Page   53
	Enterobacteriaeceae,	1.5g IV TDS	
	Enterococcus, B. fragilis	Or	
	Other anaerobes	<b>Ceftriaxone</b> 1.0 g IV BD	
		Or	
		Ciprofloxacin 500 mg BD IV	
		Plus	
		Metronidazole 500 mg IV TDS or 800 mg oral TDS	
		Duration : 2 weeks	
		Alternatives:	
		Piperacillin + tazobactam 4.5 gm IV QDS X 2 weeks	
		<ul> <li>Remarks:         <ul> <li>Piperacillin-tazobactam itself gives a good anaerobic coverage. Hence, there is no additional benefit of adding metronidazole if piperacillin-tazobactam is being given.</li> </ul> </li> <li>Ultrasound guided drainage indicated in large abscesses, signs of imminent rupture and no response to medical treatment.</li> </ul>	Formatted: Bulleted + Level: 1 + Aligned at Indent at: 0.57"
2.	Abscess-Liver Amoebic E.histolytica	Metronidazole 800 mg PO TDS OR 1000 mg IV TDS + Injection Ciprofloxacin ( 200mg ,100 ml) IV 12 hourly + Tab Chloroquine 250 mg BD OR for Severe infections Cefoperazone + Sulbactam <sup>1</sup> (1.2mg ) IV 12 hourly Duration : 10-14 days	

		Alternative:	
		Diloxanide furoate with	
		metronidazole 500 mg + 400 mg	
		TDS X 10 days ( for cyst passers)	
3.	Acute gastroenteritis	None indicated in viral	
	(indoor patient)	Bacterial:	
	Suspected- viral	Ciprofloxacin 500 mg IV BD	
	Bacterial –	Or	
	Pathogenic E.coli	Ofloxacin 200 mg IV BD	
		<b>Duration</b> – 3-5 days	
		(convert to oral when patient stabilizes)	
		Alternative:	
		Doxycycline100 mg PO	
		BD	
		Duration: 3-5 days	
		OR	
		Co-trimoxazole 800/160 mg PO OD ;	
		Duration: 3-5 days	
3a	Acute gastroenteritis	None indicated in viral	
	(OPD patient) Cholera	<u>Bacterial:</u> Doxycycline- 100 mg PO BD	
		Or	
		Ciprofloxacin 500 mg BD	
		<b>Duration</b> - 3-5 days	
		Remarks:	
		Rehydration is life saving	

1a	Dysentery - Bacillary	Ciprofloxacin 500 mg BD
	Shigella spp	Or
	Campylobacterjejuni	<b>Ofloxacin</b> 200 mg BD
	Pathogenic	(for mild cases given orally and IV for indoor patients/ patients with severe illness)
	E.con	<b>Duration</b> - 5 days
		Alternatives:
		Ceftriaxone 2gm IVOD for 5 days
		Remarks: For Campylobacterthe drug of choice is Azithromycin
4b	Dysentery - Amoebic	Metronidazole 400 mg PO TDS
	(OPD patient)	Duration- 7 days
	E.histolytica	For severe cases:
		Metronidazole 500 mg IV 8 hrly for 7-10 days
		Alternatives:
		Tinidazole 2gm oral stat
		Add <b>Diloxanidefuroate</b> 500 mgTDS for 10 days for cyst passers
5	Dysentery – Unknown OPD patient	Ciprofloxacin 500 mg PO BD
		Metromdazole 400 mg PO TDS
		Duration - 5 days
		mg PO TDS
		Alternatives:
		Ofloxacin 200 mg PO BD
		Duration: 5 days
		+
		Tinidazole 2gm oral stat

6	Cholangitis	
	Entenchesteriosesse	Cefoperazone + Sulbactam <sup>1</sup> (1.2mg) IV 12 hourly
	Enterobacteriaeceae,	+ Metropidazale 500 mg IV TDS
	Anaerobes	
		<b>Duration</b> – 7 days
		If no response after 72 hrs add,
		Amikacin <sup>2</sup> 15 mg/kg IV OD
		Duration- 7 days
		Upgrade to higher antibiotics as per culture and sensitivity
		report
		Meropenem to be reserved for post surgical/ endoscopic cases
		<b>Remarks</b> : Surgical or endoscopic intervention to be considered if there is biliary obstruction.
		High prevalence of ESBL producing E.coli, Klebsiella
		sp.strains. De- escalate therapy once antibiotic susceptibilityis
		known.

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7	Cryptosporidiosis	Nitazoxanide500 mg (PO) BD
	Cryptosporidium	Duration- 3 days
	parvum	
8	Diarrhoea – C.difficile	Metronidazole 400 mg PO TDS
		Duration - 10-14 days
		In seriously ill add,
		Vancomycin -125 mg (children) / 500 mg (adults) , PO QDS
		Duration- 10-14 days
		Remarks:
		Discontinue the causative antibiotic.
		Correct fluid and electrolyte loss.
		Intravenous vancomycin is not recommended since
		bactericidal concentrations are not achieved in the colon.

9	Enteric fever	Ceftriaxone 2 gm IV BD
	Salmonella typhi /	+
	Salmonella paratyphi A/B/C	Azithromycin
	12270	1 gm (PO or IV ) OD
		*Duration: 7 days
		If patient discharged earlier, switch to
		Oral Cefixime 200 mg BD
		+
		Azithromycin 500 mg BD
		*Duration: 7 days
		For susceptible strains with no response to Ceftriaxone give,
		Chloramphenicol 500 mg IV QDS ;
		Duration: 14 days
		*Total duration of therapy if IV drugs are given is 7 days. If IV drugs are given for 7 days in toto then no oral drugs are required However, if patient is discharged earlier than 7 days then duration of treatment for IV plus oral is 10 – 14 days.
10	Acute cholecystitis	All IV
	Enterobacteriaeceae,	Ceftriaxone <sup>1</sup> 1 gm BD
	Enterococci,	Or Cefoperazone + Sulbactam <sup>1</sup> (1.2mg) IV 12 hourly
	Anaerobes	+ Metronidazole 500 mg TDS
		Duration- 7-10 days
		If no response after 72
		hours
		Injection Piperacillin Tazobactam <sup>1</sup> 4.5 gm TDS 7-
		10 days
		Remarks:
		Patients unresponsive to antibiotics may require surgery

11	Spontaneous Bacterial Peritonitis Enterobacterales	All IV Cefotaxime , 2 gm , TDS Or
	S.pneumoniae	Piperacillin- Tazobactam 4.5 gm TDS
	Anaerobes	+ Metronidazole 500 mg TDS Duration - 7 days Alternatives: Ceftriaxone 1 gm BD Duration - 7 day

12.	Perforative peritonitis	All IV	
	Enterobacterales	Ceftriaxone + Sulbactum ( 1.5 mg ) IV 12 hourly	
	Enterococci	+ Metronidazole 1 gm TDS	
	P.aeruginosa,	Duration - 7-10 days	
	Anaerobes	Alternative: Piperacillin-	
		tazobactam	
		4.5 gm TDS	
		Or	
		Meropenem <sup>1</sup> 1 gm TDS +Metronidazole 1 gm TDS	
		Or	
		Imipenem 1 gm TDS	
		<u>If no response then upgrade as per culture and sensitivity</u> <u>report</u>	
		Addition of cover for yeast:Fluconazole 800mg IV loading dose day1, followed by 400 mg 2nd day onwards	
		Duration: ?	
		<u>Remarks: Source control is important to reduce bacterial</u> <u>load. If excellent source control – for 5-7 days; other wise 2-</u> <u>3weeks suggested.</u>	
3	Intra abdominal abscess	Inj Piperacillin- tazobactam <sup>1</sup> 4.5 gm TDS	

	Enterobacteriaeceae	+
	Gram pos cocci	Metronidazole 500 mg IV TDS
	Anaerobes MTB Complex (rare)	If no response
		Inj Ertapenem <sup>1</sup> (1mg)IV 12 hourly
		T Inj Metronidazole 500 mg IV TDS
		Duration - 10 days or longer
		Alternatives/Remarks:
		Antibiotics should be administered early.
		Drainage should be considered.
		If no response then modify as per culture sensitivity report.
		<b>Addition of cover for yeast: Fluconazole</b> 800mg IV loading dose day1, followed by 400 mg 2nd day onwards
		<b>PPI</b> Pantoprazole 40 mg PO BD
		+
		Clarithromycin 500 mg PO BD
		+
		Amoxicillin 1 gm PO BD
4	Gastric Ulcer Disease /	Duration 2 weeks
	Peptic Ulcer Disease	Alternative:
	H.pylori	<b>PPI</b> 40 mg
		+
		Clarithromycin 500 mg
		+
		Metronidazole 500 mg

15	<b>Liver - Hydatid</b> <b>Disease</b> E. granulosus	Albendazole         15 mg / kg PO BD         Duration : 3-6 months
16	Pancreatic Necrosis	<b>Imipenem 1gm with Cilastatin</b> IV TDS is the drug of
17	Necrosis Enterobacteriaeceae Enterococci Anaerobes	Choice Or Meropenem <sup>1</sup> 2 gm IV TDS + Metronidazole 500 mg IV TDS Duration : 10-14 days <u>Alternative/Remarks:</u> <u>Addition of cover for yeast:</u> Fluconazole 800mg IV loading dose day1, followed by 400 mg 2nd day onwards <u>Antibiotic de-escalation with Ciprofloxacin</u>
.7	Pancreatitis with sepsis Enterobacteriaeceae <i>P.aeruginosa</i> (occ) Enterococcus Bacteroides	Imipenem1gmwith CilastatinIV TDS is the drug of choiceOrMeropenem 2 gm IV TDS+Metronidazole 500 mg IV TDSDuration : 10-14 daysAddition of cover for veast:Fluconazole 800mg IV loading dose day1, followed by 400 mg 2nd day onwards

<sup>1</sup> Penicillins to be administered only after test dose. If allergy to beta lactams suspected, patient can be referred to Allergy OPD (Department of Clinical Pharmacology) for allergy testing Also, all parenteral beta lactams should be preferable administered as slow IV infusions over 2-3 hours (Avoid fast infusions)

		<b>Guidelines for Infections of Urinary Tract</b>
Sr. N o	Conditions/ Expected pathogens	Revised MCGM recommendations
1.	Cystitis	Nitrofurantoin 100 mg PO BD
	Most likely –	Duration : 7 days
	E.coli	Or
	Rare cause –	Cotrimoxazole DS (800/160) PO OD
	Proteus spp, Klebsiella spp	Duration : 7 days
		Alternative:
		Ciprofloxacin 500 mg PO BD
		Or
		Norfloxacin 400 mg PO BD
		Duration:
		3 days (E.coli, Kleb)
		Or
		7 days (other susceptible organisms)
2	Complicated cystitis	If patient is stable, same as above
	(Patients with structural	Duration: 14 days
	abnormalities, calculi,	<u>If patient is unstable.</u>
	UTI)	Inj Piperacillin + Tazobactam
	Most likely –	4.5 gm IV TDS
	E.coli	Alternative/Remarks:
	Rare cause –	Culture mandatory.
	Proteus spp, Klebsiella spp	If patient does not respond in 72 hrs, advise imaging , USG, CT and adjust antibiotic as per culture sensitivity report.

	Acute uncomplicated Pyelonephritis E.coli, Staphylococcus saphrophyticus (in sexually active young women), Klebsiella pneumoniae, Proteus mirabilis	Piperacillin-Tazobactam <sup>1</sup> 4.5 gm IV 8hrly OR (QID ifpseudomonas)Cefoperazone-Sulbactam <sup>1</sup> 3gm IV 12hrly ORAmikacin <sup>2</sup> 15-20mg/kg/d IM/IV OD (preferred if outpatient) orGentamicin <sup>2</sup> 4-7mg/kg/d IM/IV OD (preferred if outpatient)Duration 2 weeksMonitor creatinine if on amino glycoside
4	Complicated Pyelonephritis Escherichia coli, Klebsiella pneumonia, Proteus mirabilis, Pseudomonas aeruginosa, Enterococcus sp. Frequently multi-drug resistant organisms are present	Piperacillin-Tazobactam 4.5 gm IV 6hrly Cefoperazone-Sulbactam 3gm IV 12hrly OR Amikacin 15-20mg/kg/d IM/IV OD (preferred if outpatient) Gentamicin 4-7mg/kg/d IM/IV OD (preferred if outpatient) SECOND LINE Meropenem 1gm IV 8hrly or Imipenem 1gm 8hrly In Addition: *Ciprofloxacin 500mg BD or Levofloxacin 750 mg OD added if Pseudomonas *Switch as per culture *Duration 2 weeks *Two agents if sepsis or MODS present
5	Acute Prostatitis Enterobacteriaceae	TMP-SMX 960 mg BD X 4-6 weeks Ciprofloxacin 500mg BD or Levofloxacin 500mg OD 4-6 weeks Severe systemic symptoms -treat as pyelonephritis

6	Catheter associated UTI	<ul> <li>Sample collection</li> <li>Remove catheter and collect clean catch MSU</li> <li>Change PUC and collect sample from new catheter</li> <li>Under all asepsis, puncture catheter with sterile needle</li> <li>Treat as complicated pyelonephritis</li> </ul>
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		10. Plastic surgery and burns	
Sr. N o	Conditions/ Expected Pathogens	Revised MCGM recommendations	
1.	Maxillofacial injuries (single uncomplicated fractures)	At induction: Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV OR Ceftriaxone <sup>1</sup> 1gIV Immediate post op: 6-8 hrs post induction dose: Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV Post op: Tab Amoxycillin + Clavulanic acid <sup>1</sup> 625mg TDS for 5 days	Ра 65
2.	Maxillofacial injuries (complicated multiple fractures, panfacial fractures)	At induction: Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV OR Ceftriaxone 1gIV <u>Immediate post op:</u> 6-8 hrs post induction dose: <u>Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV</u> <u>Late post op:</u> IV antibiotic continued for 3 days Switch over to oral : Tab <u>Amoxycillin + Clavulanic</u> acid <sup>1</sup> 625mg TDS for7 days	
3.	Clean surgery	Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV         OR Cefuroxime <sup>1</sup> Repeat dose if surgery         extends beyond 6 hrs         In addition:         Modify antibiotics as per culture and sensitivity report	
4.	Clean contaminated wounds	At induction: Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV OR Ceftriaxone <sup>1</sup> 1gIV	
	(debridement and	Immediate post op: 6-8 hrs post induction dose:	

	grafting, minor	Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV	
	debridement, etc)	Late post op: Tab Co-amoxiclav 625mg TDS for 5 to 7 days (till 1 <sup>st</sup> dressing)	
		In addition:	
		Modify antibiotics as per culture and sensitivity report	
5.	Dirty wounds	At induction: Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV OR Ceftriaxone <sup>1</sup> 1gIV or as per culture reports	
	(major debridement and bone debridement), major flap and free flap surgeries	<b>Immediate post op:</b> 6-8 hrs post induction dose: <b>Amoxycillin + Clavulanic acid</b> <sup>1</sup> 1.2g IV or as per culture reports	
		Late post op:_IV antibiotic continued for 5 days	
		Switch over to Tab <u>Amoxycillin + Clavulanic acid <sup>1</sup></u> for next 5 days or asper culture reports	
		In addition:	
		Modify antibiotics as per culture and sensitivity report	
6	Burns (early excision and grafting)	<b><u>At induction:</u> Piperacillin-Tazobactam</b> <sup>1</sup> 4.5 g IV <b>ORMeropenem</b> 1g IV	
		Immediate post op: 6-8 hrs post induction dose: Piperacillin-Tazobactum 4.5 g IV OR Meropenem 1g IV	
		Late post op: _IV antibiotic continued for 5 to 7 days with change as per culture reports / clinical response	
		May switch over to oral as per culture reports	
		<u>Antifungal Therapy –</u>	
		When extensive burns and patient not responding to antibiotics	
		o If hemodynamically stable: Fluconazole	
		o <u>If hemodynamically unstable</u> : <b>Echinocandin</b>	

		In addition:	
		-Antibiotic choices are dependent on the antibiogram of the individual institution.	
		-Surgical debridement as necessary.	
		-Amphotericin B is toxic to all burn patient as renal system is compromised, hence Caspofungin may be used	
7 Burns	s (late grafting)	At induction : Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV OR Ceftriaxone 1gIV	
		Immediate post op: 6-8 hrs post induction dose: Amoxycillin + Clavulanic acid <sup>1</sup> 1.2g IV	
		Late post op: Tab Amoxycillin + Clavulanic acid <sup>1</sup> 625mg TDS for 5 to 7days	
		In addition:	
		-Antibiotic choices are dependent on the antibiogram of the individual institution.	
		-Surgical debridement as necessary.	
		-Amphotericin B is toxic to all burn patients as renal system is compromised, hence Caspofungin may be used	
<sup>1</sup> Penicillins to	be administered o	nly after test doce. If alleray to beta lactame suspected, patient or	n he
to Allergy OF	D (Department of	Clinical Pharmacology) for allergy testing	

11. Guidelines for Infections in Obstetrics and Gynaecology				
Sr. N	Condition/ Expected Pathogens	Revised MCGM recommendations		
l	Vaginal discharge	Fluconazole 150 mg PO once and Secnidazole 2 g PO once		
	Trichomonal vaginitis Monilial vaginitis	(MDACS/NACO Green kit)		
	Bacterial vaginosis	Alternatives:		
		Both sexual partners to be treated simultaneously.		
		Both are shown to be teratogenic to animals, so withhold treatment until after first trimester, unless urgent treatment is felt to be necessary		
		Local treatment in the form of intravaginal agents such as creams or suppositories as per requirement		
2	Cervical discharge	Cefixime 400 mg PO once		
	Chlamydia trachomatis	Azithromycin 1 g PO once		
		(MDACS/NACO Grey kit) Both sexual partners to be treated simultaneously.		
3	Septic abortion,	I. Amoxycillin + Clavulanic acid <sup>1</sup> 1.2 g IV q12h X $\geq$ 7 d		
	Bartholin's abscess, Chorioamnioitis,	+ Inj. Metronidazole 500 mg(100 cc) IV q8h X ≥7 d		
	PPROM,	+		
	PROM,	<b>Inj. Gentamicin</b> 1.5 to 2 mg/kg loading dose, followed by 1 to 1.7 mg/kg IV or IM q8h X 5 d		

Burst abdomen	Or
Severe PID	п.
Peritonitis	Ceftriaxone 1.5 g IV q12h +
Enterobacterales Enterococci Anaerobes	<ul> <li>This drug has no activity against Chlamydia trachomatis; appropriate antichlamydial therapy should be added when C trachomatis is a suspected pathogen.n (Doxycycline)</li> <li>Use: For the treatment of pelvic inflammatory disease (PID) due to N gonorrhoeae</li> <li>US CDC Recommendations: 250 mg IM as a single dose</li> <li>Metronidazole 500 mg IV q8h + Amikacin <sup>2</sup> 500 mg IV q12hDuration : 7-14 days</li> <li>Alternatives/Remarks:</li> <li>Wound swab/ pus collected for culture sensitivity.</li> <li>Modify if required as per culture sensitivity result.</li> <li>Monitor renal function</li> <li>Consider Vancomycin or Clindamycin as per clinical condition</li> </ul>
 PID: Mild	Tab Cefixime 400mg PO once
C.trachomatis	+
N.gonorrhoea	Tab Metronidazole 400 mg PO TDS for 14 days
Mycoplasma	+
Anaerobes	Cap <b>Doxycycline</b> 100 mg PO BD for 14 days
G.vaginalis	Along with Pantoprazole 40 mg OD
• See note at the end of this section	(MDACS/NACO yellow kit)

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		Alternatives:
		Contraindicated in pregnancy
		Confirm that patient is using a contraceptive if she is unsterilized or in the periovulatory phase
5	Syphilis	Refer to STD program guidelines
6	Tuberculosis in pregnancy	<ul> <li>Please refer NTEP guideline</li> <li>WHO has advocated that, all the first line drugs aresafe in pregnancy and can be used except streptomycin.</li> <li>Streptomycin causessignificant ototoxicity to the fetus (Pyrazinamide not recommended by US FDA)</li> <li>1. Mother and baby should stay together and the baby should continue to breastfeed.</li> <li>2. Pyridoxine supplementation is recommended for all pregnant or breastfeeding women taking isoniazid as well as to neonate who are being breast fed by mothers taking INH.</li> </ul>
		Remarks: Very small chance of transmission of infection to fetus. Late diagnosis can predispose to LBW, prematurity.

7	Influenza in pregnancy	<b>Oseltamivir</b> 75 mg Oral BD for 5 days
		In addition:
		Nebulization with <b>Zanamvir</b> resputes (2)
		5 mg each, BD for 5 days
		Remarks
		<ol> <li>Tendency for severe complications including premature labor &amp;delivery.</li> </ol>
		2. Treatment should begin within 48 hrs of onset of symptoms.
		3. Higher doses commonly used in non pregnant population (150 mg) 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.
		Complications:
		-Direct fetal infection rare

3	Varicella	>20 wks of gestation, presenting within 24 hours of the onset of the rash,
		Acyclovir 800mg Oral 5 times a day
		IV acyclovir recommended for the treatment of severe complications,
		> 24 hrs from the onset of rash, antivirals are not found to be useful.
		VZIG should be offered to susceptible women < 10 days of the exposure. VZIG has no role in treatment once the rash appears.
		The dose of VZIG is 125 units / 10kg not exceeding 625 units, IM
		Remarks:
		Chickenpox during pregnancy does not justify termination without prior prenatal diagnosis as only.
		A minority of fetuses infected develop fetal varicella syndrome.
9	Toxoplasmosis in pregnancy	<18 weeks gestation at diagnosis
		<b>Spiramycin</b> 1 gm oral qid until 16-18 weeks/ <b>Pyrimathamine</b> + <b>sulphadizine</b> . Alternate every two weeks
		If PCR Positive -
		>18 weeks gestation and documented fetal infection by positive amniotic fluid PCR.
		Pyremethamine 50 mg Oral BD x 2 days then 50 mg OD
		+
		Sulphadiazine 75 mg/kg Oral x 1 dose then 50mg/kg bd
		+
		<b>Folinic Acid</b> (10-20 mg Oral daily) for minimum of 4 weeks or for duration of pregnancy.
10.	Malaria in pregnancy	As per national program
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11.	Mastitis without	Amoxycillin clavulunate <sup>1</sup> /Cephalexin <sup>1</sup> 500 mg QID/ OR
	abscess	Ceftriaxone <sup>1</sup> 2 gm OD OR
		MRSA- based on sensitivities Add
		Clindamycin 300 QID or
		<b>Vancomycin</b> I gm IV 12 hourly / <b>teicoplanin</b> 12mg/kg IV 12 hourly x 3 doses followed by 6 once daily IV
12.	Mastitis with abscess	Drainage with antibiotic cover for
		MRSA
		Clindamycin 300 QID or
		Vancomycin 15mg/kg IV 12 hourly (maximum 1gm 12 hourly)/teicoplanin 12mg/kg IV 12 hourly x 3 doses followed by 6 mg once daily IV
хусу	ycline 100 mg orally 2 tim	es/day for 14 days
etron eatmo oxyc zithro	ycline 100 mg orally 2 tim nidazole 500 mg orally 2 t ent for Chlamydia cycline 100 mg BD taken o omycin one dose of 1g, fol be administered only after D (Danastmant of Clinical	es/day for 14 days imes/day for 14 days every day for a week llowed by 500mg once a day for 2 days r test dose. If allergy to beta lactams suspected, patient can be refe
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	12. Guidelines for Pediatric infections				
Sr. No	Condition/ Expected Pathogens	Revised BMC recommendation			
1.	Tonsilitis/ Pharyngitis Group A beta haemolytic Streptococci	<ul> <li>Amoxicillin <sup>1</sup> 50 mg/kg once daily PO (maximum 1000 mg over 24 hrs) for 10 days or</li> <li>Penicillin V <sup>1</sup> 250 mg BID (&lt;27 kg), 500 mg BID (&gt;27 kg) PO for 10 days or</li> <li>Benzathine penicillin G <sup>1</sup> 600,000 units (&lt;27kg), 1.2 million units (&gt;27 kg) IM once. Or</li> <li>Benzathine penicillin G <sup>1</sup> + procaine penicillin G <sup>1</sup> 900,000 units +300,000 units IM once.</li> <li>Alternatives</li> <li>Cefaclor: 20-40 mg/kg/d in 3 divided doses for 10 days.</li> <li>Cephalexin : 25- 50 mg/kg/24 hr 6- 12 hourly for 10 days.</li> <li>Erythromycin: 40 mg/kg/day up to 1000mg/day BID for 10 days.</li> <li>Azithromycin: 12 mg/kg/day day 1; 6 mg/kg days 2-5.</li> <li>Clarithromycin: 15 mg/kg/day up to 500 mg/day BID for 10 days.</li> </ul>	Pag 74		
2.	Otitis Media	Amoxicillin 1: 90 mg/kg/day BID         or         Amoxycillin + Clavulanic acid 1: 90 mg/kg per day of         amoxicillin component BID         Duration: 10 days         Alternatives:         Ceftriaxone 1: 50 mg/kg/day qd IM or IV for 1-3 days         Cefdinir 1: 14 mg/kg/day qd for 10 days.         Cefpodoxime 1: 10 mg/kg/day BID for 10 days.         Levofloxacin: 20 mg/kg/day BID if< or = 5 yrs. for 10 days; 10 mg/kg/day BID if > 5 yrs for 10 days.         Azithromycin: 10 mg/kg/day on day 1 qd then 5 mg/kg/day days 2-5 qd or 10 mg/kg/day for 3 days qd or 20mg/kg once.         Remarks: Tympanocentesis for those who fail second line therapy.			

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3.	Sinusitis	Amoxicillin <sup>1</sup> (oral: 45 mg/kg/day BID)		
		or <b>Amoxycillin + Clavulanic acid</b> <sup>1</sup> (80-90 mg/kg/day PO BID of amoxicillin) if failure to respond to amoxicillin in 72 hrs.		
		Alternatives: <u>Beta lactam allergy type1 hypersensitivity</u> : Levofloxacin 10-20 mg/kg/day PO every 12-24 hrly	Page 75	
		<u>Non Type 1 hypersensitivity</u> : Clindamycin 30-40 mg/kg/day TID plus cefixime 8 mg/kg/day PO BID or cefpodoxime 10 mg/kg/day PO BID.		
		Risk for antibiotic resistance or failed initial therapy: Amoxicillin-clavulanate (90mg/kg/day PO BID)		
		Clindamycin (30-40mg/kg/day PO TID) plus cefixime (8mg/kg/day PO BID) or cefpodoxime (10mg/kg/day PO BID)		
		Levofloxacin (10-20mg/kg/day PO 12-24hrly)		
	Severe infection requiring hospitalization: Ampicillin / sulbactam 200- 400 mg/kg/day IV every 6 hrly. Or			
		Ceftriaxone 50 mg/kg/day IV every 12 hrly.or		
		Cefotaxime 100- 200 mg/kg / day IV every 6 hrly.or		
		Levofloxacin 10-20 mg/kg/day IV every12-24 hrly.or		
		Duration: Individualization of therapy, with treatment recommended for a minimum of 10 days or 7 days after resolution of symptoms.		
		<b>Remarks:</b> Refer to ENT surgeon if no response		
4.	Pneumonia Community	IV Ceftriaxone 50 – 100 mg/kg/day every 12-24 hrly <b>Duration:</b> 10-14 days.		
	Age 3 weeks to 3 months	<b>For Chlamydia:</b> Intravenous Azithromycin preferred (10 mg/kg on day 1 and 2 of therapy; transition to oral therapy if possible);Alternative for Chlamydia, intravenous erythromycin lactobionate (20 mg/kg/day every 6 hrly)		
		Alternative: Amoxycillin + Clavulanic acid <sup>1</sup> 100 mg/kg/day in two divided doses		
		<b>Remarks:</b> Amoxicillin (90mg/kg/day in 2 divided or 45mg/kg/day in 3 divided doses) PO can be used in non-hospitalized patients		

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5       Pneumonia Community acquired Age 4 months – 4 years       IV Ceftriaxone 50 – 100 mg/kg/day every 12-24 hrly Duration: 10-14 days.         5       Add Vancomycin or Clindamycin if MRSA is the etiology MRSA - Injection Vancomycin (40-60mg/kg/day every 6-8 hrly. Oral clindamycin 40 mg/kg/day in 3 or 4 doses or oral linezolid 30 mg/kg/day ir doses in children <12 yrs and 20 mg/kg/day for children > 12 <u>Alternatives:</u> Amoxycillin + Clavulanic acid <sup>1</sup> / Cefuroxime axetil (150- 200mg/kg/d in 3 div doses)         Remarks: Amoxicillin (80-90 mg/kg/day oral) can be used in homitalized nationt		<ul> <li>IV Ceftriaxone 50 – 100 mg/kg/day every 12-24 hrly Duration: 10-14 days.</li> <li>Add Vancomycin or Clindamycin if MRSA is the etiology</li> <li>MRSA - Injection Vancomycin (40-60mg/kg/day every 6-8 hrly) or clindamycin 40 mg/kg/day every 6-8 hrly. Oral clindamycin 30- 40 mg/kg/day in 3 or 4 doses or oral linezolid 30 mg/kg/day in 3 doses in children &lt;12 yrs and 20 mg/kg/day for children &gt; 12 yrs.</li> <li><u>Alternatives:</u> Amoxycillin + Clavulanic acid <sup>1</sup>/ Cefuroxime axetil (150- 200mg/kg/d in 3 div doses)</li> <li>Remarks: Amoxicillin (80-90 mg/kg/day oral) can be used in non- bornitalized actions.</li> </ul>
6. Pneumonia A Community A acquired In Age > 5 years to fo D A A A A A A A A A A A A A A A A A A		Above plus Add Azithromycin (for <i>M. pneumoniae</i> and <i>C. pneumoniae</i> ) Inj Azithromycin (10mg/kg on days 1 and 2 of therapy; transition to oral therapy if possible), Oral Azithromycin 10 mg/kg on day 1, followed by 5 mg/kg/day once daily on day 2-5); Duration : 5 days Alternative for chlamydia, levofloxacin 8-10 mg/kg/day once daily for children 5-16 yrs old; maximum daily dose 750 mg) Alternatives: Amoxycillin + Clavulanic acid <sup>1</sup> / Cefuroxime axetil PLUS Azithromycin Remarks: Amoxicillin (80-90 mg/kg/day oral) can be used in non- hooristilized patients PLUS Azithromycin
7.	Empyema	<ul> <li>INSPIRATED patients PLOS AZITIFOMYCIN</li> <li>I.V. Cefotaxime / Ceftriaxone</li> <li>Injection Cefotaxime 100 – 200mg/kg/24 hrs 6 to 8 hrly IV or IM</li> <li>Injection Ceftriaxone 100 mg/kg/24 hrs 12 to 24 hrly (max 2gm/dose and 4gm/24 hrs)</li> <li>Add I.V. Amoxycillin + Clavulanic acid <sup>1</sup> 100 mg/kg/day in two divided doses</li> <li>Vancomycin (40-60 mg/kg/day in 4 div doses) or Linezolid (10mg/kg/dose 8-12 hrly) if MRSA is the aetiology.</li> <li>Duration: 4 weeks</li> <li>Remarks:</li> <li>Thoraco-centesis/ ICD/ VATS as necessary</li> </ul>
8.	Acute epiglottitis	Ceftriaxone50-100 mg / kg / day BD Or Cefotaxime50-100 mg / kg / day TID Duration:10 days <u>Alternative:</u> Meropenem (IV 60 mg/kg/day in 3 div doses)

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<ul> <li>9. Diphtheria</li> <li>Erythromycin (40-50 mg/kg/day divided every 6 hr by mouth [PO] or intravenously [IV] max. 2 g/day) for 14 days or</li> <li>Aqueous crystalline penicillin G (100,000-150,000 U/kg/day divided every 6 hr IV or intramuscularly [IM]) for 14 days</li> <li><u>Alternative:</u> Procaine penicillin (300,000 units every 12 hrly IM for those &lt; = 10 kg ; 600,000 units every 12 hrly IM for those &gt;10 kg in weight) for 14 days Once oral medications are tolerated, oral penicillin V (250 mg times daily may be used)</li> <li><u>Remarks:</u> Penicillins should be administered after test dose Specific antitoxia to be administered.</li> </ul>		Erythromycin (40-50 mg/kg/day divided every 6 hr by mouth [PO] or intravenously [IV] max. 2 g/day) for 14 days or Aqueous crystalline penicillin G (100,000-150,000 U/kg/day divided every 6 hr IV or intramuscularly [IM]) for 14 days <u>Alternative:</u> Procaine penicillin (300,000 units every 12 hrly IM for those < or = 10 kg ; 600,000 units every 12 hrly IM for those > 10 kg in weight) for 14 days Once oral medications are tolerated, oral penicillin V (250 mg 4 times daily may be used) <u>Remarks:</u> Penicillins should be administered after test dose	
Imate: Note: Section 2010 (Section 2010)       Remarks: Section 2010 (Section 2010)         10.       Pertussis/       Azithromycin: 10 mg/kg/day in a single dose for Neonate and 1-5 months -10 mg/kg/day in a sing Infant age >6 months and children -10 mg/kg in day 1 (max 500 mg), then 5 mg/kg/day (max 250 or         10.       Erythromycin (40-50 mg/kg/day in 4 divided doses for 14 month- not preferred 1-5 months- 40-50 mg/kg/day in 4 divided doses for 14 days         Alternative: Clarithromycin (15 mg/kg/day in 2 divided doses for 14 days         Alternative: Clarithromycin (15 mg/kg/day in 2 divided doses for 16 month - not recommended. 1-5 month -15 mg/kg/day in 2 divided doses for 16 month - 15 mg/kg/day in 2 divided doses for 16 month - 17 mg/kg/day in 2 divided doses for 16 month - 18 mg/kg/day in 2 divided doses for 17 month - 15 mg/kg/day in 2 divided doses for 18 month - 15 mg/kg/day in 2 divided doses for 19 month - 15 mg/kg/day in 2 divided doses for 10 month - 15 mg/kg/day in 2 divided doses for 10 month - 15 mg/kg/day in 2 divided doses for 10 month - 15 mg/kg/day in 2 divided doses for 10 month - 15 mg/kg/day in 2 divided doses for 10 month - 15 mg/kg/day in 2 divided doses for 10 month - 15 mg/kg/day in 2 divided doses for 14 days TMP-SMX - contraindicated for infants <2 month - 15 mg/kg/day in 2 divided doses for 14 days TMP-SMX - contraindicated for infants <2 month - 15 mg/kg/day in 2 divided doses for 14 days - 15 mg/kg/day in 2 divided doses for 14 days - 15 mg/kg/day in 2 divided doses for 14 days - 15 mg/kg/day in 2 divided doses for 14 days - 15 mg/kg/day in 2 divided doses for 14 days - 15 mg/kg/day in 2 divided doses for 14 days - 15 mg/kg/day in 2 divided doses for 14 days - 15 mg/kg/day in 2 divided doses for 1		Specific antitoxin to be administered Azithromycin: 10 mg/kg/day in a single dose for 5 days Neonate and 1-5 months −10 mg/kg/day in a single dose for 5 days Infant age >6 months and children −10 mg/kg in a single dose on day 1 (max 500 mg), then 5 mg/kg/day (max 250 mg) on days 2-5 or Erythromycin (40-50 mg/kg/day in 4 divided doses for 14 days) <1 month- not preferred 1-5 months- 40-50 mg/kg/day in 4 divided doses for 14 days Infants age >6 months and children- 40-50 mg/kg/day (max 2 g/day) in 4 divided doses for 14 days Alternative: Clarithromycin (15 mg/kg/day in 2 divided doses for 7 days) Or <1 month – not recommended. 1-5 month – not recommended. 1-5 month – 15 mg/kg/day in 2 divided doses for 7 days Infants age >6 months and children- 15mg/kg/day in 2 divided doses (max 1 gm/day) for 7 days TMP-SMZ (For infants aged ≥2 mo: TMP 8mg/kg/day plus SMX40 mg/kg/day in 2 divided doses for 14 days) TMP-SMX- contraindicated for infants <2 months <u>Remarks:</u> Same drugs are useful for prophylaxis	
11.	Diarrhoea	Viral Diarrhoea- No antibiotics required. For Bacterial ( <i>E. coli</i> )- Azithromycin 12mg/kg once on 1 <sup>st</sup> day, then 6 mg/kg once daily on day 2 and day 3 (total course 3 days) Second line for <i>E.coli</i> – Ciprofloxacin 15mg/kg/day PO BID for 3 days For Salmonella- Treat similar to Shigella	

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		<b><u>Remarks:</u></b> Correct the dehydration. Add daily oral zinc for 14 days (10 mg/day for infants <6 mo of age and 20 mg/day for those >6 mo)	
12.	<b>Dysentery</b> Shigella dysentery	Ceftriaxone 50-100 mg/kg/day IV or IM, qd × 3days for severe illness requiring parenteral therapy or Ciprofloxacin 15 mg/kg/day PO BID for 3 days or Azithromycin 12 mg/kg once on 1 <sup>st</sup> day, then 6 mg/kg once on days 2 through 4 (total course: 4 days) Second line: Cefixime 8 mg/kg once daily for 3 days or Trimethoprim-sulfamethoxazole 4 mg/kg/day of TMX and 20 mg/kg/day SMX twice a day for 5 days (if susceptibility known or likely based on local data)	
13.	Cholera	<ul> <li>Doxycycline <sup>3</sup> (adults and older children): 300 mg given as a single dose or</li> <li>Tetracycline <sup>3</sup> 12.5 mg/kg/dose 4 times/day × 3 days (up to 500 mg per dose × 3 days) (for children- recommended for cases with severe dehydration)</li> <li><u>Alternatives:</u> Erythromycin 12.5 mg/kg/dose 4 times a day × 3 days (up to 250 mg 4 times a day × 3 days) or</li> <li>Azithromycin 20 mg/kg as a single dose upto 1 gm PO</li> <li>Alternative antibiotics recommended for cases with moderate to severe dehydration: Ciprofloxacin 20 mg/kg PO as a single dose or Doxycycline 2- 4 mg/kg PO as a single dose</li> <li><u>Remarks:</u></li> <li>Rehydration. Add zinc for 14 days.</li> </ul>	
14.	Giardiasis	Metronidazole 15 mg/kg/day in three divided doses for 5 to 7 days or Tinidazole (>3 yrs) 50 mg/kg once or Nitazoxanide (1 to 3 yrs) 100 mg BID for three days, (4 to 11 yrs) 200 mg BID for 3 days, (>12 yrs) 500 mg BID for 3 days <u>Alternatives:</u> Albendazole (>6yrs) 400 mg once a day for 5 days or Quinacrine 6 mg/kg/day in three divided doses for 5 days Paromomycin not recommended in pediatric age group	

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15.	Intestinal amoebiasis	Metronidazole 35-50 mg/kg/day in 3 div doses × 7-10 days or Tinidazole 50mg/kg/day once daily for 3 days followed by Paromoycin (25-35mg/kg/day TID for 7 days) (preferred) or diloxanide furoate (20mg/kg/day TID for 7 days) or iodoquinol (30-40mg/kg/day TID for 20days)
16.	Helminthic infestations	Ascariasis - Albendazole (400 mg PO once, for all ages) or Mebendazole (100 mg BD PO for 3 days or 500 mg PO once for all ages), or Ivermectin (150-200µg/kg orally once) <u>Trichuris -</u> Albendazole (400mg for 3 days for all ages) <u>A. duodenale</u> - Albendazole (400 mg PO once, for all ages) <u>A. duodenale</u> - Albendazole (400 mg BD PO for 3 days for children 1-3 yrs of age and 200 mg BD PO for 3 days for children 4-11 yrs of age. <u>Trichuris - Mebendazole (100mg twice daily for 3 days) and</u> <u>ivermectin (200µg/kg for 3 days)</u> <u>A. duodenale</u> - Mebendazole100 mg BD PO for 3 days
17.	Enteric fever	Ceftriaxone 1: 75mg/kg/day in 2 divided doses Duration : 10-14 days or Cefotaxime 1: 80mg/kg/day (for severe typhoid fever) Duration : 10-14 days or Fluoroquinolone, e.g., Ofloxacin (15 mg/kg/day in 2 div doses) or Ciprofloxacin (15-30 mg/kg/day in 2 div doses) Duration: 5-7 days <u>Alternatives:</u> Chloramphenicol (50-75mg/kg/day for 14-21days) or Amoxicillin (75-100mg/kg/day for 14days ) or Azithromycin: 8-10mg/kg/day for 7 days or Cefixime 20 mg/kg/day in 2 div doses for 7-14 days.
18.	Community acquired sepsis	Cefotaxime <sup>1</sup> (200 mg/kg/24 hr, given every 6 hr) or Ceftriaxone <sup>1</sup> (100 mg/kg/24 hr administered once per day or 50 mg/kg/dose, given every 12 hr). Add Amikacin <sup>4</sup> (if necessary). Add Vancomycin <sup>2</sup> if resistant <i>S. aureus</i> or resistant <i>S. pneumoniae</i> suspected.(40 mg/kg/day 6 hrly) If intra-abdominal process is suspected, anaerobic coverage should be included with metronidazole (22.5- 40 mg/kg/day 8 hrly), clindamycin (25-40 mg/kg/day 6 to 8 hrly) or piperacillin- tazobactam (100 mg/kg/dose 6 to 8 hrly)

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		Duration : 14 days	
19	UTI- uncomplicated	<b>TMP-SMX</b> : 6-12mg/kg/day in 2 divided doses for 3 to 5 days is effective against most strains of <i>E. coli</i> .	
or Nitrofurantoin5-7 mg/kg/24 hr in 3-4 divided d (also active against <i>Klebsiella</i> and <i>Enterobacter</i> ) Duration : 7-10 days Alternative: Amoxicillin 50 mg/kg/24 hr also is effective as i		or Nitrofurantoin5-7 mg/kg/24 hr in 3-4 divided doses also effective (also active against <i>Klebsiella</i> and <i>Enterobacter</i> ).	
		Duration : 7-10 days Alternative: Amoxicillin 50 mg/kg/24 hr also is effective as initial treatment	
		or Cefixime8mg / kg / day BD for 14 days	
20.	UTI-Complicated	<b>Ceftriaxone</b> <sup>1</sup> (50 mg/kg/24 hr, not to exceed 2 g)	
		<b>Cefotaxime</b> <sup>1</sup> 100-150 mg/kg/24 hr in 3-4 divided doses,	
		Cefepime <sup>1</sup> (100mg/kg/24hr q12h)	
21.	Bacterial	<b>Cefotaxime</b> <sup>1</sup> 225-300 mg/kg/24 hr, given every 6 hr or 8hrly)	
	meningitis	or	
		<b>Ceftriaxone</b> <sup>1</sup> - 100 mg/kg/24 hr administered once per day or 50 mg/kg/dece. given every 12 hrs	
50 mg/kg/dose, given every 12 hrs Add Amikacin <sup>4</sup> if necessary		Add Amikacin <sup>4</sup> if necessary.	
		Add Vancomycin <sup>2</sup> if resistant S. pneumoniae suspected.	
		Duration- 1 to 4 weeks	
22.	Skin and Soft	Oral dicloxacilin <sup>1</sup> (25-50 mg/kg/day 6 hrly) or cephalexin (25-50 mg/kg/day 6 hrly) or if mothicillin register 5 tanhulogogous is	
<b>Infections</b> suspected oral clindamycin (10-40 mg/kg/day 6 to 8 h		suspected oral clindamycin (10-40 mg/kg/day 6 to 8 hrly) for 5 to 7	
	Cellulitis	days	
Carbuncle IV antibiotics can be considered if no improvement of progression in first 24 to 48 hrs- IV clindamycin (25-6 to 8 hrly) or cefazolin (100 mg/kg/day 6 to 8 hrly) if methicillin-resistant <i>Staphylococcus</i> is suspected-1 vancomycin (20 mg/kg/dose 6 hrly)		IV antibiotics can be considered if no improvement or disease	
		progression in first 24 to 48 hrs- IV clindamycin (25-40 mg/kg/day	
		if methicillin-resistant <i>Staphylococcus</i> is suspected- IV	
		vancomycin (20 mg/kg/dose 6 hrly)	
23.	Bone and Joint	Cefazolin <sup>1</sup> (100 -150 mg/kg/day 8 hrly) or Nafcillin (150-200	
	Infections	mg/kg/day 6 hrly)	
		If methicillin-resistant <i>Staphylococcus</i> is suspected, $1V$ <b>vancomycin</b> <sup>2</sup> (15mg/kg 6 hrly) is the gold standard agent for	
		treating invasive methicillin-resistant <i>Staphylococcus</i> infection.	
		If community acquired methicillin-resistant <i>Staphylococcus</i> is	
		suspected, then addition of vancomycin to a beta lactam should be considered	
		Duration- 4 to 6 weeks	
24.	Infective	Amoxicillin <sup>1</sup> (50 mg/kg 1 hr before the procedure)	
	endocarditis	Alternatives:	
	prophylaxis	Ampicillin <sup>1</sup> (50 mg/kg 30 min before the procedure)	
		Ceftriaxone <sup>1</sup> (50 mg/kg IM or IV)	
		Allergic to penicillin – oral cephalexin 50 mg/kg or oral	
		clindamycin 20 mg/kg or oral azithromycin/ clarithromycin 15	
		mg/kg Allergic to penicillin and unable to take oral medication – IV cefaralin or IV ceftriaxona 50 mg/kg or IV clindamycin 20 mg/kg	

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25.	Malaria	Refer to National and MCGM Guidelines	
26.	Leptospirosis	Parenteral Penicillin G <sup>1</sup> (6-8 million U/m <sup>2</sup> /day divided every 4 hr IV Duration : 7 days <u>Alternative:</u> Tetracycline (10-20 mg/kg/day divided every 6 hr PO or IV for 7 days) (doxycycline) (2 mg/kg/day divided in 2 doses with maximum of 100mg twice daily as an alternative for patients allergic to penicillin)	Pag 81
27.	<b>pH1N1</b> (pandemic influenza 2009)	Oseltamivir < 15kg - 30 mg BD; > 15-23kg - 45 mg BD; > 23-40 kg - 60 mg BD; > 40 kg - 75 mg BD Duration : 5 days	
28.	Chicken pox (Varicella zoster)	Oral therapy with acyclovir (20 mg/kg/dose, maximum 800 mg/dose) given as 4 doses/day for 5 days can be used to treat uncomplicated varicella in children >12 mo of age with chronic cutaneous or pulmonary disorders, corticosteroid therapy, and long-term salicylate therapy. <u>Alternatives:</u> Valacyclovir (20 mg/kg/dose; maximum : 1000 mg//dose administered 3 times daily for 5 days) for children 2 to <18 yrs of age. Start preferably within 24 hr of the onset of the exanthem. IV therapy is indicated for severe disease and for varicella in immunocompromised patients (even if begun 72 hr after onset of rash).	
<sup>1</sup> Peni to All Also, fast in <sup>2</sup> Vano infusi Also,	cillins to be administer ergy OPD (Departmen all parenteral beta lacta fusions) comycin to be administ on reactions and red-min therapeutic drug monit between 15 and 20 up	ed only after test dose. If allergy to beta lactams suspected, patient can t of Clinical Pharmacology) for allergy testing ams should be preferable administered as slow IV infusions over 2-3 here tered as a slow IV infusion over 1- 2 hours (Rapid infusion can increase an syndrome). oring for vancomycin is strongly recommended to maintain therapeutic (mL (increased))	be referred ours (Avoid e the risk of c plasma
<sup>3</sup> Tetra	acyclines (including do	exycycline) should not be used in children below 8 years of age.	
<sup>4</sup> OD day. A for an	dosing of aminoglycos Also, aminoglycoside d hinoglycoside may be c	ides is associated with a lesser risk of nephrotoxicity than divided dose ose needs to be adjusted as per renal condition. Therapeutic drug moni considered for optimizing the dose	<u>s in a</u> toring

13.Guidelines for acute febrile illness		
Sr.	Conditions/ Expected	Revised recommendations
	nothogons	
0		
1.	Leptospirosis	Adults:
	L. icterohaemorrhagia complex	<u>Doxvcvcline</u> 100 mg twice a day for 10-14 days <u>(contraindicated</u> in <u>pregnancy)</u>
	_	+
		<u>Inj. Crystalline penicillin</u> 20 lacs IU IV every 6 hourly after test dose.
		(For the individuals who are allergic to penicillin group of drugs following
		<u>alternative regimes maybe used)</u>
		Ceftriaxone 1 gm IV x 6 hourly for 7 days
		OR
		Cefotaxime 1 gm IV x 6 hourly for 7 days
		Erythromycin 500 mg I v x 6 hourly for 7 days
		Remarks:
		Pregnant & lactating mothers should preferably be admitted and treated as above (except for doxycycline as it is contraindicated in pregnancy)
		<u>If pregnant women cannot be admitted then they should be given</u> capsule ampicillin 500 mg every 6 hourly for 10 days
		Children < 8 years
		Amoxycillin/ Ampicillin 30-50 mg/kg/day should be given in
		aiviaea aoses for 7 days
		Inj. Crystalline penicillin should be given 2–4 lacs IU/kg/ day for 7 days after test dose.
		(For individuals who are allergic to penicillin group of drugs

		following alternative regimes may be used)
		Ceftriaxone 50-75 IV mg/kg/day for 7 days
		OR
		Cefotaxime 50-100 IV mg/kg/day for 7 days
		OR
		Erythromycin 30-50mg/kg/day in divided dose for 7 days
		Prophylaxis after wading through flood water:
		Doxycycline 100 mg BD
		Duration: 2 days
2.	Malaria	Refer to national treatment guidelines
	Plasmodium spp	http://www.nvbdcp.gov.in/Doc/Diagnosis-Treatment-Malaria-2013.pdf
3	COVID-19	In mild / moderate with adequate oxygen saturation, Molnupiravir 400
		mg BD x 5 days

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# 14. Guidelines for Neonatal Infections

This document is based on

- 1. National Neonatal Perinatal Database (NNPD) Network, the largest hospital based study comprising of 145623 intramural & 11026 extramural neonates from 18 centers, conducted over 2 years, published in 2004.
- 2. Evidenced Based Clinical Practice Guidelines published by National Neonatology Forum India in October 2010. (www.nnfpublication.org)
- 3. Clinical experience at medical college hospitals in Mumbai.

## As per NNPD data,

Particulars	Intramural data	Extramural data
Incidence	3.0%,	39.7%,
	(EOS: 67% & LOS: 31.6%)	(EOS: 56.1% & LOS: 45%)
Organisms	Klebsiella pneumoniae,	Klebsiella pneumoniae, Staphylococci
	Staphylococci aureus,	aureus,
	E. coli	E. coli
	Pseudomonas aeruginosa	Pseudomonas aeruginosa
Clinical	Septicemia	Pneumonia
category	Pneumonia	Meningitis
	Meningitis	Infective diarrhoea
	-	Bone/joint infection
Mortality	18.6%	39%,
	Secondary cause of death	Primary cause of death

- In India, bacterial sensitivity profile of organisms is similar for EOS and LOS. Hence, the following policies can be used irrespective of whether it is EOS or LOS. No distinction is needed in the choice of empirical antibiotics.
- It is not possible to suggest a single antibiotic policy for use in all newborn units. Every newborn unit must have
- its own antibiotic policy based on the local sensitivity patterns and the profile of pathogens.
- Preferably choose Penicillin group plus an Aminoglycoside combination.
- Cephalosporins rapidly induce the production of extended spectrum β-lactamases (ESBL), cephalosporinases and fungal colonization. Use judiciously.
- In all cases, collect specimens for culture prior to administration of antibiotics. Modify antibiotic use if clinically indicated based on culture sensitivity results.

Sr. No.	Type of Infection	Line of Antibio tics choice	Community Acquired	Hospital Acquired	Duration of Antibiotics
	Septicemia (EOS or LOS) Pneumonia	1st	Amoxicillin – Clavulanic acid + Amikacin	Amoxicillin – Clavulanic acid + Amikacin Or Ampicillin – Sulbactam + Amikacin	Culture positive sepsis: 10-14 days
		2nd	Ampicillin – Sulbactam + Amikacin	(Piperacillin - tazobactam) + Amikacin	

Sr. No.	Type of Infection	Line of Antibio tics choice	Community Acquired	Hospital Acquired	Duration of Antibiotics
			or Cefuroxime + Amikacin An ampi+sulb is no more effective than an amoxiclav. It could either be an Amoxiclav / Ampisulb with amikacin as first line. One could consider Pip+taz / Cefoperazone+sulbactam as second line before moving up to carbapenems.		Culture negative sepsis: 7-10 days
		3 <sup>rd</sup>	Meropenem / Imipenem	Meropenem / Imipenem +/- Amikacin / Colistin If MRSA evidence (culture proven): Vancomvcin/ Linezolid	
•	Meningitis	1st	Cefotaxime + Amikacin	Meropenem +/- Amikacin	21 days
		2 <sup>nd</sup>	As per culture & sensitivity Meropenem +/- Amikacin	As per culture & sensitivity	
	Bone	1 <sup>st</sup>	Amoxicillin – Clavulanic acid + Amikacin	(Piperacillin - tazobactam) + Amikacin	6 weeks ( 4 wks IV + 2 wks
		2 <sup>nd</sup>	Vancomycin + Amikacin/ Cefotaxime	Vancomycin + Amikacin Or Linezolid + Amikacin	oral)
		3 <sup>rd</sup>	Linezolid + Amikacin/ Colist	in	
	UTI*	1 <sup>st</sup>	Cefotaxime plus Amikacin		7-10 days
		2 <sup>nd</sup>	As per culture report.		
<i>.</i>	Fungal Sepsis		NA	Fluconazole Amphotericin B (Preferably liposomal)	

\*UTI occurring in the setting of generalized septicemia may not be associated with VUR or malformations. However, an isolated UTI could be associated with these conditions. Hence, after treatment of isolated UTI, all cases must be started on Amoxicillin 10 mg/kg once a day oral prophylaxis, till such time that a renal ultrasound, MCU and DMSA scan are performed to exclude VUR or malformations.

0.	Name of Antibiotic	Dose	Dose Interval			Remarks
			PMA (weeks)	Postnatal (days)	Interval (hours)	
	Amoxicillin – Clavulanic acid	50 mg/kg/dose	All	<u>1-7</u> >7	12 8	-
	Amikacin	15 mg/kg/dose	All		24	Potentially nephrotoxic, ototoxic & neurotoxic. Ototoxicity is usually irreversible
	Ampicillin –	50 mg/kg/dose	< 30	1 - 28	12	
	Sulbactam	(as ampicillin		> 28	8	
		component)	30-37	1 - 14	12	
		Meningitis: 300 -		> 14	8	
		400 mg/kg/day	> 37	All	8	
	Piperacillin -	50 - 100 mg/kg/	< 30	0 - 28	12	CNS penetration
	tazobactam	dose		>28	8	modest. Use for
		(as piperacillin	30 - 36	0 - 14	12	treatment of non
		component)		>14	8	CNS infections
		IV infusion over	37 - 44	0 - 7	12	-
		30 minutes.		>7	8	
	Cefotaxime	50 - 100 mg/kg/	< 30	0 - 28	12	
		dose		>28	8	
			30 - 36	0 to 14	12	
				>14	8	
			37 - 44	0 to 7	12	
				>7	8	
			≥45	ALL	6	
	Meropenem	Sepsis: 20	< 32	1 – 14	12	For meningitis &
		mg/kg/dose		> 14	8	Pseudomonas
			> 32	1 - 7	12	infection, all ages:
		Meningitis: all		> 7	8	40 mg/kg per dose
		ages: 40 mg/kg/ dose				every 8 hours.
	Imipenem/Cilastatin	20 to 25 mg/dose	1		12	Restricted to
	penens enusuum	IV infusion over				treatment of non
		30minutes.				CNS infections
	Colistin	25000				Use only for MDR
		units/kg/dose				Klebsiella,
		-				Acinetobacter,
						Pseudomonas
	Vancomycin	Meningitis:	< 30	1 - 14	12	Use only if MRSA
		15 mg/kg/dose		> 14		
		Bacteraemia:	30 - 36	1 - 14	12	
		10 mg/kg/dose		>14	8	
			37 - 44	0 - 7	12	
	1	1	1	>7	0	1

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10	Linezolid	10 mg/kg/dose IV infusion over 30 minutes.	< 37	< 7	12	Oral dosing is the same as IV.
			> 37		8	<ul> <li>Do not use as empiric treatment.</li> </ul>
1	Fluconazole	Invasive Candidiasis:	< 30	1 - 14	48	Extended dosing intervals should be
		Loading dose: 12 - 25 mg/kg, then 6 to 12		>14	24	considered for neonates with renal insufficiency (S.
		mg/kg/dose IV infusion by syringe pump	> 30	1 - 7	48	<ul> <li>Creatinine &gt; 1.3 mg/dL).</li> <li>Good penetration</li> </ul>
		over 30 minutes.		> 7	24	into CSF after both oral & IV administration.
2	Amphotericin B	1 to 1.5 mg/kg IV infusion over 2 to 6 hours.			24	Incompatible with saline. Dosage modification if S. Creatinine > 0.4 mg/dl from baseline, hold dose for 2 to 5 days. Alt. day dosing recommended over decreasing daily dose in renal toxicity.
.3	Amphotericin B Liposomal	5 - 7 mg/kg/dose IV infusion over 2 hours.			24	Use in patients with renal or hepatic dysfunction. Monitor urine output.
4	Metronidazole	Loading dose: 15 mg/kg IV infusion over	< 30 30 - 36	0 - 14	24 24 12	
		ou minutes.	37 - 44	0 - 7 > 7	24 12	
	1		N 44	A 11	0	

# Upgradation of empirical antibiotics

- Empirical upgradation may be done if the expected clinical improvement with the ongoing line of antibiotics does not occur.
- At least 48-72 hours period of observation should be allowed before declaring the particular line as having failed. If any new sign appears and/or the existing signs fail to begin remitting, it would be considered that the expected clinical improvement has not occurred.
- Current evidence does not support the use of serial quantitative CRP as a guide for deciding whether or not antibiotics should be upgraded empirically.
- In case the neonate is extremely sick or deteriorating very rapidly, a decision may be taken to bypass the first line of antibiotics and start with the second/ third-line of antibiotics.

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## Antibiotic therapy once culture report is available

• It must first be assessed whether the positive blood culture is a contaminant. The following are suggestive of contamination: growth in only one bottle (if two had been sent), growth of a known non-pathogen: eg. aerobic spore bearers, mixed growth of doubtful significance and onset of growth beyond 96 hours in the absence of a history of prior exposure of antibiotics in the 72 hours before sending the blood culture. This must be discussed with the microbiologist because certain slow growing organisms may have onset of growth beyond 96 hours.

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- If the growth is a non-contaminant, the antibiotic sensitivity must be assessed to decide whether antibiotics need to be changed. The following guidelines would allow a rationale use.
- If the organism is sensitive to an antibiotic with a narrower spectrum, therapy must be changed to such an antibiotic, even if the neonate was improving with the empirical antibiotics and/or the empirical antibiotics are reported sensitive.
- If possible, a single sensitive antibiotic must be used, the exception being Pseudomonas for which 2 sensitive antibiotics must be used.
- If the empirical antibiotics are reported sensitive, but the neonate has worsened on these antibiotics, it may be a case of in vivo resistance. Antibiotics may be changed to an alternate sensitive antibiotic with the narrowest spectrum.
- If the empirical antibiotics are reported resistant but the neonate has improved clinically, it may or may not be a case of in-vivo sensitivity. In such cases, a careful assessment must be made before deciding on continuing with the empirical antibiotics. One must not continue with resistant antibiotics with in vitro resistance in case of Pseudomonas, Klebsiella and MRSA; and in cases of CNS infections and deep-seated infections.
- If no antibiotic has been reported sensitive, but one or more have been reported as intermediate sensitive, therapy must be changed to such antibiotics at the highest permissible dose. Use a combination, in such cases.

#### Duration of antibiotics

#### **Evidence and Recommendations:**

- 1. Culture positive sepsis: Total duration of 10-14 days. There is no definitive published literature regarding the optimum duration of antibiotics for neonatal sepsis.
- 2. Culture negative sepsis: If the blood culture is reported sterile at 48 hours, the following guidelines must be adhered to:
- Asymptomatic neonate at risk of EOS: stop antibiotics
- Suspected EOS/LOS & the neonate becomes completely asymptomatic over time: stop antibiotics
- Suspected EOS or LOS and the neonate improves but does not become asymptomatic: repeat a CRP: If CRP + ve: continue antibiotics & If CRP -ve: stop antibiotics
- Suspected EOS or LOS and the neonate have not improved or have worsened: upgrade antibiotics as per the antibiotic policy. Simultaneously, alternative explanations for the clinical signs must be actively sought for.

## Fungal sepsis

> Do a fungal culture prior to starting empiric therapy.

	<b>15. GUIDELINES FOR</b>	ANTIMICROBIAL USE	IN DENTAL PRACTICE
Sr. No.	Conditions	Expected pathogens	Revised MCGM recommendations Antimicrobial of choice Dose/ Route/ Frequency/ Duration/ Alternatives
1	Parotitis	<b>Bacterial:</b> S. aureus, and anaerobic bacteria with predominance of gram negative bacilli	Acute Suppurative condition: Co-amoxiclav 625 mg PO TDS If allergic to penicillin: Clindamycin 300 mg QDS Duration: 7 days
		Viral: Paramyxovirus, EBV, Coxsackie virus, Influenza A and Parainfluenza viruses.	Viral parotitis: Acyclovir 400 mg PO QDS OR Valacyclovir 1 g PO QDS Duration: 7 days
2	Periapical abscess	Strict anaerobes, viridians streptococci, Strep. angionosus (milleri) group, Staphylococci	Adult dose: Co-amoxiclav 625 mg PO BD + Metronidazole 400 mg TDS Duration: 5 days
			Child dose: Co-amoxiclav 20mg/ 5 mg/ kg/ day to 60mg/ 15 mg/ kg/ day divided in 3 doses Duration: 3-7 days
			Remarks: Management of local focus of infection bt curettage and debridement
3	Gingival and periodontal abscess	Anaerobes, Fusobacterium, P. gingivalis, Spirochetes, Gram negative cocci, diplococci	Adult dose: Co-amoxiclav 625 mg PO BD + Metronidazole 400 mg TDS Duration: 5 days Alternative: Doxycycline 100 mg PO BD Duration: 10 days
			If allergic to penicillin: Clindamycin 300 mg BD for 5 days Child dose: Co-amoxiclav 20mg/ 5 mg/ kg/ day to 60mg/ 15 mg/ kg/ day divided in 3 doses +
4	Cellulitis due to tooth/teeth	S. viridians and	day Duration: 3-7 days Adult dose:
	with systemic involvement	Prevotella species, E. coli	Co-amoxiclav 625 mg PO BD + Metronidazole 400 mg TDS Duration: 7 days

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				Child dose: Co-amoxiclav 20mg/ 5 mg/ kg/ day to 60mg/ 15 mg/ kg/ day divided in 3 doses +	
				Cloxacillin 50-100 mg/ kg/ day divided in 4 doses	Page   90
				+ Metronidazole 7.5 mg/ kg 3 times a day <b>Duration</b> : 3-7 days <b>Alternative</b> : Cefadroxil >6 years 500 mg BD 1-6 years 250 mg BD <1 year 25 mg/ kg/ day in divided doses	
				<b>Remarks:</b> Along with establishment of drainage for pus	
5		Ludwig's Angina	Polymicrobial (Oral anaerobes)	Mild cases: Co-amoxiclav 1.2 g IV BD + Metronidazole 500 mg IV TDS Duration: 5-7 days	
				Severe cases: Ceftriaxone 1 g IV BD	
				+ Metronidazole 500 mg IV TDS OR Meropenem 1 g IV TDS	
				Metronidazole 500 mg IV TDS <b>Duration:</b> 5-7 days	
				<b>If immunocompromised</b> Piperacillin-Tazobactam 4.5 g(80 mg/kg) IV 6 hrly <b>Duration:</b> 5-7 days	
				If allergic to penicillin Clindamycin 600 mg IV 8 hrly Remarks: Management of local focus of infection.	
6		Osteomyelitis	Alpha haemolytic streptococcus, S. aureus, Enterobacteriaceae,	Co-amoxiclav 625 mg PO BD <b>Duration</b> : 6 weeks	
			Actinomycetes, various anaerobes	If allergic to penicillin: Ciprofloxacin 400 mg IV PB q 12hr +	
7		Mucormycosis	Rhizonus	Clindamycin 600 mg IV PB q 8 hr	
/			C. UI	IV/ q day	
8		Oral Candidiasis	Candida spp	Clotrimazole for local application	

			Chlorhexidine mouthwash till improvement
			Severe cases: Fluconazole LA and 100-200 mg PO Duration: 2 weeks
			<b>Remarks:</b> Local Nystatin application for mild cases
			Correct factors predisposing to oral thrush For prophylaxis, once weekly oral dose of fluconazole is given
9	Herpes Zoster	Varicella Zoster virus	Acyclovir 800 mg PO q 5 hr OR Valacyclovir 100 mg PO q 8 hr OR Famciclovir 100 mg PO q 8 hr <b>Duration</b> : 7 days
10	Herpes Simplex	Herpes Simplex virus	Recurrent infection: Acyclovir cream 5% topical application qid for 4 days OR Pencicyclovir cream 1% topical q 2h for 4 days OR Docosanol cream 10% topical qid
			until healed Active lesion/ large/ frequent episodes: Valacyclovir 1g PO q 8 hr for 7 days OR Famcicyclovir 500 mg PO q 8 hr for 7 days
11	Clean/ Atraumatic extractions/Orthodontic extractions/ Clean Closed fractures	-	No Antibiotics
11	Elective / clean major surgical procedures	-	Co-amoxiclav 1.2 g IV OR Ceftriaxone 1 g IV Immediate post op: 6-8 hrs post induction dose: Co- amoxiclav 1.2 g IV Late post op: Tab Co-amoxiclav 625 mg BD for 5-7 days
12	Minor surgical procedures Extractions of teeth with intra/extra oral swelling, impacted teeth, periapical surgery, infected implants,	Gram positive cocci, Enterobacteriaceae	Adult dose: Co-amoxiclav 625 mg PO BD + Metronidazole 400 mg PO TDS Duration: 5days

	and extraction in medically compromised patients.		Child dose: Co-amoxiclav 20mg/ 5 mg/ kg/ day to 60mg/ 15 mg/ kg/ day divided in 3 doses Duration: 3-7 days
13	Maxillofacial injuries Abrasions, Lacerations, complicated multiple fractures, panfacial fractures, luxation, avulsion of teeth.	Gram negative bacilli, S. aureus	Adult dose: At induction: Co-amoxiclav 1.2 g IV OR Ceftriaxone 1 g IV Immediate post op: 6-8 hrs post induction dose: Co- amoxiclav 1.2 g IV Late post op: IV antibiotic continued for 5 days Switch over to oral: Tab Co- amoxiclav 625 mg BD for 5 days
			Child dose: Co-amoxiclav 20mg/ 5 mg/ kg/ day to 60mg/ 15 mg/ kg/ day divided in 3 doses Duration: 3-7 days
14	Chronic periodontitis	P. gingivalis, Aggregatibacter actinomycetemcomitans, P. intermedia, T. forsythia, T. denticola, Fusobacterium	Co-amoxiclav 625 mg PO BD Duration: 3 days If allergic to penicillin: Ciprofloxacin 500 mg BD
15	Aggressive periodontitis	Aggregatibacter actinomycetemcomitans, P. gingivalis, Bacteroides forsythus	Co-amoxiclav 625 mg BD + Metronidazole 400 mg TDS Duration: 7 days
			Alternative: Doxycycline 100 mg/ day for 5 days
16	Refractory periodontitis	Fusobacterium spp, Bacteroides fragilis, Porphyromonas spp., Prevotella intermedia	Metronidazole 400 mg PO TDS + Ciprofloxacin 500 mg PO BD Duration: 7 days
17	Acute Necrotising Ulcerative Gingivitis	Spirochetes, fusobacterium, borrelia	Adult dose: Co-amoxiclav 625 mg BD + Metronidazole 400 mg TDS Duration: 7 days
			Child dose: Co-amoxiclav 20mg/ 5 mg/ kg/ day to 60mg/ 15 mg/ kg/ day divided in 3 doses <b>Duration:</b> 3-7 days <b>If allergic to penicillin</b> Erythromycin 30-50 mg/ kg/ day in divided doses 2 & warry 1 gm/ day in divided doses

18	Pericoronitis	Streptococci viridans, Actinomyces, Prevotella	Adult dose: Co-amoxiclav 625 mg BD + Metronidazole 400 mg TDS Duration: 3-7 days Child dose: Co-amoxiclav 20mg/ 5 mg/ kg/ day to 60mg/ 15 mg/ kg/ day divided in 3 doses + Metronidazole 7.5 mg/ kg 3 times a	Pa 93
			day	

# B. (ii) PRE-OPERATIVE PROPHYLAXIS / THERAPY

. In patients with community / hospital acquired infection, collect appropriate specimen for culture and susceptibility testing prior to administration of antibiotic.

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- H is not recommended to collect specimen from healing wounds.
   Modify / De-escalate treatment as per microbiology report and clinical response.
- Basic infection prevention and control strategies should be in place.
- · Definitions:

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- Clean wound (Surgery) An uninfected operative wound in which no inflammation is encountered and the respiratory, alimentary, genital, or uninfected urinary tracts are not entered.
- b) Clean contaminated- Operative wounds in which the respiratory, alimentary, genital or urinary tracts are entered under controlled conditions and without unusual contamination. Specifically, operations involving the biliary tract, appendix, vagina, and oropharynx are included in this category provided no evidence of infection or major break in technique is encountered.
- c) Contaminated - Includes open, fresh, accidental wounds. In addition, operations with gross spillage from the gastrointestinal tract, and incisions in which acute, non-purulent inflammation is encountered are included in this category. d) Dirty -Includes old traumatic wounds with retained or devitalized tissue and those that involve existing
- clinical infection or perforated viscera

References - 1. American Society of Health System Pharmacists (ASHP) 2013 Report 2. WHO Safe Surgery 2009

Sr Ne	Condition / Expected pathogen/s	Antimicrobial of choice Dose/RoutyFrequency/Duration	Alternatives/ Remarks
	OPITULALMOLOCY		
1	Pre-operative Prophylaxis Clean cases Cataract, terygium, glaucoma, strabismus, lid(entropion, exotropion,ptosis), corneal transplant	Modfloxacin e/d 6 times previous day of surgery Betadine e/d pre-operative	
2	Contaminated cases Endopthalmitis, corneal ulcer, post traumatic tear with infection,intraecular foreign body, lacrimal sac surgery, dacrocystitis	Systemic Cefotaxime 1 gm IV TDS Or Ceftriaxone 1.5 gm IV BD for 3 days prior to surgery, 7 days post surgery + Topical Moxifloxacin	
3	Corneal foreign body	Patch for 24 hrs for epithelisation before increased cycloplegia. Antibiotic Chloramphenicol applicap Next day : antibiotic drops Moxifloxacin/ Gatifloxacin X 3 days	
	TNT		
1	Pre op prophylaxis. Major head and nerk surgery including implant surgeries	Inj Cefazulin /2.gms (IV) 1° dose at induction or In Cefuroxime sodium 1.5 gm (IV) 2° dose within 24 $\rm hrs$	

### GENERAL SURGERY / GI Surgery

		Uncomplicated cases (patient stable) Appendix / g	all
_	Clean surgery	bieldelin 2 gms IV	Total only 3 doses. If
1	S. 291223,	Go-amoxiclay IV 3 doses	surgery beyond 4 hrs.
	5. evidernidis	<b>@5-amoxiclav</b> (Amoxycillin 2 g + Clavulanic acid 12 ⊈oppriaxone 1.5 gm IV_BD X 5 days	25 mejeive another dose. Post- Por complicated SUSPERY
		Complicated cases Cefotaxime 1 gm / IVTD5 OR	2 dose; at 12 Filv anterva straperazone + subbactam should be the drug of
		Cettriaxone 1.5 gm / IV BD	choice as it has the best
2	Clean contaminated	+ Amikacin 5 mg / kg OD + Metronidazole 500 mg TD5	biliary penetration / concentration.

3	Contaminated	Duodenal / Ileal perforation (Patient stable) Cefotaxime 1 gm IV Or Ceftriaxone 1.5 gm IV BD X 5 days Patients with organ failure / sepsis / In seriously ill / previous hospitalization, Piperacillin-tazobactam 4.5 gm TDS + Amikacin 5 mg / kg OD + Metronidazole 500 mg QD5 X 5 days		
4	Implants  Gram positive cooci Enterobacteriaceae}	Cefurexime 1.5 gm / IV If surgery beyond 4 hrs, give another dose, then BD X 5 days OR Co-amoxiclav -Amoxicillin 2 gm + Clavulanic acid 125 / IV If surgery beyond 2 bours, give another dose. Then, BI 5 days	Cefazolin is preferred over 2 <sup>rd</sup> and 3 <sup>rd</sup> gen cephalosporins as they itare potent inducers of PSRF 5	
5	Past-splenectomy - long, term prophylaxis Enferobacteriaceae Anaerobes	2 weeks prior to elective surgery vaccinate for Spneumoniae, Hinfluonzar b and Nameningitidis. Repeat Hib vaccine annually. + Amoxicillin 500 mg PO OD Duration : 2 years		
3	Contaminated	Duodenal / lical perforation (Patient stable) Cefotaxime 1 gm IV Or Ceftriaxone 1.5 gm IV BD X.5 days Patients with organ failure / sepsis / In seriously ill / previous hospitalization, Piperacillin-tazobactam 4.5 gm TDS + Amikacin 5 mg / kg OD + Metronidazole 500 mg QD5 X.5 days		
4	Implants (Gram positive cooci Enterobacteriaceae)	Cefuroxime 1.5 gm / IV If surgery beyond 4 hrs, give another dose, then BD X 5 days OR Co-amoxiclav -Amoxicillin 2 gm + Clavulanic acid 125 / IV If surgery beyond 2 hours, give another dose. Then, BI 5 days	Cefazolin is preferred over 2 <sup>-1</sup> and 3 <sup>-1</sup> gen cephalosporins as they have potent inducers of poten	
5	Past-spleneelomy - long leem prophylaxis Enferobacteriaceae Anaerobes	2 weeks prior to elective surgery, vaccinate for Spneumoniae, H.influonzar b and N.meningitidis. Repeat Hib vaccine annually. + Amoxicillin 500 mg PO OD Duration : 2 years		
3	Paediatrie Cardiae Surgery	Same as CABC, except the dosc Cefazolin: 20 mg/kg Vancamycin : 15 mg/kg Centamicin: 3 mg/kg		
4	Pacemaker/ Defibrillator Implantation 5. aureus 5. epidemaidis Gram Negative Bacilli	Cafazolin 1.g IV 60 min prior to skin incision		



# Version 2022 (1.4) Inj Co-amoxiclav 1.2 gm 12 hourly(IV/IM) until orals started 625 mg TDS upto total 5 days Major Cases 4 S.aureus. Other Cram positive cocci Metronidazole 500 mg (100cc) IV TDS x 5 days Rarely Gram negative bacilli Inj. Gentamicin 1.5 to 2 mg/kg loading dose, followed by 1 to 1.7 mg/kg IV or IM every 8 bours x 3 days Post-operative wound gape Inj Ceftriaxone 1gm IV 8D-X 5-7 days Collect specimen for aulture 5 S.aureus, Enterobacteriaceae, sensitivity. Inj Metronidazole 500 mg IV TDS X 5-7 days Change antibiotic based on microbiology report as required. Anaerobes, Enterococci, Other Gram positive cocci NEUROSURGERV For patients allergic to penicillin Clindamycin 600 mg (20 mg/kg) / Azithromycin 500 mg (15 mg/kg) / Oral: Orai: Amosicillin 2 g (50 mg/kg) / Cephalexin 2 g (50 mg/kg) / Cefadroxil 2 g (56 mg/kg) Single dose before procedure 1 Clean cases Clarithromycin 500 mg (15 mg/kg) Vancomycin 1g (20 mg/kg) IV (in MRSA positive and penicillin allergic patients) All given for 5 days Surgery on contaminated Clindamycin 0.6 g IV 8 hrly + Gentamicin 2 CANPS Cetazolin 1g IV 8 hrly 80 mg IV 8 hrly Ampicillin 2g IV 6 hrly/ + Gentamicin 80 mg IV 8 hrly + Metronidazole 0.5g IV Vancomycin 1g IV 12 hrly if MRSA prevalence in cenre is high / MRSA expected 8 hrly · Amoxicillin 1g + clavunate 0.2 g IV 12 hrly PLASTIC SURGERY Co-amovielav 1.2g IV OR Ceftriaxone 1g IV Single dose Repeat dose it surgery extends beyond 6 hrs 1 Clean surgery Clean contaminated wounds At induction: Co-amoxiclav 1.2g IV OR 2 (debridement and grafting, Ceftriaxone 1g IV Immediate post op: 6-8 hrs post induction dose: Co-amoxiclav 1.2g IV minor debridement, etc) Late post op: Tab Co-amoxiclav 625mg 8D for 5 to 7 days (till 1" dressing)

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Dirty wounds At induction: Co-amoxiclav 1.2g IV OR Ceftriaxone 1g IV or as per culture reports Immediate post op: 6-8 hrs post induction dose: Co-amoxiclav 1.2g IV or as per culture reports Late post op: IV antibiotic continued for 5 days (major debridement and bone debridement), major flap and free flap surgeries Switch over to Tab Co-amoxiclav for next 5 days or as per culture reports

At induction:

Meropenem 1g IV

Burns 4 (early excision & grafting)

Burns 5

(late grafting)

Immediate post op: 6-8 hrs post induction dose Piperacillin-tazobactum 4.5 g IV OR OR Meropenem 1g IV Late post op: IV antibiotic continued for 5 to 7 days with change as per culture reports / clinical response May switch over to oral as per culture reports At induction: Co-amoxiclav 1.2g IV OR Cost Ceftriaxone 1g IV Immediate post op: 6-8 hrs post induction dose: Co-amoxiclav 1.2g IV Late post op: Tab Co-amoxiclav 625mg BD for 5 to 7 days.

Piperacillin-tazobactum 4.5 g IV OR

Maxillofacial injuries 6 (single uncomplicated fractures

Maxillofacial injuries

(complicated multiple

7

At induction: Co-amoxiclav 1.2g IV OR Ceftriaxone 1g IV Immediate post op: 6-8 hrs post induction dose: Co-amoxiclav 1.2g IV Post op: Tab Co-amoxiclav 625mg BD for 5 days

At induction: Co-amoxiclav 1.2g IV OR fractures, panfacial fractures) Ceftriaxone 1g IV Immediate post op: 6-8 hrs post induction dose: Co-amoxiclav 1.2g IV Late post op: IV antibiotic continued for 3 days Switch over to oral : Tab Co-amoxiclav 625mg BD for 7 days

Local anaesthesia cases in 8 minur OT

No antibiotics

Sec     Condition     Expected pachagery     Antimisrobial of choice Desyl Mante/Dreguency/Deration     Alternatively Reserves       1     Clean Surgery (Pre-operative prophylaxis)	Sec         Condition         Inspected pullogery         Antimicrobial of choice Desy/Montp/Enquency/Durator         Alternativey Remarks           PATTHATRIC SUBCIEN         I         Clean Surgery (Pre-operative prophylaxis)         Image: Comparison of the prophylaxis         Image: Comparison of the prophylaxis         Image: Comparison of the prophylaxis           Image: Comparison of the prophylaxis         Image: Comparison of the prophylaxis         Image: Comparison of the prophylaxis         Image: Comparison of the prophylaxis         Image: Comparison of the prophylaxis           Image: Comparison of the prophylaxis         Surplifer relations         No antibiatic required unless the prophylaxis         Image: Comparison of the prophylaxis         Image: Comparison of the prophylaxis           Image: Comparison of the prophylaxis         Surplifer relation of the prophylaxis         Surplifer relation of the prophylaxis         Image: Comparison of the pr	Version 2022 (1.4)			
PATHATROSURCERS         1       Clean Surgery (Pre-operative prophylaxis)         1/z       Hernia       Supplementation         1/z       Hernia       Supplementation       No antibiatic required memory         1/z       Hydrocoels       Supplementation       No antibiatic required memory         1/z       Hydrocoels       Supplementation       No antibiatic required memory         1/z       Hydrocoels       Supplementation       No antibiatic required memory         1/z       Orthopers       Supplementation       No antibiatic required memory         1/z       Orthopers       Supplementation       No antibiatic required memory         1/z       Orthopers       Supplementation       No antibiatic required unless 2       Image for the patient is infection.         1/z       Connection       Supplementation       No antibiatic required unless 2       Image for the patient is infection.         1/z       Connection       Supplementation       No antibiatic required unless 2       Image for the patient is infection.         1/z       Connection       Supplementations       No antibiatic required unless 2       Image for the patient is infection.         1/z       Connection       Supplementations       No antibiatic required unless 2       Image for the patient is in	PATEIATRIC SUBCITY         1       Clean Surgery (Pre-operative prophylaxis)         1/2       Hermin       Surpicformulds Streptoceccus, Corynobacteria, Perstreptocecus, Corynobacteria, Perstreptocecus, Corynobacteria       No antibiatic requirec unless the patient is immunacompromised.         1/2       Hydrococh       Surpicformulds Streptocecus, Corynobacteria       No antibiatic requirec unless the patient is immunacompromised.         1/2       Orchiopeny       Surpicformulds Streptocecus, Corynobacteria       Inj. Celazolin 30 mg/kg IV single d inj. Celazolin 30 mg/kg IV single d inj. Celazolin 30 mg/kg IV single d instease in the new?         1/2       Cpt Excision 4 dimension in the new?       Suppicformulds Surpic	Sr No Condition	Expected pathogen/s	Antimicrobial of choice Dose/Route/Frequency/Duration	Alternatives/ Remarks
1       Clean Surgery (Pro-operative prophylaxis)         1/2       Hernia       Supploarmidis Supploarmidis Streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Coryanbacteria, Streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Streptoneceus, Streptoneceus, Streptoneceus, Coryanbacteria, Pro-operative streptoneceus, Streptoneceus, Streptoneceus, Streptoneceus, Streptoneceus, Streptoneceus, Streptoneceus, Strepto	1       Clean Surgery (Pre-operative prophylaxis)         1       Hernia       Supplormalis Supplormali	PAEDIATRIC SURGERY			
12       Hernia       Supplementations Streptococcus, Corynebatteria, Prioribacteriaceor       No antibiotic required unless the patient is innunacempromised.         1b       Hydracoela       Supplementation Streptococcus, Corynebatteria       No antibiotic required unless the patient is innunacempromised.         1c       Hydracoela       Supplementation Streptococcus, Corynebatteria       Inj. Cefazolin 30 mg/kg IV single d unices the patient is information 30 mg/kg IV single d inj. Cefazolin 30 mg/kg IV single d unices in the neely         1d       Cyst Decision 4 sinesses in the neely       Supplementation Supplementations Streptococcus, Corynebatteria, Supplementation Streptococcus, Corynebatteria, Supplementation Streptococcus, Corynebatteria, Supplementation Streptococcus, Corynebatteria, Supplementation Streptococcus, Corynebatteria, Supplementation Streptococcus, Corynebatteria, Supplementation Streptococcus, Corynebatteria, Supplementation Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Corynebatteria Streptococcus, Str	12       Hernia       Supridermidis Suprocessis, Corrynebacteria, Enterplacements, Corrynebacteria Suprocessis, Corrynebacteria       No antibiotic required unless the patient's immunacempromised.         18       Hydracoel,       Supridermidis Suprocessis, Corrynebacteria       No antibiotic required unless the patient's immunacempromised.         14       Orchtopexy       Supridermidis Stoppic       Inj. Cefazolin 30 mg/kg IV single d inj. Cefazolin 30 mg/kg IV single d info. Cefrasone 50 mg/kg single d         14       Cyst Decision 4: dimension the newly       Supridermidis Stoppic       No antibiotic required unless 2' infortion, Corrynebacteria         14       Cyst Decision 4: dimension the newly       Supridermidis Suprocessing, Corrynebacteria Suprocessing, Corrynebacteria Corrynebacteria Suprocessing, Corynebacteria Suprocessing, Cor	1 Clean Surgery (Pre-operative prop	hylaxis)		
Ib     Hydracoels     Supplementatis Surproducture, Corynebocteria     No antibinite required unless the patient is immunacompromised.       Ir     Outbiopexy     Surpidermidis Surproducture, Corynebocteria     Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single d       Ir     Cyst Excision & sinusces in the nee's     Surpidermidis Surproducturia Surprod	Ib     Hydracaels     S.epidermulis S.auteus     No antibinite required unless the patient is immunacentoromised.       1r     Orthopexy     S.epidermulis Stepicoccus, Corvaebacteria     Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single d       1d     Cpst Decision & dimension the neels     S.epidermulis Stepicoccus, Corvaebacteria, S.epidermulis S.auteus     No antibiotic required unless 2' infection, Enterobacteriaeas       1d     Cpst Decision & dimension the neels     S.epidermulis Stepicoccus, Corvaebacteria, Enterobacteriaeas     No antibiotic required unless 2' infection, Enterobacteriaeas       1e     Cremension     S.epidermulis Stepicoccus, Corvaebacteria, Enterobacteriaeas     No antibiotic required unless 2' infection, Enterobacteriaeas       1e     Cremension     S.epidermulis Stepicoccus, Corvaebacteriaeas     No antibiotic required unless 2' infection, Enterobacteriaeas       1e     Cremension     S.epidermulis Stepicoccus, Corvaebacteriaeas     No antibiotic required unless 2' infection, Enterobacteriaeas       1e     Cremension     S.epidermulis Stepicoccus, Corvaebacteriaeas     No antibiotic required unless 2' infection	12 Hernia	Stepidermidis Staureus Strepiococcus, Corynebacteria, Paternhocteria		
Ir       Orchiopexy       Supidermidis Streptococous, Corynebacteria,       Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single d         Id       Cyst Excision & simusors in the nucle       Supidermidis Supidermidis Streptococous, Corynebacteria, Enterobacteriaese       No antibiotic required unless 2' infection         Id       Cyst Excision & simusors in the nucle       Supidermidis Supidermidis Streptococous, Corynebacteria, Enterobacteriaeses       No antibiotic required unless 2' infection         Id       Commercision       Supidermidis	1/r       Cachiopexy       Supidermidis Supreprocessing, Coryachateria, dimension the mode       Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single d         1/r       Cpst Excision & sinuses in the mode       Supidermidis Supreprocessing Coryachateria, Enterobacteriacease Supidermidis Supreprocessing       No antibiotic required unless 2' infection         1/r       Cincurcision       Supidermidis Supreprocessing       No antibiotic required unless 2' infection         1/r       Cincurcision       Supidermidis Supidermidis Supreprocessing       No antibiotic required unless 2' infection         1/r       Cincurcision       Supidermidis Supidermidis Supidermidis Supreprocessing       No antibiotic required unless 2' infection         1/r       Cincurcision       Supidermidis Supidermidis Supreprocessing       No antibiotic required unless 2' infection         1/r       Cincurcision       Supidermidis Supreprocessing       No antibiotic required unless 2' infection         1/r       Cincurcision       Supidermidis Supreprocessing       No antibiotic required unless 2' infection         1/r       Cincurcision       Cincurcision 30 mg/kg IV 8 hourty for 3 days	116 Hydracoek	S.epidermidis S. aureus Streptococcus, Corynebocteria	No antibiotic required unless the patient is inanunacompromised.	
Cyst Excision &       Supidermidis       No antibiotic required unless 2'         M       Supression for mark       Supression for mark         Streptococcus,       If infection,         Corracteria,       If infection,         Enterobacteria,       Supression for 3 days         If       Supression         Supression       Supression <tr< td=""><td>Cyst Excision &amp;       Subjectmodes       No antibiotic required unless 2'         Main Streptococcus, Corynebacteria, Enterobacteriaceae then Inj. Cefazolin 30 mg/kg IV       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Main Circumcision       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Subjecteriaceae       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Subjecteriaceae       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Subjecteriaceae       Subjecteriaceae         Subjecteriaceae       No antibiotic required unless 2'         Subjecteriaceae       Subjecteriaceae         Subjecteriaceaee       If infection         Streptococcus, Corynebacteriaceaee       If infection         Streptococcus, Subjecteriaceaeee       If infection         Streptococcus, Corynebacteriaceaeee       If infection         Streptococcus, Corynebacteriaceaeeee       If infection         Streptococcus, Corynebacteriaceaeeee       If infection         Streptococcus, Corynebacteriaceaeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee</td><td>1. Orthiopexy</td><td>S.epidermidis S. aureus Streptococcus, Coryaebacteria</td><td>Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single c or Inj. Ceftriaxone 50 mg/kg single dc</td><td></td></tr<>	Cyst Excision &       Subjectmodes       No antibiotic required unless 2'         Main Streptococcus, Corynebacteria, Enterobacteriaceae then Inj. Cefazolin 30 mg/kg IV       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Main Circumcision       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Subjecteriaceae       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Subjecteriaceae       Subjecteriaceae then Inj. Cefazolin 30 mg/kg IV         Subjecteriaceae       Subjecteriaceae         Subjecteriaceae       No antibiotic required unless 2'         Subjecteriaceae       Subjecteriaceae         Subjecteriaceaee       If infection         Streptococcus, Corynebacteriaceaee       If infection         Streptococcus, Subjecteriaceaeee       If infection         Streptococcus, Corynebacteriaceaeee       If infection         Streptococcus, Corynebacteriaceaeeee       If infection         Streptococcus, Corynebacteriaceaeeee       If infection         Streptococcus, Corynebacteriaceaeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee	1. Orthiopexy	S.epidermidis S. aureus Streptococcus, Coryaebacteria	Inj. Cefazolin 30 mg/kg IV single d Inj. Cefazolin 30 mg/kg IV single c or Inj. Ceftriaxone 50 mg/kg single dc	
le Cincurneision Stopidermidis No antibiotic required unless 2 Stopidermidis Stopidermidis infection Streptococcus, If infection, Corynebacteria. If infection, Enterobacteriaecoaction 10, Cefazolin 30 mg/kg IV 8 baurly for 3 days	If Circumcision Supplementation Supplementation Supplementation Supplementation Supplementation Streptoeccours, Convincibulteria (finitection, Convincibulteria (finitection, Enterobacteria (finitection)) Streptoeccours (finitection) Streptoeccours	Cyst Excision & in conversion the mark	Stepidermidis Staureus Streptococcus, Coryaebacteria Enterobacteriaceae	No antibiotic required unless 2' infection If infection, free Enj. Cefazolin 30 mg/kg IV 8 bourly for 3 days	
		le Commission	Stepidermidis Staureus Strepiococaus, Coryachacteria Enterobacteriacocac	No antibiotic required unless 2 infection If infection, then Inj. Cefazolin 30 mg/kg IV 8 hourly for 3 days	

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2	Clean Contaminated Surgery (Pre-operative prop)	hylaxis)			
2:	Mpelo- meningacaele Repair	Stepidermidis States Entershoeteriacoor	Inj: Ceftriaxone 100 mg / kg / d, qt: * Inj. Metronidazole 30 mg/kg / d, qs. * Inj Amikacin Duration : 5 days minimum Or Inj. Cefazolin 30 mg / kg Lv. 8 hourly + Inj. Metronidazole 30 mg / kg / d, q6h + Inj Amikacin Or Inj Meropenem 20 -40 mg / kg/dose thrice daily Duration : 10-14 days (with CSF leakage)	laj, Clindamyeta 20 mg/lig t.v. 3 hourly	Page   100
2h	Cyslascocy	5. attaux. Patembacteriaseae	inj. Ceftriaxene 100 mg / kg / d, q1; Or Inj. Cefazolin 30 mg /kg i.v. 8 hourly + Inj. Amikacin 15 mg/kg/d, q8h Duration : 1-3 days if no UTI Or 5-7 days if febrile UTI	Autibiatic to be directed is per pre-op urine culture sensitivity report-	
2	Thoracolomy (fo: decorfication)	S epidermidis S aureus Streptocorcus, Coryaebacteria, Enterchacteriaceae	See next column	Antibiotic as per culture sensitivity for 7-10 days	
24	Thoracolomy (other indications)	Stepidermidis Staureus Streptococcus, Corynebacteria, Patensbacteriaceae	Inj. Ceftriaxone 100 mg / kg /d, q15 ± Amikacin ± metronidazole Or Inj. Cefazolin 30 mg / kg i.v. 8 hourl +amikacin ± metronidazole		
71	Laparatamy	Suepidermidis S. aureus Streptococcus, Corynebacteria, Enterobacteriacea: Anocembes	Duration : 3-5 days inj. Cefazolin 30 mg / kg i.v. 8 hourt + Inj Amikacin + Inj Metronidazole 30 mg / kg / d; q6h Duration : 3-5 days Or Ceftriaxone / Ceftazidime + Amikacin + Metronidazole x 5 day Or Neonates - meropenem	Juration and antibiotic lepends on indication and surgery done	

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21	Цараковсор;	S.epidermidis S. aureus Strepiococcus, Corynebacteria, Enterobacteriaceae Anacrobes	Inj: Cefazolin 30 mg / kg i.v. 8 hour + Inj Amikacin ± Inj. Metronidazole 30 mg / kg / d, q6h for 3-5 days Or 1 dose for diagnostic Laparoscopy	f Same as above	
			Inj. Ceftriaxone 100 mg / kg i.v. 8 hourly + Inj. Metronidazole 30 mg / kg / d q6h 1-5 days for appendicectomy and 5 days for resection anastomosis	L	Page 101
2g	Thoracoscopy	S.epidermidis S. aureus Streptococcus, Corynebacteria, Patenshocteriacoc	CDH a. Off ventilator Ceftriaxone or ceftazidime Duration : 3 days b. On ventilator Meropenem or Imipenem + cilastati Duration : 7 days	Same as above Antibiotics according to TCU organisms in different hospitals maybe needed	
2h	Hypospadias	Stepidermidis Staureus Strepiococcus, Corynebacteria, Pateroloccuriaceae	Inj. Cefazolin 30 mg / kg i.v. 8 hour + Inj.Metronidazole 30 mg / kg / d q6h or Inj. Ceftriaxone 100 mg/kg i.v. 8 hou + Inj. Metronidazole 30 mg / kg / d, c	d IV amosystavulanie acid , 12.5 mg/kg/ dose twize day of amostailin for 1-3 days	
21	VP shunt Insertion	S.epidermidis S. aureus, Streptococcus, Enterobacteriareac Anaerabes	Ceffriaxone (double dose )+ Amika Duration :5 day:	claepending on CSP culture sensitivity reports	
2	TEF repair	S.epidormidis S. aureus Strepi ocorcus, Enterobacteriaceac Arcaerobes	Inj. Ceftriaxone 100mg/kg i.v. 8 hourly + Inj Amikacin + Inj. Metronidazole 30 (mg/kg)/d, i for 7 days or Piperacillin + tazobactam 90mg/kg/dose four times a day + metronidazole	Meropenem Imipenem * cilastatin or qcolistin for 7 days for bad patients/ on ventilator/ delayed presentation Antibiotics according to ICU organisms in different hospitals may be needed.	

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9L	Appendicedamy	Stepidermidis Staureus Strepiococcus, Enterobacteriaceae Anaecobes	Ceftriaxone or Ceftazidime single shot OR Co-amoxiclav-single shot Complicated appendicitis - Ceftriax ± amikacin + metronidazole	inj: Clindamycin 20 mg /kg i.v. 8 hourly 4 Gentamicin, 3 mg per kg or Mozificanin 10 mg/kg + Metroridazole
			Duration : 3-7 days	Duration : 5-7days
21	Choledochal Cyst	Stepidermidis Staaraus Strepiococcus, Enterobacteriaceae Araceabes	Ceffelaxone or Cefoperazone ± amikacin + Matomidazle Duration : 7 days	Same os abour
2111	Chalceystectomy	Stepidermidis Staureus Streptococcus, Enterobacteriaceae Anoccobes	inj, Ceftriaxone ± Co-amoxiclay single shoi Dr Cefoperazore + Amikacin +	Sama os abour
?п	Abdominal pull Ibrough	Stepidermidis Staureus Streptococcus, Streptococcus, Enterobacteriaceae Anaceabes	Ceftriaxone or Ceftazidime ± amikacin + Metronidazole Or Cefazolin 30 mg / kg i.v. 8 hourly	Same as above
20	ASARP	Stepidermidis Staureus	Metronidazole 30 mg / kg /d, q6 Duration : 5-7 days Ceftriaxone or Ceftazidime     ± Amilkacin	t Same as above
		Streptococcus. Enterobacteriaceae Anoccabes	+ Metronidazole Or Cefazolin 30 mg/kg i.v. 8 hourly + Amikacin + Metronidazole 30 mg / kg /d, qt Duration : 5-7days	
2p	TSART	S.epidermidis S. aureus	Ceftriaxone or ceftazidime ± amika + metro	( Same as abase
		Streptocorcus, Streptocorcus Enterobacteriaceae Arosendes	Or Cefazolin 30 mg/kg i.v. 8 hourly + Amikacin + Metronidazole 30 mg / kg /d, q6i are used. Duration : 3-5 days	ti da se
2q	Bihary airesia Re	Stepidormidis Stateois Streptococcus, Enterobacteriaceae	Ceftrfaxone or Cefoperazon: 1 Amikacin 2 Metronidazole Duration : 7 days	Sama og above
21	Hepatic Resection & other Hepato Biliary Conditions	September S. aureus Streptoroccus, Enterobacteriaceae Anaenabes	Piperacill-intazobactam, Infants 29 months: 80 mg/kg of the piperacill component, Children >9 months an «40 kg: 100 mg/kg of the piperacill component 2 hrly Or Cefoperazone / Ceftriaxone + motronidazole Duration : 5 days	Game as about

Ne	Condition	Expected pathogen/s	Antimicrobial of choice Dosc/Route/ Frequency/Duration	Alternatives/ Remarks
3	Contaminated	(Empiric Therapy		
3a	Incision & drainage of Abscesses Superficial abscesses	S.aureus (mosily) S.pyogenes, E.coli	Clovacillin 25-80mg/kg in 4 divided 3doses for 5-10 days	Cephalasin / co-amosystav for 10-14 days
3Ь	Deep intra- abstominal absorsses	S.aureus (mostly) S.pyogenes, F.coli	Ceflazidime or refiriaxore + amikacin + notro Duration : 5-7 days ± chloroquine x 5-7 days	Surgical drainage followed by placement of indwelling drains is the procedure of choice.
2	Stama Formation	Stepidermidis Scaureus Streptococrus, Enterobacteriaceae Americabes	Ceftriaxone/ ceftazidime * metronidazole Or Ampicillin- sulbactam 50 mg/kg of the ampicillin component + Centamicin 2.5mg/kg i.v. 8 hourly +Metronidazole 15mg/kg i.v. 8 hourly Duration : 3 days If neonate 5 days	May nord to be stepped up if enterscalits, sick child, sepsis or depending on ICU flora
٥.		for example of	a satura tana kita tan taha tan s	A The same address on the
		tow beautions	Antimieropial of endice	ALL DE LI DE LE
	Condition	pathogen/s	Dose/feotie/rectiency/Dimitor	Kemarks
No Rd	Fishelation	pathogen/s S.epidermidis S. aureus Streptocroceus, Enterobacteriacea; Enterococei Anaenabes	<ul> <li>- oral Cefazolin + Metronidazole for 3 days cefazolin 30 mg/kg i.v. 8 hourly + metronidazole 30 (mg/kg)/d, q6h or 40 mg/kg 2 hrly or ampicillin - sulbactam 50 mg/kg of the ampicillin component or ceftriaxone + metronidazole</li> </ul>	Clindaniycin 20mg/kg i.v. q8h + Gentanicin, 3 mg per kg or fluoroquinolone (nozriflexacin 10 mg/kg) or Metronidazole + aminoglycoside or fluoroquinolone

.51	Perforative perilonitis	Enteropocci Enteropocteriaceoe Anocrobos	Cefficlasone / Ceffazidime+amikacin + metronidazole x 5 days Neonates meropenem /colistin x 5-7 days	As per requirement - In paediatric surgery conditions, in neonates for surgical intervention meropenem or insipenem * cilastatin are required
e e	Condition	Expected pathogen/s	Antimicrobial of choice Doss/Route/Frequency/Duration	Alternatives/ Remarks
38	Debridement of hums	S. aureus Enterobacteriaceae Denstamenas	Piperacillin-tazobactam, Infants 29 mo: 80 mg/kg of the piperacillin component, Children >9 mo and = 40 kg; 100 mg/kg of the piperacillin component 2 hrly * metro for 5-7 days or cefotaxime 50 mg/kg 3 hrly + ampicillin 50 mg/kg 2 hrly for 5-7 days	As per tissue culture sensitivity Topical therapy is often applied to prevent infections and to treat ongoing infections or used as an adjunct to surgical treatment and systemic antibiotics. Topical silver nitrate + gentamicin are preferred
ih	Resection & anastomosis	S.epidermidis S. aureus Streptornecus, Enterobacteriacea: Enterocecci Anaerabes	Ceffriasone / Ceffazidime+amikacin + metronidazole x 5 days Neonates meropenem / colistin x 5-7 days	Clindamycin 20mg/kg i.v. 8 hourly + aminoglycoside (gentamicin, 3 mg per kg) or fluoroquinolone (mexiflavacin 10 mg/kg) + Metronidazole + aminoglycoside - as per requirement x 5-7 days