

## Launch of FIRST Antibiotic Protocol for GICU 2017

HCTM PPUKM Antimicrobial Stewardship (AMS) Committee has recently develop an Antibiotic Protocol for General Intensive Care Unit (GICU). This is a collaboration between AMS Committee and Department of Anesthesiology & Intensive Care. Data were collected from December 2014 up to June 2016. Doctors are encourage to refer to this protocol when initiating antibiotics in ICU.

GICU Empirical Therapy		(Send cultures before starting antibiotics)	
	TYPE 1 (CAI)	TYPE 2 (HAI)	TYPE 3 (NI)
<b>Blood</b>	Amoxicillin / clavulanate If IDU: Cloxacillin	Ertapenem + Amikacin	If patient in severe sepsis / septic shock: Imipenem/ Meropenem ± Vancomycin ± Polymyxin* If strongly suspected of MRSA use Vancomycin * Polymyxin is to be initiated with ID consultation only
<b>Lung</b>	Ceftriaxone + Azithromycin	Piperacillin/ tazobactam ± Gentamicin	If patient in severe sepsis/septic shock: Imipenem/ Meropenem ± Vancomycin ± Polymyxin* If strongly suspected of MRSA use Vancomycin * Polymyxin is to be initiated with ID consultation only
<b>Skin and Soft tissue</b>	Amoxicillin / clavulanate	Piperacillin / tazobactam ± Gentamicin	If patient in severe sepsis/septic shock: Imipenem / Meropenem + Vancomycin If strongly suspected of MRSA use Vancomycin
<b>Continuing Treatment</b>	If the pathogen is sensitive or culture is negative & patient responds clinically; Consider ORAL switch if 1. T < 38 °C for >24 hours with clinical improvement AND 2. Orally tolerated, AND 3. No sign of sepsis AND 4. No high risk / deep seated infection.		De escalate to narrowest spectrum antimicrobials If culture negative and clinically stable, consider 5-7 days duration (* Strongly recommend ID consultation)

**Type 1** → No contact with health care system in the last 90 days AND No prior antibiotic treatment in the last 90 days AND young Patient with no or few co-morbid conditions

**Type 2** → Contact with health care system in past 3 months or < 1 week in the hospital or < 48hrs in ICU (eg. admission in hospital or nursing home), invasive procedure OR Recent antibiotic therapy in last 3 months OR elderly (> 65 years) with few co-morbidities

**Type 3** → Hospitalization > 5-7 days ± infections following major invasive procedures OR Recent & multiple antibiotic therapies OR Elderly (> 65 years) + multiple co-morbidities (eg. structural lung disease, immunodeficiency)

### TOP 5 Pathogens [GICU] Dec 2014 – Jun 2016

Blood Stream Infection (BSI) (N=170 [Top 5 is 61%])
Staphylococcus aureus [n= 54; MRSA 22 (41%)]
Escherichia coli [n= 28; ESBL 5 (18%), CRE 1 (4%)]
Klebsiella spp [n= 23; ESBL 8 (35%), CRE 1 (4%)]
Burkholderia cepacia [n=21 (9%)]
Pseudomonas aeruginosa [n=12 (5%)]

Respiratory Infection (N= 371 [Top 5 is 85%])
Acinetobacter sp. [n=82 (22%) ]
Pseudomonas aeruginosa [n=79 (21%) ]
Klebsiella sp. [n= 79; ESBL 33 (42%) ]
Staphylococcus aureus [n= 79; MRSA 13 (28%) ]
Enterobacter sp. [n=27; ESBL 7(25%) ]

Skin and Soft Tissue Infections (SSTI) (N=117 [Top5 is 69%])
Klebsiella sp. [n= 22; ESBL 11 (50%) ]
Staphylococcus aureus [n= 17; MRSA 11 (65%) ]
Pseudomonas aeruginosa [n=16 (14%) ]

Acinetobacter sp. [n=13 (11%) ]
Escherichia coli. [n=13; ESBL 6 (46%) ]

# Updates From Pharmacy Department

## SHORT EXPIRY **FORMULARY** ITEMS

Dear Professors/Specialists/Doctors,

Please be informed that these drugs will be expiring soon. Kindly assist usage where deemed necessary.

No	Drugs	Expiry Date & Quantity	Prescriber & Indication
1	Novorapid Penfill	30 June 2017, 45 boxes x 5's	A* : Endocrinologists only Treatment of patients with diabetes mellitus.
2	Clindamycin 300mg/2mL Inj	31 May 2017, 100 amps	Use when indicated.
3	Exelon Patch 5mg	31 July 2017, 23 boxes x 30's	Mild to moderate dementia in Alzheimer's disease/Parkinson's disease
4	BSS Plus Intraocular Irrigating Solution	30 May 2017, 50 bottles x 1's	A* : Ophthalmologists only. For use during all intraocular surgical procedures with constellation machine in OT.
5	Caspofungin 50mg Inj	1 July 2017, 22 vials	A* : Respiratory Specialist, Nephrologists and ID Consultant only. 1) Invasive Candidiasis, including candidemia 2) Esophageal Candidiasis 3) Invasive aspergillosis in patients who are refractory to or intolerant of other therapies (i.e amphotericin B , lipid formulations of amphotericin B , and/or intrakonazole).
6	Ampicillin Sodium & Sulbactam Oral Suspension 250mg/5mL, 30mL	31 July 2017, 5 bottles	B: Medical Officer General : Child <30kg : 12.5-25mg/kg q12H, >30kg : 375-750mg q12H

## SHORT EXPIRY **NON-FORMULARY** ITEMS

No	Drug	Expiry Date & Quantity	Price	Prescriber/Indication
1	<b>Bivalent Human Papilloma-virus</b> Vaccine Types 16 & 18 ( <b>CERVARIX</b> ) 0.5mL PFS	31/05/2017 10 vials	RM 163.90/inj	Prevention of cervical cancer for females from age 10-45 years.
2	<b>Dexamethasone</b> Phosphate 0.1% Eye Drops 0.5ml ( <b>MINIMS DEXAMETHASONE</b> )	30/05/2017 60 bottles	RM 75.60/box	Non-infected, steroid responsive, inflammatory conditions of the eye.
3	<b>Dexamethasone</b> 0.1%, Neomycin 3.5mg, Poly B 6000u/ M Eye Drop ( <b>MAXITROL</b> )	30/5/2017 RM 75.60/box	RM8.30/bottle	Treating eye infections and associated symptoms, including redness, irritation, and discomfort.
4	<b>Diclofenac</b> Sod Emulgel 20g ( <b>VOLTAREN EMULGEL</b> )	31/05/2017 16 tubes	RM 20.70/each	Treat joint pain caused by <u>osteoarthritis</u> in the hands, wrists, elbows, knees, ankles, or feet.
5	<b>Irinotecan</b> 40mg Inj. ( <b>CAMPTO</b> )	31/05/2017 20 vials	RM 169.10/inj	Advanced colorectal cancer in combination with 5-fluorouracil and folinic acid without prior chemotherapy for advanced disease. As a single agent in patient who have failed an established 5-fluorouracil containing regimen.
6	<b>Panitumumab</b> 20mg/ML, 5ml Solution For Infusion ( <b>VECTIBIX</b> )	30/05/2017 25 vials	RM 1713.20/inj	Treatment of patients with wild type KRAS metastatic colorectal cancer.
7	<b>Indacaterol</b> 150mcg Inhalation capsule ( <b>ONBREZ BREEZHALER</b> )	31 July 2017, 7 inhalers x 1's	RM107.00/inhaler	Maintenance bronchodilator treatment of airflow obstruction in patients with COPD
8	Rivastigmine Tartrate 4.6mg/24 hr EXELON PATCH 5mg	31 July 2017, 23 boxes x 30's		Mild to moderate dementia in Alzheimer's disease/Parkinson's disease

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PPUKM Formulary is now available in **Play Store** (Drug Formulary DIY) and **Apple Store** (PPUKM Formulary).