

2ND EDITION

# PHARMACY BULLETIN

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PHARMACY DEPARTMENT, HOSPITAL SERI MANJUNG

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Shiau Hui and Mrs. Chuah Bee Leng

# Medication safety

By : Miss Noor Azrina binti Sanik

## STABILITY OF ANTIMICROBIAL INJECTIONS AFTER RECONSTITUTION

No	Generic Name	Current Brand Name	Direction for Reconstitution	Stability After Reconstitution	
				RT (25°C)	Fridge (2-8°C)
1	Acyclovir 250mg	Vaxcel (Kotra Pharma)	IV : WFI or NS (10ml)	48 hours in less than 25°C	-
2	Amikacin 250mg/ml	Apalin (Duopharma)	Already in solution	24 hours	-
3	Amikacin 500mg/ml	Apalin (Duopharma)	Already in solution	24 hours	-
4	Ampicillin 500mg	Kampibiotic (Karnataka)	IV : WFI (10ml) IM : WFI (1.5ml)	Single use	-
5	Ampicillin 1g & Sulbactam	Ampicillin & Sulbactam for Injection (Karnataka)	IV or IM: 3.2ml	Single use	-
6	Amphotericin B 50mg	Amphotret (Bharat Serum and Vaccine)	IV: WFI (10ml)	-	7 days
7	Amoxicillin 1g & Clavulanic Acid 200mg	Clavam (Alkem)	IV: WFI (20ml)	Single use	-
8	Artesunate 60mg	Artesun (Guilin)	Preparation: 1ml Na bicarbonate 5%, shake 2-3 min until dissolved, get rid of gas. IV: NS or D5% (5ml) IM: NS or D5% (2ml)	Single use	-
9	Azithromycin 500mg	Vaxcel Azithromycin (Kotra Pharma)	IV: WFI (4.8ml)	24 hours	24 hours
10	Benzylpenicillin 1MU (600mg)	Bepen (Karnataka)	IV: WFI (≥2ml) IM: WFI (≥2ml)	2 days	6 days
11	Benzylpenicillin 5MU (3g)	Bepen (Karnataka)	IV: WFI (≥10ml) IM: WFI (≥10ml)	2 days	6 days
12	Benzathine Benzylpenicillin 2.4MU	Sterile Penicillin G Benzathine (Karnataka)	IM: WFI (≥8ml)	Single use	-
13	Cefazolin 1g	Cefazolin (Sandoz)	IV: WFI or NS (≥4ml) IM: 0.5% Lidocaine (4ml)	Single use	-
14	Cefepime 1g	Vaxcel Cefepime (Kotra Pharma)	IV: WFI or D5% or NS (10ml) IM: WFI or D5% or NS (3ml)	24 hours	7 days

# Medication safety

By : Miss Ling Shiau Hui

## STABILITY OF ANTIMICROBIAL INJECTIONS AFTER RECONSTITUTION

No	Generic Name	Current Brand Name	Direction for Reconstitution	Stability After Reconstitution	
				RT (25°C)	Fridge (2-8°C)
15	Cefoperazone 1g	Bicafar (Duopharma)	IV: WFI or NS or D5% (5ml) IM: WFI (2.6ml) + 2% Lidocaine (0.9ml) Withdrawable volume= 4ml (Yield 250mg/ml)	24 hours	5 days
16	Cefoperazone 500mg & Sulbactam 500mg	Vaxcel Cefobactam (Kotra Pharma)	IV: WFI or NS or D5% (3.4ml) (Yield 250mg/ml)	24 hours	-
17	Cefotaxime 500mg	Rekaxime (Duopharma)	IV: WFI (≥2ml) IM: WFI (2ml)	24 hours	-
18	Ceftazidime 2g	Cefatum (Duopharma)	IV: WFI (10ml) IM: Lignocaine 0.5% (3ml)	12 hours 6 hours	7 days 4 days
19	Ceftriaxone 1g	Unocef (Duopharma)	IV: WFI or NS or D5% (9.6ml)	3 days	10 days
			IM: WFI or NS or D5% or 1% Lidocaine solution (3.6ml) (Yield 250mg/ml)	24 hours	3 days
20	Cefuroxime 750mg	Anikef (Duopharma)	IV: WFI (≥6ml) IM: WFI (3ml)	5 hours	48 hours
21	Ciprofloxacin 200mg/10ml	Ciproxol (Ain Medicare)	Already in solution	Single use	-
22	Cloxacillin 250mg	Cloxacillin Sodium for Inj (Karnataka)	IV: WFI (≥1-2ml) IM: WFI (≥1-2ml)	Single use	-
23	Cloxacillin 500mg	Cloxacillin Sodium for Inj (Karnataka)	IV: WFI (≥2ml) IM: WFI (≥2ml)	Single use	-
24	Ertapenem 1g	Invanz (MSD)	IV: WFI or NS (10ml)	6 hours	24 hours
			IM: 1% OR 2% Lidocaine (3.2ml)	1 hour	-
25	Fluconazole 100mg/50ml	Fluconol (Ain Medicare)	Already in solution	Single use	-
26	Gentamycin 80mg/2ml	Garasent (Duopharma)	Already in solution	Single use	-

# Medication safety

By : Mrs Chuah Bee Leng

## STABILITY OF ANTIMICROBIAL INJECTIONS AFTER RECONSTITUTION

No	Generic Name	Current Brand Name	Direction for Reconstitution	Stability After Reconstitution	
				RT (25°C)	Fridge (2-8°C)
27	Imipenem 500mg & Cilastatin 500mg	Imipenem/Cilastatin (Fresenius Kabi)	IV: Add 10ml NS or D5% to vial, shake well & transfer to infusion solution container. Repeat with additional 10ml NS or D5% to ensure complete transfer from vial to infusion solution.	4 hours	24 hours
28	Kanamycin 1g powder	Kanamycin Inj (Yung Shin)	Already in solution	Single use	-
29	Linezolid 600mg/300ml	Zyvox (Pfizer)	Already in solution	Single use	-
30	Meropenem 1g	Nuronem (Sun Pharmaceutical)	IV: NS (20ml)	8 hours (after dilution)	48 hours (after dilution)
31	Metronidazole 500mg	Metronol (Ain Medicare)	Already in solution	Single use	-
32	Netilmicin 150mg/2ml	Lotifar (Duopharma)	Already in solution	Single use	-
33	Piperacillin 4g & Tazobactam 0.5g	Aurotaz – P (Aurobindo)	IV: WFI or NS (20ml)	-	24 hours
34	Polymyxin E 1MU	Colomycin (Xellia Pharmaceuticals)	IV: WFI or NS (10-50ml)	Single use	-
35	Streptomycin 1g	Streptin (SM Pharmaceuticals)	IM: 4.2-4.5ml WFI or NS (Yield 200mg/ml) <b>OR</b> IM: 3.2-3.5ml WFI or NS (yield 250mg/ml)	Single use	24 hours
36	Sulfamethoxazole 400mg & Trimethoprim 80mg per 5ml	Bactrim (Deva)	Already in solution (Must be diluted prior to administration; stable up to 6 hours after being diluted)	Single use	-
37	Vancomycin 500mg	Celovan (Mylan)	IV: WFI (10ml)	48 hours	48 hours
38	Zidovudine 200mg/20ml	Retrovir (Viiv Healthcare)	Already in solution. MUST be diluted prior administration. (For further dilution with D5%, stable for 48 hours at both 5°C and 25°C)		-

### REFERENCE


- i. Product leaflet (for all medications).

# Medication safety

By : Maryam Syafiqah binti Abdul Latif



## CAN YOU GUESS WHAT'S MISSING ?

Nama: <i>Mohamad A bin Mohamad B</i>	R. <i>T. Metformin BP</i> <i>T. Gliclazide BD</i> <i>T. Perindopril OD</i> <i>T. Amlodipine OD</i>	Perubatan 6A 
No. K/P: <i>551111-11-5555</i>		
No. Daftar:		
Umur: <i>60 Tahun</i>		
Tarikh: <i>7/6/2015</i>		
Penyakit: <i>Hypertension</i> <i>T2DM</i>	HOSPITAL NEGERI	DR NURUL A BINTI MOHAMAD B PECAHAT PERUBATAN U44 KLINIK KESIHATAN ABC (Tandatangan)

WJDCU000147—PN

*23111190*  
*Wahid*  
*day to day*  
*hypertension*  
*but no amlodipine*  
*in my hand*  
Don't write like this

A badly written and incomplete prescription can cause misinterpretation and lead to possible dispensing error.

# Medication safety



Complete prescription = medication safety

Nama: <i>Mohamad A bin Mohamad B</i>	TCA : 10/12/2015 R.	Perubatan 6A
No. K/P: <i>551111-11-5555</i>	<i>T. Metformin 1g BD</i>	3/ 12
No. Daftar:	<i>T. Gliclazide 80mg BD</i>	
Umur: <i>60 Tahun</i>	<i>T. Perindopril 4mg OD</i>	
Tarikh: <i>7/6/2015</i>	<i>T. Amlodipine 10mg OD</i>	
Penyakit: <i>Hypertension</i> <i>T2DM</i>	HOSPITAL NEGERI	DR NURUL A BINTI MOHAMAD B PECAJAI PERUBATAN U044 KLINIK KESIHATAN ABC (Tandatangan)

WJDCU000147—PN



PATIENT NAME & IC NUMBER



NEXT TCA DATE



MEDICATION NAME, DOSE, DOSAGE FORM, FREQUENCY AND DURATION



PRESCRIBER NAME, SIGNATURE AND STAMP WITH MMC REG NO



PRESCRIPTION DATE AND PATIENT'S AGE



DIAGNOSIS



BODY WEIGHT FOR CHILDREN

## REFERENCE

- Malaysian Pharmaceutical Society (MPS) Bulletin.

# Rabies vaccine

By : Fadzilah binti Mohamad



<b>INDICATION</b>	<p>Prevention of rabies in children and adults. Primary vaccination or booster dose before and after exposure.</p> <p>i. <b>Pre-exposure rabies prevention (pre-exposure vaccination)</b> Offer to subject at high risk of contamination by the rabies virus.</p> <p>ii. <b>Post-exposure rabies prevention (post-exposure vaccination)</b> Should be initiated immediately at the slightest risk of rabies contamination. Post-exposure treatment includes local non-specific treatment of the wound, vaccination and passive immunisation with rabies immunoglobulins.</p>
<b>DOSAGE</b>	<p>Each booster dose consists in the administration of one dose of 0.5 mL.</p> <p>i. <b>Pre-exposure prophylaxis against rabies :</b> 3 IM inj on days 0, 7 and on day 21 or 28, followed by a booster inj after 1 year &amp; booster inj every 5 year</p> <p>ii. <b>Post-exposure prophylaxis of rabies :</b> Non-immunised patient: 5 IM inj on days 0, 3, 7, 14 and day 28. Fully immunised patient: 2 booster doses on day 0 and 3</p>
<b>METHOD OF ADMINISTRATION</b>	<p>Administered via the <b>INTRAMUSCULAR</b> route.</p> <p>&lt;12 months: the anterolateral region of the thigh muscle &gt;12 months: the deltoid muscle</p> <p><b>DO NOT INJECT</b> in the buttocks region and via the intravascular route.</p>
<b>ADVERSE REACTIONS</b>	<p>Pain, erythema, oedema, pruritus &amp; induration at injection site, moderate fever, shivering, malaise, asthenia, headaches, dizziness, myalgia, GI disorders.</p>
<b>STORAGE</b>	<p>Store in the refrigerator (+2°C - +8°C). Do not freeze. Store in the original outer package, protected from light.</p>

# Pharmacy Value Added Services

By : Fouzia Hanim binti Abd Halim

## **Ubat Melalui Pos (UMP)**

The supply of medication is sent directly to the patient's house through Pos Malaysia service. Every month Pos Malaysia will send the medication to the patient and they have to pay RM5 as a shipping charge. However, there are some medications that cannot be sent through UMP such as fridge item medication, psychotropic medication and topical preparation.

## **Sistem Pendispensan Ubat Bersepadu (SPUB)**

A uniform referral system between the original pharmacy and other healthcare facilities under KKM. Help patients in terms of saving the cost and travel time in obtaining a monthly supply of medication.

## **Letak & Ambil**

Patient will leave the prescription and come back later to collect the medications.

## **SMS & Ambil**

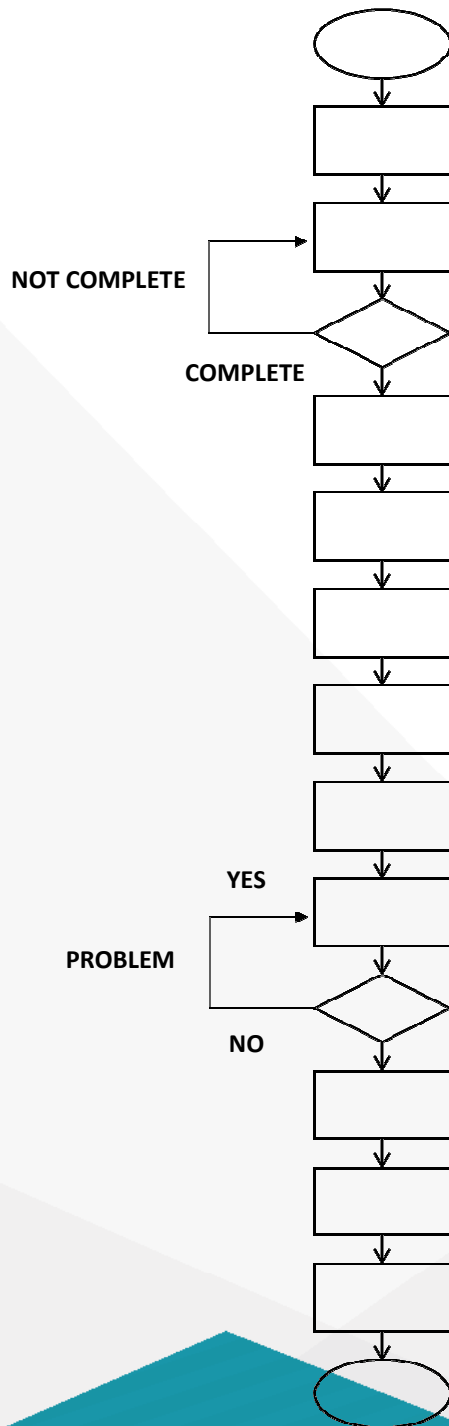
Patient will send an SMS regarding the details, date and time 2 days earlier before they come to the pharmacy to collect the medication.

## **Kad Temujanji**

This card will be offered to patients with chronic diseases or patients with total medication more than 5 in one prescription.

# Value Added Services

## UMP



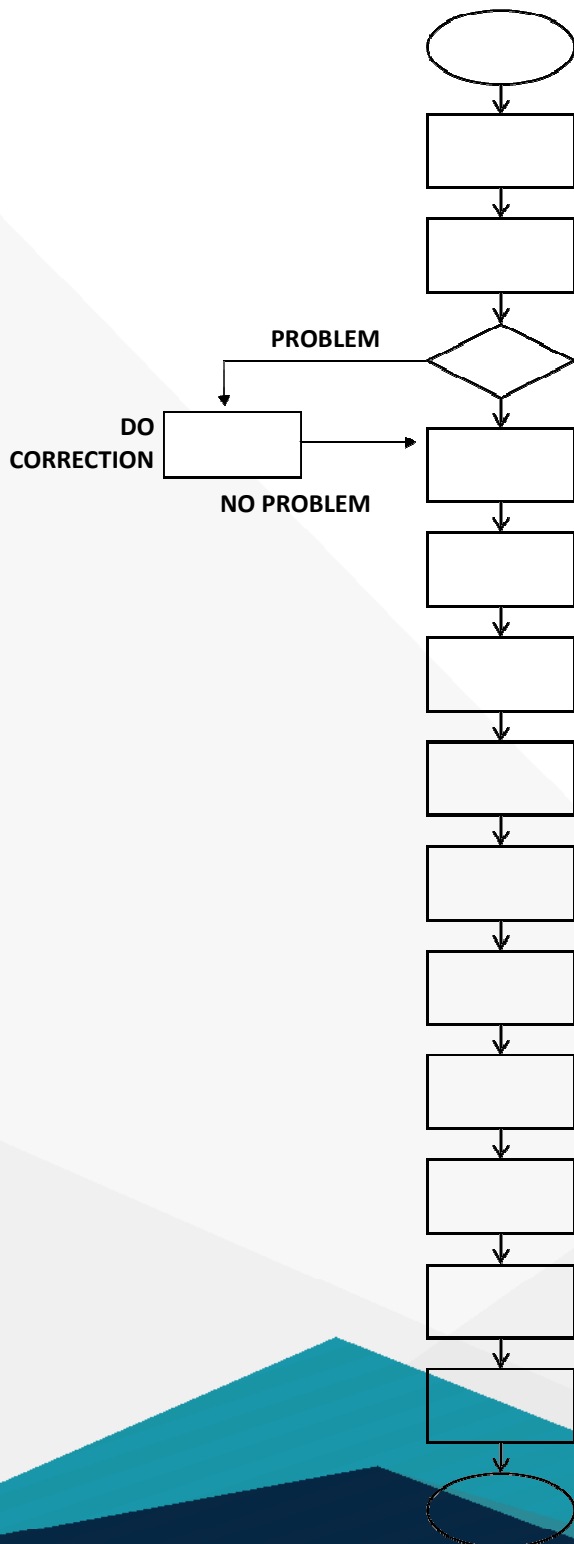
1. Start
2. Offer & give explanation to patient regarding UMP process
3. Patient fill the UMP form
4. Check the form, especially patient details such as address and phone number
5. Print two copies of prescription
6. Stamp the UMP chop on the original prescription
7. Give the original prescription to the patient
8. Staple the UMP form together with the copied prescription
9. Record patient's information in UMP registry folder and in the computer
10. Prepare the medication
11. Counter check the medication and label
12. Sign at the back of prescription after counter check
13. Packing and wrap the medication using bubble wrap
14. Put the bubble wrap inside the Sampul Kiriman Poslaju and post to patient
15. End

### REFERENCE

- i. Laman Portal Rasmi Program Perkhidmatan Farmasi (SPUB)

# Value Added Services

## SPUB



1. Start
2. Receive prescription from patient at the counter
3. Accept the request from patient to take the balance medication at other KKM facilities and identify the problem
4. Verify the prescription
5. The prescription must be chopped with SPUB stamp and pharmacist in charge need to write the name and signed
6. Fill patient's information in the SPUB R1 form manually or using system. The form needs to be printed if using system
7. Prepare the medication for one month supply
8. Provide counselling to patient if needed
9. Ensure all the information regarding the supply of medication is stated clearly on the prescription
10. Give the prescription and explain the procedure to obtain the next supply of medication at other KKM facilities.
11. Fax/post/email the SPUB R1 form within 7 days
12. Contact the referred facilities to ensure they receive the form
13. Keep the form in one SPUB file
14. Record all SPUB cases in the SPUB registry and Form PF 5.3
15. End

### REFERENCE

1. Manual Control Room Program Performance Parameter (SPUB)

# Entresto

By : Shugania a/p Nadarajan



Entresto contains a combination of sacubitril and valsartan. Sacubitril is a blood pressure medicine. It works by increasing the levels of certain proteins in the body that can dilate (widen) blood vessels. This helps lower blood pressure by reducing sodium levels. Valsartan is an angiotensin II receptor blocker (sometimes called an ARB). Valsartan keeps blood vessels from narrowing, which lowers blood pressure and improves blood flow.

<p><b>INDICATION</b></p>	<p><b>Heart Failure</b></p> <ol style="list-style-type: none"> <li>1. Indicated to reduce the risk of cardiovascular death and hospitalization for heart failure (HF) in patients with chronic heart failure (CHF) (NYHA class II-IV) and reduced ejection fraction.</li> <li>2. Initial dose (not currently taking ACE inhibitor or angiotensin receptor blocker, or taking low dose): Sacubitril 24mg/ valsartan 26mg orally BD Initial dose (switching from an ACE inhibitor or angiotensin receptor blocker, or taking low dose): Sacubitril 49mg/ valsartan 51mg orally BD</li> <li>3. Target maintenance dose: After 2-4 weeks, double the dose to the target maintenance dose of Sacubitril 97mg/ valsartan 103mg orally BD as tolerated.</li> </ol>
<p><b>DOSAGE FORMS AND STRENGTHS</b></p>	<p>Film-coated tablets (sacubitril/valsartan): 24/26 mg; 49/51 mg; 97/103 mg</p>
<p><b>DOSE ADJUSTMENT</b></p>	<p><b>Renal impairment</b></p> <p>Mild-to-moderate (eGFR <math>\geq 30</math> mL/min/1.73 m<sup>2</sup>): No starting dose adjustment required</p> <p>Severe (eGFR <math>&lt; 30</math> mL/min/1.73 m<sup>2</sup>): Reduce starting dose to 24 mg/26 mg BID; double the dose every 2-4 weeks to target maintenance dose of 97 mg/103 mg BD as tolerated</p> <p><b>Hepatic impairment</b></p> <p>Mild (Child-Pugh A): No starting dose adjustment required</p> <p>Moderate (Child-Pugh B): Reduce starting dose to 24 mg/26 mg BD; double the dose every 2-4 weeks to target maintenance dose of 97 mg/103 mg BD as tolerated</p> <p>Severe (Child-Pugh C): Not recommended</p>

# Entresto



<b>DOSING CONSIDERATIONS</b>	Contraindicated with concomitant use of an ACE inhibitor; if switching from an ACE inhibitor to sacubitril/valsartan, allow a washout period of 36 hr between administration of the 2 drugs.
<b>ADMINISTRATION</b>	May take with or without food
<b>PREGNANCY AND BREASTFEEDING</b>	Entresto should be discontinued as soon as pregnancy detected because during the second and third trimesters of pregnancy, it may results in oligohydramnios which causes fetal injury (eg, hypotension, neonatal skull hypoplasia, anuria, reversible and irreversible renal failure) and death. Entresto is not recommended in breastfeeding.
<b>PHARMACOKINETIC</b>	<p><b>Absorption</b></p> <p>Sacubitril bioavailability, oral: <math>\geq 60\%</math></p> <p>Valsartan in Entresto is more bioavailable than the valsartan in other marketed tablet formulations; 26 mg, 51 mg, and 103 mg of valsartan in Entresto is equivalent to 40 mg, 80 mg, and 160 mg of valsartan in other marketed tablet formulations, respectively</p> <p><b>Distribution</b></p> <p>Protein bound : 94-97%</p> <p>Sacubitri, Vd: 103 L, Valsartan, Vd: 75 L</p> <p><b>Metabolism</b></p> <p>Sacubitril is a prodrug that is metabolized by esterases to the active metabolite LBQ657. LBQ657 is not further metabolized to a significant extent. Valsartan is minimally metabolized; only about 20% of the dose is recovered as metabolites; a hydroxyl metabolite has been identified in plasma at low concentrations (&lt;10%)</p> <p><b>Excretion</b></p> <p>Sacubitril: 52-68% (primarily as LBQ657) in urine; 37-48% (primarily as LBQ657) in feces, Valsartan: 13% in urine; 86% in feces.</p>

## REFERENCE

Medscape. (2019). Entresto (sacubitril/valsartan) dosing, interactions, adverse effects and more. [online] Available at: <https://reference.medscape.com/drug/entresto-sacubitril-valsartan-1000010> [Assessed 16/8/2019].

# Alteplase

By : Nurfatih Syahirah



Alteplase is a thrombolytic drug that helps the body to produce a substance that dissolves unwanted blood clots. Alteplase is used to treat a stroke caused by a blood clot or other obstruction in a blood vessel, prevent death from acute myocardial infarction and to treat pulmonary embolism. It is also used to dissolve blood clots that have formed in or around a catheter placed inside a blood vessel. This improves the flow of medicines injected in through the catheter, or blood drawn out through the catheter.

<b>INDICATION</b> - as practice in Hospital Seri Manjung	<b>Acute ischaemic stroke</b>  0.9 mg/kg (max 90 mg) infuse over 60 minutes with 10% of the total dose administered as an initial IV bolus. Initial treatment as early as possible within 4.5 hours of symptom onset
<b>PHARMACOLOGIC CATEGORY</b>	Thrombolytic agent
<b>DOSAGE FORMS AND STRENGTH</b>	<b>1 box of Actilyse® Treatment set contains:</b> 2 injection vials Actilyse® 20mg 2 vials of 50ml water for injection 2 conduction cannulars
<b>PRICE</b>	RM 4695.00 / 2's
<b>DOSE ADJUSTMENT</b>	<b>Renal Impairment</b> There are no dosage adjustments provided in the manufacturer's labelling. Haemostatic defects due to severe renal disease may increase the risk of bleeding  <b>Hepatic Impairment</b> There are no dosage adjustments provided in the manufacturer's labelling. Significant hepatic impairment and haemostatic defects due to severe hepatic disease may increase the risk of bleeding.
<b>STORAGE</b>	<b>Chemical and physical in-use stability</b> The reconstituted solution has been demonstrated to be stable for 24 hours at 2 °C – 8 °C and for 8 hours at 25 °C.

# Alteplase



<p><b>PREGNANCY AND BREASTFEEDING</b></p>	<p>Published studies and case reports in pregnant women are insufficient to inform a drug associated risk of adverse developmental outcomes. The most common complication is bleeding; pregnancy may increase this risk. There are no data on presence of Alteplase in human milk, effects on breastfed infant or on milk production</p>
<p><b>PHARMACOLOGY</b></p>	<p><b>Mechanism of Action :</b> Recombinant human tissue-type activator (t-PA); produces local fibrinolysis. Promotes thrombolysis by converting plasminogen to plasmin; plasmin degrades fibrin and fibrinogen</p> <p><b>Absorption :</b> Onset: Coronary thrombolysis occurs in 30 min Peak plasma time: 20-40 min</p> <p><b>Distribution :</b> Vd: 27-53 L</p> <p><b>Metabolism :</b> Rapidly cleared from circulation by liver. Metabolites: Degradation products (constituent amino acids of alteplase)</p> <p><b>Elimination</b> Initial half-life: 5 minutes (free, unbound form) Terminal half-life: 72 minutes Total body clearance: 34.3-38.4 mL/hr</p> <p><b>Excretion :</b> Urine</p>
<p><b>SUPPLYING PROCEDURE IN CASE OF ACUTE STROKE</b></p>	<ol style="list-style-type: none"> <li>1. When there is a case of acute stroke indicated for Alteplase, doctor will inform in the whatsapp group and activate the stroke code.</li> <li>2. Doctor will indent the medication manually using the medication chart.</li> <li>3. Doctor will come to Outpatient Pharmacy Department (counter 5) to take the medication.</li> <li>4. Outpatient Pharmacy Department will supply the medication within 5 minutes.</li> </ol>

# EPINEPHRINE pen

By : Syafina Syafawati binti  
Mohamad Sukaini

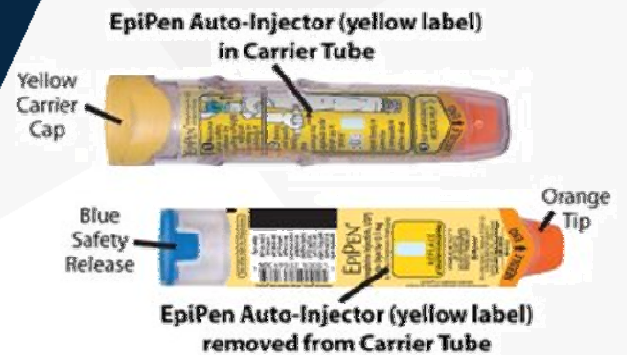


<p><b>INDICATION</b></p>	<p>EpiPen and EpiPen Jr are indicated in the emergency treatment of allergic reactions (Type 1). Through its action on alpha-adrenergic receptors, epinephrine lessen the vasodilation and increased vascular permeability that occur during anaphylaxis, which can lead to loss of intravascular fluid volume and hypotension.</p> <p>Through its action on beta-adrenergic receptors, epinephrine cause bronchial smooth muscle relaxation and help alleviate bronchospasm wheezing and apnoea</p> <p>EpiPen and EpiPen Jr are intended for immediate administration as an emergency supportive therapy only and not a substitute for immediate medical care.</p>											
<p><b>DOSE</b></p>	<table border="1"> <thead> <tr> <th>Auto Injector</th> <th>Patient Weight</th> <th>Epinephrine Concentration</th> </tr> </thead> <tbody> <tr> <td>EpiPen Jr</td> <td>15kg – 30kg</td> <td>0.15mg</td> </tr> <tr> <td>EpiPen</td> <td>≥30kg</td> <td>0.3mg</td> </tr> </tbody> </table>			Auto Injector	Patient Weight	Epinephrine Concentration	EpiPen Jr	15kg – 30kg	0.15mg	EpiPen	≥30kg	0.3mg
Auto Injector	Patient Weight	Epinephrine Concentration										
EpiPen Jr	15kg – 30kg	0.15mg										
EpiPen	≥30kg	0.3mg										
<p><b>ADMINISTRATION</b></p>	<p>Used intramuscularly or subcutaneously into the anterolateral aspect of the thigh, through clothing if necessary. Each device is a single-use injection.</p>											
<p><b>PREGNANCY AND BREASTFEEDING</b></p>	<p>There are no adequate and well-controlled studies of the acute effect of epinephrine in pregnant women. Low dose of intramuscular epinephrine are unlikely to interfere with breastfeeding. Epinephrine is the first line-medication of choice for treatment of anaphylaxis; it should be used in the same manner in breastfeeding and pregnant patient.</p>											
<p><b>STORAGE AND STABILITY</b></p>	<p>Protect from light. Epinephrine is light sensitive and should be stored in the carrier tube provided to protect it from light. Store at 20° to 25°C. Do not refrigerate.</p> <p>Before using, check to make sure the solution in the auto-injector is clear and colorless. Replace the auto-injector if the solution is discolored (pinkish or brown color), cloudy, or contains particles.</p>											

**REFERENCE**

- i. Medscape. (2019). Epinephrine dosing, interactions, adverse effects and more. [online] Available at: <https://reference.medscape.com/drug/epipen-jr-epinephrine-342437#0>
- ii. Product leaflet : EPIPEN ® and EPIPEN Jr ®

# EPINEPHRINE pen



## INSTRUCTION FOR ADMINISTRATION



1. Remove the EpiPen or EpiPen Jr from the clear carrier tube.



2. Grasp the auto-injector in your fist with the orange tip (needle end) pointing downward. With your other hand, remove the blue safety release by pulling straight up.



3. Place the orange tip against the the middle of the outer thigh (upper leg) at a right angle (perpendicular) to the thigh. Swing and push the auto-injector firmly until it 'clicks'. The click signals that the injection has started.



4. Hold firmly in place for 3 seconds (count slowly 1,2,3). The injection is now complete.



5. Remove the auto-injector from the thigh. The orange tip will extend to cover the needle. If the needle is still visible, do not attempt to reuse it.



6. Massage the injection area for 10 seconds.

# KPK application

By : Nur Izzati binti Ashaari

## WHAT IS KPK DRUG ?

Medicines that are not listed in FUKKM (bluebook) or medicines which is not registered in Malaysia.

Require approval from the Director General of Health Malaysia or Senior Director of Pharmaceutical Services.

## KPK DRUG CRITERIA

- i. Registered medicine but not listed in FUKKM
- ii. Registered medicine and listed in FUKKM but off-label FUKKM
- iii. Medicine not registered with PBKD but listed in FUKKM
- iv. Medicine not registered with PBKD and not listed in FUKKM

## SITUATION FOR KPK DRUG APPLICATION

- i. Life saving drug with no other alternative in FUKKM
- ii. Drug with specific indication and no other alternative in FUKKM
- iii. Drug for epidemic cases
- iv. Orphan drug

# KPK application

## KPK APPLICATION THROUGH PHIS



\* Step 1 –12 : Specialist  
 \* Step 13 : HOD  
 \* Step 14 - 17 : DIS pharmacist

\* MOH Drug Formulary, Registered MAL number, Indication approved by PBKD, Manufactured by, Imported by, Request quantity, Packaging description, Packaging quantity, Cost per pack

### REFERENCE

- i. Garis Panduan Permohonan Memperolehi dan Menggunakan Ubat-ubatan yang Memerlukan Kelulusan Ketua Pengarah Kesihatan (KPK)/ Pengarah Kanan Perkhidmatan Farmasi (PKPF) Edisi Pertama Ogos 2016.

# Staff movement May - august 2019

## NEW STAFF

- |    |                                      |  |
|----|--------------------------------------|--|
| 1. | MISS HIU YEN SAN                     | PROVISIONAL REGISTERED PHARMACIST UF41 |
| 2. | MISS LING WEN SHI                    | PROVISIONAL REGISTERED PHARMACIST UF41 |
| 3. | MR MOHD IZZAT AKMAL BIN RAHMAN AHMAD | PROVISIONAL REGISTERED PHARMACIST UF41 |
| 4. | MISS NG PHUI QI                      | PROVISIONAL REGISTERED PHARMACIST UF41 |

## TRANSFERRED IN

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|----|-------------------|-----------------|
| 1. | MISS WOO HUI YING | PHARMACIST UF41 |
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## TRANSFERRED OUT

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|----|---------------------------------------|-----------------|
| 1. | MISS ELINAZ JASMINE BT HAJI JAMALUDIN | PHARMACIST UF41 |
| 2. | MISS NUR DAYANA SYAZLINA BINTI RUSLI  | PHARMACIST UF41 |
| 3. | MISS LIEW KA KEI                      | PHARMACIST UF41 |
| 4. | MISS NUR FARHAH BINTI SAMSUDDIN       | PHARMACIST UF41 |
| 5. | MR NGU HUI SERN                       | PHARMACIST UF41 |

