



CONTENT

PARKINSON DISEASE.....	01-02
PAIN AS THE 5TH VITAL SIGN.....	03-04
NEW MEDICATIONS IN HSM	05-06
SCABIES	07-08
HAPPENINGS IN PHARMACY DEPARTMENT...	09
STAFF MOVEMENT.....	10-11



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BY: HANIS NABILAH BINTI KHAIROL AZMI

WHAT IS PARKINSON DISEASE?

It is a form of **brain disorder that may lead to unintended or uncontrolled movements** such as shaking, stiffness, as well as difficulty with balancing or coordination. Most people with Parkinson disease will first **develop the disease after age 60, however about 5% to 10% experience onset before the age of 50.** Early-onset forms of Parkinson's are often, but not always. It may be inherited, while some forms have been linked to specific alterations in genes.



CAUSES/PREDISPOSING FACTORS

Parkinson disease caused by the **impaired function of Basal ganglia in the brain.** Basal ganglia is an area of brain that controls movement. Normally, basal ganglia will produce an important brain chemical called Dopamine. When it become impaired or less active, it will produce less dopamine and can be associated with the movement problems.

However, Parkinson's disease is a complex condition with various factors may contribute to its condition. While the exact cause is not fully understood, several factors are considered predisposing or potentially linked to the disease:

- **Age:** Parkinson's disease typically develops in older adults, with the average age of onset around 60 years old. Advancing age is a significant risk factor.
- **Environmental factors:** Exposure to certain toxins or environmental factors may increase the risk of Parkinson's disease. This includes pesticides and herbicides (like paraquat), industrial chemicals, and possibly heavy metals.
- **Neuroinflammation:** Chronic inflammation in the brain, possibly related to infections or autoimmune responses, has been hypothesized as a factor contributing to Parkinson's disease.

DISEASE PRESENTATION

Early symptoms of Parkinson's Disease **may go mild or unnoticed.** It can vary widely between individuals and typically develop gradually over time. Parkinson's disease symptoms may include:

- **Tremor:** Tremor, or shaking, usually begins in a limb, often in the hand or fingers. It is typically more noticeable at rest and may decrease or disappear with movement.
- **Bradykinesia:** People with Parkinson's disease may have difficulty initiating movements, such as starting to walk, or they may have reduced facial expressions (hypomimia) and reduced blinking.
- **Rigidity:** Rigidity or muscle stiffness can occur which causing movement difficulty pain or discomfort.
- **Postural Instability:** It is an impaired balance and coordination, which can lead to difficulties with walking and an increased risk of falls.

PHARMACOLOGICAL TREATMENT

Pharmacological treatment of Parkinson disease aims to alleviate symptoms by increasing dopamine levels in the brain or mimicking dopamine's actions. The medications that are available in HSM for Parkinson disease includes:

Amantadine HCl 100mg Capsule

Initial Dose: 100mg once daily and is increase to 100mg twice daily.

Benzhexol 2mg Tablet

Initial Dose: 1 mg daily
Maintenance: 5 - 15 mg daily in 3 - 4 divided doses. (Max 15mg/day)

Entacapone 200mg Tablet

Dose: 200 mg to be taken with each daily dose of levodopa/dopadecarboxylase inhibitor. Max 2g daily.

Levodopa 200 mg, Benserazide 50 mg

Initial Dose: 100mg once daily and is increase to 100mg twice daily.

BY: HANIS NABILAH BINTI KHAIROL AZMI

PHARMACOLOGICAL TREATMENT



Levodopa 100 mg, Benserazide 25 mg

Initial dose: 100/25 mg 1-2 times/day, increase every 3-4 days until therapeutic effect achieved



Pramipexole 0.375mg ER Tablet

Dose escalation: 0.375 mg/day on week 1, 0.75 mg/day on week 2, 1.5 mg/day on week 3.



Memantine HCL 10 mg Tablet

Initial dose: 5mg OD (1st week), 5mg BD (2nd week), 15mg /day (3rd week)
Maintenance dose: 20mg/day



Selegiline HCL 5mg Tablet

Dose: 5 mg twice daily at breakfast and lunch. Maximum 10 mg/day

PHARMACIST'S ROLE

As a pharmacist, it is important to give a proper counselling to a patient with Parkinson disease. As it may help them to understand their condition, manage the symptoms effectively, and help them to cope with the challenges that may presents.

Some **counselling points** that pharmacist can provide to patients include:

- 1. Understanding the disease.** By counselling the patient about the Parkinson's disease, it can help the patients and their families understand the nature of the disease, its symptoms, and its progression over time. This may involves explaining how dopamine deficiency leads to symptoms like tremors, rigidity, slowness of movement, and balance issues.
- 2. Medication Adherence.** Pharmacist should emphasize the importance of taking medications on time and as prescribed by the physician to let the patient managed their symptoms effectively.
- 3. Lifestyle modifications.** Encourage patient to perform regular exercise to maintain their mobility, improve balance, and alleviate symptoms. Besides, by practicing proper diet, and exercising, it may complement medication therapy and improve patient's quality of life.
- 4. Medication safety.** Pharmacist should also counsel on the possible side effects of the Parkinson's disease medication. It may includes on monitoring of the symptoms dyskinesia, hallucinations, constipation which are common in patient taking Parkinson's disease medication.
- 5. Emotional support.** This disease not only affects physical health but also has significant emotional and psychological impacts. Pharmacist may offer emotional support and discuss coping strategies for managing the emotional impact of Parkinson's disease. This includes depression, anxiety, and changes in mood.





BY: NURUL SYAFIQAH BINTI FAIZAL

JOURNEY OF PAIN FREE HOSPITAL

International Association for the Study of Pain (IASP) defines pain as an **unpleasant sensory and emotional experience associated with, or resembling actual or potential tissue damage**. Enhancing methods for assessing pain is crucial for improving pain management. In **2008**, the Ministry of Health (MOH) introduced "**Pain as the 5th Vital Sign**" to ensure effective pain management in MOH healthcare facilities. However, this initiative does not lead to any significant practice change. Subsequently, in **2011**, a **Pain Free Hospital concept was introduced** and 3 hospitals were involved in the pilot project. This program aimed to achieve pain-free experiences during surgery, labor, procedures, rehabilitation, and discharge. It required **engagement from multidisciplinary teams** to manage pain using holistic approaches. These approaches included **minimally invasive surgery, integrating non-pharmacological methods, and modifying anesthesia and analgesia techniques to minimize pain**. By December 2020, 30 hospitals in Malaysia had been certified as Pain Free Hospitals.

R.A.T APPROACH



Recognizing pain through patient observation and inquiry.



Assessing the pain, where healthcare providers identify its type, underlying cause, severity, impact on the patient, and pain score.



Treatment, focusing on addressing the root causes and employing multimodal approaches.

SELECTION OF PAIN ASSESSMENT TOOL

AGE / POPULATION GROUP	SCALE
ADULT	MOH PAIN SCALE
Language Barrier/ Cognitively Impaired patient	FLACC SCALE
Patient Ventilated & Sedated	CPOT/BPS
Pain Assessment in Advanced Dementia	PAINAD
PAEDIATRIC	
<1 month	NIPS (Neonatal Infant Pain Scale)
1 month - 4 years	FLACC SCALE
4 years-7 years	FACES SCALE
>7 years	MOH PAIN SCALE

ITEMS	0	1	2	SCORE
Breathing (Independent of vocalization)	Normal	Occasional labored breathing. Short period of hyperventilation.	Noisy labored breathing. Long period of hyperventilation. Cheyne-Stokes respirations.	
Negative vocalization	None	Occasional moan or groan. Low level of speech with a negative disapproving quality.	Repeated troubled calling out. Loud moaning or groaning. Crying.	
Facial expression	Smiling or inexpressive	Sad, righteased, frown.	Facial grimacing.	
Body language	Relaxed	Tense. Distressed pacing. Fidgeting.	Rigid. Fast clenched. Knees pulled up. Pulling or pushing away. Striking out.	
Consolability	No need to console	Distractions or reassured by voice or touch.	Unable to console, distract or reassure.	
TOTAL				

Indicator	Description	Score	
Facial expression	No muscular tension observed	Relaxed, neutral	0
	Presence of frowning, brow lowering, orbit tightening, and levator contraction	Tense	1
Body movements	All of the above facial movements plus eyelids tightly closed	Grimacing	2
	Does not move at all (does not necessarily mean absence of pain)	Protection	1
Muscle tension	Slow, cautious movements, touching or rubbing the pain site, seeking attention through movements	Restlessness	2
	Resistance to passive flexion and extension of upper extremities	Very tense or rigid	2
Compliance with the ventilator (Intubated patients)	Strong resistance to passive movements, inability to complete them	Tolerating ventilator or movement	0
	Alarms not activated, easy ventilation	Coughing but tolerating fighting ventilator	1
O/R	Alarms stop spontaneously	Alarms frequently activated	2
	Alarms stop spontaneously	Alarms frequently activated	2
Vocalization (extubated patients)	Talking in normal tone or no sound	Sighing, moaning	0
	Sighing, moaning	Crying out, sobbing	1
		Crying out, sobbing	2

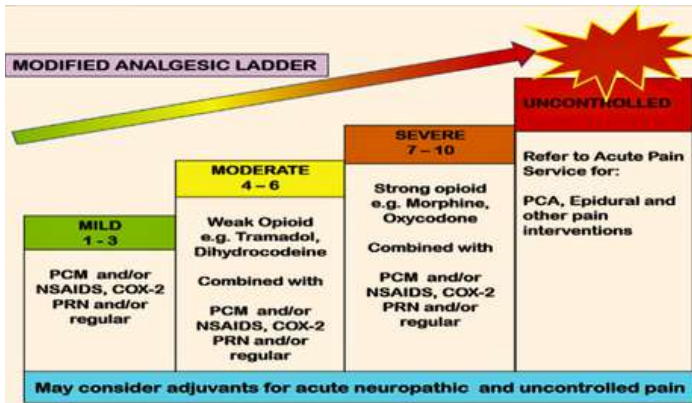


Kategori	0	1	2
Wajah	Tidak kelihatan berpenyah atau pergerakan lidah dan bibir.	Merengut atau berpenyah.	Merengut atau berpenyah dengan lidah dan bibir.
Kaki	Kedudukan biasa atau tenang.	Merengut atau berpenyah.	Merengut atau berpenyah dengan lidah dan bibir.
Aktiviti	Bergerak dengan tenang.	Merengut atau berpenyah.	Merengut atau berpenyah dengan lidah dan bibir.
Tangis	Tidak menangis.	Merengut atau berpenyah.	Merengut atau berpenyah dengan lidah dan bibir.
Ketabirahpujangan	Tenang.	Merengut atau berpenyah.	Merengut atau berpenyah dengan lidah dan bibir.



BY: NURUL SYAFIQAH BINTI FAIZAL

PHARMACOLOGICAL TREATMENT



The WHO-modified analgesics ladder guides treatment based on pain intensity, starting with simple analgesics for mild pain and progressing to opioid analgesics for moderate to severe pain. Fortunately, Hospital Seri Manjung has access to a range of pain medications, including paracetamol, NSAIDs, COX-2 inhibitors, and opioids.

Common pain reliever medications used in Hospital Seri Manjung are:

Paracetamol

- Dose: 1g TDS or QID, max 4g/day,

Diclofenac Sodium 50 mg Tablet

- 75 - 150 mg daily in divided doses after food.
Max: 200mg/day.

Celecoxib 200 mg Capsule

- 200 mg daily, can be increased up to 400mg daily.

Tramadol HCl 50 mg Capsule

- 50mg initially, can take another 50mg after 30 - 60 min if pain not relieved. Max: 400 mg/day

Morphine HCl 10 mg/5 ml Solution

- 5-20 mg or more regularly every 4 hours as needed in terminal pain

TREND ON OPIOID CONSUMPTION

Disparities in global opioid consumption were highlighted in the WHO report "Pain is left behind" in 2023, revealing significant inequalities between high-income countries like the United States and low- and middle-income countries (LMICs). In United States, patient with chronic pain can obtain opioid prescriptions easily from their physician. This can be seen as 240 million opioid prescriptions were prescribed in the United States which accounted for nearly one prescription for every adult in the general population in 2015.

In contrast, Asian countries, including Malaysia, has shown much lower opioid consumption. Duthey and Acholten (2014) reported that in Malaysia, the average amount of morphine equivalent (MEs) per capita, used for pain relieve was 6.27mg in 2010. This amount is significantly lower compared to the average level observed in the top 20 countries ranked by the Human Development Index (HDI), which was 216.7mg per capita in the year 2010. A survey reported that among Ministry of Health (MOH) facilities, 18% do not have readily available immediate-release oral morphine. This may reflect on the challenge to assess opioid which translates to low opioid consumption in Malaysia. Furthermore, a study by Kweh et al. (2023) highlighted doctors' concerns about opioid addiction (34.2%) and respiratory depression (57.9%), which may contribute to cautious opioid prescribing practices. However, it is noteworthy to mention that this study on doctors' perception was limited to a single study center in Malaysia.

Therefore, it is essential to identify and address the primary barriers to opioid use in pain management in order to successfully achieve the goals of pain-free hospitals. As healthcare providers, we must recognize the significance of pain and respond promptly to patients' reports, by ensuring they receive appropriate pain management.

Duthey, B., & Scholten, W. (2014). Adequacy of Opioid Analgesic Consumption at Country, Global, and Regional Levels in 2010, Its Relationship With Development Level, and Changes Compared With 2006. *Journal of Pain and Symptom Management*, 47(2), 283-297.

Häuser, W., Buchser, E., Finn, D. P., Dom, G., Fors, E., Heiskanen, T., . . . Morlion, B. (2021). Is Europe also facing an opioid crisis?—A survey of European Pain Federation chapters. *European Journal of Pain*, 25(8), 1760-1769.

Kweh, T. Y., Yeoh, C. H., Chan, H. K., & Ahmad, F. (2023). Knowledge, Perception and Barriers to Cancer Pain Management among Doctors in Malaysia. *Malays J Med Sci*, 30(3), 184-194.

BY: JOEY CHONG

Mesna 400mg/4ml Inj

Indication:

For prevention of urotoxic effects of oxazaphosphorines e.g. ifosfamide and cyclophosphamide.



Dosage:

IV injection at a dosage of 20% of the corresponding oxazaphosphorine dose at the times 0 hour (concurrently with the oxazaphosphorine), 4 hours and 8 hours thereafter.

Palivizumab 100mg/ml Soln for Inj

Indication:

For the prevention of serious lower respiratory tract disease caused by respiratory syncytial virus (RSV) in paediatric patients at high risk of RSV disease.



QUOTA HSM

Dosage:

15 mg/kg IM once a month during season of RSV risk.

Prescriber category: A*

Rituximab 500mg/50ml Inj

Prescriber category: A*

QUOTA HSM



Indication:

- i) Epidermolysis bullosa acquisita (off-label FUKKM (KPK))
- ii) Relapsing-remitting multiple sclerosis (off-label FUKKM (KPK))
- iii) SLE with Lupus Nephritis (off-label FUKKM (KPK exemption given))

Dosage:

- i) Refer dermatologist. 1gm weekly x 4 weeks.
- ii) Refer neurologist. 1gm every 6 months.
- iii) Refer nephrologist. 2 doses of 1gm/dose 2 weeks apart; may be considered for another cycle of 2 doses of 1gm/dose 2 weeks apart if response towards 1st cycle considered adequate/necessary.

Pertuzumab 420mg/14ml Inj

Indication:

Early HER2 positive BCA with trastuzumab during neoadjuvant chemotherapy.



Dosage:

Adult: Initially, 840 mg via infusion over 60 minutes. Maintenance: 420 mg once every 3 weeks given via infusion over 30-60 minutes.

Prescriber category: A*

**QUOTA HSM
KPK ITEM**

Bevacizumab 25mg/ml Inj

Indication:

Metastatic colorectal CA in combination with fluoropyrimidine-based chemotherapy.



Prescriber category: A*

**QUOTA HSM
KPK ITEM**

Dosage:

IV infusion 5 or 10 mg/kg once every 2 wk, or 7.5 or 15 mg/kg once every 3 wk.

Linezolid 600mg Tab

Indication:

MRSA patient with severe sepsis requiring intensive care and not clinically responding to vancomycin.

Dosage:

ADULT: Above 12 years 600 mg every 12 hours for 10-14 days.
CHILD :10 mg/kg 3 times daily.
PREMATURE NEONATES less than 7 days: 10 mg/kg twice daily.



Prescriber category: A*

Deferasirox 180mg Film Coated Tab (Irosix)

Indication:

Treatment of chronic iron overload due to blood transfusions.

Dosage:

Recommended initial dose is 14mg/kg body weight.



Prescriber category: A*

QUOTA HSM

BY: JOEY CHONG

Clostridium Botulinum Toxin Type-A 100 units, (Botox) Powder for Injection



Indication:

Treatment of blepharospasm associated with dystonia, including benign essential blepharospasm, hemifacial spasm & VIIth nerve disorder in patients ≥ 12 yr.

Prescriber category: A

QUOTA HSM

Dosage:

20-200 units 3 months once.

Dapagliflozin 10mg Tab



Indication:

To reduce the risk of cardiovascular death and hospitalization for heart failure in adults with heart failure (NYHA class II-IV) with reduced ejection fraction. For cardiorenal protection in adult patients with chronic kidney disease, with or without Type 2 Diabetes Mellitus.

Prescriber category: A/KK

Dosage:

10mg once daily

Brexpiprazole 2mg Tab



Prescriber category: A*

QUOTA HSM

Indication:

- i) Treatment of Schizophrenia
- ii) Use as adjunctive treatment to antidepressant in adult with major depressive disorder

Dosage:

- i) Initial: 1mg once daily; target dose: 2-4mg/day, max daily dose: 4mg
- ii) Initial: 0.5mg or 1mg once daily, titrate at weekly intervals based on response and tolerability, max daily dose: 3mg

Palbociclib 125mg, 100mg, 75mg Tab

Indication:

Treatment of HR+, HER2-ve, locally advanced/ metastatic breast CA in combination with aromatase inhibitor as initial endocrine based therapy.

Dosage:

125mg capsule taken orally once daily for 21 consecutive days followed by 7 days off treatment to comprise a complete cycle of 28 days.



Prescriber category: A*

QUOTA HSM

Dexmedetomidine 200mcg/2ml Inj



Indication:

Sedation in ICU

Dosage:

Not to be infused for more than 24 hours, 1mcg/kg over 10 minutes as loading dose. Maintenance dose: 0.2-0.7 mcg/kg/hr.

Prescriber category: A*

Lanreotide acetate 120mg Prolonged- release Soln for Inj

Indication:

- i) Treatment gastroenteropancreatic neuroendocrine tumours of midgut, pancreatic or unknown origin, in adult patients.
- ii) Treatment of the clinical symptoms of neuroendocrine (particularly carcinoid) tumours.



Prescriber category: A*

QUOTA HSM

Dosage:

- i) 120mg administered every 28 days
- ii) 60mg to 120mg administered every 28 days

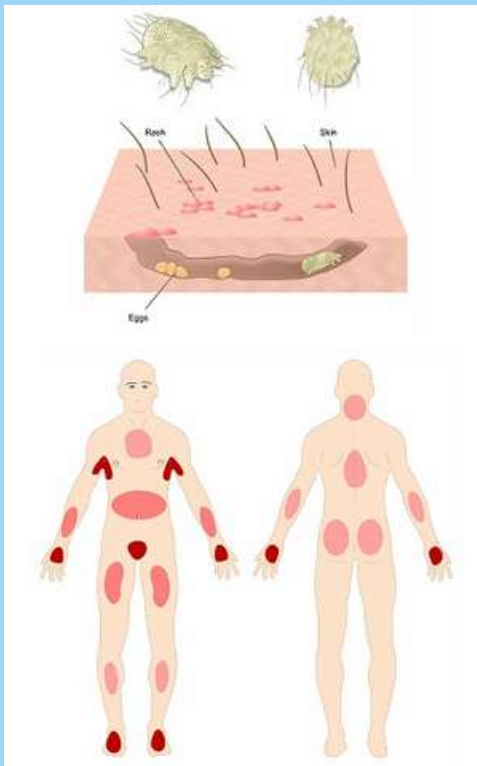
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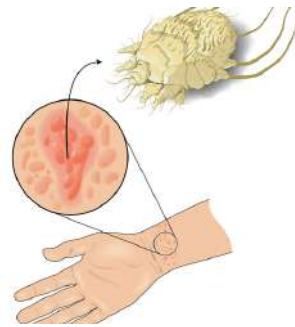
BY: CHUAH BEE LENG, AMY TAN SZI SZE

WHAT IS SCABIES?

Scabies is caused by the mite, *Sarcoptes scabiei* var. *hominis*, which burrows into the upper layer of the skin - the stratum corneum. The female lays eggs in the tracks of the burrows. The eggs and mite proteins produce an allergic reaction and this reaction, is responsible for the characteristic itching and rash.

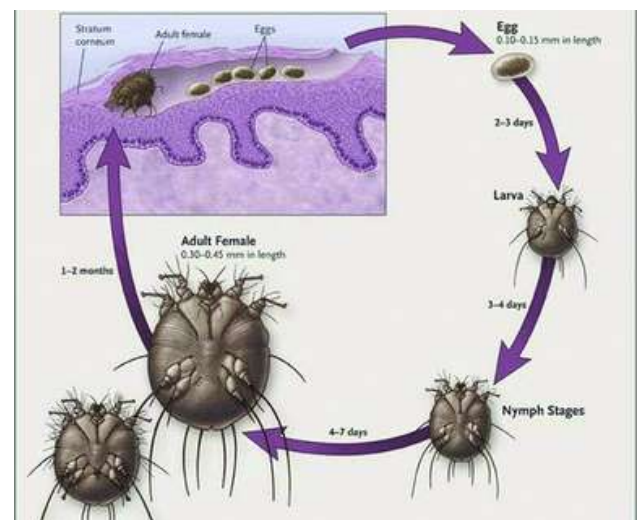


HOW SCABIES TRANSMITTED?



Scabies is normally acquired from skin-to-skin contact with another individual who has scabies. It is frequently acquired among children and can also be sexually transmitted. It is sometimes transmitted from care providers or beddings.

LIFE CYCLE OF SCABIES



Scabies undergoes four stages in its life cycle: egg, larva, nymph and adult.

CLINICAL PRESENTATION

The incubation period for those without previous exposure to scabies is 2 to 6 weeks. Individuals who have been previously infested with scabies develop symptoms within 1 to 5 days of re-exposure.

The main symptom is itch, which is usually generalized, very intense and intractable. The itch is worst at night. History of itch among family members within the same period.



Intense Itching



Bumpy Rash







Burrows and Tracks



Sores and Blisters

BY: CHUAH BEE LENG, AMY TAN SZI SZE

TREATMENT OF SCABIES AVAILABLE IN HSM

No	Scabicial Agents	Allowed For	Application	Contraindication /Caution	Side Effects
1.	Permethrin 5% Lotion 	Infants > 2 months to children < 7 years Pregnant women	1. Apply thoroughly to all body parts from head to soles of the feet. 2. Leave overnight for 8 hours 3. Wash off 4. Reapply after one week if live mites are demonstrated	Percutaneous absorption in animal tests shows 40-400 times lower than Lindane 1%	<ul style="list-style-type: none"> Itching & burning/stinging sensation on application
2.	Benzyl Benzoate 12.5%, 25% Emulsion (EBB) 	EBB 12.5% Children 7 - 12 years EBB 25% Adult > 12 years	1. After bath, apply over the whole body, neck down and leave on for 24 hours. 2. Then wash off and reapply every 24 hours. 3. To be kept on the skin surface continuously for 2-3 days (with bath taken between each application)	Contraindicated in: pregnant & breastfeeding women, and infants < 2 years	<ul style="list-style-type: none"> Skin irritation and burning sensation. May cause conjunctivitis if exposed to eyes. May worsen/cause post- scabetic eczematous reaction. Affect compliance
3.	Crotamiton 10% Cream 	Infants < 2 months	1. Apply to the whole body from below the chin 2. Wash it off 24 hours later. 3. Then, reapply daily up to 5-7 days.	Avoid massive & prolonged use in pregnant women and infants	<ul style="list-style-type: none"> Irritant contact dermatitis
4.	Gamma Benzene Hexachloride 1% lotion (Lindane) 	Only for Adult > 50kg	1. Only for single application. 2. Apply thinly to all skin areas from the neck to toes. 3. Wash off after 6-8 hours. 4. Not to be repeated in less than a week.	<ul style="list-style-type: none"> Contraindicated in: pregnant & breastfeeding women, infants, children < 10 years, patients with seizure disorders Use restricted to patients who have failed treatment with or cannot tolerate other medications Lindane is lipophilic drug and has the potential for CNS toxicity Avoid applying after a hot bath to prevent/reduce percutaneous absorption 	<ul style="list-style-type: none"> Neurotoxicity Cramps dizziness Seizures in children Hypoplastic anaemia Cancer

Ministry of Health. (2015). Guideline for Management of Scabies in Adults and Children.

Imam, H., Muhammad, H., Mohd, I. H., Ng, I., Phak, H., Thomas, T., & Kesihatan Malaysia, K. (2019). PAEDIATRIC PROTOCOLS For Malaysian Hospitals.

BY: NURUL SYAFIQAH BINTI FAIZAL



Majlis Sambutan Aidilfitri 2024 Anjuran Jabatan Farmasi Hospital Seri Manjung



BY: NURUL SYAFIQAH BINTI FAIZAL



Majlis Sambutan Aidilfitri 2024 & Sambutan Hari Lahir Anjuran Jabatan Farmasi Pesakit Luar Hospital Seri Manjung



Transferred Out

1	Chiam Zye Wei (Vivian)	PF UF54
2	Koay Hui Ying	PF UF52
3	Muhammad Muniir bin Ahmad	PF UF48
4	Tay Siok Ling	PF UF44(K)
5	Anissolehah binti Shaari	PF UF44(K)
6	Norzulaikha binti Norahzan	PF UF44(K)
7	Nur Farhana binti Baharudin	PF UF41(K)
8	Yusnita binti Yaacob	PPF U29
9	Siti Norazera binti Mohamad	PPF U29

Transferred In

1	Sayangku Aini binti Tajor Amar	PF UF52
2	Ngu Hui Sern	PF UF44
3	Devimanohari a/p Mohanakrishnan	PF UF41
4	Mah Ai Wei	PF UF41
5	Kogilavani a/p Ramasamy	PF UF41
6	Nurul Huda binti Mohamed	PPF U32
7	Faridah Akmam binti Yahaya	PPF U32 (KUP)

New PRP

1	Joey Chong	PF UF41(K)
2	Nurul Syafiqah binti Faizal	PF UF41(K)
3	Hanis Nabilah binti Khairol Azmi	PF UF41(K)

Resigned

1	You Xi Lin	PF UF44(K)
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