

# PROTOCOL MEDICATION THERAPY ADHERENCE CLINIC (MTAC): PSORIASIS



Pharmaceutical Services Division  
Ministry of Health Malaysia



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# PROTOCOL MEDICATION THERAPY ADHERENCE CLINIC (MTAC): PSORIASIS

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Ministry of Health Malaysia**

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Ministry of Health, Malaysia**

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# PREFACE



**D**ermatologic problems have significant impact on patients' quality of life. Non-adherence to treatment is among the biggest challenge in treating patients with dermatological problems. This is contributed by complexity of drug regimen, development of adverse effects and unacceptability of certain formulations. Misunderstanding on the use of various different formulations such as ointments and creams is another issue which may affect treatment outcomes.

As pharmacists are getting more involved in the care of patients with dermatological problems, they could play important roles in educating patients on their medication, teaching and assessing administration technique, and managing pharmaceutical care issues. Given the wide range of dermatological problems which might require different approach and new involvement of pharmacists in the dermatology team, the Ministry is currently focusing on psoriasis.

This protocol is meant for pharmacists in the Ministry of Health (MOH) who provide Psoriasis Medication Therapy Adherence Clinic service. The protocol will ensure standardisation of practice throughout all MOH facilities and will serve as a guide for pharmacists to deliver the service optimally so that they give meaningful contribution in patient care, together with other healthcare professionals.

I would like to congratulate all contributors for their valuable effort in developing this protocol.

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## **A. INTRODUCTION**

Skin disease has become a healthcare burden in almost all countries in the world. According to the Third National Health and Morbidity Survey conducted by Ministry of Health Malaysia, the prevalence of skin diseases among Malaysians was 0.3%, which was 189 cases in 68,636 people.<sup>1</sup>

Psoriasis is a common skin disease characterised by inflamed scaly patches and plaques. It runs a chronic relapsing course with variable degree of severity and causes significant physical, psychosocial and economic impact on the patient. Being incurable, it may lead to poor patient compliance especially in treatment which will further compromise the overall management of the disease.<sup>2</sup>

Medication Therapy Adherence Clinic-Psoriasis (MTAC Psoriasis) is an ambulatory care service conducted by pharmacists in collaboration with physicians with the aim of helping psoriasis patients to improve their medication adherence level and skin condition control. The patients enrolled in this clinic will be followed-up for a minimum of six visits where they will receive medication adherence assessment, identification and management of drug-related problems, medication counselling, monitoring of clinical outcomes and dermatology education by the pharmacists.

## **B. OBJECTIVES**

1. To optimise the benefits of medication therapy in psoriasis patients.
2. To work in collaboration with dermatologist and other healthcare professionals in pharmacotherapy management of psoriasis patients.
3. To educate patients and encourage the appropriate use of psoriasis medications among patients.
4. To increase patients' adherence towards psoriasis medications.
5. To minimise adverse effects or complications resulting from psoriasis medications and /or multiple drug regimens.

## **C. SCOPE OF SERVICE**

1. The MTAC Psoriasis service will operate in the clinic area during clinic days.
2. The MTAC Psoriasis pharmacist will perform a multitude of duties throughout the day: assessing patients and addressing their needs, documenting interventions and plans, providing appropriate education to patients/ caregivers and completing follow-ups. A minimum of six (6) sessions of MTAC Psoriasis over a 12-month period are required for every patient.
3. Activities at the clinic should be structured according to the suggested workflow (refer *Appendix I and II*) and conducted based on MTAC checklist (refer *Appendix III*).

## **D. MANPOWER REQUIREMENT**

On a typical MTAC Psoriasis day, at least one pharmacist should be placed in the clinic. The MTAC Psoriasis has an average of three to five patient visits per day (depending on patients' appointment with the clinic).

## **E. APPOINTMENT**

All appointments will be scheduled by pharmacist or other healthcare providers in the clinic.

## **F. PROCEDURES**

### **1. PATIENT SELECTION**

- 1.1 Patients referred for psoriasis medication adherence assessment and/or counselling by dermatologist or other healthcare providers.

### **2. INITIAL ASSESSMENT BY PHARMACIST**

- 2.1 During the initial visit, the pharmacist will perform an initial assessment of the patient. The initial evaluation will involve:

- 2.1.1 Review of patient's medical and medication histories
  - 2.1.2 Assessment of past medical and medication histories
  - 2.1.3 Assessment of social and family histories
  - 2.1.4 Assessment of diet and lifestyle
  - 2.1.5 Assessment of allergies (drug, food etc.)
  - 2.1.6 Assessment of side effects/toxicity of past medication
  - 2.1.7 Assessment of medication knowledge
  - 2.1.8 Assessment of medication adherence
  - 2.1.9 Review of laboratory values and relevant tests (PASI, BSA, DLQI etc.)
  - 2.1.10 Determination of medication-related problems and issues
  - 2.1.11 Patient (and/or caregiver) interview
- 2.2 During the initial interview, the pharmacist will introduce him/herself and the following will be reviewed with the patient:
- 2.2.1 MTAC Psoriasis objectives
  - 2.2.2 Anticipated benefits to the patient
  - 2.2.3 Goals for patient or caregiver
  - 2.2.4 Patient-specific drug therapy-related needs and goals
  - 2.2.5 Patient's rights and responsibilities in the MTAC programme
  - 2.2.6 Brief overview of the disease
  - 2.2.7 Assessment of medication knowledge
- 2.3 Upon agreeing to enrol into the MTAC programme, the patient will sign a participation agreement (refer *Appendix IV*), allowing his/her information to be released or shared with other healthcare providers involved in his/her care for the sole purpose of providing critical information needed for coordination of his/her care, unless his/her advice is otherwise. The patient's caregivers/relatives are strongly encouraged to attend the MTAC session together.

2.4 After the initial interview, the pharmacist will schedule the patient's next MTAC follow-up based on the need of assessment after the first visit, the patient's current health status or other clinic appointment and medication refill appointment.

2.5 The pharmacist can also proceed with the first visit module, depending on the suitability of the clinic setting/time.

### **3. SECOND AND SUBSEQUENT VISITS**

3.1 The patient's subsequent appointments should be based on the patient's next clinic appointment date or pharmacist appointment. However, MTAC Psoriasis appointment date maybe rescheduled based on the following reasons:

3.1.1 A change in patient's medication

3.1.2 Patient experiencing serious drug adverse events or toxicity

3.1.3 Other reasons as determined by the pharmacist that warrant a follow-up.

3.2 Assessment of disease control and discussion of clinical results will be done. Therapeutic goals shall be clearly stated. Adherence to therapeutic plan shall be assessed at each visit (reassurance and reinforcement).

3.3 Every visit shall include interviewing and educating patients regarding disease control, signs and symptoms of adverse reactions and disease progression or development of new complications.

3.4 Provide health advice and education (refer *Appendix V*) when appropriate and refer to dermatologist for interventions.

3.5 Review appointment until disease control and other clinical parameters achieve target goals.

3.5.1 A patient who meet the following criteria can be scheduled on longer appointment date (four months) based on medication supply date:

**Criteria:**

- a) Medication adherence score = 7 (high adherence) (refer *Appendix VI*) for three consecutive visits
- b) Review of Patient's Understanding (Medication) = >90% (refer *Appendix VI*) for three consecutive visits.

3.5.2 Patients who do not meet the above criteria should attend regular follow-ups.

**4. MISSED VISIT**

Patients will be contacted by telephone after a missed MTAC Psoriasis appointment to reschedule the appointment or to be seen at their next doctor appointment.

**5. PHARMACEUTICAL REVIEW**

The pharmaceutical review must be done at the earliest opportunity after referral of patient by doctor/other healthcare professional.

**5.1 Identifying drug-related problem**

- a) Carefully assess the patient and obtain all information required to ascertain if any drug intervention or recommendation has to be made
- b) Identify patient-specific health- or drug-related problems especially adverse drug reactions.

**5.2 Solving drug-related problem**

- a) Identify available therapeutic alternatives and consider the pros and cons of each alternative with the doctor and patient
- b) Consider whether non-pharmacological therapy may help to overcome the health- or drug-related problem
- c) Formulate a patient-specific action plan with the patient, including identifying specific health outcomes and the ways (drug or lifestyle changes) to achieve them
- d) Take a holistic approach to patient care (e.g. consider patient's medical, social, financial needs) in establishing the action plan.

### **5.3 Drug therapy monitoring**

- a) Monitor patient's adherence to the plan
- b) Follow-up on patient's progress to ensure the achievement of desired outcomes; suggest modifications to the existing plan if necessary (e.g. dose adjustment and drug modification) by referring to dermatologist.

### **5.4 Method of application**

In the event of multiple topical therapies prescribed, the patient should be advised on the sequence of application and the areas involved in a systematic way to improve patient's understanding (refer *Appendix VIII*).

### **5.5 Pharmacist's recommendation**

Provide feedback to the prescriber and discuss the patient's progress according to the action plan and outcomes.

## **6. MEDICATION DISPENSING AND COUNSELLING**

- 6.1 Pharmacist shall dispense the medication and counsel the patient at the clinic
- 6.2 Follow-up counselling: during scheduled appointment given by pharmacist or other health care providers participating in the clinic
- 6.3 Use colour sticker and body diagram sheet to improve patient's understanding (refer *Appendix VIII*).

## **7. DOCUMENTATION**

- 7.1 All relevant data to be recorded using MTAC Psoriasis Pharmacotherapy Review form and stored in the patient's profile and/or case note.
- 7.2 Documentation shall include the following (refer *Appendix VI*):
  - a) Patient's demography and medical/medication history
  - b) Assessment of patient's medication knowledge
  - c) Assessment of patient's medication adherence
  - d) Pharmaceutical care issues and pharmacist's plan
  - e) Patient's laboratory values and relevant tests scores (i.e. DLQI, BSA) – retrieved from patient's case note.

7.3 After each visit, update patient's progress in the MTAC Psoriasis Pharmacotherapy Review form which includes patient's current status, identified drug-related problems and monitoring results, current medication list as needed, allergies, adverse drug reactions, medication adherence and any intervention and action/plan for each medical condition addressed.

7.4 Any intervention and recommendation to dermatologist shall be documented in the patient's profile and/or patient's case note for future reference.

## **G. REFERENCES**

1. Amal NM, *et. al.* Prevalence of chronic illness and health seeking behaviour in Malaysian population: results from the Third National Health Morbidity Survey (NHMS III) 2006. *Med J Malaysia* 2011;66(1):36-41.
2. Malaysian Psoriasis Registry. <http://www.acrm.org.my>.
3. Management of atopic eczema in primary care: a national clinical guideline. Scottish Intercollegiate Guidelines Network (SIGN). 2011.

H. APPENDICES

Appendix I

**MTAC PSORIASIS WORKFLOW  
(FIRST VISIT)**

Location: Dermatology Clinic

Nurse

Registration

Dermatologist

Screening process

Dermatologist

Review and treatment

Pharmacist

Patient to sign participation agreement  
*(Appendix IV)*

Refer dermatologist if have any pharmaceutical care issues

Pharmacist

Assessment and review

- Drug knowledge assessment
- Adherence assessment
- Technique assessment
- Pharmaceutical care issues
- Sign and symptoms assessment
- Medication review

Pharmacist

Medication dispensing and counselling

Pharmacist/Nurse

Schedule for next visit/  
appointment

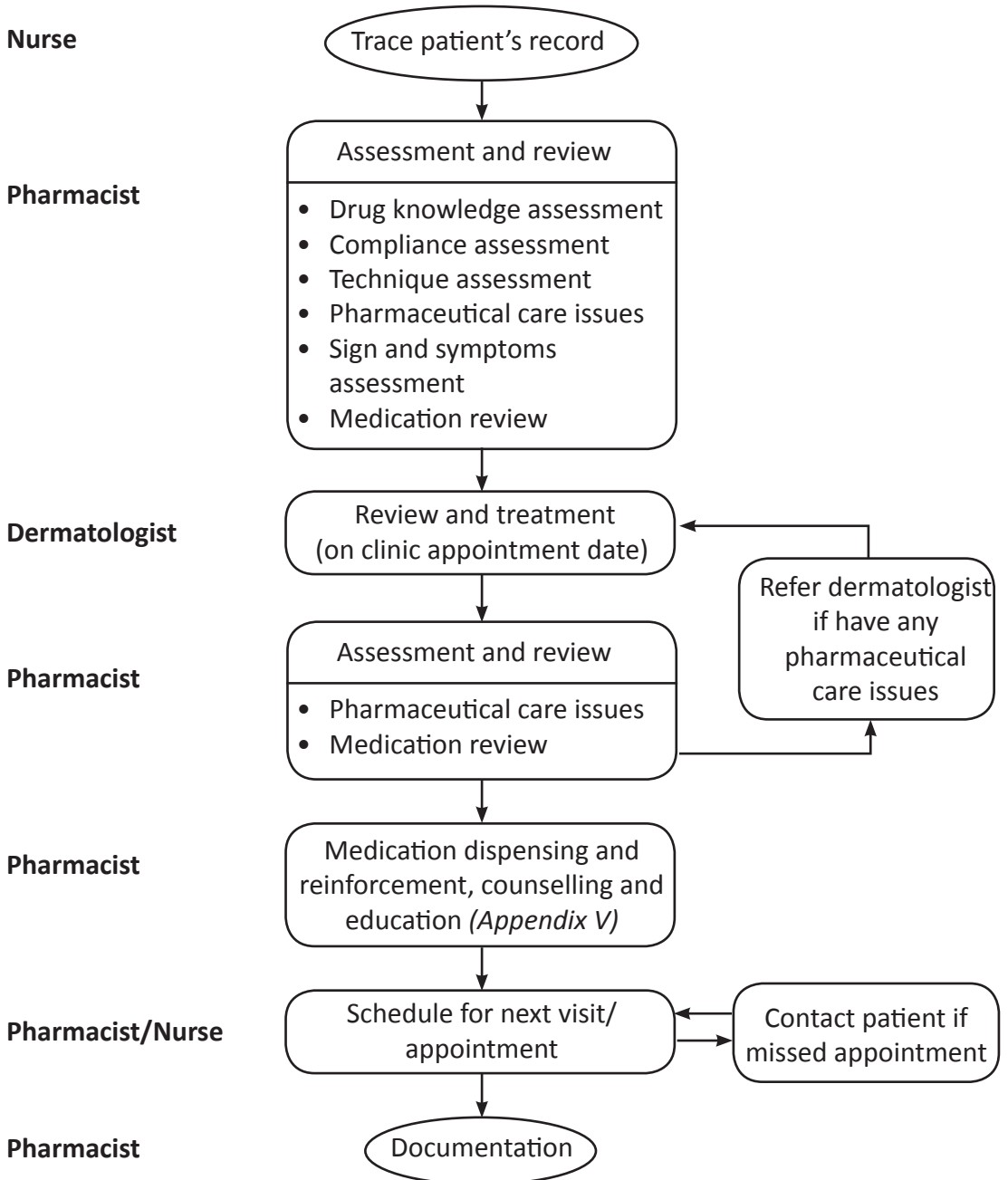
Pharmacist

Documentation



**MTAC PSORIASIS WORKFLOW  
(SECOND AND SUBSEQUENT VISIT)**

Location: Dermatology Clinic



MTAC PSORIASIS CHECKLIST						
Visit	1	2	3	4	5	6
Date						
<b>1. Participation agreement form</b> <i>(Appendix IV)</i>						
<b>2. What is psoriasis?</b>						
<b>3. What are psoriasis sign and symptoms?</b>						
<b>4. What else happens if my psoriasis is not controlled?</b>						
<b>5. How to avoid risk factors?</b> <ul style="list-style-type: none"> <li>• Know your trigger factors</li> <li>• Keep away from trigger factors</li> </ul>						
<b>6. Tests that you may have</b> <ul style="list-style-type: none"> <li>• DLQI (Dermatology Life Quality Index)</li> <li>• BSA (Body Surface Area)</li> <li>• PASI (Psoriasis Area Severity Index)</li> </ul>						
<b>7. Treatment of psoriasis</b> <ul style="list-style-type: none"> <li>• Medication</li> <li>• Local application</li> </ul>						
<b>8. What can you do?</b> <ul style="list-style-type: none"> <li>• Take your medication as prescribed and correctly</li> <li>• Monitor psoriasis status using body surface and/or any relevant test technique</li> <li>• Recognise sign that psoriasis is worsening and take action</li> </ul>						
<b>9. Medication</b> <ul style="list-style-type: none"> <li>• Understand the indication of the oral medication and local application</li> <li>• Proper local application (cream, ointment, lotion and shampoo)</li> <li>• Personal hygiene</li> <li>• Dosage adjustment</li> </ul>						
<b>11. Assessment test</b> <ul style="list-style-type: none"> <li>• Drug knowledge assessment</li> <li>• Adherence assessment</li> </ul>						
<b>12. Pharmaceutical Care Issues</b>						

MTAC NO.: \_\_\_\_\_



**MEDICATION THERAPY ADHERENCE CLINIC  
PSORIASIS**

BAHAGIAN PERKHIDMATAN FARMASI  
KEMENTERIAN KESIHATAN MALAYSIA

**PERAKUAN PENYERTAAN**

Saya, \_\_\_\_\_ (No.K/P: \_\_\_\_\_) bersetuju menyertai program *Medication Therapy Adherence Clinic* (Psoriasis) atau Klinik Kepatuhan Terapi Ubat Psoriasis yang dianjurkan oleh Jabatan Farmasi, Hospital \_\_\_\_\_ . Saya akan memberikan kerjasama sepenuhnya dengan menghadiri kesemua sesi kaunseling yang diadakan oleh Pegawai Farmasi MTAC Psoriasis dan aktiviti-aktiviti lain berkaitan dengannya yang bertujuan membantu mengawal penyakit psoriasis saya dengan lebih baik.

\_\_\_\_\_  
Tandatangan  
Nama pesakit:  
Tarikh:

\_\_\_\_\_  
Tandatangan  
Nama Peg. Farmasi:  
Tarikh:

## **EDUCATION OUTLINE FOR PSORIASIS PATIENTS**

### ***Visit 1***

- Brief overview on psoriasis disease
- Therapeutic goals, specifically disease control and medication adherence
- Specific discussion on medication (function/mechanism/education/demonstration/adverse effects) with the patient (topical and systemic agents):
  - \* Name of medication
  - \* Indication for each medication
  - \* Dosage, frequency and duration
  - \* Method of administration
  - \* Possible side effects
  - \* Proper storage condition
  - \* Precaution
  - \* Contraindication
  - \* Action to be taken when missed dose
- Sign and symptoms of disease, management and course of action to be taken
- Patient's concerns

### ***Visit 2 and Subsequent Visits (1-2 months)***

- Revision of treatment goals
- Other therapeutic goals (laboratory parameters, relevant tests etc.)
- Benefits, risks and options for improving disease
- Prevention of external factors aggravating disease (allergies, food etc.)
- Importance of adherence to treatment
- Specific medication counselling
- Patient's concerns

### ***Follow-up Upon Discharge (4 months)***

- Revision of treatment goals
- Other therapeutic goals (laboratory parameters, relevant tests etc.)
- Benefits, risks and options for improving disease
- Prevention of external factors aggravating disease (allergies, food etc.)
- Importance of adherence to treatment
- Specific medication counselling
- Patient's concerns

Tel: .....

**MEDICATION THERAPY ADHERENCE CLINIC (PSORIASIS)  
PHARMACOTHERAPY REVIEW  
PHARMACEUTICAL SERVICES DIVISION  
MINISTRY OF HEALTH, MALAYSIA**

1. PATIENT PROFILE	MTAC NO. :
NAME:	I/C:
AGE:	GENDER: MALE /FEMALE
RACE: <input type="checkbox"/> MALAY <input type="checkbox"/> CHINESE <input type="checkbox"/> INDIAN <input type="checkbox"/> OTHERS	WEIGHT/HEIGHT :
DATE OF VISIT: _____/_____/_____/_____/_____/_____	
DIAGNOSIS:	
CONCURRENT DISEASE:	
PAST MEDICAL HISTORY (SUMMARY)	CONCURRENT TRADITIONAL MEDICINE/ SUPPLEMENTS (PLEASE STATE DRUG/DOSE/ FREQUENCY):
SOCIAL/FAMILY HISTORY SMOKING : ( ) ALCOHOL INTAKE : ( )	ALLERGIES (DRUG/FOOD/OTHERS)

## 2. MEDICATION LIST (BEFORE ENROLMENT)

1.	11.
2.	12.
3.	13.
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

## 3. TEST

TEST	VISIT 1	VISIT 2	VISIT 3	VISIT 4	VISIT 5	VISIT 6
	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
DLQI						
BSA (%)						
PASI						

Key: DLQI (Dermatology Life Quality Index); BSA (Body Surface Area); PASI (Psoriasis Area Severity Index)

## 4. REVIEW OF PATIENT'S UNDERSTANDING (MEDICATION)

Medication History	VISIT 1				VISIT 2				VISIT 3				VISIT 4				VISIT 5				VISIT 6			
	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M

### I. TREATMENT FOR PSORIASIS

MOSTURISERS																									
Aqueous cream																									
Aqueous cream + glycerin 25%																									
Glycerin 50% in aqueous cream																									
Liquid paraffin																									
Menthol 0.5% in aqueous cream																									
Menthol 1% in aqueous cream																									

#### 4. REVIEW OF PATIENT'S UNDERSTANDING (MEDICATION)

Medication History	VISIT 1				VISIT 2				VISIT 3				VISIT 4				VISIT 5				VISIT 6			
	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M
Ung. Emulsificant (UE) ointment																								
Urea 5% cream																								
Urea 10% cream																								
White soft paraffin (WSP)																								
WSP 50% + liquid paraffin 50%																								
<b>STEROIDS</b>																								
Betamethasone 17-valerate 0.025% cream																								
Betamethasone 17-valerate 0.025% ointment																								
Betamethasone 17-valerate 0.05% cream																								
Betamethasone 17-valerate 0.05% ointment																								
Betamethasone 17-valerate 0.1% cream																								
Betamethasone 17-valerate 0.1% ointment																								
Clobetasone butyrate 0.05% (Eumovate) cream																								
Clobetasone butyrate 0.05% (Eumovate) ointment																								
Clobetasone propionate 0.05% (Dermovate) cream																								
Clobetasone propionate 0.05% (Dermovate) ointment																								
Hydrocortisone 1% cream																								
Hydrocortisone 1% ointment																								
Mometasone (Elomet) cream																								
<b>STEROID COMBINATIONS</b>																								
Betamethasone 17-valerate 0.025% + salicylic acid 2% cream																								
Betamethasone 17-valerate 0.025% + salicylic acid 2% ointment																								





#### 4. REVIEW OF PATIENT'S UNDERSTANDING (MEDICATION)

Medication History	VISIT 1				VISIT 2				VISIT 3				VISIT 4				VISIT 5				VISIT 6			
	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M	D	F	I	M
T. Hydroxyzine 25 mg																								
T. Levocetirizine (Xyzal) 5 mg																								
T. Loratadine 10 mg																								
T. Methotrexate 2.5 mg																								
T. Mycophenolate mofetil 250 mg/500 mg																								
T. Neotigasonone 10 mg																								
T. Neotigasonone 25 mg																								
T. Prednisolone 5 mg																								
T. Sulphasalazine 500 mg																								
<b>OTHERS</b>																								
Calcipotriol 50 mcg + betamethasone 0.5 mg (Daivobet) ointment																								
Calcipotriol 50 mcg/ml (Daivonex) scalp solution																								
Calcipotriol 50 mcg/g (Daivonex) cream																								
Dithranol in vaseline																								
LPC in UE																								
Salicylic acid 2-10% cream																								
Salicylic acid 20% ointment																								
Sulphur 2% + salicylic acid 2% in calamine lotion																								
Titanium dioxide 5% as sunblock																								
Titanium dioxide 10% as sunblock																								
Titanium dioxide 20% as sunblock																								
Tretinoin (Retin A) 0.05% cream																								
Tretinoin (Retin A) 0.1% cream																								
Calcipotriol monohydrate 50 mcg + betamethasone dipropionate 0.5 mg /g (Xamiol) gel																								
Zinc oxide as sunblock																								



5. ADHERENCE ASSESSMENT	YES/NO					
	VISIT 1	VISIT 2	VISIT 3	VISIT 4	VISIT 5	VISIT 6
	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
1. Do you sometimes forget to take your medicine? <i>Pernahkah anda terlupa untuk mengambil ubat anda?</i>						
2. People sometimes miss taking medication for reasons other than forgetting. Thinking over the past two weeks, were there any day when you did not take your medicine? <i>Selain terlupa, terdapat juga alasan-alasan lain yang menyebabkan pesakit tidak dapat atau terlepas mengambil ubat mereka. Sejak dua minggu yang lepas, pernahkah anda terlepas atau tidak dapat mengambil ubatan anda?</i>						
3. Have you ever cut back or stopped taking your medication without telling your doctor because you felt worse when you took it? <i>Adakah anda pernah berhenti atau mengurangkan pengambilan ubat tanpa memberitahu doktor terlebih dahulu jika anda mendapati ubat itu memberi kesan yang tidak diingini selepas menggunakannya?</i>						
4. When you travel or leave home, do you sometimes forget to bring along your medication? <i>Apabila anda melancong atau keluar dari rumah, pernahkah anda terlupa untuk membawa bersama ubat anda?</i>						
5. When you feel like your disease is under control, do you sometimes stop taking your medicine? <i>Apabila anda merasakan penyakit anda terkawal, adakah kadang kala anda akan berhenti mengambil ubat?</i>						
6. Taking medication is a real inconvenience for some people. Do you ever get hassled about sticking to your treatment plan? <i>Pengambilan ubat menyebabkan kesulitan terhadap sesetengah pesakit. Pernahkah anda mengalami kesulitan untuk mengikuti jadual pengambilan ubatan anda?</i>						
7. How often do you have difficulty remembering to take all your medication? <i>Berapa kerapkah anda mengalami kesukaran dalam mengingati pengambilan semua ubat anda?</i>  Never/Rarely.....0 <i>Tidak pernah</i> Once in a while.....1 <i>Jarang-jarang</i> Sometimes.....2 <i>Kadang-kadang</i> Usually.....3 <i>Selalu /sering kali</i> All the time.....4 <i>Sepanjang masa</i>						
<b>SCORE</b> <b>(Please refer "Coding and Re-coding Instructions" for scoring)</b>						

*This scale is modified from the Modified Morisky Medication Adherence Scale to suit psoriasis patients and has not been validated.*

**References:**

1. Donald E. Morisky, Alfonso Ang, Marie Krousel-Wood, and Harry J. Ward (2008). Predictive Validity of a Medication Adherence Measure in an Outpatient Setting. *Journal of Clinical Hypertension* (Greenwich); 10(5): 348–354.
2. Harith Kh. Al-Qazaz, Mohamed A. Hassali, Asrul A. Shafie, Syed A. Sulaiman, Shameni Sundram, and Donald E. Morisky (2010). The eight-item Morisky Medication Adherence Scale MMAS: Translation and validation of the Malaysian version. *Diabetes Research Clinical Practice*; 90(2): 216–221. doi:10.1016/j.diabres.2010.08.012.

## CODING AND RE-CODING INSTRUCTIONS

### Codes are:

No = 0 and Yes = 1

### Re-codes:

Recoding is required because the questions are phrased to avoid the “yes-saying” bias by reversing the wording of the questions about the way patients might experience failure in following their medication regimen, since there is a tendency for patients to give their physicians or other healthcare provider positive answers.

### For Items 1 – 7:

You will need to reverse the code response in a positive direction.

### For Item 7:

It is divided by 4 when calculating a summated score (this procedure standardises the 5-point Likert scale).

### How to re-code (r):

If Item1 = 1 Item 1r = 0	(low adherence)
If Item2 = 1 Item 2r = 0	(low adherence)
If Item3 = 1 Item 3r = 0	(low adherence)
If Item4 = 1 Item 4r = 0	(low adherence)
If Item5 = 1 Item 5r = 0	(low adherence)
If Item6 = 1 Item 6r = 0	(low adherence)
If Item7 = 0 Item 7r = 4/4	(highest adherence)
If Item7 = 1 Item 7r = 3/4	(high adherence)
If Item7 = 2 Item 7r = 2/4	(moderate adherence)
If Item7 = 3 Item 7r = 1/4	(low adherence)
If Item7 = 4 Item 7r = 0	(lowest adherence)

### Interpretation:

Adherence Level	Score
Low Adherence	< 5
Medium Adherence	5 to < 7
High Adherence	7

## 6. PHARMACEUTICAL CARE ISSUES

(Medication-related problem encountered during drug counselling)

Visit No.:		Date:	
Pharmaceutical Care Issues (please tick ✓)	Pharmaceutical Care Issue	Pharmacist Recommendation / Intervention	Outcome
A. Drugs and doses o Drug & dose tolerability • Yes • No (if no, any changes have been done?) o Drug regimen appropriateness			
B. Adherence o Medication administration			
C. ADR/Side effect o Severe nausea/vomiting o Rash o Dry skin o GI upset o Headache o Abnormal LFT o Abnormal FBC o Others (if any)			
D. Contraindication o Pregnant o Breastfeeding o Liver disease o Renal impairment o Lung disease			
E. Others o Drug-drug interaction o Drug-food interaction			
F. Dietary and lifestyle modification o Aggravating factor o Pain relieving factor			

Require further follow-up: Yes/No

Follow-up date: \_\_\_\_\_

**FAKTOR-FAKTOR YANG MEMPENGARUHI KETIDAKPATUHAN PESAKIT  
TERHADAP RAWATAN PENYAKIT PSORIASIS  
(Untuk diisi oleh Pegawai Farmasi)**

Sekiranya tahap kepatuhan pesakit terhadap ubat-ubatan adalah dalam kategori rendah (skor < 5) atau sederhana (skor 5 – < 7), sila tanya kepada pesakit tentang faktor-faktor yang mempengaruhi ketidakpatuhan.

Sila tandakan (v) pada kotak yang berkenaan berdasarkan jawapan yang diterima daripada pesakit. Anda boleh menanda lebih daripada satu jawapan.

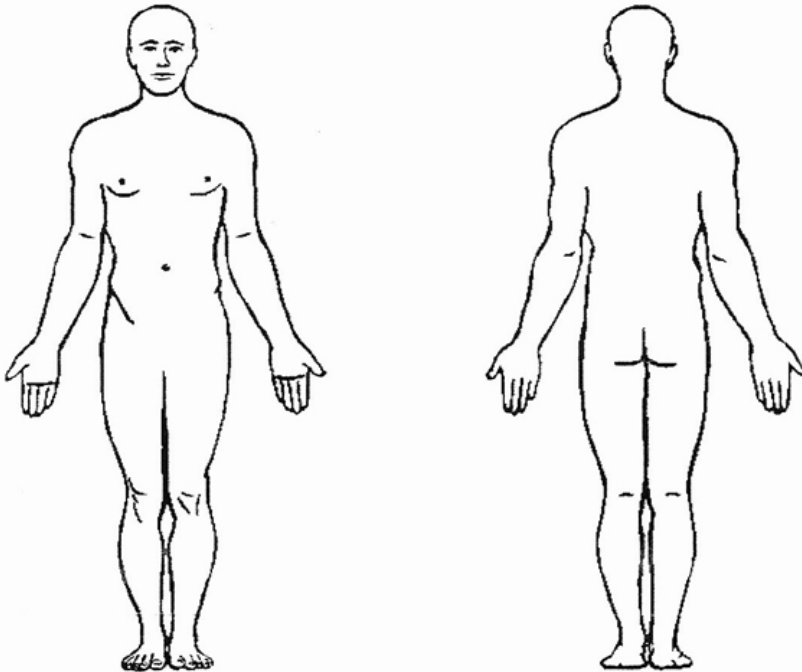
	YA	TIDAK	CATATAN
1. Arahan penggunaan ubat/label adalah tidak jelas.			
2. Formulasi ubat-ubatan (krim/salap/ losyen) tidak digemari oleh pesakit.			
3. Masalah pengangkutan ke hospital (tambang pengangkutan/perjalanan jauh/tempat meletak kenderaan).			
4. Kuantiti ubat yang diberikan sentiasa tidak mencukupi sehingga tarikh temujanji doktor.			
5. Masalah kesihatan lain (darah tinggi, demam, kemasukan wad) yang mengganggu penyakit psoriasis.			
6. Kekurangan sokongan keluarga untuk membawa pesakit ke klinik untuk mengambil ubat/temujanji doktor.			
7. Kepercayaan terhadap ubat-ubat alternatif untuk mengubati psoriasis.			
8. Terdapat kesan sampingan ubat (kegatalan, ruam).			
9. Kurang kefahaman terhadap kepentingan rawatan penyakit psoriasis.			
10. Masalah dalam mengingat masa/cara pengambilan ubat.			
11. Kesukaran untuk mengambil ubat kerana waktu bekerja.			
12. Lain-lain.....			

MTAC PSORIASIS HOSPITAL.....

Nama :

Tarikh :

Sila rujuk kepada kod warna atau nama ubat untuk memastikan ubat disapu pada bahagian badan yang betul.



Nota tambahan:

**PSORIASIS AREA AND SEVERITY INDEX (PASI) ASSESSMENT**

Name :

I/C :

Visit No. :

Date :







**Head:**  $0.1 \times \boxed{\phantom{00}} \times (\boxed{\phantom{00}} + \boxed{\phantom{00}} + \boxed{\phantom{00}}) = \boxed{\phantom{00}}$   
 Area Erythema Scaliness Thickness

**Arms:**  $0.2 \times \boxed{\phantom{00}} \times (\boxed{\phantom{00}} + \boxed{\phantom{00}} + \boxed{\phantom{00}}) = \boxed{\phantom{00}}$   
 Area Erythema Scaliness Thickness




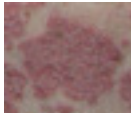





**Trunk:**  $0.3 \times \boxed{\phantom{00}} \times (\boxed{\phantom{00}} + \boxed{\phantom{00}} + \boxed{\phantom{00}}) = \boxed{\phantom{00}}$   
 Area Erythema Scaliness Thickness

**Legs:**  $0.4 \times \boxed{\phantom{00}} \times (\boxed{\phantom{00}} + \boxed{\phantom{00}} + \boxed{\phantom{00}}) = \boxed{\phantom{00}}$   
 Area Erythema Scaliness Thickness

**TOTAL SCORE**

Score	Area	Erythema	Scaliness	Thickness
0	No psoriasis involvement for the region			
				
1	<10%	Slight pink 	Fine scale 	Slight plaque elevation 



2	10 - <30%	Pink 	Coarse scales with most lesions partially covered by scale 	Moderate elevation with rounded or sloped edges 
3	30 - <50%	Red 	Coarse scales with almost all lesions covered and a rough surface 	Marked elevation with marked sharp edges 
4	50 - <70%	Dark red/purple 	Very coarse thick scales covering all lesions, very rough surface 	Very marked elevation with very hard sharp edges 
5	70 - <90%			
6	90 - 100%			

### DISEASE SEVERITY DEFINITION

Psoriasis Severity	Definition
Mild	BSA<10%, PASI<10
Moderate	BSA = 10 – 20%, PSA = 10 - 20
Severe	BSA>20%, PASI>20

Name: \_\_\_\_\_

Visit No.: \_\_\_\_\_

I/C : \_\_\_\_\_

Date : \_\_\_\_\_

**Dermatology Life Quality Index (DLQI)**DLQI= 

The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK.

*Objektif kaji-selidik adalah untuk memahami setakat manakah masalah kulit anda mempengaruhi kehidupan anda SEPANJANG MINGGU YANG LALU.*

Please tick one box for each question/*Sila tandakan satu kotak untuk setiap soalan "✓"*

Over the last week... <i>Sepanjang minggu yang lalu...</i>	Very much <i>Sangat banyak</i>	A lot <i>Banyak</i>	A little <i>Sedikit</i>	Not at all <i>Tidak langsung</i>	Not relevant <i>Tidak berkenaan</i>
1. How itchy, sore, painful or stinging has your skin been? <i>Setakat manakah kulit anda berasa gatal atau sakit?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. How embarrassed or self-conscious have you been because of your skin? <i>Setakat manakah anda berasa malu atau segan disebabkan oleh kulit anda?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. How much has your skin interfered with you going shopping or looking after your home or garden? <i>Setakat manakah kulit anda mengganggu anda daripada pergi membeli-belah atau menjaga rumah atau berkebun?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. How much has your skin influenced the clothes you wear? <i>Setakat manakah kulit anda mempengaruhi pakaian yang anda pakai?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. How much has your skin affected any social or leisure activities? <i>Setakat manakah kulit anda mengganggu aktiviti-aktiviti sosial atau masa lapang anda?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. How much has your skin made it difficult for you to do any sport? <i>Setakat manakah keadaan kulit anda menyebabkan anda tidak selesa semasa bersukan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Has your skin prevented you from working or studying? <i>Adakah kulit menyebabkan anda tidak dapat kerja atau belajar?</i>  <input type="checkbox"/> Yes/Ya <input type="checkbox"/> No/Tidak <input type="checkbox"/> Not relevant/Tidak berkenaan • If "No", over the last week how much has your skin been a problem at work or studying? <i>Jika "Tidak", setakat manakah kulit anda menjadi masalah semasa kerja atau belajar?</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. How much has your skin created problems with your partner or any of your close friends or relatives? <i>Setakat manakah kulit anda menimbulkan masalah dengan teman, rakan baik atau saudara-mara anda?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. How much has your skin caused any sexual difficulties? <i>Setakat manakah kulit anda menyebabkan sebarang masalah hubungan seks?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. How much of a problem has the treatment for your skin been, for example, by making your home messy, or by taking up time? <i>Setakat manakah rawatan kulit anda menimbulkan masalah seperti mengotori rumah anda atau mengambil masa anda?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please check if you have answered EVERY question. Thank you.

*Sila semak sama ada SETIAP soalan telah dijawab. Terima kasih.*

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