



**STANDARD OPERATING PROCEDURE  
FOR  
MINISTRY OF HEALTH DENTAL CLINICS**



**MANAGEMENT  
OF  
PERIODONTAL CONDITIONS  
IN  
PRIMARY ORAL HEALTHCARE CLINICS**

ORAL HEALTH PROGRAMME  
MINISTRY OF HEALTH MALAYSIA

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## **1.0 INTRODUCTION**

Periodontal disease is considered as one of the two significant global burden of oral diseases with the other being dental caries. Severe periodontitis is recognised as the sixth most prevalent oral disease.<sup>1</sup>

The prevalence of periodontal disease among the Malaysian dentate adults is alarmingly high (94.0%) as reported in the National Oral Health Survey of Adults (NOHSA) 2010. Almost half of the adult population was found to have periodontal pockets. The mean number of sextant with healthy periodontium was only 0.68. The majority of the adult population (90.0%) need oral hygiene instruction, scaling and prophylaxis. There is also a great need for complex periodontal care with an increase of more than three folds since 1990 (5.2% in 1990 to 18.2% in 2010).<sup>2</sup>

Unhealthy lifestyles such as tobacco use, poor nutrition and stress are the common risk factors associated with periodontal disease. Diabetes mellitus and other predisposing factors such as genetics and drugs also lead to the development of this condition.<sup>3</sup> Thus, it is necessary to consider these factors in the management of periodontitis patients.

Periodontal disease is a chronic disease that can't be treated with curative care. Dental Officers and Dental Therapists must be trained on effective primary prevention measures through periodontal risk assessment and structured screening procedures.<sup>4</sup> A well-defined referral system and guidelines on appropriate management of periodontal patients need to be strengthened to prevent 'fall-out' of patients.<sup>5</sup>

This Standard Operating Procedure (SOP) aims to provide appropriate dental care to periodontal patients aged 18 years and above attending Primary Oral Healthcare Clinics.

## **2.0 OBJECTIVES**

### **2.1 General Objective**

To address the high burden of periodontal disease among Malaysian adults aged 18 years and above.

### **2.2 Specific Objectives**

- i) To determine BPE score of patients attending primary oral healthcare clinics.
- ii) To refer complex periodontal disease to Periodontist as early as possible
- iii) To increase the accessibility to periodontal care at primary oral healthcare clinics

### 3.0 SCOPE

This SOP will be used to screen adults aged 18 years and above attending primary oral healthcare clinics.

### 4.0. IMPLEMENTATION

#### 4.1. Periodontal Screening

##### 4.1.1. Basic Periodontal Examination (BPE)

- The Basic Periodontal Examination (BPE) is a simple and rapid screening tool that is used to detect periodontal disease<sup>1</sup>.
- BPE does not provide a diagnosis of periodontal disease but indicates for further assessment and treatment required<sup>1</sup>.
- BPE screening should be done using WHO CPITN probe. This probe has a “ball end” 0.5mm in diameter and a black band from 3.5mm to 5.5mm<sup>1</sup>.
- If there is no WHO CPITN probe, other periodontal probes such as Williams probe, Michigan ‘O’, Marquis and UNC-15 can be used<sup>1</sup>.

##### 4.1.2 Screening method

- Dental officer should briefly explain to patients regarding the BPE procedure and possible consequences that may arise.
- Divide the dentition into 6 sextants<sup>1</sup>

Upper right (17 to 14)	Upper anterior (13 to 23)	Upper left (24 to 27)
Lower right (47 to 44)	Lower anterior (33 to 43)	Lower left (34 to 37)

- All teeth in each sextant are examined with the exception of third molars<sup>1</sup>.
- For a sextant to qualify for recording, it must contain at least 2 teeth. If only 1 tooth is present in a sextant, the score for that tooth is included in the recording of the adjoining sextant<sup>1</sup>.
- A WHO CPITN probe should be “walked around” the sulcus/pockets in each sextant, and the highest score recorded in Kad Rawatan Pesakit Am/ Sekolah L.P.8-2 PIN.7/97.
- Light probing force (20g-25g) should be used<sup>1</sup>.
- Once a code 4 is detected in a sextant, the clinician may then move directly on to the next sextant<sup>1</sup>.

### 4.1.3 BPE Scoring Codes

BPE Score	Probing Depth	Observation
0	Black band completely visible	No probing depths >3.5 mm, no calculus / overhangs, no bleeding after probing
1	Black band completely visible	No probing depths >3.5 mm, no calculus / overhangs, but bleeding after probing
2	Black band completely visible	No probing depths >3.5 mm, but supra or sub gingival calculus / overhangs present
3	Black band partially visible	Probing depths of 3.5 – 5.5 mm present
4	Black band entirely within the pocket	Probing depths >5.5mm
*	N/A	Furcation involvement

### 4.2. Early Treatment

- The BPE score for each sextant gives an indication of the periodontal care required.
- The BPE score should be considered together with other factors when making decision for referral.

BPE Score	Early treatment	Review period	Level of care
0	No need periodontal treatment	Once a year	Primary care level
1	Oral Hygiene Instruction (OHI), Dietary Counselling and Smoking Cessation Advice	Review 6 monthly	
2	OHI, Dietary Counselling, Smoking Cessation Advice, Scaling and removal of plaque retentive factor	2-4 month recall after completion of treatment	
3	OHI, Dietary Counselling, Smoking Cessation Advice, Scaling and removal of plaque retentive factor  Referral to specialist may be indicated	2-4 month recall after completion of treatment	
4	OHI, Dietary Counselling, Smoking Cessation Advice, Scaling, removal of plaque retentive factor and referral to Periodontist	3-6 month recall after completion of treatment	Specialist care level
*	OHI, Dietary Counselling, Smoking Cessation Advice, Scaling, removal of plaque retentive factor and referral to specialist	3-6 month recall after completion of treatment	

 If patient's refuse treatment, further advice should be given and documented in the clinical notes.

### 4.3 Review and Reassessment

Review and reassessment for patients with BPE 1, 2 and 3 is performed at 2-4 months interval to assist periodontal patients in maintaining their oral health. A typical visit includes:

- Review medical and drug history of patients
- BPE charting
- Oral Hygiene Instructions, Dietary Counselling and Smoking Cessation Advise are provided by Dental Officers / Dental Therapists with involvement of *Klinik Pergigian Mesra Promosi*
- Scaling if necessary.

### 4.4 Referral

#### 4.4.1 Referral to Periodontists

Referral of patients with periodontal problems to Periodontist depends on several factors including:

- BPE score 0,1,2,3 with periodontal problems such as mucogingival defect and gingival hyperplasia
- BPE score 3 with underlying medical problems such as major organ transplants, diabetes, immunosuppression, history of infective endocarditis and patients on Warfarin
- BPE score 3 not responding to treatment after 2 visits
- BPE score 4

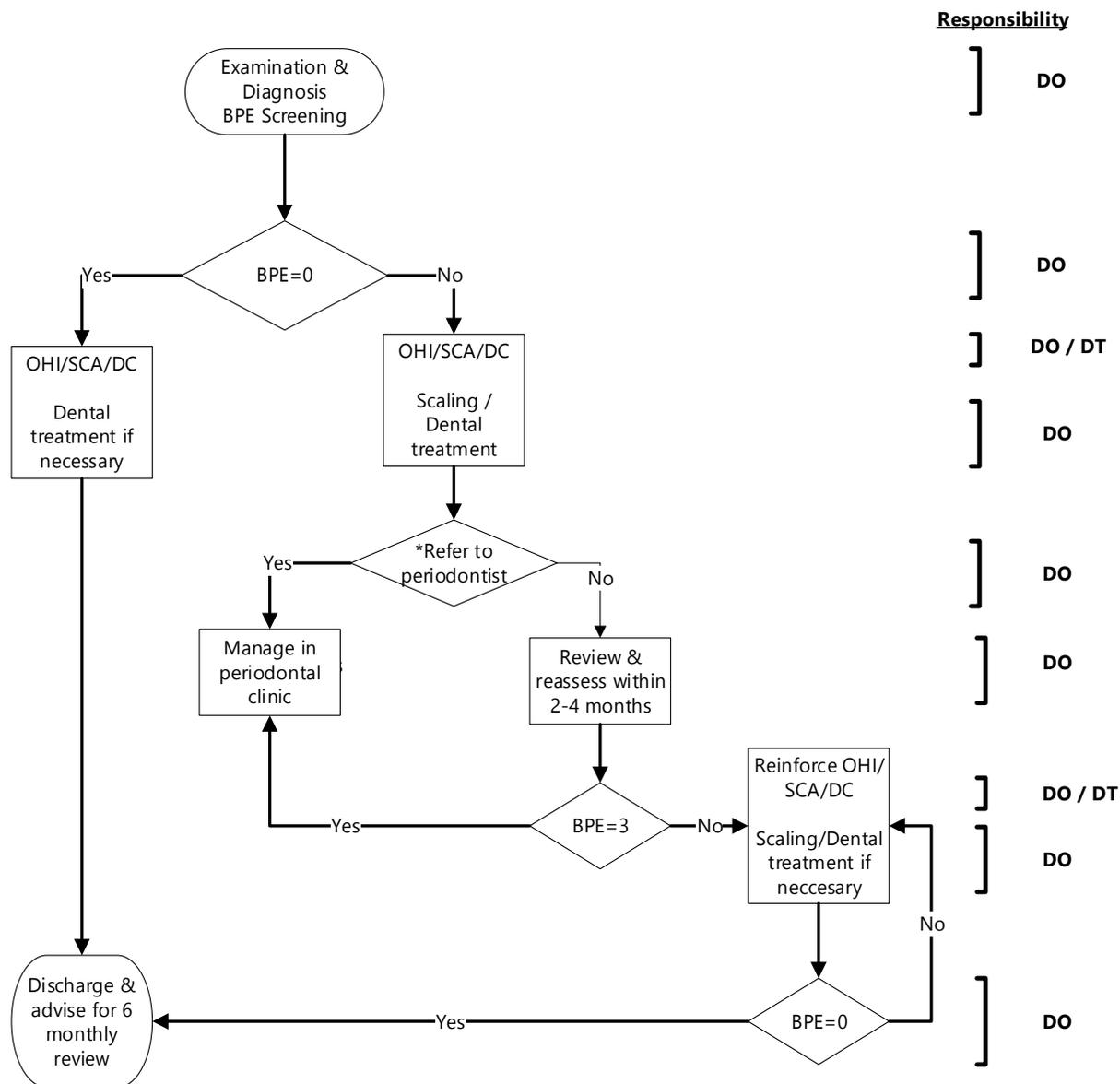
✚ All patients for referral must be provided with basic dental treatment e.g. filling, scaling and extraction

✚ Operators must always adhere to the latest Periodontal Referral Protocol

### 4.5 Responsibility

- All patients are under the responsibility of Dental Officers at the Primary Oral Healthcare Clinics.
- Dental Therapists will assist in providing OHI, Smoking Cessation Advice and Dietary Counselling under supervision of Dental Officers

## 4.6 FLOW CHART ON MANAGEMENT OF PERIODONTAL CONDITIONS FOR PATIENTS 18 YEARS OLD & ABOVE IN PRIMARY ORAL HEALTHCARE CLINICS



**Note**

- OHI : Oral hygiene instruction
- SCA : Smoking Cessation Advice
- DC : Diet counselling
- DO : Dental Officer
- DT : Dental Therapist

\* Refer to periodontist for patients with BPE=3 with medical conditions and BPE=4

\*Other dental treatment are carried out simultaneously with referral to the periodontist if indicated

## 5.0 Training

The training for Management of Periodontal Conditions in Primary Oral Healthcare Clinics will be conducted in two phases.

### 5.1 Centralized Training of Trainers

A centralized training will be conducted to train the trainers. Training consists of a 3 days lecture, case based presentations/ discussions and standardization using diagram and model. The topics that will be covered are as illustrated in **Appendix 1**. Dental Officers Grade UG48 and above will be chosen to represent each state.

### 5.2 Localized Training (State Level Training)

Trained dental officers will then conduct echo-training involving Dental Officers and Dental Therapists with the help of Periodontist within their respective states.

## 6.0 Monitoring and Evaluation

Indicators are monitored using daily and monthly returns as in **Appendix 2 and 3**.

The evaluation is done by monitoring the output indicators as below:

NO	INDICATOR	NUMERATOR	DENOMINATOR
1	Percentage of patient with BPE = 0	No. of patients with BPE = 0	Total new attendances screened
2	Percentage of patient with BPE = 1	No. of patients with BPE = 1	Total new attendances screened
3	Percentage of patient with BPE = 2	No. of patients with BPE = 2	Total new attendances screened
4	Percentage of patient with BPE = 3	No. of patients with BPE = 3	Total new attendances screened
5	Percentage of patient with BPE = 4	No. of patients with BPE = 4	Total new attendances screened
6	Percentage of patients reviewed at primary oral healthcare clinics	No. of patients reviewed at primary oral healthcare clinics	Total no of patients given appointment for review

NO	INDICATOR	NUMERATOR	DENOMINATOR
7	Percentage of patients given OHI	No. of patients provided OHI	New attendance
8	Percentage of patients given dietary counselling	No. of patients provided dietary counselling	New attendance
9	Percentage of patients given smoking cessation advice	No. of patients provided smoking cessation advice	No of smokers attending primary oral healthcare clinics
10	Percentage of patients provided with scaling	No. of patients provided with scaling	No of patients indicated for scaling
11	Percentage of patients referred to Periodontist	No. of patients referred to Periodontist	New attendance

 **New attendance refers to patients screened BPE for the first time in that particular year.**

## REFERENCES

1. British Society of Periodontology 2016, The Good Practitioner's Guide to Periodontology, Revised March 2016, 3rd version
2. Oral Health Division, Ministry of Health, Malaysia. National Oral Health Survey of Adults 2010 (NOHSA 2010)
3. Genco RJ, et al. Risk factors for periodontal disease, June 62(1):59-94 Periodontol 2000. 2013
4. Dom TN, Muttalib KA, Ayob R, Yaw SL, Asari AS, Manaf MR, Aljunid SM. Periodontal status and provision of periodontal services in Malaysia: trends and way forward. Malaysian Journal of Public Health Medicine 2013, Vol. 13(2):38-47.
5. Azli NA, Abdullah MZ, Ismail NA. Management of Periodontal Conditions in Primary Care Setting: Need Leading Change (TGP Report 2016)

**TRAINING MODULE: MANAGEMENT OF PERIODONTAL CONDITIONS IN PRIMARY  
ORAL HEALTHCARE SETTINGS (TRAINING OF TRAINERS)**

No	Lectures	Topics Covered	Specialty	Duration
1	Introduction	<ul style="list-style-type: none"> <li>- Overall Objectives</li> <li>- Running of the Program</li> <li>- Expected Outcome</li> </ul>	DPHS	30min
2	Epidemiology of Periodontal Disease	<ul style="list-style-type: none"> <li>- Global epidemiology – prevalence &amp; distribution of gingivitis &amp; periodontitis</li> <li>- Pattern of prevalence &amp; severity of gingivitis &amp; periodontitis in Malaysia</li> <li>- Progression pattern of periodontitis</li> </ul>	DPHS	1 hour
3	Periodontal diagnosis & Screening	<ul style="list-style-type: none"> <li>- Pathogenesis of periodontal condition</li> <li>- Detection of periodontal condition</li> <li>- Diagnosis of periodontal condition</li> <li>- Who to screen?</li> <li>- How to screen?</li> <li>- How to use screening information?</li> </ul>	Periodontal Specialist	1.5 hour
4	Risk Factors	<ul style="list-style-type: none"> <li>- Known risk factor</li> <li>- Introduce risk prediction models in epidemiology</li> <li>- Periodontitis a risk factor for other disease</li> </ul>	DPHS / Periodontal Specialist	1 hour
5	Treatment Planning of Periodontal Cases	<ul style="list-style-type: none"> <li>- Sequence of therapeutic procedure</li> <li>- Objective of periodontal therapy</li> <li>- Factors which affects healing</li> <li>- Healing after periodontal therapy</li> </ul>	Periodontal Specialist	1 hour

No	Lectures	Topics Covered	Specialty	Duration
6	Non- Surgical Treatment	<ul style="list-style-type: none"> <li>- Plaque control mechanical (OHI, tooth brushing) &amp; chemical (mouthwash)</li> <li>- Root surface instrumentation &amp; its effectiveness</li> <li>- Adjunctive pharmacological agents</li> <li>- Response to treatment</li> <li>- Failure of treatment</li> <li>- Monitoring</li> </ul>	Periodontal Specialist	1.5 hour
7	Instrumentation & Scaling Technique	<ul style="list-style-type: none"> <li>- Ultrasonic &amp; magnetostrictive scalers</li> <li>- Scaling technique</li> <li>-</li> </ul>	Periodontal Specialist	1 hour
8	Periodontal Reassessment & SPT	<ul style="list-style-type: none"> <li>- Rationale</li> <li>- Objectives</li> <li>- Sequence of maintenance visits</li> <li>- Recall interval</li> <li>- Procedure to perform at recall</li> </ul>	Periodontal Specialist	1 hour
9	Rehabilitation in periodontally compromised conditions	<ul style="list-style-type: none"> <li>- To extract or not to extract</li> <li>- Concept of replacing missing tooth</li> <li>- Implants</li> <li>- Factors to consider prior to implant</li> <li>- Peri-implant complications</li> <li>- Rehabilitation options</li> </ul>	Periodontal Specialist	1 hour
10	The decision to treat or refer	<ul style="list-style-type: none"> <li>- Guidelines for referral based</li> <li>- Key info in referral letter</li> </ul>	Periodontal Specialist	30min
11	BPE Hands-On	<ul style="list-style-type: none"> <li>- BPE &amp; instrumentation technique on models</li> </ul>	Periodontal Specialist	1.5 hour



