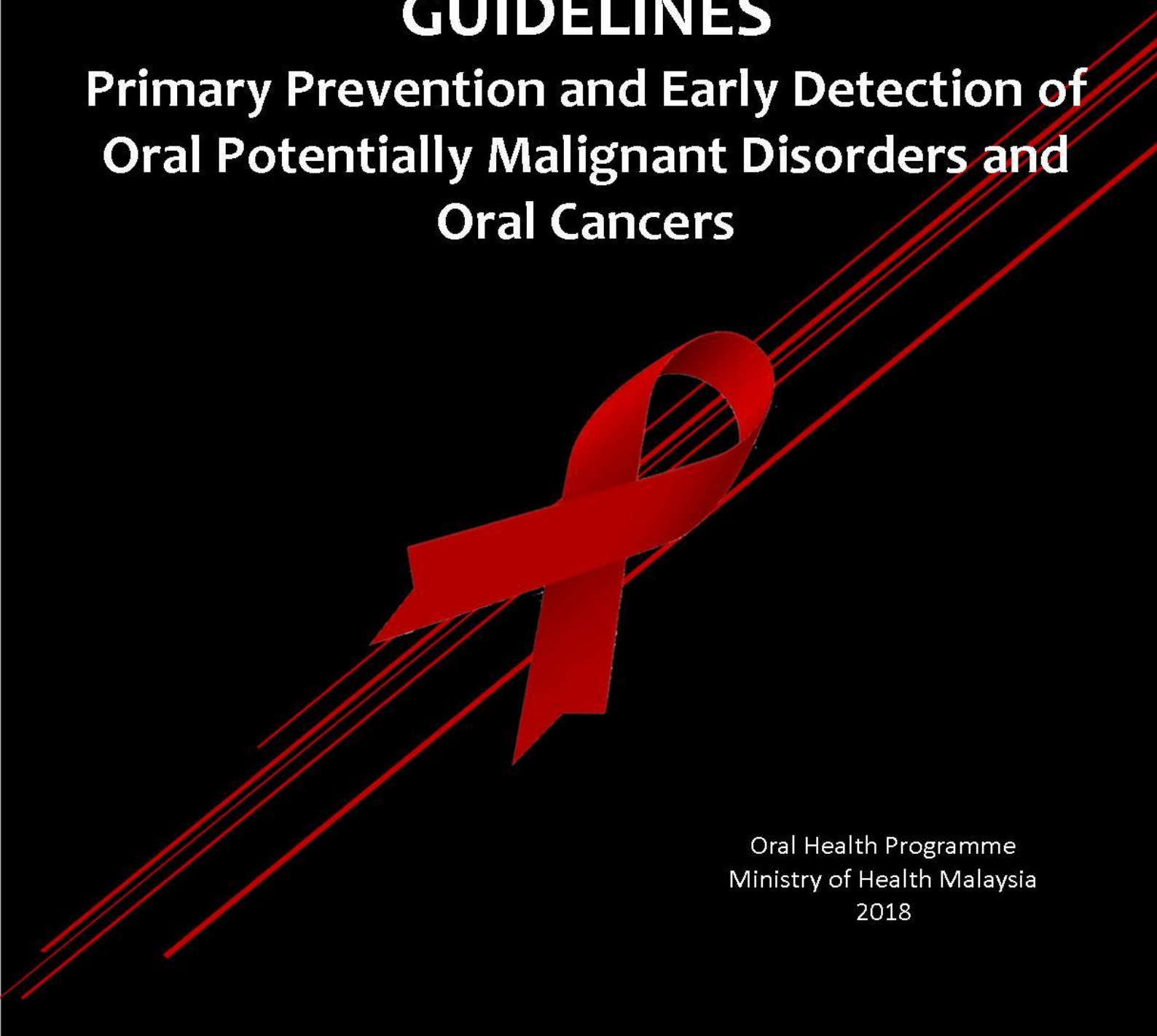
MOH/K/GIG/2.2018(GU)

GUIDELINES

Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers



Oral Health Programme
Ministry of Health Malaysia
2018

MOH/K/GIG/2.2018 (GU)

Guidelines
Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers

Oral Health Programme
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FOREWORD

Oral cancer remains a major health concern in Malaysia. Although prevalence is low, oral lesions are predominantly found among some identified communities especially among Indians. According to the Malaysian National Cancer Registry Report, more than 50% of oral cancer patients present at stages III and IV. This late detection not only makes ideal management impossible, those who survive have a poor quality of life.

It was documented that the practice of oral habits such as smoking, betel quid chewing and alcohol consumption are the main risk habits to oral cancer in the Malaysian population. Based on these facts, the Oral Health Programme, Ministry of Heath Malaysia had established its emphasis on Primary Prevention and Early Detection of Oral Pre-Cancer and Cancer Programme since 1997.

In collaboration with relevant agencies, the programme initially aimed at captive groups particularly Indians as well as Indigenous People of East Malaysia. It worked towards raising awareness of known risk factors to oral lesions and of the signs and symptoms of such lesions. The screening of high risk communities were later accentuated by opportunistic screening of walk-in patients at dental clinics.

This document incorporates current concepts and approaches in oral cancer control and serves as a guide for Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers for Oral Health Programme, Ministry of Health Malaysia. Other supporting documents were also developed to enhance the uptake and success of the programme.

It is envisaged that early intervention through raising awareness of such lesions coupled with concerted efforts at modifying, reducing, or at best, stopping risk habits would afford the best approach towards earlier detection of oral cancers and reducing its incidence and prevalence in the country.

I take this opportunity to express my heartfelt appreciation to the working group and all others involved in the preparation of this revised guideline.

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This publication is dedicated to:

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1.0 INTRODUCTION

Oral cancer is one form of malignancy that is very easily detected through an oral examination. Prevention and early detection of potentially malignant disorders have the potential of not only decreasing the incidence but also in improving the survival of those who develop oral cancer.[1] Lack of public awareness about signs, symptoms and risk factors, along with the absence of knowledge for early detection by health-care providers are believed to be responsible for the diagnostic delay in identifying the potentially malignant disorders.

The definition of oral cancer in this programme is confined to cancers of the orofacial region affecting the oral mucosa including the tongue, lip, gingivae, palate and alveolus. This does not include tumours of the salivary glands or the oropharynx.

The National Cancer Registry, Ministry of Health has registered new cancer cases of the lips, tongue and mouth and those reported at advanced stage were at percentage 46.9%, 60.6% and 66.9% respectively.[2] Oral cancer is prevalent especially among the Indian ethnic group where the incidence ranked within the top ten cancers in Malaysia. Among male and female Indians, cancer of the mouth was the 8th most frequent cancer reported at the percentage of 4.0% among males and was the 4th most frequent cancers among female Indians at the percentage of 6.0%.[2] Indigenous people of Sabah and Sarawak are also at an increased risk for this type of cancer. It was documented that the practice of oral habits

[1] Zain, Ikeda & Axeal. Clinical criteria for diagnosis of oral mucosal lesions: An aids for dental and medical practitioners in the Asia-Pacific Region. Faculty of Dentistry, University of Malaya 2002. Kuala Lumpur.
[2] Azizah Ab M, Nor Saleha I.T, Noor Hashimah A, Asmah Z.A, Mastulu W. Malaysian National Cancer Registry Report 2007-2011. National Cancer Institute, Ministry of Health Malaysia 2015

such as smoking, betel quid chewing and alcohol consumption are the main risk habits to oral cancer in Malaysian population. [3,4]

In 2002, the Oral Health Programme, Ministry of Health Malaysia (MOH) had started the implementation of the National Programme for 'Primary Prevention and Early Detection of Oral Pre-cancer and Cancer'. There were 93,457 patients aged 20 years and above that have been screened between year 2003 and 2015 from a total of 3,017 new high risk areas and 686 repeated high risk areas. A total of 1,065 patients screened were found with lesions that accounted for 1.1%. However, only 61.0% and 28.6% were referred and seen by oral surgeons respectively. Over a period of thirteen years from year 2003 to 2015 merely 20.5% (24 of 117 cases) were detected at stage 1 while more than 67.5% were detected at later stages (Stage III and IV). [5]

The programme for 'Primary Prevention and Early Detection of Pre-Cancer And Oral Cancer Lesions' was initiated in 1997[3] and was outlined in the guideline of "Primary Prevention and Early Detection of Oral Precancer and Cancer" in 2002 under the support of World Health Organization (WHO).[3] In this revised edition, the emphasis is on empowerment of individuals and communities through multi-sectoral collaborations with various government and private agencies and NGOs. A number of Standard Operating Procedures (SOPs) and a Training Module have been developed as supplementary references to this edition in order to provide a standardised and systematic approach for implementation of the programme.

[3] Oral Health Division, Ministry of Health. *Guidelines primary prevention and early detection of oral precancer and cancer*; 2002.
[4] Zain RM, Ikeda N, Muhammad Y. *Oral mucosal survey of adults in Malaysia 1993-1994*. Joint Project by Ministry of Health Malaysia, University of Malaya and Aichigakuin University of Japan.
[5] Oral Health Division, Ministry of Health. *Annual Report 2015*.

2.0 LITERATURE REVIEW

2.1 Definition and Prevalence

The term "oral cancer" includes all malignancies arising from the lips, oral cavity, oropharynx, nasopharynx, hypopharynx, and other ill-defined sites within the lip, oral cavity, and pharynx.[6] However, the definition of oral cancer in this programme is confined to cancers of the orofacial region affecting the oral mucosa including the tongue, lip, gingivae, palate and alveolus.

Globally, although oral cancer is largely preventable by individuals avoiding risk factors, a high rate of oral cancer has been recorded in the Indian subcontinent, central and eastern Europe and in parts of France, southern Europe, South America, and Oceania.[7] It also has been estimated that more than 30,000 new cases of oral cancer are diagnosed in the United States (US) each year, with approximately 8,000 associated deaths.[8]

Oral cancer is the most common form of cancer and of cancer-related death among men in India.[3] Furthermore in the United Kingdom in 1999, the number of newly diagnosed cases of oral cancer was 3,268 in males and 1,831 in females, and the number of deaths was approximately 1,600.[9] Although globally oral cancer represents an incidence of 3% (males) and 2% (females) of all malignant neoplasms, it has one of the lowest survival rates (50%), within a five-year period.[10] The World Health Organization reported oral cancer as having one of the highest mortality ratios amongst all malignancies.[11]

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[6] World Health Organization. *International statistical classification of diseases and related health problems. - 10th revision,* Fifth edition, 2016.
[7] Parkin DM, Whelan SL, Ferlay J, Teppo L, Thomas DB, eds. *Cancer incidence in five continents*. Lyon: IARC Press; 2002.
[8] Jemal A, Murray T, Samuels A, Ghafoor A, Ward E, Thun M. *Cancer statistics 2003*. CA Cancer J Clin. 2003; 53(1): 5–26.
[9] Cancer Statistics Registrations. *Registrations of cancer diagnosed in 1999*. London: Office for National Statistics; 2002.
[10] Greenlee RT, Hill-Harmon MB, Murray T, Thun M. *Cancer statistics 2001*. CA Cancer J Clin. 2001; 51: 15–36.
[11] Ferlay J, Bray F, Pisani P, Parkin DM. *GLOBOCAN 2000, Cancer incidence, mortality and prevalence worldwide*, Version 1.0. Lyon: IARC Press; 2004.

In Malaysia, the National Cancer Registry (2003-2005) reported mouth cancer as the 7th and 3rd most common cancers for the Indian males and females respectively. Oral cancer among the Indian males and females accounted for 4.5% and 6.5% respectively of all cancers.[12] In 2007, National Cancer Registry reported oral cancer as the 21st most common cancer in the general population and the 17th most common cancer in males and 16th in females.[13] In the most recent National Cancer Registry (2007-2011) report published in 2015, the incidence of oral cancer remains predominant among the Indian ethnic group where mouth cancers were among the 10 most common cancers in both male and female. The incidence of oral cancer is highest in Indian females where the Age Standardised Rate (ASR) was 7.5 /100,000 as compared to 2.9/100,000 among Indian males. It was also noted that mouth cancer was the 4th most frequent cancer among female Indians. Of the mouth cancer cases reported, only 14.2% and 18.9% of the cases were diagnosed at stage I and II respectively. As the lip is more noticeable, more cases of lip cancers (34.7%) were detected at stage I whereas only 15.2% and 14.2% of tongue and mouth cancers were detected at stage I respectively. Of those cancer lesions with staging, 46.9%, 60.6% and 66.9% of lips, tongue and mouth respectively were already at an advanced stage.[2] The indigenous people of Sabah and Sarawak were also identified as a group with a high occurrence of precancerous and cancerous lesions after the Indians as about 17 % of them were affected.[12]

2.2 Risk Habits

It has been recognized worldwide that tobacco smoking, quid chewing and alcohol consumption are the three main risk habits found to be associated with oral

[12] National Cancer Registry. *Cancer incidence in Peninsular Malaysia, 2003 - 2005*. Kuala Lumpur; 2008.
[13] O Zainal Ariffin, I.T Nor Saleha, GCC Lim, S Rampal, Y Halimah (Eds). National Cancer Registry Report 2007, Ministry of Health, Malaysia. 2011.

cancer.[14,15,16,17,18] The dose response relationship between tobacco habits and oral leukoplakia (oral potentially malignant disorder) is well established.[19] A study on oral mucosal lesions in Malaysia was carried out in 1993/1994. Of the 11,697 subjects examined, only 5 oral cancer cases were found with a prevalence of 0.04%. This report also noted variation in the occurrence of oral premalignancy among the ethnic groups, where the Indigenous people of Sabah and Sarawak were also identified as a group which had a high occurrence of precancerous (15.4 %) and cancerous lesions (1.9 %).[20]

Oral visual screening can reduce mortality in high-risk individuals and has the potential of preventing at least 37 000 oral cancer deaths worldwide.[21] Therefore, it is an ideal tool to identify early potentially malignant lesions as it is a simple, acceptable, and accurate screening test for oral neoplasia.[22,23,24,25,26,27] Early detection of oral cancer leads to significantly reduced mortality and morbidity. The most cost effective way is to screen high risk communities particularly those practicing high risk habits. However, when

[14] Choi SY, Kahyo H. *Effect of cigarette smoking and alcohol consumption in the aetiology of cancer of the oral cavity, pharynx and larynx*. Int J Epidemiol. 1991; 20 (4): 878 -885.
[15] Hirayama T. *An Epidemiological study of oral and pharyngeal cancer in Central And South-East Asia.* Bulletin World Health Org. 1966; 34:41-69.
[16] Mehta FS, Gupta PC, Bhonsle RB, Murti PR, Daftary DK, Pindborg JJ. *Detection of oral cancer using basic health workers in an area of high oral cancer incidence in India.* Cancer Detect Prev.1986; 9: 219–25.
[17] Johnson NW. *Orofacial neoplasm: global epidemiology, risk factors and recommendations for research*. Int Dent J.1991; 41: 365-375.
[18] Ko YC, Huang Y, Lee CH, Chen MJ, Lin LM, Tsai CC. *Betel quid chewing, cigarette smoking and alcohol consumption related to oral cancer in Taiwan*. J Oral Pathol Med. 1995; 24: 450-3.
[19] Gupta PC. *A study of dose response relationship between tobacco habits and oral leukoplakia.* Br J cancer. 1984; 50: 527-531.
[20] Zain RB, Ikeda N, Razak I, et al. *A national epidemiological survey of oral mucosal lesions in Malaysia*. Community Dent Oral Epidemiol. 1997; 25: 377-83.
[21] NIDR. *Prevention and early detection: Keys to oral cancer*. J Am Dent Assoc (JADA).1993; 124(1): 81-82.
[22] Warnakulasuriya KAAS, Nanayakkara BG. *Reproducibility of an oral cancer and precancer detection program using a primary health care model in Sri Lanka*. Cancer Detect Prev. 1991; 15: 331–34.
[23] Warnakulasuriya KAAS, Ekanayake ANI, Sivayoham S, et al. *Utilisation of primary care workers for early detection of oral cancer and precancer cases in Sri Lanka.* Bulletin World Health Organ. 1984; 62: 243–50.
[24] Mehta FS, Gupta PC, Bhonsle RB, Murti PR, Daftary DK, Pindborg JJ. *Detection of oral cancer using basic health workers in an area of high oral cancer incidence in India*. Cancer Detect Prev. 1986; 9: 219–25.
[25] Mathew B, Sankaranarayanan R, Sunilkumar KB, Binu K Pisani P, Krishnan Nair M. *Reproducibility and validity of oral visual inspection by trained health workers in the detection of oral precancer and cancer*. Br J Cancer. 1997; 76: 390–94.
[26] Mathew B, Wesley R, Dutt SC, Amma S, Sreekumar C. *Cancer screening by local volunteers*. World Health Forum. 1996; 17: 377–78.
[27] Sankaranarayanan R. *Healthcare auxiliaries in the detection and prevention of oral cancer*. Oral Oncol. 1997; 33: 149–54.

screening is limited to high risk individuals, those who are not identified as high risk will not be screened and will therefore be missed.[28]

Opportunistic mass screening is the only viable choice to find oral cancer at precancerous or very early and high survival stage. It was found that adopting the high risk approach or opportunistic screening has resulted in the identification of an additional 46.70 oral cancers per 100 000 members of the general population and an additional 23.95 cases per 100 000 of high-risk individuals and thus associated with 269.31 and 1437.64 life-years saved per 100 000 individuals in the general population and high-risk individuals respectively.[29] Cancer of the mouth occurs in a region of the body that is generally accessible to physical examination by the patient, the dentist, and the physician.[30] However, oral health personnel are in the best position to undertake a systematic and methodical examination of the mouth and its surrounding structures. Screening for oral cancer may be more effective if targeted to younger age groups, particularly those aged 40 to 60. However, another study found that there has been a nearly five-fold increase in incidence in oral cancer patients under age 40 and many with no known risk factors.[31]

Since oral cancer, particularly Squamous Cell Carcinoma, is largely a preventable disease, the emphasis should also, or perhaps even more so, be on cessation of tobacco and alcohol habits. In the US, knowledge on risk habits for oral cancer among the public is still low and only few US adults have had an oral cancer examination.[32] A three-year survey (2004-2007) in Maggie's Cancer Caring Centres or in patients' homes in Glasgow and Edinburgh, Scotland with participants that included young patients diagnosed with oral cancer, found

[28] Sankila R, Coll EC. *Evaluation and monitoring of screening program*. Luxembourg: Office for the Official Publication of the European Communities; 2001.
[29] Subramanian S, Sankaranarayanan R, Bapat B, Somanathan T, Thomas G, Mathew B, Vinoda J & Ramadas K. *Cost-effectiveness of oral cancer screening: results from a cluster randomized controlled trial in India*. Bulletin of the World Health Organization. 2009; 87: 200-206. doi: 10.2471/BLT.08.053231
[30] Chiodo GT, Eigner T, Rosenstein DI. *Oral cancer detection, the importance of routine screening for prolongation of survival*. Postgrad Med. 1986; 80:231–6.
[31] Llewellyn CD, Johnson NW, Warnakulasuriya KA. *Risk factors for squamous cell carcinoma of the oral cavity in young people–a comprehensive literature review*. Oral Oncol. Jul 2001;37(5): 401-418.
[32] Horowitz AM, Goodman HS, Yellowitz JA and Nourjah PA. *The need for health promotion in oral cancer prevention and early detection.* Journal of Public Health Dentistry. 1996; 56: 319–330. doi: 10.1111/j.1752-7325.1996.tb02459.x

that none of the patients suspected that they had oral cancer until it was confirmed by their general practitioner or general dental practitioner. [33]

Several studies have been done to determine the correlation between the development of oral cancer and socioeconomic status (SES).[34,35] Systematic reviews and meta-analysis of case-control studies done in 2008 and 2009 respectively concluded that oral cancer risks associated with low SES is significant and comparable to lifestyle risk factors. [36,37] The primary measure of SES include education and occupation. A survey in India found that awareness was proportional to education level but the prevalence of risk habits was inversely proportional to the education level. However, among the high risk subjects, 82% of smokers, 75% of tobacco chewers and 66% of those who consumed alcohol were aware that their habits could lead to oral cancer.[38] In Malaysia, more than two third (69.4%) of adults have heard of oral cancer before and it also shows an increase with higher education levels. Majority (86.9%) knew of smoking as a risk habit and more than half of the adults were aware that consumption of alcohol and betel quid chewing were also recognized as risk factors for oral cancer.[39]

3.0 OBJECTIVES

3. 1 General Objective

To reduce prevalence and incidence of oral potentially malignant disorders (OPMDs) and oral cancers in the communities.

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[33] Al-Dakkak I.*Public awareness of oral cancer and associated risk factors is low*. Evid Based Dent. 2010; 11(4): 106-7.

[34] Allam E (2013) *Social and behavioral determinants of oral cancer*. Dentistry 4:182. doi:10.4172/2161 1122.1000182

[35] Sharpe KH, McMahon AD, Raab GM, Brewster DH, Conway DI (2014) *Association between socioeconomic factors and cancer risk: A population cohort study in Scotland (1991-2006).* PLoS ONE 9(2): e89513. doi:10.1371/journal.pone.0089513

[36] Conway, D. I., Petticrew, M., Marlborough, H., Berthiller, J., Hashibe, M. and Macpherson, L. M.D. (2008), *Socioeconomic inequalities and oral cancer risk: A systematic review and meta-analysis of case-control studies.* Int. J. Cancer, 122: 2811–2819. doi:10.1002/ijc.23430

[37] Warnakulasuriya S (2009) *Significant oral cancer risk associated with low socioeconomic status.* Evidence-Based Dentistry 10, 4–5. doi:10.1038/sj.ebd.6400623

[38] Elango JK, Sundram KR,Gangadharan P,et al. *Factor affecting oral cancer awareness in a high risk population in India*. Asian Pac J Cancer Prev. 2009 Oct-Dec; 10(4):627-30.

[39] Oral Health Division, Ministry of Health. *National Oral Health Survey of Adults 2010 (NOHSA 2010).* November 2013.

3. 2 Specific Objectives

i) To screen adults for early detection of OPMDs and oral cancers in identified high risk communities

ii) To conduct opportunistic screening for early detection of OPMDs and oral cancers among adults:

   a) attending community programmes

   b) attending dental clinics

iii) To detect cases of OPMDs and oral cancers, to make necessary referrals and monitor compliance

iv) To educate the general population and high risk communities on risk factors, early signs of oral cancer and mouth self-examination.

4.0 PROGRAMME TEAM

State committees shall be formed for the purpose of:

i) Planning community programmes and opportunistic screening at state and district levels;

ii) Identification of, and liaison with, estates / kampong / clinics as well as other communities exhibiting high-risk habits;

iii) Monitoring and evaluation of the programme through the following:

   a. managing data collection through clinical examination formats;

   b. ensuring efficient data flow for compliance of referral cases between primary and secondary oral healthcare at state level;

   c. monitoring management of patients found with oral lesions at primary and secondary healthcare at state level; and

   d. producing an annual evaluation report on the programme for the national steering committee.

iv) Planning for training and standardisation of dental officers for oral lesion identification with state Oral and Maxillofacial Surgeons (OMFS), Oral Pathology and Oral Medicine (OPOM) specialists; and

v) Planning for training in all other aspects deemed necessary for the implementation of the national programme.

At state level, the Deputy Director of Health (Dental) will act on behalf of the Programme Director and shall form his own committee comprising the District Dental Officers, Oral Maxillofacial Surgeons or Oral Pathology / Oral Medicine Specialists, Dental Public Health Specialists and other committee members which should at least comprise of:

a) Examiners - all / selected Dental Officers
b) Recorders - Dental Surgery Assistants shall assist in the screening as well as registration of subjects and recording of findings.
c) Support Staff - include drivers, attendants and dental therapists, the latter being primarily involved in oral health promotive / preventive efforts on oral cancer and OPMDs such as talks and exhibitions to be held in conjunction with the programme.

This programme will require close co-operation with other related agencies.

5.0 METHODOLOGY

A targeted population strategy involving identifying of risk habits and screening for early detection of oral cancer shall be employed.

5.1 The Target Population

This programme covers all Malaysian adults **aged 18 years and above**

5.1.1 Primary Prevention

Oral health education shall be undertaken for adult patients, their family members and other members of the communities with the objective of increasing awareness on (1) the associated risks of high-risk habits, (2) the signs and symptoms of OPMDs and (3) mouth self-examination. This shall be done through exhibitions, oral / poster / video presentations, chair side education, etc. The activities conducted to be recorded in the Health Information Management System PKP 201. Materials shall cover smoking, alcohol consumption, and betel quid chewing as risk habits for OPMDs and oral cancers and mouth self-examination. Visual presentation of common OPMDs and oral cancer lesions shall be shown. Information to subjects must emphasise that OPMDs can be prevented from progressing or may even regress with cessation, reduction, and modification of habits.

5.1.2 Oral Examination

Oral examination shall be rendered to:

a) **all adults** in identified high risk communities (e.g. Indian, Orang Asli, indigenous people in Sabah and Sarawak)
b) **all adults** attending other community programmes and outpatient dental clinics

A systematic oral examination should be done in order not to miss any lesions. A guide to the systematic oral examination for early detection of OPMDs and oral cancers is outlined in **Appendix 1**.

- Patients with high risk habits shall be managed according to the **SOP on Management of Patients with High Risk Habits**
- Patients with suspicious OPMDs or oral cancer lesions shall be managed according to the **SOP on Referral Pathway for Patients with Oral Potentially Malignant Disorders and Oral Cancers**

5.2 High Risk Community Screening

5.2.1 Identification of High Risk Communities

All state commitees shall also obtain information on communities where there is widespread prevalence of high-risk habits or identified cancer cases to identify the high risk communities. Health programmes organized for identified high risk communities by other agencies shall be considered for high risk community screening.

5.2.2 Planning of High Risk Community Screening

Permission shall be sought from the management of identified communities. A presurvey visit/ liaison is recommended to establish:

a) details of the community - location, access road, racial composition, and availability of amenities (water, electricity, etc.);
b) contact / resource personnel - this is normally the estate medical assistant or supervisor who can help with organisation, publicity work and referrals;
c) rapport with any visiting medical officer for purposes of referral and compliance of subjects;
d) manpower and logistics
e) location for screening exercise and oral health promotion house-to house visits are recommended to ensure maximum recruitment. If this is not feasible, an activity centre shall be identified and efforts made to increase uptake

5.2.3 Screening Period

This programme shall be part of oral health community programmes and all efforts shall be made to ensure its sustainability.

5.2.4 Revisit screening

Identified high risk communities in the programme shall be revisited at least **once in 5 years.**

Consent shall be obtained before conducting oral examination.

The flow of screening is shown in **Appendix 2A**.

5.3 Opportunistic Screening

5.3.1 Identification of Individuals at Risk for Oral Cancer

Individuals at risk for oral cancer may be identified by asking the history of smoking, alcohol consumption and betel quid chewing habits.

5.3.2 Planning for Opportunistic Screening

a) Community programme

Screening for early detection of OPMDs and oral cancers may be included in the activities planned for community programmes for the adults. Consent shall be obtained before conducting oral examination.

The flow of screening is shown in **Appendix 2B.**

b) Individuals attending outpatient dental clinics

All adults shall be rendered an oral examination for early detection of OPMDs and oral cancers. Consent shall be obtained before conducting oral examination.

The flow of screening is shown in **Appendix 2C.**

5.4 Standardisation of Examiners

The training for standardisation of examiners shall be conducted according to the **Training Modules for Early Detection of Oral Potentially Malignant Disorders and Oral Cancer (2015).**

5.5 Forms and Recording Instructions

5.5.1 Clinical Format for Screening (Appendix 3)

This form is designed to capture salient points on demographic particulars; risk habits; size and site of lesions; family history on oral cancer as well as referrals. Recording instructions for this format is shown in **Appendix 3_1.**

Patients with identified risk habits and willing to quit shall be referred to cessation service/ clinic (refer SOP for Management of Patients with High Risk Habits) of their choice.

All patients found with suspicious oral lesions shall be referred to the Oral Pathology and Oral Medicine (OPOM) Specialist or Oral Maxillofacial Surgeon (OMFS) using the referral form shown in **Appendix 4** (refer SOP for Referral of Oral Potentially Malignant Disorders to Specialists). The OPOM Specialist or OMFS shall complete **Appendix 4A** on information of patients who attend their clinics. Quarterly, the referring primary care clinic shall obtain all filled **Appendix 4A.**

5.5.2 Register of Referral Cases (Appendix 5)

Appendix 5 is designed to capture information on cases with oral lesions referred from primary level to the OPOM Specialists or OMFS. The information pertains to demographic particulars; provisional diagnoses made by dental officers and oral surgeons; as well as management of patients with reference to biopsies and histological findings. Instructions for filling in **Appendix 5** are shown in **Appendix 5_1.**

5.6 Data Collection, Collation, Processing and Analysis

5.6.1 Screening and Referral Database

At state level, all information from **Appendix 3** (Format for Screening and Early Detection of Oral Potentially Malignant Disorders and Cancer Lesions) and **Appendix 5** (Register/Analysis of Referral Cases) shall be entered into the MS Access database designed for the purpose of this programme.

Data entry shall be undertaken in duplicate CDs. One CD shall be sent annually to the Oral Health Programme, Ministry of Health by **31st January the following year.**

5.6.2 Minimising Data Entry Error

For verification purposes and to minimise data entry error, data shall be entered twice on the same file either by

- the same dental personnel after a break; or
- by different dental personnel.

5.6.3 Data Analysis

Descriptive analysis of data shall be undertaken using both the MS Access and other suitable statistical package such as the SPSS. Profiling of the socio-demographic status of patients with lesions can also be carried out.

Based on the MS Access data entry, a general report on the programme shall be completed as shown in **Appendix 6A** and **Appendix 6B.** In addition to these reporting, all training activities related to the programme shall be collected in general as shown in **Appendix 7**.

Each state committee shall send the following reports (along with the database CD) to the Oral Health Programme, Ministry of Health for national level compilation:

- Appendix 5
- Appendix 6A
- Appendix 6B
- Appendix 7

6.0 MONITORING AND EVALUATION

The programme shall be monitored continuously based on the data entry of Appendix 3 into the MS Access database (number of patients / individuals screened) and monthly returns as in PKP 201A (oral health promotion activities). More promotional activities should be conducted to increase knowledge and generate consciousness among population/ individuals to undergo oral cancer screening for early detection of potentially malignant disease in achieving the National Oral Health Plan (NOHP) 2020 goal for oral cancer: 30% of oral cancers are detected at stage 1.

Monitoring and evaluation shall be done at 3 levels namely district, state and national levels. Indicators used for monitoring include:

a) Process Indicators
   - Number of individuals screened
   - Number individuals given oral health promotional activities
   - Number of training activities done

b) Output Indicators
   - Number of personnel trained

   - Percentage of oral potentially malignant disorders detected:
     $= \frac{\text{Number of patients with oral potentially malignant disorders}}{\text{Number of patients screened}}$

   - Percentage of individuals with high risk habits referred for cessation:
     $= \frac{\text{Number of individuals with high risk habits referred for cessation}}{\text{Number of individuals with high risk habits}}$

c) Outcome Indicators

- Percentage of compliance for referral to specialists:

  = Number of patients seen by specialist
  Number of patients referred

- Percentage of referred patients with high risk habits ceased for 6 months or more:

  = Number of individuals with high risk habits ceased for 6 months or more
  Number of referred individuals with high risk habits

Evaluation of programmes shall be done yearly through analysis of available data as well as national surveys. Evaluation indicators of this programme are:

- Percentage of oral cancer cases detected at stage 1:

  = Number of patients reported at stage 1
  Number of patients diagnosed with cancer with staging report

- Percentage of oral cancer cases detected at early stage:

  = Number of patients reported at stage 1 and stage 2
  Number of patients diagnosed with cancer with staging report

- Level of public awareness on oral cancer
  - Percentage of awareness on high risk habits for oral cancer
  - Percentage of awareness on early detection of oral cancer

In addition, continuous research shall be undertaken to measure the effectiveness of the programme from other possible aspects as well. A mechanism to measure survival rate of patients shall be in place to enable us to evaluate our performance in improving the quality of life of the population.

7.0 CONCLUSION

Primary prevention and early detection of oral potentially malignant disorders and oral cancers is important to improve the oral health and quality of life of the population. To achieve this, planning, implementation, monitoring and evaluation of the programme needs to be done systematically. Multisectoral collaboration and empowerment of

individuals and communities are essential to ensure the success of this programme. It is expected this guidelines will serve as a useful reference for managers at various levels in planning, implementing, monitoring and evaluating this programme.

APPENDICES

SYSTEMATIC ORAL EXAMINATION

Systematic clinical examination of the oral cavity should be preceded by examination of the head and neck as it may provide valuable information on the overall assessment of possible oral diseases. Examination of the oral cavity should be carried out with adequate lighting from an external source such as fixed or head-mounted examination lights or hand-held flashlights, supplemented by room lighting. Oral examination should be carried out wearing gloves. Mouth mirrors, tongue depressors and gauze sponges are essential tools for adequate examination of the intraoral structures. A good knowledge of the colour and texture of the various structures and mucosa of the oral cavity is necessary before commencing the oral examination. The examiner should be alert during the entire procedure to identify any change in colour and/or texture of the mucous membrane, inflammatory areas, erythema, hyperpigmentation, macules, papules, vesiculobullous lesions, white lesions, greyish white lesions, red lesions, induration, ulceration, swellings and growth in the oral mucosa.

1. Head and Neck
   Head and neck examination for cervical lymph glands is carried out by standing behind the individual and slightly flexing and bending the neck to the side so that the sternocleidomastoid muscle becomes relaxed and palpation and identification of any enlarged nodes will be easier. The presence of neck masses is not an uncommon finding, especially in subjects with oral infections or cancer.

2. Lips
   Oral examination commences with the visual examination of the lips and the vermilion border and by palpation after removing any lipstick. The lip is usually smooth and pliable. Evert the lips and carefully inspect the labial mucosa. It should be smooth, soft and well-lubricated by minor salivary glands that can be palpated.

3. Buccal Mucosa
   The buccal mucosa is examined by stretching it with a pair of tongue depressors or mouth mirrors after the subject partially opens the mouth.

   In people with dark skin, one may frequently observe a benign condition called leukoedema, which is characterized by a diffuse greyish white opalescence in the buccal mucosa; this disappears when the tissue is stretched.

   A horizontal white or grey line, along the buccal mucosa, called linea alba buccalis may be observed in some persons. This is a benign, hyperplastic reaction resulting from the chronic irritation from the teeth cusps at the level of the interdigitation of the teeth.

The opening of the parotid salivary gland duct, the Stensen duct, may be observed as a small papillary or punctate soft tissue mass on the buccal mucosa adjacent to the maxillary second molar tooth. Milking of the parotid gland may expel saliva at the duct opening.

Ectopic sebaceous glands may be observed on the buccal or labial mucosa as whitish-yellow, pinpoint papules; this developmental anomaly is termed as Fordyce conditions or granules. Minor salivary glands and Fordyce granules may lead to a granular feel on palpation of the buccal mucosa.

4. Tongue – Dorsal Surface
The dorsal surface of the tongue is examined by asking the subject to protrude the tongue and attempt to touch the tip of the chin; alternatively the tip of the tongue may be held gently by the fingers and a gauze sponge.

The dorsal surface of the tongue is normally uniformly covered by numerous fine-pointed and cone-shaped filiform papillae; dozens of mushroom-shaped fungiform papillae, each of which contains one or more taste buds are interspersed among them. The filiform papillae may occasionally become elongated (hairy tongue) and collect oral debris, which can lead to bad breath (halitosis) and an uncomfortable palatal sensation that may lead to gagging. The circumvallate papillae containing numerous taste buds, 8–10 in number arranged in a V-shaped fashion, are located at the junction of the anterior two thirds and posterior third of the tongue. Occassionally, fissuring of the dorsal surface of the tongue may be observed. Nutritional deficiencies may lead to atrophy of the tongue with altered taste sensations or even complete loss of taste.

5. Tongue – Lateral border
The lateral borders of the tongue are examined by grasping the tip of the tongue with a gauze sponge, extending and rotating it laterally and retracting the buccal mucosa on the same side with the tongue depressor. Alternatively, the lateral border of the tongue can be examined by asking the person to touch the opposite buccal mucosa with the tip of the tongue and retracting the buccal mucosa with a mouth mirror.

Vertical fissuring may be observed more along the lateral border of the tongue.

6. Ventral Surface of Tongue and Floor of Mouth
The ventral surface of the tongue and the floor of the mouth are most easily visualized by having the person touch the tip of the tongue to the roof of the mouth. A high level of clinical alertness is required when examining these sites, where oral cancers may be missed as red or white innocuous-looking lesions.

Folds of tissue, the plica sublingualis, can frequently be observed extending from the ventral surface of the tongue. The saliva pooled in the floor of mouth during an oral examination is removed with a gauze sponge. The openings of the submandibular ducts, the Wharton ducts, are usually visualised as midline papillae on either side of the lingual frenum. Saliva oozes out of the Wharton ducts when the submandibular salivary glands are bimanually palpated.

7. Gingivae

The gingivae are examined with the mouth partially opened and the lips retracted with a mouth mirror, fingers or plastic lip retractor.

The attached gingivae adjacent to the teeth appear pale, firm and firmly attached to the underlying bone and are frequently pigmented. The gingival mucosa is darker in colour than the rest and extends from the mucogingival junction to cover the buccal sulcus. Alterations in the clinical appearance of the gingivae can be an indicator of both localized and systemic disease.

8. Hard Palate

The anterior part of the hard palate is better visualised using an intraoral mirror.

The anterior portion of the hard palate is covered by many fibrous ridges. The presence of a large number of minor salivary glands makes the hard palate a common location for minor salivary gland tumours.

9. Soft Palate

The soft palate is examined by depressing the base of the tongue with a tongue depressor and asking the subject to say "aah".

Part of the oropharynx, particularly the accessory lymphoid tissues in the posterior pharyngeal wall that appear as pale mucosal papules, is visible during this procedure. The tonsillar pillars are examined by moving the tongue laterally.

10. Teeth

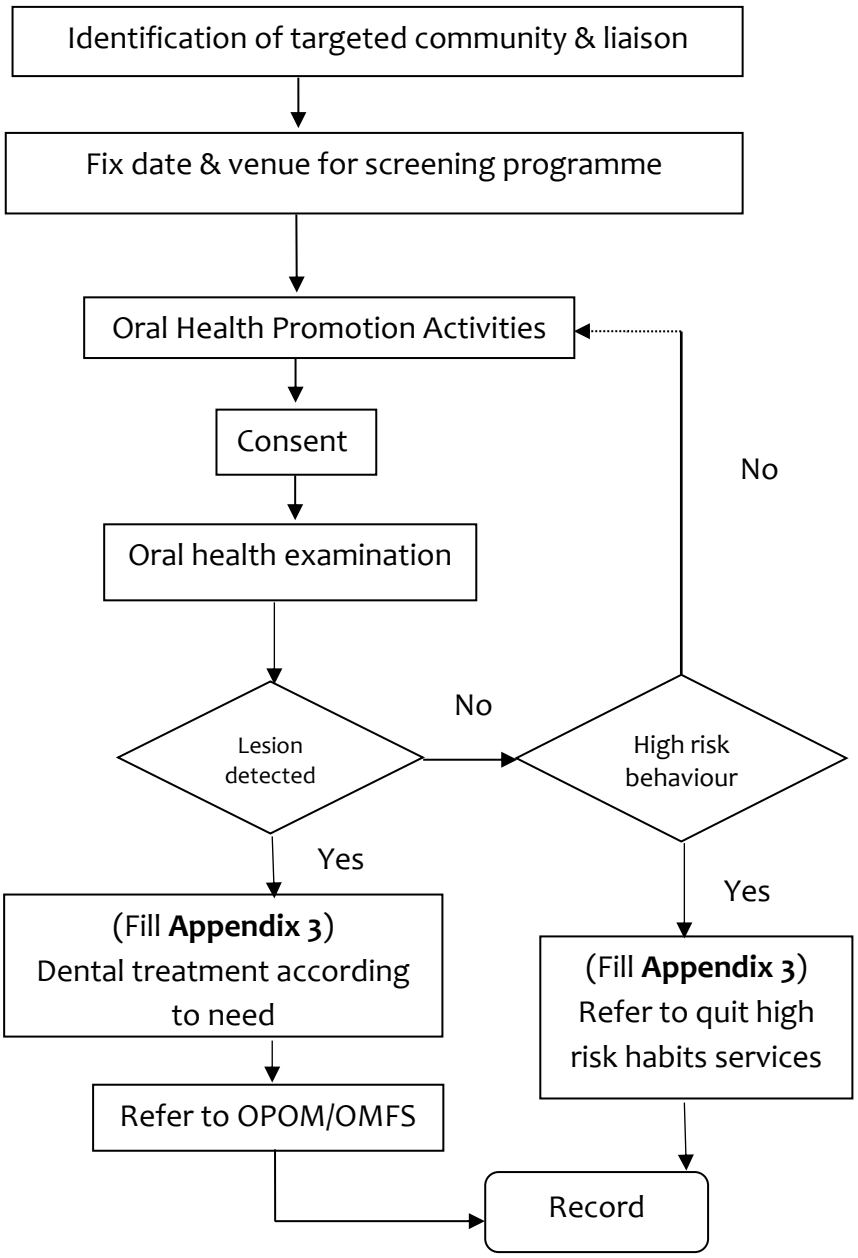
Examination of the teeth should be the final part of the oral examination.

Missing teeth and/or supernumerary teeth may be observed. Discoloured cavities in the occlusal surfaces of teeth may be observed as a consequence of poor oral hygiene.

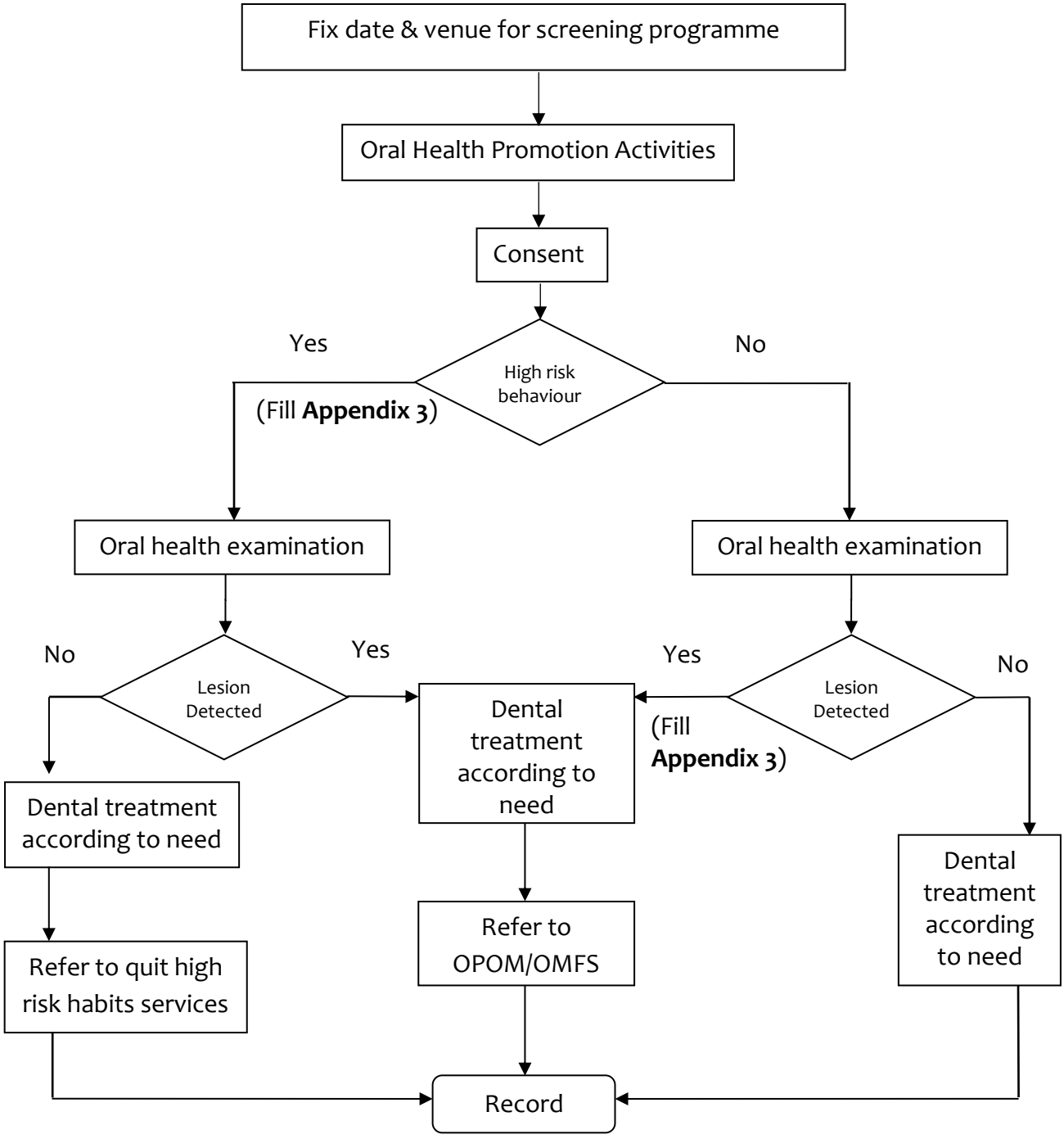
Further reference : **See HANDBOOK - Clinical Criteria for Diagnosis Of Oral Mucosal Lesions: An Aid for Dental and Medical Practitioners In The Asia-Pacific Region**

Source: International Agency for Research on Cancer (IARC) 2008. Physical examination of the oral cavity. [ONLINE] Available at: http://screening.iarc.fr/atlasoral_list.php?cat=H2&lang=1. [Accessed 5 December 2016].

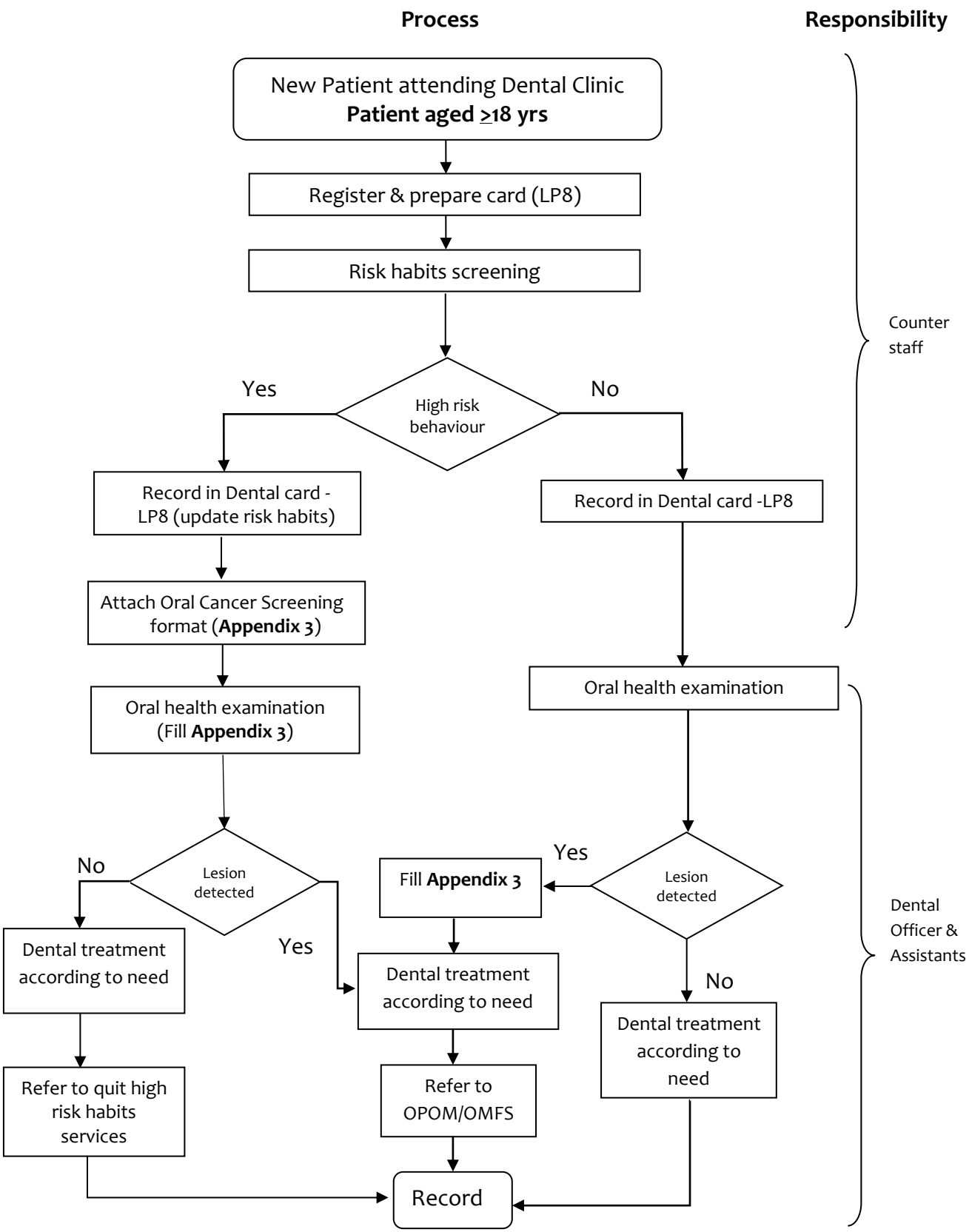
Flow Chart for implementation at Primary Care Level (Identified high risk community)



Flow Chart for implementation at Primary Care Level
(Opportunistic screening at community)



Flow Chart for implementation at Primary Care Level (Opportunistic Screening at Dental Clinic)



CLINICAL FORMAT FOR SCREENING
PRIMARY PREVENTION AND EARLY DETECTION OF
ORAL POTENTIALLY MALIGNANT DISORDERS AND ORAL CANCERS
ORAL HEALTH PROGRAMME, MINISTRY OF HEALTH MALAYSIA

A. GENERAL INFORMATION

State Code: ☐☐

District Code: ☐☐

Date of screening: ☐☐☐☐☐☐
Day Month Year

Screening case: ☐ 1= High risk community 2= Other community 3= Dental clinic

Attendance: ☐ 1= First time 2= Subsequent

Location of screening _____

Name: _____

_____

IC No.: ☐☐☐☐☐☐☐☐☐☐☐☐

Gender: ☐ 1=Male 2=Female

Date of birth: ☐☐☐☐☐☐☐☐
Day Month Year

Ethnic group: ☐☐ 01 = Malay, 02 = Chinese, 03 = Indian, 04 = Bajau, 05 = Dusun, 06 = Kadazan, 07 = Murut 08 = Bumiputera Sabah Lain, 09 = Melanau 10 = Kedayan, 11 = Iban, 12 = Bidayuh, 13 = Bumiputera Sarawak Lain, 14 = Orang Asli Semenanjung, 15 = Lain-lain

Address: _____

_____

_____

Telephone No.: _____

Email: _____

B: HABITS

Any present or past high risk habits ☐ 0=No 1= Yes If NO, go straight to **Section C**

If yes, specify:	Status (0,1,2)	Advised	Ready to Quit
Tobacco (including e-cigarette, shisha)		**YES / NO**	**YES / NO**
Betel quid chewing (including any tobacco products)		**YES / NO**	**YES / NO**
Excessive alcohol consumption (consumption of 6 and more standard drink per-sitting on at least one occasion weekly)		**YES / NO**	**YES / NO**

High risk habits status:
0 = no such habits
1 = habit currently practiced
2 = past habit now has stopped (minimum 6 month)

C. MEDICAL HISTORY ☐ 0=No, 1=Yes

If Yes, please specify:

_____

D: FAMILY HISTORY

Has any member of family had cancer? ☐ 0=No, 1=Yes

If Yes, please specify: _____

Relationship to patient: ☐
1=Parent
2=Sister/brother
3=Grandparent

E. EXTRA ORAL EXAMINATION

Lymph nodes ☐ 0 = Non-palpable 1= Palpable

Face ☐ 0 = Symmetrical 1 = Non-symmetrical

F: ORAL MUCOSA EXAMINATION

Any lesion ☐ 0=No 1= Yes If NO, go straight to **Section I**

If Yes, specify TYPE, SIZE and SITE of lesion:

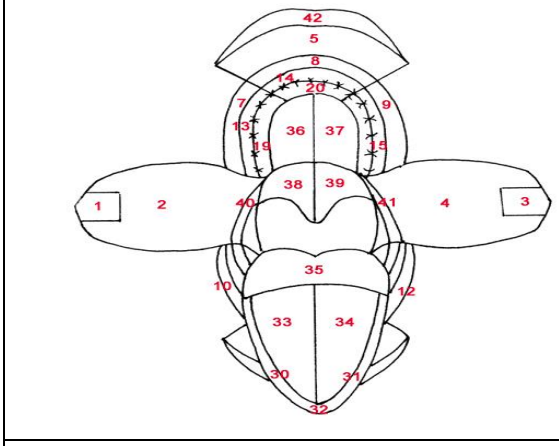
	TYPE	SIZE	SITE 1	SITE 2	SITE 3	SITE 4
1. 1st lesion						
2. 2nd lesion						
3. 3rd lesion						
4. Other pathology	……					

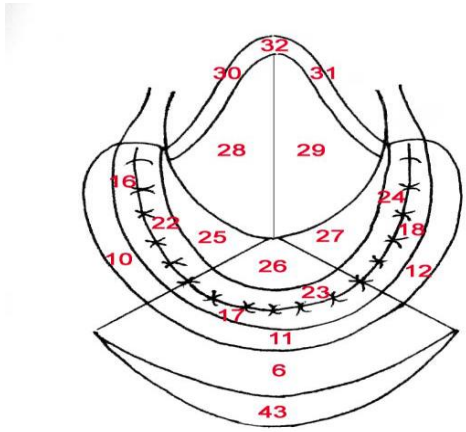
LESION TYPE
0=not applicable
1=Leukoplakia
2=Erythroplakia
3=Lichen Planus
4=Submucous fibrosis
5=Suspicious of oral cancer

SIZE
0= not applicable
1= 0-2 cm
2= > 2-4 cm
3= > 4 – 6 cm
4= > 6 cm

SITE OF LESION
Use codes

SITE OF LESION: Please draw/indicate on diagram to facilitate identification of numbers





00 = not applicable
01 = Right Lip commissure
02 = Right buccal mucosa
03 = Left lip commissure
04 = Left buccal mucosa
05 = Upper labial mucosa
06 = Lower labial mucosa
07 = Right upper buccal sulcus
08 = Upper labial sulcus
09 = Left upper buccal sulcus
10 = Right lower buccal sulcus
11 = Lower labial sulcus
12 = Left lower buccal sulcus
13 = Right upper buccal alveolar mucosa
14 = Labial alveolar mucosa
15 = Left upper buccal alveolar mucosa
16 = Right lower alveolar mucosa
17 = Lower labial alveolar mucosa
18 = Left lower alveolar mucosa
19 = Right upper palatal alveolar mucosa
20 = Upper palatal alveolar mucosa
21 = Left upper palatal alveolar mucosa
22 = Right lower lingual alveolar mucosa
23 = Lower lingual alveolar mucosa
24 = Left lingual alveolar mucosa
25 = Right floor of mouth
26 = Anterior floor of mouth
27 = Left floor of mouth
28 = Right ventral surface of tongue
29 = Left ventral surface of tongue
30 = Right lateral border of tongue
31 = Left lateral border of tongue
32 = Tip of tongue
33 = Right dorsal surface of tongue
34 = Left dorsal surface of tongue
35 = Posterior tongue
36 = Right palatal mucosa
37 = Left palatal mucosa
38 = Right soft palate
39 = Left soft palate
40 = Right retromolar
41 = Left retromolar
42 = External upper lip
43 = External lower lip
44 = WIDESPREAD

G: ADDITIONAL DETAILS FOR PATIENTS DETECTED WITH LESION

Education Level: ☐☐ 01 = No respond, 02 = No formal education, 03 = Primary education, 04 = PMR or equivalent, 05 = SPM or equivalent, 06 = STPM or equivalent, 07 = Certificate or equivalent, 08 = Diploma or equivalent, 09 = Degree or equivalent

Occupation: _____

H: REFERRAL TO OPOM SPECIALIST / OMFS ☐ 0=No, 1=Yes

Date referred: _____

Date of Appointment: _____

I: REFERRAL TO QUIT RISK HABITS SERVICES ☐ 0=No, 1=Yes

Date referred: _____

Date of Appointment: _____

J: EXAMINER: _____

RECORDING INSTRUCTIONS FOR APPENDIX 3

GENERAL RECORDING INSTRUCTIONS

1. To maintain examiners' objectivity during examination, ORAL MUCOSA EXAMINATION (Section F) will precede the enquiry of HABITS (Section B) and FAMILY HISTORY (Section D).

2. ENTER ALL DATA IN **CAPITAL LETTERS**.

SPECIFIC INSTRUCTIONS

Item Name	Specific Instructions
A. GENERAL INFORMATION	
State Code	Enter the state code 01 = Johor 02 = Kedah 03 = Kelantan 04 = Melaka 05 = Negeri Sembilan 06 = Pahang 07 = Pulau Pinang 08 = Perak 09 = Perlis 10 = Selangor 11 = Terengganu 12 = Sabah 13 = Sarawak 14 = WP Kuala Lumpur & Putrajaya 15 = WP Labuan
District Code	Refer **Appendix 15**
Date of screening	Enter the actual date of screening
Screening Case	Enter 1 = High risk community (for cases seen during screening exercise held in identified high risk location/community) 2 = Other Community (for cases seen during screening exercise in other community) 3=Dental clinic (for cases seen as outpatients in dental clinics)
Attendance	Enter 1 = First time screening 2 = Subsequent screening
Name	Enter the name of the subject as it appears in the Identity Card.
IC No.	Enter the patient's old/new identity card number (boxes are provided to accommodate new IC numbers).

Gender	Enter 1 = male 2 = female
Date of Birth	The patient's actual date of birth is to be documented for verification purposes, for example, a person born on 1.1.1950 is to be recorded as 0 1 0 1 1 9 5 0 day month year
Ethnic Group	Use the following codes and enter accordingly 01 = Malay 02 = Chinese 03 = Indian 04 = Bajau 05 = Dusun 06 = Kadazan 07 = Murut 08 = Bumiputera Sabah Lain 09 = Melanau 10 = Kedayan 11 = Iban 12 = Bidayuh 13 = Bumiputera Sarawak Lain 14 = Orang Asli Semenanjung 15 = Lain-lain
Address	Enter the full address of the subject for purposes of follow-up.
Telephone number	Enter the telephone number of the subject
Email	Enter the email adress of the subject (if any)
B. HABITS	
Habits	0= No, proceed to section C 1= Yes, If yes, circle the yes/no choices in the high risk habit table for status, advised and readiness to quit For high risk habits status, enter 0= no such habits 1= habit currently practiced 2= past habit now has stopped (minimum 6 month) Circle 'Yes' or 'No' for advised and ready to quit but do not circle for 'no such habit'

C. MEDICAL HISTORY	
Medical	History Enter 0 = No 1 = Yes If yes, please specify the medical condition(s).
D: FAMILY HISTORY	
Any family history of cancer is to be indicated	0 = No 1 = Yes (If Yes, specify type of cancer). Specify the relationship of the affected person to the patient. 1 = parent 2 = sister/brother 3 = grandparent
E. EXTRA ORAL EXAMINATION	
Lymph Nodes	Enter 0 = Non-palpable 1 = Palpable
Face	Enter 0 = Symmetrical 1 = Non-symmetrical
F. ORAL MUCOSA EXAMINATION If "1=Yes" has been entered for 'Any Lesion' please ensure that all boxes are filled by entering a '0 = not applicable' where relevant.	
Any Lesion	Enter 0 = No (If No, go straight to Section G). 1 = Yes (If yes, specify TYPE, SIZE and SITE of lesion).
Type, Size and Site of Lesion	The patient may have more than 1 type of lesion. Boxes have been provided to accommodate for 1st, 2nd and 3rd Lesion and 'Other Pathology'. For each **type of lesion** detected, enter: 0 = not applicable 1 = leukoplakia 2 = erythroplakia 3 = lichen planus 4 = submucous fibrosis 5 = suspicious of oral cancer Criteria for identification of lesion must be strictly adhered to. For example, an ulcer that is established because of a traumatic episode, and is not clinically suspicious, is recorded as 'Other Pathology' and specified as 'traumatic ulcer'.
	For each of the lesion detected, specify the overall **size of lesion** by entering the following codes: 0 = not applicable 1 = 0 - 2 cm 2 = > 2 - 4 cm 3 = > 4 - 6 cm 4 = > 6 cm

	For each of the lesion detected, enter the code(s) for **site(s) of lesion** according to the graphical presentation given. Boxes for four sites have been provided. If more than 4 sites are involved, record the lesion as code = 44 ('widespread') in boxes for 'Site 1'. Enter Code '00' for all other sites for that lesion. Enter Code '00' if not applicable
G. ADDITIONAL DETAILS FOR PATIENTS DETECTED WITH LESION	
Education Level	Enter 01 = No respond 02 = No formal education 03 = Primary education 04 = PMR or equivalent 05 = SPM or equivalent 06 = STPM or equivalent 07 = Certificate or equivalent 08 = Diploma or equivalent 09 = Degree or equivalent
Occupation	Enter the subject's occupation
H. REFERRAL TO OPOM SPECIALIST /OMFS	
Referrral to OPOM specialist /OMFS	0 = No 1 = Yes Enter Date Referred……
I: REFERRAL TO QUIT RISK HABITS SERVICES	
Referrral to quit risk habits services	0 = No 1 = Yes Enter Date Referred……
J. EXAMINER	
Examiner	Enter the name of the Dental Officer

BORANG RUJUKAN PESAKIT DENGAN KEADAAN MULUT BERPOTENSI MALIGNAN DAN KANSER MULUT

(perlu dilengkapkan oleh Pegawai Pergigian)
(Diisi sebanyak 2 salinan)

BAHAGIAN A (BUTIRAN PESAKIT YANG DIRUJUK)

Nama Pesakit	
Jantina	
Alamat	
No Telefon	
No Kad Pengenalan	
Umur	
Tarikh Rujukan	
Nama waris	
No telefon waris	

BAHAGIAN B (BUTIRAN FASILITI YANG DIRUJUK)

Nama Fasiliti Yang Dirujuk	
Tarikh Temujanji	
Masa Temujanji	
Pegawai yang dihubungi	

BAHAGIAN C (MAKLUMAT KLINIKAL DAN SEJARAH PERUBATAN)

Cancer Area Suspected	***Signs and Symptoms***	***Risk Factors***
☐ *Lip* ☐ *Tongue* ☐ *Buccal Mucosa* ☐ *Retro-molar* ☐ *Floor of mouth* ☐ *Mandible* ☐ *Alveolar Mucosa* ☐ *Maxilla* ☐ *Palate* ☐ *Others* *(please specify)*	☐ *Unexplained ulceration > 3 weeks* ☐ *Red or red and white patch* ☐ *Unexplained lump and bump* ☐ *Unexplained tooth mobility* ☐ *Unexplained lump in the neck* ☐ *Palpable band/pale mucosa* ☐ *White striae* ☐ *White patch* ☐ *Others(please specify)*	☐ *Heavy smoker / tobacco use* ☐ *Heavy alcohol consumption* ☐ *Betel quid chewing* ☐ *History of cancer* ☐ *Family history of cancer* ☐ *Others (please specify)* ***Medical history*** ☐ *Present illness (please specify)* ☐ *Medication (please specify)*
Maklumat tambahan – sila gunakan lampiran tambahan		

BAHAGIAN D (PEGAWAI YANG MERUJUK)

Nama Pegawai Pergigian:	**Tandatangan Pegawai Pergigian:**	**Cop klinik:** **No telefon klinik:**

MAKLUM BALAS RUJUKAN PESAKIT DENGAN KEADAAN MULUT BERPOTENSI MALIGNAN DAN KANSER MULUT

(perlu dilengkapkan oleh Klinik Pakar yang dirujuk dan kembalikan ke Klinik Primer yang membuat rujukan)

BAHAGIAN A (BUTIRAN PESAKIT YANG DIRUJUK)

Nama Pesakit			
Jantina			
Alamat			
No Telefon			
No Kad Pengenalan		**Umur**	
Tarikh Rujukan		**Tarikh Temujanji**	

BAHAGIAN B (PENGESAHAN PENERIMAAN RUJUKAN)

Tarikh hadir	
Diperiksa oleh	☐ Pegawai Pergigian ☐ Pakar OPOM/ Bedah Mulut & Maksilofasial
Diagnosis klinikal	☐ *Leukoplakia* ☐ *Erythroplakia* ☐ *Lichen planus* ☐ *Submucous fibrosis* ☐ *Suspicious of oral cancer* ☐ *Other pathology, specify:*
Biopsi	☐ Yes ☐ No
Diagnosis histopatologikal	☐ *Hyperkeratosis* ☐ *Epithelial dysplasia* ☐ *Carcinoma-in-situ* ☐ *Invasive squamous cell carcinoma* ☐ *Oral lichen planus* ☐ *Oral submucous fibrosis* ☐ *Other malignancies, specify:* ☐ *Benign pathologies*
Lesion status	☐ *Benign* ☐ *Potentially malignant* ☐ *Malignant*
TNM Staging	☐ *Stage I* ☐ *Stage II* ☐ *Stage III* ☐ *Stage IV*
NCR notification	☐ *Yes* ☐ *Not applicable*
Require follow-up at primary care	☐ *No* ☐ *Yes, specify:*

BAHAGIAN C (PENGESAHAN)

Nama dan tandatangan **Cop rasmi** **Tarikh**

Pakar/ Pegawai Pergigian

REGISTER OF REFERRAL CASES

Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers

This form is for use at clinic/district as well as at state level (fill in where applicable)

State:

No	Date referred	Name	IC	District	Location of screening	Gender	Ethnicity	Age	Prov. Diagnosis DO	Date seen by specialist	Compliance **(1,2,3,4,5,9)**	Clinical Diagnosis	TNM Code	Biopsy done	Histo-Diagnosis	Lesion Status	Comments
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Instructions for Filling in Appendix 5

REGISTER OF REFERRAL CASES

1. Appendix 5 shall be managed as a manual form at the primary oral healthcare level. However, an MS Access database of Appendix 5 shall be provided for keeping a computerised register of referred cases at state level.
2. Appendix 5 is for use at clinic/district/state level. At clinic level, all information for Columns 1 – 10 are recorded upon every referral.
3. Information for Columns 11 – 18 must be filled upon the receipt of Appendix 4A every quarterly (Mar, June, Sept, Dec) from the Oral Pathologist/ Oral Medicine Specialist/ Oral Maxillofacial Surgeon and send completed Appendix 5 to state coordinators every 6 months (June, December). State coordinator shall send Appendix 5 to the Oral Health Programme, MOH by 31st January the following year.

Column No.	**Column Name**	**Definition**
Columns 1 – 10 to be filled in at Primary Oral Healthcare Level upon every referral		
Column 1	No	Begin with number 1 and so on.
Column 2	Date referred	Enter date of referral by dental officer to OPOM Specialist/ Oral Maxillofacial Surgeon (OMFS)
Column 3	Name	Enter the name of referred patient.
Column 4	IC	Enter patient's identification card no.
Column 5	District	Enter the district name. Refer **Appendix 10**
Column 6	Estate/Kg/Location	Enter the name of estate/kampung/location
Column 7	Gender	Enter 1 = male 2 = female
Column 8	Ethnicity	Enter coding for ethnic group 01 = Malay 02 = Chinese 03 = Indian 04 = Bajau 05 = Dusun 06 = Kadazan 07 = Murut 08 = Bumiputera Sabah Lain 09 = Melanau 10 = Kedayan 11 = Iban 12 = Bidayuh 13 = Bumiputera Sarawak Lain 14 = Orang Asli Semenanjung 15 = Lain-lain
Column 9	Age	Enter the age of patient (cross check with age automatically computed in Ms Access file).

Column No.	Column Name	Definition
Column 10	Prov. Diagnosis DO (if there is more than one provisional diagnosis , please enter all relevant codes e.g. 1,3,4)	Enter code for the provisional diagnosis of dental officer 1 = Leukoplakia 2 = Erythroplakia 3 = Lichen Planus 4 = Submucous fibrosis 5 = Suspicious of oral cancer (potentially malignant) 9 = Other pathology
Columns 11 – 18 to be completed upon the receipt of referral feedback		
Column 11	Date seen by specialist	Enter date first seen by specialist
Column 12	Compliance Date seen by specialist – date referred	1= within 6 months 2= > 6 months to 1 year 3= > 1 to 2 years 4= > 2 to 3 years 5= > 3 to 5 years 9= > 5 years
Column 13	Clinical Diagnosis of Specialist (if there is more than one clinical diagnosis, please enter all relevant codes e.g. 1,3,4)	Enter code for the clinical diagnosis of OPOM specialist /OMFS 1 = Leukoplakia 2 = Erythroplakia 3 = Lichen Planus 4 = Submucous fibrosis 5 = Suspicious of oral cancer (potentially malignant) 9 = Other pathology
Column 14	TNM Code	Enter the TNM clinically assessed by OPOM specialist /OMFS 1 = Stage 1 2 = Stage 2 3 = Stage 3 4 = Stage 4
Column 15	Biopsy	If biopsy done enter 1 = yes, otherwise insert a dash (-)
Column 16	Histological Diagnosis (if there is more than one histological finding , please enter all relevant codes e.g. 1,4,7)	Enter diagnosis based on histological findings 1 = Hyperkeratosis 2 = Epithelial dysplasia 3 = Carcinoma-in-situ 4 = Invasive squamous cell carcinoma 5 = Oral lichen planus 6 = Oral submucous fibrosis

Column No.	Column Name	Definition
		7 = Other malignancies (please specify in Column 18) 8 = Benign pathologies (please specify in Column 18)
Column 17	Lesion Status *If there is more than 1 lesion, record the status of the most severe lesion.	Enter code 0 = benign, 1 = pre-malignant 2 = malignant Lesion status is based on histological diagnosis. If there is no histological diagnosis, then lesion status shall be based on clinical diagnosis.
Column 18	Comments	Enter any comment(s) e.g. description of other pathology, refusal for management etc. If Column 16 for 'Histological Diagnosis' is coded either 7 or 8, please specify lesion here.

LAPORAN AM AKTIVITI

'PRIMARY PREVENTION AND EARLY DETECTION OF ORAL POTENTIALLY MALIGNANT DISORDERS AND ORAL CANCERS'

(HIGH RISK COMMUNITY)

Negeri:

Tahun:

Daerah	Jumlah komuniti dengan tabiat berisiko tinggi yang dilawati *		Jumlah Anggaran Penduduk Berumur ≥ 18 Tahun **	Jumlah Penduduk ≥ 18 tahun yang disaring		Ada lesi mulut			Ada tabiat berisiko tinggi			
	Baru	Ulangan		Baru	Ulangan	Jumlah penduduk disaring yang ada lesi mulut	Jumlah Pesakit Dirujuk	Jumlah Hadir Rujukan	Jumlah penduduk disaring dengan tabiat berisiko tinggi	Jumlah Pesakit Dirujuk	Jumlah Hadir Untuk Rawatan	Jumlah Berjaya Berhenti
1	2	3	4	5	6	7	8	9	10	11	12	13

* 'High Risk Community' – Komuniti yang kebanyakan penduduk mengamalkan tabiat berisiko tinggi untuk kanser mulut

Baru = Lawatan pertama kali

Ulangan = Lawatan semula dalam tempoh 5 tahun

** Anggaran jumlah penduduk berumur ≥ 18 Tahun - diperolehi dari Ketua Kampung atau JKKK

LAPORAN AM AKTIVITI

'PRIMARY PREVENTION AND EARLY DETECTION OF ORAL POTENTIALLY MALIGNANT DISORDERS AND ORAL CANCERS'

(OPPORTUNISTIC SCREENING)

Negeri:
Tahun:

Daerah	Jumlah pesakit ≥18 tahun yang disaring		Jumlah pesakit disaring dengan tabiat berisiko tinggi		Pesakit dengan tabiat berisiko tinggi						Jumlah pesakit disaring yang ada lesi mulut		Pesakit dengan lesi mulut			
					Jumlah Dirujuk		Jumlah Hadir Untuk Rawatan		Jumlah Berjaya Berhenti				Jumlah Dirujuk		Jumlah Hadir Rujukan	
1	2		3		4		5		6		7		8		9	
	Klinik	Komuniti	Klinik	Komuniti	Klinik	Komuniti	Klinik	Komuniti	Klinik	Komuniti	Klinik	Komuniti	Klinik	Komuniti	Klinik	Komuniti

LAPORAN AM LATIHAN BERKAITAN PROGRAM KANSER MULUT

TAHUN…….. NEGERI:…….

DAERAH	SESI KALIBRASI		SESI *AWARENESS & MOUTH SELF EXAMINATION*				LATIHAN LAIN (NYATAKAN)……		CATATAN
	TARIKH	BILANGAN PEGAWAI	TARIKH	BILANGAN PEGAWAI	BIL ANGGOTA SOKONGAN	BIL ANGGOTA SELAIN PERGIGIAN	TARIKH	BILANGAN ANGGOTA	
JUMLAH									

DISEDIAKAN OLEH :……..

TARIKH:…….

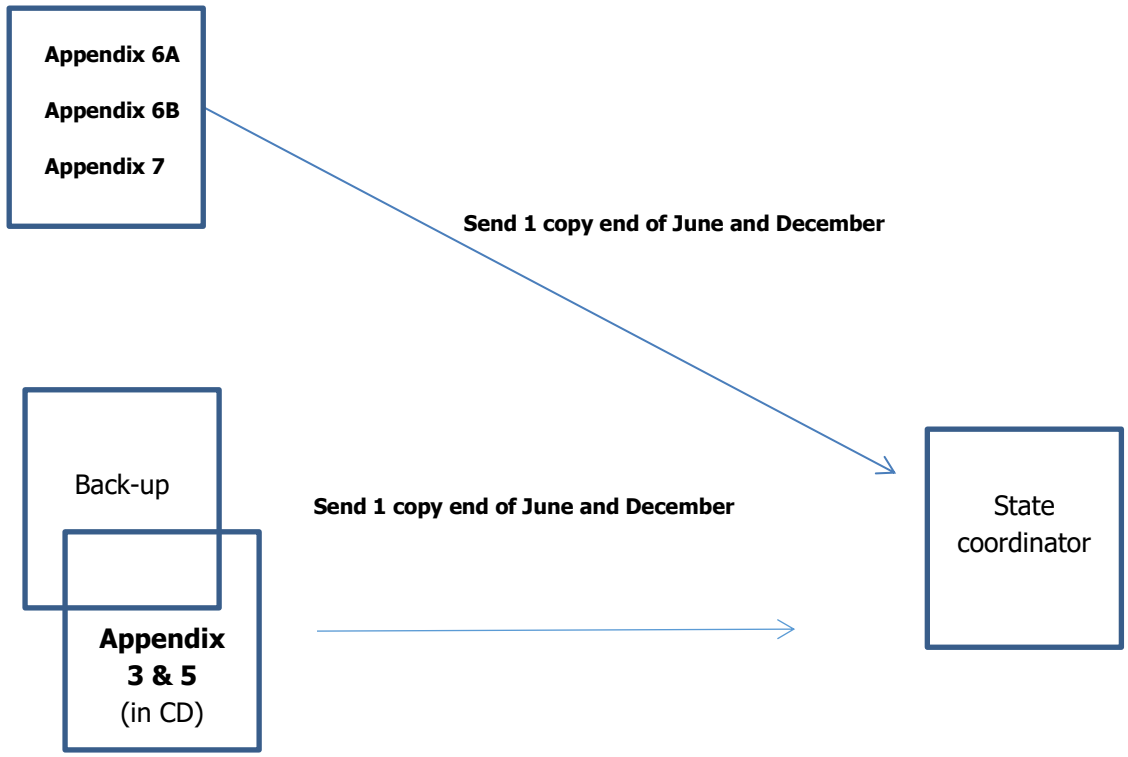
DISEMAK OLEH:……..

TARIKH:…….

DATA FLOW

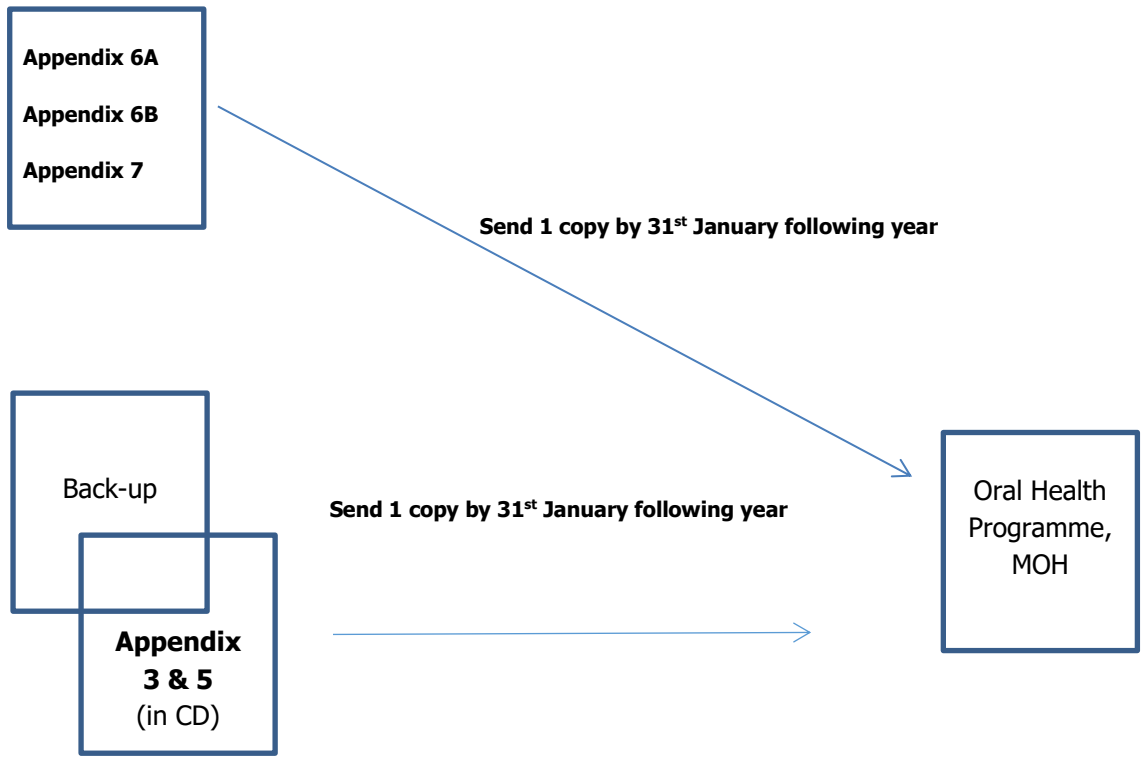
A) Data Flow from District to State Level

Every 6 months (end of June and December)



B) Data Flow from State to National Level

Annually (to reach by 31st January the following year)



TNM CLASSIFICATION FOR LIP AND ORAL CAVITY

T= Extent of the Primary tumour

- ⓾ Includes both the clinical (T) and pathologic (pT) categories
- ⓾ T designation varies according to the anatomic site involved
- T_x - primary tumour cannot be assessed
- T_0 - no evidence of primary tumour
- T_{is}- carcinoma in-situ
- T_1 - tumour 2 cm or less in greatest dimension
- T_2 - tumour more than 2 cm but not more than 4 cm in greatest dimension
- T_3 - tumour more than 4 cm in greatest dimension
- T_4 - tumour invades adjacent structures (tongue, skin of neck, and through cortical bone)

N = Absence/ presence and extent of regional lymph node metastasis

- ⓾ Includes both the clinical (N) and pathologic (pN) categories
- N_x - regional lymph nodes cannot be assessed
- N_0 - no regional lymph node metastasis
- N_1 - metastasis in a single ipsilateral lymph node, 3 cm or less in greatest dimension
- N_2 - metastasis in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension or metastasis in multiple ipsilateral lymph nodes none more than 6 cm in greatest dimension or metastasis in bilateral or contralateral lymph nodes none more than 6 cm in greatest dimension
- N_3- Metastasis in a lymph node more than 6 cm in greatest dimension.

M = absence or presence of distant metastasis; includes both the clinical (M) and pathologic (pM) categories

- M_x - not assessed
- M_0 - no distant metastasis
- M_1 – distant metastasis present

CLINICAL STAGE

STAGE I	-	$T_1N_0M_0$
STAGE II	-	$T_2N_0M_0$
STAGE III	-	$T_3N_0M_0$ or $T_1N_1M_0$ or $T_2N_1M_0$
STAGE IV	-	$T_4N_0M_0$ or $T_4N_1M_0$; Any T, N_2 or N_3, M_0; Any T, any N, M_1

DISTRICT CODES BY STATE

STATE	STATE CODE	DISTRICT	DISTRICT CODE
JOHOR	01	JOHOR BAHRU	01
		MUAR	02
		BATU PAHAT	03
		KLUANG	04
		SEGAMAT	05
		PONTIAN	06
		KOTA TINGGI	07
		MERSING	08
		KULAI JAYA	09
		LEDANG	10
KEDAH	02	KOTA SETAR	01
		KUALA MUDA	02
		KUBANG PASU	03
		PADANG TERAP	04
		SIK	05
		YAN	06
		KULIM	07
		BALING	08
		LANGKAWI	09
		PENDANG	10
		BANDAR BAHARU	11
KELANTAN	03	KOTA BHARU	01
		PASIR MAS	02
		PASIR PUTEH	03
		MACHANG	04
		BACHOK	05
		TANAH MERAH	06
		KUALA KRAI	07
		TUMPAT	08
		GUA MUSANG	09
		JELI	10
MELAKA	04	MELAKA TENGAH	01
		ALOR GAJAH	02
		JASIN	03
NEGERI SEMBILAN	05	SEREMBAN	01
		KUALA PILAH	02
		TAMPIN	03
		PORT DICKSON	04
		JELEBU	05
		JEMPOL	06
		REMBAU	07
PAHANG	06	KUANTAN	01
		PEKAN	02
		LIPIS	03
		TEMERLOH	04
		JERANTUT	05
		RAUB	06
		BENTONG	07
		CAMERON HIGHLANDS	08
		ROMPIN	09
		MARAN	10
		BERA	11
PULAU PINANG	07	SEBERANG PERAI UTARA	01
		SEBERANG PERAI TENGAH	02
		SEBERANG PERAI SELATAN	03
		TIMUR LAUT	04
		BARAT DAYA	05

STATE	STATE CODE	DISTRICT	DISTRICT CODE
PERAK	08	HILIR PERAK	01
		HULU PERAK	02
		MANJUNG	03
		KERIAN	04
		KUALA KANGSAR	05
		BATANG PADANG	06
		LARUT MATANG DAN SELAMA	07
		KINTA	08
		PERAK TENGAH	09
		KAMPAR	10
		MUALLIM	11
		BAGAN DATUK	12
PERLIS	09	ARAU	01
		KANGAR	02
SELANGOR	10	GOMBAK	01
		PETALING	02
		KUALA SELANGOR	03
		KUALA LANGAT	04
		SEPANG	05
		SABAK BERNAM	06
		HULU SELANGOR	07
		KLANG	08
		HULU LANGAT	09
TERENGGANU	11	KUALA TERENGGANU	01
		HULU TERENGGANU	02
		BESUT	03
		DUNGUN	04
		KEMAMAN	05
		MARANG	06
		SETIU	07
		KUALA NERUS	08
SABAH	12	KOTA KINABALU	01
		KUDAT	02
		KENINGAU	03
		BEAUFORT	04
		TAWAU	05
		LAHAD DATU	06
		SANDAKAN	07
		KOTA BELUD	08
		PENAMPANG	09
SARAWAK	13	KUCHING	01
		SRI AMAN	02
		SIBU	03
		MIRI	04
		LIMBANG	05
		SARIKEI	06
		KAPIT	07
		SAMARAHAN	08
		BINTULU	09
		SERIAN	10
		BETONG	11
		MUKAH	12
WP KUALA LUMPUR & PUTRAJAYA	14	PKP LEMBAH PANTAI	01
		PKP TITIWANGSA	02
		PKP KEPONG	03
		PKP CHERAS	04
		PKP PUTRAJAYA	05
WP LABUAN	15	LABUAN	01

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Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers

Standard Operating Procedure on

Management of Patients

ACKNOWLEDGEMENT

Members of the Oral Health Programme, Ministry of Health Malaysia extend their appreciation to all who have contributed in one way or another in the preparation of the document.

These standard operating procedures (SOP) are a component of the revised **Guidelines on Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers 2018.**

Each SOP is intended to address the basic elements for effective management, monitoring and evaluation of the programme.

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Standard Operating Procedure on
Management of Patients with High Risk Habits in Dental Practice

STANDARD OPERATING PROCEDURE ON MANAGEMENT OF PATIENTS WITH HIGH RISK HABITS IN DENTAL PRACTICE

1. Aim

To reduce the prevalence of high risk habits for oral cancer among Malaysian population

2. Objectives

- To identify individual with high risk habits
- To advise high risk individual to cease their habits
- To follow up referred individual

3. Role of Dentists

- To identify patient with high risk habits in their dental practice (both in clinic and community)
- To advise identified patient to quit high risk habit/s and refer motivated patients to quit services where available
- To follow up referred patients periodically to ensure / encourage complete cessation of high risk habits

4. Approach

The risk habits intervention can be brief, simple, cost-effective, and do not need to disrupt the practice routine. Therefore, this SOP is developed based on **Very Brief Advice (VBA) Model**, adapted from the National Centre for Smoking Cessation and Training (NCSCT)[40]. The VBA consist of three elements ASK, ADVICE and ACT.

4.1 ASK - Establishing and recording high risk habit status

All patients should have their tobacco / betel quid / alcohol use (current/ex/never used) established and checked during dental examination/oral cancer screening at least once a year. The information should be updated in the patient's clinical notes (LP8).

4.2 ADVICE- Advising on the personal benefits of quitting

Having established that people are tobacco / betel quid / alcohol user, the traditional approach has been to warn them of the dangers and advise them to stop. This is deliberately left out of VBA for two reasons:

a) It can immediately create a defensive reaction and raise anxiety levels

[40] www.ncsct.co.uk/VBA

b) It takes time and can generate a conversation about their high risk habits, which is more appropriate during a dedicated cessation consultation. For example, there is no need to ask how long someone has used tobacco, how much they use, or even what they use (cigarettes, shisha, cigars, chewing tobacco or paan). Stopping use will be beneficial in every case and the details of this are better saved for the stop smoking consultation. The best way of assessing a smoker's motivation to stop is simply to ask, "Do you want to stop smoking/chewing tobacco/ consume alcohol?" VBA involves a simple statement advising that the best way to stop is with a combination of support and treatment, which can significantly increase the chance of stopping.

4.3 ACT- Offering help

All patients with high risk habits receive advice about the value of attending their local cessation services for specialised help. Those who are interested and motivated to stop receive a referral to these services.

Appendix 1A shows the flow chart of ask, advice and act process for dental practice.

5. Implementation

The implementation for management of high risk habits patients are as follow:

a) Confirm patient's identity and consent
b) Record patient's medical, dental history and social history in LP-8
c) Fill **Appendix 3** (Clinical Format for Screening) for each patient with high risk habits and provide VBA (Ask, Advise, Act).
d) Refer motivated patients with high risk habits to cessation service/clinic using *Borang Rujukan Amalan Berisiko* shown in **Appendix 4B**
e) Advise non-motivated patients with high risk habits to seek cessation services when they are ready and to undergo mouth cancer screening at dental clinic yearly
f) Follow up on the referred patient using *Borang Susulan Rujukan Amalan Berisiko* shown in **Appendix 4C**
    - All data pertaining to the referred patient shall be obtained from the referred cessation clinic every six monthly.
    - If the referred patient does not turn up at the cessation clinic, the referral dental clinic shall contact the patients to assist in giving another appointment if required.

Flow chart for implementation of management of patients with high risk habits is shown as in **Appendix 2**.

6. **Recording**

6.1 Recording of patients of high risk habits in the Clinical Format for Screening Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers Oral Health Programme, Ministry of Health Malaysia (**Appendix 3**).

6.2 Recording of referred patient and intervention status are shown in **Appendix 5A.**

7. Monitoring

7.1 Output indicator

- Number of patients with high risk habits. Information obtained from Database **Appendix 3.**
- Number of patients with high risk habits referred. Information obtained from **Appendix 5A.**
- Number of referred patients with high risk habits attended cessation clinic. Information obtained from **Appendix 5A.**

7.2 Outcome indicator

- Number of referred patients with high risk habits ceased for 6 months or more. Information obtained from **Appendix 5A.**

8. **Way forward**

a. To develop evaluation protocol for longitudinal study on cessation of high risk habits in high risk community for oral cancer

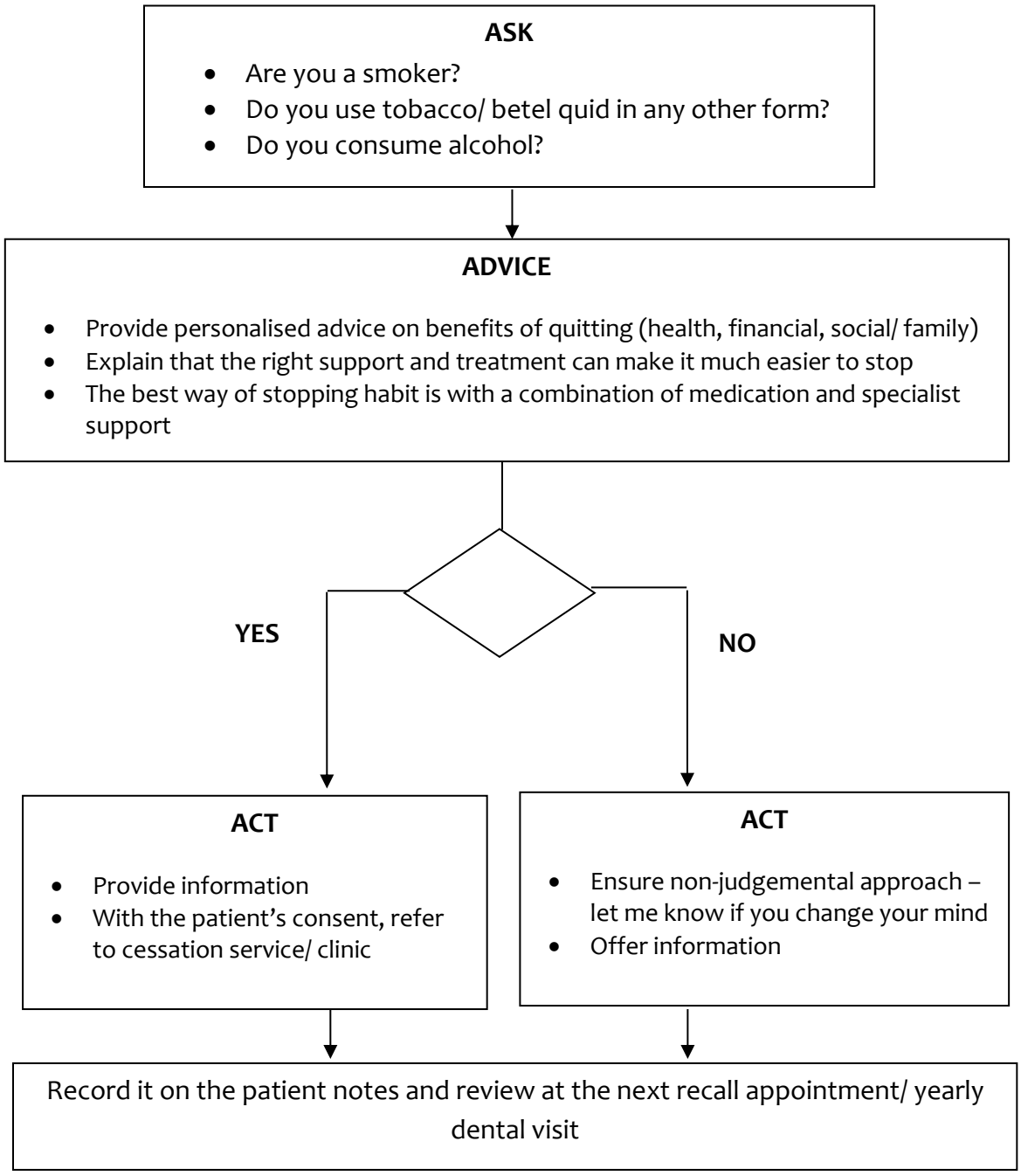
b. To pilot the SOP at the identified community. Criteria for community selection are:
   - Community with high risk habits
   - Existing active cessation clinic within the community

c. To pilot the smoking cessation service in dental facility
   - To train Dental Officers in smoking cessation interventions (behavioural and pharmacotherapy)

d. To develop and pilot the implementation of behavioural betel quid cessation interventions by Dental Public Health Specialists

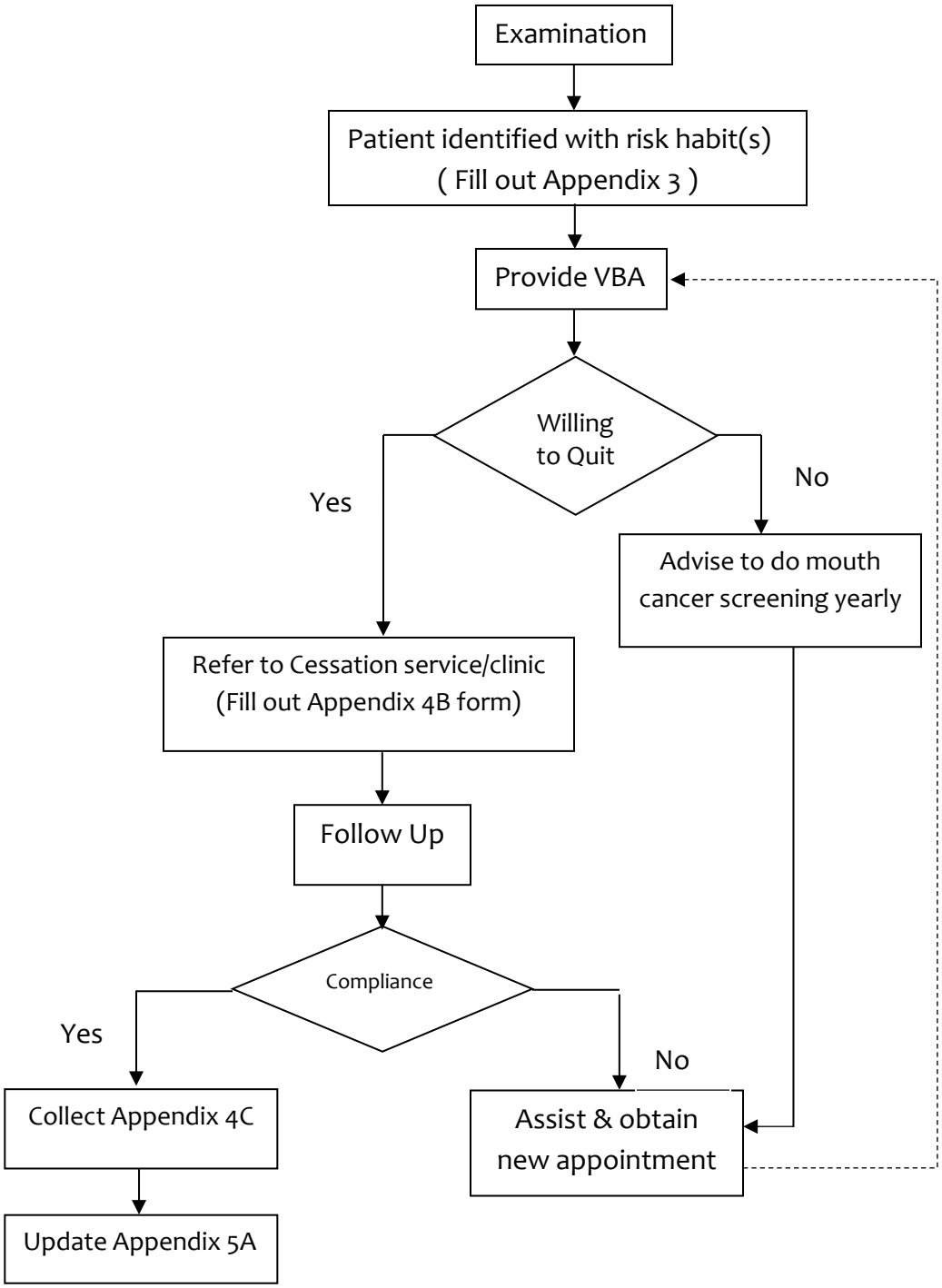
APPENDIX 1A

FLOW DIAGRAM OF ASK, ADVICE AND ACT PROCESS FOR DENTAL PRACTICE



APPENDIX 2

FLOW CHART FOR IMPLEMENTATION FOR MANAGEMENT OF PATIENTS WITH HIGH RISK HABITS



No Rujukan **:**

BORANG RUJUKAN AMALAN BERISIKO

(Diisi sebanyak 2 salinan oleh pegawai dari klinik yang membuat rujukan)

BAHAGIAN A (BUTIRAN PESAKIT YANG DIRUJUK)

Nama Pesakit	
Jantina	
Alamat	
No Telefon	
No Kad Pengenalan	
Umur	
Tarikh Rujukan	

BAHAGIAN B (BUTIRAN FASILITI YANG DIRUJUK)

Nama Fasiliti Yang Dirujuk	
Tarikh Temujanji	
Masa Temujanji	
Pegawai yang dihubungi	

BAHAGIAN C (SEJARAH PERUBATAN & AMALAN BERISIKO TINGGI)

Maklumat Amalan Berisiko Tinggi	**Tabiat**	**Ya**
	a.Merokok termasuk *e-cigarette*	
	b.Mengambil alcohol	
	c.Mengunyah sireh pinang bersama kapur/ pinang/ tembakau/suntil	
Sejarah Perubatan		
Ubat-ubatan yang diambil		
Catatan		

BAHAGIAN D (PERSETUJUAN PESAKIT UNTUK DIRUJUK)

Saya mengesahkan bahawa saya telah diberi penerangan dengan jelas oleh pihak yang membuat rujukan di atas dan bersetuju untuk mengikuti program berhenti amalan berisiko tinggi demi kesejahteraan hidup saya.

Nama Pesakit:	Tandatangan Pesakit:	Tarikh:

BAHAGIAN E (PEGAWAI YANG MERUJUK)

Nama Pegawai Pergigian:	Tandatangan Pegawai Pergigian:	Cop klinik: No telefon klinik:

No Rujukan **:**

Tarikh Rujukan Diterima **:**

BORANG SUSULAN RUJUKAN AMALAN BERISIKO

(diisi oleh klinik rujukan dan dikembalikan semula ke Klinik Pergigian yang merujuk)

BAHAGIAN A (BUTIRAN PESAKIT YANG DIRUJUK)

Nama Pesakit	
Jantina	
Alamat	
No Telefon	
No Kad Pengenalan	
Umur	
Tarikh Rujukan	

BAHAGIAN B (PENGESAHAN PENERIMAAN RUJUKAN)

Tarikh Mula Pesakit Terima Intervensi	
Jenis Intervensi Diterima	
Cop dan Tandatangan Pegawai yang Menerima Rujukan	

BAHAGIAN C (SUSULAN <u>SELEPAS 6 BULAN</u> INTERVENSI AMALAN BERISIKO TINGGI)

Adalah disahkan pesakit diatas: **BERJAYA / TIDAK BERJAYA* MENGHENTIKAN AMALAN BERISIKO TINGGI**		
Nama Pegawai Yang Menerima Rujukan:	Cop dan Tandatangan Pegawai:	Tarikh:

*** Sila potong yang tidak berkenaan**

STATUS KES RUJUKAN PESAKIT DENGAN TABIAT MULUT BERISIKO TINGGI

(Borang ini perlu dikemaskini setiap 6 bulan sekali)

DAERAH: ……...

KLINIK PERGIGIAN: ……. Bulan/Tahun: ……./ …….

Bil	Tarikh rujukan	Nama	No Kad Pengenalan	No Telefon	Tarikh Temujanji Pertama	Status Kehadiran Temujanji Pertama (Hadir/ Tidak Hadir)	Status intervensi*				Catatan
							I	II	III	IV	

*Status intervensi:

I. Sedang menerima rawatan
II. Gagal datang temujanji
III. Gagal berhenti
IV. Berjaya berhenti (selama 6 bulan) – nyatakan tarikh berhenti

Standard Operating Procedure on
Referral Pathway for Management of Patients with Oral Potentially Malignant Disorders and Oral Cancers

Standard Operating Procedure on Referral Pathway for Management of Patients with Oral Potentially Malignant Disorders and Oral Cancers

1. Aim

This module aims to facilitate appropriate referral between primary and secondary care for patients with oral potentially malignant disorders and oral cancers from primary healthcare to specialist healthcare

2. Objectives

- To provide referral pathway for management of patients with oral potentially malignant disorders and oral cancers
- To improve compliance / follow up of referral

3. Implementation

A flow chart of referral pathway for management of patients with oral potentially malignant disorders and oral cancers is as shown in **Appendix 1B.**

3.1 Criteria for Referral

All subjects with or suspicious of potentially malignant lesions or oral cancer lesions shall be referred to the nearest clinic / dental specialist clinic for further management using the referral letter as in **Appendix 4.** The first line of referral shall be to Oral Maxillofacial Surgeons (OMFS) for all overt cases of oral lumps and bumps which require surgical removal or biopsy. The Oral Pathology and Oral Medicine (OPOM) Specialist shall receive all cases clinically diagnosed as non-malignant mucosal lesions. In hospitals with no OPOM specialists, cases shall be referred to OMFS.

3.2 Types of Referral

The types of referral shall be determined based on the guide shown in **Table 1.**

Type of referral	Indication
Urgent (to be seen by specialist within 2 weeks)	a) Unexplained ulceration in the oral cavity lasting for more than 3 weeks
	b) A red or red and white patch in the oral cavity consistent with erythroplakia or non homogenous leukoplakia
	c) Unexplained lump on the lip or in the oral cavity
	d) Unexplained tooth mobility not associated with periodontal disease
	e) A persistent and unexplained lump in the neck
	f) An irregular pigmented lesion
	g) Oral submucous fibrosis with mucosal changes (e.g ulceration, white or red areas, lump or hyperplastic changes)
Type of referral	**Indication**
Non-urgent (to be seen by specialist within 1 month)	a) Oral Lichen planus / Oral lichenoid reaction
	b) White patches with no redness or ulceration
	c) Chronic candidal lesion
	d) Oral submucous fibrosis with no redness or ulceration
	e) Painful traumatic ulcers
	f) Recent unilateral salivary gland swellings
	g) Pigmented lesion (e.g Amalgam tattoo)
	h) Other lumps and bumps
	i) Recurrent oral ulcers

Table 1: Types and indication of referrals

3.3 Follow-up for Referred Cases

All referred cases shall be noted in **Appendix 3** and updated in the database. The OPOM specialist or OMFS shall complete **Appendix 4A** on information of patients who attend their clinics. A follow-up of referred patients shall be done by the referring primary care clinic. **Non-compliance patients must be contacted through phones or letters as soon as possible**. Education and consultation of the possibility of cancer should be given by the dental practitioners who referred the case. Quarterly, the referring primary care clinic shall obtain all filled **Appendix 4A.**

3.4 Register of Referral Cases

Appendix 5 is designed to gather information on cases with oral potentially malignant disorders and oral cancers referred from primary level to the OPOM specialist or OMFS. The information pertains to demographic particulars; provisional diagnoses made by Dental Officers and OPOM specialists or OMFS; as well as management of patients with reference to biopsies and histological findings. (Instructions or filling in Appendix 5 are shown in **Appendix 5_1)**

When referring a patient with suspected oral cancer to a specialist, Appendix 5 shall be filled by Dental Officer in primary care. However, column 11-18 can only be completed upon the receipt of **Appendix 4A** every quarterly from the OPOM specialist or OMFS. **Appendix 5** shall be sent to the state coordinator every **6 months**. State coordinator shall send **Appendix 5** to the Oral Health Programme, MOH by 31st January the following year.

4. Monitoring and Evaluation

The referral shall be monitored continuously based on the data entered in Appendix 5. Indicator for monitoring is:

Percentage of compliance for referral to specialists:

$$= \frac{\text{Number of patients seen by specialist}}{\text{Number of patients referred}}$$

Evaluation indicators of this programme include:

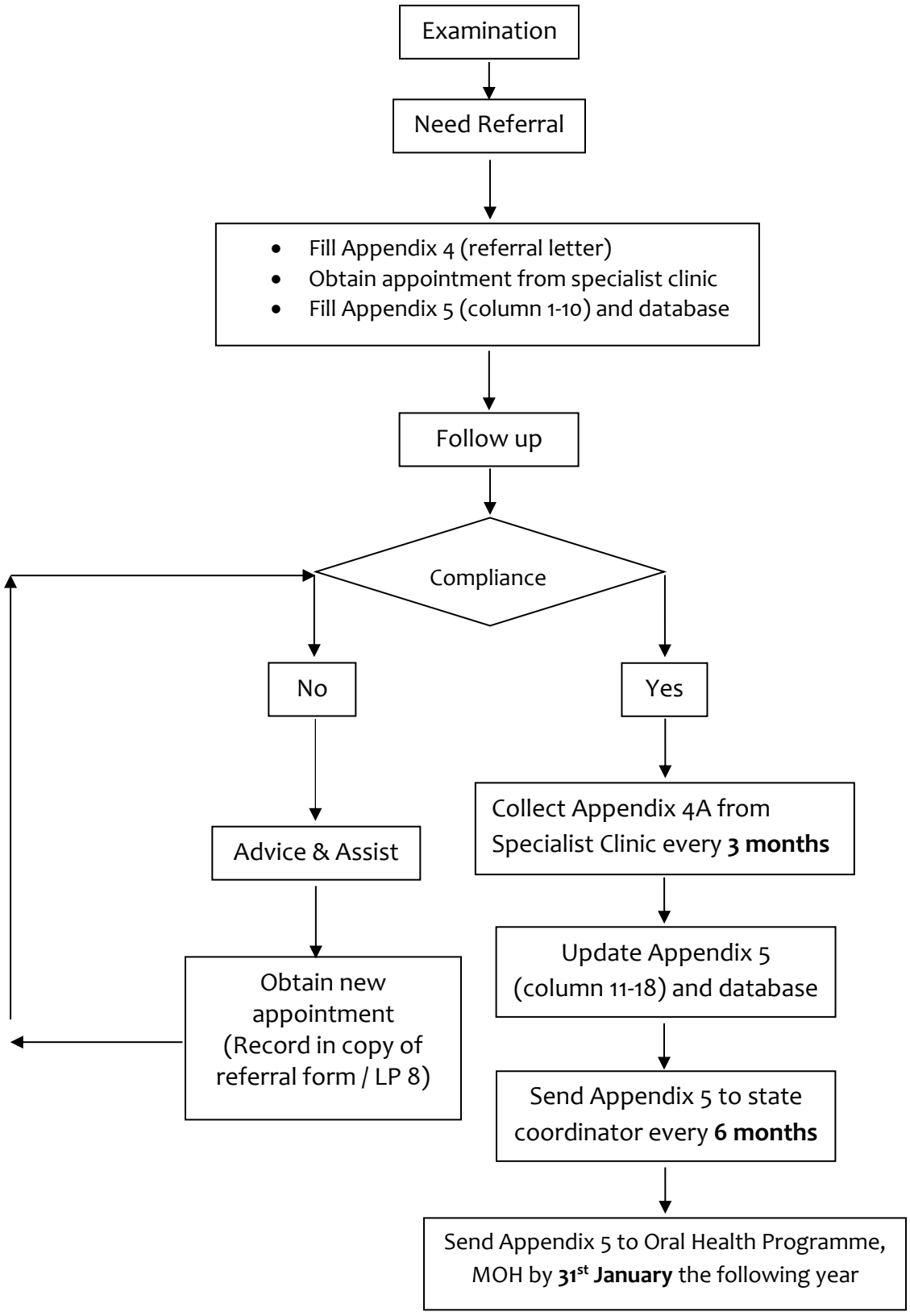
a) Percentage of oral cancer cases detected at stage 1:

$$= \frac{\text{Number of patients reported at stage 1}}{\text{Number of patients diagnosed with cancer with staging report}}$$

b) Percentage of oral cancer cases detected at early stage:

$$= \frac{\text{Number of patients reported at stage 1 and stage 2}}{\text{Number of patients diagnosed with cancer with staging report}}$$

REFERRAL PATHWAY FOR MANAGEMENT OF PATIENTS WITH ORAL POTENTIALLY MALIGNANT DISORDERS AND ORAL CANCERS



Appendix 4

BORANG RUJUKAN PESAKIT DENGAN KEADAAN MULUT BERPOTENSI MALIGNAN DAN KANSER MULUT

(Perlu dilengkapkan oleh Pegawai Pergigian)
(Diisi sebanyak 2 salinan)

BAHAGIAN A (BUTIRAN PESAKIT YANG DIRUJUK)

Nama Pesakit	
Jantina	
Alamat	
No Telefon	
No Kad Pengenalan	
Umur	
Tarikh Rujukan	
Nama waris	
No telefon waris	

BAHAGIAN B (BUTIRAN FASILITI YANG DIRUJUK)

Nama Fasiliti Yang Dirujuk	
Tarikh Temujanji	
Masa Temujanji	
Pegawai yang dihubungi	

BAHAGIAN C (MAKLUMAT KLINIKAL DAN SEJARAH PERUBATAN)

Cancer Area Suspected	***Signs and Symptoms***	***Risk Factors***
☐ *Lip* ☐ *Buccal Mucosa* ☐ *Floor of mouth* ☐ *Alveolar Mucosa* ☐ *Palate* ☐ *Others (please specify)* ☐ *Tongue* ☐ *Retro-molar* ☐ *Mandible* ☐ *Maxilla*	☐ *Unexplained ulceration > 3 weeks* ☐ *Red or red and white patch* ☐ *Unexplained lump and bump* ☐ *Unexplained tooth mobility* ☐ *Unexplained lump in the neck* ☐ *Palpable band/pale mucosa* ☐ *White straie* ☐ *White patch* ☐ *Others(please specify)*	☐ *Heavy smoker / tobacco use* ☐ *Heavy alcohol consumption* ☐ *Betel quid chewing* ☐ *History of cancer* ☐ *Family history of cancer* ☐ *Others (please specify)* ***Medical history*** ☐ *Present illness (please specify)* ☐ *Medication (please specify)*
Maklumat tambahan – sila gunakan lampiran tambahan		

BAHAGIAN D (PEGAWAI YANG MERUJUK)

Nama Pegawai Pergigian:	**Tandatangan Pegawai Pergigian:**	**Cop klinik:** **No telefon klinik:**

MAKLUM BALAS RUJUKAN PESAKIT DENGAN KEADAAN MULUT BERPOTENSI MALIGNAN DAN KANSER MULUT

(Perlu dilengkapkan oleh Klinik Pakar yang dirujuk dan kembalikan ke Klinik Primer yang membuat rujukan)

BAHAGIAN A (BUTIRAN PESAKIT YANG DIRUJUK)

Nama Pesakit			
Jantina			
Alamat			
No Telefon			
No Kad Pengenalan		**Umur**	
Tarikh Rujukan		**Tarikh Temujanji**	

BAHAGIAN B (PENGESAHAN PENERIMAAN RUJUKAN)

Tarikh hadir	
Diperiksa oleh	☐ Pegawai Pergigian ☐ Pakar OPOM/Pakar Bedah Mulut & Maksilofasial
Diagnosis klinikal	☐ *Leukoplakia* ☐ *Erythroplakia* ☐ *Lichen planus* ☐ *Submucous fibrosis* ☐ *Suspicious of oral cancer* ☐ *Other pathology, specify:*
Biopsi	☐ Ya ☐ Tidak
Diagnosis histopatologikal	☐ *Hyperkeratosis* ☐ *Epithelial dysplasia* ☐ *Carcinoma-in-situ* ☐ *Invasive squamous cell carcinoma* ☐ *Oral lichen planus* ☐ *Oral submucous fibrosis* ☐ *Other malignancies, specify:* ☐ *Benign pathologies*
Lesion status	☐ *Benign* ☐ *Potentially malignant* ☐ *Malignant*
TNM Staging	☐ *Stage I* ☐ *Stage II* ☐ *Stage III* ☐ *Stage IV*
NCR notification	☐ *Yes* ☐ *Not applicable*
Require follow-up at primary care	☐ *No* ☐ *Yes, specify:*

BAHAGIAN C (PENGESAHAN)

Nama dan tandatangan **Pakar/ Pegawai Pergigian**	**Cop rasmi**	**Tarikh**

REGISTER OF REFERRAL CASES

Primary Prevention and Early Detection of Oral Potentially Malignant Disorders and Oral Cancers

This form is for use at clinic/district as well as at state level (fill in where applicable)

State:

No	Date referred	Name	IC	District	Location of screening	Gender	Ethnicity	Age	Prov. Diagnosis DO	Date seen by specialist	Compliance **(1,2,3,4,5,9)**	Clinical Diagnosis	TNM Code	Biopsy done	Histo-Diagnosis	Lesion Status	Comments
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Instructions for Filling in Appendix 5

REGISTER OF REFERRAL CASES

1. Appendix 5 shall be managed as a manual form at the primary oral healthcare level. However, an MS Access database of Appendix 5 shall be provided for keeping a computerised register of referred cases at state level.
2. Appendix 5 is for use at clinic/district/state level. At clinic level, all information for Columns 1 – 10 are recorded upon every referral.
3. Information for Columns 11 – 18 must be filled upon the receipt of Appendix 4A every quarterly (Mar, June, Sept, Dec) from the Oral Pathologist/ Oral Medicine Specialist/ Oral Maxillofacial Surgeon and send completed Appendix 5 to state coordinator every 6 months (June, December). State coordinator shall send Appendix 5 to the Oral Health Programme, MOH by 31st January the following year.

Column No.	**Column Name**	**Definition**
Columns 1 – 10 to be filled in at Primary Oral Healthcare Level upon every referral		
Column 1	No	Begin with number 1 and so on.
Column 2	Date referred	Enter date of referral by dental officer to OPOM Specialist/ Oral Maxillofacial Surgeon
Column 3	Name	Enter the name of referred patient.
Column 4	IC	Enter patient's identification card no.
Column 5	District	Enter the district name. Refer **Appendix 10**
Column 6	Estate/Kg/Location	Enter the name of estate/kampung/location
Column 7	Gender	Enter 1 = male 2 = female
Column 8	Ethnicity	Enter coding for ethnic group 01 = Malay 02 = Chinese 03 = Indian 04 = Bajau 05 = Dusun 06 = Kadazan 07 = Murut 08 = Bumiputera Sabah Lain 09 = Melanau 10 = Kedayan 11 = Iban 12 = Bidayuh 13 = Bumiputera Sarawak Lain 14 = Orang Asli Semenanjung 15 = Lain-lain
Column 9	Age	Enter the age of patient (cross check with age automatically computed in Ms Access file).

Column No.	Column Name	Definition
Column 10	Prov. Diagnosis DO (if there is more than one provisional diagnosis , please enter all relevant codes e.g. 1,3,4)	Enter code for the provisional diagnosis of dental officer 1 = Leukoplakia 2 = Erythroplakia 3 = Lichen Planus 4 = Submucous fibrosis 5 = Suspicious of oral cancer (potentially malignant) 9 = Other pathology
Columns 11 – 18 to be completed upon the receipt of referral feedback		
Column 11	Date seen by specialist	Enter date first seen by specialist
Column 12	Compliance Date seen by specialist – date referred	1= within 6 months 2= > 6 months to 1 year 3= > 1 to 2 years 4= > 2 to 3 years 5= > 3 to 5 years 9= > 5 years
Column 13	Clinical Diagnosis of Specialist (if there is more than one clinical diagnosis, please enter all relevant codes e.g. 1,3,4)	Enter code for the clinical diagnosis of OPOM specialist/ OMFS 1 = Leukoplakia 2 = Erythroplakia 3 = Lichen Planus 4 = Submucous fibrosis 5 = Suspicious of oral cancer (potentially malignant) 9 = Other pathology
Column 14	TNM Code	Enter the TNM clinically assessed by OPOM specialist/ OMFS 1 = Stage 1 2 = Stage 2 3 = Stage 3 4 = Stage 4
Column 15	Biopsy	If biopsy done enter 1 = yes, otherwise insert a dash (-)
Column 16	Histological Diagnosis (if there is more than one histological finding , please enter all relevant codes e.g. 1,4,7)	Enter diagnosis based on histological findings 1 = Hyperkeratosis 2 = Epithelial dysplasia 3 = Carcinoma-in-situ 4 = Invasive squamous cell carcinoma

Column No.	**Column Name**	**Definition**
		5 = Oral lichen planus 6 = Oral submucous fibrosis 7 = Other malignancies (please specify in Column18) 8 = Benign pathologies (please specify in Column 18)
Column 17	Lesion Status *If there is more than 1 lesion, record the status of the most severe lesion.	Enter code 0 = benign, 1 = pre-malignant 2 = malignant Lesion status is based on histological diagnosis. If there is no histological diagnosis, then lesion status shall be based on clinical diagnosis.
Column 18	Comments	Enter any comment(s) e.g. description of other pathology, refusal for management etc. If Column 16 for 'Histological Diagnosis' is coded either 7 or 8, please specify lesion here.

DISTRICT CODES BY STATE

STATE	STATE CODE	DISTRICT	DISTRICT CODE
JOHOR	01	JOHOR BAHRU	01
		MUAR	02
		BATU PAHAT	03
		KLUANG	04
		SEGAMAT	05
		PONTIAN	06
		KOTA TINGGI	07
		MERSING	08
		KULAI JAYA	09
		LEDANG	10
KEDAH	02	KOTA SETAR	01
		KUALA MUDA	02
		KUBANG PASU	03
		PADANG TERAP	04
		SIK	05
		YAN	06
		KULIM	07
		BALING	08
		LANGKAWI	09
		PENDANG	10
		BANDAR BAHARU	11
KELANTAN	03	KOTA BHARU	01
		PASIR MAS	02
		PASIR PUTEH	03
		MACHANG	04
		BACHOK	05
		TANAH MERAH	06
		KUALA KRAI	07
		TUMPAT	08
		GUA MUSANG	09
		JELI	10
MELAKA	04	MELAKA TENGAH	01
		ALOR GAJAH	02
		JASIN	03
NEGERI SEMBILAN	05	SEREMBAN	01
		KUALA PILAH	02
		TAMPIN	03
		PORT DICKSON	04
		JELEBU	05
		JEMPOL	06
		REMBAU	07
PAHANG	06	KUANTAN	01
		PEKAN	02
		LIPIS	03
		TEMERLOH	04
		JERANTUT	05
		RAUB	06
		BENTONG	07
		CAMERON HIGHLANDS	08
		ROMPIN	09
		MARAN	10
		BERA	11
PULAU PINANG	07	SEBERANG PERAI UTARA	01
		SEBERANG PERAI TENGAH	02
		SEBERANG PERAI SELATAN	03
		TIMUR LAUT	04
		BARAT DAYA	05

STATE	STATE CODE	DISTRICT	DISTRICT CODE
PERAK	08	HILIR PERAK	01
		HULU PERAK	02
		MANJUNG	03
		KERIAN	04
		KUALA KANGSAR	05
		BATANG PADANG	06
		LARUT MATANG DAN SELAMA	07
		KINTA	08
		PERAK TENGAH	09
		KAMPAR	10
		MUALLIM	11
		BAGAN DATUK	12
PERLIS	09	ARAU	01
		KANGAR	02
SELANGOR	10	GOMBAK	01
		PETALING	02
		KUALA SELANGOR	03
		KUALA LANGAT	04
		SEPANG	05
		SABAK BERNAM	06
		HULU SELANGOR	07
		KLANG	08
		HULU LANGAT	09
TERENGGANU	11	KUALA TERENGGANU	01
		HULU TERENGGANU	02
		BESUT	03
		DUNGUN	04
		KEMAMAN	05
		MARANG	06
		SETIU	07
		KUALA NERUS	08
SABAH	12	KOTA KINABALU	01
		KUDAT	02
		KENINGAU	03
		BEAUFORT	04
		TAWAU	05
		LAHAD DATU	06
		SANDAKAN	07
		KOTA BELUD	08
		PENAMPANG	09
SARAWAK	13	KUCHING	01
		SRI AMAN	02
		SIBU	03
		MIRI	04
		LIMBANG	05
		SARIKEI	06
		KAPIT	07
		SAMARAHAN	08
		BINTULU	09
		SERIAN	10
		BETONG	11
		MUKAH	12
WP KUALA LUMPUR & PUTRAJAYA	14	PKP LEMBAH PANTAI	01
		PKP TITIWANGSA	02
		PKP KEPONG	03
		PKP CHERAS	04
		PKP PUTRAJAYA	05
WP LABUAN	15	LABUAN	01

PROGRAM KESIHATAN PERGIGIAN
KEMENTERIAN KESIHATAN MALAYSIA

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