



GUIDELINES

Oral Healthcare For The Elderly in Malaysia



Oral Health Division Ministry of Health Malaysia



ORAL HEALTH DIVISION
MINISTRY OF HEALTH

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**Guidelines on Oral Healthcare for
the Elderly in Malaysia**

Oral Health Division
Ministry of Health Malaysia
Revised January 2014

- **Self - examination**
 - Check for bleeding gums.
 - Red, swollen and tender gums/mucosa.
 - Pus around tooth.
 - Bad breath or lack of taste.
 - White/red patches.
 - Mucosa stiffness.
 - Difficulty in swallowing.

CHECKLIST FOR DENTAL HEALTH EDUCATION (DHE)

- IDENTIFY THE PROBLEM
- DHE PERTAINING TO PROBLEM
- DIETARY NEEDS
 - **Balance And Prioritise Diet**
 - According to physiological changes eg: osteoporosis, osteoarthritis etc.
 - Stress on Calcium, Vitamin D, Magnesium and protein.
 - Foods cut into small pieces for easy chewing, stew, soup or pureed.
 - **Low Sugar Diet Food/Drink**
- DAILY ORAL HEALTHCARE
 - **Brushing Tips**
 - Use fluoridated toothpaste.
 - Soft bristle toothbrush.
 - Gentle scrubbing/massaging motion.
 - Brush the teeth and tongue.
 - Replace worn toothbrush.
 - Modify toothbrush according to needs.
 - Tag the toothbrush.
 - **Flossing tips**
 - Floss in a gentle back and forth motion.
 - Do not forget to floss behind last tooth.
 - **Denture Care**
 - Removal of denture during bed time.
 - Clean all surfaces.
 - Do not use hot water, toxic or abrasives.
 - Get dentures repaired (eg. sharp edges, broken parts, loose denture, etc.)
 - When not in use, soak in water.

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E. ORAL PRE-CANCER AND CANCER LESIONS

- a. Leukoplakia
 1. Appears as a white patch on oral mucosa that cannot be characterised clinically or pathologically as any other disease.
 2. It is a pre-cancerous lesion.
 3. Management of leukoplakia:
 - Treatment by surgical excision.
- b. Erythroplakia
 1. Seen as red patch that cannot be characterised clinically or pathologically as any other disease.
 2. It is a pre-cancerous lesion.
 3. Management of erythroplakia:
 - Treatment by surgical excision.
- c. Oral Cancer
 1. Incidence is low but mortality rate is high.
 2. Squamous cell carcinoma represents 80-90% of all oral malignancies.
 3. More common in older age.
 4. Betel-quid chewing, smoking and alcohol as predisposing factors.
 5. Prognosis is good if treated early.
 6. Management of oral cancer:
 - Treatment planning depends on site, size and spread of the tumour, the patient's general health and age.
 - Treatment by surgical excision may require construction of prosthesis or obturator.
 - Patient who has undergone radiotherapy will need antibiotic coverage before any invasive dental procedure.

COMMON ORAL DISEASES / DISORDERS AFFECTING THE ELDERLY

A. CARIES

1. Caries progresses slowly along the cemento-enamel junction resulting in root caries.
2. Root caries occurs due to exposed root surface, poor oral hygiene, reduced salivary flow and high sugar diet.
3. Caries may cause sensitivity and pain.
4. Caries may progress and eventually effect the vitality of the tooth.
5. Management of caries:
 - Effective toothbrushing using fluoridated toothpaste.
 - Use dental floss and interdental sticks to clean between teeth.
 - Reduce sugar intake.
 - Regular dental check-up for early diagnosis and early intervention.

B. PERIODONTAL DISEASE

1. Include gingivitis, periodontitis, gingival recession.
2. Can cause tooth mobility, tooth drifting and tooth migration.
3. Periodontal manifestation may occur as a result of systemic disease.
4. Management of periodontal disease:
 - Stress on good oral hygiene.
 - Treatment includes scaling, splinting of mobile teeth, gingival surgery and periodontal surgery.

C. CANDIDIASIS

1. Caused by fungus *Candida albicans*.
2. Seen as soft white plaques on mucosa and tongue.
3. Mucosa bleeds if scraped.
4. Mucosal candidiasis usually occurs as a secondary condition e.g. during chemotherapy and intake of antibiotic.
5. Management of candidiasis:
 - Elimination of known local or systemic predisposing factors.
 - Provision of topical or systemic anti-fungal drugs.

D. DENTURE-INDUCED HYPERPLASIA

1. Persistent wearing of an ill-fitting denture may result in hyperplastic mucosa.
2. Seen as folds of mucosa in the buccal sulcus, lingual sulcus or at the junction of hard and soft palate in relation to border of denture.
3. Management of denture hyperplasia:
 - Modification or reconstruction of denture.
 - Instructions on oral and denture care.

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**FOREWORD
BY THE PRINCIPAL DIRECTOR OF ORAL HEALTH
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Older Malaysians make up a growing percentage of the population. The latest population census in 2010 showed those aged 65 and above make up 5.1% of the population. As we live longer, the need for proper oral healthcare is vital to maintain function and enhance quality of life. This necessitates well planned strategies and implementation of care in a comprehensive manner.

Of concern are the constraints of time and manpower faced by many public sector oral healthcare providers in providing oral healthcare to the elderly in the face of myriad competing demands placed on already stretched services. It is thus vital to move with private agencies and community bodies to collaborate in the care of the elderly especially in institutions and community centres. The perception by many that oral health is less important as we age needs to be dispelled. In fact, oral healthcare becomes more important as we age.

This document incorporates current concepts and approaches in care management of the elderly and serves as a guide for standardised and systematic implementation of the oral healthcare programme for the elderly in Malaysia. Strategies for human resource, for provision of elderly-accessible facilities and services as well as monitoring and evaluation of such initiatives are also outlined.

I take this opportunity to thank the working group and all others involved in the preparation of this document.



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C. GINGIVAE AND PERIODONTIUM

1. The keratinised layer thins out may result in an oedematous appearance.
2. Vascularity decrease resulting in tissue becoming more friable and easily injured.
3. Apical migration of periodontal attachment.
4. Increasing incidence of gingivitis, deepening of pockets and increased mobility and migration of teeth.
5. Gingival hyperplasia may be due to chronic irritation (by dentures and sharp edges of teeth).

D. SALIVA

1. Decrease flow of saliva due to reduced glandular function.
2. Dryness of mouth:
 - May cause root caries.
 - May be due to hormonal changes in post-menopausal women.
 - Leads to drying of mucosa and tongue causing burning sensation (xerostomia) with loss of taste or abnormal taste sensations.
 - May cause decreased denture retention.
 - May result in rampant caries, candidiasis, and dysphagia.
 - May sometimes be associated with small ulcers.
 - Predisposes to oral infections.
 - Is a common side effect of many medications, including anti-cholinergics and anti-depressants.

E. TONGUE

1. Epithelial surface becomes smooth as filiform papillae are lost.
 - Reduction in taste acuity.
 - Probably related to nutritional deficiencies.
2. Hairy tongue may be due to elongated filiform papilla caused by local irritant.
3. Dark brown or black coloration caused by staining by food/tobacco.
4. Coated tongue caused by poor oral hygiene.
5. Common changes to tongue:
 - Burning sensation may be due to Vitamin B complex deficiency, pernicious anaemia, hormonal imbalance or emotional upsets.
 - Allergic reaction to acrylic material or dentures.
6. Epithelium of ventral surface of tongue is thin and well-supplied with blood, but veins are frequently varicosed.

F. LIPS

1. Angular cheilitis is common and characterised by presence of erythema, discomfort and crusting at angles of mouth.

G. PAROTID AND SUBMANDIBULAR GLANDS

1. Inflammation of parotid and submandular glands may be seen.

H. OTHER STRUCTURES

1. Degenerative changes of maxilla, mandible and TMJ occur, which may be the result of osteoporosis or from arthritic change.

COMMON ORAL MANIFESTATIONS OF AGEING

1. Elderly may be affected by oral health problems.
2. Medical problems in other parts of the body can present with oral manifestations.
3. Problems involving gums, teeth and/or dentures may result in difficulty in chewing and swallowing.
4. Speech and appearance may be affected by missing teeth, loose teeth, ill-fitting dentures and dry mouth.
5. Severe oral health problems may lead to social isolation and loss of personal contact that may lead to depression.

A. TEETH

1. Loss of teeth
 - Degeneration of periodontal structures.
 - Caries.
 - Lack of emphasis on preventive care.
2. Attrition
 - Wearing of occlusal surfaces.
 - Related to bruxism.
 - Predominant use of selected tooth segment.
3. Abrasion
 - Caused by hard toothbrushes, abrasive dentifrices and excessive brushing pressures.
 - Cervical abrasion due to incorrect brushing technique.
4. Erosion
 - Associated with acidic substances from diet.
 - Chronic vomiting and regurgitation.
5. Ankylosis
 - Increase in calcification of dentine.
 - Apparent increase in bone cementum may ankylose teeth to bone.
6. Brittle, yellow and fractured teeth
 - The blood supply may diminish and teeth may fracture off.
 - Retained roots may become infected and/or their sharp edges cause irritation to tissues leading to ulceration, pain and discomfort.

B. ORAL MUCOSA

Loss of elasticity with dryness and atrophy of tissues.

1. Buccal mucosa:
 - Becomes thinner and less vascular and easily traumatised.
 - Whitish keratosis of epithelium may be seen which includes lichen planus, candidiasis and leukoplakia.
 - Fordyce's spots or granules are readily visible.
 - Red petechial spots may be due to abnormality of blood vessel walls.
2. Generalised cyanosis of oral mucosa is seen in patients with heart and lung diseases or polycythaemia.
 - Anaemic person's mouth shows a characteristic pallor.
 - Brown pigmentations on mucosa may be a sign of Addison's disease.
 - The palate of heavy smokers may be affected by smoker's keratosis.

1. INTRODUCTION

According to the United Nations, population ageing occurs when people aged 65 years and older of a country reaches 7% of the total population¹. The number and proportion of the elderly in Malaysia is increasing substantially. In year 2013, the elderly population of Malaysia aged 60 years and above was around 9% and is projected to increase to 11% in year 2020, and subsequently to 14% in year 2030¹. The number of elderly utilising oral health services has gradually increased over the years and in 2013, a total of 187,613 elderly patients utilised public dental clinics².

To meet the challenges of an ageing population, the Government of Malaysia formulated and endorsed the National Policy for Senior Citizens in 1995³. One of the strategies is enabling the elderly access to healthcare. In line with this, the Ministry of Health (MOH) established the Majlis Kesihatan Warga Tua (National Council on Health of the Elderly) in 1997, with action plans for provision of healthcare for the elderly in Malaysia. The National Policy for Senior Citizens was revised in 2008 where optimal health for the elderly through an integrated and comprehensive health approach was emphasised⁴.

An oral healthcare programme for the elderly was initiated in the MOH in 1993, specifically for the elderly in institutions. In 2002, Guidelines on Oral Health Care for the Elderly in Malaysia were formulated by the Oral Health Division (OHD), MOH and more comprehensive services were extended to the elderly in dental clinics and institutions⁵. The Family Development Division, MOH also produced guidelines on implementation of health services for the elderly in 2006⁶.

A recent development in working towards a healthy ageing nation included the launch of the 1Malaysia Family Care initiative under the National Blue Ocean Strategy (NBOS 7) in March 2013 which emphasised the provision of holistic health and social support for the

¹Department of Statistics, Malaysia. Population Projections Malaysia 2010-2040.

²Health Informatics Centre, MOH. Appendices Oral Health, 2010-2013.

³Ministry of National Unity and Social Development, Ministry of Health Malaysia. National Policy for Older Persons, 1995.

⁴Family Health Development Division, Ministry of Health Malaysia. National Policy for Older Persons, 2008 Oral.

⁵Health Division, Ministry of Health Malaysia. Guidelines on Oral Health Care for the Elderly in Malaysia, November 2002.

⁶Family Health Division, Ministry of Health Malaysia. Garis Panduan Melaksanakan Perkhidmatan Kesihatan Warga Emas Di Peringkat Daerah, Klinik Kesihatan dan Penglibatan Komuniti. October 2006.

elderly, single mothers and the special needs group. Through this initiative, a total of 4,816 residents in 188 (57%) institutions for the elderly and day care centres were given oral healthcare⁷. In 2014, the 1Malaysia Civil Service Retirement Support (1MCSRS) under NBOS 10 was launched with provision of oral healthcare for retired civil servants which ties in with strategies to provide oral healthcare to the elderly.

This document is a revision of the 2002 guidelines in keeping with the seventh challenge of the Vision 2020 namely “Establishing a Fully Caring Society and a Caring Culture” and the quest to achieve “Health for All” under the Declarations of Alma Ata 1978⁸ and 2008⁹.

2. LITERATURE REVIEW

2.1 Definition of Ageing

Ageing can be defined as a natural biological process, a pathological process, a psychosocial or a socio-economic process¹⁰. Hence, there is no universal agreement on the chronological age for ‘elderly’. Generally, the ages 60 and 65 years have been adopted by developing and developed countries respectively for the purpose of policy-making. Malaysia has adopted the United Nations definition of elderly for developing countries of 60 years and above (60+ years)¹¹.

2.2 Review of Oral Health Programmes in Other Countries

In general, the delivery of oral healthcare for the elderly relies upon a combination of professional assessment, patients’ perception of their dental needs and their demands for oral healthcare. Each country develops its own oral healthcare system best suited to their circumstances. In particular, oral healthcare for the elderly in the Scandinavian countries, United Kingdom and Japan are of relevance to Malaysia as these countries have sizeable elderly populations and elaborate healthcare systems.

⁷ Oral Health Division, Ministry of Health Malaysia. Oral Health Data 2013.

⁸ Declaration of Alma-Ata. International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978.

⁹ Revisit of Alma-Ata 2008.

¹⁰ Kalk W, Baat C, Meeuvissen: Is there a need for gerodontology? Int. Dent. J. 1992.

¹¹ United Nations, World Assembly on Ageing 1982. Vienna International Plan of Action on Ageing 1982 (cited in National Policy for Older Persons, 2008, Family Health Development Division, Ministry of Health Malaysia).

TOPIC 3: BARRIERS TO ACCESS OF ORAL HEALTH CARE

- a. Facilities/equipment.
- b. Physical/Mental barriers.
- c. Perceived and Normative Needs.
- d. Awareness and Importance of Oral Healthcare.
- e. Ethical and Legislation issues.

TOPIC 4: REFERRALS AND OUTREACH PROGRAMMES

- a. Referral Guidelines to Specialist.
- b. Domiciliary Oral Healthcare/Mobile Team.

TOPIC 5: WORKSHOP AND DISCUSSION (CASE SCENARIOS)

LEARNING OUTCOMES

The training module hopes to achieve the following outcomes:

- The clinical participants would be able to develop confidence in formulating treatment plans and carrying out adequate oral healthcare for the elderly.
- The clinical participants would have better understanding of the relationship between general health and oral health.
- The clinical participants would be able to make appropriate referrals to specialists.
- The participants would have better understanding of the social and economic factors which may influence the management of care of the elderly.
- The participants would have the necessary awareness, knowledge and skills to look after the oral health needs of the elderly.

TRAINING MODULE FOR DENTAL STAFF AND CARERS

General objective

To train oral health staff and carers in optimal management of oral healthcare for the elderly.

Specific objectives

1. To provide clinical knowledge and skills to clinicians to identify needs and provide necessary oral healthcare to the elderly.
2. To increase awareness of the risk factors for poor oral health and their relationship to general health.
3. To increase awareness about issues pertaining to barriers to oral healthcare for the elderly.
4. To provide necessary communication skills/tips when managing elderly patients.
5. To provide carers with the necessary knowledge and skills to look after the oral health needs of the elderly in institutions.

Training Format

1. Lectures.
2. Discussion/Work Groups.
3. Question and Answer Sessions.

SUGGESTED LECTURE TOPICS**TOPIC 1: AGEING, SYSTEMIC DISEASE AND ORAL HEALTH**

- a. Cardiovascular diseases.
- b. The effects of medications on oral health.
- c. Diabetes and oral health.
- d. Osteoporosis, arthritis and oral health.
- e. Elderly with special needs.

TOPIC 2: DENTAL MANAGEMENT OF COMMON ORAL HEALTH PROBLEMS IN THE ELDERLY

- a. Dental caries/decay and rationale for treatment.
- b. Periodontal/gum problems and rationale for treatment.
- c. Xerostomia/dry mouth.
- d. Oral ulcers.
- e. Radiotherapy and chemotherapy for head and neck oncology.
- f. Dental problems related to denture wearer.

Care for the elderly provided by the Scandinavian countries is well established and systematic¹². The delivery of oral healthcare has separate provision modalities for the independent and dependent (those not able to access care on their own) elderly. Tables 2.1 and 2.2 describe in brief the oral healthcare delivery systems in selected countries.

Table 2.1: Oral Healthcare Delivery Systems for the Independent Elderly

Countries	Major oral healthcare provide	Cost	Type of treatment covered by national health insurance
Denmark	Private dental practitioners.	Supported by national health insurance/individual expenses based on the type of dental treatment.	Preventive treatments. Basic restorative treatments covered up to a certain amount.
Sweden	Private dental practitioners/ public dental service.	Supported by national health insurance/individual expenses based on the type of dental treatment.	Routine dental treatments. Extensive dental treatment covered up to certain amount.
Norway	Private dental practitioners.	Individual expenses.	None.
United Kingdom ¹³	NHS and contracted private practitioners under NHS.	Most patients contribute to the cost of dental care through co-payments.	General dental service. Community dental service. Hospital dental service.
Japan ¹⁴	Private dental practitioners.	National Insurance Scheme.	Patients older than 70 years only pay 10% of treatment fees.

¹²Holm-Pederson P, et al., Dental care for aging population in Denmark, Sweden, Norway, United Kingdom and Germany. Journal of Dental Education, 2005. 69(9): p. 987-97.

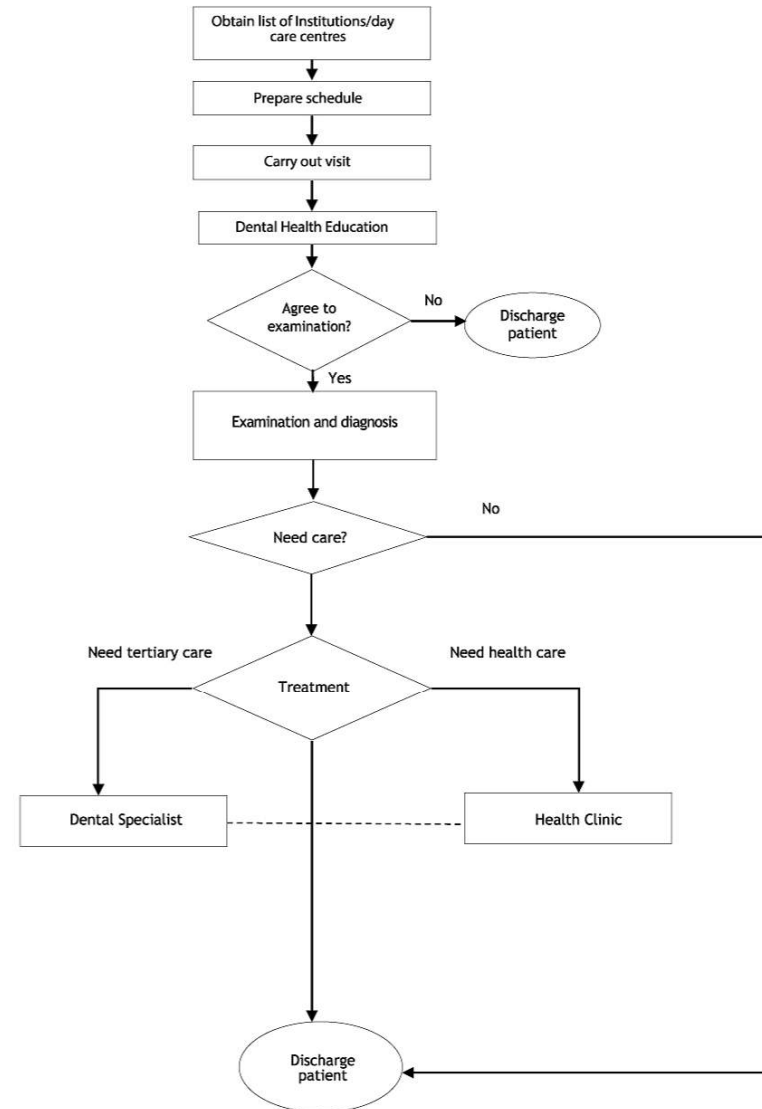
¹³National Health Service, United Kingdom. <http://www.newham.nhs.uk/main.cfm?type=DENT>.

¹⁴Kousei, Ministry of Health and Welfare Japan. 2000, Hakusyo 2002: Gyousei, Tokyo. p. 444-5.

Table 2.2: Oral Healthcare Delivery Systems for the Dependent Elderly

Countries	Major oral healthcare provider	Cost	Type of treatment subsidised by the government/ national health insurance	Oral health programmes available
Denmark	Public dental services.	Nominal charge.	Any necessary and realistic treatment needs recommended by the dental professionals.	Outreach programme. On-site programmes in long term psychiatric care institutions.
Sweden	Public dental services.	Counties and national dental health insurance.	Free oral health assessments and counselling organised by the counties. All 'necessary treatment' covered almost totally by the national dental health insurance.	Systematic on-site dental care units at the institutions. Routine oral health assessments. Counselling for patients and nursing staff.
Norway	Private dental practitioners.	Individual expenses.	Free regular and outreach services.	Outreach services for groups of elderly, institutionalised and homebound, sick and chronically ill and disabled people (Dental Service Act Norway).
United Kingdom ^{15, 16}	NHS and contracted private practitioners under NHS.	Most patients contribute to the cost of dental care through co-payments.	Specific groups receive general dental care without any patient charge, for example those on welfare benefits. Dental services provided by the Community and Hospital Dental Services are free, although there may be a charge for bridges and dentures.	General Dental Service. Community Dental Service. Hospital Dental Service.

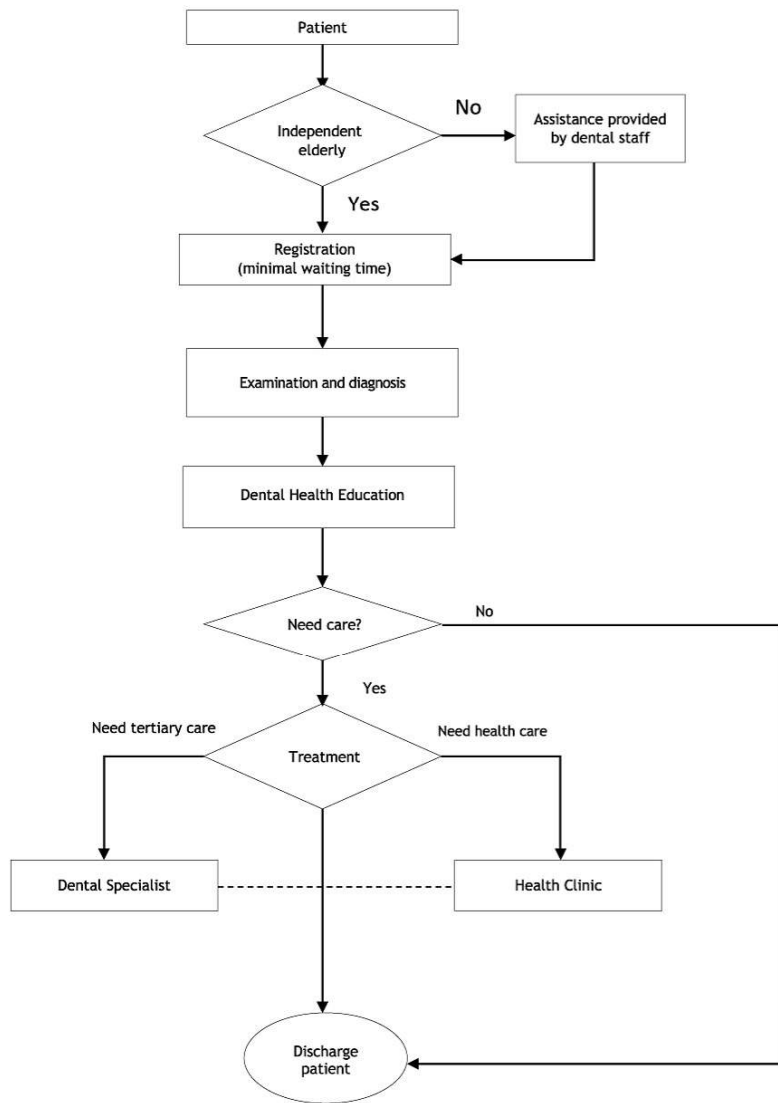
FLOW CHART FOR OUTREACH SERVICES IN INSTITUTIONS /DAY CARE CENTRES



¹⁵ The Gerodontology Association and Munksgaard Ltd., National Working Group for Older People-Meeting the challenges of oral health for older people. Gerodontology, 2005. 22(Supplement 1): p. 2-48.

¹⁶ Borreani E, et al., Minimising barriers to dental care in older people. Biomedical Central Oral Health, 2008. 8(7): p. 1-15.

FLOW CHART FOR CARE IN THE DENTAL CLINIC



Countries	Major oral healthcare provider	Cost	Type of treatment subsidised by the government/national health insurance	Oral health programmes available
Japan ^{17,18,19}	Private dental practitioners.	Nursing Care Insurance.	Dental treatment is covered totally by Nursing Care Insurance.	The 'Healthy Japan 21' concept - for the elderly to maintain at least 24 teeth at age 60 and 20 natural teeth at age 80.

2.3 Oral Health Status in Elderly

Various factors impact on the oral health status of the elderly such as the environment, their attitude/behaviour, public health services and genetics. It has been suggested that attitude and dental care behaviour may at certain stages influence the oral health status of the elderly especially the institutionalised groups²⁰. The institutionalised elderly were also found to be two times more edentulous than the independent elderly due to socio-demographic factors prior to institutionalisation²¹. Apart from attitude and behaviours, access, service utilisation and the types of treatment available are factors which can lead to oral health disparities among the elderly²².

Some of the common oral manifestations and oral diseases affecting the elderly are listed in **Appendices 14** and **15**. Statistics show that recurrent dental caries, gingivitis and periodontal attachment loss are the most common dental problems experienced by older adults²³. These can be compounded by medical conditions such as cardiovascular diseases, diabetes, systemic infections, low nutritional intake and dysphagia. Patients' self esteem

¹⁷ Department of Economic and Social Affairs, Population Division, United Nations. World Population Ageing 2009.

¹⁸ Shinso F, New strategy for better geriatric oral health in Japan: 80/20 movement and Healthy Japan 21. *International Dental Journal* 2001. 51(3 Suppl): p. 200-6.

¹⁹ Maki Y, Oral health care systems for elderly in Asia and Japan. *Geriatrics and Gerontology International* 2004. 4(Suppl): p. S158-9.

²⁰ Sriyono NW, Correlation of age, attitude, and dental care behavior with the oral health status of institutionalized elderly in Yogyakarta, Indonesia. *Hong Kong Dental Journal*, 2005. 3: p. 30-4.

²¹ Slade GD, et al., Differences in oral health status between institutionalized and non-institutionalized older adults. *Community Dentistry of Oral Epidemiology*, 1990. 18: p. 272-6.

²² Shamdol Z, I.N., Tengku Hamzah N, Ismail AR, Prevalence and associated factors of edentulism among elderly Muslims in Kota Bahru, Kelantan, Malaysia. *JIMA*, 2008. 4:p. 143-8.

²³ Ship JA and Ghezzi EM, eds. *Oral manifestations of systemic disease* 4th ed. Otolaryngology head and neck surgery ed. Cummings C.W., Flint P.W., and H.L.A et. at. 2005, Elsevier Mosby: Philadelphia. 1493-1510.

and overall well being have also been proven to have a direct relation to their oral health status and conditions^{24,25,26}.

2.4 Oral Health-Related Quality of Life

Oral health-related quality of life (OHRQoL) is a relatively new concept which measures the impact of poor oral health on quality of life. The definition of OHRQoL varies. The simplest by the United States Surgeon General describes OHRQoL as “a multidimensional construct that reflects (among other things) people’s comfort when eating, sleeping, and engaging in social interaction; their self esteem; and their satisfaction with respect to oral health”²⁷.

In the elderly, oral conditions can have substantial effects on their quality of life. Local studies have found that the prevalent oral impacts faced by the elderly are ‘difficulty in chewing’ (53-67%), ‘limitation in type/quantity of food taken’, ‘pain and discomfort in eating’^{28,29}. Locker (1992) indicated that people may avoid having food in company because of eating problems and associated embarrassment³⁰. These findings imply that oral diseases can seriously impact on oral function, physical presentation and social relationship.

The Geriatric Oral Health Assessment Index (GOHAI) was developed as a self-reported assessment tool of oral health in older adults³¹. In Malaysia, the GOHAI has been validated to measure the OHRQoL of elderly individuals³².

²⁴ Coleman P, Improving oral health care for the frail elderly: A review of widespread problems and best practices. *Geriatric Nursing*, 2002. 23(4): p. 189-99.

²⁵ Taylor GW, Loesche WJ, and Terpenning MS, Impact of oral diseases on systemic health in the elderly: Diabetes Mellitus and aspiration pneumonia. *Journal of Public Health Dentistry*, 2000. 60(4): p. 313-20.

²⁶ Fowler EB, Periodontal status and its association with systemic disease. *Military Medicine* 2001. 166(1): p. 85-9

²⁷ National Institute of Craniofacial Research, oral Health America: A Report of the Surgeon General. 2000, National Institute of Health Rockville, Maryland.

²⁸ Latifah RJ, Oral health of elderly Malaysians: a socio-dental study. Ph.D Thesis, University of Malaya 1999.

²⁹ Ismail N. Tooth loss and perception of oral function of an elderly Malay population in Kelantan. Master in Community Dentistry research report, University of Malaya 1996.

³⁰ Locker D, The burden of oral disorders in population of older adults. *Community Dental Health*. 1992. 9:109-124.

³¹ Atchison KA and Dolan TA, Development of the geriatric oral health assessment index. *Journal of Dental Education*, 1990. 54(11): p. 680-7.

³² Wan Nasir W, Othman, Khairiyah A, Muttalib, Rugayah Bakri, Jennifer G. Moss, Nasruddin Jaafar, Natifah C. Salleh, Sharon Chen. Validation of Geriatric Oral Health Assessment Index (GOHAI) in Malay Language. *Journal of Public Health Dentistry*. 2006; 66(3): 199-204.

English version

No.	In the past 3 months	Always	Very Often	Often	Sometimes	Seldom	Never
1.	How often did you limit the kinds of food or amounts of food you eat because of problems with your teeth or dentures?						
2.	How often did you have trouble biting or chewing any kinds of food, such as firm meat or apples?						
3.	How often were you able to swallow comfortably?						
4.	How often have your teeth or dentures prevented you from speaking the way you wanted?						
5.	How often were you able to eat anything without feeling discomfort?						
6.	How often did you limit contacts with people because of condition of your teeth or dentures?						
7.	How often were you pleased or happy with the looks of your teeth and gums, or dentures?						
8.	How often did you use medication to relieve pain or discomfort from around your mouth?						
9.	How often were you worried or concerned about the problems with your teeth, gums or dentures?						
10.	How often did you feel nervous or self-conscious because of problems with your teeth, gums or dentures?						
11.	How often did you feel uncomfortable eating in front of people because of problems with your teeth or dentures?						
12.	How often were your teeth or gums sensitive to hot, cold or sweet?						

Reference:

Oral Health Division, Ministry of Health Malaysia. Cross cultural adaptation and validation of the Geriatric Oral Health Assessment Index (GOHAI) for use in Malaysia, September 2005.

Geriatric Oral Health Assessment Index (GOHAI)

(Bahasa Melayu version)

No.	Dalam tempoh 3 bulan yang lepas	Sentiasa	Sangat Kerap	Kerap	Kadang-kadang	Jarang sekali	Tidak Pernah
1.	Berapa kerapkah anda menghadkan jenis atau jumlah makanan yang anda makan di sebabkan masalah gigi atau gusi anda?						
2.	Berapa kerapkah anda mengalami kesukaran menggigit atau mengunyah sebarang jenis makanan pejal misalnya daging yang liat, atau buah epal?						
3.	Berapa kerapkah anda boleh menelan dengan mudah?						
4.	Berapa kerapkah gigi atau gigi palsu anda menghalang anda daripada bercakap dengan cara yang diingini?						
5.	Berapa kerapkah anda boleh memakan apa sahaja tanpa kesukaran?						
6.	Pernahkah anda mengelak diri dari bertemu dengan orang lain disebabkan keadaan gigi atau gigi palsu anda?						
7.	Berapa kerapkah anda berpuas hati dengan rupa gigi dan gusi, atau gigi palsu anda?						
8.	Pernahkah anda mengguna atau memakai ubat untuk melegakan sakit atau rasa tidak selesa di kawasan mulut anda?						
9.	Pernahkah anda berasa risau atau bimbang tentang masalah gigi, gusi atau gigi palsu anda?						
10.	Pernahkah anda merasa malu atau gelisah kerana masalah gigi, gusi atau gigi palsu anda?						
11.	Pernahkah anda tidak selesa apabila makan bersama orang lain disebabkan gigi, atau gigi palsu anda?						
12.	Pernahkah gigi atau gusi anda terasa ngilu atau sengal apabila makan/minum benda yang panas, sejuk atau manis?						

Reference:

Oral Health Division, Ministry of Health Malaysia. Cross cultural adaptation and validation of the Geriatric Oral Health Assessment Index (GOHAI) for use in Malaysia, September 2005.

Another commonly-used index is the Oral Health Impact Profile-14 (OHIP-14)³³. Both assessment tools may be adopted to measure OHRQoL of the elderly.

2.5 Utilisation of Dental Services

An increasing number of the elderly are retaining their teeth longer. Healthy, active and independent elderly can receive dental care from the community dental clinic. However, those with complex dental needs may need to seek dental care from specialists.

Utilisation of dental services by the elderly seems to decrease with increasing age³⁴. Not only is perceived need for oral care less; even when the need exists, it is less likely to be translated into action and demand for care. When the elderly do make use of dental services, it is more likely to be on an emergency rather than a routine basis.

Other research indicates that dental visits by older adults are correlated to the possession of teeth, not with age. As long as they maintain their dentition, they will continue to seek dental services. Failure to seek dental care often result from a lack of perceived need for services. Edentulous elderly often do not seek dental services. However, with oral cancer occurring primarily in adults over the age of 65, an annual examination will benefit even the edentulous elderly.

In Malaysia, though the utilisation rates of MOH dental services by the elderly are gradually increasing, it is still rather low with a range of only 6.1% to 7.6% from 2010 to 2013² (Figure 2.1).

³³ Locker D, et al., Comparison of the GOHAI and OHIP-14 as measures of the oral health related quality of life of the elderly. Community Dental Oral Epidemiology 2001. 29: p.373-81

³⁴ Dougall A, and Fiske J, Access to special care dentistry, part 1. Access. Br Dent J, 2008. 204(11): p. 605-16

Figure 2.1: Number and Percentage Utilisation of MOH Dental Services by the Elderly in Malaysia, 2010-2013



Source: Health Informatics Centre, MOH. Appendices Oral Health, 2010-2013

3. OBJECTIVES

3.1 General Objective

The objective of this document is to provide guidance in the provision of appropriate oral healthcare to the elderly to enhance their quality of life.

3.2 Specific Objectives

- 3.2.1 To provide accessible and appropriate oral healthcare to the elderly in public sector clinics and institutions/day care centres.
- 3.2.2 To raise oral health awareness among the elderly and carers.
- 3.2.3 To assess Oral Health Related Quality of Life.

INDICATORS FOR EVALUATION OF THE PROGRAMME FOR THE ELDERLY

NO.	INDICATOR	FORMULA	TARGET
1.	% of elderly patients aged 60 years (walk in/visited patients) with ≥ 20 teeth present.	$\frac{\text{No. of 60-year-old patients with } \geq 20 \text{ teeth present.}}{\text{No. of 60-year-old patients examined.}}$	$\geq 60\%$ (NOHP 2020 Goal)
2.	% of elderly patients aged 60 years and above (walk in/visited patients) with ≥ 20 teeth present.	$\frac{\text{No. of patients aged 60 years and above with } > 20 \text{ teeth present.}}{\text{No. of patients aged 60 years and above examined.}}$	$\geq 30\%$
3.	% of edentulous patients aged 60 years and above (walk in/visited patients).	$\frac{\text{No. of edentulous patients aged 60 years and above.}}{\text{No. of patients aged 60 years and above examined.}}$	$\leq 30\%$
4.	Average no. of teeth present at age 60 years and above (walk in/visited patients).	$\frac{\text{Total no. of teeth present at aged 60 years and above.}}{\text{No. of patients aged 60 years and above examined.}}$	To collect as trend data

5. MONITORING AND EVALUATION

Monitoring of the oral health status of the elderly using daily and monthly returns under the Health Information Management System (HIMS) are as in **Appendices 2** and **3**. The daily and monthly NBOS 7 data are reported using the Oral Health Data formats as in **Appendices 4** and **5**. Both daily and monthly returns of the 1Malaysia Civil Service Retirement Support (1MCSRS) under NBOS 10 is also required following the Director-General of Health's circular³⁵ using formats as in **Appendices 6, 7** and **8**. Denture services provided through Mobile Dental Lab(s) and its data collection formats are addressed in the Standard Operating Procedure for Mobile Dental Laboratory³⁶. Other relevant monitoring formats by the Oral Health Division, Ministry of Health will be utilised as and when needed. Indicators for the evaluation of the oral health programme for the elderly are as in **Appendix 9**.

In addition to the monitoring of programmes as stated above, research using the Geriatric Oral Health Assessment Index (GOHAI) as in **Appendix 10**, can be carried out at timely intervals to assess the impact of the programme on the quality of life health outcomes for the elderly.

6. CONCLUSION

A healthy and active ageing population with optimum quality of life is one of the goals of the Ministry of Health. To achieve this, proper planning and comprehensive implementation strategies are needed as well as forging smart partnerships and strengthening multi-sectorial collaboration. It is expected that this guideline will allow managers at various levels to plan, implement, monitor and evaluate the oral healthcare programme for the elderly successfully.

³⁵ Ministry of Health Malaysia. Surat Pekeliling Ketua Pengarah Kanan Malaysia Bil. 10/2014. Panduan Pelaksanaan NBOS 10 (NBOS-JPA): '1Malaysia Civil Service Retirement Support (1MCSRS)', 19 May 2014.

³⁶ Bahagian Kesihatan Pergigian, Kementerian Kesihatan Malaysia. Standard Operating Procedure Makmal Pergigian Bergerak, 2014.

Appendix 7

GIG 1/1MCSRSSHA 1/2014

KEMENTERIAN KESIHATAN MALAYSIA
RETEN SARINGAN KESIHATAN PERGIGIAN NBOS-10 (1MCSRS-HA)
 DAFTAR HARIAN PESAKIT BARU PESARA KERAJAAN
 (berumur kurang 60 tahun / berumur 60 tahun dan ke atas)
 UNTUK BULAN _____ TAHUN _____

1. Negeri:		2. Daerah:		3. Klinik Pergigian:		4. Nama/Bilangan Pegawai Pergigian:																													
Tarikh	No. KP	Keuruman		Jantina		Status Kesihatan Mulut		Jenis Rawatan Dibeni																											
		Melayu	Cina	India	Lain-Lain	L	P	Mempunyai ≥ 20 Gigi	Perlu Gigi Palsu	Penyakit Periodontal	Lesi Mukosa	Tidak perlu Rawatan	Tampalan	Cabutan	Penskakeran	Kes Perubahan Mulut	Adeses	Kes Surgikal Lain	Lain-lain	Khidmat Nasihat	Temujanj/susunan														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Jumlah Bulanan																																			

Gunakan boring yang berasingan untuk pesara kerajaan yang berumur kurang 60 tahun dan yang berumur 60 tahun dan ke atas
 Ruangan 3-15, 21 -35: Tandakan '1' di mana berkenaan

RETEN PELAKSANAAN 1MCSRS-HA (PESARA) DI FASILITI KESIHATAN KKM

KK/KP/DAERAH/HOSPITAL/NEGERI :

Bulan :

Tahun :

	Perkara	Umur < 60 Tahun		Umur ≥ 60 Tahun		JUMLAH KESELURUHAN		
		L	P	L	P	HOSPITAL	KLINIK KESIHATAN	KLINIK PERGIGIAN
A.	Bilangan fasiliti yang melaksanakan R-Lane							
	Bilangan pelanggan menggunakan R-Lane							
	Bilangan pesara menggunakan R-Lane							
	% Pesara menggunakan R-Lane							
B.	Bilangan ceramah diberi							
	Bilangan pesara menghadiri ceramah							
	Bilangan peserta menghadiri ceramah							
	% Pesara menghadiri ceramah							

*Semua Klinik Pergigian (KP) kecuali klinik Pakar di Hospital.

IMPLEMENTATION STRATEGIES FOR THE ORAL HEALTHCARE PROGRAMME FOR THE ELDERLY

STRATEGY	ACTIVITY	MONITORING	RESPONSIBILITY
1. Planning: a) Oral health services - Institution - Day Care Centres	1. To appoint a co-ordinator at national/state level to coordinate planning and implementation at state/district levels as well as collate and analyse data. 2. To identify facilities (Institutions/Day Care Centres) in every state/district and collect baseline data. 3. To prepare yearly time-table for visits and to carry out visits in institutions/day care centres. To monitor activities using Appendix 2 and 3 and other relevant formats.	<ul style="list-style-type: none"> No. of facilities in state/district. No. of facilities to be visited. No. of elderly in Institutions/Day Care Centres. 	1. National Level - Director of Oral Health, MOH - National Coordinator in Oral Health Division (OHD) - Family Health Division, MOH 2. State level - SDDH (OH)-State Deputy Director of Health (Oral Health) - State Coordinator (G) - DDO (District Dental Officer) - Family Health Unit 3. District level - DDO/DPHS (Dental Public Health Specialist)/DOIC (Dental Officer in-charge)

IMPLEMENTATION STRATEGIES FOR THE ORAL HEALTHCARE PROGRAMME FOR THE ELDERLY

STRATEGY	ACTIVITY	MONITORING	RESPONSIBILITY
b) Facilities & Infrastructure	<p>1. Special needs friendly facility</p> <ul style="list-style-type: none"> • Priority Registration counters (green lane). • Lifts for clinics situated above ground level. • Ramps (non-slip flooring). • Hand rails/support. • Padded seats in waiting area. • Doors designed to facilitate access. • Special needs friendly toilets. • Digital calling system (visual & sound). • Designated parking close to clinic entrance. • Location of future dental clinics to be on the ground floor, where possible. <p>2. Outreach programme</p> <ul style="list-style-type: none"> • Special needs mobile clinic. • Special needs mobile team. • Mobile equipment. 	<ul style="list-style-type: none"> • No. of clinics new/upgraded with some special needs friendly facilities. • No. of special needs mobile clinics/teams. 	<ul style="list-style-type: none"> - Planning Division, KKM - SDDH (OH) - DDO - State Coordinator
c) Human resource planning and development	<p>1. Establish a team comprising of</p> <ul style="list-style-type: none"> • Dental Officer. • Dental Nurse. • Dental Surgery Assistants/Healthcare Assistant. • Driver. 	<ul style="list-style-type: none"> • No. of teams. 	<ul style="list-style-type: none"> - SDDH (OH) - DDO - State Coordinator

Appendix 5
(continuation)

Cabutan	Gigi Desidus	Gigi Kekal	Kompilasi selepas cabutan	Penskateran	Rawatan Periodontik	Rawatan Endodontik	Rawatan Orodontik	Kes Perubatan Mulut	Pembedahan Mulut				Prostetik Sebahagian		Lain-lain	Bil. X-ray Diambil	Kes Selesai			
									Kes Perubatan Mulut	Abeses	Cabutan Surgikal	Fraktur	Kes Surgikal Yang lain	Denure				Penuh	Denure	Pesakit
38		39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	

KEMENTERIAN KESIHATAN MALAYSIA
 BAHAGIAN KEMENTERIAN PERGIATAN
 PROJEK NATIONAL BLUE OCEAN STRATEGY 7
 LAPORAN BULANAN KLINIKAL/ DAERAH/ NEGERI

Kategori Pesakit	Kelunutan												Jenis Rawatan Diberi																				
	Kedatangan												Sejalan Fibr						TAMPAKAN Posterior														
	Melayu	Cina	India	Baju	Dusun	Kadazan	Murut	Bumiputera Sabah	Melayu Sarawak	Melanau	Kedayan	Iban	Bidayuh	Bumiputera Sarawak	Orang Asli	Lain-lain	Bukan Wargangegara	Jumlah	Baru/Semula (B/S)	Sepuan Florida	Murid	Gigi	GD	GK	GD	GK	Sewarna	GD	GK	GD	GK	Amalgam	Crown/Bridgel
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37		
Keperluan Khas	Baru	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
Keperluan Khas	Ulangan																																
Ibu	Baru																																
Tunggal	Ulangan																																
Warga Emas	Baru																																
	Ulangan																																
Jumlah Besar	Baru																																
	Ulangan																																
Jumlah Kumulatif Dari Bulan Legas	Baru																																
	Ulangan																																
Jumlah Kumulatif Termasuk Bulan Semasa	Baru																																
	Ulangan																																

BIL	Lawatan	SEMASA	KUMULATIF
	Warga Emas		
	Keperluan Khas		
	Ibu tunggal		

OKU	Warga Emas
Bil dibayar	Bil Peserta
Bil Peserta	Bil Peserta

Warga Emas	Keperluan Khas
Kunjungan	PPJK
Sivasta	Bulan PJK

* Bil dan kumulatif termasuk bulan semasa

IMPLEMENTATION STRATEGIES FOR THE ORAL HEALTHCARE PROGRAMME FOR THE ELDERLY

STRATEGY	ACTIVITY	MONITORING	RESPONSIBILITY
c) Human resource planning and development	2. Continuous training of existing staff (CPD)	• No. of training sessions conducted/no. of staff trained.	- SDDH (OH) - State coordinator - DDO - Special Needs Dentistry Specialist
	3. Post-graduate training for officers in special needs (geriatric) dentistry.	• No. of Officers trained as specialists.	- OHD, MOH - Universities
	4. Propose post-basic study opportunities for Dental Nurses and Dental Technologists in special needs (geriatric) dentistry.	• No. of dental nurses/dental technologists sent for post-training.	- DTCM (Dental Training College Malaysia) - Special Needs Dentistry Specialist
	5. Training of carers	• No. of carers trained.	- SDDH (OH) - DDO - Institutions
	• In-house training for carers-continuous updating of knowledge and skills. • Imparting oral health knowledge to carers.		

IMPLEMENTATION STRATEGIES FOR THE ORAL HEALTHCARE PROGRAMME FOR THE ELDERLY

STRATEGY	ACTIVITY	MONITORING	RESPONSIBILITY
2. Promotion of oral health as part of general health: a) Enhancing collaboration with Health and Hospital counterparts.	<ol style="list-style-type: none"> Form a working committee at district level to promote this aspect. Conduct Seminars/Courses for Health Staff/ Members of Kelab Usia Emas (Refer Training Module - Appendix 13). 	<ul style="list-style-type: none"> No. of courses conducted. No. of health staff trained. 	<ul style="list-style-type: none"> SDDH (OH) DDO DPHS DOIC Welfare Department Malaysia (WDM) Non-governmental organisations (NGOs)
b) Improve multi-sectoral collaboration with other relevant government agencies and NGOs.	<ol style="list-style-type: none"> Strengthen community participation <ul style="list-style-type: none"> sponsorships. campaigns. old folks special day. 	<ul style="list-style-type: none"> No. of campaigns conducted. 	<ul style="list-style-type: none"> DDO DOIC Community leaders/volunteers
c) Community participation.	<ol style="list-style-type: none"> Encourage the elderly to join senior citizen's/social clubs by providing the address and contact numbers of existing clubs. Training of trainers (TOT) from clubs/volunteers from voluntary bodies/NGOs. Incorporate dental check-up as part of health promotion in senior citizen's club activities/campaigns. 	<ul style="list-style-type: none"> No. of dental related activities in collaboration with senior citizen's club/voluntary bodies. No. of trainers trained. No. of dental promotion activities organised. 	<ul style="list-style-type: none"> DDO DOIC MOIC (Medical officer in-charge) NGOs District coordinator Community leaders/volunteers

Appendix 4
(continuation)

Cabutan	Gigi Deslus	Gigi Kekal	Kompaksi selepas cabutan	Penskaleran	Rawatan Periodontik	Rawatan Endodontik	Rawatan Orodontik	Kes Perubatan Mulut	Pembedahan Mulut				Prostetik Sebahagian						
									Abses	Cabutan Surgical	Fraktur	Kes Surgical yang lain	Denure	Pesakit	Denure	Pesakit	Lain-lain	Bill X-ray	Diambil
38		39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56

