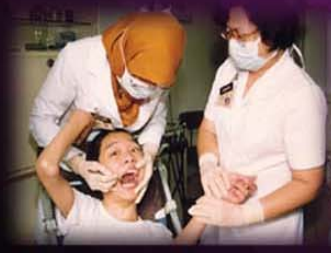
Oral Healthcare for CHILDREN WITH SPECIAL NEEDS



Guidelines for Implementation




Oral Health Division
Ministry of Health Malaysia

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ORAL HEALTHCARE FOR CHILDREN WITH SPECIAL NEEDS

ORAL HEALTH DIVISION
MINISTRY OF HEALTH MALAYSIA
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FOREWORD

Ammended in July 2004

There has been marked improvement in the oral health status of Malaysians especially among the school-going population. This has been achieved through an emphasis on prevention and an incremental approach in providing oral healthcare.

However, an area of concern is the provision of oral healthcare for the 'special child'. For such children to enjoy the same benefits as normal children, healthcare providers have to be trained not only in the clinical skills required, but also in the management of such cases with patience and compassion.

This guideline addresses the provision of oral healthcare for the special child. The document incorporates current concepts and approaches in care management and addresses such issues as the need for awareness, knowledge and skills among providers of care. Strategies for implementation, monitoring and evaluation are also outlined to ensure continuous improvement in the provision of care. It is my sincere hope that this important document will serve as a reference to improve quality of care.

I take this opportunity to express my warm appreciation of the commendable efforts of the committee involved in the preparation of these guidelines.

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ORAL HEALTHCARE
FOR CHILDREN WITH SPECIAL NEEDS

1. INTRODUCTION

Children with `special needs' are specified groups of children with some form of handicap that prevents them from living a 'normal' life and necessitates the involvement of others in their everyday living. The World Health Organisation (WHO) has defined a handicapped person as 'one who over an appreciable period of time is prevented by physical or mental conditions from full participation in normal activities of their age group including those of a social, recreational, educational and vocational nature' [1]. Generally, the varying definitions of a handicap can be roughly divided into three categories : mental handicaps, physical handicaps and medical disabilities [2,3].

The Oral Health Division, Ministry of Health, Malaysia has recognised this group as one of the priority groups [4]. In early 1993, the Division launched the 'Oral healthcare programme for special children' with special emphasis given to this disadvantaged group (the handicapped and the medically-compromised) at outpatient level [5]. This is in line with Vision 2020 of the Malaysian Government and the Vision for Health towards the development of a caring society.

This group has been shown to have a high prevalence of oral diseases and unmet treatment needs [6]. Currently the management of this group of children is hampered by poor coverage, lack of trained dental personnel and public awareness. There is thus a need to develop standardised guidelines with the aim of strengthening the programme.

2. BACKGROUND

A special programme has been implemented to cater for the oral health needs of these children in institutions as well as in ordinary schools since the 1980's. However, pressing problems faced by the families of these children and also by the oral health services have not allowed for full implementation of the programme.

Barriers to oral healthcare range from lack of awareness and insufficient information, social stigma faced by the family members and financial constraints to poor access and lack of availability of nearby healthcare facilities. To most of them, seeking routine oral healthcare is secondary to the management of the main disability of the child.

Constraints faced by the services included physical environments not being patient friendly and ill equipped to cater to the needs of these special children. There was also inadequate motivation for oral health personnel to provide care due to their inexperience, apprehension and lack of exposure.

As a result, the oral health needs of most of these children have been left untreated. To address these issues, children with special needs were formally recognised as one of the priority groups for oral health care with the official launch of the Oral Healthcare programme for children with special needs in February 1993 [5]. This is to ensure that the desired oral health status is achieved through oral health promotion, clinical preventive measures and the necessary treatment required [7,8].

At present, these children attend special classes either in schools, institutions or Community-based Rehabilitation Centres. They are treated on an ad-hoc basis when mobile dental teams make visits to these places. Children with special needs are also referred by Dental Nurses and Dental Officers to Paediatric Dental Specialists based in hospitals.

The first Paediatric Dental Specialist Unit was established in Kuala Lumpur Hospital in 1992. Subsequently, such units were also set up in other states on a staggered basis. These units serve as referral centres for secondary and tertiary care where such children are given comprehensive dental treatment. The following table gives the

percentage of new attendances of special needs patients recorded at a number of Paediatric Dental Specialist clinics.

Percentage of new attendances of children with special needs at Paediatric Dental Specialist Clinics

Dental Clinic	2001	2002
Institute Paediatric Hospital Kuala Lumpur	25.9%	24.7%
Hospital Sultanah Aminah, Johor Bahru	19.8%	18.2%
Hospital Ipoh, Perak	56.8%	39.9%
Hospital Seremban	36.5%	43.3%
Hospital Tengku Ampuan Rahimah, Kelang	21.9%	21.4%
Hospital Alor Star, Kedah	19.8%	17.2%
Hospital Tengku Ampuan Afzan, Kuantan	-	22.7%
Hospital Queen Elizabeth, Kota Kinabalu	-	34.3%
Hospital Pulau Pinang	23.1%	25.4%

Source : Information and Documentation System Unit, Ministry of Health, Malaysia

3. LITERATURE REVIEW

The results of a survey in 1968 on the dental status of cerebral palsy children in the United Kingdom showed that compared to a control group, these children had similar levels of dental caries [9]. However, they had poorer gingival health and less restorative care [9]. Compared to the group of normal children, they had more teeth remaining unrestored or extracted. A follow up study, in 1991, found that the situation had not changed [10]. During this period of time, other authors reported similar conditions with other groups of special needs children, indicating that the oral health of these children had remained unchanged over a period of 20 years [11,12].

A 1987 survey of the dental health status of 116 handicapped subjects at the Selangor Spastic Center, revealed that 85.3% of the subjects had decayed and untreated teeth with 41.4% needing urgent treatment [13]. Poor oral hygiene was evident in 87.9% of the children with 74% showing moderate to intense gingivitis. Malocclusion was detected in 31% of the subjects [13].

Other research studies in the United Kingdom in the nineties on medically-compromised children (suffering from cardiac disease, acute leukaemias, deafness, chronic renal failure, cystic fibrosis, diabetes mellitus, haemoglobinopathies and asthma) have all reported similar findings [9]. With few exceptions, the overall level of dental caries and periodontal disease was the same as in the general child population. However, the standard of dental care provided was clearly inadequate. Within the National Health Service (NHS) in the United Kingdom, there have always been extra payments for the dental care of disadvantaged children (and adults). Under these schemes of payment, the general dental practitioners receive additional money to care for these individuals because it is recognised that they do require extra treatment time. Yet, despite these added incentives the level of care remains low. This has led to the recommendation for a three-tier system of care for children with special needs [14].

The British Society For Disability and Oral Health has developed specific guidelines for oral health care for various special needs groups such as people with physical disabilities, those who are dependent, dysphagic or critically and terminally ill, long-stay patients, people with mental illness and the medically-compromised [15].

In the United States of America (USA), the National Foundation of Dentistry for the Handicapped was established in 1974 to address the problems of dental needs of the disadvantaged groups. It is a national charitable organisation solely dedicated to meeting the needs of citizens with physical, medical and mental disabilities. The Foundation and its affiliates and partner organisations operate three humanitarian programmes :

i) Donated Dental Services through which disabled, elderly and medically-compromised patients are linked to dentists in their communities to receive free comprehensive dental treatment, including prosthetics;
ii) Dental House calls in which a cadre of dedicated volunteer dentists treat patients in nursing homes, community mental health centres, special education centres, residences of the homebound, and facilities serving people with developmental disabilities, by transporting mobile dental equipment in a van to these special sites; and

iii) The Bridge programme which offers in-service training to nurses, teachers, case managers, residential staff, and parents of individuals with disabilities to help improve oral hygiene and follow up with routine dental care [16].

The results of a survey conducted by the Federatione Dentaire Internationale (FDI) in 1989 indicated similarities within the models developed by the countries which responded. This form the basis for the development of services in countries where no such services exist.

The models developed by the Netherlands, Norway and the United Kingdom are clearly public health service-based, with national guidelines for implementation, and mainly financed by public funds. In the USA and Canada, the services that exist are the product of state legislation in many cases and are funded through both private and public funds. In Europe, the social security arrangements for reimbursement of costs made treatment of all categories of patients a reasonably attractive proposition. The situation in Japan, where public health systems are well established, is, in some respects, similar to that in the European countries[16].

Barriers to oral healthcare identified in these countries include the following:

i) Inadequate public awareness of the need for dental care for these children;
ii) Poor accessibility to dental care due to ignorance or difficulty in obtaining care;
iii) Financial problems – many children are from socially-deprived families and not able to afford treatment or expenses incurred to obtain treatment (e.g. transport);
iv) Poor communication – many of these children are unable to convey their dental needs adequately. Treatment is only sought when there are obvious signs e.g. swellings;
v) Associated medical problems - many of these children have associated medical problems, which can complicate their dental management;
vi) Lack of training and understanding among dental personnel.

Due to lack of training or perceived prejudice, dental personnel are reluctant to manage these children and instead prefer to refer them to specialists for dental management.

4. OBJECTIVE

4.1 General Objective

To improve oral health of children with special needs that will contribute to an enhancement of their quality of life.

4.2 Specific Objectives

4.2.1 To inculcate good oral health practices for maintenance of oral health throughout their lives.

4.2.2 To increase the awareness of the carers /minders and dental personnel on oral health care for children with special needs.

4.2.3 To improve the skills of dental personnel in the management of children with special needs.

4.2.4 To improve oral health status of children with special needs.

5. SCOPE

This programme covers all children with special needs in institutions and schools, those attending out-patient clinics, as well as patients referred to paediatric dental specialist clinics.

6. STRATEGIES

This guideline paves the way for a more organised oral health service for children with special needs. The initial phase of the programme should emphasise on prevention. The curative component should subsequently be gradually increased in terms of types and complexity of care. The programme for children with special needs requires close cooperation and collaboration from :

- Dental personnel
- Parents or guardian
- Institutional personnel
- Health personnel
- Related government agencies

6.1 Providing preventive and curative care

The initial phase of the programme would be oriented towards prevention. Curative procedures would gradually be introduced in terms of types and complexity of care by providing comprehensive oral healthcare to children with special needs.

6.2 Creating oral health awareness among carers and minders.

6.3 Training oral personnel on the management of children with special needs.

6.4 Integrating service with other healthcare personnel to ensure that oral healthcare is included in the overall health programme.

6.5 Collaborating with other agencies eg. Education Department, Welfare Department, and NGO's.

6.6 Improving coverage by overcoming barriers to care.

6.7 Monitoring and evaluating the programme on a regular basis.

7. OPERATIONAL STRATEGIES

7.1 Strengthening and intensifying oral health promotion to create greater oral health awareness among carers and minders.

- Incorporate oral health messages and services available for the special groups into the overall oral health promotion campaign.
- Organize oral health campaigns at institutions/schools for teachers, carers, minders and parents of children with special needs.
- Introduce oral healthcare aids specific to disability.

7.2 Establishing a dedicated team comprising trained dental officer, dental nurses, dental surgery assistants and related supporting personnel.

7.3 Providing specific training to the oral health personnel involved in the care of children with special needs

- Conduct in-service training/Continuing Dental Education on management of children with special needs. The training should emphasise on the handling of special needs children including the behavioral sciences.
- Conduct Seminars / Workshops / Hands-on courses on clinical skills and use of equipment and special aids including restraints, modified tooth brushes and sedation techniques.
- Provide training to ensure effective consultation regarding oral health to minders and care providers.

7.4 Providing where possible, comprehensive oral healthcare to children with special needs

- identify population;
- obtain data from health office, education department, welfare department and institutions;
- screen children at institutions / schools to assess treatment needs;
- provide treatment
  - at institutions and schools
  - referral to dental clinics **(Three Tier System of Referral for Oral Healthcare of Special Needs Children – Appendix I, II & III)**

  This should preferably be done in the presence of parents/ guardians / wardens.

Three Tier System (3 - Tier System) of Referral for Oral Healthcare of Special Needs Children

The senior dental officer in charge of the district shall coordinate the overall implementation of the programme:

- establish dedicated teams who will be involved in the initial screening of the identified population
- categorise the patients according to American Society of Anaesthesiologists (ASA) Categories of Anaesthetic Risk for Classification of Physical Status (refer to **Appendix I and II**). This can be done by dental officer in the team.

Any active oral disease should first be controlled and further disease prevented. Preventive programmes should focus on prevention of dental caries as well as on plaque control, gingivitis and periodontal diseases. These should be regularly reinforced. For some categories of disadvantaged children, oral hygiene care and instruction is needed at least every 3 months in order to keep the disease under control. Current approach in restorative care like Atraumatic Restorative Treatment and minimal intervention should be considered.

7.5 Collaborating with other healthcare personnel to ensure effective multi-disciplinary management

- Disseminate information on dental diseases and treatment options via discussions, talks, case presentations and pamphlets.
- Emphasise the importance of early referral by healthcare personnel to the dental clinic for preventive oral health counselling and timely intervention.
- Establish combined multidisciplinary clinics involving the relevant medical and dental specialists in hospitals for cases such as oncology, orofacial deformities and the medically compromised.

7.6 Improving coverage by overcoming barriers to care

- Set up temporary clinics at institutions and schools
- Provide preferential treatment for children with special needs at outpatient clinics.

7.7 Monitoring and evaluation of programme on a regular basis

- Record data on screening and treatment on LP2/LP8
- Record daily and monthly returns in HMIS formats
- Evaluate effectiveness of programme using health outcome research studies

8. MONITORING AND EVALUATION

The target population for purpose of monitoring and evaluation of the programme shall consist of all children with special needs in institutions and schools. The programme is monitored by measuring output indicators. Data is collected using Health Management Information System (HMIS) formats.

The output indicators are :

- Number of new attendances
- Number of completed cases
- Number of cases who do not require treatment (NTR)

The programme is evaluated for adequacy and effectiveness every 5 years. **Adequacy** is determined by the coverage or attendances of children with special needs in all dental clinics. The **effectiveness** of the programme can be evaluated by

measuring impact indicators such as improvement in the oral health status and the maintenance of orally-fit status. Increased awareness among carers, minders, parents and staff can be assessed through health system research.

The indicators to be used are :

Percentage of new attendances

$$\frac{\text{No. of new attendances}}{\text{Total enrolment}} \times 100$$

Percentage of completed cases

$$\frac{\text{No. of completed cases}}{\text{Total enrolment}} \times 100$$

Percentage of orally-fit cases at recall

$$\frac{\text{No. of orally-fit cases}}{\text{No. of new cases}} \times 100$$

9. CONCLUSION

Children with special needs require a greater degree of care and attention than normal children. A standardised and a more organised approach to oral healthcare for this group of children is needed to ensure a more accessible, equitable and technologically-appropriate provision of care in accordance with the National Health Policy. It is hoped that this guideline will serve as a reference document for the management of this target group thereby contributing to enhancement of their quality of life through improved oral health.

Appendix I

Proposed Three Tier System (3-tier system) of referral for oral health care of children with special needs

Primary care (Managed by Dental Nurses)

This would be carried out by Dental Nurses. They shall provide routine oral healthcare for children with low levels of disease. Emphasis will be on clinical prevention and regular monitoring. These children are usually ASA I. Treatment can be carried out at homes, institutions or schools on a mobile squad basis.

Secondary care (Managed by Dental Officers)

Children in this group include those with treated and controlled cardiac conditions, long term transplant cases, cancer patients on remission but after chemotherapy, low or moderate mental retardation, mild cerebral palsy, deafness, blindness, and children with repaired cleft lip and palate. This group of children may have moderate dental disease and need routine dental treatment. They are managed by dental officers at dental clinic settings. These children may be ASA I or ASA II.

Tertiary care (Managed by Pediatric Dental Surgeons)

These are children who need to be treated in a hospital setting where there is access general anaesthesia and medical support. These children may present with acute or uncontrolled systemic medical problems, severe mental retardation or uncontrollable behaviour management problems. They are managed at paediatric dental specialist units. They are usually ASA II or ASA III.

* ASA – American Society of Anaesthesiologists (ASA) Categories of Anaesthetic Risk for Classification of Physical Status

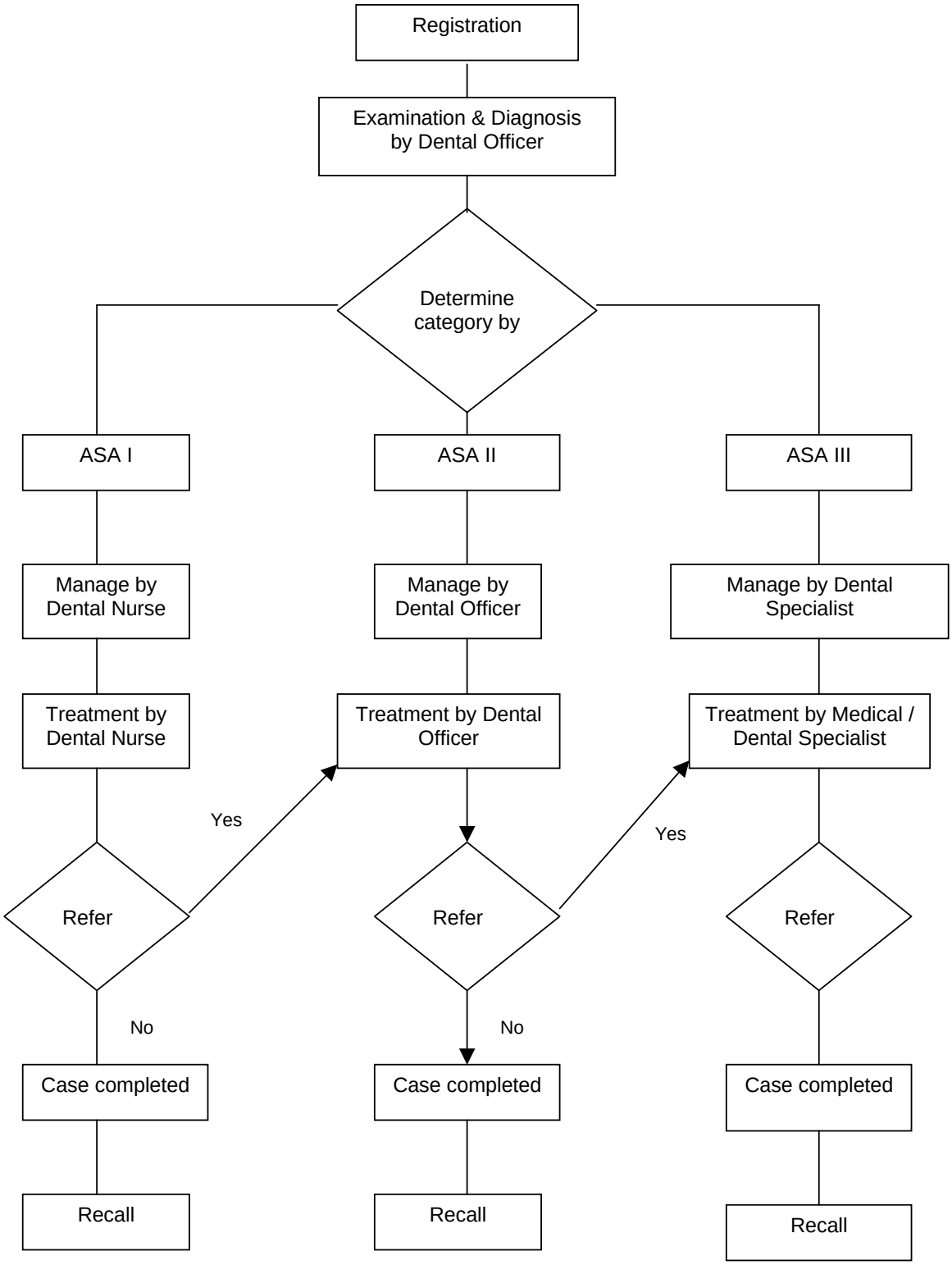
Appendix II

American Society of Anaesthesiologists (ASA) Categories of Anaesthetic Risk for Classification of Physical Status

Class	Description	Example
ASA I	A normal healthy patient who has no organic, physiological, biochemical or psychiatric disturbances.	
ASA II	A patient with mild to moderate systemic disturbances caused either by the condition to be treated surgically or by other pathophysiological processes	i. Asthma ii. Controlled diabetes iii. Mild hypertension iv. The extreme of age should be included in this group even though there is no discernible systemic disease. v. Extreme obesity vi. Chronic bronchitis
ASA III	Severe systemic disturbance or disease which limits activity but is not incapacitating.	i. Severely limiting organic heart disease ii. Severe diabetes with vascular complications iii. Moderate to severe degrees of pulmonary insufficiency iv. Angina Pectoris v. Healed myocardial infection
ASA IV	Severe systemic disorder that is life threatening and incapacitating	i. Organic heart disease showing marked signs of cardiac insufficiency, persistent angina or active myocarditis ii. Advanced degrees of pulmonary insufficiency iii. Advanced degrees of hepatic insufficiency iv. Advanced degrees of renal insufficiency v. Advanced degrees of endocrine insufficiency
ASA V	A moribund patient not expected to survive 24 hours with or without medical intervention	i. Acute trauma

APPENDIX III

WORKFLOW – THREE TIER SYSTEM OF REFERRAL FOR ORAL HEALTHCARE FOR CHILDREN WITH SPECIAL NEEDS



Note : Please refer to Appendix 2 for American Society of Anaesthesiologists (ASA) Categories of anaesthetic risk

APPENDIX IV

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APPENDIX V

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