GUIDELINES

ORAL HEALTHCARE FOR PRESCHOOL CHILDREN

ORAL HEALTH PROGRAMME
MINISTRY OF HEALTH MALAYSIA
2019

MOH/K/GIG/11.2019 (GU)

Guidelines

ORAL HEALTHCARE FOR PRESCHOOL CHILDREN

ORAL HEALTH PROGRAMME
MINISTRY OF HEALTH MALAYSIA
2019

ACKNOWLEDGEMENT

Steering Group in Oral Health Programme

- Dr Doreyat bin Jemun
  Principal Director of Oral Health, Oral Health Programme, MOH
- Dr Nomah binti Taharim
  Former Principal Director of Oral Health, Oral Health Programme, MOH
- Dr Chia Jit Chie
  Director of Oral Healthcare Division, Oral Health Programme, MOH
- Dr Naziah binti Ahmad Azli
  Former Director of Oral Healthcare Division, Oral Health Programme, MOH

Working Group

- Dr Zainab binti Shamdol
  Deputy Director, Oral Health Programme, MOH
- Dr Maryana binti Musa
  Deputy Director, Oral Health Programme, MOH
- Dr Nurrul Ashikin binti Abdullah
  Senior Principal Assistant Director, Oral Health Programme, MOH
- Dr Azliza binti Zabha
  Senior Principal Assistant Director, Oral Health Programme, MOH
- Dr Susan Shalani a/p Gnanapragasam
  Principal Assistant Director, Oral Health Programme, MOH
- Dr Norhayati binti Ahmad
  District Dental Officer of Ku bang Pasu, Kedah
- Dr Nurkurshiah binti Hj. Selamat
  Senior Principal Assistant Director, Oral Health Division, Perak
- Dr Zakiah binti Muhammad
  Senior Principal Assistant Director, Oral Health Division, Negeri Sembilan
- Dr Azhani binti Ismail
  District Dental Officer of Muar, Johor
- Dr Nurul Asniza binti Abas
  Senior Principal Assistant Director, Oral Health Division, Selangor

Members of the steering and working groups wish to express their heartfelt thanks to all those who have directly or indirectly contributed to the preparation of this guidelines.

Foreword
Principal Director of Oral Health
Ministry of Health Malaysia

Preschool children constitute one of the major target groups for oral healthcare under Ministry of Health Malaysia. In spite of a structured programme implemented since early 1980s, findings from National Oral Health Survey of Preschool Children (NOHPS) conducted in 2015, showed dental caries experience as still being high. Therefore, there is a need to further enhance oral health promotion and prevention of oral disease as well as to provide new initiatives with regards to oral healthcare services to preschool children in Malaysia.

Main concerns include the time and manpower constraints faced by many public sector oral healthcare providers in providing oral healthcare to the preschool children. The perception by many that oral health is less important during the early age needs to be corrected. This revised guidelines can serve as a framework for the implementation of oral healthcare programme for preschool children.

Finally, I would like to congratulate everyone who have directly or indirectly contributed to the successful development of the guidelines. Let us double our efforts to ensure the success of this programme.

Dr Doreyat Bin Jemun

CONTENTS

GUIDELINES ORAL HEALTHCARE FOR PRESCHOOL CHILDREN

1.0 INTRODUCTION

Preschool children aged 5 to 6 years old comprised 3.2 % (1,029,200) of total Malaysian population in 2017.[1] Majority of these children attended preschool education at preschool classes or at kindergartens. The Education Act 1996, has enabled preschool children aged 4 to 6 years old to enjoy the preschool education regardless of household income, place of residence and ethnicity.[2] The Malaysian Education Blueprint (2013-2025) launched in 2005 emphasizes on equity and access to education among preschool children by ensuring 100% enrolment.[3] This has led to an increase in number of preschool children enrolled at government and private preschools/kindergartens. Hence, there is a substantial need to monitor oral health status and implement incremental care among preschoolers more efficiently.

Being one of the major target groups under the primary oral healthcare programme of the Ministry of Health Malaysia, the preschool oral health programme was developed and launched in 1984. The main focus was on preventive and promotive activities with the aim of creating awareness and inculcating positive oral health habits and attitudes among preschool children.[4] The outreach programme through the establishment of preschool teams from 1996 to 2000 has further facilitated the implementation of this programme.[4] Several initiatives were undertaken over the years to provide the necessary care to these children.

However, dental decay remains the most common oral disease among these children who require further management.[5] Children with Early Childhood Caries (ECC) are also at a greater risk of developing caries in their permanent dentition and this would have a negative impact on their quality of life.[6] Continuous monitoring and appropriate care helps to reduce the burden of dental caries on these young children. In cognizance of the introduction of recent initiatives with regards to the oral healthcare delivery in the MOH, there is a need to update the existing Guidelines in Oral Healthcare for Preschool Children.

2.0 BACKGROUND

The oral healthcare programme for preschool children began in 1984, where visits were made to kindergartens or preschools annually. Dental screening, dental health talks, tooth brushing drills, role play and puppet show were conducted during these visits.[7] As of 2017, there were 136 mobile dental teams throughout Malaysia to provide oral healthcare to this target group.[8] A total of 458,137 government preschool children and 242,428 private preschool children were covered annually.[9] Government preschool children who were examined were mainly from *Prasekolah, KEMAS, Tadika Perpaduan and Tadika Agama.*[9]

The World Health Organization (WHO) has selected 5 year-old as one of the indicators for international benchmarking of children's oral health.[10] A research conducted in Southeast Asia in 2016 reported caries prevalence among 5 to 6 year- old from 2006-2015 at 49.0% (Singapore), 59.0% (Brunei), 79.0% (Thailand) and 89.0% (Philippines) respectively.[11] Similar findings from the Malaysian National Oral Health Survey of Preschool Children (NOHPS) in 2015 among 5 year-old, reported a relatively high caries prevalence of 71.3%.[12]

These findings suggest that a need to further enhance oral health promotion and prevention of oral disease as well as to provide appropriate oral healthcare services to preschool children in Malaysia.

3.0 LITERATURE REVIEW

3.1 Oral Health Status of Preschool Children in Malaysia

Dental caries is one of the significant global oral health burdens which affects many school aged children.[13] Findings from NOHPS 2015 showed a reducing trend of caries prevalence from 87.1 % in 1995 to 76.2 % in 2005 which was further reduced to 71.3 % in 2015.[12] This achievement is however still far from reaching the target of the National Oral Health Plan (NOHP) 2011-2020 which is 50.0 % caries free among 5 year-old by 2020.[25] Similarly, there was a reduction in caries severity from 5.8 (1995) to 5.5 (2005) and later to 4.83 (2015).[12, 14, 15] A steady reduction of 1.0 dft (decayed and filled teeth) was noted over a span of 20 years. The decayed tooth (d) continued to be the largest component of the dft score.

The mean 'd' was 5.3(2005) which was reduced to 4.55(2015) while the filled (f) component remained low at 0.2 (2005) and slightly increased to 0.28 (2015). This reflected the high unmet treatment needs among preschool children in the past decade. [12, 14, 15]

High caries prevalence and unmet treatment needs were also noted in several smaller scale local studies.[16, 17, 18] Other studies have found that children who had caries in their primary teeth were three times more likely to develop caries in their permanent teeth.[19]

3.2 Oral Health Habits and Practices among Preschool Children

The development of caries is mainly due to high sugar diet, presence of cariogenic microorganisms, the host factors which includes the teeth and also time[20]. Food and beverages served by kindergarten authorities or provided by parents were high in sugar, fat and salt contents.[16] As such a local study conducted in a government kindergarten showed that there was high caries prevalence among preschoolers consuming sugary food and drinks more than three times a day.[18] These findings highlighted the need to advocate healthy eating policies or guidelines at kindergartens.

Brushing teeth twice a day with small pea size fluoridated toothpaste containing at least 1000ppm Fluoride under parental / caregivers / teacher's supervision was found to be effective in preventing caries through effective plaque removal.[10] However, tooth morphology such as enamel hypoplasia in children is a potential caries risk factor.[21]

Caries is initiated by multifactorial sources and it is important to give due attention to individual child's tooth morphology, habits and practices. Modifiable and non-modifiable risk factors such as plaque accumulation, high sugar intake, poor socioeconomic status and accessibility to oral healthcare significantly influence severity and progression of dental diseases.[20] It is highly recommended to incorporate a structured Caries Risk Assessment (CRA) during routine dental examination as an appropriate prevention measure to manage dental caries risk.

3.3 Role of Teachers and Parents/Caregivers on Oral Health Status of Preschool Children

Imparting knowledge on oral hygiene to children (infants / preschool/ schoolchildren) had been recognized as crucial towards preventing oral disease.[22] In addition, school environment provides an effective platform for promoting oral health since children spend most of their time at school.[23] Preschoolers must be educated on good oral health practices since habits develop early in life.[24] Schoolteachers too have an influence in developing healthy habits among their students.

Studies have concluded that the formation of a child's oral hygiene habits and the prevalence of oral diseases is influenced by parental skills and attitudes toward oral hygiene.[25] It is widely acknowledged that there is a link between the parents' oral health knowledge, attitude and behavior with the child's oral health condition.[26] Low socio-economic factors such as unhealthy home environment have been found to have a negative impact on children's oral health.[27] Thus, teachers and parents/ caregivers should have good knowledge, attitudes, and practices toward oral hygiene.[26]

According to NOHPS 2015, majority of preschool teachers have a good level of oral health knowledge, practices and oral health-related behaviours.[12] The survey also noted that 59.0% of preschool teachers had never attended oral health seminars conducted by the State's Oral Health Division and only 52.0% had actually conducted oral health's role play activities.[12] It was noted that the availability of oral health promotion material in the preschools was low.[12] Thus, there is a need to provide oral health information to preschool teachers through a comprehensive oral health seminar tailored according to their role as an educator.

3.4 Oral Health Promotion

Oral health education can be reinforced throughout the school years, which is an influential period in children's lives. Evidence had shown that oral health promotion was effective in preventing Early Childhood Caries (ECC) when information was delivered through repeated rounds of anticipatory guidance[28], motivational interviewing[29], home visit[30], autonomy-supportive psycho- educational video[31], games and puppet shows.[32]

Oral health education should form part of the school curriculum involving students, school staff and parents in oral health promotional activities at school.[33] Activities include delivering oral health messages in small groups through ready made slide presentation, printed leaflets, tooth brushing drills, simplified dental health talks, role play and puppet shows. With the advancement in technology, interactive apps and video games can be used for education purposes on improving dental health knowledge in children.[32] Several studies have evaluated the effect of oral health promotion intervention involving mothers and children in preventing ECC and found that a combination of interventions is more effective than single health education intervention.[34] A study on effectiveness of health promotion intervention in reducing ECC and improving nutritional status and dietary habits among toddlers in Kelantan concluded that the combination of nutrition and oral health promotion intervention to prevent ECC have a positive influence in producing good general health outcomes.[16]

4.0 RATIONALE

Dental caries is one of the seven key oral health goals identified under NOHP [35] targeting at 50.0% of 6 year old children to be caries free by 2020. However, the high caries prevalence and caries severity among preschoolers warrants greater efforts to reduce morbidity from oral diseases[12]. A more holistic and integrated strategy should be adopted in empowering the preschool teachers, parents and communities. More effective approaches for this target group will ultimately enhance the oral health status and well-being of the children in this country.

5.0 SCOPE

This programme covers preschool children aged 5-6 year old attending kindergartens and preschools. Services include promotive, preventive and curative activities towards the control of oral diseases. Priority will be given to government- aided kindergartens under the jurisdiction of District Education Office, Jabatan Kemajuan Masyarakat, *Jabatan Perpaduan Negara, Jabatan Agama Negeri / Majlis Agama Negeri* and if resources allow, will be extended to registered private kindergartens.

6.0 OBJECTIVES

6.1 General Objective

To attain good oral health amongst preschool children.

6.2 Specific Objectives

6.2.1 To promote and inculcate good oral hygiene practices in preschool children

6.2.2 To reduce occurrence of oral diseases in preschool children

6.2.3 To achieve and maintain optimal oral health amongst preschool children

6.2.4 To enhance oral health awareness to teachers and parents / caregivers

7.0 IMPLEMENTATION STRATEGIES

To achieve the objectives of the programme, the following strategies are identified:

7.1 Planning of Oral Health Services

Planning delivery of oral healthcare services at preschools in schools, government and private kindergartens and ensuring good coverage of preschool children.

7.2 Promoting Oral Health

Reinforce oral health awareness among preschool children, teachers and parents/ caregivers.

7.3 Delivery of Oral Healthcare Services

Providing oral healthcare services including preventive and curative care using the Incremental Dental Care (IDC) approach via outreach mobile dental team.

- Obtain consent from parents / caregivers prior to examination & diagnosis and dental treatment

- Perform caries risk assessment for all preschool children during initial screening (**Appendix 2**)

- Gradual expansion of IDC to all preschools, with some flexibility in implementation given to the state management teams. The government preschool classes in schools are given priority. Extension to other government and private kindergartens are to be carried out in phases. Children aged 5 to 6 years old are exempted from dental charges.[36]

- Each district to initiate at least one 'Tadika Angkat' programme.

Table 1: Strategies and activities to support the objectives

NO.	STRATEGIES	ACTIVITIES	INDICATORS	RESPONSIBILITY
1.	Planning: a) Oral health services visit • Preschools in schools • Government kindergartens • Registered private kindergartens	a) To appoint a coordinator at national/ state level to coordinate planning and implementation at state/ district levels as well as to collect and analyze data. b) To identify preschools in government schools, government and registered private kindergartens in every state/ district from state education department and collect baseline data. c) To prepare schedule for visits to identified preschools in schools, government and registered private kindergartens annually and carry out the programme accordingly.	• No. of preschools in schools, government and registered private kindergartens in state/ district • No. of preschools in schools, government and registered private kindergartens visited • Percentage of coverage of preschools in schools, government and registered private kindergartens • No. of preschoolers in schools, government and registered private kindergartens • Percentage of coverage of preschoolers in schools, government and registered private kindergartens	i. National Level a) Director of Oral Health Programme, MOH b) National Coordinator at Oral Health Program ii. State level a) State Deputy Director (Oral Health) (SDD-OH) b) Senior Principal Assistant Director of Oral Health (SPAD-OH) c) State Coordinator d) Dental Therapist U36/U38/U40 iii. District level a) District Dental Officer b) Dental Therapist U36/U38/U40

NO.	STRATEGIES	ACTIVITIES	INDICATORS	RESPONSIBILITY
2.	Reinforce oral health promotion awareness	a) To use TBD/ Role Play/ Dental Health Education/ interactive games. b) Organise seminars for preschools in schools, government and registered private kindergarten teachers. c) Organise talks to parents/caregivers	• Number of activities/ seminars/ talks undertaken • Number of participants	a) State Deputy Director Oral Health (SDD-OH) b) SPAD (OH) c) State coordinator d) District Dental Officer (DDO) e) Dental Officer (DO) a) Dental Therapist U36/U38/U40
3.	Strengthen multisectorial collaboration with i. District Education Office *ii. Jabatan Kemajuan Masyarakat* *iii. Jabatan Perpaduan Negara* *iv. Jabatan Agama / Majlis Agama Negeri* v. Others	a) Collaborate with related agencies e.g. *Kementerian Pendidikan Malaysia (KPM)* to improve the IDC program for preschoolers. b) Arrange meetings annually with *KPM* to highlight achievements (fact sheets), strategies and problems encountered. c) Award kindergartens that implement oral health initiatives with star ratings using certificates, plaque by dental officers (**Appendix 9**).	• Number of activities/ campaign per year	a) Oral Health Care Division, MOH b) State Deputy Director Oral Health (SDD-OH) c) SPAD (OH) d) State coordinator e) District Dental Officer (DDO) f) Relevant agencies

NO.	STRATEGIES	ACTIVITIES	INDICATORS	RESPONSIBILITY
4.	Increase accessibility to oral health care	a) Optimise use of mobile dental team. b) Screen children at preschools, government and registered private kindergartens using Caries Risk Assessment (**Appendix 2**). c) Strengthen preventive care using MOH Modified ICDAS and curative component. d) Refer high caries risk preschool children to Dental Public Health Specialist Unit (DPHSU).	• Number of children screened (new attendance) • Prevalence of Caries Free status(dft = 0) • Proportion of children with low/moderate/high risk • No of preschoolers referred to DPHSU • Percentage of No Treatment Required (NTR) • Percentage of Case Completion (C) • Percentage with Good Oral Hygiene (Grade A)	g) State Deputy Director Oral Health (SDD-OH) h) SPAD (OH) i) State coordinator j) District Dental Officer (DDO) k) Dental Officer (DO) l) Dental Therapist U36/U38/U40

NO.	STRATEGIES	ACTIVITIES	INDICATORS	RESPONSIBILITY
5	Train personnel (national/ state/ district level) regarding protocol on Oral Healthcare for Preschool Children	a) Provide training on DHE, TBD, Role play and CRA. b) Provide training to conduct Oral Health Seminar for Preschool Teachers (preferably those who have not attended any seminars) by establishing working committee, comprising oral health personnel.	• Number of personnel trained	a) State Deputy Director Oral Health (SDD-OH) b) SPAD (OH) c) State Coordinator d) District Dental Officer (DDO) e) Dental Officer (DO) f) Dental Therapist U36/U38/U40

8.0 MONITORING AND EVALUATION

8.1 Monitoring

Monitoring of the preschool programme is required to ensure activities are being implemented as planned and to report programme performance at district/state level through meetings held annually. The State Deputy Director (Oral Health) (SDD-OH), Senior Principal Assistant Director of Oral Health (SPAD-OH), State Coordinator, Dental Officer (DO) and Dental Therapist U36/ U38/U40 shall be responsible for monitoring and evaluation of the preschool programme at state level whilst district dental officer and district matron shall monitor and evaluate district level performance.

Indicators for Monitoring and Evaluation

No.	Indicator	Data Source
1.	**Percentage of coverage of preschools in school, government and registered private kindergartens** Number of preschools in school, government and registered private kindergartens visited ——————————— Total number of preschools in school, government and registered private kindergartens	PGPS 2 / 301 & PGPS 2 / 201
2.	**Percentage of coverage of preschool children in schools, government and registered private kindergartens** No. of new attendance of preschool children in schools, government and registered private kindergartens ——————————— Total enrolment of preschool children visited at schools, government and registered private kindergartens	PGPS 2 / 301 & PGPS 2 / 201

No.	Indicator	Data Source
3.	**Percentage of preschool children exposed to DHE,TBD, and Role-play** i. $\frac{\text{No of preschool children exposed to DHE}}{\text{Total enrolment of preschool children visited at preschools, government and registered private kindergartens}} \times 100$ ii. $\frac{\text{No of preschool children exposed to TBD}}{\text{Total enrolment of preschool children visited at preschools, government and registered private kindergartens}} \times 100$ iii. $\frac{\text{No of preschool children exposed to Role Play}}{\text{Total enrolment of preschool children visited at preschools, government and registered private kindergartens}} \times 100$	PGPS 2 / 201
4.	**Workload** i. Number of permanent molars fissure sealed ii. Number of fluoride varnish done iii. Number of dental restoration done iv. Number of scaling done	PGPS 2 / 301 & PGPS 2 / 201
5.	**Oral Health Status** i. Percentage of preschool children with No Treatment Required (NTR)-maintaining orally fit $\frac{\text{No. of preschool children with No Treatment Required (NTR)}}{\text{Total no. of new attendance of preschool children in schools, government and registered private kindergartens}} \times 100$	PGPS 2 / 301 & PGPS 2/ 201

No.	Indicator	Data Source
	ii. Percentage of preschool children with Case Completion-rendered orally fit No. of preschool children with Case Completion x 100 Total no. of new attendance of preschool children in schools, government and registered private kindergartens iii. Percentage of preschool children with Good Oral Hygiene (Grade A) No. of preschool children with Good Oral Hygiene (Grade A) x 100 Total no. new attendance of preschool children in preschools, government and registered private kindergartens	
6.	**Percentage of preschool teachers trained at oral health seminar** No. of teachers at preschools, government and registered private kindergartens trained in oral health seminar x 100 Total no. of kindergarten teachers at preschools, government and registered private kindergartens	Seminar attendance list
7.	**Quality Oral Healthcare** Percentage of preschool children rendered orally fit No. of preschool children with Case Completion x 100 No. of new attendances of preschool children	PGPS 2 / 301 & PGPS 2 / 201

8.2 Evaluation

Evaluation of the program is to be carried out on a regular basis to determine whether the objectives have been achieved. The following indicators are used to measure equitable distribution of services and appropriateness, acceptability and effectiveness of activities.

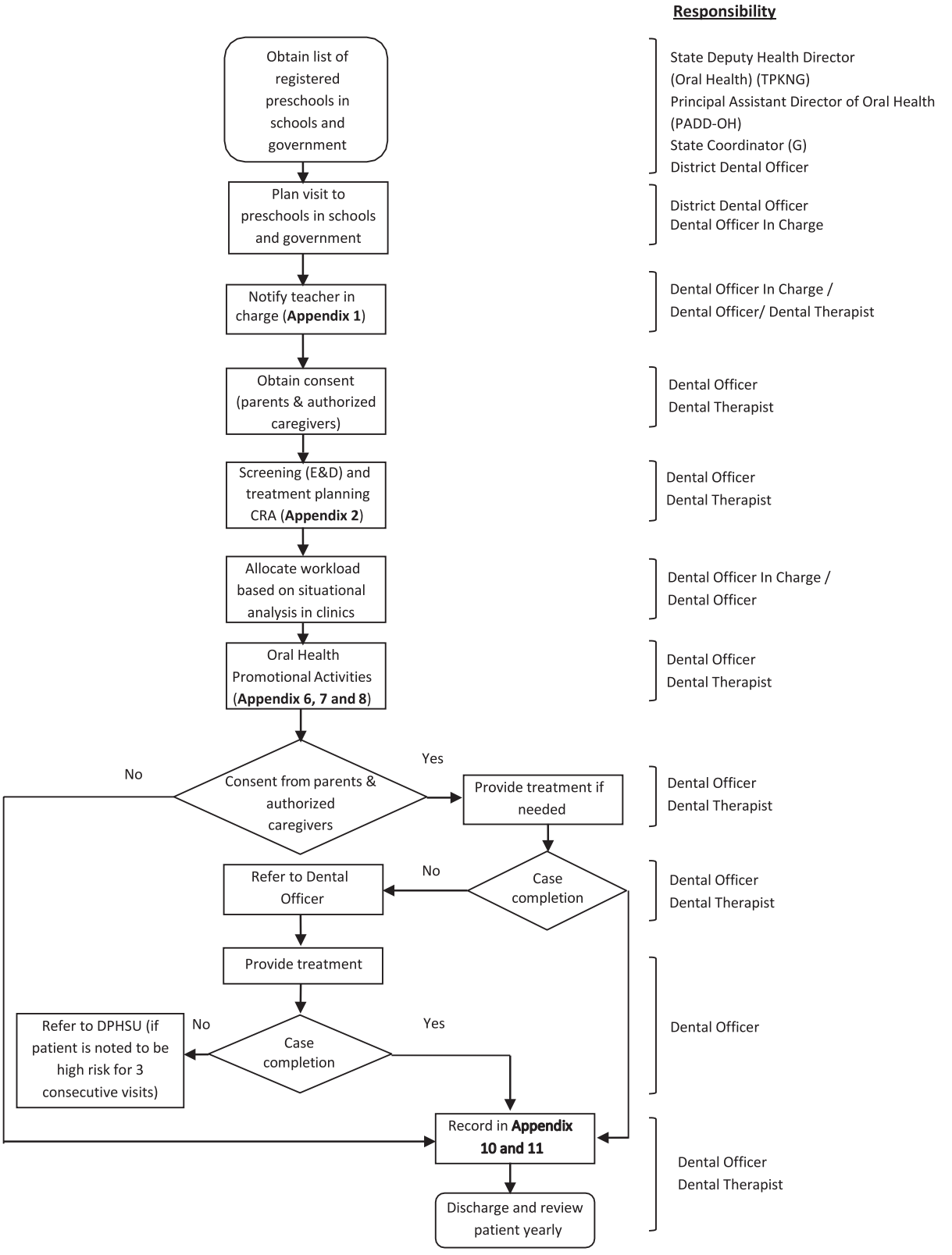
Indicators for Evaluation of Preschool Programme

No	Indicators	Data Source
1.	**Percentage of 5 year old children with Caries-Free Mouth (CFM)** a. Number of 5 year old children with CFM b. New attendances for 5 year old c. Percentage 5 year old children with CFM = (a/b x 100)	PGPS 2 / 201
2.	**Percentage of 5 year old children with Good Oral Hygiene** a. Number of 5 year old children with Good Oral Hygiene (Grade A) b. New attendances for 5 year old c. Percentage 5 year old children with Good Oral Hygiene = (a/b x 100)	PGPS 2 / 201

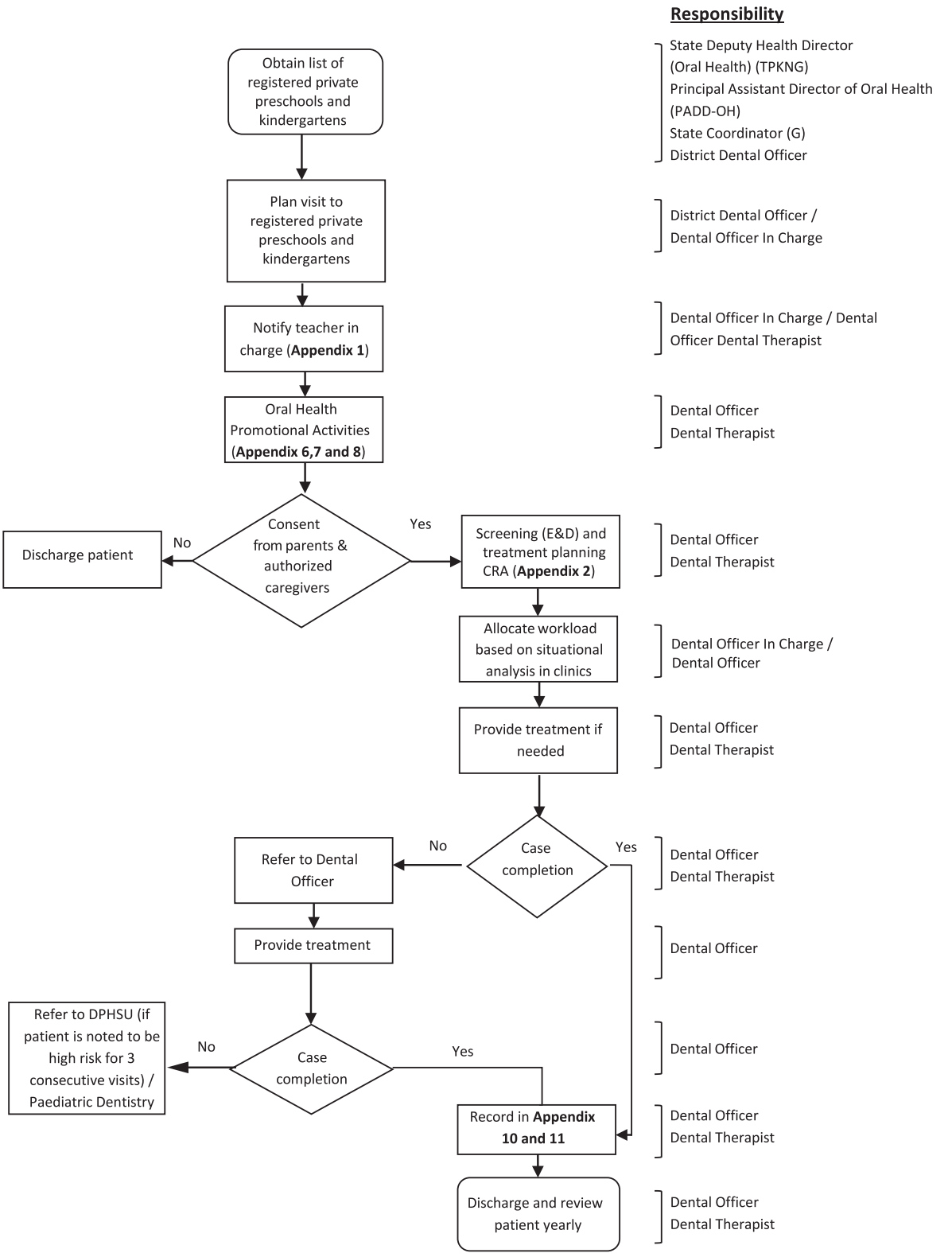
9.0 CONCLUSION

Healthy and active preschool children is one of the goals of the Ministry of Health. In order to accomplish this, proper planning and comprehensive implementation strategies are required as well as shaping smart partnerships and strengthening multi-sectorial collaboration. This guidelines is expected to assist managers at various levels to plan, implement, monitor and evaluate the oral healthcare programme for the preschool children successfully.

FLOWCHART ON IMPLEMENTATION OF ORAL HEALTHCARE SERVICES FOR PRESCHOOL CHILDREN IN PUBLIC SECTOR



FLOWCHART ON IMPLEMENTATION OF ORAL HEALTHCARE SERVICES FOR PRESCHOOL CHILDREN IN REGISTERED PRIVATE KINDERGARTENS



Appendix 1

PERMOHONAN KEBENARAN MEMBERIKAN PERKHIDMATAN KESIHATAN PERGIGIAN UNTUK KANAK-KANAK PRASEKOLAH/TADIKA AWAM DAN SWASTA

Rujukan:

Klinik Pergigian ……
…….

Kepada,
……
……

Tuan / Puan,
LAWATAN KE ……

Adalah dengan hormatnya saya merujuk kepada perkara di atas.

2. Sukacita dimaklumkan bahawa Pasukan Pergigian Bergerak Prasekolah bercadang melawat ke premis tuan/puan untuk memberikan perkhidmatan kesihatan pergigian pada .....

3. Sukacita sekiranya tuan/puan dapat menyediakan cawan dan berus gigi untuk aktiviti latihan memberus gigi. Bersama-sama ini disertakan Borang PGPS 2/ 301 untuk diisikan maklumat murid- murid.

4. Kerjasama tuan/puan sangat-sangat kami harapkan dan diucapkan setinggi-tinggi terima kasih. Sekian, untuk makluman dan tindakan tuan/puan.

"SENYUMAN MANIS SEPANJANG HAYAT"

Saya yang menjalankan amanah,

…….
(NAMA PEGAWAI PERGIGIAN)
Pegawai Pergigian Daerah/Yang Menjaga

Appendix 2

CARIES RISK ASSESSMENT

No. of Visit: **Date:**

Step 1: Current Caries Experience Assessment

Visual Guide	Sound (Code 0)	Early Caries (Code E)	Caries (Code 1)
Number of teeth scored			
Tick Highest code observed			

Source : Manual Fluoride Varnish Programme for Toddlers, 2018. Oral Health Programme, Ministry of Health, Malaysia.

Step 2: Risk Factor Assessment (Tick √ - Can tick more than one)

☐	Visible Plaque (Grade C & E)
☐	No Fluoride Exposure
☐	Sugar/Snacks Intake Between Meals
☐	Medically Compromised
☐	Mother/Sibling Caries Experience History
☐	Crowding
☐	Any dental appliances
☐	Dry mouth

Step 3: Caries Risk Indicator (Based on Highest Code Observed & Number of Risk Factors) - (Tick √)

Number of Risk Factors	Sound (Code)	Early Caries (Code E)	Caries (Code 1)
☐ 0	Low	Moderate	Moderate
☐ 1 ☐ 2	Low	Moderate	High
☐ 3 or more	Moderate	High	High

Step 4: Recall Visit - (Tick √)

☐ 3 months ☐ 6 months ☐ 12 months

***Please refer to Dental Public Health Specialist Unit if patients are noted to be High Risk for 3 consecutive visits.**

PLAQUE SCORE ASSESSMENT

1.0 Examination Procedures

Look for the presence of soft debris deposits (material alba) on the specified surface of the index teeth or their substitutes.

1.1 Examine only fully erupted teeth. A tooth is deemed to be fully erupted when only its occlusal or incisal surfaces have reached the occlusal plane.

1.2 Examination is done on specified surfaces of the index teeth.

Buccal	Labial		Buccal
55	51		65
85		71	75
Lingual		Labial	Lingual

1.3 Alternative teeth

- If any of the Es is / are not present, examine the adjacent Ds, whichever present.
- If any of the As is / are not present, examine the contralateral As. E.g. If 51 and 71 is not present, examine the contralateral 61 and 81.
- When both the index tooth and its substitute are not present, record the highest score of the remaining teeth within the same sextant.
- Do not examine teeth which have been indicated for extraction
- When in doubt, record the lower score.

2.0 Scoring Criteria

To obtain the debris score, the index tooth, or its substitute, is examined by running the side of the periodontal probe along the specified surface to estimate the surface area covered by debris. The occlusal or incisal extent of the debris is noted as the probe is passed along the tooth surface.

2.1 The following scoring system is used:

Plaque Score	Extent of Debris
0	No debris present
1	Soft debris covering not more than 1/3 of the tooth surface examined
2	Soft debris covering more than 1/3 but less than 2/3 of the tooth surface examined
3	Soft debris covering more than 2/3 of the tooth surface examined

2.2 The sum of the scores of the index teeth gives the total score. The total score is converted into plaque score grading in the following way:

Total Plaque Score	Grade	Remark
0 - 4	A	Low
5 - 9	C	Moderate
10 - 18	E	High

Appendix 4

ORAL HEALTH SEMINAR FOR PRESCHOOL TEACHERS

Oral Health Seminar for Preschool Teachers aims to create awareness on the importance of oral health among preschool teachers. This is necessary to empower preschool teachers in assisting young children to practice good oral health habits.

CONTENTS OF ORAL HEALTH SEMINAR

The one-day seminar consists of oral health lectures, oral health lesson plan and working group activities.

1.1 Oral health lectures

Topics to be covered in oral health lectures are as follow:

1. Optimal Oral Health and Oral Health Problems
- Importance of optimal oral health for general health
- Role of diet and nutrition in oral health

2. "Prevention is better than cure"
- Oral diseases – dental caries and periodontal diseases; ways to prevent these diseases
- Role of diet and nutrition in oral health.

3. Role of the kindergarten / preschool teachers in promoting oral health of preschool children.

- Topics emphasizing the role of teachers in promoting good oral health and ensuring good oral hygiene practices among preschooler children as follows :
  - > Brush teeth and gums twice a day with the recommended fluoride toothpaste and organize frequent tooth brushing drills. Emphasize on brushing teeth before sleeping at night.

> Reduce frequency of sugary foods and drinks, especially between meals among preschooler children. Plan a healthy meal and take into account every child's diet history.

> Advise the preschool children to visit the dentist for regular check-ups at least once a year and keep parents informed on the details of oral healthcare services carried out at preschools in schools and kindergartens.

- Briefly describe and incorporate the Star Rating Assessment Criteria for preschools in schools and kindergartens receiving Ministry of Health oral healthcare services.

1.2 Oral health lesson plan

Oral health lesson plans are adapted from *Aktiviti Pengukuhan dari Modul Boneka Prasekolah 2016 (muka surat 53-65).* It helps children to understand the importance of their teeth, provides basic information appropriate to their age and experience, about keeping teeth clean and healthy and introduces the dentist as a friendly doctor who helps them take care of their teeth.

1.3 Work group activities

Suggested topics for working group activities are as below:

Work Group 1
Prepare a 2-week menu for the mid-morning snack for preschool children. The menu should comprise food that is nutritious and non-cariogenic.

Work Group 2
Discuss how teaching modules/ lesson plans may be used to incorporate oral health messages for preschool children.

Work Group 3
Discuss the role of sugary foods in the oral health of preschool children. List out:

a. Ways to reduce the harmful effects of sugar consumption on oral health

b. Foods with hidden sugars

c. Ways to teach preschool children in making healthy food choices

Work Group 4

The kindergarten under your care is planning a regular tooth brushing activity. Discuss the possible problems that may arise while carrying out this activity in the kindergarten and how it may be possible to overcome them.

Work Group 5

Suggest a design for a toothbrush/ tumbler rack for the children at a preschool in schools/ kindergarten. The rack should have the following features:

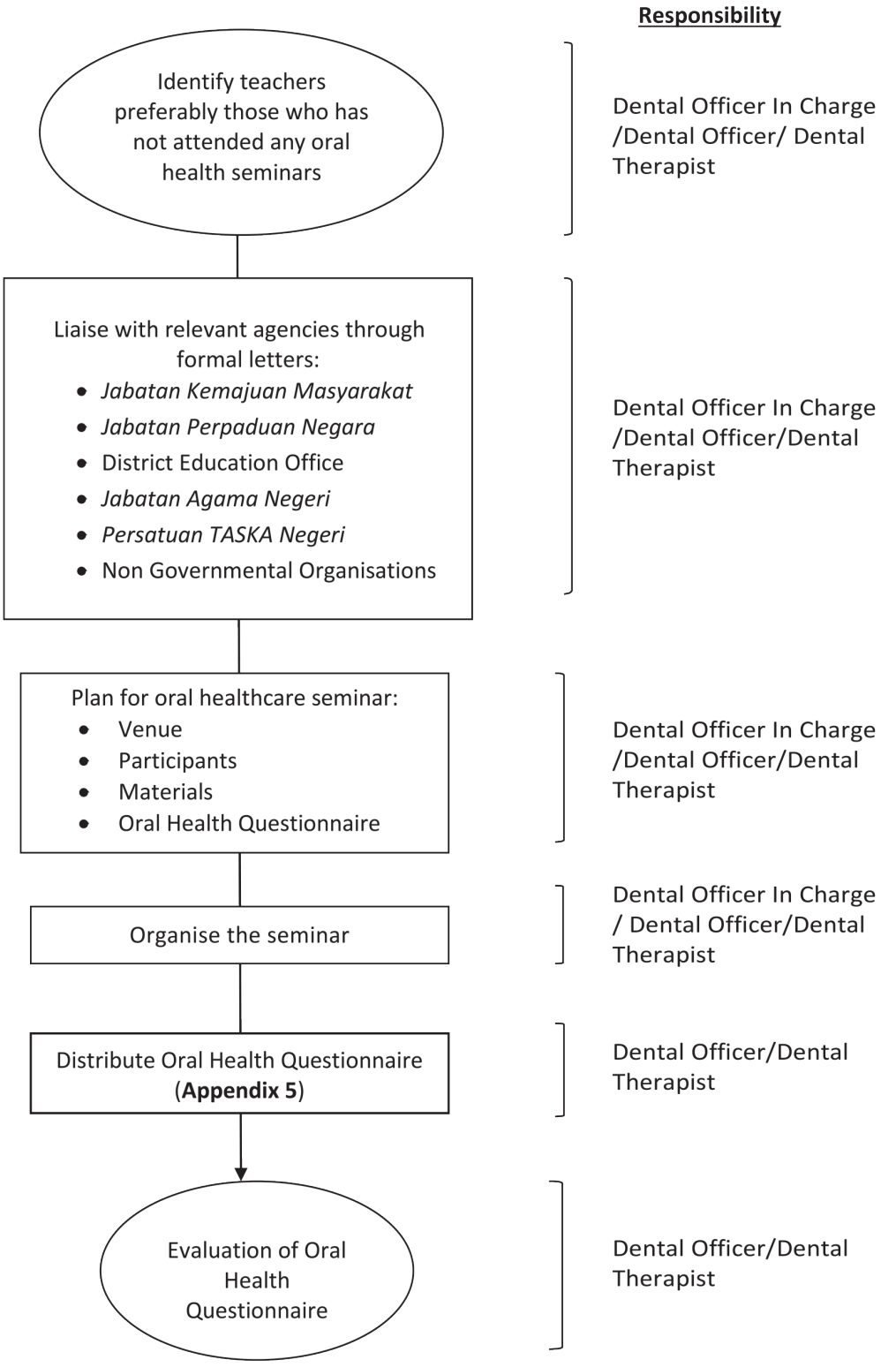
a. Be able to accommodate all the toothbrushes for one class of children
b. Should have a free circulation of air
c. Children could easily identify their own toothbrush
d. Affordable and made from recyclable material

Work Group 6

Discuss how the involvement of parents and care givers / teachers can help in caring for the teeth of the preschool child.

Appendix 4

FLOWCHART ON ORAL HEALTH SEMINAR FOR PRESCHOOL TEACHERS



Appendix 5

ORAL HEALTH QUESTIONNAIRE FOR PRESCHOOL TEACHERS

ID: ☐☐☐

1. **State :**
2. **Name of Kindergarten: ……**
3. **Location of Kindergarten :** Urban Rural
4. **Type of Kindergarten :**

1= KEMAS, 2= Perpaduan, 3= Govt. Islamic, 4= Private Islamic, 5= Preschool Min. Educ, 6= Other Private, 7= Others (which cannot be coded 1 to 6)

SECTION A: TEACHER'S PARTICULARS

Please fill in your answers in the appropriate box OR fill in the blanks for the following questions.

No.	Item
A1	Your age on last birthday : ☐☐
A2	Ethnic Group : ☐ 1. Malay 2. Chinese 3. Indian/Pakistani 4. Other Bumiputera 5. Others, please state……
A3	Gender : 1 = Male 2 = Female ☐
A4	Your highest level of education : ☐ 1. Degree and above 2. STPM/Matriculation/Diploma/Certificate (or the equivalent) 3. Form 5 (or the equivalent) 4. Form 3 (or the equivalent) 5. Standard 6 (or the equivalent) 6. Primary school but did not reach Standard 6 7. No formal education

Appendix 5

ID: | | | |

SECTION B: ORAL HEALTH PRACTICE AND RELATED BEHAVIOUR

Please **tick (✓) one answer only** in the appropriate box at the end of each question.

No.	Item	Response is number of times per day/week/month/never						
		>2 per day	2 per day	1 per day	2-3 per week	1 per week	1 per month	Never
B1	How often do you brush your teeth?	☐	☐	☐	☐	☐	☐	☐

SECTION C: PERCEPTION OF YOUR ROLE IN PROMOTING ORAL HEALTH

To what extent do you agree with the following statements in C1-C6?
Please **tick (✓) one answer only** in the appropriate box at the end of each question.

No.	Item	Strongly disagree	Disagree	Agree	Strongly agree
C1	It is important for me to detect tooth decay and gum problems in children.	☐	☐	☐	☐
C2	It is not my duty to supervise daily tooth brushing of children during school hours.	☐	☐	☐	☐
C3	It is my responsibility to monitor the types of food/drink served to preschool children.	☐	☐	☐	☐

SECTION D: ORAL HEALTH KNOWLEDGE

To what extent do you agree with the following statements in D1-D13?
Please **tick (✓) one answer only** in the appropriate box at the end of each question.

No.	Item	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
D1	Eating too much sugary food can cause tooth decay.	☐	☐	☐	☐	☐
D2	Risk of tooth decay is reduced by reducing sugary snacks in between meals.	☐	☐	☐	☐	☐
D3	Brushing teeth with toothpaste containing fluoride prevents tooth decay.	☐	☐	☐	☐	☐

THANK YOU FOR YOUR COOPERATION

BORANG KAJISELIDIK UNTUK GURU TADIKA/ PRA SEKOLAH

ID: | | | |

UNTUK KEGUNAAN PEJABAT:

1. Negeri:

2. Nama Tadika: ……

3. Lokasi Tadika: 1 = Bandar 2 = Luar Bandar

4. Jenis Tadika :

1 = KEMAS, 2 = Perpaduan, 3 = Islam Kerajaan, 4 = Islam Swasta, 5 = Prasekolah Kementerian Pendidikan, 6 = Swasta lain-lain, 7 = Lain-lain (yang tidak dapat dikod 1 hingga 6)

BAHAGIAN A: MAKLUMAT GURU

Sila isikan jawapan anda dalam kotak yang berkenaan ATAU isikan tempat kosong bagi soalan-soalan berikut.

No. Item	Item	
A1	Umur anda pada hari jadi terakhir :	
A2	Kumpulan Etnik : 1. Melayu 2. Cina 3. India/Pakistan 4. Bumiputera lain 6. Lain-lain, sila nyatakan……	
A3	Jantina : 1 = Lelaki 2 = Perempuan	
A4	Tahap pendidikan tertinggi anda : 1. Ijazah dan ke atas 2. STPM/Matrikulasi/Diploma/Sijil (atau yang setaraf) 3. Tingkatan 5 (atau yang setaraf) 4. Tingkatan 3 (atau yang setaraf) 5. Darjah 6 (atau yang setaraf) 6. Sekolah rendah, tetapi tidak sampai Darjah 6 7. Tiada pendidikan formal	

BAHAGIAN B: AMALAN KESIHATAN PERGIGIAN/MULUT DAN TINGKAH LAKU YANG BERKAITAN

Sila **tandakan (**) **bagi jawapan anda (1, 2, 3, 4, 5, 6 atau 7)** dalam kotak yang disediakan di akhir setiap soalan.

No.	Item	Jawapan adalah dalam bilangan kali dalam sehari/seminggu/sebulan/tidak pernah						
B1	Berapa kerapkah anda memberus gigi?	>2x sehari	2x sehari	1x sehari	2-3x seminggu	1x seminggu	1x sebulan	Tidak pernah
		☐	☐	☐	☐	☐	☐	☐

BAHAGIAN C: PENGETAHUAN TENTANG KESIHATAN PERGIGIAN/MULUT

Sejauh manakah anda bersetuju dengan kenyataan C1 - C2 berikut?
Sila **tandakan (**) dalam kotak yang disediakan di akhir setiap soalan.

No.	Item					
C1	Pengambilan makanan manis secara berlebihan boleh menyebabkan gigi berlubang.	Sangat tidak setuju	Tidak setuju	Tidak pasti	Setuju	Sangat setuju
		☐	☐	☐	☐	☐
C2	Memberus gigi dengan ubat gigi yang mengandungi fluorida mencegah gigi dari berlubang .	Sangat tidak setuju	Tidak setuju	Tidak pasti	Setuju	Sangat setuju
		☐	☐	☐	☐	☐

BAHAGIAN D: PERSEPSI TENTANG PERANAN ANDA DALAM MEMPROMOSIKAN KESIHATAN PERGIGIAN

Sejauh manakah anda bersetuju dengan kenyataan D1-D3 berikut?
Sila tandakan **(**) dalam kotak yang disediakan di akhir setiap soalan.

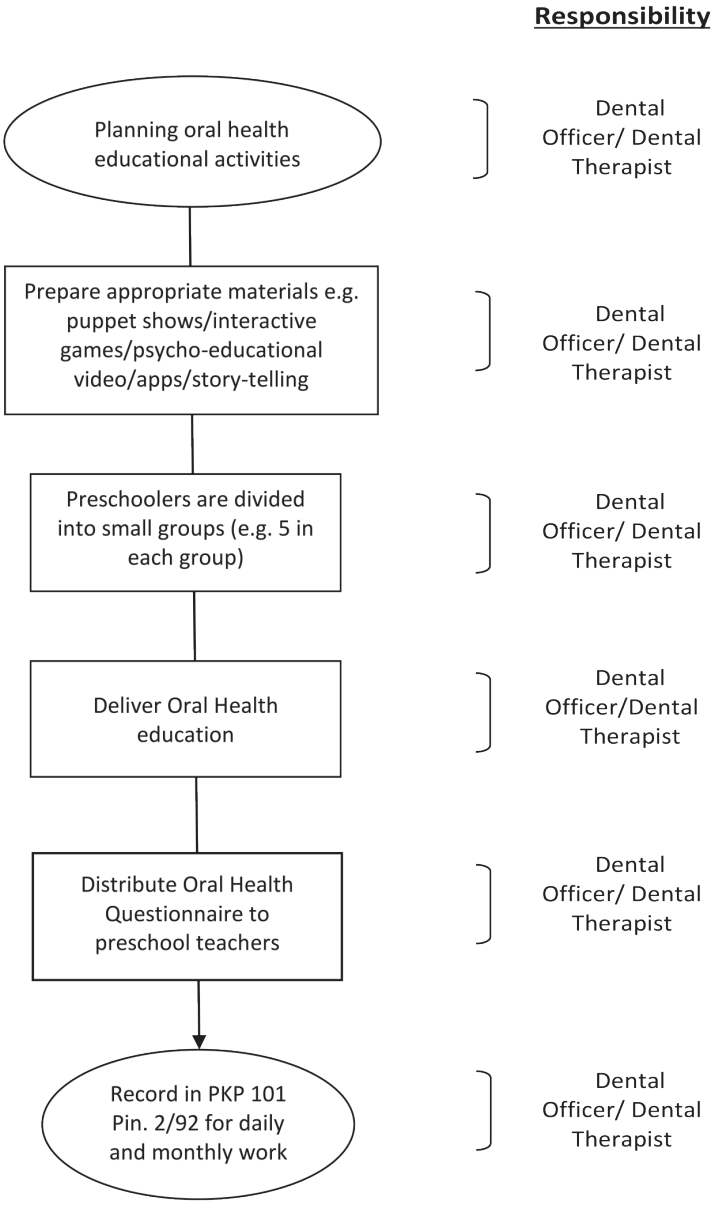
No.	Item				
D1	Penting bagi saya untuk mengesan kerosakan gigi dan masalah gusi pada kanak-kanak.	Sangat tidak setuju	Tidak setuju	Setuju	Sangat setuju
		☐	☐	☐	☐
D2	Bukan tugas saya untuk menyelia aktiviti memberus gigi kanak-kanak setiap hari semasa waktu persekolahan.	Sangat tidak setuju	Tidak setuju	Setuju	Sangat setuju
		☐	☐	☐	☐
D3	Menjadi tanggungjawab saya untuk memantau jenis makanan/minuman yang dihidangkan kepada kanak-kanak prasekolah.	Sangat tidak setuju	Tidak setuju	Setuju	Sangat setuju
		☐	☐	☐	☐

TERIMA KASIH ATAS KERJASAMA DIBERIKAN

Appendix 6

ORAL HEALTH EDUCATION FOR PRESCHOOL CHILDREN

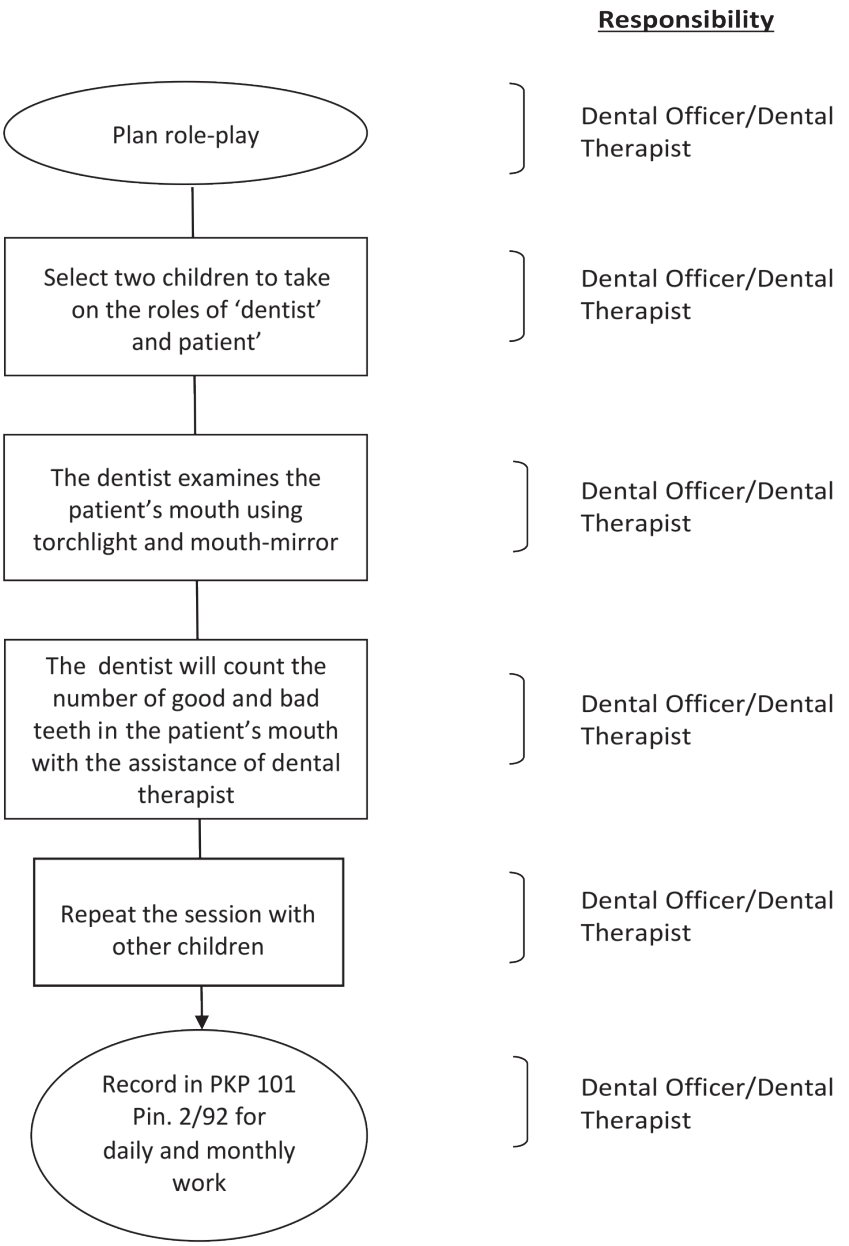
The aim of this activity is to enable good self oral hygiene practices and habits among preschool children by empowering them. The modes of delivery of oral health messages are through puppet shows, interactive games, psycho-educational video, apps and story-telling.



Appendix 7

ROLE-PLAY FOR PRESCHOOL CHILDREN

Role-play is an interactive activity that allows preschool children to play the roles of 'dentist' and 'patient'. The children are exposed to oral health screening procedure that enables them to be receptive to oral health personnel and oral healthcare activities.



Appendix 8

TOOTH BRUSHING DRILL

The aim of this activity is to perform proper tooth brushing technique which facilitates optimum plaque removal. The preschool children will be guided through a series of **Tell, Show & Do** during tooth brushing drill on toothbrush and toothpaste selection, brushing techniques and motivation. The operator is advised to follow the Standard Operating Procedure (SOP) of Tooth Brushing Drill with minimal rinsing from Oral Health Promotion Section (2019).

Appendix 9

STAR RATING ASSESSMENT

This is an initiative from the Oral Health Program to recognize the commendable efforts towards promoting oral health and ensuring good oral hygiene practices among preschool children (health promoting preschools). This assessment with be conducted by the Dental Officer In Charge / Appointed Dental Officer.

STAR RATING ASSESSMENT CRITERIA FOR PRESCHOOL RECEIVING ORAL HEALTHCARE SERVICES

YEAR: ……..

State / District: _____
Name of Preschool/Tadika/Kindergarten: _____

NO	CRITERIA	SUB-CRITERIA	MARKS	SCORE	NOTES
A	INFRASTRUCTURES /FACILITIES		20		
	A1.1	Do they provide any designated corner/space for Tooth Brush Drill?	5		
	A1.2	Do they provide rack/ toothbrush holder for preschool children?	5		
	A1.3	Do they provide a suitable place for delivery of oral healthcare services to preschool children?	10		
B	CURICULUM		10		
	B2.1	Do they include information regarding oral health in preschool syllabus for preschool children?	5		
	B2.3	Do the teachers conduct oral health quiz in the classroom?	5		
C	INVOLVEMENT		30		
	C3.1	Do the teachers supervise/ monitor the TBD every day?	10		
	C3.2	Do they implement TBD every day for preschool children?	10		
	C3.3	Do the preschool elect *Tunas Doktor Muda* etc. as role model?	5		
	C3.4	Do the *Tunas Doktor Muda* help with oral health activities in preschool?	5		

NO	CRITERIA	SUB-CRITERIA	MARKS	SCORE	NOTES
D	PROMOTIONAL ACTIVITIES		20		
	D4.1	Do they provide reading materials for oral health promotional activities?	5		
	D4.2	Do they organize any competitions such as colouring, storytelling, singing or healthy teeth for preschool children?	5		
	D4.3	Do they provide interactive games, role play and food pyramid for preschool children?	5		
	D4.4	Do they give incentive / presents for preschool children who give good cooperation?	5		
E	OTHER ACTIVITIES		20		
	E5.1	Do they provide healthy meals to the preschool?	10		
	E5.2	Did the preschool teachers attend any oral health seminars?	5		
	E5.3	Do the preschool teachers give Cooperation to dental teams in delivering oral healthcare services?	5		

DENTAL OFFICER'S REVIEW

_____

_____

_____

_____

RATING MARKS BY DENTAL OFFICER

RATING	CRITERIA	RECOMMENDATION
★	< 60 %	More effort is required for improvement.
★ ★	60 – 74 %	There is room for improvement.
★ ★ ★	75 – 84 %	Good job. Some minor adjustments are needed.
★ ★ ★ ★	85 – 94 %	Congratulations! Continue with your good work.
★ ★ ★ ★ ★	95 – 100 %	Excellent!

Appendix 10

PGPS 2 / 301

Kementerian Kesihatan Malaysia

Sistem Maklumat Pengurusan Kesihatan

Reten Harian Bagi Rawatan Pergigian Kanak-kanak Prasekolah Awam dan Swasta

Negeri :.....

Daerah :.....

Klinik :.....

Tadika / Kelas : .....

Tarikh : .....

Jenis Perkhidmatan Pergigian	Bil. Dilawati	Bil. Diliputi*	Umur	Kedatangan		Status Kesihatan Mulut															Baru/ Semula (B/S)	Jenis Rawatan Diberi														
						STATUS GIGI SUSU				STATUS GIGI KEKAL					SKOR PLAK							Sapuan Fluorida		Selan Fisur		Tampalan						Cabutan Gigi Desidus	Penskaleran	Kes selesai	% Kes Selesai
																								Anterior		Posterior									
																								Sewarna		Sewarna		Amalgam							
				Baru	Ulangan	d	f	x	Jumlah dfx	D	M	F	X	Jumlah DMFX	A	C	E	MBK (dfx=0, DMFX=0)	dfx = 0	BK (DMFX=0)	TPR		Bil. Kanak-kanak Perlu Sapuan	Bil. Kanak-kanak yang Dibuat Sapuan	Murid	Gigi	GD	GK	GD	GK	GD	GK	Jumlah Tampalan				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Kerajaan			5																			B														
																						S														
Kerajaan			6																			B														
																						S														
Swasta			5																			B														
																						S														
Swasta			6																			B														
																						S														
Murid Pendidikan Khas			5																			B														
																						S														
Murid Pendidikan Khas			6																			B														
																						S														
Jumlah			5																			B														
																						S														
Jumlah			6																			B														
																						S														
Jumlah Besar																						B														
																						S														

Kementerian Kesihatan Malaysia

Sistem Maklumat Pengurusan Kesihatan

Laporan Bulanan Daerah/Negeri bagi Rawatan Pergigian Kanak-kanak Prasekolah Awam dan Swasta

Negeri :.....

Daerah :.....

Klinik :.....

Jenis Perkhidmatan Pergigian	Bil. Dilawati	Bil. Diliputi*	Umur	Kedatangan		Status Kesihatan Mulut																	Baru/ Semula (B/S)	Jenis Rawatan Diberi														Maklumat Asas			
						STATUS GIGI SUSU				STATUS GIGI KEKAL					SKOR PLAK									Sapuan Fluorida		Selan Fisur		Tampalan													
																												Anterior		Posterior											
																												Sewarna		Sewarna		Amalgam									
				Baru	Ulangan	d	f	x	Jumlah dfx	D	M	F	X	Jumlah DMFX	A	C	E	MBK (dfx=0; DMFX=0)	dfx = 0	BK (DMFX=0)	TPR		Bil. Kanak-kanak Perlu Sapuan	Bil. Kanak-kanak yang Dibuat Sapuan	Murid	Gigi	GD	GK	GD	GK	GD	GK	Jumlah Tampalan	Cabutan Gigi Desidus	Penskaleran	Kes selesai	% Kes Selesai	Jenis Pra Sekolah	Jumlah Pra Sekolah / Tadika Dilawati	Jumlah Pra Sekolah / Tadika Dalam Daerah/ Negeri	Enrolmen
																																									Semua
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Kerajaan			5																			B																Kerajaan			
																						S																			
Kerajaan			6																			B																Kerajaan			
																						S																			
Swasta			5																			B																Swasta			
																						S																			
Swasta			6																			B																Swasta			
																						S																			
Murid Pendidikan Khas			5																			B																Murid Pendidikan Khas			
																						S																			
Murid Pendidikan Khas			6																			B																Murid Pendidikan Khas			
																						S																			
Jumlah			5																			B																Semua			
																						S																			
Jumlah			6																			B																Semua			
																						S																			
Jumlah Besar																						B																Semua			
																						S																			

Aktiviti Promosi Kesihatan Pergigian	Bil diadakan	Bil Peserta
Ceramah		
Role play		
LMG		

References

1. Department of Statistics, Malaysia. Population quick Info. 2017.
2. The Commisioner of Law Revision Malaysia under the Authority of the Revision of Laws Act 1968, 2012. Act 550. Education Act 1996.
3. Ministry of Education. Malaysian Education Blueprint 2013-2025 (Preschool to Post- Secondary Education). 2013.
4. Oral Health Division, Ministry of Health Malaysia. Guidelines on Oral Healthcare for Preschool Children. 2003.
5. Puska P, Porter D, Petersen PE. Dental diseases and oral health. World Health Organisation.2003.http://www.who.int/oral_health/publications/en/orh_fact_sheet.pdf. Retrieved on Feb 2019.
6. American Academy of Pediatric Dentistry. Definition of Early Childhood Caries (ECC). 2008. http://www.aapd.org/assets/1/7/D_ECC.pdf.
7. Oral Health Division. Ministry of Health Malaysia. Guidelines on Oral Healthcare for Preschool Children. 1984.
8. *Pusat Informatik Kesihatan Bahagian Perancangan Kementerian Kesihatan Malaysia. Taburan Fasiliti dan Perkhidmatan Pergigian, 2016.*
9. Health Informatics Centre Planning Division, Ministry of Health Malaysia. Annual Report HIMS Oral Health Sub-system, 2017.
10. Petersen P E, Bourgeois D, Bratthall D, Ogawa H. Oral Health Information Systems- towards measuring progress in oral health promotion and disease prevention. Bulletin of World Health Organization, 2005.
11. Duangthip D, Gao SS, Lo EC, Chu CH. Early childhood caries among 5- to 6-year-old children in Southeast Asia. Int Dent J. 2017 Apr; 67(2):98-106. doi: 10.1111/idj.12261. Epub 2016 Oct 18.
12. Oral Health Division, Ministry of Health Malaysia. National Oral Health Survey of Preschool Children 2015.
13. Petersen P E, Bourgeois D, Ogawa H, Estupinan-Day S, & Ndiaye C. The global burden of oral diseases and risks to oral health Bulletin of the World Health Organization | September 2005, 83 (9).
14. Oral Health Division, Ministry of Health Malaysia. National Oral Health Survey of Preschool Children 2005.
15. Oral Health Division, Ministry of Health Malaysia. National Oral Health Survey of Preschool Children 1995.

16. Ruhaya H, Jaafar N, Jamaluddin M, Ismail AR, Ismail NM, Badariah TC, Azizah M, Mohamed SZ (2012). Nutritional status and early childhood caries among preschool children in Pasir Mas, Kelantan, Malaysia. Arch Orofac Sci, 7(2): 56-62.
17. Zaharah A M, Nur Ili M T, Nurul Y. Dietary habits and dental caries occurrence among young children: Does the relationship still exist? Malaysian Journal of Medicine and Health Sciences. 9. 9-20. (2013).
18. Zahara AM, Fashihah MH, Nurul AY (2010). Relationship between frequency of sugary food and drink consumption with occurrence of dental caries among preschool children in Titiwangsa, Kuala Lumpur. Malays J Nutr, 16(1): 83-90.
19. Li Y, Wang W. Predicting caries in permanent teeth from caries in primary teeth: an eight year cohort study. J Dent Res. 2002 Aug; 81(8): 561-566
20. Health Promotion Agency, New Zealand. A Literature Review on Oral Health in Preschoolers. 2015.
21. Basha S, Mohamed RN, Swamy HS. Association between enamel hypoplasia and dental caries in primary second molars and permanent first molars: A 3-year follow-up study. Ann Trop Med Public Health [serial online] 2016 [cited 2018 Nov 13]; 9:4-11.
22. Hewitt CN. The work of hygiene in the education of children in the common schools, and in the families and society in which they live. Public Health Pap Rep 1878; 4:81-87.
23. Mota A, Oswal KC, Sajnani DA, Sajnani AK. Oral health knowledge, attitude, and approaches of pre-primary and primary school teachers in Mumbai, India. Scientifica (Cairo) 2016; 2016:5967427.
24. Gauthier S. Teaching of hygiene in the elementary schools. Public Health Pap Rep 1894; 20:259-262.
25. Aljafari AK, Scambler S, Gallagher J, Hosey MT. Parental views on delivering preventive advice to children referred for treatment of dental caries under general anaesthesia: a qualitative investigation. Community Dent Health. 2014; 31(2):75–9.
26. Bozorgmehr E, Hajizamani A, and Mohammadi TM. Oral Health Behavior of Parents as a Predictor of Oral Health Status of Their Children. Hindawi Publishing Corporation ISRN Dentistry Volume 2013, Article ID 741783,5 pages http://dx.doi.org/10.1155/2013/741783
27. Tang RS, Huang ST, Chen HS, Hsiao SY, Hu HY, Chuang FH. The association between oral hygiene behavior and knowledge of caregivers of children with

severe early childhood caries. Journal of Dental Sciences, Volume 9, Issue 3, 2014.Pages 277-282, ISSN 1991-7902.

28. Plutzer K, Spencer AJ. Efficacy of a oral health promotion intervention in the prevention of early childhood caries. Commun Dent Oral Epidemiol. 2008; 36:335–46.
29. Naidu R, Nunn J, Irwin JD. The effect of motivational interviewing on oral healthcare knowledge, attitudes and behaviour of parents and caregivers of preschool children: an exploratory cluster randomised controlled study. BMC Oral Health. 2015; 15:101. Published 2015 Sep 2. doi:10.1186/s12903-015-0068-9
30. Feldens CA, Vítolo MR, Drachler Mde L. A randomized trial of the effectiveness of home visits in preventing early childhood caries. Community Dent Oral Epidemiol. 35(3):215- 23. 2007 Jun;
31. KarinWG, John W Johnmarshall R, David D, Katherine K, Teresa M & Deborah VD. (2013). An Effective Psychoeducational Intervention for Early Childhood Caries Prevention: Part II. Pediatric dentistry. 35. 247-51.
32. Almut M, Konrad R. (2001). Playing games in promoting childhood dental health. Patient education and counseling. 43. 105-10. 10.1016/S0738-3991(00)00142-7.
33. Kwan SY, Petersen PE, Pine CM, Borutta A. Health promoting schools: an opportunity for oral health promotion. Bull World Health Organ. 2005; 83:677-85.
34. Prevention and Population Health Branch, Department of Health, Melbourne, Victoria. Government of Victoria Evidence-based oral health promotion resource, 2011.
35. Oral Health Division, Ministry of Health Malaysia. National Oral Health Plan 2011-2020, February 2011.
36. Federal Government Gazette. Fees (Medical) (Amendment) Order 2017;1 February 2017. Published by Attorney General's Chambers.

Oral Health Programme
Ministry of Health Malaysia
Level 5, Block E10, Precinct 1
Federal Government Administrative Centre
62590 Putrajaya, Malaysia

ISBN 978-967-16632-3-3