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COMMUNITY HEALTH PROJECT REPORT 2015

Promotion of Knowledge and Awareness of Parents in HK about Infant Oral Health Care



Promotion of Knowledge and Awareness of Parents in HK about Infant Oral Health Care

Community Health Project

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Group 4.2

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TABLE OF CONTENTS

1. ABSTRACT.....	1
2. INTRODUCTION	3
3. AIMS AND OBJECTIVES	5
4. MATERIALS AND METHODS.....	6
4.1 Participant recruitment	6
4.2 Workshop	6
4.3 Questionnaire	7
4.3.1 Pre-workshop questionnaire	8
4.3.2 Post-workshop questionnaire.....	8
4.4 Data analysis	8
4.4.1 Score on general oral health knowledge.....	8
4.4.2 Score on infant oral health knowledge	9
4.4.3 Score on parents' attitude towards infant oral health	9
4.4.4 Analysis	9
5. RESULTS	10
5.1 Profile of participants	10
5.2 Child's oral health behaviour	12
5.3 Pre-workshop survey.....	14
5.3.1 General oral health knowledge	14
5.3.2 Infant oral health knowledge	16
5.3.3 Infant oral health attitude.....	18
5.4 Post-workshop survey: knowledge and attitude.....	19
5.5 Scores	19
5.5.1 General oral knowledge score	19
5.5.2 Infant oral knowledge score	19
5.5.3 Attitude score.....	20
5.6 Correlation with background and oral health behaviour	21
5.7 Evaluation and action plan	21
6. DISCUSSION	23
6.1 Weaker aspects in oral health knowledge and behaviour	23
6.1.1 Children oral health behaviour	23

6.1.2 Knowledge on general oral health care	24
6.2 Design of the workshops	25
6.3 Effectiveness of workshops.....	26
6.4 Limitations	26
7. CONCLUSION.....	27
8. RECOMMENDATIONS.....	28
9. ACKNOWLEDGEMENTS.....	29
10. REFERENCES	30
11. APPENDICES	32
Appendix I: Workshop proposal	32
Appendix II: PowerPoint slides	34
Appendix III: Tools used in small-group demonstration on infant oral hygiene instructions	42
Appendix IV: Souvenir sets for participants	43
Appendix V: Pre-workshop questionnaire	44
Appendix VI: Post-workshop questionnaire	52
Appendix VII: Ethical approval	58
Appendix VIII: Introduction of the workshop	60
Appendix IX: Consent form.....	63

1. ABSTRACT

Aim: To promote the knowledge and awareness of infant oral health (OH) care among Hong Kong parents with children aged 0 to 2 years through an interactive workshop and to evaluate its effectiveness.

Methods: Parents were recruited from government-registered childcare centers and private playgroups. Interactive workshops consisted of a 30-minute PowerPoint presentation and 20 minutes of small-group activities, which included infant oral hygiene instruction with custom-made infant dentition models, diet analysis and question-and-answer session. Self-completed questionnaires used to evaluate the knowledge and attitude of parents were distributed before and after the workshops. Scores on general OH knowledge (range=0-18), infant OH knowledge (0-10) and parent's attitude (0-4) were computed. Scores of at least 70% were considered proficient.

Results: Among the 111 participants (aged 26 to 54 years, 64% mothers), 96% had a child aged 0 to 30 months. 30% had their children's mouth cleaned at least twice a day. Only one participant had brought his/her child to see a dentist. Weaker aspects in parents' OH knowledge and common misconceptions were identified in the pre-survey. Only 35% identified frequent meals as an increased caries risk; only 59% and 79% identified starchy food and formula milk as cariogenic food respectively. 58% did not know water fluoridation can prevent caries, while 33% of parents pointed out calcium supplement can prevent caries. Before the workshop, 41% had proficient general OH knowledge (mean=11.9) and 16% had proficient infant OH knowledge (mean=4.8). Over half of parents showed positive attitude (mean=3.4). Significant improvements in general OH knowledge (mean=15.6, $p<0.001$), infant OH knowledge (mean=8.8, $p<0.001$) and attitude (mean=3.9, $p<0.001$) were observed. Parents reflected the workshops were useful (94%) and they learned new practices to improve their infants' OH (95%).

Conclusion: Several deficiencies in oral health knowledge and behaviour are identified. The interactive workshops can effectively promote the knowledge and awareness of infant oral health care among parents with children aged 0 to 2 years. Large-scale infant oral health

survey is needed. Interactive workshops with longer follow-up periods are recommended. More guidelines can be provided to parents and general dentists for prevention of caries.

2. INTRODUCTION

Dental caries is one of the most common oral diseases in children. In Hong Kong, 50.7% of 5-year-old children have caries experience with a mean dmft of 2.1 and among them 92% have not received any treatment for their decayed teeth¹. According to another survey, the prevalence of Early Childhood Caries (ECC) of 3-year-old children in Hong Kong was reported to be 31% and the mean dmft score was 1.2². Both results show that the oral health status of Hong Kong children is poor.

ECC has detrimental effects on eating, speech, general growth and well-being (quality of life) of children^{3,4}. Poor oral hygiene practice and improper feeding habit are considered as the major causes of ECC⁵. It comes to the parents' or caregivers' responsibilities in providing proper oral cleaning, such as toothbrushing and formulating a proper diet for their infants^{6,7}. The above alarming figures have aroused our attention on the oral education knowledge of the infants' caregivers in Hong Kong.

According to the guideline of the American Academy of Pediatric Dentistry on infant oral health, parents should help to clean their children's teeth with a soft toothbrush and the practice should begin after the eruption of first primary tooth⁷. For children with moderate or high caries risk, a 'smear' of fluoridated toothpaste should be used as well⁷. However the situation in Hong Kong is beyond satisfaction. The lack of infant oral care practice can be reflected by the fact that less than 40% of preschool children started brushing their teeth before 18 months old⁸ and only 18% of parents assisted their child's toothbrushing until 3 years old⁹.

To improve infant oral health, improving knowledge and awareness of parents on infant oral health care are the primary things to be done¹⁰. Oral diseases, such as caries, begin to affect infants as early as the first tooth is erupted. It is necessary that the parents should possess knowledge and awareness of maintaining a good dietary habit and applying proper oral cleaning to their children since they were born¹¹.

In Hong Kong, most research put their focus in pre-school children above 3 years old and the figures are already very alarming. It is necessary to begin oral health promotion and

education at an earlier stage. Therefore in this study, our target group consisted of parents with children between 0 and 2 years of age as early prevention is the key to solve the problem of ECC and improve infant oral health¹¹.

To effectively educate parents, choosing a suitable education method is very important. Various methods have been applied to promote infant oral health care, including seminars, exhibitions, workshops, internet webpages and leaflets. Seminars and exhibitions are quick ways to deliver oral health messages; however these events may not be able to suit the individuals' need and may fail to motivate them into bringing theories into action. It is believed that an interactive and small-group event is a more suitable way to promote infant oral health care because parents can ask and learn through interaction and sharing of experience among each other¹². It is also important that the event can help the parents to develop their personal action plan for the future. Putting all those objectives into consideration, workshops seem to be a better promotion method¹². Effectiveness of the workshops can then be evaluated by the feedback of participants and further improvement can be made. The ultimate goal of this study was to provide new suggestions regarding motivation and education on parents towards proper oral health care practice, which could prevent oral diseases at the very beginning.

3. AIMS AND OBJECTIVES

The aim of this study was to promote the awareness and knowledge of infant oral care among parents with young children in Hong Kong through the use of an interactive workshop.

The objectives of this study were:

1. To find out the weaker aspects in infant oral health knowledge among parents with young children.
2. To formulate a workshop to raise their awareness.
3. To evaluate effectiveness of the workshop.

4. MATERIALS AND METHODS

4.1 Participant recruitment

The target population of this study was parents with children aged 0 to 2. In order to reach this target group, a list of 28 government-registered childcare centers nursing 0- to 6-year-old children in Hong Kong was obtained from the government website¹³ and 10 private playgroups were found through their online advertisements. The target centers in cooperation were chosen based on the availability of time during February to April 2015, willingness to help in recruiting parents with 0 to 2 years old children and ability to provide venue for the workshop. These centers should be located in different areas in Hong Kong in order to minimize bias in the data collected.

Through initial contact by phone calls and emails, a workshop proposal (Appendix I) was sent to 20 suitable centers (including government-registered childcare centers and private playgroups) nursing 0- to 2-year-old children during October to December 2014. In total, five government-registered childcare centers and two private playgroups expressed interest in cooperation in holding workshops between February and April 2015.

4.2 Workshop

A total of nine workshops (three workshops were conducted in one of the centers) at public nurseries and private playgroups in scattered areas of Hong Kong were held between February and April 2015.

The oral health workshop consists of two parts.

The first part was a 30-minute PowerPoint presentation (Appendix II) on oral health knowledge highlighting infant oral health care, prevention of ECC and common oral health misconceptions. The information on oral health knowledge and prevention of childhood caries were adopted from Government Tooth Club website¹⁴ and Student Knowledge Exchange (KE) Project 2012-13, Faculty of Dentistry, The University of Hong Kong: *On Becoming Babywise: Oral Health Knowledge Education Among Parents*¹⁵. Common misconceptions on children oral health care were identified from a reported research done on local populations named the *Oral health status and behaviors of preschool children in Hong*

Kong⁸, and an ongoing survey *Family-centered oral health promotion for new parents and their infants: a randomized controlled trial*¹⁶. These common misconceptions were also included in the surveys to assess parent's knowledge on infant oral health care. A 5-minute Q&A session was held at the end of the presentation.

The second part of the workshop was a 20-minute group discussion. A group of three to five participants were led by one to two dental students during which participants were taught about the daily infant oral hygiene routine with demonstration using tooth models and appropriate oral hygiene aids (e.g. gauze and toothbrush). Various types of tooth models were utilized, including large-sized models for easy demonstration of toothbrushing techniques, models demonstrating the developmental status of permanent and deciduous teeth at age 5, models having a complete set of deciduous teeth, and custom-made tooth models simulating the oral cavity of a 7- to 8-month-old infant with upper and lower incisors erupted (Appendix III). The tooth models were borrowed from Tooth Club – the Oral Health Education Unit of the Department of Health, the Pediatric Clinic of Prince Philip Dental Hospital (PPDH), as well as custom-made by the Dental Laboratory in PPDH. Apart from oral hygiene instruction and demonstration, parents were also asked to discuss on the problems (e.g. frequent intake of cariogenic food) presented in a sample of a child's diet record. After the workshop, each participant received a souvenir pack comprising of government leaflets on infant oral health, a toothbrushing frequency magnet and a colour book produced by the KE Unit of the HKU Faculty of Dentistry, as well as an infant toothbrush (Appendix IV).

4.3 Questionnaire

In order to gauge the parents' knowledge and awareness on general and infant oral health, and to evaluate the effectiveness of the workshop, a pre-workshop survey (Appendix V) and a post-workshop survey (Appendix VI) were distributed to each participant to collect the data needed. Ethical approval from the Institutional Review Board of the University of Hong Kong/ Hospital Authority Hong Kong West Cluster (Appendix VII) was obtained before implementation of the workshop.

Prior to each workshop, participants were asked to read the introduction of the workshop (Appendix VIII) before signing the consent form (Appendix IX) and completing the pre-

workshop survey. The pre- and post-workshop questionnaires of each participant were numbered for results comparison while maintaining anonymity.

4.3.1 Pre-workshop questionnaire

The pre-workshop questionnaire consisted of four parts: in the beginning of the survey, basic information of the family including parent age, gender, education level, number of children, as well as age, gender and the primary caregiver of the children were asked. Part A comprised of nine questions focusing on the diet and oral hygiene habits of the child. Questions on general oral health knowledge were included in Part B. Part C tested parents' knowledge on infant oral health with eight questions in which one of them (Question 3) was on parents' attitude. Questions were set in the form of either multiple choices or true/false statements. Respondents were allowed to select 'uncertain' to assess the lack of knowledge and to discourage guessing.

4.3.2 Post-workshop questionnaire

The post-workshop questionnaire consisted of the same questions related to general and infant oral health knowledge as the pre-workshop questionnaires to assess participants' gain in knowledge immediately after the workshops. Participants' evaluations and feedback on the workshops were also included in the post-survey.

The surveys collected during the workshop were checked immediately by dental students to prevent mis-numbering and any blanking out of answers.

4.4 Data analysis

Data collected was input into Microsoft Excel with checking and data cleaning completed before transferring into IBM SPSS Statistics 22 for data analysis. In order to compare parents' knowledge and attitude on general and infant oral health before and after the workshop, scores are calculated from the corresponding questions in the questionnaires.

4.4.1 Score on general oral health knowledge

Part B in the pre-workshop survey and Part A in the post-workshop survey tested on general oral health knowledge. Questions 1 to 3 in both surveys allowed multiple correct answers, therefore participants would score one mark for each correct answer, zero for choosing

‘uncertain’, and one mark would be deducted for each incorrect answer. Each correct answer in Question 4 was granted one mark. Total score of this part ranged from 0 to 18; 13 marks or above ($\geq 70\%$) were considered to be proficient in general oral health knowledge, marks between 9 and 12 as satisfactory, and below 9 as unsatisfactory.

4.4.2 Score on infant oral health knowledge

Knowledge on infant oral health was included in Part C (except Question 3) in the pre-workshop survey and Part B (except Question 3) in the post-workshop survey. Participants would score one mark for each correct choice and zero for ‘uncertain’. The score range of this part was 0 to 10; participants scoring 7 marks or above ($\geq 70\%$) were considered to be proficient in infant oral health knowledge, 5 to 6 marks were considered satisfactory, and below 5 marks were unsatisfactory.

4.4.3 Score on parents’ attitude towards infant oral health

The importance of infant oral health was assessed in Question 3 of Part C in the pre-workshop and Part B in the post-workshop questionnaires. Each positive attitude choice was granted one mark and the maximum score for this part was four.

4.4.4 Analysis

After generating the scores of each individual in the pre- and post-survey, statistical differences between each individual’s scores were evaluated by comparing pre- and post-survey scores using paired samples T-tests. Analysis to examine relationships between the pre-workshop oral health knowledge, attitude scores and the participants’ age and child age were done using Pearson correlation coefficient tests. Independent samples T-tests were conducted to determine the differences in the mean scores in the pre-survey among participants with different background or oral health behaviour. The level of significance was set to be .05, so p-value < 0.05 was considered to be statistically significant.

5. RESULTS

5.1 Profile of participants

Approximately 150 adults participated in the workshops; 123 participants completed the workshop questionnaires, with 12 considered to be outside our target group due to having children older than 30 months or surveys filled in by grandparents, resulting in a final sample size of 111. Majority of participants were recruited from government-registered crèches (81.1%), with 13 to 23 parents from each center (Table 1).

Table 1. Number of participants from different centers

Centers	n	%
Government-registered childcare centers		
NAAC Sun Chui Day Crèche (Sha Tin)	17	15.3
Yan Chai Hospital C. C. Everitt Day Crèche (Tsuen Wan)	23	20.8
Po Leung Kuk Mok Hing Yiu Crèche (Causeway Bay)	16	14.4
TWGHs Kwan Fong Nursery School (Wong Tai Sin)	21	18.9
Yuen Long Rhenish Day Crèche (Tin Shui Wai)	13	11.7
Private playgroups		
Child Psychological Development Association (Sha Tin)	12	10.8
Child Psychological Development Association (Tsim Sha Tsui)	9	8.1

The study group (Table 2) was predominantly mothers (64.0%). Participants aged from 26 to 54 years; almost half between 31 and 35 (42.6%). Two-thirds attained a tertiary education level or above (69.6%). Majority had a child aged 0 to 30 months (96.4%), others had two (3.6%); less than one-fifth of the children had siblings older than 30 months (17.1%). Age of children ranged from 3 to 30 months, with one-third between 13 and 18 months old (34.3%). There were an approximately equal numbers of boys (53.6%) and girls (46.4%). Most children had 6 to 10 teeth (30.0%) or 16 to 20 teeth (32.0%). Primary caregivers were usually parents (49.1%).

Table 2. Basic information of participants and children

Information of participants	n	%
Parent		
Father	40	36.0
Mother	71	64.0
Age (years)		
26-30	15	13.9
31-35	46	42.6
36-40	37	34.3
Above 40	10	9.2
Education level		
Primary education or below	1	1.0
Secondary education	30	29.4
Tertiary education or above	71	69.6
Information of children aged 0 to 30 months		
Age (months)		
1-6	6	5.4
7-12	14	12.6
13-18	38	34.3
19-24	29	26.1
25-30	24	21.6
Gender		
Boy	59	53.6
Girl	51	46.4
Number of teeth		
0-5	20	20.0
6-10	30	30.0
11-15	18	18.0
16-20	32	32.0
Primary caregiver		
Parents	54	49.1
Grandparents	20	18.1
Helper	18	16.4
Center/teacher	18	16.4

5.2 Child's oral health behaviour

Parents' report of their children's oral health behaviour is summarized in Table 3. Almost all parents had started introducing solid food to their children (97.3%). In the past week, majority of the children did not intake sugary snacks/chocolates (75.9%) or soft drinks/beverage with sugar (60.2%); very few had snacks (3.7%) or sugary beverage (11.1%) more than once daily. Three-quarters ate fruits once to twice every day (77.7%). Less than one-fifth of the children had gone to sleep with a nursing bottle of milk/sugary drink in the mouth (14.4%), most of whom had it every night (75.0%). Parents predominantly fed their children by clock (90.9%), five times or less each day (67.3%).

Most children had their mouth cleaned (85.6%), usually once a day (54.7%) or more (29.5%). Parents used a toothbrush (53.7%), gauze/cotton swab (25.3%), or both (21.0%). Three-quarters of children used a toothbrush (74.7%) with a diameter of a 10-cents coin, 17.5 mm (77.5%). Approximately seven in ten parents did not use toothpaste for their children (71.6%). Only one child had been to a dentist (0.9%) for check-up.

Table 3. Child's oral health behaviour

	n	%
1. Have you started introducing solid food to your child?		
Yes	108	97.3
No	3	2.7
2. How many times did your child intake the following food daily last week?		
Sugar/ chocolate		
None	82	75.9
Less than once daily	22	20.4
Once to twice daily	4	3.7
Soft drink/ beverage with sugar (e.g. Fruit juice)		
None	65	60.2
Less than once daily	31	28.7
Once to twice daily	10	9.2
Three times or more daily	2	1.9

Fruits		
None	4	3.7
Less than once daily	18	16.7
Once to twice daily	84	77.7
Three times or more daily	2	1.9
3. Has your child gone to sleep with a nursing bottle of milk or sugary drink in the mouth?		
No	95	85.6
Yes	16	14.4
Frequency (times per week)		
2	1	6.3
5	2	12.4
7	12	75.0
14	1	6.3
4. When do you feed your child?		
On demand	10	9.1
By clock	100	90.9
5. How many times do you feed your child every day, including snacks?		
5 times or less	74	67.3
6-8 times	35	31.8
9-11 times	1	0.9
6. Has there been someone (including yourself) cleaning your child's mouth and teeth?		
No	16	14.4
Yes	95	85.6
Frequency		
Less than once a day	15	15.8
Once a day	52	54.7
Twice or more a day	28	29.5
Method		
Toothbrush	51	53.7
Gauze or cotton swab	24	25.3
Both (toothbrush and gauze/cotton swab)	20	21.0

7. Does your child use toothbrush at present?

No	24	25.3
Yes	71	74.7

Size of the toothbrush

Diameter of a 10-cents coin	55	77.5
Diameter of a 50-cents coin	14	19.7
Not sure	2	2.8

8. Does your child use toothpaste at present?

No toothpaste is used	68	71.6
Yes, children's toothpaste	27	28.4

9. Has your child been to a dentist?

No	110	99.1
Yes	1	0.9

Reason

Check-up	1	100.0
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5.3 Pre-workshop survey**5.3.1 General oral health knowledge**

As shown in Table 4, a vast majority of participants could answer too much sweet food (96.4%), plaque (89.2%) and poor oral hygiene (91.9%) as risk factors of caries. However, only one-third (35.1%) could identify frequent snacks or meals as one of the risk factors. There were also one-third of participants who answered lack of calcium (33.3%) as a factor of caries. As to food that can lead to caries, all participants could point out sugars and chocolate and a majority could answer fruit juice (90.1%), soft drinks (98.2%), and formula milk (74.8%). Only half of the participants (58.6%) could answer starchy food. One-third of participants (33.3%) also answered sugar-free candies and half answered meat (56.8%) and vegetables (58.6%) as cariogenic food. In relation to measures preventing caries, most participants could identify reduce eating of sweet food (90.1%), using fluoridated toothpaste (76.6%) and regular dental check-up (79.3%). However, less than one-third of participants (27.0%) could identify reducing frequency of meals and snacks as one of the prevention measures while one-third (33.3%) believed calcium supplements can prevent caries.

Regarding the true or false section, a vast majority of participants correctly answered self-care can affect the state of teeth (97.3%) while most participants could point out that dental problems can affect whole body (85.6%) and the need of oral hygiene aids other than the toothbrush to maintain good oral hygiene (85.6%). Nevertheless, one-third of participants (33.3%) were uncertain if fluoridated toothpaste is bad for general health and less than half (42.3%) could point out fluoride in tap water can prevent caries.

Table 4. Knowledge on general oral health care

	Pre-workshop questionnaire	Post-workshop questionnaire
	% of correct answers	% of correct answers
1. Which of the following will contribute to tooth decay?		
Too much sweet food (✓)	96.4	100.0
Frequent meals/ snacks (✓)	35.1	96.4
Lack of calcium (✗)	66.7	86.5
Bacteria/ plaque (✓)	89.2	93.7
Improper brushing/ poor oral hygiene (✓)	91.9	93.7
Hot air (✗)	98.2	100.0
2. Which of the following food may cause tooth decay?		
Sweets and chocolate (✓)	100.0	100.0
Starchy food (e.g. Bread, biscuits, rice) (✓)	58.6	94.6
Meats (✗)	56.8	74.8
Vegetables (✗)	58.6	81.1
Fruit juice (✓)	90.1	98.2
Soft drinks (✓)	98.2	99.1
Formula milk (✓)	74.8	99.1
Sugar-free candies (✗)	66.7	81.1
3. Which of the following will help prevent tooth decay?		
Reduce eating sweet food (✓)	90.1	92.8
Calcium supplement (✗)	66.7	93.7
Fluoridated tooth paste (✓)	76.6	91.9
Reduce frequency of meals or snacks (✓)	27.0	92.8
Regular dental check-up (✓)	79.3	89.2
Chinese medicine (e.g. Herbal tea) (✗)	98.2	100.0

	Pre-workshop questionnaire		Post-workshop questionnaire	
	% of correct answers	Uncertain (%)	% of correct answers	Uncertain (%)
4. True/false questions				
a) State of teeth is greatly decided at birth and is not related to self-care. (F)	97.3	2.7	98.2	0.0
b) Dental problems can affect the whole body. (T)	85.6	8.1	82.9	3.6
c) Using toothbrush alone is sufficient for good oral hygiene, other aids (floss, ID brush, and mouth rinse) are unnecessary. (F)	85.6	4.5	72.1	3.6
d) Using fluoridated tooth paste is bad for general health. (F)	64.9	33.3	91.9	4.5
e) Fluoride added to tap water can prevent tooth decay. (T)	42.3	24.3	54.1	9.0

5.3.2 Infant oral health knowledge

From Table 5, only one-third of participants (36.0%) could answer the correct number of primary teeth. Three-quarters of participants could identify that primary tooth caries can affect permanent teeth (75.7%) and habits like thumb sucking can cause poor alignment of teeth (75.7%). Nevertheless, only a minority (17.1%) knew that caries-inducing bacteria can be transmitted from mother to child and most believed milk is beneficial to primary teeth (85.6%). Regarding infant oral health practice, most participants knew the method for cleaning infants' mouth before eruption of primary teeth (gauze or cotton swab: 91.0%). Only 11.7% of participants could point out the need for using toothbrushes after eruption of primary first molars while other participants indicated eruption of the first tooth or after eruption of all primary teeth as a requirement for toothbrushing. Three-quarters of participants (72.1%) knew the correct size of toothbrush to be used. However, only less than half of the participants could answer the correct time to start using toothpaste (when the infant knows how to spit: 44.1%) and the amount of toothpaste to be used (a smear: 43.2%).

Table 5. Knowledge on infant oral health

	Pre-workshop questionnaire	Post-workshop questionnaire
	% of correct answers	% of correct answers
1. How many primary teeth does a child normally have? (Ans: 20)	36.0	90.1
2. How should a baby's mouth be cleaned before eruption of primary teeth?	% of answers	% of answers
Use toothbrush	5.4	1.8
Use gauze or cotton swab (✓)	91.0	89.2
Other methods	3.6	9.0
3. When must a child start using toothbrush?		
After eruption of the first primary tooth	60.4	30.6
After eruption of the first primary molar (✓)	11.7	67.6
After eruption of all primary teeth	11.7	1.8
Others	1.8	
Uncertain	14.4	
4. What size of toothbrush should be used for children younger than 2 years old?		
Children younger than 2 years old should not use toothbrush	2.7	3.6
Diameter of a 10-cents coin (✓)	72.1	94.6
Diameter of a 50-cents coin	9.0	1.8
Uncertain	16.2	
6. When should a child start using toothpaste?		
After eruption of the first primary tooth	25.2	11.7
After eruption of all primary teeth	11.8	4.5
It depends, as soon as children can spit out excess toothpaste (✓)	44.1	82.0
Uncertain	18.9	1.8
7. How much toothpaste should be used for children less than 2 years old?		
A Smear (✓)	43.2	91.9
Pea-sized (5 mm diameter)	41.4	8.1
Uncertain	15.3	

	Pre-workshop questionnaire		Post-workshop questionnaire	
	% of correct answers	Uncertain (%)	% of correct answers	Uncertain (%)
8. True/false questions				
a) Primary tooth decays does not affect permanent teeth. (F)	75.7	16.2	98.2	0.0
b) Milk is beneficial to children's teeth because it contains calcium. (F)	14.4	27.9	86.5	3.6
c) Habits like thumb sucking and prolonged pacifier sucking cause poor alignment of teeth. (T)	75.7	15.3	92.8	0.9
d) Tooth decay-inducing bacteria can be transmitted from mother to child. (T)	17.1	31.5	85.6	1.8

5.3.3 Infant oral health attitude

Most participants showed positive attitude regarding the maintenance of good infant oral health (Table 6). Majority of the participants understood the need for maintaining good oral hygiene (92.8%), treating primary tooth caries (81.1%) and regular dental check-up for infants (73.9%). Nearly all participants also considered it unacceptable to let infants sleep with a nursing bottle (96.4%).

Table 6. Parents' attitude towards infant oral health

	Pre-workshop questionnaire		Post-workshop questionnaire	
	% of positive attitude	Uncertain (%)	% of positive attitude	Uncertain (%)
Agree/disagree questions				
a) It is unnecessary to treat decays of primary teeth as they will exfoliate eventually. (F)	81.1	11.7	92.8	1.8
b) It is unnecessary to brush teeth until all primary teeth have erupted. (F)	92.8	3.6	97.3	0.0
c) It is unnecessary to visit the dentist if there is no toothache or obvious change of colours of your child's teeth. (F)	73.9	12.6	98.2	0.9
d) It is acceptable to let your child sleep with a bottle of milk so he/she does not feel hungry during the night. (F)	96.4	1.8	100.0	0.0

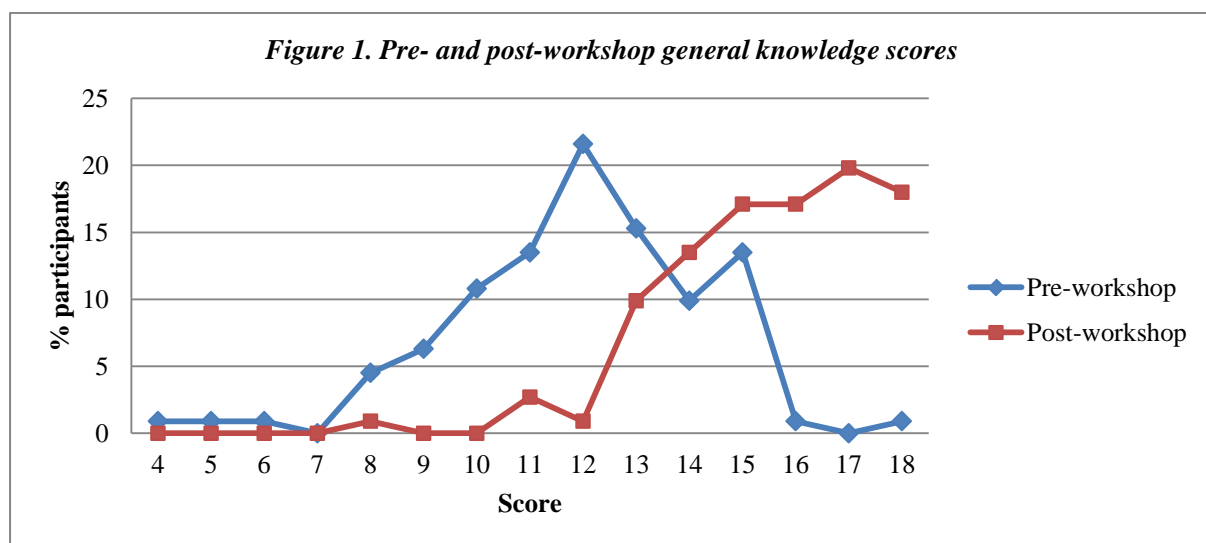
5.4 Post-workshop survey: knowledge and attitude

There was an increase in both general and infant oral health knowledge and an improvement in parental attitude after attending the workshop. More than three-quarters of participants could correctly answer almost all questions. However, only half (54.1%) could point out the use of fluoride in tap water to prevent caries in the post-survey.

5.5 Scores

5.5.1 General oral knowledge score

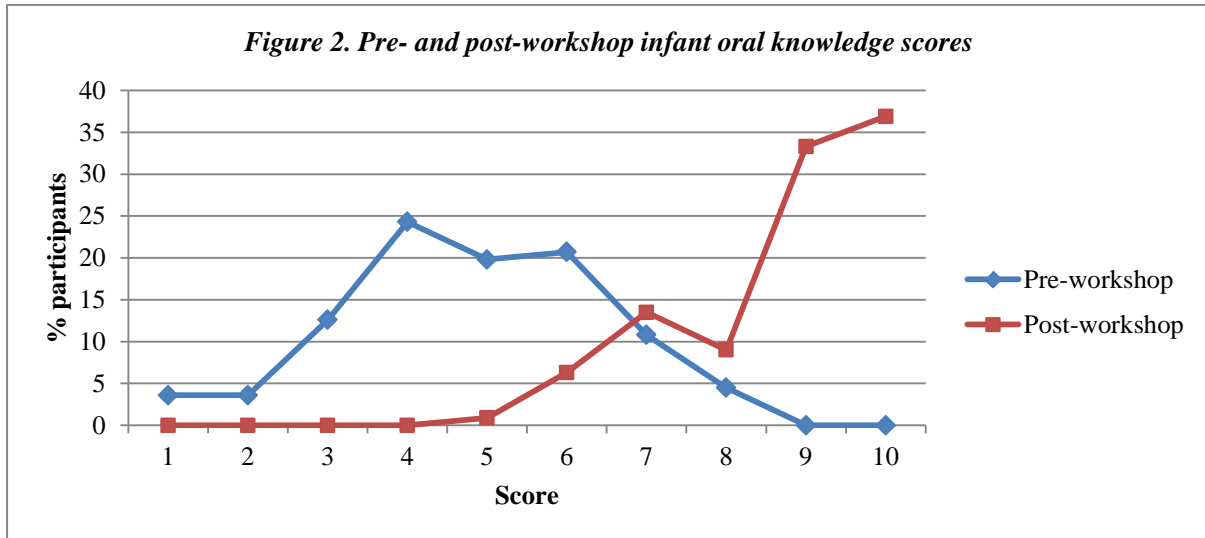
Pre-survey scores ranged from 4 to 18 following a normal distribution pattern (Figure 1). Satisfactory scores (≥ 9 marks) were obtained by 92.7% of participants and 40.5% obtained proficient scores (≥ 13 marks). The mean score was 11.9 (SD=2.34). For the post-survey, scores ranged from 8 to 18; only one participant scored less than satisfactory while 95.5% of participants obtained 13 marks or more. The mean score was 15.6 (SD=1.94). Paired samples T-test showed a significant increase of 3.6 in the mean score (SD=2.16, $p < 0.001$).



5.5.2 Infant oral knowledge score

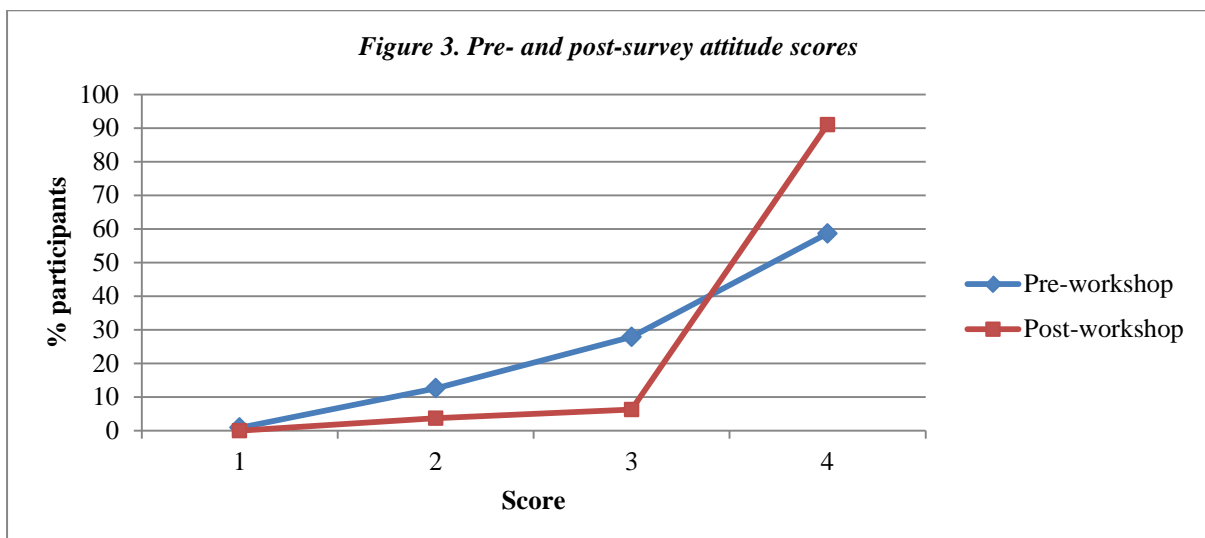
Pre-survey scores ranged from 1 to 8 following a normal distribution pattern (Figure 2). Satisfactory scores (≥ 5 marks) were obtained by 55.8% of participants while only 15.5% of participants obtained proficient scores (≥ 7 marks). The mean score was 4.8 (SD=1.64). For the post-survey, all participants scored satisfactorily (≥ 5 marks) and 92.8% of participants

obtained 7 marks or more. The mean score was 8.8 (SD=1.30). Paired samples T-test showed an increase of 4.0 in the mean score (SD=1.84, $p<0.001$).



5.5.3 Attitude score

Slightly more than half (58.6%) of participants scored full marks (4 marks) in the pre-survey while a vast majority (90.1%) of participants scored full marks in the post-survey (Figure 3). Paired samples T-test showed an increase of 0.4 in the mean score (SD=0.76, $p<0.001$).



5.6 Correlation with background and oral health behaviour

The relationships of participant background (e.g. participant age, gender, education level, child age) and pre-workshop knowledge and attitude scores were investigated. Significant correlations were found in the followings:

Pearson correlation coefficient tests were used to study the relationships of participant age and child age with pre-workshop scores. There was a weak negative correlation between parent age and pre-workshop attitude score ($r=-0.24$, $p=0.012$). Significant correlations were found in the child age with pre-workshop infant oral health knowledge ($r=0.22$, $p=0.020$) and attitude ($r=-0.22$, $p=0.019$) scores. With increasing child age, parents' infant knowledge would be higher while the attitude of participants would be less positive. Testing of pre-workshop scores indicated weak positive relationships between general oral health knowledge and infant oral health knowledge ($r=0.23$, $p=0.014$), as well as infant oral health knowledge and parental attitude ($r=0.26$, $p=0.005$).

The pre-workshop scores of participants with different education level were compared. Since only one participant had attained primary education level or below, education levels were rearranged into two groups: 'secondary education or below' and 'tertiary education or above'. Independent samples T-test found significant difference in the mean pre-workshop attitude scores between participants with secondary education or below (mean=3.1, SD=0.72) and those with tertiary education or above (mean=3.6, SD=0.73, $p=0.007$) which showed parents with a higher education level would have a higher mean attitude score.

Regarding oral health behavior, it was found that parents who cleaned their children's mouths scored higher in the pre-workshop infant oral health knowledge scores (mean=5.0, SD=1.57) compared to those who did not (mean=3.8, SD=1.69, $p=0.005$) using independent samples T-test.

5.7 Evaluation and action plan

As shown in Table 7, a vast majority of participants agreed that they learned more about infant oral health care after attending the workshop (92.8%) and they understood the messages delivered (94.6%). They also agreed that the workshop covered all information they needed (91.9%) and taught them new methods to improve their children's oral hygiene

(94.6%). Most of the participants were confident to practise proper infant oral health care after the workshop (76.6%) and to teach their children to practice proper oral hygiene (81.1%). Participants generally found the workshop useful (93.7%) and interesting (84.7%).

Table 7. Evaluation of the workshop

Ratings	Agree (%)	Neutral (%)	Disagree (%)
a) I learned more about infant oral healthcare after attending this workshop.	92.8	4.5	2.7
b) I am able to understand the messages delivered by this workshop.	94.6	1.8	3.6
c) This workshop covers all of the information I need concerning infant oral healthcare.	91.9	5.4	2.7
d) This workshop has taught me new practices and/or methods to improve my child's oral hygiene.	94.6	3.6	1.8
e) I am confident to practise proper infant oral health care on my child after attending this workshop.	76.6	19.8	3.6
f) I am confident that I can teach my child to practise proper oral hygiene methods after attending this workshop.	81.1	15.3	3.6
g) I think the workshop is useful.	93.7	3.6	2.7
h) I think the workshop is interesting.	84.7	10.8	4.5

Many participants stated in their personal action plans that they would use the methods learned in the workshop to clean their children's mouths (34.2%), starting that night (25.2%). One-quarter intended to use toothbrushes twice a day (27.9%). A few parents planned on teaching their infants the correct oral hygiene methods (6.3%), changing the feeding time of their children (5.4%), and bringing them for regular dental check-up (3.6%). Other answers included increasing brushing frequency, being more patient so their children would develop interest in toothbrushing, and educating their children's caregiver on oral hygiene practices.

Nevertheless, a majority of participants (86.5%) pointed out their children may not be able to follow their instructions and some (15.3%) believed lack of time as a difficulty in carrying out their plans.

6. DISCUSSION

6.1 Weaker aspects in oral health knowledge and behaviour

The survey was designed to evaluate the oral health knowledge and attitude of parents, and their oral health care behaviour towards their infants. Several weaker aspects are identified.

6.1.1 Children oral health behaviour

Among the infants of the parents surveyed, a minority had their nursing bottle of milk or sugary drink in the mouth while sleeping; almost all in this group were fed every night in this way. This reflects a total unawareness of overnight feeding as a major risk factor of ECC¹⁷, and thus the significance of spreading this piece of knowledge to those infant caregivers lacking the knowledge.

Results showed that more than two-thirds of the parents surveyed assisted or had caregivers assist in cleaning their children's mouth and teeth less than twice a day, which is not sufficient to maintain infants' oral health⁷. Although a majority of them were aware of their role in maintaining their children's oral health, probably because they understand the incapacity of infants to clean their own mouth, overall parents still seem to underestimate the importance of their task.

Another noteworthy figure would be that all but one parent had not brought their children to see a dentist. They did not appreciate the importance of dentists in early prevention of caries and other dental problems of infants. This is reflected in the group discussion session when many participants raised questions in relation to the correct time to bring their children for dental check-up. Some parents had brought their older children to general dentists for examination but were rejected due to young age. This also indicates a discouraging phenomenon that it may be the dentists who are reluctant to treat pediatric patients, possibly due to the lack of cooperation by such patients or they did not expect caries to develop so early during infancy.

6.1.2 Knowledge on general oral health care

Most parents were able to opt for sweet food, bacteria/plaque and improper brushing/poor oral hygiene as contributing factors of caries, yet significantly fewer of them knew about the frequency of meals as a major cause. This subsequently affects the following question on caries prevention, where only 27% correctly chose ‘reducing frequency of meals or snacks’ as a measure to help prevent tooth decay. From the pre-workshop survey, more than 30% of parents fed their children six times to eight times per day which marginally increases caries risk¹⁴. As the frequency of taking sugary or starchy food, the main diet of local Hong Kong people, is critically associated with caries risk¹⁸, it is encouraged to gradually decrease the number of meals especially when the child is above 6 months old. Therefore in the workshop, dietary advice including the reduction to six or fewer meals as their children are reaching 2 years old was given. This is a point that any infant oral health care education in Hong Kong should emphasize.

In the questionnaire, ‘hot air’ and ‘lack of calcium’ were included as choices in the question about contributors to caries. Most parents successfully identified ‘hot air’ as not a risk factor, but only one-third could point out ‘lack of calcium’ was also not a contributor to childhood caries. Approximately the same number of parents correctly negated ‘calcium supplement’ as a preventive measure to caries. Even after explanation during the workshop, post-workshop questionnaire results still show an obviously smaller proportion of parents capable of negating this choice as a caries risk factor. This suggests that such misconception is more deeply-rooted among parents. It is necessary to correct such a misunderstanding, otherwise this could intensify the ECC problem in the way that parents feed their children frequently with the purpose of preventing caries but actually causing it. Other options were identified or negated correctly by most parents post-workshop.

Regarding the types of food causing tooth decay, in pre-workshop questionnaires significantly fewer parents were able to identify starchy food (59%) and formula milk (75%) as food that may cause caries (meanwhile more than 90% of them could correctly select sweet food and sugary drinks as the answers). The lack of knowledge about formula milk as a cariogenic food especially warrants attention – as one of the most common causes of ECC¹⁹, oral healthcare workers must help publicize this information. Cariogenicity was a relatively simple concept such that 95% or more parents could identify all food that may lead to caries in the post-workshop survey, including starchy food and formula milk.

Post-workshop questionnaire results showed general improvement in parental knowledge on general oral health care, except for some questions that were not specifically mentioned during the workshop. Although the caries prevention effect of fluoride was introduced in the PowerPoint presentation, merely half of them could correctly answer ‘fluoride added to tap water can prevent tooth decay’ in the post-workshop questionnaire, only a slight improvement compared with pre-workshop performance.

6.2 Design of the workshops

Several features have been incorporated into the workshops to make them interactive. There were advantages in using an interactive workshop for oral health education.

Firstly, parents were more willing to ask questions during the small-group discussions than during the Q&A session in a large group. Most parents were confused with the large variety of commercially-available infant oral health care products such as ‘swallowable toothpaste’ and different types of cleaning tools. They wanted to know more about pediatric dentists and the appropriate timing to visit them. Moreover they expressed concerns about their children not being able to cooperate. The discussion, compared to conventional one-way dentist-to-patient oral hygiene instruction, is more interactive and can help the organizer to address the concerns of parents in future workshops.

Secondly, experience in dietary analysis can be provided. Parents were able to satisfactorily analyze the dietary record sample, which meant they were aware of both the types of cariogenic food and the importance of reducing frequency of meals. This explains the improvement in the scores (factors and types of food that cause caries) from pre- to post-workshop surveys.

Finally, organizers can provide tailor-made oral hygiene instructions according to infant age and number of teeth using the partially-dentate models of infants, which can be easily fabricated in the laboratory. Parents will have a better understanding as the tooth models that are available commercially do not usually reflect the small size of the oral cavity and the limited number of erupted teeth in infants.

6.3 Effectiveness of workshops

By comparing the scores of pre- and post-workshop surveys, effectiveness of the workshops in improving parents' knowledge and awareness on infant oral health care in the short term can be assessed. From post-workshop questionnaire results, all knowledge scores are markedly improved, proving the workshop effective.

Upon receiving positive feedback on the usefulness of the workshop in addition to the remarkable improvement in the scores, we recommend that future public health workshops for parents can include small-group discussions that are designed to accommodate their needs and concerns.

6.4 Limitations

Questionnaires were used to identify misconceptions and evaluate the knowledge of parents, and they can be used as a reference for future oral health education on similar target groups. However, the sample group was limited to parents attending nurseries or playgroups, who were more motivated to sign up for the workshop. This may contribute to variations from the general population of parents with young children.

Long-term follow-up and oral examination of infants were not done due to limited time frame of this project. In spite of the improvements in knowledge and awareness of parents surveyed, the above evaluation lacks assessment of the effect on motivating and sustaining the caregivers' practice in cleaning their children's teeth in the long run. Feedback from some parents at the end of the workshop showed that they were not confident enough to apply what they have learned, possibly due to the lack of cooperation from their infants. Also, some parents were not assured they could teach their children the proper oral hygiene methods even when they believe they have learned the proper way to clean their children's teeth.

Concerning the poor performance of parents on the question about water fluoridation, this question was to allow parents to apply the principle of 'fluoride preventing caries' to a paraphrased statement. Such slight improvement in the post-workshop survey shows that parents failed to extrapolate their knowledge and apply them to similar topics. Therefore the workshop's effectiveness is confined to what had been addressed in the presentation and small-group discussion.

7. CONCLUSION

1. According to the results from the pre-workshop surveys, the following deficiencies in infant oral health knowledge are identified from the participants:
 - Underestimation of the importance of parent-assisted infant oral health practice, and the necessity of daily teeth-cleaning twice a day in caries prevention.
 - Underestimation of the importance of the role of dentists in early prevention of caries and other infant dental problems.
 - Unawareness of overnight bottle-feeding as a major risk factor of ECC.
 - Inability to identify the causal relationship between high frequency of meals and caries, and the importance of reducing eating and drinking frequency in caries prevention.
 - Unawareness of the transmission of caries-inducing bacteria from mother to child.
 - Inability to identify starchy food and formula milk as cariogenic food.
 - Misconceptions that the lack of calcium being a risk factor of caries and calcium supplements being a preventive measure of caries.
 - Inability to identify water fluoridation as a preventive measure of caries.
2. An interactive workshop consisting of PowerPoint presentation and small-group discussion and activities was formulated to promote the awareness and knowledge of infant oral care among parents with young children and successfully delivered.
3. A vast majority of participants understood the information delivered and agreed that the workshop covered all information they needed.
4. Short-term effectiveness of the workshops was evaluated through pre-and post-workshop surveys. The effectiveness was proven by the marked improvement of all scores (general knowledge score, infant knowledge score and attitude score) in the post-workshop survey.

8. RECOMMENDATIONS

Acknowledging the limitations of this project, we would like to make several recommendations to facilitate further research and promotion on infant oral health care:

1. A large-scale infant oral health survey with a larger sample size involving more diverse geographic areas in Hong Kong should be conducted to confirm the results found in this study.
2. Interactive workshops are effective in promoting infant oral health care. The interactive workshop formulated in this study should be widely used in future oral health promotion opportunities.
3. Conduct post-workshop surveys at least twice: immediately after the workshop and after a certain time interval so as to evaluate both short-term and long-term effectiveness of the workshops.
4. Pre-workshop and post-workshop (after a certain time interval) infant oral examinations can be performed to evaluate the effectiveness of workshop in terms of implementation of infant oral hygiene practices. The accuracy of such evaluation is, however, affected by the possibility that the children's teeth may be cleaned by other caregivers instead of the workshop participants themselves.
5. More guidelines can be provided to both parents and general dentists in relation to the need for and advantages of early dental check-up for infants. Early prevention protocols should be employed as soon as possible to prevent ECC.

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Po Leung Kuk Mok Hing Yiu Crèche,
TWGHs Kwan Fong Nursery School,
Yuen Long Rhenish Day Crèche,

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11. APPENDICES

Appendix I: Workshop proposal

**The University of Hong Kong
Faculty of Dentistry
Group 4.2 Public Health Project 2014-2015
Infant Oral Healthcare Workshop Proposal**

Aim:

Our workshop aims to promote the awareness and knowledge of infant oral care among parents with children aged 2 or below.

Our rationale:

It has come to our attention that Hong Kong parents may not have sufficient knowledge and awareness on infant oral health management. Negligence of babies' oral health may lead to early childhood caries with detrimental effects on eating, speech and the general well being of the children. As the old saying goes, prevention is better than cure, hence we, as dental students, are intended to hold an interactive workshop on promoting the knowledge and awareness on infant oral health.

Proposed workshop information:

Target group: Parents with children younger than 2 years old

Target number of participants: 25

Number of workshops: 1

Proposed date: 28 Feb – 7 Mar 2015

Proposed time: To be confirmed

Approximate time for each workshop: 75 mins

Workshop flow:

Pre-workshop survey (~10 mins)

Questionnaires will be given to assess the knowledge level on infant oral hygiene before workshop

Infant oral health education

PowerPoint and video presentations (~20 mins)

Including:

- Oral cleaning method before tooth eruption
- Teething sequence and discomfort caused
- Importance of primary dentition
- Proper use of toothbrush, toothpaste and other cleaning aids
- Early childhood caries: causes, consequences, prevention,
- Time for dental examination
- Common misconceptions regarding dental care

Small group oral hygiene care demonstration and activities (~25 mins)

Q & A session (~10 mins)

Post-workshop survey (~10 mins)

Questionnaires will be given to assess the knowledge of parents and evaluate outcome of the workshop

Souvenirs

Souvenirs will be distributed to each participant at the end of the workshop

Appendix II: PowerPoint slides



○ 情緒煩躁不安
 家長可多跟寶寶玩耍以減輕不安



○ 牙肉腫脹
 如果呈紅色或藍色 請盡早帶幼兒見牙醫

出牙時會發燒嗎？



出牙是**不會**引致發燒的！

但有機會因為出牙喜歡咬東西而增加受細菌感染的風險
 如有發燒，應立即帶他找醫生求診

最常見兒童疾病
蛀牙



本港兒童蛀牙情況

○ 2011 口腔健康調查顯示

- 五歲兒童有一半以上患有蛀牙
- 平均有多於兩顆蛀牙

蛀牙成因

• 食物（糖） + 細菌 = 酸素

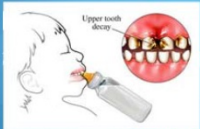


• 酸素 + 時間 + 牙齒 = 蛀牙

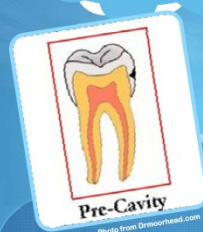


早期兒童蛀牙

- 常見原因: 吃著奶瓶睡覺或餵奶過頻
- 然後是主要白齒。
- 牙齦炎、感染和失眠。

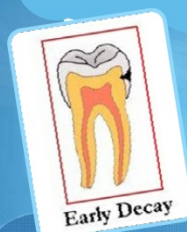


蛀牙過程



初期蛀牙

通常是在刷牙時，沒有任何不舒服的感覺，



蛀牙蔓延至象牙質

吃冷、熱、酸、甜食物時，患者可能會感到牙齒酸痛；此外，牙齒並可能出現蛀洞。



Deep Decay
Photo from Drmoorhead.com

蛀牙蔓延至牙髓

產生劇痛，影響睡眠
牙髓也可能受細菌感染，甚至壞死

牙齒背面亦須留意...



- 定期找牙醫檢查
 - 半年到一年
- 盡早治療
 - 可發現初期蛀牙
 - 簡化療程
 - 減少支出
 - 減少不適及痛楚



Dentalhealthweek.com

否則...



乳齒蛀掉不用處理?

乳齒蛀掉不用處理?

- 誤解: 乳齒遲早會自己用, 何必浪費時間治療?
- 正解: 乳齒蛀牙的影響包括:
 1. 影響小朋友形象, 打擊自信心
 2. 痛楚
 3. 影響恆齒生長



Bracesdentalscentercare.com
Deltadentalamblog.com

我會將口腔細菌傳染給嬰兒嗎？

- 會。導致蛀牙的病菌可透過口水傳染



Babytoteira.com



如何護理寶寶的牙齒？

從飲食開始！

0至6個月



Photo from www.babylike.com.tw

- 在BB睡著時停止餵哺。
- 不要讓寶寶養成含著奶或有甜味的飲品睡覺的習慣。
- 隨著寶寶成長，在他6個月大時訓練他每天有規律地吃6至8餐。

6個月至2歲

- 定時餵哺寶寶，在寶寶大概6個月大時，把他每天所需食物，包括奶品分成6至8餐來餵哺，兩餐之間只讓他喝白開水。
- 寶寶漸漸長大，就該讓他每天定時吃喝，每天最多6餐。
- 不要讓寶寶含著盛有奶的奶瓶睡覺。
- 寶寶約9個月大就該開始改用戒奶杯，最好在寶寶14個月大前完全轉用戒奶杯進食。

可引致蛀牙的食物

- 糖
- 朱古力
- 果汁
- 汽水
- 配方奶粉
- 澱粉質類食物



kingkid.com



Chocolate candy business



Ultimateahealthguide.com

如何清潔寶寶牙齒？



從寶寶出生開始，家長就該每晚定時替他抹口腔

Toothclub.org.hk



BB第一顆白齒長出後，家長必須每天在孩子早上起床及晚上睡前替他刷牙

www.aftalodentists.com



孩子兩歲前，家長該為寶寶選擇一支刷毛柔軟，刷頭長度不大於一毫子硬幣直徑的牙刷。

imgkid.com Toothclub.org.hk

使用含氟牙膏

- 有助預防蛀牙
- 初期替孩子刷牙是不需使用牙膏
- 可待孩子會吐口水後才開始使用
- 2歲以下薄薄的一層牙膏已足夠



fig 1: Under 2, Smear
fig 2: 2 years and older, Pro-Size®

American Association of Pediatric Dentistry

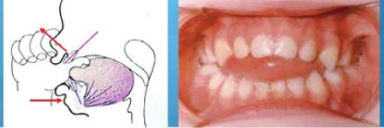
當寶寶口腔清潔恰當...



常見問題和解答

我的孩子吸吮自己的手指可以嗎？

- 嬰兒吸吮手指很正常
- 大多數在**2歲**時都能停止
- 在**4歲**後還吸吮手指會導致牙齒歪斜和/或咬合問題。



IntelligentDental.com

我的孩子使用人工奶嘴可以嗎？

- 可以
- 但**不要**浸入糖、蜜或甜液體中
- 嘗試讓您的孩子在**2歲**前棄用人工奶嘴。

牛奶含豐富鈣質，常飲有益牙齒？

- 乳齒長出後不會受到身體內鈣質高低影響
- 奶粉含高糖份- 長期頻密飲用引致蛀牙

「熱氣」會引致蛀牙嗎？

- **不會！**
- 沒有任何科學研究証實「熱氣」會引致蛀牙

發問環節



參考資料

- Tooth Club HK government
http://www.toothclub.gov.hk/chi/home_01_02_03.html
- KE Project On Becoming Babywise
<http://facdent.hku.hk/index.php/engagement/community-projects/>
- Dental Care Today
<http://www.dentalcaredtoday.net/index.asp?f=childdentaltips&l=ch>



2月3日	
8 : 30	朱古力奶 花生醬麵包
11 : 30	橡皮糖
12 : 45	火腿通粉
15 : 30	夾心餅 益力多
17 : 30	薯條 可樂
19 : 00	白飯 蒸肉餅 菜
21 : 20	橙汁
22 : 30	朱古力 (刷牙後)



Appendix III: Tools used in small-group demonstration on infant oral hygiene instructions



Appendix IV: Souvenir sets for participants



Appendix V: Pre-workshop questionnaire (English version)

The University of Hong Kong
Faculty of Dentistry
Group 4.2 Community Health Project 2014-2015
Infant Oral Healthcare Workshop – Pre-workshop Questionnaire



Basic information (for research purposes only)

Family information

Number of children above age 2: _____ Number of children aged 0 to 2: _____

Your information

Age: _____ Gender: Male Female

Relationship with your child: _____

Education level: Primary education or below Secondary education Tertiary education or above

Information of your child aged 0 to 2

Age: _____ months Gender: Male Female

How many teeth does your child have: _____

Who is the usual carer of your child: _____

Part A: Your child's oral health behaviour

1. Have you started introducing solid food to your child?
 Yes (Proceed to Question 2) No (Skip to Question 3)
2. How many times did your child intake the following food daily last week?
 - a) Sugar/ chocolate
 None Less than once daily Once to twice daily Three times or more daily
 - b) Soft drink/ beverage with sugar (e.g. Fruit juice)
 None Less than once daily Once to twice daily Three times or more daily
 - c) Fruits
 None Less than once daily Once to twice daily Three times or more daily
3. Has your child gone to sleep with a nursing bottle of milk or sugary drink in the mouth?
 No Yes, frequency: _____ times per week
4. When do you feed your child?
 On demand By clock
5. How many times do you feed your child every day, including snacks?
 5 times or less 6 - 8 times 9 - 11 times 12 times or more

6. Has there been someone (including yourself) cleaning your child's mouth and teeth?
 No (Skip to Question 9) Yes (Proceed to Questions 6a and 6b)
- 6a) Frequency: Less than once a day
 Once a day
 Twice or more a day
- 6b) Method: Use toothbrush
 Use gauze or cotton swab
 Other methods, please specify: _____
7. Does your child use toothbrush at present?
 No toothbrush is used
 Yes, the size of the toothbrush is approximately: Diameter of a 10-cents coin
 Diameter of a 50-cents coin
 Diameter of a 1-dollar coin
 Not sure
8. Does your child use toothpaste at present?
 No toothpaste is used
 Yes, use children's toothpaste
 Yes, use adult's toothpaste
9. Has your child been to a dentist?
 No
 Yes, reason: (multiple answers allowed) Check-up
 Extraction
 Restoration
 Others, please specify: _____

Part B: Knowledge on general oral healthcare

1. Which of the following will contribute to tooth decay? (Multiple answers allowed)
- | | |
|---|---|
| <input type="checkbox"/> Too much sweet food | <input type="checkbox"/> Improper brushing/ poor oral hygiene |
| <input type="checkbox"/> Frequent meals/ snacks | <input type="checkbox"/> Hot air |
| <input type="checkbox"/> Lack of calcium | <input type="checkbox"/> Others, please specify: _____ |
| <input type="checkbox"/> Bacteria/ plaque | <input type="checkbox"/> Uncertain |
2. Which of the following food may cause tooth decay? (Multiple answers allowed)
- | | |
|--|---|
| <input type="checkbox"/> Sweets and chocolate | <input type="checkbox"/> Fruit juice |
| <input type="checkbox"/> Starch (e.g. Bread, biscuits, rice) | <input type="checkbox"/> Soft drinks |
| <input type="checkbox"/> Meats | <input type="checkbox"/> Formula milk |
| <input type="checkbox"/> Vegetables | <input type="checkbox"/> Sugar-free candies |
3. Which of the following will help prevent tooth decay? (Multiple answers allowed)
- | | |
|---|--|
| <input type="checkbox"/> Reduce eating sweet food | <input type="checkbox"/> Reduce frequency of meals or snacks |
| <input type="checkbox"/> Calcium supplement | <input type="checkbox"/> Regular dental check-up |
| <input type="checkbox"/> Fluoridated tooth paste | <input type="checkbox"/> Chinese medicine (e.g. Herbal tea) |

4. Please state "True", "False" or "Uncertain" for the following statements:

	True	False	Uncertain
a) State of teeth is greatly decided at birth and is not related to self-care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Dental problems can affect the whole body.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Using toothbrush alone is sufficient for good oral hygiene, other aids (floss, ID brush, and mouth rinse) are unnecessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Using fluoridated tooth paste is bad for general health.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Fluoride added to tap water can prevent tooth decay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part C: Knowledge on infant oral healthcare

1. How many primary teeth does a child normally have? _____

2. Please state "True", "False" or "Uncertain" for the following statements:

	True	False	Uncertain
a) Primary tooth decays does not affect permanent teeth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Milk is beneficial to children's teeth because it contains calcium.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Habits like thumb sucking and prolonged pacifier sucking cause poor alignment of teeth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Tooth decay-inducing bacteria can be transmitted from mother to child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Do you agree with the following statements?

	Agree	Disagree	Uncertain
a) It is unnecessary to treat decays of primary teeth as they will exfoliate eventually.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) It is unnecessary to brush teeth until all primary teeth have erupted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) It is unnecessary to visit the dentist if there is no toothache or obvious change of colours of your child's teeth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) It is acceptable to let your child sleep with a bottle of milk so he/she does not feel hungry during the night.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How should a baby's mouth be cleaned BEFORE eruption of primary teeth?

- No need to clean
- Use toothbrush
- Use gauze or cotton swab
- Other methods, please specify: _____
- Uncertain

5. When must a child start using toothbrush?

- After eruption of the first primary tooth
- After eruption of the first primary molar
- After eruption of all primary teeth
- Others, please specify: _____
- Uncertain

6. What size of toothbrush should be used for children younger than 2 years old?

- Children younger than 2 years old should not use toothbrush
- Diameter of a 10-cents coin
- Diameter of a 50-cents coin
- Diameter of a 1-dollar coin
- Others, please specify: _____
- Uncertain

7. When should a child start using toothpaste?

- After eruption of the first primary tooth
- After eruption of all primary teeth
- It depends, as soon as children can spit out excess toothpaste
- Others, please specify: _____
- Uncertain

8. How much toothpaste should be used for children less than 2 years old?

- A Smear
- Pea-sized
(5mm diameter)
- Regular (1 - 2cm)
- Uncertain



- End of questionnaire -

Appendix V: Pre-workshop questionnaire (Chinese version)

香港大學牙醫學院
四年級 第二組 公共衛生項目 2014-2015
幼兒家長口腔衛生教育工作坊 - 工作坊前問卷調查



基本資料 (供研究用)

家庭資料

2 歲以上孩子數目：_____ 0 至 2 歲孩子數目：_____

家長資料

年齡：_____ 性別： 男 女

關係：_____

教育程度： 小學程度或以下 中學程度及預科 大專程度或以上

0 至 2 歲孩子資料

年齡：_____ 月 性別： 男 女

牙齒數目：_____

日常主要照顧你孩子的人是：_____

甲部：孩子飲食及口腔健康習慣

1. 你的孩子有進食固體食物嗎？

有 (請繼續回答第 2 題) 沒有 (請回答第 3 題)

2. 你的孩子過去一星期每天平均進食下列食品的次數：

a) 糖果 / 朱古力

無 每天少於 1 次 每天 1-2 次 每天 3 次或以上

b) 汽水 / 含糖份飲品 (如果汁)

無 每天少於 1 次 每天 1-2 次 每天 3 次或以上

c) 水果

無 每天少於 1 次 每天 1-2 次 每天 3 次或以上

3. 你的孩子有沒有含著裝有奶或甜飲品的奶瓶睡覺？

沒有 有，每星期 _____ 次

4. 你給孩子餵哺的習慣是：

孩子想吃時就餵哺 每天固定時間餵哺

5. 你平均每天給孩子餵哺多少次？

0-5 次 6-8 次 9-11 次 12 次或以上

6. 有沒有人（包括你自己）為你的孩子清潔口腔？
- 沒有（請回答第 9 題） 有（請繼續回答問題 6a, 6b）
- 6a) 次數： 每天少於 1 次
 每天 1 次
 每天 2 次或以上
- 6b) 方式： 使用牙刷
 用紗布或棉棒等擦拭
 其他，請註明 _____
7. 你的孩子現時有沒有使用牙刷？
- 沒有使用牙刷
 有，牙刷的大小為： 一毫子硬幣的直徑
 五毫子硬幣的直徑
 一元硬幣的直徑
 不知道
8. 你的孩子現時有沒有使用牙膏？
- 沒有使用牙膏 使用兒童牙膏 使用成人牙膏
9. 你的孩子有沒有到過牙科診所檢查牙齒或接受治療？
- 沒有
 有，原因是：（可選多項） 檢查
 拔牙
 補牙
 其他原因，請註明 _____

乙部：一般口腔健康常識

1. 下列哪些原因會引致蛀牙？（可選多項）
- | | |
|---------------------------------------|--|
| <input type="checkbox"/> 吃糖果 / 甜的零食太多 | <input type="checkbox"/> 刷牙方法不正確 / 牙齒不清潔 |
| <input type="checkbox"/> 進食次數太頻密 | <input type="checkbox"/> 熱氣 / 燥熱等中醫理論 |
| <input type="checkbox"/> 缺少鈣質 | <input type="checkbox"/> 其他原因，請註明 _____ |
| <input type="checkbox"/> 細菌 / 牙垢 | <input type="checkbox"/> 不清楚引致蛀牙的原因 |
2. 下列哪些食物可引致蛀牙？（可選多項）
- | | |
|--|---------------------------------|
| <input type="checkbox"/> 糖果、朱古力 | <input type="checkbox"/> 果汁 |
| <input type="checkbox"/> 澱粉質（如麵包、餅干、飯） | <input type="checkbox"/> 汽水 |
| <input type="checkbox"/> 肉類 | <input type="checkbox"/> 奶粉 |
| <input type="checkbox"/> 蔬菜 | <input type="checkbox"/> 不含糖份糖果 |
3. 下列哪些方法可以預防蛀牙？（可選多項）
- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> 少吃糖果 / 甜的零食 | <input type="checkbox"/> 減少進食次數 |
| <input type="checkbox"/> 補充鈣質 | <input type="checkbox"/> 定期看牙醫 |
| <input type="checkbox"/> 使用含氟牙膏刷牙 | <input type="checkbox"/> 服用中藥（如飲涼茶） |

4. 請為以下句子挑選「是」，「否」，或「不知道」：

	是	否	不知道
一) 牙齒好壞是天生的，與後天保護關係不大。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
二) 牙齒可以影響全身健康。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
三) 每天用牙刷已經足夠維持口腔衛生，其他口腔用品，例：牙線、牙縫刷和漱口水並不需要。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
四) 使用含氟牙膏有損健康。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
五) 自來水內的氟化物可防止蛀牙。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

丙部：嬰兒口腔健康常識

1. 小孩子一般有多少隻乳齒？ _____

2. 請為以下句子挑選「是」，「否」，或「不知道」：

	是	否	不知道
一) 乳齒蛀牙不會影響恆齒。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
二) 牛奶含有鈣質，所以對乳齒有益。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
三) 嘜手指、含奶嘴等習慣會導致牙齒排列不整齊。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
四) 引至蛀牙的細菌可以由媽媽直接傳給孩子的。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. 你是否同意以下說法？

	同意	不同意	不知道
一) 乳齒毋需接受治療因為它們將被恆齒取替。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
二) 在所有乳齒長出前不需要刷牙。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
三) 如果孩子沒有牙痛或牙齒變色，可以不用帶他們定期看牙醫。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
四) 為了令孩子晚上不會肚餓，父母可以讓他們含奶樽睡覺，不會影響口腔健康。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. 在孩子的乳齒生出前清潔口腔的方法：

- 不需清潔
- 使用牙刷
- 用紗布或棉棒等擦拭
- 其他方式，請註明 _____
- 不知道

5. 小孩子何時開始必須使用牙刷？

- 第一顆乳齒長出後
- 第一顆白齒長出後
- 所有乳齒長出後
- 其他，請註明 _____
- 不知道

6. 年齡小於兩歲的小孩子應該使用刷頭多大的牙刷？

- 年齡小於兩歲不需使用牙刷
- 大約一毫子硬幣的直徑
- 五毫子硬幣的直徑
- 一元硬幣的直徑
- 其他，請註明 _____
- 不知道

7. 小孩子應該何時開始使用牙膏？

- 第一顆乳齒長出後
- 所有乳齒長出後
- 當小孩子懂得吐出多餘的牙膏時便可以開始使用
- 其他，請註明 _____
- 不知道

8. 年齡小於兩歲的小孩子如有需要使用牙膏，應該使用多少牙膏？

- 一層薄塗抹
- 豆般大小
(直徑 5 mm)
- 一般 (1 – 2 cm)
- 不知道



– 問卷完 –

Appendix VI: Post-workshop questionnaire (English version)

**The University of Hong Kong
Faculty of Dentistry
Group 4.2 Community Health Project 2014-2015
Infant Oral Healthcare Workshop – Post-workshop Questionnaire**

Part A: Knowledge on general oral healthcare

1. Which of the following will contribute to tooth decay? (Multiple answers allowed)

- | | |
|---|---|
| <input type="checkbox"/> Too much sweet food | <input type="checkbox"/> Improper brushing/ poor oral hygiene |
| <input type="checkbox"/> Frequent meals/ snacks | <input type="checkbox"/> Hot air |
| <input type="checkbox"/> Lack of calcium | <input type="checkbox"/> Others, please specify: _____ |
| <input type="checkbox"/> Bacteria/ plaque | <input type="checkbox"/> Uncertain |

2. Which of the following food may cause tooth decay? (Multiple answers allowed)

- | | |
|--|---|
| <input type="checkbox"/> Sweets and chocolate | <input type="checkbox"/> Fruit juice |
| <input type="checkbox"/> Starch (e.g. Bread, biscuits, rice) | <input type="checkbox"/> Soft drinks |
| <input type="checkbox"/> Meats | <input type="checkbox"/> Formula milk |
| <input type="checkbox"/> Vegetables | <input type="checkbox"/> Sugar-free candies |

3. Which of the following will help prevent tooth decay? (Multiple answers allowed)

- | | |
|---|---|
| <input type="checkbox"/> Reduce eating sweet food | <input type="checkbox"/> Reduce frequency of meals or snacks time |
| <input type="checkbox"/> Calcium supplement | <input type="checkbox"/> Regular dental check up |
| <input type="checkbox"/> Fluoridated tooth paste | <input type="checkbox"/> Chinese medicine (e.g. Herbal tea) |

4. Please state “True”, “False” or “Uncertain” for the following statements:

- | | True | False | Uncertain |
|---|--------------------------|--------------------------|--------------------------|
| a) State of teeth is greatly decided at birth and is not related to self-care. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Dental problems can affect the whole body. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Using toothbrush alone is sufficient for good oral hygiene, other aids (floss, ID brush, and mouth rinse) are unnecessary. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Using fluoridated tooth paste is bad for general health. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Fluoride added to tap water can prevent tooth decay. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Part B: Knowledge on infant oral healthcare

1. How many primary teeth does a child normally have? _____

2. Please state “True”, “False” or “Uncertain” for the following statements:

- | | True | False | Uncertain |
|--|--------------------------|--------------------------|--------------------------|
| a) Primary tooth decay does not affect permanent teeth. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Milk is beneficial to children’s teeth because it contains calcium. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Habits like thumb sucking and prolonged pacifier sucking cause poor alignment of teeth. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Tooth decay-inducing bacteria can be transmitted from mother to child. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. Do you agree with the following statements?

	Agree	Disagree	Uncertain
a) It is unnecessary to treat decays of primary teeth as they will exfoliate eventually.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) It is unnecessary to brush teeth until all primary teeth have erupted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) It is unnecessary to visit the dentist if there is no toothache or obvious change of colours of your child's teeth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) It is acceptable to let your child to sleep with a bottle of milk so he/she does not feel hungry during the night.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How should a baby's mouth be cleaned BEFORE eruption of primary teeth?

- No need to clean
- Use toothbrush
- Use gauze or cotton swab
- Other methods, please specify: _____
- Uncertain

5. When must a child start using toothbrush?

- After eruption of the first primary tooth
- After eruption of the first primary molar
- After eruption of all primary teeth
- Others, please specify: _____
- Uncertain

6. What size of toothbrush should be used for children younger than 2 years old?

- Children young than 2 years old should not use toothbrush
- Diameter of a 10-cents coin
- Diameter of a 50-cents coin
- Diameter of a 1-dollar coin
- Others, please specify: _____
- Uncertain

7. When should a child start using toothpaste?

- After eruption of the first primary tooth
- After eruption of all primary teeth
- It depends, as soon as children can spit out excess toothpaste
- Others, please specify: _____
- Uncertain

8. How much toothpaste should be used for children less than 2 years old?

- A Smear
- Pea-sized (5mm diameter)
- Regular (1 - 2 cm)
- Uncertain



Part C: Evaluation of the workshop

1. Rating

	Totally disagree			Totally agree	
	1	2	3	4	5
a) I learned more about infant oral healthcare after attending this workshop.	1	2	3	4	5
b) I am able to understand the messages delivered by this workshop.	1	2	3	4	5
c) This workshop covers all of the information I need concerning infant oral healthcare.	1	2	3	4	5
d) This workshop has taught me new practices and/or methods to improve my child's oral hygiene.	1	2	3	4	5
e) I am confident to practise proper infant oral healthcare on my child after attending this workshop.	1	2	3	4	5
f) I am confident that I can teach my child to practise proper oral hygiene methods after attending this workshop.	1	2	3	4	5
g) I think the workshop is useful.	1	2	3	4	5
h) I think the workshop is interesting.	1	2	3	4	5

2. Action plan

a) What improved or new practices would you carry out on your child? How soon would you start these?

b) What difficulties would you expect when carrying out your plan? (Multiple answers allowed)

- I lack the time to carry out my plan effectively.
- I find it hard to communicate with my child.
- My child may not be able to follow my instructions.
- I am not able to master the oral hygiene skills.
- Others, please specify: _____

- End of questionnaire -

Appendix VI: Post-workshop questionnaire (English version)

香港大學牙醫學院

四年級 第二組 公共衛生項目 2014-2015

幼兒家長口腔衛生教育工作坊 - 工作坊後問卷調查



甲部：一般口腔健康常識

1. 下列哪些原因會引致蛀牙？（可選多項）

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> 吃糖果 / 甜的零食太多 | <input type="checkbox"/> 刷牙方法不正確 / 牙齒不清潔 |
| <input type="checkbox"/> 進食次數太頻密 | <input type="checkbox"/> 熱氣 / 燥熱等中醫理論 |
| <input type="checkbox"/> 缺少鈣質 | <input type="checkbox"/> 其他原因，請註明 _____ |
| <input type="checkbox"/> 細菌 / 牙垢 | <input type="checkbox"/> 不清楚引致蛀牙的原因 |

2. 下列哪些食物可引致蛀牙？（可選多項）

- | | |
|--|---------------------------------|
| <input type="checkbox"/> 糖果、朱古力 | <input type="checkbox"/> 果汁 |
| <input type="checkbox"/> 澱粉質（如麵包、餅干、飯） | <input type="checkbox"/> 汽水 |
| <input type="checkbox"/> 肉類 | <input type="checkbox"/> 奶粉 |
| <input type="checkbox"/> 蔬菜 | <input type="checkbox"/> 不含糖份糖果 |

3. 下列哪些方法可以預防蛀牙？（可選多項）

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> 少吃糖果 / 甜的零食 | <input type="checkbox"/> 減少進食次數 |
| <input type="checkbox"/> 補充鈣質 | <input type="checkbox"/> 定期看牙醫 |
| <input type="checkbox"/> 使用含氟牙膏刷牙 | <input type="checkbox"/> 服用中藥（如飲涼茶） |

4. 請為以下句子挑選「是」，「否」，或「不知道」：

- | | 是 | 否 | 不知道 |
|---|--------------------------|--------------------------|--------------------------|
| 一) 牙齒好壞是天生的，與後天保護關係不大。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 二) 牙齒可以影響全身健康。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 三) 每天用牙刷已經足夠維持口腔衛生，其他口腔用品，例：牙線、牙縫刷和漱口水並不需要。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 四) 使用含氟牙膏有損健康。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 五) 自來水內的氟化物可防止蛀牙。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

乙部：嬰兒口腔健康常識

1. 小孩子一般有多少隻乳齒？ _____

2. 請為以下句子挑選「是」，「否」，或「不知道」：

- | | 是 | 否 | 不知道 |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 一) 乳齒蛀牙不會影響恆齒。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 二) 牛奶含有鈣質，所以對乳齒有益。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 三) 嘜手指、含奶嘴等習慣會導致牙齒排列不整齊。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 四) 引至蛀牙的細菌可以由媽媽直接傳給孩子的。 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. 你是否同意以下說法？

	同意	不同意	不知道
一) 乳齒毋需接受治療因為它們將被恆齒取替。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
二) 在所有乳齒長出前不需要刷牙。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
三) 如果孩子沒有牙痛或牙齒變色，可以不用帶他們定期看牙醫。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
四) 為了令孩子晚上不會肚餓，父母可以讓他們含奶樽睡覺，不會影響口腔健康。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. 在孩子的乳齒生出前清潔口腔的方法：

- 不需清潔
- 使用牙刷
- 用紗布或棉棒等擦拭
- 其他方式，請註明 _____
- 不知道

5. 小孩子何時開始必須使用牙刷？

- 第一顆乳齒長出後
- 第一顆白齒長出後
- 所有乳齒長出後
- 其他，請註明 _____
- 不知道

6. 年齡小於兩歲的小孩子應該使用刷頭多大的牙刷？

- 年齡小於兩歲不需使用牙刷
- 大約一毫子硬幣的直徑
- 五毫子硬幣的直徑
- 一元硬幣的直徑
- 其他，請註明 _____
- 不知道

7. 小孩子應該何時開始使用牙膏？

- 第一顆乳齒長出後
- 所有乳齒長出後
- 當小孩子懂得吐出多餘的牙膏時便可以開始使用
- 其他，請註明 _____
- 不知道

8. 年齡小於兩歲的小孩子如有需要使用牙膏，應該使用多少牙膏？

一層薄塗抹

豆般大小
(直徑 5 mm)

一般 (1 – 2 cm)

不知道



丙部：口腔衛生教育工作坊評估

1. 評分

	非常不同意					非常同意				
	1	2	3	4	5	1	2	3	4	5
一) 參加工作坊增加了我對嬰兒口腔健康的認識。										
二) 我能夠明白工作坊帶出的信息。										
三) 這工作坊提供了我所需要知道的嬰兒口腔健康資訊。										
四) 參加工作坊後，我學會了為嬰兒清潔口腔的新方法。										
五) 參加工作坊後，我有信心為我的孩子有效地清潔口腔。										
六) 參加工作坊後，我有信心有效地教我的孩子如何清潔口腔。										
七) 我覺得這工作坊對我有幫助。										
八) 我覺得這工作坊的過程有趣。										

2. 行動計劃

a) 參加工作坊後，你會如何改善替孩子清潔口腔的方法？何時開始？

b) 你預計會有什麼困難？（可選多項）

- 我沒有時間。
- 我未能夠與我的孩子溝通。
- 我的孩子未能夠跟從我的指令。
- 我未能學會正確地清潔我孩子的口腔的新方法。
- 其他，請註明 _____

— 問卷完 —

Appendix VII: Ethical approval



香港大學
University of Hong Kong



醫院管理局
HOSPITAL
AUTHORITY

香港大學及醫管局港島西醫院聯網研究倫理委員會

**Institutional Review Board of the University of Hong Kong/
Hospital Authority Hong Kong West Cluster (HKU/HA HKW IRB)**

Address: Rm 901, Administration Block, QMH Tel 2255 3923 2255 4086 Fax 2255 4735

Mr. CL Ng
BDS Student
(c/o Dr. May CM Wong, Rm.3B20, Prince Philip Dental Hospital), HKU
16-Feb-15

Dear Mr. Ng,

IRB Reference Number: **UW 15-088**

The HKU/HA HKW IRB is authorized by a joint agreement of the University of Hong Kong and Hospital Authority Hong Kong West Cluster to review and monitor clinical research. It serves to ensure that research complies with the Declaration of Helsinki and acts in accordance to ICH GCP guidelines, local regulations and Hospital Authority and the University policies.

In accordance with our standard operating procedures, we have duly performed ethics and scientific review of your application/submission. We hereby write to inform you that your application/submission has been approved by an expedited process with details shown below.

Protocol title	: Promotion of Knowledge and Awareness of parents in HK about Infant Oral Healthcare
Study site(s)	: As stated in application form
IRB reviewer	: Dr. James Ho, Deputy Chairman of the HKU/HA HKW IRB
Document(s) approved	: 01. Clinical Research Ethics Review Application Form : 02. Research Protocol; Version No. 2 dated 6 February, 2015 : 03. Information Sheet; Version 2 dated 6 February 2015 (English and Chinese) : 04. Participant Consent Form; Version 1 dated 28 January 2015 (English and Chinese) : 05. Pre-Workshop Questionnaire (English and Chinese Version) : 06. Post-Workshop Questionnaire (English and Chinese Version)
Document(s) reviewed	: 07. Short CV of Principal Investigator and Co-Investigator
Regular Progress Report(s) Required	: Every 12 months from the date of initial approval and during the period of the study

You, being the principal investigator of the study at your study site, are reminded to comply with our requirements and to maintain communication with us during the period of the study by undertaking the principal investigator's responsibilities including (but not limited to):

- if the study is an industry-sponsored clinical study, submitting to us a copy of the fully executed indemnity agreement satisfying the Hospital Authority's requirement prior to commencement of the study (if it has not been submitted yet);
- observing and complying with all applicable requirements under our standard operating procedure ("HKU/HA HKW IRB SOP"), the Declaration of Helsinki and the ICH GCP (if applicable)
- submitting regular progress report(s) at the required intervals (as specified above) in accordance with the requirements in the IRB SOP;
- not implementing any amendment/change to any approved study document/material without our written approval, except where necessary to eliminate any immediate hazard to the subjects or if an amendment/change is only of an administrative or logistical nature;
- notifying us of any new information that may adversely affect the rights, safety or well-being of the subjects or the proper conduct of the study;

- reporting any deviation from the study protocol or compliance incident that has occurred during the study and may adversely affect the rights, safety or well-being of any subject in accordance with the requirements in the IRB SOP;
- submitting safety reports on all SAEs observed at your study site or SUSARs reported from outside your study site in accordance with the requirements in the IRB SOP; and
- submitting a final report in accordance with the requirements in the IRB SOP upon completion or termination of the study at your study site.

In addition to the above, you are also reminded to observe and comply with other applicable regulatory and management requirements including (but not limited to):

- if required by Hong Kong laws or regulations, obtaining a certificate for clinical trial through the Hong Kong Department of Health and complying with the associated requirements; and
- obtaining the necessary consent from the management of your institution/department in accordance with the requirements of your institution/department; and
- obtaining prior approval before commencing the study from the appropriate head(s) of the study site (e.g. Head / COS / Nurse Manager / Department Manager etc) with regards to the use of facilities and subject recruitment logistics/arrangement.

Yours sincerely,



Mr. Chris Yip
HKU/HA HKW IRB Secretary

Appendix VIII: Introduction of the workshop (English version)



Version 2, 6 February 2015

Title of Project: Promotion of Knowledge and Awareness of parents in HK about Infant Oral Healthcare

Organization: Faculty of Dentistry, the University of Hong Kong

Introduction

It has come to our attention that Hong Kong parents may not have sufficient knowledge and awareness on infant oral health management. Negligence in babies' oral health might lead to early childhood caries with detrimental effects on eating, speech and the general well-being of children. Since prevention is better than cure, we are intended to hold a workshop on promoting the knowledge and awareness on infant oral health to parents.

Procedure

You will be asked to do a pre- and post-questionnaire before and after the workshop on oral health knowledge and behavior to help us to evaluate the outcome of the workshop and give us some feedbacks.

Potential benefits

Not only can your knowledge about infant oral health increases after attending workshop, your participation can help us understand more about the infant oral health education level in Hong Kong.

Protection of confidentiality

You and your child's personal data will be collected and will be kept confidential for research purpose only. We will do everything we can to protect your privacy. Your identity will not be revealed in any publication resulting from this study.

Under the laws of Hong Kong (in particular the Personal Data (Privacy) Ordinance, Cap 486), you enjoy or may enjoy rights for the protection of the confidentiality of your personal data, such as those regarding the collection, custody, retention, management, control, use (including analysis or comparison), transfer in or out of Hong Kong, non-disclosure, erasure and/or in any way dealing with or disposing of any of your personal data in or for this study. For any query, you should consult the Privacy Commissioner for Privacy Data or his office (Tel No. 2827 2827) as to the proper monitoring or supervision of your personal data protection so that your full awareness and understanding of the significance of compliance with the law governing privacy data is assured.

By consenting to participate in this study, you expressly authorize:

- the principal investigator and his research team and the Institutional Review Board of the University of Hong Kong/Hospital Authority Hong Kong West Cluster to get access to, to use, and to retain your personal data for the purposes and in the manner described in this informed consent process; and



- the relevant government agencies (e.g. the Hong Kong Department of Health) to get access to your personal data for the purposes of checking and verifying the integrity of study data and assessing compliance with the study protocol and relevant requirements.

Contact information

If you have any questions or concerns about this study, please contact Mr Aylwin Ng (Tel: 9502 1398) at the University of Hong Kong.

Appendix VIII: Introduction of the workshop (Chinese version)



Version 2, 6 February 2015

研究項目： 嬰兒口腔護理知識及意識促進項目

研究單位： 香港大學牙醫學院

研究簡介

香港的爸爸媽媽對於嬰兒口腔護理知識和意識有所欠缺。忽視寶寶的口腔健康可能導致寶寶患上蛀牙（齲齒）。嬰幼兒齲齒會對寶寶的飲食、語言和全身健康造成不利影響。預防勝於治療，我們希望通過舉辦工作坊，提高爸爸媽媽對嬰兒口腔護理的知識和意識。

研究程序

在參加工作坊之前和之後，請您各填寫一份關於口腔健康常識和行為的問卷，以幫助我們評價工作坊的成效和給予意見。

預期的好處

參加這一工作坊，可以讓您掌握更多關於嬰兒口腔護理的知識。您的參與也會讓我們對香港嬰兒口腔健康教育水平有更多了解。

個人資料保密

所有關於您和寶寶的個人資料將被嚴格保密，並僅用於研究目的。我們會全力保護您的個人隱私。在研究結果的報告中，不會透露您的個人資料。

根據香港法律（特別是「個人資料（私隱）條例」，第 486 章），您有權對您個人資料進行保密，如在本項研究中或與本項研究有關的個人資料的收集、保管、保留、管理、控制、使用（分析或比較）、在香港內外轉讓、不披露、消除和/或任何方式處理。如有任何問題，您可以諮詢隱私資料私隱專員或致電到其辦公室（電話號碼：2827 2827），以適當監管或監督您個人資料保護，以便您能完全認識和瞭解確保遵守法律保護隱私資料的意義。

同意參與該項研究，您明確作出以下授權：

- 為了監督該項研究，授權主要研究者及其研究團隊和香港大學及醫管局港島西醫院聯網研究倫理委員根據本項研究和本知情同意書規定的方式獲得、使用並保留您的個人資料，並且
- 為了檢查和核實研究資料的完整性、評估研究協定與相關要求的一致性，授權相關的政府機構（如香港衛生署）可獲得您個人資料。

聯絡方法

如閣下對本項研究有任何疑問，歡迎致電香港大學牙醫學院吳智龍先生（電話：9502 1398）查詢有關詳情。

Appendix IX: Consent form (English version)



Version 1, 28 January 2015

Title of Project:

Promotion of Knowledge and Awareness of Hong Kong Parents about Infant Oral Healthcare

PARTICIPANT CONSENT FORM

1. I confirm that I have read and understood the information sheet for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.
3. I agree to take part in the above study.

Name of participant: _____ Signature: _____ Date: _____.

Name of researcher: _____ Signature: _____ Date: _____.

香港大學牙醫學院牙周病學及公共衛生學
Periodontology & Public Health, Faculty of Dentistry
3/F, Prince Philip Dental Hospital, 34 Hospital Road, Hong Kong.
TEL: (852) 2859 0301 FAX: (852) 2858 7874

Appendix IX: Consent form (Chinese version)



Version 1, 28 January 2015

研究題目：嬰兒口腔護理知識及意識促進項目

參與者同意書

- 1 本人已詳閱及明白上述研究的須知，並有充分機會提問。
- 2 本人明白參與上述研究純屬自願，可在任何情況下停止參與研究，而不須要承擔任何後果。
- 3 本人同意參與上述研究。

參與者姓名: _____ 簽名: _____ 日期: _____.

研究者姓名: _____ 簽名: _____ 日期: _____.

香港大學牙醫學院牙周病學及公共衛生學
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