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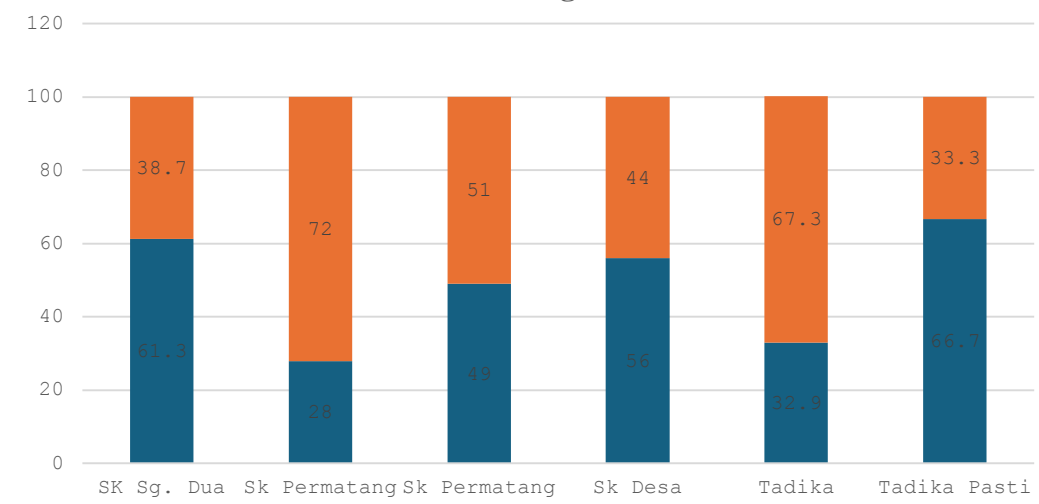
## 1. INTRODUCTION / LITERATURE REVIEW

Early childhood caries (ECC), also known as nursing bottle caries and baby bottle tooth decay, is defined as the presence of one or more decayed (non-cavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any primary tooth in a child under the age of six. Early caries experience (caries status in primary teeth) has been proven as a reliable predictor of caries experience in permanent dentition (Predicting caries in permanent teeth from caries in primary teeth (L. Y. Wang W. 2002)). According to Global Burden Of Disease study 2015, dental caries of the primary dentition was the 12th most prevalent disease (560 million children) in all ages combined. Caries prevalence amongst 5-year-olds has declined but mean *dft* has not shown similar decrease from 1995 to 2005 indicating caries severity. The key oral health goals that was set by National Oral Plan for Malaysia 2020-2030 by Ministry of Health Malaysia is 50% of 5 year and 80% of 12 year olds are caries free. Third National Health and Morbidity survey 2006 (NHMS III) by Oral Health, Ministry of Health Malaysia has also mentioned that 10% of the study population reported dental pain/problem, and the proportion reporting pain was highest at 15.7% in the preschool group. Through the Preschool oral health programme, government-aided kindergartens and pre-schools registered with the Ministry of Education are "covered" each year. Priority will be given to government-aided kindergartens, and if resources allow, will be extended to private kindergartens. In 2015, extending treatment was planned in Tadika PASTI ASY SYIFA.

## 2. SELECTION OF OPPORTUNITIES FOR IMPROVEMENT:

### PROBLEM VERIFICATION:

Percentage of Tidak Perlu Rawatan and Perlu Rawatan of Preschoolers in Sungai Dua in 2017



### JUSTIFICATION:

- Symptoms:**
  - Preschoolers with caries experience are likely to develop caries in permanent teeth.
  - Untreated caries may lead to Chronic Dental infections (i.e. Pulpitis, dental abscesses, cellulitis etc.)
  - Early childhood caries may affect mastication (leading to nutritional deficiencies) and disruption of speech and diminished oral health-related quality of life.
- Measurement:**
  - MDK (Mata Bekas Karis)
  - Reten PG 201 and PG 202
- Assessment:**
  - Early detection to improve quality of life
  - Tidak Perlu Rawatan (TPR) rate increases
- Intervention:**
  - Implementing dental treatment for private preschoolers.
- Timeline:**
  - 1 year period (April 2018- April 2019)

## 3. PROBLEM ANALYSIS

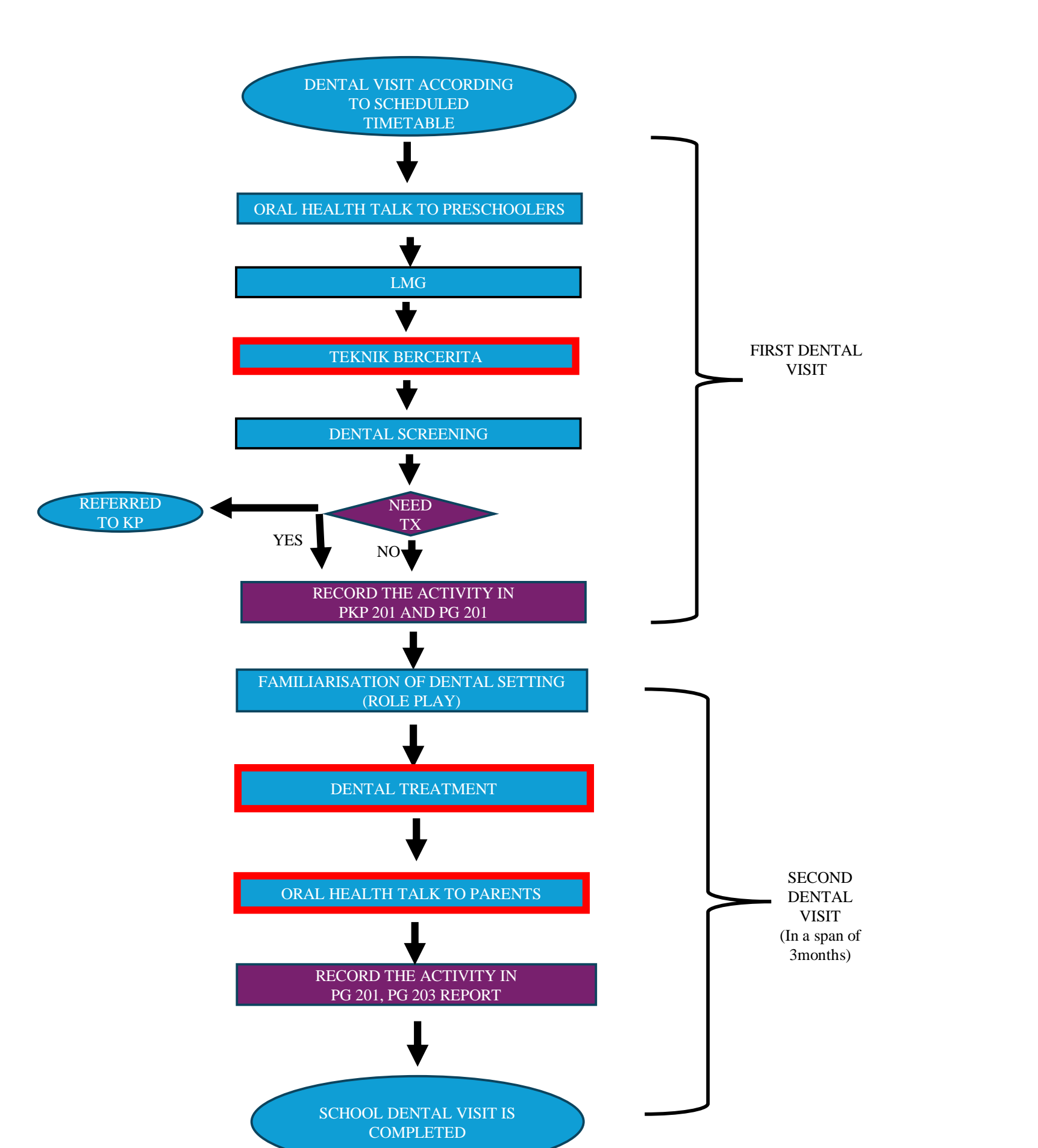


## 4. OBJECTIVES

- GENERAL OBJECTIVES:**
- To reduce the incidence of caries among the preschoolers of Tadika PASTI Asy Syifa from 66.7% in year 2018 to <50% in year 2019
- SPECIFIC OBJECTIVES:**
- To identify the percentage of preschoolers at Tadika PASTI Asy Syifa who are MIBK.
  - To determine the factors that cause the high incidence of caries of these preschoolers
  - To suggest and carry out remedial actions to reduce the caries incidence in Tadika PASTI Asy-Syifa.
  - To evaluate the effectiveness of the remedial actions that has executed.

## 5. KEY MEASUREMENT FOR IMPROVEMENT

### PROCESS OF CARE:



## MODEL OF GOOD CARE:

No	Factor	Variables	Standard	Pre-remedial	Post-remedial
<b>FIRST VISIT</b>					
1	Oral Health Talk	1. Juruterapi Pergigian (JP) are knowledgeable about Oral health 2. Oral health talk given by Juruterapi Pergigian (JP) to all students in Bahasa Malaysia.	100% 100%	80% 100%	80% 100%
2	LMG	1. LMG done according to classes ( 25 preschoolers). 2. LMG done according to Fone's Technique. 3. Students who bring their own toothbrushes and toothpaste 4. Dental screening for oral hygiene after LMG is done.	100% 100% 100% 100%	100% 0% 78% 0%	100% 100% 90% 100%
3	Teknik Bercebita	1. Teknik Bercebita should be attended by all preschoolers. 2. Given in Bahasa Malaysia to preschoolers. 3. Simple activity (game, colouring, quiz etc.) after story telling to reinforce knowledge.	100% 100% 100%	- - -	100% 100% 100%
4	Dental Screening	1. All students are screened by JP 2. Dental chartings recorded on LP-8 card correctly. 3. Active caries detected and diagnosed by JP	100% 100% 100%	92.5% 75% 75%	100% 100% 100%
<b>SECOND VISIT</b>					
5	Familiarisation of dental setting (Role Play)	1. Role play should be attended by all preschoolers. 2. Exposure of preschoolers to a dental examination.	100% 100%	50% 50%	100% 100%
6	OH Talk to parents.	1. OH talk to cover importance of deciduous teeth and dental diseases . 2. OHI & proper tooth-brushing techniques should be given to parents.	50% 50%	0% 0%	22% 22%

### INDICATOR :

Percentage of preschoolers with dental caries =  $\frac{\text{Preschoolers with caries}}{\text{Total enrolment of preschool}} \times 100$

### STANDARD :

≤ 50% of preschoolers are with caries

## 6. PROCESS OF GATHERING INFORMATION



### PLAN FOR DATA COLLECTION :

No.	Factor	Variables	Standard	Sample size	Source of Data	Method of data collection	Sample Method
<b>FIRST VISIT</b>							
1	Oral Health Talk	1. Juruterapi Pergigian (JP) are knowledgeable about Oral health. 2. Oral health talk given by Juruterapi Pergigian (JP) to all students in Bahasa Malaysia.	100% 100%	n=1	Simple questionnaire Observational check list	Interview (Pre) Self-administered (Post) Performance appraisal	Universal sampling
2	LMG	1. LMG done according to classes ( 25 preschoolers). 2. LMG done according to Fone's Technique. 3. Students who bring their own toothbrushes and toothpaste 4. Dental screening for oral hygiene after LMG is done.	100% 100% 100%	n=81	Observational check list	Performance appraisal	Universal sampling
3	Dental Screening	1. Preschoolers are screened by JP 2. Dental chartings recorded on LP-8 card correctly. 3. Active caries detected and diagnosed by JP	100% 100% 100%	n=81	LP-8 card Monthly returns (PG 201)	Review Calibration	Universal sampling
<b>SECOND VISIT</b>							
4	Familiarization of dental setting (Role Play)	1. Role play should be attended by all preschoolers. 2. Exposure of preschoolers to a dental examination.	100% 100%	n=81	Observational check list Simple questionnaire	Performance appraisal Self-administered	Universal sampling
5	OH Talk to parents	1. OH talk to cover importance of deciduous teeth and dental diseases . 2. OHI & proper tooth-brushing techniques should be given to parents.	50% 50%	n=81	Questionnaire Observational checklist	Self-administered Performance appraisal	Universal sampling

## 7. ANALYSIS AND INTERPRETATION

No	Factor	Variables	Standard	Pre-remedial	Post-Remedial
<b>FIRST VISIT</b>					
1	Oral Health Talk	1. Juruterapi Pergigian (JP) are knowledgeable about Oral health 2. Oral health talk given by Juruterapi Pergigian (JP) to all students in Bahasa Malaysia.	100% 100%	80% 100%	80% 100%
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6	OH Talk to parents.	1. OH talk to cover importance of deciduous teeth and dental diseases . 2. OHI & proper tooth-brushing techniques should be given to parents.	50% 50%	0% 0%	22% 22%

## 8. STRATEGIES FOR CHANGE

### 'TEKNIK BERCEBITA'



### IMPLEMENTATION OF TREATMENT



### DIETARY AND NUTRITIONAL COUNSELLING



### ORAL HEALTH TALK FOR JP



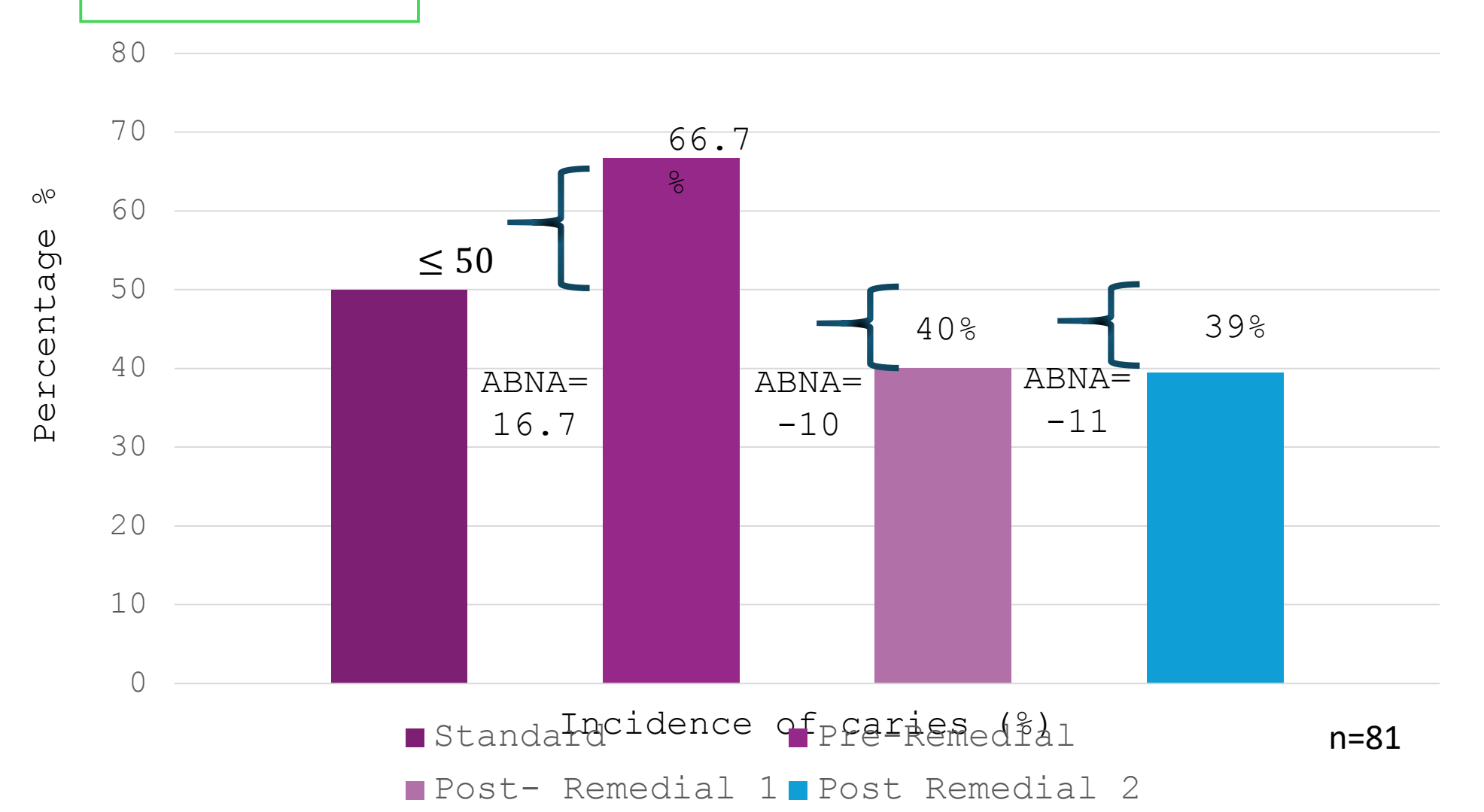
### CHECKLIST OF PROCESS OF CARE

No	Factor	Variables	Standard	Pre-remedial	Post-Remedial Cycle 1	Post-Remedial Cycle 2
<b>FIRST VISIT</b>						
1	Oral Health Talk	1. Juruterapi Pergigian (JP) are knowledgeable about Oral health 2. Oral health talk given by Juruterapi Pergigian (JP) to all students in Bahasa Malaysia.	100% 100%	80% 100%	80% 100%	99% 100%
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5	Familiarisation of dental setting (Role Play)	1. Role play should be attended by all preschoolers. 2. Exposure of preschoolers to a dental examination.	100% 100%	50% 50%	100% 100%	Unable to continue due to MCO
6	OH Talk to parents.	1. OH talk to cover importance of deciduous teeth and dental diseases . 2. OHI & proper tooth-brushing techniques should be given to parents.	50% 50%	0% 0%	22% 22%	Unable to continue due to MCO

### INVOLVEMENT OF PARENTS



## 9. EFFECTS OF CHANGE



No	Factor	Variables	Standard	Pre-remedial	Post-Remedial Cycle 1	Post-Remedial Cycle 2
<b>FIRST VISIT</b>						
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5	Familiarisation of dental setting (Role Play)	1. Role play should be attended by all preschoolers. 2. Exposure of preschoolers to a dental examination.	100% 100%	50% 50%	100% 100%	Unable to continue due to MCO
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## 10. NEXT STEP

- All the knowledge and measures taken has to gain interest of preschoolers
- More enforcement of monitoring has to be taken among dental staffs
- To try to implement all the remedial actions on other preschools/ tadika in spu district

## SUSTAINABILITY

Indicator	2019	2020	2021	2022	2023
Percentage of caries-free amongst preschooler under Pejabat Kesihatan Pergerakan Seberang Perai Utara	2146	1159	10	2444	2270
% of 6 year-old caries-free	5377	3017	16	5086	4935
	40.06%	38.40%	62.50%	48.10%	45.90%

**CURRENTLY IN 2023/2024**

- treatment for preschoolers are implemented in all private preschools visits by bahagian kesihatan perigian pulau pinang since 2022 (BKPPP)
- Oral health talks for parents are implemented for preschool visits in all the districts in Penang.
- More private preschools/ tadika are covered by BKPPP
- One visit for preschools are done for smaller preschools. Checklists provided speeds up dental visits- Saves time and cost. Allows us to cover more private preschools.

## 11. CONCLUSION

In conclusion, the percentage of caries decreased from 66.7% to 39.5%. ABNA was recorded at 11% after 2 cycles.

## 12. ACKNOWLEDGEMENT

- Dr Minni Daud
- Dr Nuraini Dina Peranginan
- Dr Nuraini Yusoff Aziz Ghaffar
- Dr Noor Hayati Che Hassan (Dagawan Pergigian Daerah SPU)
- Dr Amin Ismailyari Ya Abdul Manab
- Puatu Bahagian Pergerakan Kesihatan, Pulau Pinang

## 13. REFERENCES

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