

# Effect of Fluoride Varnish with ACP on Caries Prevention of Partially Erupted First Permanent Molar

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## Introduction

Due to high incidence of dental caries in Thai children, more attention is needed to prevent the disease especially on the occlusal surface. The best prevention on the occlusal surface is sealant. However, not everyone is able to receive full dental treatments due to limitations of access. Partially erupted first molars are at high risks for caries within the first year and they are difficult to isolate. Fluoride varnish is one of the early preventions because it can be applied in partially erupted teeth with simple techniques and appropriate to use in rural areas. Fluoride varnish with ACP was used in this study (Enamel Pro® Varnish, Premiere Dental Products Company, USA.).

## Objective

To measure the clinical use of 5% NaF varnish with ACP as an intervention to prevent caries on partially erupted first permanent molars among Grade 1 students with high caries risk.

## Materials and Methods

Grade 1 students in Wat Nawong School in Pathum Thani Province were evaluated to select the partially erupted first molars that fall into the inclusion criteria, the total number of 47. Split-mouth design was used. One side was the control group and the other was the study group. 5% NaF varnish with ACP was applied only the study group. They were re-evaluated at 5.7 months to compare caries progression. McNemar's Chi square test was used at p value of 0.05.



## Result

Control group	Study group		Total
	Progress	No-Progress	
Progress	5 (11.9%)	16 (38.1%)	21 (11.9%)
No-Progress	0 (0.0%)	21 (50.0%)	21 (50.0%)
Total	5 (11.9%)	37 (88.1%)	42 (100.0%)

The follow up visit was 5.7 months on average after fluoride application. 4 participants were lost and 42 remained. 88.1% of the study group had sound teeth and 11.9% had caries progression. In the control group, 50.0% had sound teeth and 50.0% had caries progression. There was a significant difference in caries occurrence between the two groups.

## Conclusion

5% NaF varnish with ACP is effective in reducing caries progression in study group compared to the control group

