Improving the Use of Fluoride Varnish Applications Among Children

Cecele Rogers, DNP, ARNP, CPNP

Clinical Question:
Will adding a reminder prompt to the well-child visit template increase provider adherence of fluoride varnish applications in children?

Goal:
Increase fluoride varnish applied to children by 15 percent as recommended by the American Dental Association (ADA).

Background

Most common chronic disease in children

• 50% of 12 to 15 year olds

An infectious disease that can be prevented by application of fluoride varnish

• 80% of dental caries in 20% of the population

Fluoride

• 60 million total children

• 2% of the US population

• 3-7% being minority

• 2.5 times less likely to receive dental care compared to intact children

• For each child with medical insurance, 24 more visits

• 4.5% of the US population

• 43 million people need dental care

• 80% of caries in 20% of the population

• Fluoride varnish added approximately two minutes to the visit for parent explanation and fluoride guidance to be provided

• Fluridism should be part of WCC

• Risk of fluorosis

• Fluoride applied July - January

• Fluoride placement in last 3 months

• Allergy to any component of fluoride

• No dental visit in last 3 months

• Age 12 months to 36 months

• Provider educational in-service

• Electronic Health Record Edit

• Consent

• Data Aggregation

• Results

Methods

Design

• Quality Improvement Project

• Johns Hopkins Evidence-Based Practice Model

• Pre-intervention in-service questionnaires

• Descriptive Statistics with Likert-type scale

• Chi-Square Test

Prompt in EHR

• Prompt on electronic medical record

Inclusion Criteria

• Oral health reports from the 50 states & District of Columbia. (2010).


• References

Results – Educational In-service

Results: Fluoride Application

Fluoride applied July - January

Pre-test (n=1400)

Post-test (n=1600)

Difference

Wilcoxon Signed-Rank Test

Pre-test

4.13

4.13

0.00

p<0.05

Fluoride applied

44.8%

44.8%

0.00

p<0.05

Total Well Child Visits

1508

200

0.00

Chi-Square Test

Prompt

Pre-intervention

1044

1508

564

Post-intervention

711

1290

579

Total

1043

1755

602

Discussion

Strengths:

• Administrative support at Community Health Center, Inc.

• Prompt placement in EHR

• Limitations:

• Short period of time for study

• The sample size is small

• Single provider, multiple sites

• Not generalizable to other practices

• Implications for practice:

• To add an electronic prompt after the well visit, an increase of 14%.

• The overall goal was to increase fluoride application from 44.8% to 50%.

• Provider educational in-service improves care delivery

• Results for the practice of fluoride application was approximately $5,211 per month

• Allows improved care for practice

• Dental care for children

Acknowledgements

I would like to thank Dr. Stephanie Smith and Dr. Melanie Mochin from the University of South Florida College of Nursing and Dr. Whalin from Community Health Center, Inc. for their knowledge and support.

References


Oral Health in America: Key Findings from the 2012 National Health Interview Survey. (2013). Retrieved from

University of South Florida College of Nursing, Tampa, Florida. (2014). Improving the Use of Fluoride Varnish Applications Among Children. Improving the Use of Fluoride Varnish Applications Among Children.