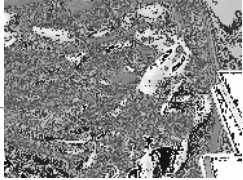


Interprofessional Education, Research, and Practice: Improving Oral Health of Young Children at Two WIC Sites



Members of the Oral Health Team

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Background

- ▶ The Surgeon General declared dental caries the "Silent Epidemic".
- ▶ Profound disparities exist in the level of dental services obtained by poor children.
- ▶ Low rates of early detection and preventive care for 3 year old and younger children eligible for Medicaid.
- ▶ Even when Medicaid provides dental services, only 33% of eligible children receive dental service due to a shortage of dentists who accept Medicaid and/or who are willing to treat children.

Factors Contributing to Poor Dental Care for Children at Risk

- ▶ Lack of pediatric dentists
- ▶ Inaccessibility due to geographical location of oral health professionals
- ▶ Parent's lack of knowledge and attitudes concerning oral health
- ▶ Low rate of early detection and preventive care for young children eligible for Medicaid.



(Pediatric Oral Health Management: Mod.1 Trends in Oral Health, 2010)

Primary Cause of Tooth Decay

- ▶ The bacterium *S. mutans* is the main contributor to tooth decay.
- ▶ Adults may have higher amount of *S. mutans* in their mouth and can transmit it to their infant or child through the exchange of saliva
- ▶ Frequent sugary snacking and drinking interact with *S. mutans*, producing acids that can cause mineral loss from teeth increases the risk for tooth decay.

("Open Wide: 1.2.1 Population Groups' Tooth Decay Risk.")

The Main Problem: Dental Caries

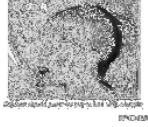
- ▶ Dental caries affect more children in the United States than any other chronic infectious disease
- ▶ Tooth decay and other oral diseases that can affect children are preventable. Fluoride varnish can reduce cavities in preschool children by 30-40%.



(Child who participated in the fluoride varnishing offered at one of the WIC sites)

Early Childhood Caries

- ▶ Tooth decay of the front top teeth are referred to as Early Childhood Caries (ECC).
- ▶ Causes of ECC:
 - Poor oral hygiene
 - Not enough fluoride
 - Sleeping with a bottle or sippy cup
 - Frequent snacking and bottle/sippy cup
 - Feedings containing beverages high in sugar, milk, or formula during the day or night.
 - Coating pacifiers with sweeteners like sugar or honey.
 - Having a mother or another caregiver or sibling who has had active tooth decay in the past 12 months.



(Open Wide: 2.3 Population Groups' Tooth Decay Risk 2010).

Consequences of Poor Dental Health

Untreated dental conditions can result in:

- ▶ Teeth destruction
- ▶ Problems chewing which could result in malnutrition negatively impacting growth development.
- ▶ Dysfunctional speech
- ▶ Poor concentration
- ▶ Poor academic performance
- ▶ Psychological issues
- ▶ Severe infections



(Open Wide: 1.5.1 Population Groups' Tooth Decay Risk, 2010)

Ways to Prevent Dental Disease

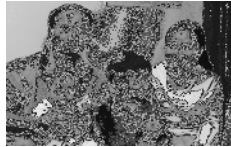
- ▶ Oral Screenings
- ▶ Fluoridation
- ▶ Educate on appropriate oral care
- ▶ Educate on preventative measures to prevent tooth decay
- ▶ Educate on good healthy eating habits



(Open Wide: 3.0 Population Groups' Tooth Decay Risk, 2010)

Purpose of Project

To improve the oral health of low income pregnant women, mothers, & children. WIC (Supplemental Nutrition Program for Women, Infants, and Children) is a national program that safeguards the health of low-income women, infants, & children who are at nutritional risk.



Preventative Measures Against Dental Disease

- ▶ The University of Akron's College of Nursing and Division of Nutrition and Dietetics collaborated together to initiated the project seeking to test the feasibility of integrating oral health assessments and fluoride varnishing interventions into regular practice at two WIC sites.



2 WIC Sites

- ▶ Two Chosen WIC sites:
 - The rural location chosen was the WIC site in Portage County.
 - The urban location chosen was the WIC site in Summit County.
 - Nurse Practitioners (NPs), Registered Dietitians(RDs), and undergraduate/graduate nursing and nutrition students are involved in the project.

Training Non-dental Specific Health Care Professionals

- ▶ At each WIC location there is an individual (RD or NP) trained to apply fluoride varnish (FV) the teeth of WIC clients' from the appearance of a child's first tooth bud through four years of age.
- ▶ By training NP's, RD's, and RN's to perform oral health assessment, fluoride varnishing, education, and other preventative care measures could reduce poor oral health in high risk populations.



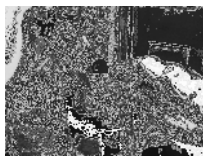
The Project Taking Place at the WIC Sites

- ▶ Typical Day:
 1. NP or RD at the WIC clinics obtain informed consent form WIC clients about the free FDA approved fluoride varnish.
 2. The guardian is then asked to fill out an Oral Health Survey which asks simple questions about the child's diet and dental care.



The Project Taking Place at the WIC Sites

- 3. The RD or NP will:
 - Ask about the infant or child's dental health
 - Provide education on appropriate dental health
 - Conduct an oral health assessment on child's teeth
 - Apply fluoride varnish to child's teeth
 - using a small brush.
 - takes a few seconds
 - tastes like bubble gum
 - Keep a dental screen record
 - Provides written material on oral health

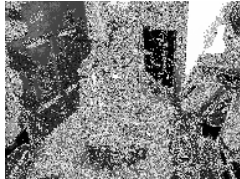


The Project Taking Place at the WIC Sites

4. The child is seen every 6 months until the study is complete in three years.
5. The RD or NP will give the guardian or parent a list of dentists that the child may be able to receive care.
6. After the fluoride varnishing procedure the parent or guardian is given an satisfaction survey.

The Project Taking Place at the WIC Sites

7. After the first time visit the child is given a goodie bag containing:
 - Information pamphlets on good dental hygiene
 - Toothbrush
 - Toothpaste
 - Coloring book
 - Crayons
 - Stickers



(First child seen at one of the WIC sites leaving with her yellow goodie bag)

Preliminary Oral Health Screening Results at both WIC sites

- Update in March 2011
- 1412 children participated in fluoride varnishing

Table 32. Rate*

Site	WIC Site #1		WIC Site #2		Total	
	Number	Percent	Number	Percent	Number	Percent
Infected	15	61.5	8	32.0	24	27.8
Washed	7	29.0	20	80.0	27	66.8
Brushed	3	3.8	1	3.7	2	2.3
Asket	2	7.7	1	3.7	3	3.5

* Percentages of those who have been in 12/2010.

Table 2. Children's Dental Screening Results

Dental Screening	Screened (n=459)		Unscreened (n=22)		Overall (n=481)	
	Number	Percent	Number	Percent	Number	Percent
Brushing habits	29	6.3	9	4.1	38	7.8
- ECC higher	2	0.4	7	3.2	9	1.9
- ECC lower	0	0.0	0	0.0	0	0.0
Brushing frequency	21	4.6	1	0.5	22	4.5
- ECC higher	3	0.7	0	0.0	3	0.6
- ECC lower	2	0.4	0	0.0	2	0.4
Brushing with toothpaste	27	5.9	6	2.7	33	6.8
- ECC higher	0	0.0	4	1.8	4	0.8
- ECC lower	11	2.4	2	0.9	13	2.7
Brushing with toothbrush	29	6.3	10	4.5	39	8.1
- ECC higher	3	0.6	0	0.0	3	0.6
- ECC lower	0	0.0	0	0.0	0	0.0
Brushing frequency with toothbrush	27	5.9	10	4.5	37	7.7
- ECC higher	12	2.6	5	2.3	17	3.5
- ECC lower	1	0.2	0	0.0	1	0.2

Note: Similar to the percentage of children's screening results by site and condition.

Preliminary Results

- ▶ Material Distributed by staff and topics discussed:
 - 97.3% Received written materials on general oral health and appropriate brushing/use of fluoride for age was discussed
- ▶ Child's dental hygiene concerns reported by parent:
 - 19.5% not eating enough fruits/veggies
 - 16.7% drinking sugary drinks
 - 16.1 eating sugary snacks
 - 14.2% use of bottle/sippy cup

Preliminary Results

Table 2. Parent/Guardian's responses for not seeing a dentist regularly

Response	Screened (n=459)		Unscreened (n=22)		Overall (n=481)	
	Number	Percent	Number	Percent	Number	Percent
It's too expensive to go	21	4.6	25	11.4	46	9.5
Time/transportation is a problem	33	7.2	11	5.0	44	9.1
Concern that a dentist will be judgmental, harsh, or disrespectful	10	2.2	0	0.0	10	2.1
It's too far to go	17	3.7	10	4.5	27	5.6
I don't know a dentist to go to	51	11.1	12	5.5	63	13.1
I see my child, they're getting better	25	5.4	18	8.2	43	8.9
My child is too young	199	43.3	20	9.1	219	45.4

Note: Percentages may not equal 100% due to rounding. Percentages may also not be 100% due to multiple responses and percentages. Percentages may also be more than 100%.

Preliminary Results

- ▶ 1179 participated in the exit survey questions
- ▶ Overall guardian or parent's response to the exit survey:
 - 95.0% recorded that they were very satisfied with the oral health visit today
 - 95.7% recorded that the information they received on oral health was helpful

The Project is still in Process

- ▶ The long term goal of this project is to show an improvement in the oral health of children at WIC sites.
- ▶ The ultimate goal is that this program will be implemented at WIC sites nationwide.



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