

Facilitators and Barriers to Twice Daily Tooth brushing among Children with Special Health Care Needs

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Children with Special Health Care Needs (CSHCN)

- Approximately 15% of US children and youth meet definition for CSHCN.
 - CSHCN are a growing segment of US population.

Oral Health

- CSHCN are at elevated risk for poor oral health.
- Oral health is connected to overall health.
- # 1 health care need in CSHCN is dental services.
- Twice daily tooth brushing is effective at preventing dental caries.



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Goals of Study

- Examine tooth brushing among pre-school CSHCN
 - Similar to typically-developing children?
- Describe facilitators and barriers to twice daily tooth brushing in CSHCN
 - Identify modifiable behaviors or beliefs





Methods



Methods

- Cross-sectional
- Semi-structured interviews
- Caregivers of pre-school (ages 24 to 60 months)
CSHCN
- Current enrollees, on the waiting list for, or
graduates of an early intervention center
- Non-fluoridated community in Washington State



Key Measures

- **Facilitators:** “What helps or makes it easier to brush your child’s teeth as often as you’d like?”
 - **Barriers:** “What makes it difficult to brush your child’s teeth as often as you’d like? What gets in the way?”
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- **Tooth brushing:** “About how often are you brushing [your child’s teeth] now?”



Coding of Facilitators and Barriers

- Coding themes from Huebner and Riedy for facilitators and barriers
 - Oral health beliefs
 - Social norms
 - Emotional reactions
 - Self-standards
 - Self-efficacy
 - Tooth brushing skills
 - External factors



Coding of External Factors

- External factors
 - Time pressures
 - The child's oral aversion
 - The child's compliance
 - Effects of other siblings
 - Having a variety of tooth brushing supplies
 - The child's level of fatigue
 - Multiple caregivers
 - Size of the child's mouth



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- **Tooth brushing: “About how often are you brushing [your child’s teeth] now?”**



Data Analysis

- Descriptive analysis
 - Caregivers
 - Children
 - Professional dental use and home oral hygiene
 - Facilitators and barriers
- Bivariate analysis of identified facilitators and barriers and tooth brushing frequency
 - X^2 comparison



Results



Descriptive Statistics

- 90 caregivers
 - 19 to 66 years old, with mean 32 years
 - Most were non-Hispanic white.
- 90 children
 - 23 to 62 months, with mean 37 months
 - Most common conditions included developmental delay, Down Syndrome, and Autism Spectrum Disorders.



Children's Professional Dental Service Use (n=90)

	% (count) or Mean \pm SD
Dental visit (ever)	80 (72)
Preventive dental visit in past 12 months	
None	21 (19)
1	32 (29)
2	38 (34)
3	8 (7)
4	1 (1)

21% + 32% = 53%



Children's Home Oral Hygiene (n=90)

	% (count) or Mean \pm SD
Started brushing (yes)	98 (88)
Age started (months)	11.95 \pm 6.52
Brushing frequency (if started)	
< 1 time / day	5 (4)
1-2 times / day	45 (40)
\geq 2 times / day	50 (44)
Uses fluoridated tooth paste (if started brushing)	62 (53)

5% + 45% = 50%



Facilitators of Tooth Brushing

- Most commonly reported facilitators
 - External support: 55%
 - Self-efficacy: 33%
 - Skills: 28%
- Associations between reported facilitators and brushing frequency
 - Having a variety of supplies ($p = .02$)



Barriers to Tooth Brushing

- Most commonly reported barrier
 - External barriers: 90%
- Associations between reported barriers and brushing frequency
 - Skills ($p = .02$)
- No caregiver described aspects of their child's special need(s) as a barrier.

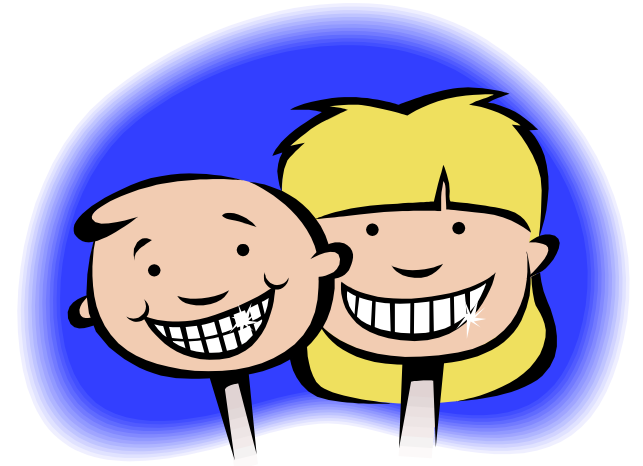


Discussion



Discussion

- Similar to typically-developing children?
 - Not exactly...but not too far off
- Modifiable behaviors or beliefs?
 - Certainly, but not unique to this CSHCN





Limitations

- Responses to interview questions
 - May be inaccurate
 - May be based on socially desirable standards
- Convenience sample
 - Limits generalizability



Conclusions

**For future interventions: enhance caregivers' skills
in routine tooth brushing**

Anticipatory guidance can be provided in already
existing avenues



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Questions?