

Are High Risk Children Receiving Preventive Dental Care? An Evaluation Of Healthpartners' Fluoride Application Project

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Background



- My background
- HealthPartners Research Foundation
- This project

What we know

- Most common disease in children impacting 40% (2-11)
- 80% experienced by 25%,
- Poor 3-5 X more likely to be untreated.
- Progressive disease with 11% in age 2, 21% in age 3, 34% in 4 year olds and 55% in 5 year olds.



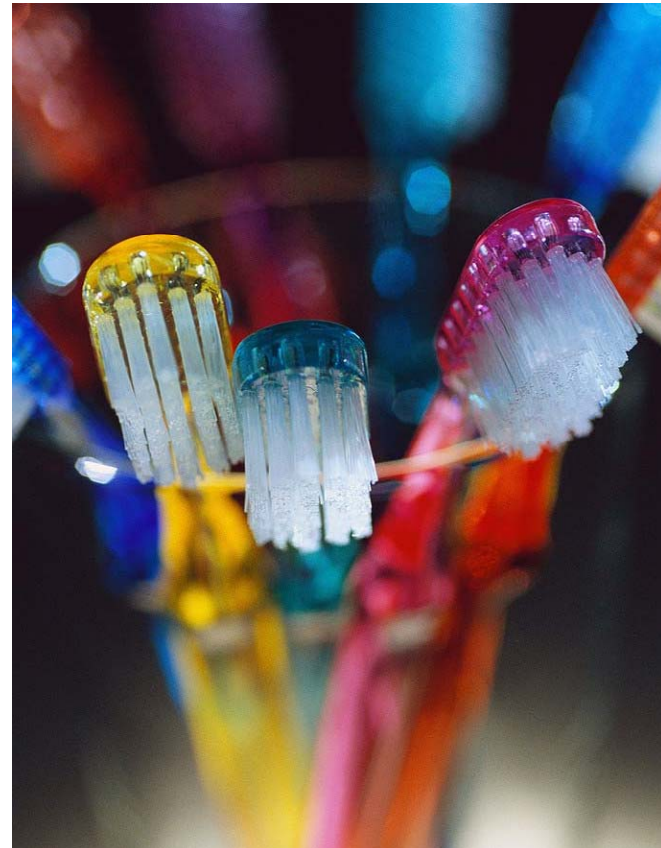
Associated Impacts



- ❑ Failure to thrive in infants
- ❑ Poor school performance (due to the missed school days)
- ❑ Silk, reported 51,000,000 school hours are missed annually in our country due to oral-health related illness.

Research Overview

- Program Evaluation
- Surveys
- Comparative Trials



Program Evaluation (delivery of care not outcomes)

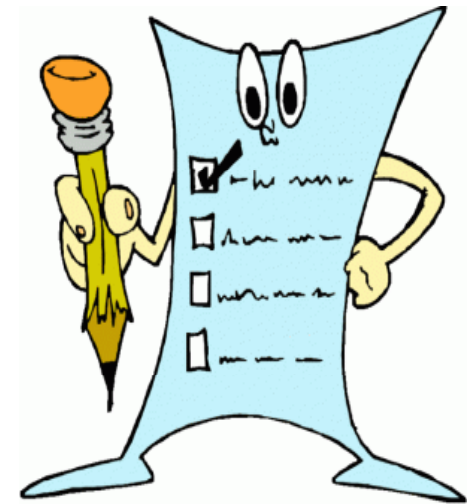
- Number of children screened
- Number treated when decay is found
- Number who receive fluoride as a preventive measure
- How providers were trained

Malmö Study

- Intervention Group n=804
 - ▣ Educate parents on oral health
 - ▣ Focus on tooth brushing and fluoride supplements
 - ▣ Call parents quarterly
- Historical Control n= 238
- **** Fewer caries (5.4 vs 6.9)**
- **Better toothbrushing/diet/use of tablets**

Survey Data

- surveys assess provider willingness to provide care
- parent health concerns in the uninsured.
- Dental care was not a high priority, thus needs are likely to go unmet.



Research Related to Health Outcomes (mixed findings)



- Speech may be affected by decay(distortion).
- Treatment improved sleep, behavior and pain
- Studies on Height and Weight are mixed.

Research Related to Financial Benefit of Early Care

Number seen by age	Age at first visit	Cost per child
23	Less than 1 year	\$226
249	Ages 1-2	\$339
465	Ages 2-3	\$449
915	Ages 3-4	\$492
823	Ages 4-5	\$546

Current recommendations (since 1990s)

- The US Preventive Services Task Force, American Academy of Family Physicians, American Academy of Pediatric Dentistry American Dental Association support
- **1st dental appointment within 6 months of the first tooth eruption/no later than age 1**
- Limited impact on practice. Literature claims only 2% had visit by age 1, 11% by age 2 and 26% by age 3



Hugh Silk's Dental Topics for Well-Child Visits

Age at visit	Advice for parents
0-2 months	Diet: no bottle propping; only water in bottle Habits: pacifier use OK; may help prevent SIDS
4 months	Diet: no bottle propping; only water or formula in bottle; no bottle in bed Caries risk assessment: family history, preterm infant, socioeconomic status, special health care needs, dental insurance Fluoride: assess need for supplementation
6-9 months	Diet: introduce cup; no bottle by age 1; limit ad lib feedings, drinks Oral hygiene: brush as teeth erupt; use a smear of fluoridated toothpaste Dental screening: assess eruption pattern, hygiene, defects, caries Fluoride: prescribe fluoride supplement if needed; counsel on fluorosis Habits: create bedtime rituals: "bath, bottle/cup, brush, book, bed"

Hugh Silk's Dental Topics for Well-Child Visits (cont.)

<p>12 mo-3 yrs</p>	<p>Diet: promote sugar-free snacks and drinks; remove bottle</p> <p>Oral hygiene: brush teeth twice daily; use a smear of fluoridated toothpaste; parental supervision</p> <p>Dental screening: assess hygiene and caries</p> <p>Fluoride: prescribe fluoride supplement if needed</p> <p>Habits: end pacifier use</p> <p>Dental referral: ideally at age 1; or high-risk at age 1, all other by age 3</p>
<p>More than 3 years</p>	<p>Diet: promote planned sugar-free snacks and drinks</p> <p>Oral hygiene: brush teeth twice daily with fluoridated toothpaste; parental supervision until age 7; floss permanent teeth; avoid smoking, alcohol use</p> <p>Dental screening: assess hygiene and caries</p> <p>Fluoride: prescribe fluoride supplement if needed until age 16</p> <p>Habits: end thumb sucking</p> <p>Oral safety: mouth guards for sports; avoid oral piercings (remove for sports)</p>

Aims of Evaluation

- Assess the proportion of eligible children who actually receive the care by age, clinic, over time
- Compare costs (patient visits, urgent care, surgeries, hospitalizations) comparing treated and not treated
- Assess provider knowledge/behavior/perception on importance of the initiative, implementation in clinic setting (who is applying the varnish/ length of time needed), challenges faced to sustaining effort and other oral health information for parents
- Compare knowledge and oral health behavior in parents whose children have and have not received the fluoride varnish