

Preventing Dental Caries: School-Based Dental Sealant Delivery Programs

Summary Evidence Table

| Study Detail | Characteristics | Participants | Interventions | Outcomes |
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| <p>Author: Bravo et al., 2005</p> <p>Greatest: RCT</p> <p>Country of study: Spain</p> <p>Geographic location: Granada</p> | <p>Unit of allocation: Cluster</p> <p>Year commenced: 1990</p> <p>Year completed: 1995</p> <p>Water fluoridation: 0.07ppm F in public drinking water</p> <p>Recruitment: Schools within cities were selected at random</p> <p>Follow-up: 9 years</p> <p>Funded by: Research Group #CTS503 "Salud Pública Oral y Gerodontología" (Junta de Andalucía, Spain) and by Projects #99/1299, #PI021129, and #PI020997 (FIS, Spain)</p> | <p>Inclusion criteria: First and second year primary school students within the district of Granada and present at school</p> <p>Exclusion criteria: Not reported</p> <p>Mean age: 7.28 years</p> <p>Gender: 67.6% female (group 1); 47.4% female (group 2); 51.1% female (group 3)</p> <p>SES: Median class IV</p> <p>Number of Participants recruited: 362</p> | <p>3 Groups:</p> <p>Group 1: Dental sealants* n=112</p> <p>Group 2: Fluoride varnish* n=155</p> <p>Group 3: Control n=135</p> <p>*Sealants and varnish were applied to healthy permanent molars. After 6, 12 and 18 months sealants were applied to newly erupted permanent teeth and replaced if necessary</p> | <p>Outcome measure: % caries reduction</p> <p>Unit of analysis: Tooth</p> <p>Data:</p> <p><u>At 4 year follow-up:</u></p> <p>Group 1: 76.3% SE 7.9%</p> <p>Group 2: 43.9% SE 10.3%</p> <p>Group 3: 57.8% SE 14.7%</p> <p><u>At 9 year follow-up:</u></p> <p>Group 1: 65.4% SE 8.5%</p> <p>Group 2: 27.3% SE 10.2%</p> <p>Group 3: 52.4% SE 12.2%</p> |
| <p>Author: Klein et al., 1985</p> <p>Moderate: Non-randomised controlled trial</p> <p>Country of study: US (national)</p> | <p>Unit of allocation: Cluster</p> <p>Year commenced: 1977</p> <p>Year completed: 1982</p> <p>Water fluoridation: 5 sites 0.8-1ppm; 5 <0.2ppm sites</p> <p>Recruitment: Announcements sent to dental schools, associations, health departments and education agencies throughout the US</p> <p>Follow-up: 4 years</p> | <p>Inclusion criteria: Schools with a high rate of student retention, no previous involvement in a school-based dental health program, willingness of teachers and other school staff to participate. The sites were chosen to be varied with regard to dental caries risk factors</p> <p>Exclusion criteria: Not reported</p> <p>Age: Grades 1, 2 and 5</p> | <p>4 Groups:</p> <p><u>Fluoridated sites:</u></p> <p>Group 1: Sealants applied & reapplied up to 3x, 0.2% neutral sodium F mouth rinse weekly & biweekly brushing & flossing & 10 health lessons/year and home supply of fluoride tooth paste n=679</p> <p>Group 2: Control, 0.2% neutral sodium F mouth rinse weekly & biweekly brushing & flossing & 10 health lessons/year & home</p> | <p>Outcome measure: DMFS increment score</p> <p>Unit of analysis: Child</p> <p>Data:</p> <p><u>Fluoridated sites:</u></p> <p>Group 1: Grades 1&2 = 1.29 grade 5 = 1.62</p> <p>Group 2: Grades 1&2 = 0.04 grade 5 = -0.61</p> |

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| | <p>Funded by: Grants from The Robert Wood Johnson Foundation to the American Fund for Dental Health and the Rand Corporation</p> | <p>Gender: Not reported SES: Not stated Number of Participants recruited: 20,052</p> | <p>supply of fluoride tooth paste n=732</p> <p><u>Non-fluoridated sites:</u></p> <p>Group 3: Sealants applied up to 3x, 1.23 F gel 2x/year 0.2 neutral % sodium F mouth rinse weekly, 1mg F in 2.2mg neutral sodium F tablet 5x/week, biweekly brushing & flossing & 10 health lessons/year & home supply of fluoride paste n=975</p> <p>Group 4: Control, acidulated paste & 1.23 F ion gel 2x yearly, 0.2 neutral % sodium F mouth rinse weekly, 1mg F in 2.2mg neutral sodium F tablet 5x/week, biweekly brushing & flossing & 10 health lessons/year & home supply of fluoride paste n=825</p> | <p><u>Non-fluoridated sites:</u></p> <p>Group 3: Grades 1&2 = 1.90 grade 5 = 1.91</p> <p>Group 4: Grades 1&2 = 0.68 grade 5 = 0.65</p> |
| <p>Author: Siegal et al., 2001 Least: Cross sectional Country of study: U.S. Geographic location: Ohio</p> | <p>Year conducted: 1998/90 Water fluoridation: Not reported Recruitment: Schools were randomly selected from a list of eligible Ohio schools Funded by: Not reported</p> | <p>Inclusion criteria: Schools with complete data on enrolment and participation in the free or reduced price meal program Exclusion criteria: Not reported Mean age: 6.9 years Gender: Not reported SES: Not reported</p> | <p>2 groups: Group 1: School based dental sealant programs in place Group 2: Control - no program</p> | <p>Outcome measure: Percentage of children receiving sealants & Percentage of children receiving sealants eligible or not for the free and reduced price meal program</p> <p>Data: Group 1: 56.7% Group 2: 28.2% Percentage point difference: 29</p> |

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| | | <p>Number of Participants recruited: 335 schools; 11,191 children</p> | | <p>Group 1: FRPMP eligible-54.4%; not FRPMP eligible-64.8% Group 2: FRPMP eligible-19%; not FRPMP eligible-33.7%</p> |
| <p>Author: Siegal et al., 2010 Least: Cross sectional Country of study: U.S. Geographic location: Ohio</p> | <p>Year conducted: 2004/05 Water fluoridation: Not reported Recruitment: A stratified cluster sample was taken from eligible schools in Ohio. Stratification was by county and income level as measured by entitlement to the free and reduced price meal program Funded by: Not reported</p> | <p>Inclusion criteria: Schools in Ohio with students in the 3rd grade Exclusion criteria: Private and charter schools Age: 3rd graders (8-9 years) Gender: Not reported SES: The sample was stratified by a proxy for SES Number of participants recruited: 14,252 children</p> | <p>2 groups: Group 1: School based dental sealant programs in place Group 2: Control - no program</p> | <p>Outcome measure: Percentage of children receiving sealants & Percentage of children receiving sealants at higher or lower risk Data: Group 1: 60.1% Group 2: 37.6% Percentage point difference: 23 Group 1: higher risk – 59.4% Lower risk – 63.4% Group 2: higher risk – 28.7% lower risk – 42.7%</p> |