

SPECIAL TOPICS

ORIGINAL RESEARCH: FEATURED ABSTRACT FROM THE
19TH NATIONAL CONFERENCE ON CHRONIC DISEASE PREVENTION AND CONTROL

Reducing Dental Sealant Disparities in School-aged Children Through Better Targeting of Informational Campaigns

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Suggested citation for this article: Jones K, Griffin S, Moonesinghe R, Jaramillo F, Vousden C. Reducing dental sealant disparities in school-aged children through better targeting of informational campaigns [abstract]. *Prev Chronic Dis* [serial online] 2005 Apr [date cited]. Available from: URL: http://www.cdc.gov/pcd/issues/2005/apr/04_0142p.htm.

PEER REVIEWED

Track: Communications and Technology

The objective of this study was to investigate whether disparities in receipt of dental sealants among school-aged children are linked to caregivers' knowledge of the preventive purpose of sealants. These findings may be used to better target oral health education campaigns.

Using data from the National Health and Nutrition Examination Survey (NHANES) 1999–2000, we estimated sealant prevalence among children aged six to 17 years who had at least one tooth eligible for a sealant. We then identified the explanatory factors (main effects model) associated with knowledge of sealants among caregivers of children aged less than 18 years using data from the 2003 ConsumerStyles, HealthStyles, and Recontact marketing surveys and logistic regression. We stratified the data from the marketing surveys on sealant knowledge and the NHANES data on sealant prevalence by race/ethnicity and income (whether \geq or $<$ 200% of the 2003 federal poverty guidelines), the two significant explanatory factors common to both data sets ($P < .001$ for race/ethnicity and $P = .01$ for income).

Over the full study sample, sealant knowledge was 62.5%, and sealant prevalence was 31%. Caregivers' race/ethnicity, age, marital status, education, income, and sex were significant predictors of sealant knowledge. Both sealant knowledge and prevalence were positively associated with income level. Among higher-income families, 71% of caregivers exhibited sealant knowledge compared with 47% of their low-income counterparts; 42% of higher-income children had sealants compared with 22% of their low-income counterparts. Among higher-income families, sealant prevalence among children was positively associated with caregiver knowledge ($r = 0.973$). Non-Hispanic whites had the highest caregiver knowledge (78%) and highest sealant prevalence (49%) in this group; non-Hispanic blacks had the lowest caregiver knowledge (41%) and sealant prevalence (22%). Among low-income families, there was no association between caregiver knowledge and sealant prevalence.

Current sealant prevalence is well below the *Healthy People 2010* objective of 50%. We found disparities in both knowledge and prevalence of sealants by race/ethnicity and income. The positive association between sealant knowledge and prevalence for higher-income families is consistent with the economic principle that demand for sealants increases with knowledge of their benefit. The lack of an association between sealant prevalence and knowledge among low-income families may reflect higher levels of public provision of sealants to this group. This suggests that informational campaigns could increase demand for sealants in both income groups. Additionally, efficient targeting — targeting groups with the lowest demonstrated knowledge — should also help eliminate

disparities. This information is useful to oral health coalitions funded by the Centers for Disease Control and Prevention in many states to promote oral health and eliminate oral health disparities.

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