

# PREVENTIVE DENTAL CARE FOR MEDICAID-ENROLLED CHILDREN: PENNSYLVANIA TRENDS 2005-2010

## WHAT WE ASKED:

Has use of preventive dental care by Medicaid-enrolled children in Pennsylvania increased, decreased or stayed the same?

## WHAT WE DID:

Because tooth decay is the most common chronic disease among children in the U.S. and because state Medicaid programs prioritize access to children's dental care, this study used Pennsylvania Medicaid records to examine trends in dental care from 2005-2010. It was limited to 371,381 children born in the state from 2000-2010 and enrolled in Medicaid for at least 10 months. For each year of Medicaid enrollment, we determined whether each child had obtained preventive dental care, e.g. tooth cleaning and the application of fluoride by a dentist. In the past, African American and Latino children have been disproportionately affected by

tooth decay and barriers to dental care, so we also looked at subgroups of children, such as children from different racial/ethnic groups and US-born children in immigrant families. The analysis took into account the child's age, Medicaid insurance provider, and other characteristics that are known to affect access to dental care. Results are presented as predicted percentages for children ages 5-10 years.\*

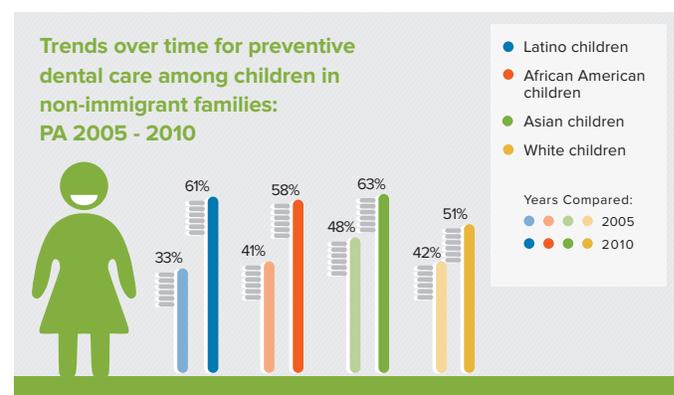
\* FOR DETAILED STUDY METHODS, SEE THE BACK OF THIS SHEET.

## WHAT WE FOUND:

- ▶ The proportion of US-born, Medicaid-enrolled children who utilized preventive dental care rose significantly for all age groups over the study period, although utilization remained less than 60% overall.
- ▶ Latino children in immigrant families were more likely to receive preventive dental care than their peers in non-immigrant families (72% and 61%, respectively, in 2010).
- ▶ White children in immigrant families were more likely to receive preventive dental care than their peers in non-immigrant families (62% and 51%, respectively, in 2010).
- ▶ African American children in immigrant and non-immigrant families were comparable to each other (60% and 58%, respectively, in 2010).
- ▶ Asian children in immigrant and non-immigrant families were also comparable to each other (69% and 63%, respectively, in 2010).

### Review of Trends over Time between Groups:

- ▶ Latino children in non-immigrant families demonstrated the largest gains over time: Only 33% of children ages 5-10 received preventive dental care in 2005, compared to 61% of children in 2010.



## WHAT IT MEANS:

Use of preventive dental care is increasing among Medicaid-enrolled, US-born children in Pennsylvania.

There have been marked gains among Latino children.

Children in immigrant families are equally or more likely to receive preventive dental care compared to children in non-immigrant families.

Future studies should identify the factors responsible for increasing utilization and explore why these factors have been more influential for some children than for others.

## STUDY METHODS:

The primary outcome, annual receipt of preventive dental care, was dichotomized using the CMS definition, which defines preventive dental care as any Current Dental Terminology (CDT) claim from D1000 through D1999. In this sample, nearly all (>98%) claims from this set of codes were for: prophylactic dental cleaning, fluoride varnish applied by an oral health provider, or sealants. This definition was selected to allow for comparison to other state and federal data on preventive dental utilization, and because it was comparable to definitions selected by other authors.

Children were eligible for the analytic sample if: (a) they resided within the state; (b) were enrolled in Medicaid for at least 10 months of any calendar year from 2005-2010; and (c) information about maternal nativity and ZIP Code Tabulation Area (ZCTA) were non-missing. If more than one child within the same family met these eligibility criteria, one sibling was randomly selected for inclusion. The 10-month Medicaid enrollment criterion was selected rather than a full-year enrollment requirement because during the study period Pennsylvania had intermittently implemented 6-month Medicaid renewal procedures, which can lead to brief gaps in coverage.

The primary sources of data were birth files, Medicaid records, the American Community Survey 2010, and the Health Resources and Services Administration (HRSA) Dental Health Provider Shortage Area (HPSA) database.

Covariates included age group, year of service, Medicaid insurance provider, Dental HPSA status, maternal education, neighborhood poverty, neighborhood density, and a combined variable for race, ethnicity, and maternal nativity.

Models were constructed in Stata/SE 1256 using xtgee in order to implement generalized estimating equations (GEE) fitting a logistic model for the binary outcome (any preventive dental care in the previous year, yes/no) using an unstructured correlation structure. All models were adjusted for age group, year, the combined variable for race/ethnicity/nativity, and the interactions between year and age group and year and the combined variable for race/ethnicity/nativity. The fully adjusted model additionally included all other covariates as noted above.

Results are presented as predicted percentages with 95% confidence intervals generated using the margins command. The predicted percentages reflect statistical adjustment for repeated measures, as well as maternal-, area-, and health-system-level covariates. However, the results are comparable when presented as either raw or predicted percentages. We focus on results for children ages 5-10 years with all covariates set to their mean values. A two-sided p-value < 0.05 was the criterion for statistical significance.

RELATED WORK: <http://policylab.chop.edu/project/increasing-oral-health-care-services-immigrant-children>

### PUBLICATION:

Yun K, Chesnokova A, Shults J, Pinto A, Rubin D. (2014) Use of Preventive Dental Care by Medicaid-enrolled, School-age US Children in Immigrant and Non-immigrant Families: Pennsylvania Trends from 2005 through 2010. *American Journal of Public Health*.

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