Interprofessional Study of Oral Health in Primary Care: Common Risk Factor Study

Beginning in 2014, the AAPD Policy Center began conducting a series of translational studies to explore pediatric medical providers’ perceptions and practices surrounding oral health. Major outcomes of the first year revealed that almost all pediatric providers considered oral health screening and education an integral part of children’s overall health, yet providers’ adoption of available formalized caries-risk assessment tools was low due to competing time demands at the well-child visit and minimal financial reimbursement.

Study at Nationwide Children’s Hospital

The next phase in 2015 was to conduct a study to identify global, medical-office specific factors that correlate to caries risk at Nationwide Children’s Hospital (NCH) in Columbus, Ohio. Nationwide Children’s Hospital utilizes an EPIC electronic health record (EHR) system that fully integrates dental with general pediatrics and pediatric specialties. A cross-sectional analysis of NCH’s electronic health record system was conducted to identify children who had one or both 12-month and 15-month well-child visit(s), and at least one dental visit. A total of 1,736 patients met the criteria.

More than 40 independent variables pertaining to nutrition, safety, development, and other screenings already embedded within the 12- and 15-month well-child examination templates were identified for analysis. In addition to well-accepted risk factors such as a positive history of nighttime feedings ($P=0.04$) or mothers’ own poor oral health status ($P=0.02$), new risk factors were identified. These include delayed immunization status ($P<0.001$), a low appointment show-rate ($P<0.001$), and still breastfeeding at 12 and/or 15 months of age ($P=0.03$).

Semi-Structured Interviews with Pediatric Health Professionals

Semi-structured interviews with five Year 1 practice observation sites were also conducted during this year of the project to gain feedback on the most useful and feasible construction of an electronic health records-based caries-risk assessment tool for medical provider use. The interviews not only indicated a high level of provider interest in building such a medically-specific caries-risk assessment tool, but further supported that these significant variables already exist in providers’ electronic health records. They considered this approach a practical solution for improving the engagement and participation by primary care providers in early oral health promotion and referrals.

Results Support Further Research

In consideration of DentaQuest’s goals of eradicating dental disease in children, we proposed a next step of this project and applied for continued grant funding. The 2016 phase of the study is to further test the identified factors – and explore other potentially significant variables – through an analysis of electronic medical and dental records of additional U.S. child populations.

One outcome of validation of the accuracy of these predictive factors would be the generation of a caries-risk screening alert in the electronic health record at the end of a well-baby visit for moderate and high risk children which could assist in increasing oral health promotion and referral to a Dental Home.

THIS RESEARCH HAS BEEN SUPPORTED THOROUGH GRANTS FROM THE DENTAQUEST FOUNDATION.

For further information, please contact AAPD Policy Center Leola Mitchell-Royston at (312) 337-2169 or lroyston@aapd.org.