

Root Cause Analysis of quality gaps in Caries Prevention Management

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Objectives: There is a great need to improve the quality of dental care delivered to patients. Our project's goal is to understand the reasons why preventive interventions (sealants and fluorides) were not placed in elevated caries risk patients at the UTHealth School of Dentistry. This knowledge will help develop system level approaches to improve dental care quality relating to caries management.

Methods: Previously validated dental quality e-measures were used. The first measure assessed gaps in sealant placement among elevated risk patients in 6–9-year-olds and 10-14-year-olds. The second evaluated the gaps in elevated caries risk patients who did not receive corresponding appropriate risk-based fluoride interventions. Using a rapid RCA protocol, two chart reviewers conducted in-depth chart reviews to identify the potential contributing factors associated with quality gaps for randomly selected patient charts identified as having a quality gap. Findings were documented in a standardized format in REDCap.

Results: 100 patient charts were reviewed for the reporting year of 2019. For the sealants dental quality measure, sealants were not planned due to the following reasons: 35 patients never returned in 2019, sealants were not planned in 29 patients, 72 patients had other reasons, and other treatment were deemed more essential in 28 patients. For the fluoride measure, fluoride interventions were not provided for the following reasons: treatment was not planned in 49 patients, 22 charts had data entry error, and 11 charts had other reasons.

Conclusion: This is the first of a 3-phased process to help develop an understanding about the factors leading to current performance gaps. Our initial findings will be supported by interviews, and ethnographic clinical observations. This will generate the data and insights to thoroughly define the scope of problems relating to caries management and inform development of informatics-based interventions to improve quality with respect to caries prevention.

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