

POSTER ABSTRACT

Towards a decision support system to better integrate primary and dental care

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Introduction: There is a growing body of evidence for associations between oral and other chronic non-communicable diseases. Early recognition and diagnosis can be important in treating these diseases and better integration of primary and dental care could improve patient care. With the Dent@Prevent project, we aim to develop an electronic decision support system (DSS) and interactive mobile application to promote better collaboration between general practitioners (GPs) and dentists.

Methods: A mixed-methods approach, including a systematic literature review, routine data analysis, focus groups with GPs and dentists and a Delphi-method with GPs, dentists and patients, is used to acquire information to develop the interactive mobile application that assesses patient-reported measures and the DSS that supports GP and dentist decision-making in an evidence-oriented way. Both the mobile application and DSS will be piloted to validate the use of these products.

Results Findings: from the systematic literature review yielded a primary focus for the mobile application and DSS on links between diabetes and periodontitis. From the focus groups with dentists and GPs it appeared that GPs are generally less aware of interactions between oral and non-communicable diseases than dentists. Furthermore, several intervention points and integration of care processes were discussed as a basis for the DSS. The developed mobile application includes patient-reported measures for diabetes and periodontitis risks, as well as measures of patient experiences and perceptions towards the integration of care. The DSS is being designed to support the GP and dentist to recognize respectively an increased risk for periodontitis in their diabetes patients and an increased risk for diabetes in their patients with periodontitis, and to care for their patients accordingly.

Discussions and conclusions: Electronic decision support systems for integration of primary and dental care might provide innovative and novel possibilities to improve integration of care through better informed decision making, including at the health policy level.

Lessons learned: Clinicians may be unaware of interactions between oral and non-communicable diseases, which may reduce the chance for early recognition of disease in both sectors of care.

Limitations: The Delphi-method was used to determine the content of the mobile application with regards to measures of patient experiences and perceptions. It was performed with an anonymized panel including dentists, GPs and patients. Because of this anonymity, the characteristics such as gender and age of the panel are unknown. Furthermore, because of limited scientific evidence on integrated care for diabetes patients with periodontitis, several development steps of the DSS depend on expert opinions from clinicians which may not be generally representative. Finally, the DSS we are developing is a pilot version but this seems a sensible approach towards stepwise creation of the DSS.

Suggestions for future research: The mobile application and DSS have to be tested and validated in real-life settings before implementation in actual practice. Once the mobile application and DSS have been validated, the system can be evaluated to assess the efficiency of the intervention to promote integrated health under day-to-day practice conditions.

Keywords: dental care; primary care; decision support; mobile application
