

Testing Clinical Decision Support for Treating Tobacco Use in Dental Clinics

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Summary: Smoking remains the leading preventable cause of death in the U.S. Research shows that smoking cessation can reduce the risk of lung cancer and other diseases by 20 to 90 percent. The U.S. Public Health Service Guidelines have established that tobacco dependence treatment, including cessation pharmacotherapy and brief counseling, can produce significant and sustained reductions in tobacco use and should be delivered to all smokers seeking routine health care. Dentists are in a good position to provide tobacco cessation treatment because: 1) they have regular access to a broad population (50 percent of current smokers report at least one annual dental visit); 2) they have access to patients who do not receive other health care services (10 percent of dental patients do not see a physician regularly); 3) multiple patient dental visits per year are common, allowing for repetitive dental provider opportunities to offer tobacco cessation counseling and interventions; and 4) evidence shows that tobacco cessation assistance delivered by dental providers can increase tobacco cessation. Currently, however, dentists generally do not provide routine tobacco cessation treatment to their patients who smoke. Dentists often cite barriers—such as concern about increased patient visit time, limited training in behavioral assessment and intervention, a lack of office-based systems to facilitate preventive care, and a lack of referral resources—to providing cessation treatment.

Dr. Donna Shelley and her research team are working to address these barriers. They are implementing a clinical decision support system that uses a previously developed smoking cessation personal digital assistant (SC-PDA). This system involves the use of a handheld PDA to help dentists provide evidence-based guidelines on smoking cessation during patient encounters. Based on the patient information entered, the system helps dentists recommend and prescribe approved pharmacotherapy; facilitates referral of patients to local counseling resources; prints handouts with patient-specific smoking cessation recommendations, instructions, and cessation resources; and documents the visit for the patient's dental record.

This study is using a cross-sectional pre-post study design to assess the impact and acceptability of the SC-PDA. The intervention is being implemented in six general dental care clinics including five New York University College of Dentistry clinics and the Institute of Family Health, a federally-qualified dental health center. Each clinic uses a tobacco use identification system (TUID) to identify patients who are eligible for the study. Patients who consent to the study are administered an exit survey after their dental visit to collect baseline data on dentist adherence to the Public Health Service Guidelines and

on patient quit behavior. After collecting baseline data, dentists in all six clinics receive training on the SC-PDA. Two weeks after implementation, clinics again use the TUID to identify patients for the study. Exit surveys are administered to collect data from patients during the intervention period of the study. At the end of the intervention, the research team plans to conduct focus groups with staff from the six clinic sites to collect data on use and acceptance of the SC-PDA.

The SC-PDA is a promising tool to help dentists provide evidence-based smoking cessation assistance. This study will provide an initial assessment of its potential impact and use and will inform future testing and implementation of the SC-PDA in dental health clinics throughout the U.S.

Specific Aims:

- Test the hypothesis that a clinical decision support system will improve the rate at which dentists assist their patients with smoking cessation by providing information and recommendations on smoking cessation resources. **(Ongoing)**
- Assess whether exposure to information and recommendations facilitated by the SC-PDA will: 1) increase the rate at which patients make at least one quit attempt in the month following the dental visit; and 2) increase the reported use of counseling and pharmacotherapy during those attempts over that observed with a tobacco use identification system alone. **(Upcoming)**
- Evaluate the acceptance of the SC-PDA into the workflow of dental clinics through semi-structured interviews of dentists and focus groups with staff at the conclusion of the trial, and by measuring the range of use of the SC-PDA with a log on the server that collects aggregate data of each dentist's access of specific PDA screens by time. **(Upcoming)**

2011 Activities: During the last quarter of 2011, the team revised and updated the SC-PDA tool. The tool was tested in one clinic and is ready for implementation. Participant recruitment was initiated at two of the six dental clinic sites to collect baseline data on provider adherence to tobacco use treatment guidelines.

As last self-reported in the AHRQ Research Reporting System, project progress and activities are mostly on track and project budget spending is roughly on target.

Preliminary Impact and Findings: This project has no findings to date.

Target Population: Adults

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care across transitions in care settings, and the use of electronic exchange of health information to improve quality of care.

Business Goal: Synthesis and Dissemination
