

Title: A National Dental PBRN pilot study of nicotine replacement therapy sampling in dental practices

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Background: Cigarette smoking is detrimental to oral health. Oral health providers advise patients to quit tobacco, but rarely recommend or prescribe cessation medications. Nicotine Replacement Therapy Sampling (NRTS) means providing all patients who smoke, regardless of interest in quitting, with samples of over-the-counter NRT products. In primary care, NRTS increases quit attempts and smoking abstinence. Dental settings are fit for NRTS because providing samples is common in dental care. Additionally, NRTS can be combined with the American Dental Hygienists' Association's recommended Ask-Advise-Refer (AAR) intervention (Ask about tobacco use, Advise quitting, Refer to quit line). The aim of this pilot study was to assess the feasibility of clinical trial procedures to test the effect of AAR + NRTS on smoking abstinence.

Methods: Two dental practices from the Midwest Node of the National Dental PBRN recruited 10 patients who smoke ($n = 5$ /practice; 100% White, 50% male, M age = 54). Practices were randomly assigned to distribute either NRTS or an electric toothbrush (ET) at dental visits in conjunction with AAR. Patients' smoking status and sample use were assessed 1-month post-visit. Participants were sent a carbon monoxide (CO) monitor and self-administered a CO breath test via smartphone. Finally, patients ($N = 7$) and dentists ($N = 2$, both White, one male, one female, M age = 54) were interviewed regarding feasibility and acceptability of study procedures. Interview transcripts were analyzed to identify opportunities to improve the upcoming clinical trial.

Results: All patients completed all surveys and 90% completed the CO test. One fifth (20%) of patients in the NRTS group were abstinent (vs. 0% of the ET group) and 60% of the ET group used NRT during the study period (vs. 0% of the NRTS group). Patients and practitioners thought study procedures were acceptable and with low burden/disruption. Patients appreciated providers' non-judgmental approach to discussing tobacco use and felt their questions about NRT side effects/dosage were addressed. Providers suggested involving more staff in patient enrollment procedures and providing written instructions for study logs.

Conclusions: Patients and providers deemed study procedures to be feasible and the sampling interventions acceptable. Both found AAR acceptable and staff found it feasible to implement into current workflows. Efficacy of NRTS in dental care will be tested in an upcoming clinical trial.

Keywords: tobacco use, oral health, clinical trial, nicotine replacement therapy

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