Preventing and detecting oral cancer

Oral health care providers' readiness to provide health behavior counseling and oral cancer examinations

GUSTAVO D. CRUZ, D.M.D., M.P.H.; JAMIE S. OSTROFF, Ph.D.; JAYANTH V. KUMAR, D.D.S., M.P.H.; SANGEETA GAJENDRA, B.D.S., M.P.H.

In 2002, it was estimated that oral and pharyngeal cancers would account for 28,900 cases and 7,400 deaths in the United States alone.[1] The primary risk factors for oral and pharyngeal cancer are tobacco use and the consumption of alcoholic beverages, and their joint effect appears to be multiplicative.[2] Moreover, it has been estimated that in the United States, approximately 75 percent of all cancers at these sites are attributable to smoking and drinking.[2] Smokeless tobacco use also has been shown to be a significant risk factor for oral and pharyngeal cancer, particularly for oral sites that come into contact with the product.[3]

Oral health care providers should include tobacco-use cessation and alcohol-abuse counseling as a standard aspect of care.

To reduce morbidity and mortality attributable to oral cancer, greater efforts at primary and secondary prevention are needed. Primary prevention of oral cancer includes avoidance of tobacco use and alcohol abuse, as well as appropriate intake of fruits and vegetables. Secondary prevention of oral cancer consists of a visual and tactile examination of the oral cavity, the head and the neck, which is essential for early detection. In the past few years, awareness of the need for routine oral cancer examinations in populations at risk has increased, particularly among oral health care professionals. However, efforts toward raising the

ABSTRACT

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Background. The authors conducted a study to examine oral cancer prevention and early detection practice patterns in a population-based random sample of practicing oral health care professionals in New York state.

Methods. The authors surveyed a population-based, self-weighting, stratified random sample of dentists (n = 1,025) and dental hygienists (n = 1,025) in New York state. They assessed the subjects' readiness to offer tobacco-use cessation and alcohol-abuse counseling and oral cancer examinations.

Results. The effective response rates were 55 and 66 percent for dentists and dental hygienists, respectively. In terms of readiness to perform oral cancer examinations for patients aged 40 years and older, the large majority (82 percent of dentists and 72 percent of dental hygienists) were in the maintenance stage of behavior, indicating that oral cancer examinations were a routine part of their practice. In terms of readiness to offer tobacco-use cessation counseling, only 12 percent of dentists and 21 percent of dental hygienists were in the maintenance stage, and only 2 percent of dentists and 4 percent of dental hygienists were in the maintenance stage of offering alcohol-abuse counseling.

Conclusions. Oral cancer examinations seem to have been adopted as a standard of practice by most oral health care providers in New York state, but cancer prevention services, such as counseling regarding cessation of tobacco use and alcohol abuse, are lacking.

Clinical Implications. Oral health care providers should be trained in oral cancer prevention services such as tobacco-use cessation and alcohol-abuse counseling and encouraged to include these services, along with continued provision of oral cancer examinations, as a standard aspect of care.

Key Words. Oral cancer; tobacco use; alcohol abuse; cancer prevention; counseling; smoking; oral health.

awareness of health care professionals and the general public of the need for primary prevention of oral cancer have been lacking.

The U.S. Preventive Services Task Force[4] recommended that clinicians include a careful examination and screening for oral cancer in their care of asymptomatic patients who have a history of tobacco or alcohol use. The American Cancer Society recommends oral cancer checkups for patients undergoing periodic dental and medical examinations.[5] But in 2003, the Cochrane Health Education Foundation reported that more evidence is needed to find out whether screening programs are effective in detecting oral cancer earlier and in reducing mortality.[6]

The primary care dental team has a central role in providing information about the oral health effects of tobacco use and alcohol abuse, including the risks of oral cancer and periodontal disease. However, national as well as local studies have demonstrated that oral health care providers (dentists and dental hygienists) have not widely adopted the published guidelines for tobacco-use cessation counseling.[7-10] To date, no prior study has assessed the alcohol-abuse counseling practices of oral health care professionals.

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We conducted a study to examine oral cancer prevention and early detection practice patterns in a population-based random sampling of practicing oral health care professionals in the state of New York. In addition, we examined whether there were any demographic or practice-level variables that were associated with lower adherence to recommended health behavior counseling so as to properly target future statewide professional educational initiatives to increase adoption of such practices.

METHODS

We conducted our study as part of a statewide needs assessment for the development of an oral cancer control plan for New York state. We selected a population-based, self-weighting, stratified random sample of dentists (n = 1,025) and dental hygienists (n = 1,025) from the roster of licensed oral health care practitioners in New York. The stratification was based on the geographical location of their residence (New York City versus the remainder of New York state). We used the nQuery Advisor software (Statistical Solutions, Saugus, Mass.) to calculate the sample sizes. Only professionals who were active in the practice of dentistry or dental hygiene were eligible to participate in the mail survey. After eliminating all ineligible providers (because they were deceased, retired, no longer in practice or had moved out of the state), we obtained a final sample size of 904 dentists and 963 dental hygienists. This sample size permitted estimation of several parameters of interest to our study with a power of at least 80 percent. This study was approved by the institutional review boards of New York State Department of Health and New York University, New York City.

We sent five mailings using the Tailored Design Method.[11] The subjects were sent initial contact letters in May 2002. Thereafter, we mailed all eligible providers a cover letter, a questionnaire, a stamped return envelope and a new U.S. golden dollar as an incentive. A reminder postcard was mailed two weeks later to the entire study sample. This was followed by a second mailing three weeks later to nonrespondents. Finally, we sent a complete third mailing to 411 nonrespondents by overnight delivery three weeks thereafter, with the principal investigator personally signing each cover letter. Four hundred ninety-nine dentists and 630 dental hygienists responded to the survey, yielding effective response rates of 55 and 66 percent, respectively.

We developed the survey instrument, using the work of Goldstein and colleagues as a basis,[12] to assess the tobacco-use cessation and alcohol-abuse counseling and oral cancer examination practices of the providers in our survey population. The items assessing tobacco-use cessation practices were based on the U.S. Department of Health and Human Services (DHHS) Public Health Service clinical practice guidelines, "Treating Tobacco Use and Dependence."[13] These guidelines include a list of activities and behaviors called "the five As":

- ask the patient about his or her tobacco use;
- advise the patient to quit;
- assess the patient's willingness to make a quit attempt;