

Perspectives of Maryland dentists on oral cancer

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Approximately 30,000 new cases and more than 8,000 deaths from oral cancer occur in the United States annually.^{1,2} This mortality rate surpasses that of cervical cancer or melanoma.³ Moreover, the five-year survival rate for oral cancer is only 52 percent, whereas it is 77 percent and 62 percent for breast and colorectal cancer, respectively.⁴ These survival rates suggest that oral cancers are diagnosed at late stages.

In the state of Maryland, two people die, on average, each day of oral and pharyngeal cancers. Maryland's mortality rate for oral and pharyngeal cancer is seventh highest overall in the United States, sixth highest for men⁵ and third highest for African-American men.⁴ In Maryland, the majority of oral cancers are detected at late stages and they are diagnosed by physicians.⁶ Moreover, the mortality rate in Maryland has remained stagnant for almost three decades. Only 28 percent of Maryland adults aged 40 years or older reported ever having undergone an oral cancer examination.⁷ Of these, 20 percent underwent an oral cancer examination in the previous year.

Nationally, these statistics are much less impressive, in that 15 percent of U.S. adults reported ever having undergone an oral cancer examination; of these, only 7 percent underwent an examination in the previous year.⁸ According to the American Cancer Society, or ACS, people aged 40 years or older or anyone at high risk of developing cancer should receive an annual oral cancer examination. For the general population aged 20 to 39 years, ACS suggests that an oral cancer examination be conducted every three years.⁹

Background. Maryland's mortality rate for oral and pharyngeal cancer is seventh highest overall in the United States, sixth highest for men and third highest for African-American men. As part of a statewide needs assessment and in follow-

up to a mail survey of Maryland general dentists, focus groups were conducted to obtain more in-depth information about why dentists do not provide a comprehensive oral cancer examination for most of their patients and how to solve this problem from a dentist's perspective.

Methods. A trained focus group moderator conducted two focus groups of general practice dentists in two locations in Maryland. Five major themes emerged from the two focus groups: inaccurate knowledge about oral cancer; inconsistency in oral cancer examinations; lack of confidence in when and how to palpate for abnormalities; lack of time to routinely provide oral cancer examinations; and recommendations to help resolve these issues.

Conclusions. The focus groups provided a rich source of ideas on how to best provide dentists with continuing education about oral cancer prevention and early detection. Participants also provided opinions about the need to improve the public's awareness of oral cancer and its prevention.

Clinical Implications. Dentists need to include comprehensive oral cancer examinations as part of their routine oral examinations for all appropriate patients.



Dentists, as the primary group of health care providers who assess the condition of the mouth, arguably bear the largest share of responsibility in detecting and diagnosing oral cancer. As part of a state initiative in oral cancer prevention and early detection, 508 general practice dentists in Maryland were surveyed by mail in 1995 with respect to their knowledge, opinions and practices about oral cancer.^{10,11} Regarding diagnostic

knowledge, only 35 percent knew that the majority of diagnoses occur in people older than age 59 years, and 24 percent did not know that patients with early oral cancer lesions are usually pain-free.¹⁰

The mailed survey included questions about the use of health histories to assess patients' oral cancer risks and the conduct of an oral cancer examination; it also solicited opinions about oral cancer practices. The results suggested that surveyed dentists did not routinely provide thorough oral cancer examinations and that their level of diagnostic knowledge was less than optimal. For example, 86 percent of dentists did not provide oral cancer examinations for non-dentate patients and 24 percent did not palpate the lymph nodes of any patients. Moreover, only 24 percent strongly agreed that they were adequately trained to conduct oral cancer examinations.¹¹

These findings are consistent with those reported in a national survey of U.S. dentists.^{12,13}

As a follow-up to the mail survey among dentists in Maryland, two focus groups were conducted: one in Baltimore and one on the Eastern Shore of Maryland. The objectives of this qualitative follow-up study were to solicit more in-depth information about why most dentists did not provide a comprehensive oral cancer examination for their patients in Maryland¹¹ and how to solve such problems from a dentist's perspective. This study probed barriers elicited from the previous mail survey and searched for other possible obstacles to providing this needed service. Finally, this study helped explain, from a dentist's viewpoint, why the majority of the target population for an oral cancer examination (that is, adults aged 40 years or older) did not recognize that they had received this examination in the previous year.⁷

SUBJECTS AND METHODS

A qualitative descriptive study was generated from two separate focus groups conducted with dentists in Baltimore and in the Eastern Shore region of Maryland. Criterion-purposeful sampling¹⁴ (that is, selecting cases based on a preconceived criterion—possibly from a previous study) was used as the sampling strategy. We used qualitative content analysis^{15,16} (that is, exam-

ining the patterns that emerge from the data) to analyze the data from the verbatim transcriptions of both sessions.

Research participants and setting. A private focus group research firm was assigned to recruit all participants. The firm used primary and secondary inclusion criteria suggested from the previous mail survey of Maryland dentists.^{10,11}

Primary criteria. In terms of primary criteria, Baltimore and the Eastern Shore region were selected as the target areas because of their high prevalence of, and rates of mortality from, oral cancer. The firm used a telephone list of licensed dentists in Maryland to screen for this geographic criterion. Only non-university-employed dentists who practiced dentistry 20 hours per week or more were recruited. Participants had to practice general dentistry for adults

primarily (specialists were excluded). Only dentists whose patients were mainly middle- or low-income were selected.

Secondary criteria. With regard to the secondary criteria, selection of participants focused on a mix of participants' years of general practice experience, a combination of public and private primary places of practice, and a blend of racial/ethnic backgrounds of their patients, with a special focus on black patients. With the exception of geographic location, criteria were verified with each participant by telephone. The recruiters from the hired firm also explained the objectives of the focus group and the participants' role in the study. Oral informed consent was obtained from each dentist before each focus group was held. A light meal was provided before each focus group and each participant was paid \$125 at the conclusion of the session.

Eight dentists participated in the Baltimore focus group. They met all four major criteria. Concerning the minor secondary criteria, most dentists had more than 15 years of practice experience; only one had about 10 years of experience. Seven participants practiced in private settings, while one worked in a public clinic. Black patients made up 5 to 94 percent of the participants' total patient practice. This focus group was conducted in a professional focus group conference room, with an adjacent room equipped with a one-way mirror for observers.

Baltimore and the Eastern Shore region of Maryland were selected because of their high prevalence of, and rates of mortality from, oral cancer.

The participants were informed that behind the one-way mirror were observers who were responsible for taking notes.

Eleven dentists participated in the Eastern Shore region's focus group. They, too, met all four of the principal criteria. Their professional experience ranged from 11 to 37 years. All were in private practice. Black patients made up from 8 to 85 percent of the dentists' total patient practice.

Because of the unavailability of a focus group conference room, this focus group was conducted in a hotel meeting room in Easton, Md. The observers sat in the same room with the participants and were introduced as summary note-takers.

A professionally trained focus group moderator was hired to conduct both focus groups. This moderator had conducted several other focus groups with the public and with other health professionals on the same topic. Each focus group lasted about 90 minutes and was audiorecorded. The moderator used a similar semistructured questionnaire guide with fixed discussion items and identical sequences for each focus group. Discussion topics included the following:

- participants' awareness and opinions about oral cancer statistics and oral cancer's risk factors;
- education and training to perform oral cancer examinations;
- opinions and practices in regard to oral cancer examinations in the participants' practice setting;
- priorities and factors that may influence dentists' priorities in regard to performing these examinations;
- reactions to results of several related surveys among dentists, other professionals and the public;
- suggestions for improving oral cancer services for the public.

At the end of each focus group, the moderator gave all participants a summary sheet of Maryland oral cancer statistics and highlights of previous surveys among health professionals and the public. A guide to performing an oral cancer examination also was provided to each participant at the conclusion of the session.

Data analysis. The focus group moderator prepared a summary report for both sessions, using selected quotes from participants, while other

research team members (P.S. and A.S.) prepared verbatim transcriptions from both audiorecordings. Two of us (P.S. and A.H.) reviewed and compared the transcriptions with the audiorecordings to ensure the descriptive validity¹⁷ and to determine the overall content of the collected data. We then used qualitative content analysis methods to extract themes, with the use of supporting quotes from the verbatim transcriptions.^{13,14} Subsequently, we compared the summary report and ver-

batim transcriptions. We concluded that the two focus groups did not present different information. Thus, we prepared a qualitative descriptive profile from the combined findings from both locations.

RESULTS

Five major themes emerged from the two focus groups. The first four helped explain data obtained from

the mail surveys in regard to why most dentists do not properly perform oral cancer examinations for their patients.¹¹ The participants' responses helped explain, from a dentist's perspective, why the majority of Maryland adults aged 40 years or older may have reported not having had an oral cancer examination in the past year.⁷ The fifth theme helped explain how to solve such problems.

Theme 1: inadequate knowledge about oral cancer. Two areas of knowledge about oral cancer were explored in the focus groups. The first area was the participants' lack of recognition of Maryland's and the nation's oral cancer problem. Most participants were more likely to relate the scope of this problem to their clinical experiences rather than to the reported statistics. They were surprised to learn about the high mortality rates associated with oral cancer because they believed that they had seen so few cases in their practices. They were more likely to recognize and accept the high rates of other types of cancer in Maryland. This led them to question the authenticity of the statistics, which was demonstrated by their comments and queries, such as the following:

- "High rate compared to what?"
- "I'm curious where these statistics come from."
- "I didn't realize Maryland was that high in oral cancer. I know that Maryland is high in each particular cancer in general, but I'm surprised about the oral."

The first area explored was the participants' lack of recognition of Maryland's and the nation's oral cancer problem.

■ “I really don’t know if it’s such a common thing as the numbers suggest. To me, it’s seldom.”

These dentists were not aware of the statistical fact that on an average day in Maryland, two people die of oral and pharyngeal cancers.⁵

The second area of knowledge explored was risk factors for oral cancer. As specialists in oral health, dentists are expected to have comprehensive knowledge of these risk factors.¹⁸ However, none of the participants could identify correctly all oral cancer risk factors. Moreover, most of the participants strongly defended their inaccurate beliefs. For example, after reviewing highlights of a survey of Maryland dentists’ knowledge of oral cancer—which found that 43 percent of dentists incorrectly identified poor oral hygiene as a risk factor⁸—one participant adamantly defended his incorrect belief. He stated, “Any time the mouth has excessive plaque and calculus, that becomes [an] irritant. And any irritant can cause cancer. So [poor] oral hygiene, that’s one of the basics.”

Another participant echoed the sentiments of the first participant: “I think it’s related. It’s [poor oral hygiene] not the highest one, with smoking and alcohol, but it’s up there.” Another participant pointed out, “Along with sharp teeth.” This was followed by a comment from one dentist, who said, “In one patient, it was caused by traumatic bite.”

These examples highlight the many misconceptions that dentists hold. Rather than being aware of the most updated scientific evidence, participants tended to depend on their personal experiences and intuitive sense to justify oral cancer risk factors.

Theme 2: inconsistent or unacceptable procedures for oral cancer examinations.

The second theme that emerged from the focus groups was that there was inconsistency among dentists in regard to performing an oral cancer examination. All participants said they provided comprehensive oral cancer examinations regularly. However, their descriptions revealed variations in the comprehensiveness of the examinations. Many participants did not mention checking patients’ faces or palpating the lymph nodes. One participant admitted the following: “I guess I got lazy after awhile and didn’t palpate as much.”

With regard to the intraoral part of the oral cancer examinations, participants varied in the timing of the screening and in what order

the examination procedures are conducted. Some checked their patients at the beginning of the visit, while others did so at the end. Some began by checking the hard tissues, while many examined the soft tissues first. In addition, the soft-tissue examination steps varied extensively among participants. This variation is in stark contrast to the guide provided by the National Institutes of Health, which stresses the importance of following a definitive step-by-step protocol.¹⁹

In addition, one participant summed up the lack of routineness in performing oral cancer examinations for all patients: “Every new patient comes in for a comprehensive exam, but we do sometimes neglect a cancer exam on a hygiene patient, ‘cause you are behind, even without managed care.”

We also noted that patients were not properly informed that an oral cancer examination was about to be performed. Many dentists felt the reason behind their not mentioning the oral cancer screening to their patients was concern about the patients’ reactions. Here are some of the participants’ explanations:

■ “I tend to downplay anything that tends to alarm them. I still give them a complete examination but I don’t say, ‘By the way, I am going to do a cancer screening procedure now.’”

■ “I’ll say it once in awhile, but not routinely. I’m more likely to tell them I am doing periodontal probing. ... I stay away from the word ‘cancer.’”

Moreover, after the moderator stated that Maryland adults said they do not receive oral cancer examinations,⁷ the focus group participants explained that patients probably just do not realize that the examination has been performed. They also speculated that many patients do not remember when a procedure has been done. They opined:

■ “I think that might be because we are delinquent in telling the patients what we do when we do an oral exam.”

■ “I generally don’t tell them [patients], but I probably should. Most of the patients don’t know what you [dentists] are doing [providing an oral cancer examination].”

■ “I do the screening routinely at every exam. But I don’t emphasize it at all. ... I pull out the tongue and tell them I am just looking for bumps and bruises.”

The suggested lack of recall on the part of patients could be partly the result of dentists’

not informing them about the examination, although the dentists explained that they were trying to prevent their patients from being overly alarmed about cancer.

Two other issues discussed were patient education about oral cancer prevention and the oral cancer examination. The participants varied in the strategies they used to educate their patients. Often, their response was inadequate, either orally or because they did not provide written materials such as fliers or pamphlets. Moreover, they tended to focus on smokers as the only group targeted for health education. Comments included the following:

■ “I have pamphlets, especially for those patients who smoke and they are reeking when they come in; it gets a little nauseating. Most patient education is for smokers.”

■ “We do have a few pamphlets and I’ll say something occasionally. I don’t really lecture people about their tobacco use. Sometimes I feel it’s redundant.”

■ “I don’t have pamphlets at all, but I love to talk and I talk like crazy about oral hygiene and smoking.”

Theme 3: uncomfortable and not confident about oral cancer examinations. In general, the dentists in our focus groups said they felt uncomfortable performing extraoral examinations, specifically the palpation of female patients who, they believed, may not understand why dentists are concerned about anything outside the mouth. Responses from participants included the following:

■ “I’m a little uncomfortable with young ladies when I start to check the thyroid. I always have a female assistant in the room with me. Even after [I] tell [them] what [I’m] doing, I’m still uncomfortable.”

■ “If you start palpating her neck and, let’s be realistic, fellas, in this day and age you’re setting yourself up—I mean from a legal perspective.”

Moreover, although most participants thought that their oral pathology training was adequate, they were not confident about performing oral cancer examinations right after graduating from dental school. Several participants said that it took a while before they became comfortable with, and adept at, performing a comprehensive examination. Here are some of their comments:

■ “I didn’t give the complete exam when I got out

of school. I just didn’t. I had to grow into it. The longer I have been in practice, the more I grow into it. And the more I grow into it, the more comprehensive it gets. It was very hard to do the soft-tissue exam when I first started [in practice].”

■ “When I first got out of school, it was very hard and it was just in the last couple of years that I started doing the outside of the neck. I just made up my mind that I was going to start doing that.”

Thus, a lack of confidence in conducting a comprehensive oral cancer examination when first entering private practice and being concerned about patients’ reactions to external palpation help explain why some dentists do not provide these examinations routinely.

Theme 4: limited time perceived as major problem. Time constraints emerged as a major problem when the moderator asked dentists how they determine who receives a comprehensive oral cancer examination. One participant replied, “I think a lot of it is dictated by the time on the clock.” Another said, “I do [provide oral cancer examinations] as much as I can, if I have time available.”

This led to a brief discussion about managed care. Most participants said they felt managed care caused dentists to neglect their patients, although few participated in a managed care system. Moreover, time constraints affected the extent of health education provided to patients. One participant said, “Sometimes I tell them [about oral cancer]. I actually believe that you should. I don’t, because I guess it’s something else that requires an explanation. ... If they ask, I’ll be happy to talk about it, but it can make a visit longer.” Furthermore, participants said that although they have patient educational materials in their offices, there is little time for them to directly discuss the educational issues in them with patients.

Thus, as expressed by dentists in the focus groups, the lack of time is a major barrier to providing oral cancer examinations on a routine basis. Dentists also cited the lack of time as a barrier to providing oral health education or counseling with regard to oral cancer prevention and early detection.

Theme 5: recommendations to solve the problem. When the moderator prompted dentists for topics on oral cancer that they would like to see offered as continuing education courses, most

In general, the dentists said they felt uncomfortable performing extraoral examinations.

seemed generally uninterested unless the material was a brief add-on to another course. One respondent said, "Speaking for myself, if there was a course offered in oral cancer screening or oral pathology, I would not make the time to go to that. But, if something were tagged on at the end of another clinical type of course, I'd be interested in that. It [continuing education on oral cancer] is just not on my priority list." Another commented, "We all have just so much time we have off from our practice. And we have to pick and choose what courses to take. And usually, it will be whatever is the most effective in practice at that time."

On the positive side, several important suggestions for continuing education were offered: "I wouldn't mind a one- or two-hour course on a freshening up, especially of [oral cancer examination] techniques. See if what I'm doing is up with what's being suggested."

One dentist said, "Wouldn't it be nice if at the end of the CPR course, something like that [oral cancer screening] would be introduced? Because you're talking about the overall well-being of the patient anyway. What a nice time at the very end [of the CPR course] to tie it in and go ahead and say, 'This is how we do oral cancer screening.'"

Another important point made in regard to continuing education referred to experts who come to the dentist's office and provide hands-on training, a process sometimes referred to as "detailing." Most participants agreed with this dentist's remark: "Yeah, I like the idea." Most participants said they felt that the solution lies in consumer awareness and education. One participant explained what he thought was most important: "public awareness through marketing by government, insurance companies, etc. Marketing of public awareness will increase the dental practitioners' awareness. The public will become the driving force that will force oral cancer screening."

Another dentist stated that if the government or insurance companies gave warnings about this health problem or even gave some type of incentive to conduct routine oral cancer examinations, more patients likely would be screened. Therefore, the zeal seen in preventing, diagnosing and treating other predominant cancers also would be established for oral and pharyngeal cancers. Another idea was to "introduce this particular topic,

oral cancer screening, as part of something that's done in the [dental] schools."

DISCUSSION

Because qualitative research—focus groups in this case—has not been fully embraced by many people, it is important to discuss potential weaknesses and strengths of this type of approach. One potential weakness of our study is that there might not have been enough data obtained from only two focus groups. At the outset of the Maryland statewide needs assessment, only two focus groups were planned for each health care provider group because of limited financial resources. Because little additional information was gleaned from the second focus group, we believe the information from this study is likely adequate to guide interventions that are needed for the initial phases of the oral cancer prevention program in Maryland.

One strength of using focus groups in conjunction with surveys is the in-depth information provided by focus groups that usually is not attainable in surveys. A combined approach may provide valuable insights into ways of enhancing the oral cancer prevention and early detection efforts in Maryland.

Because dentists are the primary providers of oral care, they should play a pivotal role in the early detection and prevention of oral and pharyngeal cancers. Our examination of the data from the two focus groups uncovered several similar themes. In particular, dentists in both groups were surprised by statistics showing a high prevalence of oral cancer in Maryland.

Both groups struggled with the question of whether and how to inform patients about the purpose of the examination. This lack of doctor-patient interaction possibly has been a factor in the minimal knowledge held by Maryland adults about oral cancer.⁷ Furthermore, by not explaining the procedures to the patient, a dentist misses a prime opportunity to provide useful information about oral cancer prevention and early detection.

In addition, there appeared to be a lack of agreement among the dentists in regard to a standard way of performing oral cancer examinations. In fact, the same dentist might perform different oral cancer examinations in different patients. How an oral cancer examination was

Most participants said they felt that the solution lies in consumer awareness and education.

performed seemed to depend on a number of factors, the most pertinent of which were time and the comfort level and training of the dentist. The suggestion that dental schools should place greater emphasis on oral cancer examinations was important. If students are taught about oral cancer prevention and screening in school, and if they are required to perform these examinations routinely while in school, we can assume that when they graduate, dentists will be more likely to do so in practice.²⁰

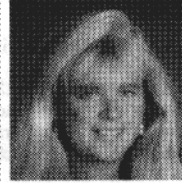
Another commonality between the two groups was the emphasis participants placed on the need for patient education rather than the need for continuing education. The dentists were quite specific in stating that they would be interested in a continuing education course only if it was short, simple and directly relevant to their practices. This information elucidated the generally positive responses received in the Maryland state survey to the simple question of whether dentists were interested in attending a continuing education course on oral cancer prevention and early detection. Survey respondents also were asked to rank, in order of preference, the type of continuing education courses they preferred.

Most oral and pharyngeal cancers can be prevented by avoiding risk factors such as tobacco and alcohol use as well as overexposure to sunlight (in the case of lip cancer). Other risk factors include a lack of fruit in the diet, prior cancerous lesions, age, race and some viruses.²¹ Because oral cancer progresses over many years, if detected early, it can be treated effectively. The foremost method of early detection and diagnosis involves the education of both health care providers and patients with regard to risk factors and signs and symptoms, as well as the oral cancer examination itself. At the same time, misinformation—such as the mistaken belief that there is a causal relationship between improperly fitting dentures, sharp teeth or poor oral hygiene and oral cancer—needs to be addressed.

The information provided by the focus group participants stimulated many ideas for educational interventions in Maryland. The next task is to use this information to help improve levels of knowledge and practices among Maryland dentists concerning early detection and prevention of oral cancer. The participants' responses suggest the need to develop continuing education opportunities that suit the needs and wants of dentists.



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Moreover, dental schools need to place more emphasis on oral cancer prevention and early detection as well as on training students in proper dentist-patient interaction.

CONCLUSION

The findings from these focus groups combined with findings from the Maryland state and the national surveys suggest that government, dental associations and insurance agencies should develop incentives to improve health care workers' assessment of patients' risks for oral cancer and increase the number of comprehensive oral cancer examinations provided. ■

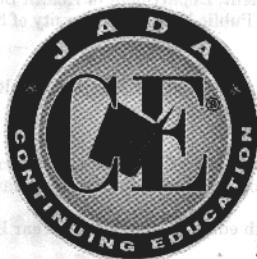
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