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Strategies for Incorporating Antimicrobial Mouthrinses into Daily Oral Care

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Overview. A cost-effective way of improving patient outcomes is adopting preventive practices known to be effective. As "front-line" providers of dental health services and information, dental hygienists are an important catalyst for the implementation of evidence-based preventive practices - such as the twice-daily use of antimicrobial mouthrinses - in the self-care routines of patients. However, encouraging patients to adopt new behaviors can present a challenge: providers may be uncomfortable with recommending new behaviors and patients may be resistant to learning new skills. As expert clinicians, educators, and counselors, dental hygienists are in an excellent position to help patients make changes and learn new behaviors.

Clinical Implications. This article discusses practical methods for promoting change. Targeting interventions to individual patient values, stage of readiness to change, and skill set encourages patient incorporation of new behaviors. Time should be allotted for supervised practice of new skills, and patients should be supported in planning for effective and lasting behavior change. Through effective communication, skills teaching, and use of follow-up, dental hygienists can help patients adopt healthy behaviors.

Keywords: Antimicrobial mouthrinse, compliance, dental hygiene,, oral health, patient education

Introduction

The merits of oral hygiene to health have long been valued by oral health care providers. However, public awareness of the importance of oral health and the links between oral and systemic health and disease has increased in recent years, particularly since the publication of *Oral Health in America: A Report of the Surgeon General* in 2000 and the subsequent release and implementation of the *National Call to Action to Promote Oral Health*, a public-private partnership under the leadership of the Office of the Surgeon General.[1,2] Dental hygienists now have an important window of opportunity to counsel patients on behaviors that promote oral health. Health care providers, including dental hygienists, can act as catalysts for change by teaching patients about oral health, modeling health behaviors, and helping patients adopt healthy behaviors.[3]

It has been noted that "the most cost-effective opportunity to improve patient outcomes over the next quarter century will likely come not from discovering new therapies but from discovering how to deliver therapies that are known to be

effective."[4] The aim of this article is to enable dental hygienists to put evidence-based information about antimicrobial mouthrinses into practice by effectively communicating research findings with patients and promoting incorporation of healthy behaviors into their self-care regimens. This review will focus on practical methods for promoting positive change and suggest ways to involve patients in optimizing their oral health. By promoting optimal oral care, dental hygienists can make a significant difference in the health and well-being of their patients.

Initiating Behavioral Change

While encouraging patients to adopt new, healthful behaviors is something dental hygienists frequently do, they may find it difficult to recommend new behaviors, such as use of antimicrobial mouthrinses. Barriers to change are varied and include:

- Habit: Dental hygienists may recommend traditional oral hygiene methods most often (such as brushing and flossing), despite research demonstrating the effectiveness of other oral hygiene aids and techniques.5
- Lack of confidence6: Dental hygienists may lack the confidence to use motivational interviewing techniques (please see Practical Strategies for Change)
- Lowered expectations: Hygienists may feel that patients are unlikely to change their behaviors despite counseling. Patients that dental hygienists have the lowest expectation of - those with high plaque levels - may receive less genuine verbal interaction and not receive the more intensive instruction they need.7 These more challenging patients may be ideal candidates for dental hygienists to begin targeting for incorporating antimicrobial oral rinsing into daily home care.
- Not enough time: Lack of interest and resistance from the patient and poor financial incentives for oral hygiene instruction may contribute to limiting the time spent on education.8,9

For all of these reasons, dental hygienists may tend to continue to recommend the traditional therapies of brushing and flossing alone. However, compliance with daily flossing has been reported to be generally low, ranging from only 10% to 30%,[5] so patients may benefit from information about new and adjunctive methods for thorough plaque removal.

But changing dental hygienist behavior is difficult due to the complexity of the process, and different barriers likely respond to different approaches to change.[10,11] Simple exposure to new knowledge may be insufficient to overcome most barriers to change practices,[11,12] but dissemination of information can be more effective in changing behavior when combined with other methods such as interactive educational activities, enabling tools, and reminders.[13] In addition, comparing one's current practice behaviors to sources of evidence, such as guidelines and external feedback, has been shown to motivate change.[12,14] Reading journal articles that summarize the evidence base in a subject area, like the ones published in this journal supplement, and comparing the findings to one's current practice may stimulate a need that encourages practitioners to change their professional behaviors.

Recently, two professional dental organizations have officially acknowledged evidence about the adjunctive use of daily antimicrobial rinsing. The American Dental Association (ADA) released a statement in support of the use of ADA-Accepted antimicrobial mouthrinses in addition to traditional brushing and interdental cleaning.[15] The Canadian Dental Hygienists' Association (CDHA) published a position statement supporting the incorporation of antimicrobial rinsing in patient home care routines.[16] Both of these documents provide support for the dental hygienist as he or she recommends that patients incorporate oral rinsing into their daily routine.

Practical Strategies for Change

The patient is the center of any successful change effort. Promoting change starts with listening to the patient and providing suggestions and skills teaching that are aligned with the patient's values. Dental hygienists need to be comfortable with actively questioning and interviewing patients to elicit the patient's beliefs and values about oral hygiene, health, and disease and be prepared for responses that do not conform with ideals.[28] Effective questioning minimizes patient

defensiveness, allowing patients to consider change. The following are strategies that can promote effective dialogue and support adoption of healthy behaviors.

- Ask patient about current oral health practices Begin with determining the patient's current level of selfcare. Example: "What do you do each day to take care of your teeth and gums?" You may want to ask the patient questions that elicit felt needs, such as, "If you could change anything about your oral health, what would you change?" Avoid a confrontational approach, and be sure to support healthy activities the patient is already performing.
- Assess patient readiness to change Determine the patient's readiness to incorporate new self-care behaviors.23 The initial question may be "Would you be willing to try using an antimicrobial mouthrinse twice daily?" If the patient responds positively, move to practical support. If the patient responds with disinterest, determine any obstacles to change. "Have you tried them in the past? Did you find one you liked? Why not? Why don't you think it would be helpful?" Be sure to maintain a nonconfrontational attitude. It may help to write down patient objections, and continue to listen to objections until the patient is finished. Active listening may diffuse patient resistance. If the patient is unwilling to consider change, providing interventions over multiple visits can encourage the patient to rethink his or her decision. Always work within the patient's stage of readiness to change.
- Supervise new skills/behaviors If the patient is ready to attempt new behaviors, supervised practice will enhance patient self-efficacy.3 Encourage the patient to practice using mouthrinse, and show the patient what to look for on the label. This will increase the patient's comfort level and success with the new behavior. Remind the patient that if a product was shown via research to be effective with twice daily use, using the product once daily may not yield the desired outcomes.
- Structure a plan for successful adoption of the new behavior If the patient is ready to change, it is also important to help with the plan for success. Unlike other negative behaviors such as overeating or smoking, patients do not derive positive satisfaction when neglecting oral self-care. The primary obstacle is apathy. Work with the patient to develop a brief change plan that incorporates environmental support. Encourage the patient to be specific. These planning steps maximize the likelihood of successful change. Example: "I'm glad you're ready to make a positive change. I've seen many patients significantly improve the health of their gums by adding an antimicrobial mouthrinse to their daily routine. Do you have an antimicrobial mouthrinse? Do you know where to look to find out if your rinse is ADA-Accepted? When do you plan to use your rinse? Will your use of the rinse match the manufacturer's recommendations for daily care?"
- Anticipate obstacles Stressful life experiences can disrupt the formation of positive habits.18 Encourage the patient to incorporate external memory triggers (eg, notes to self) to allow him or her to maintain or resume positive oral health practices during disruptive or stressful periods. If the patient does not discuss obstacles, you may want to engage in self-disclosure or share examples from your experience with other patients. Example: "It can be hard sometimes to remember new healthy habits when we're busy, sick, traveling, or stressed out. I'm a dental hygienist, and some days I'm so busy I barely have time to brush my teeth. What are some ways that help you remember to do things when life is stressful? What are some obstacles that may keep you from using an antimicrobial mouthrinse twice daily?"
- Follow up with the patient Ask the patient about whether he or she has successfully incorporated the behavior and any obstacles that were encountered: "Were you able to find a product you really liked? Could you easily access the product? Was it hard to be consistent? What was your biggest challenge?" Praise any progress toward the desired behavior, and revise the patient's action plan accordingly: "Even though you weren't able to use the rinse every day twice daily, I'm glad that you were able to use it before bed most nights. You have made a great start! Do you think you can use it more often? When do you think you can incorporate a second rinse into your day?" Specific follow-up demonstrates care for the patient and is appreciated. Follow-up is also central to maintaining change.26,27

While it takes time to change behaviors, the above interventions are brief and can be incorporated into a preventive, therapeutic, or periodontal maintenance visit. Through use of effective questioning and encouraging patients to share their health values and behaviors, dental hygienists can offer targeted advice and be perceived as caring and supportive while fulfilling their responsibility to educate patients. Nonconfrontational questioning minimizes patient defensiveness and ensures they will be as receptive as possible to receiving information on their oral health. Repeated interventions can assist patients as they adopt positive behaviors that will improve oral health and quality of life.

Encouraging Compliance / Adherence

Once a dental hygienist decides to assist patients in improving their oral health status through the implementation of an evidence-based product, (eg, an antimicrobial mouthrinse), the dental hygienist must motivate the patient to change his or her daily oral care routine. Research confirms what dental hygienists know intuitively, that patients are reluctant to change their home care routines and, overall, may not display interest in oral hygiene instruction.[9,17]

Despite the value people place on oral health, patients are increasingly strained with meeting the demands of daily life.[18] Stressful life events have also been shown to interfere with selfcare.[18] In a study examining the impact of oral hygiene education, patients with poor oral hygiene subsequent to instructions and education reported having difficulty taking care of their teeth and had more factors that interfered with self-care than the more successful study participants.[19] Moreover, because incorporating complex behaviors - such as traditional oral self-care behaviors - may be met with less compliance than simpler strategies,[19] oral rinsing interventions may produce improved adherence (see Adherence versus Compliance).

Adherence versus Compliance

Compliance is a common term used in oral health care literature to describe a patient's willingness to follow a practitioner's instructions.[20,28] The term has been criticized because it implies that the patient assumes a passive role and acquiesces to professional recommendations he or she may not understand or agree with.[17,20,28] Some authors use the term adherence instead of compliance, as it implies that the patient takes a more active role in decision making and thereby improves behavior change.[20]

Further complicating the issue of compliance, research evidence demonstrates that even persons with high plaque levels believe they are doing a good job with their oral home care.[19] The fact that patients have an inability to evaluate their oral hygiene effectiveness and monitor their oral health status has been raised as a weakness undermining dental hygiene instruction.[8] Finally, compliance in behaviors preventing conditions perceived to be non-life threatening, such as periodontal disease and dental caries, may have a lower priority for patients.[18,20]

Dental hygienists can encourage patients to adopt healthy behaviors, such as the twice-daily use of an ADA-Accepted antimicrobial mouthrinse, by a variety of methods. Dental hygienists can listen to patient feelings and values and emphasize the value and relevance of oral hygiene care before providing oral hygiene education.[21] This allows patients to link improved health behaviors to these values, enhancing their readiness to make positive changes.[21]

In addition, change efforts should be tailored to the patient's expressed readiness to change. According to the Transtheoretical Model of Change, patients are in one of several stages of readiness to incorporate new behaviors,[20,22]- and interventions should be targeted accordingly. Table I shows stages of change and appropriate interventions based on the patient's stages of readiness.

Table I. Transtheoretical Stages of Change and Suggested Interventions[20, 22-23]

Stage	Characteristics	Suggested Intervention
Precontemplation	Patient is unaware of the need for behavior change or resistant to change *"I won't change"*	Verify patient's state of readiness Raise patient awareness *"Are you aware of the health benefits of using an antimicrobial mouthrinse twice daily?"*
Contemplation	Patient has considered changing behavior but is not currently taking action *"I might change"*	Verify patient's state of readiness Compliment patient on thinking about making a change *"Sounds like you've been thinking about making changes in your oral self-care. That's great! What would you say is holding you back from taking that step?"*
Preparation	Patient is ready to take positive action *"I will change"*	Verify patient's state of readiness Provide actionable information *I'm glad you're ready to make a healthy change. If you wanted to use mouthrinse tonight, what steps would you need to take?* (eg, suggest purchasing a mouthrinse known to reduce plaque and gingivitis)
Action	Patient is making initial steps toward behavior change *"I am making a change"*	Verify patient's state of readiness Support change *"I'm glad you decided to give mouthrinse a try. Have you thought about ways to make it easier to continue your new habit?"* (eg, suggest placing it on the counters in all the bathrooms, placing a reminder note on the bathroom mirror, or including it in an oral care kit at work)
Maintenance	Patient has incorporated behavior change successfully, although some relapse may have occurred *"I have been making changes"*	Verify patient's state of readiness Support behavior maintenance, explore potential obstacles, make contingency plans *"That's wonderful to hear you're using mouthrinse! I can see the improvement in your plaque and gingival bleeding scores. It takes time to change lifetime habits. We will keep monitoring your oral health status at each dental hygiene visit. Let me show you how to monitor yourself at home."*

In addition to matching educational interventions to patient readiness for change, it is important to tailor information to each individual patient. Through the skillful use of listening, questioning, imparting knowledge, and teaching skills, the dental hygienist can influence the key dimensions of patient behavior including acquiring knowledge, changing attitudes, heightening perceived needs, and improving motivation.[19,24] While the actual interventions recommended may be the same across a variety of patients - for example, twice daily use of an antimicrobial rinse - the individual tailoring of educational sessions to these behavioral dimensions are critical for motivating change.[19,25] As new products are introduced to the market, the dental hygienists' role becomes crucial in helping patients understand the personal health care implications of the research literature.[25]

The provision of information about safe and effective antimicrobial mouthrinses is important, but information alone will not change patient behavior.[8,9] The teaching of new skills is a necessary component of an effective intervention. Skills acquisition is facilitated by introducing skills one at a time, allowing time for supervised practice. This approach increases the chance for successful transfer of knowledge from the office to the home setting.[7] Using quantitative hygiene assessment tools such as plaque and gingivitis scores can help patients see the relevance of instruction to their oral health.[7]

Table II summarizes important features of successful dental hygiene interventions designed to motivate patients into changing their home care behaviors. These factors combined with the patient's belief that he or she has control over his or her oral hygiene and health will increase the likelihood for positive behavior change.[3]

Table II. Dental Hygienist Actions for Supporting Patient Behavior Change

General for All Patients	Individualized to Specific Patient
Target high-risk patients	Provide sufficient contact time
Clarify patient values	Ensure mastery of one skill at a time
Determine the patient's state of readiness for change	Provide meaningful praise
Inquire about current behaviors	Include intraoral demonstrations
Tailor approach—ensure relevance	Include supervised practice
Convince patient of effectiveness of intervention	Encourage a partnership incorporating two-way communication
Highlight the pleasurable sensations and social benefits of oral hygiene and health	Ensure patient can self-monitor improvements (eg, decreased redness, swelling, and bleeding)
Maintain a positive environment	Provide patient specific written educational materials to supplement interventions
Display warmth and genuineness	Assist patient in managing when home care will occur, incorporating contingency plans
Provide ongoing reminders	
Be prepared for relapse	

The fact that research-supported, oral health-promoting behaviors (such as the twice-daily use of a safe and effective antimicrobial mouthrinse) need to be carried out over one's lifetime contributes to the challenge.[17] Studies consistently show that modest gains achieved initially in changing patient behavior diminish with time and minimize initial gains.[19] Key elements to maximize that patients maintain their new behaviors include the use of positive feedback, patient reminders (such as phone calls and postcards), and adapting dental hygiene instructions to the needs of the patient.[20] In a series of 3 studies evaluating the maintenance of self-care behavior programs, adherence was improved when reminders were used, seemingly for as long as the reminders were provided.[26] Therefore, maintenance of behavioral change is an ongoing and deliberate process.[27]

Conclusions

As preventive oral health experts, dental hygienists must continually evaluate methods of enhancing oral health and recommend those techniques and products with evidence-based effectiveness to their patients. This article has examined strategies for promoting behavioral change in the context of adoption of twice-daily use of antimicrobial mouthrinses, which have been shown to effectively reduce plaque and promote oral health when used as part of a daily self-care regimen. These principles can also be applied when teaching patients about other health care products and behaviors.

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