the Journal of CONTEMPORARY DENTAL PRACTICE at www.thejcdp.com
Volume 2 Number 2 Spring Issue, 2001

Counseling and Treating Bad Breath Patients: A Step-By-Step Approach

Patricia Lenton RDH,MA; Georgia Majerus RDH, BS;
Bashar Bakdash, DDS, MPH, MSD

Abstract

Bad breath (oral malodor, halitosis) can be detrimental to one's self-image and confidence causing social, emotional, and psychological anxiety. With the majority of breath problems having an oral origin, the dental office is the most logical place for patients to seek treatment. When patients look to dental professionals for expert advice, it is critical they have the knowledge base and communication techniques to provide quality clinical assessment and implement effective intervention programs. Moreover, dental professionals should feel comfortable proactively counseling patients about oralmalodor without fear of offending the patient. Numerous continuing education programs and journalarticles related to the diagnosis and treatment of oral malodor are available. In addition, electronic sources are accessible for dental professionals to expand their knowledge base regarding oral malodor information. Fewer resources are available, however, regarding techniques to facilitate an effective dialogue with patients on this sensitive issue. This article seeks to provide such information and to helpprofessionals tailor the target communication message to meet the specific needs of individual patients.

Keywords: Bad breath, oral malodor, halitosis, volatile sulfur compounds, breath odor, breath odor counseling.

Introduction

The production of bad breath (oral malodor, halitosis) is multi-factorial and may involve both oral and non-oral sources.[1,2] Non-oral sources of breath odor are generally related to systemic problems and/or medications. Conditions such as diabetes, liver and kidney disorders, and pulmonary disease may contribute to offensive breath odor. This is also true of some medications, especially those that reduce salivary flow such as antidepressants, antipsychotics, narcotics, decongestants, antihistamines, and antihypertensives. These non-oral sources of breath odor have been well reviewed in the literature[2,3,4] However, while systemic conditions and medications can contribute to breath problems, most authorities seem to agree the majority of bad breath originates in the oral cavity.

Bacterial putrefaction[5,6,7] by gram-negative anaerobic bacteria, particularly those residing on the posterior dorsum of the tongue, utilize sulfur containing amino acids, primarily cysteine and methionine,[8,9,10] to produce volatile sulfur compounds (VSCs).[11] Although other organic components (e.g., organic acids, indole/skatole, putrescine, cadaverine) may be involved in the production of halitosis,[12] hydrogen sulfide (H2S), methyl mercaptan (CH3SH), and dimethyl sulfide [(CH3)2S] have been identified as the predominate VSCs responsible for ora malodor.[9,13,14] While the tongue is considered the primary source of VSC production, other dental problems can generate these offensive gases.

Dental conditions such as gingivitis, periodontal disease, gross carious lesions, and poor oral hygiene have been shown to contribute to bad breath.[5,10,15-19] However, when dental disease is the source of oral malodor, treatment of the condition will often eliminate the problem.[5,10,17,19] Likewise, transient breath problems from eating spicy foods, smoking, and drinking certain beverages will most often disappear shortly after their use is discontinued.[1,20] However, while eliminating these sources can successfully treat the majority of patients who suffer from bad breath, some individuals continue to have chronic breath problems.

It has been estimated that up to 25% of the population suffer from bad breath on a regular basis in spite of having good physical and oral health and after the elimination of offensive foods and beverages.[21,22,23] It is these patients that most need our expertise. While there are many new products and emerging information regarding the treatment of oral malodor, the dental professional also needs to feel comfortable sharing this information and these products with their patients.

Self-Consciousness: A Barrier to Communication

Regardless of the source of oral malodor, chronic breath problems can be detrimental to one's self-image and confidence causing social, emotional, and psychological anxiety. The problem of assessing and treating oral malodor is exacerbated by the personally sensitive nature of the topic. Even in close relationships, people are often reluctant to inform others their breath is offensive. Asking a trusted confidant or experienced health professional is considered the most reliable method of confirming a chronic breath odor problem. This, however, can be awkward and embarrassing for both the patient and the dental professional, who historically has been hesitant to broach the subject. Since the dental office is the most logical place to assess and treat oral malodor, it is important to develop the communication skills and knowledge base that will enable dental professionals to respond to our patients who seek information about and treatment for bad breath.

Since oral malodor can be related to certain medical conditions or medications, taking a comprehensive medical/dental history, including questions pertaining to breath concerns,

can lay the groundwork for open dialogue about breath problems. When patients initiate a dialogue about their breath concerns, dental professionals need to be comfortable with explaining the etiology of and treatments for oral malodor. Think for a moment about how you would respond to the following situations:

Amy Wu is a 43-year old married woman who has been referred to your office by a co-worker. During the appointment she tells you her husband frequently complains that she has bad breath. She tells you she has tried to assess her own breath by cupping a hand over her mouth and nose and smelling the expired breath, however, she is unable to detect a problem. She asks you for your professional opinion. How will you proceed to address her concern?

Jeff Olsen, a 22-year old man, is being seen for his semiannual prophylaxis. Jeff is reserved and timid. When you ask if he has any other concerns or questions, he is too embarrassed to share that he has a bad breath problem and can often detect the offensiveness himself. You sense there is an unspoken concern; what can you do to encourage Jeff to be forthcoming about his problem?

Michelle Thomas is a 51-year old woman who faithfully schedules her six-month recall appointments. She is a model patient and her home care is meticulous. While greeting Michelle, you notice her breath is very offensive, even from a distance of several feet. Will you say anything about this to her?

Carlos Suarez, a 36-year old businessman, has scheduled an appointment specifically to discuss his bad breath. He tells you he is so self-conscious about the problem that he turns his head when talking to others to avoid breathing directly on them. He believes his breath is chronically bad and is certain he currently has bad breath. You are unable to detect any offensiveness; in fact, you detect "a pleasantness" in his breath. What will you say to him?

The P-LI-SS-IT System

This paper introduces a communication model that has been used successfully by people in a range of helping professions when providing sexuality-related information. The model is J.S. Annon's P-LI-SS-IT system.[24] The acronym stands for the model's four progressive levels:

- Permission
- Limited Information
- Specific Suggestions
- Intensive Therapy

The P-LI-SS-IT system is flexible and adaptable to many settings and to whatever amount of time is available. The model allows for a range of treatment choices geared to the level of competenceof the individual clinician. This information discusses how the P-LI-SS-IT model may be applied to the dental setting for discussing the personally sensitive topic of breath odor concerns with patients.

Before introducing the P-LI-SS-IT model, a brief review of interviewing skills and counseling techniques is in order.

Preparation for Interviewing and Counseling Patients

Before an effective clinician/patient dialogue can take place, it is important that the dental professional feel secure about their own knowledge level regarding the etiology and interventions available for treating breath problems. A strong knowledge base enables the clinician to personalize the treatment plan to the particular problem of an individual patient and rely less on standardized techniques and "one size fits all" regimens. Furthermore, it is important to be familiar with interviewing and counseling techniques that encourage open communication, reduce anxiety, and establish rapport.

Background in Oral Malodor

The more knowledge of the etiology and treatment of oral malodor a clinician has, the more confidence they will experience when interviewing and counseling patients. Several sources of information are available to expand one's knowledge base regarding oral malodor.

Readings

A self-study program of selected readings from the resource list at the end of this article may be helpful in acquiring relevant knowledge concerning oral malodor. To better retain and apply the knowledge gleaned from these resources, it is helpful to discuss the information with colleagues and other interested persons. In addition, there is an expanding body of oral malodor literature being reported in numerous books, professional journals, and online at websites such as this or the International Society for Breath Odor Research (http://www.tau.ac.il/~melros/Society.html).

Continuing Education Courses

Attending or participating in continuing education lectures and workshops that deal with oral malodor can also greatly increase the clinician's knowledge and skills. Many product manufacturers now offer free online courses that are easily accessible. Inviting appropriate speakers and specialists to conduct in-office seminars may also be an effective alternative.

While having a strong knowledge base about a topic is important, it is just as important to have a basic understanding of fundamental interviewing and counseling techniques to communicate this information effectively.

Basic Interviewing Skills

Most of us have heard the adage "It's not what is said but how it's said that makes a difference." This is particularly true when discussing subjects that are inherently sensitive. What follows are specific suggestions for interviewing and counseling patients:

The Setting

It is very important the clinician and patient have some degree of privacy when discussing personally sensitive issues. Patients are typically reluctant to share sensitive information that might be overheard by others. For this reason, if you can offer a patient privacy, it's best to do so. When privacy is limited, it is best to postpone discussions until the clinician is alone with the patient and to speak in a low volume.

The Initial Approach

Time is typically a consideration. If the clinician does not have time available to talk in-depth about the patient's concern, she/he can give limited information (following the P-LI-SS-IT model discussed in this article) and make another appointment for the patient as soon as practical. This way the patient does not leave feeling as though their needs were not addressed.

When initiating conversations regarding oral malodor, it is important to use statements the clinician feels comfortable with. For example, after reviewing a patient's medical history or oral examination, one might begin by using one of the following questions:

"Do you have any other dental concerns or problems regarding yourself or a family member's oral health?"

"What dental products are you currently using on a regular basis?"

"Do you have questions regarding dental products you've seen advertised or heard about?"

If the patient says they do not have any concerns, it is recommended to accept this answer and do not press further. Let it be known that if in the future he or she does have concerns that they feel free to contact you at the office. Suppose the patient does have a concern, what does the clinician do?

Listening

The most common and serious mistake made by most clinicians is failing to really listen to what the patient has to say without interrupting. It is important we don't jump in with suggestions before hearing the patient out. For example, a dental hygienist at a general practice clinic who was thoroughly "prepared" has the following conversation with a patient.

Hygienist: "Do you have any other dental concerns or problems regarding your oral health?"

Patient: "Well, yes...lately I've been having problems with bad breath..."

Immediately the eager dental hygienist launches in with:

Hygienist: "Oh, don't worry about that.

Bad breath is a common problem and we can schedule you for a breath assessment appointment. We have equipment that measures the amount of sulfur in your breath."

The dental hygienist finally pauses as she realizes the young woman wants to say something further.

Hygienist: "Is there something else that you wanted to say?"

Patient: "Well, yes," replied the woman. "I only have this problem when I get a sinus infection. Once the infection clears up, my breath problem does too. I just wanted to know if there was something I could use during those times?"

It is also important to determine whether the patient actually considers their concern a problem. They may simply be sharing information to find out what your opinion is. An example of a good follow-up question after the patient makes an initial statement is: "Does that bother you?" or "How do you feel about that?" The following conversation illustrates how the presented statement actually wasn't a real problem.

Hygienist: "Do you have any other dental concerns or problems regarding your oral health?"

Patient: "Well, my co-worker always complains my breath smells like garlic."

Hygienist: "I see. How do you feel about that?"

Patient: "To be honest with you, I don't really care. I love garlic and eat it every day. I haven't had a cold in three years and my cholesterol is great."

Hygienist: "If I hear you correctly, you're not concerned about your breath smelling like garlic and it isn't really a problem after all that I can help you solve."

Patient: "That's right. My partner eats garlic too. It doesn't bother us at all that we smell like garlic, in fact, we actually like the smell of garlic."

This example illustrates the fact we need to listen and let the patient define the problem, rather than we, as clinicians, always defining the problem for the patient.

Assume the clinician is familiar with the etiology and treatment of oral malodor, has learned and practiced various counseling and interviewing skills, has a setting that ensures privacy, and has an easy initial approach. He or she has learned how to listen and avoids interrupting. The patient has carefully described his or her bad breath concern and waits expectantly. At this point, how the clinician might respond will be the subject of the remainder of this paper. Keep in mind that when providing professional services to patients it is important to preserve the patients' trust

The crucial point: hear what the patient has to say before launching into a detailed presentation on the management of bad breath and offering a treatment plan. It is generally recommended once the patient begins talking, the clinician should be quiet and listen.

The Dental Professional's Responsibility

With the advent of so many "bad breath" remedies and standardized regimens available for sale to patients, it is important for dental professionals to keep in mind the treatment procedures and/or products we recommend should be based on an individualized assessment. Otherwise, there is no point in performing a comprehensive assessment if all patients go through the same treatment program. Furthermore, it is important to keep in mind we have a professional responsibility to follow The Code of Professional Conduct for the Dental Profession.

A Conceptual Scheme for Counseling Patients With Oral Malodor: The P-LI-SS-IT System

As mentioned earlier, we have adapted a model that has been used successfully by school counselors, social workers, nurses, clergymen, and health aides when counseling persons with sexuality concerns and problems. The P-LI-SS-IT system is flexible and adaptable to many settings and to whatever amount of time is available.

The model allows for a range of treatment choices geared to the level of competence of the individual clinician. The first three levels involve "brief therapy," and most patient bad breath problems can be successfully resolved at these levels. The fourth and final level involves "intensive therapy" and is reserved for those patients whose problems require more complex therapy. At this level, it is important the clinician have the appropriate training and experience to provide a highly individualized therapeutic program. This may include a referral for either medical assessment or psychological counseling.

This information discusses how the P-LI-SS-IT model may be applied to the dental setting for discussing the personally sensitive topic of breath odor concerns with patients. Let's return to the scenarios presented earlier and outline some helpful responses using the P-LI-SS-IT model.

Dentist: "Mrs. Wu, my name is Dr. Anderson, it is nice to meet you. I see that Bill and Mary Smith have referred you to our office."

Patient: "Yes. We've just moved to the community and they're our new neighbors. They said you have been their dentist for the last ten years and they are really satisfied with your service."

Dentist: "Well, welcome to the community. I think you and your family will enjoy living here, and I'm delighted to hear that Bill and Mary referred you. Referrals are the highest compliment we can receive."

Patient: "I always ask people I know for recommendations for healthcare providers."

Dentist: "Speaking of healthcare, I see by your medical history that you are not taking any medications or under the care of a physician. It appears you are in excellent health."

The code of ethics reminds dental professionals to preserve the inherent trust in the dentist-patient relationship. It also stresses the importance of verifying the accuracy of claims made by manufacturers and distributors about product safety and efficacy before inducing patients to purchase products or undergo procedures. "The dentist has an independent obligation to inquire into the truth and accuracy of such claims and verify that they are founded on accepted scientific knowledge or research."

American Dental Association website, Code of Professional Conduct & Advisory Opinions; III Principles, Sec. 5: Veracity; 5.D.2., Marketing or Sale of Products or Procedures.

Application of the First Level of Treatment: Permission

Scenario: A new patient, Amy Wu, is a married 43-year old woman who has just moved into the community. Her husband has told her that she has bad breath. She has made an appointment to have a dental examination. The following is the dialog that took place between her and the dentist during the appointment:

Patient: "Yes, I am very fortunate."

Dentist: "Are you currently having any dental problems or do you have any concerns about how your teeth feel or look?"

Patient: "I need to have a check-up and a cleaning. I don't have any pain but my husband has told me (whispering), this is really embarrassing, my husband tells me I have halitosis."

Dentist: "How often does you husband complain about your breath?"

Patient: "Almost every morning."

Dentist: "Is it mainly in the morning that he complains?"

Patient: "Yes, in fact he won't kiss me until I brush my teeth."

Dentist: "Has anyone else every told you that you have a breath problem?"

Patient: "No only my husband."

Dentist: "Well, Amy if I hear you correctly you only have a breath problem in the morning when you first wake up."

Patient: "That's right Dr. Anderson. And I always brush, floss, rinse with mouthwash, and even brush my tongue before I go to bed. I am just so embarrassed."

Dentist: "What you describe is really quite normal. In fact most people have bad breath when they first wake up. I myself have bad breath in the morning."

Patient: "No kidding you mean it is really normal? Even when you brush at night?"

Dentist: "When we sleep our salivary flow decreases, and there is also an increase in bacte rial accumulation in the mouth. These normal processes enhance the formation of offensive breath odor that is commonly called morning breath.5 You might try using oral hygiene products with antibacterial ingredients. They reduce bacterial activity so you have less offensive odor produced during the night. Upon waking, activities such as talking, eating, brushing, and flossing decrease morning breath odor."

The foregoing example illustrates the application of the first level of treatment (permission) using the P-LI-SS-IT model. Patients often seek information from experts when they have a concern. Patients' often simply need the reassurance from a professional or an expert that what they are experiencing is normal and commonly occurs to others.

The use of the permission giving approach is adaptable to most settings and takes very little time on the part of the clinician. Many patient concerns can be resolved at this level. In addition, the permission approach may be used in conjunction with all other levels in the P-LI-SS-IT model. While this approach is useful when patients have concerns, it is typically not sufficient when trying to resolve *problems*. If the permission approach is not sufficient to resolve the patient's concern, there are two options available to the clinician at this point. The patient may be referred for appropriate treatment elsewhere or, providing the clinician has the appropriate setting, knowledge, skills, and experience, he or she can proceed to the second level of treatment: limited information.

Application of the Second Level of Treatment: Limited Information

Scenario: Jeff Olsen, a 22-year old man, is being seen by Sue, a staff hygienist, in a general practice dental office for scaling and prophylaxis. Jeff maintains good oral hygiene. He is reserved, timid, and embarrassed to share he has a bad breath problem. Sue senses there is an unspoken concern.

Hygienist: "Well Jeff, it looks like you're good for another six months. Before you leave, are there any other concerns or questions you have about your oral health? Now's the time to ask."

Patient: "Ah...well..., I wonder if I could ask you about breath fresheners. Do some work better than others? I mean, which ones do you recommend?"

Hygienist: "How often do you believe you need to use a breath freshener?"

Patient: "Actually, I feel like I need to use something most days."

Hygienist: "Can you tell me more about what you mean when you say you "feel" like you need to use something most days?"

Patient: "Well...sometimes when I talk to people, I notice they turn their heads away from me.

Actually, that happens a lot. I've gotten to where I avoid talking 'directly' to people any more. Also, sometimes I can smell that my breath is bad."

Hygienist: "How do you check your breath Jeff?"

Patient: "I lick the back of my hand and then smell it."

Hygienist: "How often do you check your breath?"

Patient: "Several times a day."

Hygienist: "Are there times that your breath seems to smell okay?"

Patient: "Yes, it's usually better after I eat but if my stomach is empty, then it seems like my breath is worse."

Hygienist: "Well Jeff, actually research has shown eating reduces bad breath, often for several hours so what you're describing makes sense.[25] Our saliva functions as an antibacterial, antiviral, antifungal, buffering, and cleaning agent; therefore, activities like chewing, that stimulate our salivary flow, will help decrease oral malodor.[26] The "lick-wrist" test you mentioned is a useful method for checking one's own breath."

Patient: "The problem is, I get so busy during the day I don't always stop and eat when I should; in fact, I skip meals a lot."

Hygienist: "You're right Jeff, that probably is a big part of the problem. Your brushing and flossing are good, so I don't suspect that's the problem. Also, there's nothing in your medical history that would make me suspect a systemic problem. I would recommend you make it a priority to eat more frequently and to drink plenty of water throughout the day. You might have to bring in some instant soups or microwavable meals to have handy."

Patient: "Gee, I didn't know eating would mprove my breath; I'll have to try that and hope it makes a difference. I should be eating regular meals anyway. Is there anything else that you'd recommend?"

Hygienist: "Well Jeff, many bad breath experts agree most malodor originates on the tongue. Because of its large surface area and rough texture, the tongue easily collects bacteria and food debris and is an excellent habitat for sulfur production. The best way to minimize this is to thoroughly clean the tongue. Before you leave I will show you how to gently clean your tongue with a specially designed tongue scraper."

Patient: "That makes sense. I've always concentrated on the brushing and flossing. Should I use the tongue cleaner everyday?"

Hygienist: "That's a good idea. Add it to your normal brushing and flossing routine. If after three or four weeks you're still having problems, please call and we can explore some other possibilities. It's just best to begin with the least invasive therapy."

The foregoing example illustrates the application of the second level of treatment using the P-LI-SS-IT model. This example demonstrates the importance of asking for further descriptive information in order to help the patient define the problem himself. Jeff expresses the fact he isn't eating regularly and knows his breath problem improves when he does eat. He also states he hasn't focused on cleaning his tongue.

Application of this second level is a continuation of the first level of approach, *permission*. At the *permission* level the patient is made to feel comfortable and encouraged to share their concerns. The clinician is primarily concerned with reassuring the patient that she/he is normal. At the *limited information* level, the patient is given specific factual information directly relevant to their specific problem. Typically, the information provided at this level can be incorporated into existing schedules and does not require additional appointment time.

If giving limited information is not sufficient to resolve the patient's concern, there are two options available to the clinician at this point. The patient may be referred for appropriate treatment elsewhere or, providing the clinician has the appropriate setting, knowledge, skills, and experience, he or she can proceed to the third level of treatment: specific suggestions.

Application of the Third Level of Treatment: Specific Suggestions

Scenario: Michelle Thomas is a 51-year old woman who faithfully schedules her six-month

recall appointments. She is a model patient who brushes and flosses daily. While greeting Michelle, the hygienist notices her breath is very offensive even from a distance of several feet. After reviewing Michelle's medical history and performing a clinical examination, the hygienist observes Michelle has a moderate coating on the posterior third of her tongue. The hygienist suspects this is the source of Michelle's breath problem.

Hygienist: "Michelle I always appreciate seeing you because you take such good care of your gums and teeth. It's obvious you're doing your homework."

Patient: "I just don't want to end up like my mom did, with dentures."

Hygienist: "Well, I believe if you keep up the flossing and brushing, you won't have to worry about dentures. Michelle, while you're doing an excellent job with you gums and teeth, I am noticing you have a moderate amount of coating on the back portion of your tongue; have you ever noticed that?"

Patient: "No, I really haven't paid much attention to my tongue; what causes that?"

Hygienist: "Just like bacterial plaque can build up on the teeth and below the gums, it can also build-up on the tongue. The surface of the tongue is very rough, and it's easy for the bacteria to stick to it."

Patient: "Can that cause problems."

Hygienist: "Well, most authorities on the subject believe that tongue coating is the primary source of bad-breath."

Patient: "Do you think my breath is bad?"

Hygienist: "To be honest Michelle, I have noticed some unpleasantness during today's appointment. Has anyone else ever mentioned your breath was disagreeable?"

Patient: "Yes. As a matter of fact my 4-year old granddaughter said to me just last week, 'Gee gramma, your mouth smells bad,' kids can be so honest."

Hygienist: "You indicated on your medical history the only medications you're taking is hormone replacement therapy; are you using any over-the-counter products, such as decongestants? I'm also wondering if you've eaten any strong or spicy food in the last few day?" Certain medications and spicy foods can cause or contribute to bad breath."

Patient: "No, I'm not taking any other medications and I don't eat spicy foods very often."

Hygienist: "Well, we can easily check to see if the odor source is the tongue coating by doing the 'spoon test.' This is something you can easily do at home." (The hygienist hands Michelle a hand mirror for observation and then, using a plastic spoon, gently removes a small amount of the coating from the tongue. The hygienist has Michelle sniff the spoon and also sniffs the spoon herself.)

Patient: "Oh...that smells nasty! Does my breath really smell like that?"

Hygienist: "Well, it's more concentrated when we smell a sample of the bacteria close-up, but that is similar to the odor I've been detecting. The good news Michelle is, if that's the source, it's fairly easy to treat."

Patient: "What do you recommend?"

Hygienist: "Thorough tongue cleaning is the recommended treatment. I am going to give you a tongue scraper and I'll demonstrate how it should be used."

Patient: "How far back do I have to go? I gag very easily."

Hygienist: "We have tongue cleaners in a variety of shapes and sizes; we'll find one that's comfortable for you. I will also demonstrate breathing techniques that reduce gagging. (The dental hygienist demonstrates techniques.) Since it's difficult to assess our own breath, it would be best to have a trusted confidant check your breath for

you. Also, because bad breath can be episodic, it will be important to check your breath at different times of day over the next week. Then, I'd like to reconnect with you in the next seven to ten days to see how things are going. If you're still having problems at that point, we'll schedule an appointment to explore other possible sources."

Patient: "Should I brush my tongue as well?"

Hygienist: "Actually, that would be a good idea. We have an anti-bacterial paste you could use in conjunction with the tongue brushing for added benefit. We also have a brochure that goes over the production of sulfur compounds in the mouth; it's very well-written and informative."

Patient: "Thank you so much for all your help; I really appreciate your advice."

The foregoing example illustrates application of the third level counseling approach using the P-LI-SS-IT model. When providing *specific suggestions*, clinicians may wish to supplement verbal instruction with appropriate readings; resources include published articles, patient education brochures, and Internet websites. Reading materials provide both non-intimidating information sources as well as being time saving, for both the clinician and the patient.

While it may be possible to incorporate the information provided at this level into existing appointments, it may also be necessary to schedule additional appointment time(s). The fees charged for these procedures will be determined by individual offices and will be based on the time involved, the expertise of the clinician, and the products provided to the patient.

There may be times when the specific suggestions that have worked for others do not work for a particular patient's problem. When a clinician believes they have done as much as they can from within the "brief therapy" framework, then it is time for highly individualized intensive therapy.

Application of the Fourth Level of Treatment: Intensive Therapy

Scenario: Carlos Suarez, a 36-year old businessman, has scheduled an appointment specifically to discuss his bad breath. At a previous visit he revealed that he is so self-conscious about his bad breath, he turns his head when talking to others to avoid breathing directly on them. Carlos has been examined by an ear, nose, and throat (ENT) specialist and a gastroenterologist (GI). The specialists could not find any physical cause for his complaint, and both had recommended he see a dentist. This is his third appointment in your office for breath evaluation. At the previous two visits, unpleasant breath odor could not be detected by either sensory assessment (smell) or when using the Halimeter® (an electronic device that measures sulfur levels in breath). Carlos was asked to return for another assessment when he believed his breath was extremely offensive. Carlos's oral, sensory, and Halimeter® assessment has just been completed. (Interscan Corporation http://www.Halimeter.com)

Hygienist: "Carlos as you can see, all three of the Halimeter® readings are low today. Actually the highest number recorded by the digital monitor is only 43 parts-per-billion. These readings are similar to those recorded at your last two appointments."

Patient: "I really can't believe it!"

Hygienist: "Well, neither I nor the other hygienists were able to detect any offensiveness in your breath. In fact, I actually find your breath has a rather pleasant smell."

Patient: "Pleasant! Your nose must be broken. I feel like my breath is really bad today."

Hygienist: "What is it that makes you think your breath is so offensive?"

Patient: "I just know it is. I can just tell. When I lick my wrist and smell it, it's terrible."

Carlos licks his wrist and then smells his wrist. "Yuck that's terrible!" He extends his wrist for the hygienist to smell."

Hygienist: "Carlos, I don't smell any offensiveness on your wrist. In fact, I have never been able to

detect any bad breath from you, and all your Halimeter® readings have been low. Even with you not brushing this morning. Has anyone ever told you your breath was bad?"

Patient: "Well, no. But I know it is; even when I turn my head to avoid breathing directly on people, they still turn their heads away from me."

Hygienist: "Carlos, have you ever considered the fact that when you turn your head away from people, they think you're responding to their breath, so then they become self-conscious and turn away from you?"

Patient: "Gee, I never thought about that. Is that what you think is happening? Do you think it's all in my head?"

Hygienist: "Carlos, I'm willing to acknowledge your concern is real, I'm just saying the problem may not be real. I'm just not finding the evidence to substantiate your concern."

Patient: "Do you think I'm nuts?"

Hygienist: "No. I don't think you're nuts. I'm simply saying, based on the clinical evidence that's been collected, my assessment is that your breath is not offensive. Do you think it's possible the problem may not be as bad as you think it is?"

Patient: "Well, I don't know what to say. The ENT and GI specialists couldn't find anything wrong either. I'm starting to wonder if I am nuts!"

Hygienist: "Carlos, I'm not certain what to say either; you've had two medical specialists in addition to myself each tell you your breath is not offensive. Yet, it seems as though nothing the specialists or I say can convince you your breath is okay. My concern is the negative effect your anxiety about your breath is having on you as a person. You've told me it's affected how you interact with others and you avoid talking directly to people."

Patient: "Do you think I should see a shrink?"

Hygienist: "If a counselor reassured you your breath is okay, would you believe them?"

Patient: "Well...there must be some reason I'm so worried about it."

Hygienist: "I agree with you Carlos; there must be some reason for your concern. If you were my brother, I would encourage you to meet with a counselor. You have nothing to lose and, potentially, a lot to gain."

Patient: "Well...I need to do something because this is really bothering me."

Hygienist: "Do you have access to counseling services through your medical provider? Otherwise, we can refer you to several clinicians who specialize in this area."

Patient: "My medical coverage provides for counseling services. I'll check with them and try to set something up."

Hygienist: "Carlos, I really believe that's the best route to take."

The foregoing example illustrates the transition into the fourth level approach using the P-LI-SS-IT model. While Carlos' problem is most likely due to a compulsive disorder (halitophobia[27]), this level may also include those patients' whose bad breath is multi-factorial in nature including both oral and non-oral components. For example, patients with periodontal disease, who are taking medications, and/or who have medical conditions that exacerbate bad breath. When the specific suggestions that work for the majority of patients are not effective for a particular patient's problem, then it is time for highly individualized intensive therapy.

Intensive therapy involves an *in-depth* assessment of the patient's specific situation in order to develop a highly individualized comprehensive therapeutic program unique to them. Clinicians with appropriate training in the etiology of and treatment modalitiesfor oral malodor could initiate such treatment. Otherwise, this is the point at which you would refer patients for appropriate treatment elsewhere. The important point to keep in mind is we have an ethical responsibility to first try to resolve patients' problems from within the brief therapy approach.

Summary

The patient scenarios are examples that provide a framework for clinicians to work within as they counsel and provide treatment to patients with bad breath issues. Clinicians will have to adapt their use of the P-LI-SS-IT model to their particular settings, the amount of time they have available, and their particular level of competence. As clinicians expand their level of knowledge and experience in the oral malodor arena, they will become more proficient at devising individualized treatment plans for helping patients.

It is important to keep in mind that while the brief therapy part of the model may be sufficient to resolve many of our patients' oral malodor problems, it is not intended to resolve all bad breath problems. If we don't have the expertise in our office, we have an ethical responsibility to identify and refer patients to those who do.

Many of the essential elements of some of the popular standardized programs currently being marketed can be successfully utilized within the brief therapy approach offered here. It is also the author's firm opinion, based on an ever increasing amount of clinical and research evidence, it is now unethical to involve patients in an expensive, long-term treatment program without first trying to resolve their problems from within a brief therapy approach.

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About the Authors

Patricia A. Lenton RDH, MA

Ms. Lenton is a Research Fellow in the Oral Health Clinical Dental Research Center at the University of Minnesota School of Dentistry. Ms. Lenton has been involved with grant writing and protocol development for conducting oral malodor research and has presented study findings at scientific meetings. She has designed and developed continuing education courses in customer service and communication for the dental team. Ms Lenton's undergraduate degree is in Dental Hygiene Education and her graduate degree is in Training and Development. She is a member of the International Society of Breath Odor Research, both the International and American Association of Dental Research and the American Dental Hygiene Association.

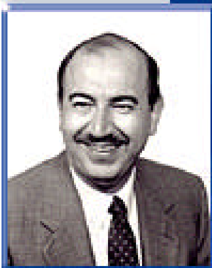
e-mail: lento001@umn.edu

Georgia Majerus RDH, BS

Georgia Majerus is an Assistant Clinical Professor, Division of Periodontology, Department of Preventive Sciences in the School of Dentistry, University of Minnesota. Ms. Majerus has presented numerous educational programs on the topics on conservative periodontal therapies, prevention of dental diseases, dental products and diagnosis and treatment of oral malodor. Ms. Majerus' current research is in the methods of assessment and treatment of oral malodor. She is a current member of the International Association of Dental Research, International Society of Breath Odor Researches and American Dental Hygienist's Association.

e-mail: majer002@umn.edu

Bashar Bakdash, DDS, MPH, MSD



Dr. Bakdash is a Professor and Director, Division of Periodontology, Department of Preventive Sciences in the School of Dentistry, University of Minnesota. He is also a member of the Dental Research Institute and the Oral Health Clinical Research Center at the University of Minnesota. Dr. Bakdash has authored/co-authored over 100 publications and digital programs in the areas of periodontics, public health, preventive dentistry, dental education and information transfer. At the present time, Dr. Bakdash is the Vice President of the Minneapolis District Dental Society and the Chair of the Informatics Section, American Dental Education Association. In both roles, he is leading a number of initiatives designed to integrate information technology into dental education and organized dentistry. In addition, Dr. Bakdash is providing leading roles in a number of state and national organizations including membership on the Public Relations Committee of the Minnesota Dental Association and the Task Force to Develop an Outcome Assessment Program, American Academy of Periodontology.

e-mail: bakda001@umn.edu