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The Foundation for Dental Care: The Patient Interview and Dental/ Medical Health History

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The Foundation for Dental Care: The Patient Interview and Dental/Medical Health History

By Richard W. Panek, DDS, and George Georgiev, DDS

Figure 1 — The Patient's Medical History

Description of patient: Age, gender, race, occupation.

Chief complaint: Four or five words, preferably quoting the patient, stating the purpose of the visit and the duration of the complaint.

Other providers involved in the patient's care: Physician or other treating dentists.

History of the present illness pertinent to the present exam: Chronological record of onset of symptoms, what makes the symptoms better or worse, past treatments, etc.

Past medical history: Previous illnesses and hospitalizations, major surgeries and invasive procedures, immunizations, medications, allergies, and alcohol, tobacco, and drug habits.

Social and occupational history: Description of a typical day in the patient's life and how any present oral condition affects it, as well as social supports available to the patient and any pertinent occupational history related to the condition.

Family history: History of genetically related diseases in the patient's family and longevity and cause of death in family members.

Review of systems: In medical practice this systemic review encompasses all major organ systems; however, in the oral health care environment it will be focused on organ systems of the head and neck.

(Adapted from Bates' Pocket Guide to Physical Examination and History Taking, 4th Ed., Lippincott Williams and Wilkins, 2004)

The foundation for any new patient examination and subsequent care is the patient interview and assessment of their medical and dental history. Most standard medical history forms used in dental offices provide a good structure for conducting the medical history and a subsequent risk assessment. The medical history form is the ideal starting point for the initiation of the patient interview during a new patient or recall exam.

The primary goal of the clinician–patient interview is to improve the well-being of the patient. The purpose of conversation with the patient is threefold: To establish a trusting and supportive relationship, to gather information, and to offer information.[1] Oral health care providers have a duty to be aware of the general health status of their patient, not just their oral health status. The patient interview to assess the patient's medical history is therefore an ideal opportunity to establish rapport and open communication.

Medical history taking should be performed for every new patient examination as well as periodic recall examination, and they should be reviewed with the patient at each visit. A complete health history is to be taken on all patients every three years. Patients returned to active status after three years of inactivity should complete a new health history before initiating treatment.[2]

The patient's medical history

The main components of the patient's medical history are listed in Figure 1. Key elements of the medical history include identifying data as well as the source of the patient's history, whether it be the patient or a caregiver. A note of the reliability of the history is important in cases of advanced age or cognitive impairment. This is key information that may assist dental team members in providing care for the patient. The next component of the medical history is the chief complaint, including history of the present illness. A record listing medications, allergies, tobacco, alcohol, and recreational drug use is also an integral part of the history. Nonprescription, over-the-counter or supplement-type medications (especially alternative medicine or herbal preparations) can have a bearing on patient management as well.[3]

The patient interview

The obvious first step in the patient interview is to greet the patient and establish rapport. It is important to maintain confidentiality. If the patient is with a companion, obtain permission to discuss the patient's medical or dental condition in their presence. Cultural competence is an essential consideration, recognizing that patients may be reluctant to disclose personal health considerations in the presence of parents, siblings, and translators from their community. The next step is to invite the patient's story. Begin with open-ended questions and allow full freedom of response. For example: "How can I help you?" or "What brings you into the office today?"

Allow the patient to voice their chief complaint as well as provide a history of the present problem. Ask open-ended questions about previous dental treatment as well as problems with dental care. If they are presenting without a complaint as a new patient exam, use this opportunity to ask them about their oral health and their desires for treatment with you.

Once the patient has told their story, the interview can progress to the review of the medical history form. The easiest way to transition to this topic is to establish the agenda for the rest of the interview. For example: "Before we go further into your dental health, I would just like to review your medical status." If the patient presents some resistance, tell them that reviewing all aspects of their health has a bearing on the dental examination, subsequent diagnosis, and can impact the safety of the care they receive.

Skilled interviewing

The standard medical history form in your dental record can serve as a step-by-step guide for structuring the patient interview. Positive responses in the questionnaire serve as the

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starting point for discussion regarding issues that are recorded. Any history of heart attack, high blood pressure, diabetes, bleeding issues, etc., should be correlated with the listing of medications. If there are no medications listed, ask how the noted illnesses are being managed. Keep in mind that diet and lifestyle modifications are an important part of disease management. On the other hand, the patient may not be familiar with the medications they take, or may never have filled prescriptions that were written for management of these disorders. An attempt should be made to obtain an accurate listing of prescription and non-prescription medications and supplements that the patient uses.

A patient who takes an active role in the management of their health may be compliant with physician-prescribed medications but also take supplements and herbal preparations as well. Many times, these supplements are supervised by their medical doctor, but they could also be taking substances without the physician's knowledge. Certain herbals can interact with anticoagulants and NSAIDs, leading to increased risk of bleeding problems. Examples include arnica, chamomile, fever few, garlic, ginger, and ginkgo. CNS depressants such as opioids and benzodiazepines can be potentiated by the use of kava, marigold, calendula, and valerian.[10] The prudent practitioner should review supplement use with the patient to make sure they are aware of potential interactions with prescribed medications. Dentists are part of the primary health care team and, as such should contact a patient's primary care physician if there is evidence of prescription noncompliance.

Incomplete information found in the medical history during the interview can indicate care management issues that need to be addressed. These issues can range from cognitive impairment, illiteracy, a need for translation services, or hostility regarding medical providers in general.

Facilitating the patient's story requires specific techniques of skilled interviewing. In addition to active listening and adaptive questioning (i.e., asking directed questions, offering multiple choices for answers, and clarifying what the patient means), it may be necessary to utilize alternative communication techniques. For instance, observe nonverbal cues the patient may be presenting, such as failure to maintain eye contact, specific facial expressions, posture, etc. Verbal cues you can use to aid the patient in telling the story include facilitation by encouraging them to elaborate further. A helpful technique for the elderly patient includes mirroring the patient's language patterns or qualities of speech. This would involve using the same pacing, tone, and volume to aid in communication.

If a patient projects anger, sadness, or frustration regarding a medical or dental condition, it is important to identify this emotion with empathic responses such as "I understand," "that sounds upsetting," etc. Reflecting empathy validates the patient's emotional experience and is an important first step in improving their well-being.[1]

There are ways of adapting interview questions to specific patient situations. Challenges may include overtalkative patients or those who are confused or angry. The talkative patient should be allowed to explain their story for a few minutes. During this monologue, try to identify what seems most important to the patient and use that as a point to refocus the discussion. A confusing patient may be one who is experiencing multiple symptoms or has difficulty expressing themselves regarding quality of pain or emotions. Clarifying questions can help redirect the patient in the interviewing process.

Figure 2 — Suggestions for Working with an Interpreter

It's best to use a professional interpreter rather than a co-worker, family member, or friend. They can be a resource for cultural information.

Let the interpreter know what you plan to cover at the appointment. Remind them to translate everything the patient says.

You should have eye contact with the patient so you can read each other's nonverbal cues.

Place the interpreter next to you; allow them to be at ease with the patient.

Talk to the patient directly and respond to questions with nonverbal behaviors.

Focus on what's most important, and keep your sentences short and simple.

Ask the patient to report back what they have heard, to make sure they understand.

Be aware that the appointment may take more time and less information may be obtained. Be patient.

(Adapted from: *Bates' Pocket Guide to Physical Examination and History Taking,* 4th ed., Lippincott Williams and Wilkins, 2004.)

With patients who are unhappy or angry, it is important to validate their feelings as a point of empathy. They may not be angry at you specifically, so try not to take it personally. Always try to stay calm to avoid feeling challenged. Be aware of possible implicit bias that you may have in the provider-patient interaction. We cannot assess the patient's condition through the lens of our own life experiences. Consequently, it is a useful exercise to put yourself in their shoes. Imagine what it is like to experience their condition within their own particular life experience and its possible frustrations. Keep in mind the dental ethical principles of patient autonomy, nonmaleficence, beneficence, justice, and veracity in all patient interactions.

Difficult topics

We have all met people in our lives who appear to be healthy but are living with significant, potentially life-threatening medical conditions. Alternatively, there are those who are obviously ill but insist that they are healthy. Both of these individuals may fill out a completely negative medical history form when presenting to your office. The challenge is how to get to the truth to help you identify an undiagnosed illness or to prevent you from harming a patient with your dental care.

Substance abuse

Visibly healthy young adults who fill out a negative medical history should still be queried about their health status. At minimum, ask the following: "Do you have any heart disease, lung problems, diabetes, or bleeding problems? Any problems with depression or anxiety? Do you have any allergies or take any medications or supplements?" These questions are appropriate for healthy patients from childhood to advanced age.

Clinicians should consider if gathered health histories reflect the expected prevalence of substance use in the general population. Patients in high school through adulthood should be asked about their use of alcohol, tobacco, and recreational drugs. Drug use in teens and adults includes alcohol, marijuana, cocaine, and amphetamines. The legalization of marijuana and opening of retail dispensaries has produced an explosion of cannabis abuse in our patient population. The estimation of cannabis use is approximately 14.5% of the population in North America.[14] The National Institute on Drug Abuse estimates that 15% of non-college-attending young adults smoke, vape, or ingest cannabis daily. The current cannabis supply is also estimated to be 10 times stronger than it was in the 1980s.[4] An internet search of cannabis dispensary websites in California and Colorado showed "Flower" THC content of up to 29%, and THC content of refined products for vaping of up to 90%.[5]

Oral implications of marijuana use include periodontitis, xerostomia, and increased risk of head and neck cancer.[18] However, with the rising use among youth and adults, general dentists need to be on the lookout for systemic effects. Whether smoked or vaped, THC onset of action is immediate, lasting one to three hours depending on dose. The elimination half-life can be up to 72 hours.[5]

The main adverse physiologic effects of cannabis can be broken down into cardiovascular, respiratory, and gastrointestinal manifestations. The cardiovascular implications of chronic marijuana use include increased risk for angina, myocardial infarction, cerebrovascular accident, and arrhythmias (atrial fibrillation, atrial flutter, second-degree AV blocks, PVCs, and ventricular tachycardia).[14] The acutely intoxicated cannabis user should not receive local anesthetics, sedation, or general anesthesia in the dental office for these reasons.

Cannabis use is also associated with increased episodes of cough, sputum production, dyspnea, and acute asthma exacerbation.[14] Lastly, cannabis hyperemesis syndrome is a rare but not uncommon condition that is characterized by episodic nausea, vomiting, and abdominal pain associated with prolonged (near daily) recreational cannabis use. The underlying pathophysiologic mechanism of hyperemesis syndrome is unclear, but it resolves with cannabis cessation.[14] Appropriate history and physical examination with review of systems can identify and mitigate the risk of treating chronic users in the dental setting.

The dentist faces similar risks in treating cocaine and amphetamine abusers. Abuse of cocaine and amphetamines is associated with acute ischemic as well as hem-

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Figure 3 — The CAGE Questionnaire

Have you ever felt the need to **cut down** on drinking?

Have you ever felt **annoyed** by criticism of drinking?

Have you ever felt **guilty** about drinking?

Have you ever taken a drink first thing in the morning **(eye opener)** to steady your nerves or get rid of a hangover?

(Adapted from Mayfield D, McLeod G, Hall P: The CAGE questionnaire: validation of a new alcoholism screening instrument. Am J Psychiatry 1974;131:1121–1123.)

orrhagic stroke in young adults.[6,7] Inhaled cocaine has a duration of action of up to 45 minutes, and significant myocardial ischemia and cardiac arrhythmia is a main concern for patients who are acutely cocaine intoxicated. Patients who use cocaine should not receive dental treatment for at least six hours after the last administration of the drug.[8]

Adderall, Ritalin, and Vyvanse are commonly prescribed for attention deficit hyperactivity disorder. However, these stimulants are increasingly becoming available among teenagers and young adults, often without a prescription, and can easily be abused.[17] At pharmacological doses dangerous systemic effects are rare, but with increasing rates of abuse these systemic effects can become more prevalent. Recognizing the signs, symptoms, and understanding systemic complications of abuse can prevent in-office adverse events such as tachycardia, hypertension, decreased seizure threshold, paranoia, and delusions.[16] Amphetamine usage can often be overlooked or not disclosed by patients to providers. It is important to confirm that their use is under a physician's direction.

Alcohol abuse has increased during the pandemic, and screening should identify the type and frequency of alcohol use.[9] Alcohol abuse is strongly correlated with nutritional deficiencies as well as several types of cancer, including head and neck cancer.[13] Typically, in primary care medicine the CAGE questionnaire is used for screening alcohol use disorder (Figure 3, see Page 49). A thorough social history should include the patient's frequency of consumption as well as the type of consumption. This information can have a bearing on oral diagnosis as well as proposed treatment.

Chronic alcohol use has been shown to be associated with an increased risk of hypertension, atrial fibrillation, and alcohol-induced cardiomyopathy in patients at risk of cardiovascular diseases.[13] The greatest concerns regarding dental management of alcohol use disorder are hepatic and hematologic manifestations. Chronic alcohol abuse leads to hepatic dysfunction, which includes impaired production of coagulation factors resulting in increased bleeding. Decreased albumin production by the liver, coupled with associated alcoholic malnutrition, can lead to fluid imbalance and delayed wound healing.[13] Additionally, liver-impaired patients should avoid the use of drugs metabolized by the liver, such as acetaminophen.

Hematologic manifestations of anemia are directly correlated to malnutrition and the toxic effects of alcohol on red blood cells and bone marrow, resulting in low levels of iron, vitamin B12, and folate, as well as platelets.[13] Additionally, chronic alcohol abuse can result in upper gastrointestinal bleeds.[13] A record of a patient's use of alcohol may therefore have a bearing on diagnosis and planned treatment. An accurate social history, including the amount and type of alcohol consumption, can help the general dentist identify patients at risk for associated treatment complications.

Figure 4 — Binge Drinking and Heavy Drinking

NIAAA* defines binge drinking as a pattern of drinking alcohol that brings blood alcohol concentration (BAC) to 0.08 percent — or 0.08 grams of alcohol per deciliter — or higher. For a typical adult, this pattern corresponds to consuming five or more drinks (male), or four or more drinks (female), in about two hours.

The Substance Abuse and Mental Health Services Administration, which conducts the annual National Survey on Drug Use and Health, defines binge drinking as five or more alcoholic drinks for males or four or more alcoholic drinks for females on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least one day in the past month.

NIAAA defines heavy drinking as follows:

- For men, consuming more than four drinks on any day or more than 14 drinks per week.
- For women, consuming more than three drinks on any day or more than seven drinks per week.

*National Institute on Alcohol Abuse and Alcoholism

Behavioral health issues

The patient interview and review of the health history also includes asking about behavioral health issues that may influence diagnosis and treatment. According to the National Alliance on Mental Illness, one in five U.S. adults experiences mental illness, and one in 20 U.S. adults experiences serious mental illness. NAMI also estimates that 17% of youth (6-17 years) experience a mental health disorder.[11] Emotional issues should be identified by the dentist and discussed openly in a supportive manner. Frank identification of this fact and discussion with an empathetic approach is indicated.

Mental health disorders that can affect dental treatment include anxiety disorder, ADHD, bipolar disorder,

depression, obsessive compulsive disorder, schizophrenia, and post-traumatic stress disorder, among others. Anorexia nervosa is a behavioral disorder that may present clear oral manifestations. The estimated lifetime prevalence of anorexia nervosa in the general U.S. population is 0.6%, more commonly affecting women, with a median onset of 18 years of age.[12] Anorexia nervosa is characterized by an abnormally low body weight, intense fear of gaining weight, and distorted perception of body weight and shape.[12] Common symptoms of anorexia include exertional fatigue, weakness, cold intolerance, palpitations, dizziness, and early satiety.[12]

Physical signs in these patients include, but are not limited to, low body mass index (BMI < 17), hypothermia (core temperature <95°F), bradycardia, hypotension, xerosis (dry, scaly skin), brittle hair, and lanugo hair growth.[12] These findings can easily be identified via vital signs, height, and weight, and a thorough head and neck examination. General practitioners should be aware of possible systemic complications, which include bradycardia, pericardial effusion, arrhythmias, electrolyte disturbances (hypokalemia, hypomagnesemia, hyponatremia), and anemia.[12] Given the chronicity and the severity of anorexia, dental treatment may have to be deferred. Recognizing the signs and symptoms, however, can facilitate appropriate medical and psychiatric referral for the patient.

The medical management of behavioral health disorders may involve a wide range of drug classes. These classes include mood stabilizers/antipsychotics (lithium, valproic acid, carbamazepine, and lamotrigine), stimulants (discussed above), benzodiazepines, and barbiturates. The most common classes encountered in dental practice are the tricyclic antidepressants (TCAs), serotonin norepinephrine reuptake inhibitors (SNRIs), selective serotonin reuptake inhibitors (SSRIs) and (more rarely) monoamine oxidase inhibitors (MAOs). Although the exact mechanism of action is not known, it is thought that antidepressants increase the amount of serotonin and/or norepinephrine at the synapse to achieve a therapeutic effect.[14]

Dentists may have concerns treating patients taking MAOs, TCAs and SNRIs. Epinephrine in local anesthetic could have exaggerated effects on blood pressure and heart rate from any of the drug that reaches the heart and peripheral vasculature. While not contraindicated, epinephrine in local anesthesia should be used with caution in patients taking these drugs. If possible, injected epinephrine in local anesthetic solutions should be minimized, or injections given slowly over time to minimize systemic absorption. Conversely, SSRIs, the most widely used drugs in this class, are considered to have less risk associated with administration of epinephrine in local anesthetics.[14] Tricyclics as well as some anti-psychotic agents may lower seizure threshold, so limiting the amount of local (independent of epinephrine) used in these cases is indicated.[14]

Another aspect of reviewing a patient's medical history that has a bearing on health is the identification of abuse and human trafficking. Michigan is ranked in the top 10 states for human trafficking, with estimation of 1,100 to 1,400 individuals trafficked each year. The three most common types of human tracking including sex trade, forced labor, and domestic servitude.[15] All health care professionals should be able to identify the red flags of human trafficking. Specific warning signs include late presentation to appointments, poor historians, indicators that the individual is being controlled (i.e., not carrying their own ID, not being allowed to speak during the appointment).[16] An accurate history and physical exam can aid in recognizing the warning signs of abuse or trafficking obligating a report to the appropriate agencies.

Putting it all together

Physical diagnosis is the medical discipline used to assess a patient's physical status and the emotional and social aspects of their life that influence health. It is the foundation of everyday practice in primary care medicine. Medical students are trained in the total assessment of patients, encompassing all organ systems. Dentists, like medical specialists in ophthalmology or orthopedics, are not expected to perform comprehensive, head-to-toe, physical examination and diagnosis. They must however, like other medical specialists, be aware of the overall health status of their patient and how that affects oral diagnosis and treatment planning.

Total medical assessment of the patient is beyond the scope of practice of dentistry. Dentists must rely on an accurate medical history provided by the patient, their general medical knowledge, and some of the risk assessment guidelines above. If there are questions or concerns about a patient's prescription compliance or health status, physician consultation is indicated. Physician consultation does not consist of asking for "medical clearance" for the patient. The purpose is to have the physician determine whether the patient is medically optimized for the care planned. It is necessary to indicate the intended dental treatment for physician reference.

Not every patient with an involved medical history will require physician consultation. If the patient presents an accurate history and any medical conditions and their management are familiar to the dentist, treatment may proceed. However, many health care providers (including physicians), are not familiar with all possible

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medical conditions and therapies. The knowledge base for medicine, like dentistry, changes continually, and it can be a challenge to keep up with new information. Fortunately, there are multiple online and app-based resources that can be used to keep abreast of changes in medical therapeutics. Medscape, epocrates, and UpToDate are web-based applications that can be accessed thru the Google Play or Apple stores. These websites and smartphone apps are useful for reviewing drugs, interactions, and disease therapies, as well as accessing pill identifiers.

Another option is to contact your patient's primary care physicians affiliated with local hospitals and health systems to request access to their electronic health records (EHRs). EpicCare Link is an example of a portal that gives community providers access to a patient's records in Epic, the most widely used medical EHR. The Epic portal provides a record of outpatient physician visits, lab results, and future scheduled medical appointments, as well as summaries of inpatient encounters. You may also upload any of your office notes or reports to the Epic EHR as a PDF.

Providers seeking access to medical EHRs will need to contact individual health system EHR departments to apply for these privileges. Gaining access requires completion of cyber security and compliance forms, as well as training. Dentists and auxiliary staff with access to the medical EHR can then confirm the accuracy of the patient's medical history in the dental office.

Our patients are presenting with increasingly complex medical as well as dental issues. Refocusing on the patient medical history portion of the examination process will provide added value to your care. Having access to current medication lists and laboratory results can increase the efficiency of care and is the first step in integrating oral health care with total patient care. Risk reduction and increased patient safety and health are the ultimate goals. ●

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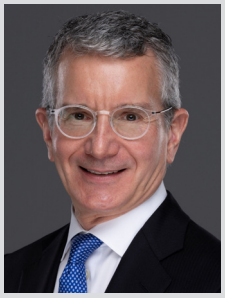

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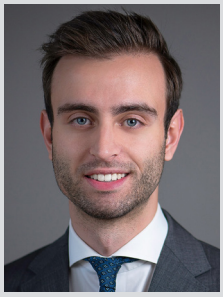

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