

Quality Resource Guide

Medical Health History in Dental Practice

Author Acknowledgements

BERNADETTE ALVEAR FA, DDS CPT

Associate Professor
Department of Preventive and Restorative
Dentistry
Director for Local Anesthesia Curriculum
University of the Pacific,
Arthur A. Dugoni School of Dentistry
San Francisco, California

Dr. Fa has no relevant financial relationships to disclose.

Educational Objectives

Following this unit of instruction, the practitioner should be able to:

1. Understand the importance of a thorough health history as a foundation for safe dental care.
2. Gain a perspective on the diversity of languages spoken in the United States.
3. Be familiar with the aspects of health and disease that impact dental therapy.
4. Be familiar with the medical/legal reasons to gather accurate and timely health history information.
5. Be familiar with critical questions that should be repeated in an interview format to ensure the patient fully understands what they are answering.
6. Understand the need for a medical consultation relative to certain aspects of the patient's health problems.
7. Be familiar with Internet resources relative to health history problems.

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The following commentary highlights fundamental and commonly accepted practices on the subject matter. The information is intended as a general overview and is for educational purposes only. This information does not constitute legal advice, which can only be provided by an attorney.

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Bridgewater, NJ 08807

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Introduction

Do no harm! That is a basic tenant in the delivery of health care. A complete medical history is the required centerpiece of every patient evaluation, helping to ensure that we do no harm.

Collecting the medical history has always been considered an integral part of the initial interview process and the ongoing care of any patient. The interview is designed to identify medical problems that may put the patient at an increased risk for problems during dental procedures. Though a health history could be gathered by verbally questioning the patient and writing down the responses, most dental practices have the patient initially fill out a health history questionnaire, which makes the process more efficient and ensures that no questions are missed. The validity of the health history questionnaire is well documented.¹

However, the questionnaire must then be followed with a verbal interview by the doctor. This is done to ensure the patient properly understood the questions they answered, to ask about any positive responses, and to ensure that a negative response was what the patient intended. Many forms use terms that the patient may not understand. Limited health literacy is a significant issue among many populations. The 2003 National Assessment of Adult Literacy (NAAL) showed that 30 million adults had “below basic” health literacy. Some of those most at risk are patients over 65 years old, those who did not graduate high school, those with one or more disabilities, those below the poverty line, black and Hispanic adults, and several other groups. Patients may not be familiar with terms used on a health history form and they may not volunteer information.² The dentist needs to confirm understanding and when necessary, explain the questions and conditions in terms the patient can understand, so they can provide the correct answers. Patients with low health literacy are at risk for sub-optimal communication and unwanted outcomes.³

All patients, even young and apparently healthy ones, require a thorough health history review. As medical problems escalate or increase in number, the potential for complications during dental

therapy increases as well. While many young people may have significant medical histories, as people age, some medical conditions, such as heart disease, diabetes mellitus type 2 and Alzheimer’s disease, become more prevalent. A 2014 CDC survey of health characteristics found in adults 65 years and older showed approximately 21% in fair or poor health (the rate was about 25% for those 75 years and over).⁴ These numbers indicate that as the patients in our practices age, there is a high potential we will need to manage patients with significant chronic diseases that may or may not be controlled and those with limited literacy and access to care will be at greater risk of developing these diseases.

The Covid-19 pandemic was a season that drastically changed how oral health care professionals could see/treat patients.⁵⁻⁶ Some practices had to shut down totally, but some remained open for emergency services. Aerosol producing treatments rendered a need for in office Covid-19 testing. When vaccinations were available, medical professionals would administer the vaccine and in certain states oral health care professionals received certification and training to administer to patients.⁶⁻⁷

Careful review of the health history and the medication history provides important information about a patient’s health. Sometimes providers must ask questions in such a way that patients provide information they may not have thought was important to provide.

People are living longer with complex medical conditions. This longevity is due in part to medical surgical and pharmaceutical interventions. Functional status can vary over a lifetime.⁸ Patients are also keeping their teeth longer and therefore need and desire more dental procedures as they age. All of this creates a dental, medical, and legal environment that requires a current and thorough review of medical history for every patient.

Questionnaires

There are numerous health history questionnaires available in the United States. The American Dental Association has developed forms for adults

and children, in English and in Spanish that is available for member dentists.⁹ Other forms have been developed by academic health centers and various practice management organizations. The intent of the health history questionnaire is to find out whether the patient feels well, whether they have been diagnosed with medical problems and, whether they are under active treatment or taking medication. The questions should be designed so that they are efficient and most patients can understand the questions and respond correctly.

This questionnaire is up-to-date and conforms to the legal requirements for a health history. The accompanying Health History Interview Sheet was originally developed at The University of the Pacific School of Dentistry (Pacific) (**Form 1**). The use of the Questionnaire and the Interview Sheet completes the medical-legal requirements for a thorough evaluation and assists the practitioner in ensuring that no medical problems have been overlooked (**Form 2**). This Health History form has been translated into multiple languages with the numbering and sequence of all the questions on all the health histories is exactly the same. The English and the translated forms are available through MetLife.¹⁰ A question on one health history form exactly matches the same numbered question on any another health history form. Thereby an English-speaking practitioner can effectively evaluate a Vietnamese-speaking patient’s medical problems, by having the Vietnamese speaking patient fill out the Vietnamese language health history, and then correlating it with the English version. Having a translated health history greatly facilitates communication and can assist in making sure no significant medical problems are missed. When there is doubt about understanding, an interpreter should be enlisted.

Communication

Communicating clearly with diverse populations is crucial in providing appropriate dental care. Data released from United States Census Bureau in 2020 said that 99% of households will be able to respond in their language. Resources and videos have been created to address 59 non-English languages and American Sign Language.¹¹

Besides ensuring an accurate health history, using a health history translated into a patient's primary language or seeking the services of an interpreter documents a level of respect that is an important first step in establishing appropriate patient rapport and developing an optimal working relationship with the patient. Importantly, while the patient may have completed a health history questionnaire written in his or her own language, the health history interview process, is also required. It is incumbent upon the dentist to ensure that the patient fully understood the medical meaning of the questions in the health history questionnaire. "Yes" responses should be fully explored and "no" responses to crucial questions, such as heart disease, should be verbally confirmed. The clinician must carry on a verbal discussion with the patient. If it appears that the patient cannot adequately communicate to understand the health history interview questions it is appropriate to use an interpreter (In some states, it is legally required that the practice provides an interpreter if necessary).

The Pacific health history is used in this Guide as a source to illustrate the components of a thorough health history. Dentists should carefully evaluate the health history form they currently use to ensure that it is up-to-date and contains the appropriate questions/elements that will elicit signs and symptoms of diseases and ask about specific diseases, medical problems and medications that are important relative to dental therapy.

Sections of the Health History

I. General Questions

Section I is designed to elicit general information about the patient's health. Specifically the last visit with their physician, their physician's name, are they currently in pain, or have had any problems with prior dental treatment. This section may also have an option for patients to indicate their preferred pronoun of reference.¹²

II. Signs and Symptoms

Section II focuses on various signs and symptoms that are indicative of medical problems. Signs are indications of disease that can be observed by the practitioner, *e.g.*, swollen ankles. Symptoms

are problems associated with a disease that are experienced by the patient, but cannot be seen by the practitioner, *e.g.*, the pain from a migraine headache. All of the signs and symptoms listed are associated with one or another disease. A "yes" response to "frequent thirst" and "frequent urination" would be a symptom and a sign, respectively, associated with diabetes. A positive response to "swollen ankles" can be a sign associated with heart failure. Some of the other signs and symptoms are less clearly associated with a specific medical problem. For example, "headaches" and "dizziness" could be signs associated with several problems including high blood pressure. Based on that, it would be prudent for the clinician to take the patient's blood pressure. Also, if the headaches and dizziness were persistent or marked, it would certainly be appropriate for the clinician to encourage the patient to see their physician.

No time frame is given for the patient's problem/complaint. Therefore, they may answer "yes" for a sinus problem that had occurred many years ago. This is intentional; determining the relevance of the time frame is the responsibility of the clinician. Pertinent information may be missed if the questions are restricted only to problems that have occurred within the last year. A "yes" response in the signs and symptoms section may require a medical consultation in order to develop a definitive diagnosis.

III. Specific Diseases

Section III concentrates on specific diseases that have been previously diagnosed. These problems have the greatest potential to be of dental significance. If they have already made the patient ill enough to send them to the physician, and the physician has developed a diagnosis, then these diseases are clearly having a systemic effect.

The diseases listed have potential ramifications relative to oral health care. Diseases of the heart and liver or diseases such as diabetes and cancer may have a profound impact on the management of the patient relative to dental procedures. Some diseases of the heart require antibiotic premedication to prevent the development of bacterial endocarditis following invasive dental

procedures. Some patients with uncontrolled hypertension or recent heart attack may not be able to tolerate dental procedures until their condition is controlled. Liver problems can alter the ability of the patient to metabolize drugs and may also predispose them to bleeding problems. Patients in treatment for cancer may be at risk for increased bleeding or risk of infection. In such situations the clinician may appropriately request laboratory tests to further evaluate risks of treatment for the patient. The primary lab test of interest to dentists would be a CBC (complete blood count) with a differential. If the patient is taking anti-coagulants or there is a concern about bleeding for any reason then a PT, PTT, INR, and bleeding time are appropriate. Practitioners could also request a medical consultation for further evaluation and recommendations.^{8,13}

While many dental procedures have a physiological impact they are not usually significant, unless the patient's physiology is also compromised by medical conditions. Surgical procedures are usually the most stressful and potentially risky procedures, though for some patients prolonged restorative procedures can also be physiologically demanding. The dentist must be aware of potential problems with any dental procedure and the possible need to modify the procedure (*e.g.*, choice of anesthetic) or mitigate the physiological impact to ensure patient safety. Depending on the patient's medical problem, the dentist may require a medical consult to gain a better understanding of the medical problems before proceeding with dental therapy. All of the diseases, signs and symptoms, and other questions on the health history have, or could have, dental relevance depending on the patient and the dental procedure being done or medication being utilized.¹⁴

IV. Treatments

Section IV discusses medical treatments and prosthetic devices, which can have a bearing on dental management. A positive response to "radiation therapy", especially if it is in the head and neck area, will have a profound impact on dental management. Such therapy usually damages salivary glands creating dry mouth (xerostomia)

and decreases blood flow in the bone making it prone to infection.^{8,14} Decisions regarding dental management depend on the patient's specific situation and the extent of the treatment and/or potential outcome.

V. Medications and Drugs

Section V elicits important information on prescription, over-the-counter medications, natural remedies and any other drugs the patient might be taking. The patient's current medication history is extremely pertinent and documents the extent of any problems identified on other parts of the health history (and at times the existence of problems not identified by the patient). For example, a patient may not mention they have angina, but they list "nitroglycerin for chest pain" as one of their medications. Their medication information can have a bearing on oral diagnoses, dental management and the potential for adverse drug reactions as well as drug interactions.

According to a 2009 sales data survey, over-the-counter (OTC) drugs were used most commonly for cough and cold, analgesia, antacid; anti-gas, laxative and antidiarrheal purposes.¹⁵ OTC medications such as acetaminophen containing products (pain relief and some sleep aids) are important to note to avoid the possibility of an overdose if the dentist plans on using an acetaminophen containing pain medication. Over dosage of acetaminophen and resultant permanent liver damage is a common clinical problem.¹⁵

Recreational drug use is extremely important to identify in patient's medical history. Chronic use of recreational drug may hinder use of local anesthetics with vasoconstrictor.¹⁶

The use of natural remedies is an important area that must also be evaluated when developing the patient's health history. A 2007 survey of "Complementary and Alternative Medicine" (CAM) found that approximately 38% of adults and 12% of children utilized CAM therapies (including the use of natural products or medications) at least once in the last year. Most often they were used for management of musculoskeletal pain, anxiety, cholesterol management, colds, headache and

insomnia.¹⁷ In a 2010 study conducted by AARP based on the CAM study as many as 47% of those over 50 reported using CAM in the last twenty-three months.¹⁸ Only half of those reported discussing it with their health care providers. Practitioners should ask patients if they are taking over the counter medications or natural remedies and ask why they are taking them. This may shed light on important aspects of their health history as well as the potential for drug reactions and interactions that can impact dental management.

Some medications alter the body's ability to protect and heal itself. Medications such as corticosteroids, used to treat autoimmune diseases, and chemotherapeutic agents, used to treat cancer, profoundly compromise the immune system predisposing the patient to infections and poor healing following surgical procedures. Some prescription medications, OTC drugs and natural remedies may place the patient at risk for excessive bleeding (see **Table 1**), especially if the patient is knowingly or unknowingly taking more than one.¹⁸⁻¹⁹

If a patient is using any medication, and especially if they are using multiple medications, the clinician should be alert for oral side effects.

The most common direct effect of medication on the oral cavity is xerostomia. Antidepressants, antihistamines, and antihypertensives are some of the most common drugs causing this problem.²⁰ Patients may or may not complain of a dry mouth but reduced salivary flow places them at significant risk for recurrent caries and other dental diseases that may require treatment. Severe xerostomia can cause discomfort to the patient and may even interfere with swallowing and speech.²¹ In addition, xerostomia reduces saliva, putting the patient at risk for being prone to caries.²⁰⁻²¹ Provision of palliative therapy and/or referral to a physician is appropriate in these cases. The physician may also provide palliative care or attempt to alter the medication regimen to diminish the adverse effects.²²

Other medications can also have other significant direct effects on the oral cavity. Bisphosphonates, used to preserve bone in patients with osteoporosis or in some cancer therapies, has been associated with osteonecrosis of the jaws.^{14,23} Gingival enlargement is associated with use of diphenylhydantoin (Dilantin), calcium channel blockers, and Cyclosporine A, usually in combination with poor oral hygiene. Some

Table 1 - Natural Products That May Alter Dental Management¹⁷

Compound	Possible Dentally Relevant Problem
Feverfew Garlic* Ginger Ginkgo Biloba* Bilberry Dong Quai St John's Wort	May increase bleeding
Echinacea* St. John's Wort	These herbs inhibit liver enzymes so they may potentiate the liver enzyme (cytochrome P450) inhibiting effect of erythromycin and ketoconazole.
Ephedra (Ma-Huang) Bitter orange	May increase blood pressure and heart rate due to anxiety or if epinephrine/ vasoconstrictor used.
Kava-Kava	Hepatotoxicity, especially in those taking other medications metabolized in the liver.
Valerian	May potentiate the effects of sedative, hypnotics and antianxiety drugs.
* Denotes natural product in the top ten most commonly used ¹⁴	

antihypertensive drugs may cause lichenoid reactions. Some medications taken for chronic obstructive pulmonary disease may place the patient at risk for intraoral candida infections. Both xerostomia and the metabolism of some drugs can result in dysgeusia. Patients may mention this to their dentist before they tell their physicians. If no oral causes are identified, or dental treatment for a possible cause is not effective, then referral to the patient's physician for further evaluation is indicated, especially if the altered taste appears to affect nutritional intake.²³

Many medications have no oral cavity or dental impact and so no change in dental management is needed. The clinician must discern which medications are important and which are not. This requires the clinician to investigate medications they are not familiar with and review their side effects, toxicities and contraindications. There are several good resources on the Internet that can be utilized (**Table 2**, Internet Resources Guide) to look up medications as well as the protocols and recommendations for the dental management of medically complex patients.

VI. Women Only

Section VI elicits specific information relative to women, such as pregnancy, nursing and birth control pills. There is no contraindication to any dental procedure during pregnancy. Routine examinations and hygiene visits during pregnancy can prevent some oral complications that may come with pregnancy. Routine care during pregnancy has also been associated with reduction in adverse outcomes in pregnancy such as pre-term delivery and low birth weight. However, as a precaution, to avoid potential complications related to pregnancy, non-elective dental procedures and the use of medications for dental purposes are most appropriately done in the second trimester or first half of the third trimester.²⁴ Some patients and doctors prefer to postpone elective procedures until after the pregnancy is completed to avoid any possible pregnancy problems that may be attributed, correctly or incorrectly, to dental treatment.

Table 2 - Limited list of online resources relative to medical histories, medication management and use, and the dental management of medically complex patients.

www.aaom.com

The American Academy of Oral Medicine

http://www.acpm.org/?OTCMeds_ClinRef

American College of Preventive Medicine

www.ada.org

The American Dental Association

www.alz.org

The Alzheimer's Association

www.americangeriatrics.org

The American Geriatrics Society

www.ama-assn.org/ama

The American Medical Association

www.fda.gov

U.S. Food and Drug Administration

www.fda.org

FDA.org – The Center for Health and Wellness

www.lexicomp.com

Lexicomp®

<https://www.merckmanuals.com/professional/>

Merck Manual Professional

www.nlm.nih.gov/medlineplus

www.nlm.nih.gov/medlineplus/druginformation.html

A service of the U.S. National Library of Medicine and National Institutes of Health

www.nccam.nih.gov

National Center for Complementary and Alternative Medicine

www.pdr.net

The Physician's Desk Reference on-line

VII. Covid-19 Vaccination

Section VII confirms if the patient has received a Covid-19 vaccination and allows the patient to specify which vaccine was administered and date of final dose. Knowing this information can help dental providers determine best possible treatment for a patient that may present with any symptoms.⁵

VIII. All Patients

Section VIII consists of a catchall question designed to elicit information the patient feels is appropriate to provide, but which has not been otherwise

queried. This is the area where patients will write down some of the less understood or poorly defined medical syndromes as they relate to oral health. This may include chronic fatigue syndrome, depression, cognitive impairments, systemic fungal infection, and environmental allergies. There may be no specific dental recommendations for some medical conditions and medical treatment may also be varied, with varied success. Regardless, these problems must be taken into consideration. A medical consultation may be of value in such

situations. Even in cases which are ambiguous, physician consultations should be as specific as possible. The treatment plan, including any important details such as drugs and dosages to be administered, level of difficulty or amount of bleeding anticipated from the procedure should also be provided to the physician so that they can make reasonable recommendations based on the extent of the treatment planned. Dentists should note the concern, *e.g.*, “...this patient has noted a cognitive impairment in their history, and they were unable to provide further information about their condition.”

There should be specific questions:

- Has the cause of the cognitive impairment been identified and if so, what is the cause?
- Is he/she able to make their own treatment decisions? If not, who is the surrogate decision maker?

After the dentist lists his/her specific concerns, there should be a general question to inquire if the physician has any concerns or comments about the patient ability to tolerate and benefit from the treatment that is planned. Using this approach, the dentist’s specific concerns are addressed, and the physician has been given the opportunity to provide additional information that may be important in safely managing the patient.

Many patients have keen insights into their conditions and how they react to specific medical treatment. Asking the patient for their input in this regard is important as well. Together, practitioner and patient, in consultation with their physician as needed, can decide whether or not to proceed with a given treatment. This partnership is an important step toward successful dental-patient relationships and treatment outcome.

Once the patient has completed the health history, they should sign and date the document. The clinician should be aware of the patient’s general well-being and health at every appointment. Patients should be asked at every appointment if there is any change in their health status.

The patient should review their complete health history questionnaire at selected intervals, and re-sign it, documenting any changes or affirming that there have been no changes. The frequency of review depends on the practitioner’s preference, the volatility of the patient’s medical status and the state’s dental practice regulations. Most commonly, offices have the patient review, update and re-sign their health history approximately every year during a hygiene recall or an annual examination visit. The dentist should review the pertinent information and re-sign the interview sheet documenting the review.

Health History Interview Sheet

All clinicians develop an individual health history interview style, which elicits the needed information, without offending the patient. The health history interview is a very important time in establishing the dentist-patient relationship, so it has to be done professionally, with caring and respect that reflects the style of the practice.

Using the health history interview sheet ensures that any positive questions are followed up appropriately and documented. This sheet provides a location for any significant findings and descriptions of any dental management considerations. Medical - legally, this allows a separate area for the dentist’s edits, comments and notes. Ideally, the dentist does not alter the patient questionnaire, or add notes on that form. If the dentist feels an edit on the questionnaire is crucial for clarification, any edit should be dated and initialed by the patient. Critical questions that the dentist must review with patients are listed on the right side of the interview sheet. These questions should be verbally asked of the patient, even if the patient has already answered them in the negative on the questionnaire. The six areas covered by these questions are extremely important in dentistry and it is appropriate to ensure that the patient properly understands what is being asked. Patients may answer “no” to items on a questionnaire but acknowledge the diagnosis when directly asked by the practitioner during the health history interview. At times, a patient

will intentionally neglect to mention important medical findings such as a congenital heart defect, because they want to avoid the hassle of taking prophylactic antibiotics. If they circle “no” to heart disease on the health history questionnaire and responded “no” to the dentist’s verbal questions about heart problems, their intention to hide that information is clearly documented.

CRUCIAL QUESTIONS INCLUDE:

Cardiovascular Health

Heart disease is still the leading cause of death in the United States²³ and cardiovascular conditions contribute to a large portion of the dental management considerations. Some patients who have had heart surgery or transplant, or who have certain congenital heart defects, may require antibiotic prophylaxis prior to dental treatment as do those who have had endocarditis previously. The patient may or may not understand the term “cardiovascular.” The best way to phrase the inquiry to the patient is to ask: “Do you have now, or have you had in the past, any heart problems or ever been told by a doctor that you have a heart condition?” The question is clear and direct and inquires specifically about past and present issues so that the practitioner, not the patient, can decide if the information is relevant to their dental care.

Infectious Diseases

This is designed primarily to define any active infectious problem. Hepatitis is the most common one with dental implications/complications. Another important infectious disease is advanced HIV infection or AIDS because of concurrent oral and systemic problems. Both hepatitis and HIV disease can lead to hematologic changes (increased bleeding) and problems with healing. This section is not designed to elicit information that would alter infection control protocols. Infection control protocols should be the same for all patients, except for those with active tuberculosis (TB) or suspected TB with a productive cough. Additional precautions are required for such patients. This information on infectious diseases may also be important in the event of a parental (sharps) exposure incident.

Asking some of the questions on the health history such as those about infectious diseases and recreational drug use can be awkward for some inexperienced practitioners, but they are important to ask. Routinely reviewing the list of all the questions one by one, in a professional manner, with each patient, will feel less awkward over time for the practitioner, making it less awkward for the patient. If the patient responds “no” to all questions, the clinician might follow up with the statement: “these diseases can change dental management or the response to treatment, in some situations, so I always ask these questions of everyone”. Such a statement provides an explanation of why the questions were asked and will impart to the patient the importance of revealing their health history to you. Your question may prompt some patients to inquire about sterilization procedures in your office, which they may have wondered about, but not felt comfortable asking. This will allow you a chance to reassure them.

Allergies

Allergies are always a concern in dentistry, since we use a variety of medications and materials. Penicillin and aspirin have a relatively high allergic rate and the allergies can be very severe, including life threatening anaphylactic reactions. A patient should be asked about allergies in general and specifically asked if they have allergies to antibiotics, pain medications (including aspirin), local anesthetics or narcotics. Fortunately, allergies to local anesthetics used in dentistry are rare. The “allergy” described by the patient is most commonly another type of adverse drug reaction (such as a side effect, idiosyncratic response or toxicity) and not a true immunologic response. However, any report of an allergic reaction to drugs needs to be noted and followed up. If using the compound is unavoidable, and the person is not certain they have an allergy, or the “allergy” they report is not consistent with an allergic reaction, allergy testing by a physician in a medical setting may be indicated. Allergy testing by the dentist in the dental setting is not appropriate.

Hematologic

Clinicians should not ask the patient if they have “hematologic problems”, because many would not understand the term. Instead, clinicians should ask whether the patient has ever had any bleeding problems or bruise easily. Practitioners may ask: “If you cut yourself, do you bleed regular or do you bleed extra?” The question gets the patient’s attention and makes them think about any bleeding problems they may have.

Positive answers relative to prolonged bleeding or bruising may identify a bleeding problem. These problems can occur as a result of many conditions including the use of medications like NSAIDS. Reports of prolonged bleeding or easy bruising, if undiagnosed, should be followed up with a medical consultation, whether or not the patient reports they are on an anticoagulant.

Medications

The medications a patient is taking reveal extremely important information about their medical condition. They document that the severity of their medical problem is enough to warrant medical treatment. Information about OTC, natural and herbal medications should also be elicited and recorded if none is evident on the initial information provided by the patient. See **Table 2** for natural products that may alter dental management.^{19,22} Some patients may take multiple drugs, so breaking down medication assessment in a systematic fashion can be helpful. First, take notice of any prescribed medications that may be needed in an emergency, for example, inhalers “as needed for shortness of breath”. Next, note medications that either because of the disease it is used to treat, or because of the drug itself, creates an increased chance for an adverse event or outcome. For example, if the patient is taking immunosuppressive drugs, such as corticosteroids or cancer chemotherapeutic agents, caution should be exercised relative to the risk of infection, as well as to the disease that necessitated the drug. If the patient is taking bisphosphonates, caution should be taken relative to procedures that cause trauma to bone and the

potential for osteonecrosis.⁸ Blood thinners would put the dentist on alert relative to procedures that are associated with bleeding. See **Table 3** for medications where special precautions are most likely indicated. Not on that list, but also important to consider is, acetaminophen, a commonly used drug in dentistry, that has a high potential to cause medical problems. This most commonly occurs because patients don’t realize they are taking two medications with acetaminophen, such as prescription pain medications (like Percocet and Tylenol with codeine), both containing acetaminophen. Or, when in pain they take a prescription drug and then take an additional over-the-counter (OTC) “non-aspirin” pain reliever, which in the United States, is almost always acetaminophen. They then take Nyquil to go to sleep, which also contains acetaminophen. Such a regime may lead to liver toxicity because they have, unknowingly, exceeded a safe dose. Patients should be informed and cautioned about the overdose risk when taking prescription pain relievers containing acetaminophen.²⁵

Next, review for medications that have the potential for intra oral effects such as xerostomia, gingival enlargement or lichenoid reactions. Patients should also be aware of these potential side effects and how to best address, prevent or relieve them. Finally, before any prescription is written or drug administered, the potential for adverse reactions or interactions, drug toxicity and drug interactions with drugs the patient is already taking (prescription and OTC) should be evaluated. Also note that some medications such as benzodiazepines and NSAIDS should be used with caution in older adults. Changes in drug metabolism occur as people age. Advanced age (over 85), or the presence of other systemic diseases or conditions, create an increased chance for an adverse drug reaction.^{22,25} There are several on-line sites and references that can assist practitioners in these cross checks. Some, but not all, are included in **Table 3**. A pharmacist can also be consulted if the information cannot be found or appears to be ambiguous.

Other Medical Problems Not Asked

In a comfortable one-on-one confidential setting this catchall question may elicit information about medical problems or treatments that a patient was unwilling to acknowledge on a written form but that may have a bearing on dental therapy. This question may also uncover a variety of anxieties or concerns a patient may have, but will not write down. They may be more open to discussing concerns such as dental anxieties, worries about dental materials or concerns about infection

control, once they have established rapport with the practitioner during the interview process.

Summary

The incidence of medical problems and medication use has increased with the aging population. Many patients are managing multiple chronic diseases as well as requiring complex dental care at various levels of function and dependency.²⁶⁻²⁷ Use of a patient-generated health history and the doctor-conducted health history interview is the standard of care, a medical-legal requirement and a crucial

aspect of proper dental patient management. In order to completely assess a patient, a variety of questions are necessary to evaluate signs and symptoms of medical problems, reveal diagnosed medical diseases and the receipt of specific medical treatments, including the use of drugs or medications. The questions should be reviewed with patients regularly and in a way that is understandable and re-assuring. All of these elements can impact dental management and treatment outcomes.

Table 3 - Potential Drug Related Oral Health/Management Complications^a

Drug Groups	Example Drugs	Management Problems
Anticoagulants	Aspirin, Warfarin ^b	Excessive bleeding
Immunosuppressants	Corticosteroids ^b Immunosuppressants for organ transplants	Increase risk of bacterial and fungal infection, poor stress response
Chemotherapeutic agents	Vincristine	Delayed healing, mucositis, fungal infections
Sedative hypnotics ^b , narcotics, barbiturates	Tylenol #3, Valium, Demerol	Respiratory suppression, fall risk
Hypoglycemics	Insulin ^b , sulfonylureas	Hypoglycemia
Bisphosphonate bone stabilizers (esp. I.V. bisphosphonates)	Pamidronate (Aredia) Zoledronic acid (Zometa) Alendronate (Fosmax)	Delayed bone healing, bone necrosis

^a Acetaminophen is not on this table, however a common risk is over dosage due to the unknowing use of multiple drugs containing this drug.
^b Denotes highly titrated drug, narrow margin of safety.²¹

Form 1

MetLife

Health History
English

University of the Pacific

Patient Name: _____ Patient Identification Number: _____ Preferred Pronoun: He/She/They
Birth Date: _____**I. CIRCLE APPROPRIATE ANSWER** (leave Blank if you do not understand question):

- | | | | |
|----|-----|----|--|
| 1. | Yes | No | Is your general health good? |
| 2. | Yes | No | Has there been a change in your health within the last year? |
| 3. | Yes | No | Have you been hospitalized or had a serious illness in the last three years?
If YES, why? _____ |
| 4. | Yes | No | Are you being treated by a physician now? ____ Name of Physician: _____
For what? _____
Date of last medical exam? _____ Date of last Dental exam? _____ |
| 5. | Yes | No | Have you had problems with prior dental treatment? |
| 6. | Yes | No | Are you in pain now? |

II. HAVE YOU EXPERIENCED:

- | | | | | | | | |
|-----|-----|----|--|-----|-----|----|------------------------|
| 7. | Yes | No | Chest pain (angina)? | 18. | Yes | No | Dizziness? |
| 8. | Yes | No | Swollen ankles? | 19. | Yes | No | Ringings in ears? |
| 9. | Yes | No | Shortness of breath? | 20. | Yes | No | Headaches? |
| 10. | Yes | No | Recent weight loss, fever, night sweats? | 21. | Yes | No | Fainting spells? |
| 11. | Yes | No | Persistent cough, coughing up blood? | 22. | Yes | No | Blurred vision? |
| 12. | Yes | No | Bleeding problems, bruising easily? | 23. | Yes | No | Seizures? |
| 13. | Yes | No | Sinus problems? | 24. | Yes | No | Excessive thirst? |
| 14. | Yes | No | Difficulty swallowing? | 25. | Yes | No | Frequent urination? |
| 15. | Yes | No | Diarrhea, constipation, blood in stools? | 26. | Yes | No | Dry mouth? |
| 16. | Yes | No | Frequent vomiting, nausea? | 27. | Yes | No | Jaundice? |
| 17. | Yes | No | Difficulty urinating, blood in urine? | 28. | Yes | No | Joint pain, stiffness? |

III. DO YOU HAVE OR HAVE YOU HAD:

- | | | | | | | | |
|-----|-----|----|---|-----|-----|----|-----------------------------|
| 29. | Yes | No | Heart disease? | 40. | Yes | No | AIDS |
| 30. | Yes | No | Heart attack, heart defects? | 41. | Yes | No | Tumors, cancer? |
| 31. | Yes | No | Heart murmurs? | 42. | Yes | No | Arthritis, rheumatism? |
| 32. | Yes | No | Rheumatic fever? | 43. | Yes | No | Eye diseases? |
| 33. | Yes | No | Stroke, hardening of arteries? | 44. | Yes | No | Skin diseases? |
| 34. | Yes | No | High blood pressure? | 45. | Yes | No | Anemia? |
| 35. | Yes | No | Asthma, TB, emphysema, other lung diseases? | 46. | Yes | No | VD (syphilis or gonorrhea)? |
| 36. | Yes | No | Hepatitis, other liver disease? | 47. | Yes | No | Herpes? |
| 37. | Yes | No | Stomach problems, ulcers? | 48. | Yes | No | Kidney, bladder disease? |
| 38. | Yes | No | Allergies to: drugs, foods, medications, latex? | 49. | Yes | No | Thyroid, adrenal disease? |
| 39. | Yes | No | Family history of diabetes, heart problems, tumors? | 50. | Yes | No | Diabetes? |

IV. DO YOU HAVE OR HAVE YOU HAD:

- | | | | | | | | |
|-----|-----|----|-------------------------|-----|-----|----|---------------------|
| 51. | Yes | No | Psychiatric care? | 56. | Yes | No | Hospitalization? |
| 52. | Yes | No | Radiation treatments? | 57. | Yes | No | Blood transfusions? |
| 53. | Yes | No | Chemotherapy? | 58. | Yes | No | Surgeries? |
| 54. | Yes | No | Prosthetic heart valve? | 59. | Yes | No | Pacemaker? |
| 55. | Yes | No | Artificial joint? | 60. | Yes | No | Contact lenses? |

V. ARE YOU TAKING:

- | | | | | | | | |
|-----|-----|----|--|-----|-----|----|----------------------|
| 61. | Yes | No | Recreational drugs? | 63. | Yes | No | Tobacco in any form? |
| 62. | Yes | No | Drugs, medications, over-the-counter medicines
(including Aspirin), natural remedies? | 64. | Yes | No | Alcohol? |

Please list: _____

VI. WOMEN ONLY:

- | | | | | | | | |
|-----|-----|----|--|-----|-----|----|-----------------------------|
| 65. | Yes | No | Are you or could you be pregnant or nursing? | 66. | Yes | No | Taking birth control pills? |
|-----|-----|----|--|-----|-----|----|-----------------------------|

VII. COVID 19 VACCINATION:

- | | | | |
|-----|-----|----|--|
| 67. | Yes | No | Have you received ALL required doses of the COVID 19 vaccine with the FINAL dose being greater than two weeks ago?
Date of final dose _____ Name of vaccine _____ |
|-----|-----|----|--|

VIII. ALL PATIENTS:

- | | | | |
|-----|---|-----|----|
| 68. | Do you have or have you had any other diseases or medical problems NOT listed on this form? | Yes | No |
|-----|---|-----|----|

If so, please explain: _____

To the best of my knowledge, I have answered every question completely and accurately. I will inform my dentist of any change in my health and/or medication.

Patient's signature: _____ Date: _____

RECALL REVIEW:

- | | | |
|----|---------------------------|-------------|
| 1. | Patient's signature _____ | Date: _____ |
|----|---------------------------|-------------|

The Health History is created and maintained by the University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, California.
Support for the translation and dissemination of the Health Histories comes from MetLife Dental.

Form 2

MetLife

Health History Interview

University of the Pacific

Patient Name: _____

Name of Patient's Physician: _____ Physician's Phone: _____

Significant Medical Findings	Dental Management Considerations	Date

Record below the number and details of any YES responses noted on the Health History, plus details of any YES responses to questions A through F.

- A. yes / no Cardiovascular
- B. yes / no Infectious diseases
- C. yes / no Allergy to medicines
- D. yes / no Hematologic, bleeding
- E. yes / no Medications
- F. yes / no Other medical problems not asked?

 Date Doctor's Signature

This Health History Interview form is created and maintained by the University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, California Support for the translation and dissemination of the Health Histories comes from MetLife Dental.

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Please Note

The first two editions of this Guide were written by Richard Fredekind DMD MA, Alan Budenz MS DDS and William Carpenter DDS MS. Peter Jacobsen PhD DDS contributed to the third edition, and Elisa Chávez DDS contributed to the fourth and fifth editions. We acknowledge and appreciate these prior contributions.

POST-TEST

Internet Users: This page is intended to assist you in fast and accurate testing when completing the “Online Exam.” We suggest reviewing the questions and then circling your answers on this page prior to completing the online exam.

(1.5 CE Credit Contact Hour) Please circle the correct answer. 70% equals passing grade.

1. **The health history interview process is an important opportunity to establish rapport with the patient. The type(s) of information revealed during the interview, that was not evident in the Health History Questionnaire, and especially when prompted by the question, “do you have any other medical problems that I have not asked”, is (are):**
 - a. anxieties about dental treatment
 - b. ambiguous medical history such as cognitive impairment
 - c. the use of natural or herbal medications
 - d. All of the above
2. **Which of the following is NOT true of using a health history translated into a patient’s primary language or seeking the services of an interpreter?**
 - a. Its use documents a level of respect that is an important first step in establishing appropriate patient rapport.
 - b. Its use is important to developing an optimal working relationship with the patient.
 - c. Since the patient completed a health history questionnaire written in his or her own language, the health history interview process is not required.
 - d. In some states, it is legally required that the practice provides an interpreter if necessary.
3. **Which of the following can result in dysgeusia, or altered sense of taste?**
 - a. metabolism of some drugs
 - b. dry mouth
 - c. Both of the above
 - d. Neither of the above
4. **Clear communication with the patient is an important attribute for the oral healthcare provider as it:**
 - a. is essential for discussing sections I, II, and III of the health history form.
 - b) provides an avenue for the clinician to elicit details from the patient’s source of pain.
 - c) establishes rapport with the patient receiving care.
 - d) All of the above
5. **Signs and symptoms are important indicators of disease. Which of the following are common signs and symptoms of diabetes:**
 - a. frequent thirst and urination
 - b. easy bleeding and bruising
 - c. swollen ankles
 - d. numbness on one side of the face or body
6. **Several medications or groups of medications can cause gingival enlargement. The medication or group of medications below MOST commonly associated with gingival hyperplasia is:**
 - a. beta blockers used to treat heart problems.
 - b. calcium channel blockers used to treat heart problems.
 - c. ace inhibitors used to treat health problems.
 - d. Lasix used to treat congestive heart failure.
7. **Medications can cause the patient to have a dry mouth. The group of medications below NOT commonly associated with a dry mouth is:**
 - a. anti-depressants.
 - b. antihistamines.
 - c. NSAIDS.
 - d. anti-hypertensives.
8. **Which of the following should be used with caution in older adults?**
 - a. benzodiazepenes
 - b. local anesthetics
 - c. topical anti-fungals
 - d. salivary substitutes
9. **Although a health history questionnaire is a useful way of gathering information, why is it also important to specifically review medication and drug history with patients?**
 - a. To identify the potential for an emergency.
 - b. To identify health history that was not otherwise revealed in the questionnaire.
 - c. To identify the potential for intraoral pathology.
 - d. All of the above
10. **Which of the following is NOT a reason that infectious diseases are a crucial question in the review of a patient’s health history?**
 - a. The information could be important in the event of an exposure incident.
 - b. The information can be used to modify infection control practices for those with known blood borne infectious diseases.
 - c. The question could prompt patients to raise their own questions about sterilization procedures they may have been hesitant to ask otherwise.
 - d. Some infectious diseases can also impair clotting and healing.

