

Practice Guidelines for the Treatment of HIV Patients in General Dentistry

County of San Diego

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What Viral Load and CD4 cell count means to the Dentist

The CD4 count and the viral load are the two laboratory markers that are used to monitor HIV infection. The CD4 cells are a subset of lymphocytes (synonyms are the T4 cell count or helper cells), which correlates with the patient's immune status. The normal value for adults is 750 – 1000 cells/ml. Patients with values less than 200 cells/ml are considered to have advanced immunosuppression. Those with a value of less than 50 cells/ml are considered to be in a very advanced stage and are usually symptomatic. Patients with low CD4 cell counts (less than 200 cells/ml) are at risk for developing the diseases associated with AIDS (opportunistic infections and cancers.) Those with high counts (greater than 350 cell/ml) usually manifest no AIDS related illnesses.

The goal of therapy with antiviral drugs is to reduce the viral load to an “undetectable” value. The significance of an “undetectable” viral load is that very little viral replication is occurring. This means that there is little risk of the virus being able to mutate which can result in drug resistance and treatment failure.

The dentist can play an important part in reminding patients of the need for regular follow up and monitoring of these markers.

For the dentist, the CD4 count indicates the immune status of the patient. The magnitude of the viral load is not an indicator to withhold dental treatment for the patient. High viral loads may be present in a patient with early asymptomatic disease, while low viral loads can be seen in very advanced patients on suppressive antiviral therapy. Knowledge of these markers can tell the dentist the general health of the patient and the risk of progression. The dentist can play an important part in reminding patients of the need for regular follow up and monitoring of these markers. It is recommended that the CD4 and viral load determinations be done at least every three to four months.

The dentist can also be instrumental in encouraging the patient to adhere to their medication regimen. The most common cause for drug failure is the patient taking their medications inconsistently. Missing just a few doses a month can result in the virus becoming resistant.

Antibiotic Prophylaxis

For the HIV-infected patient, there are no data supporting the need for routine antibiotic coverage to prevent bacteremia or septicemia arising from dental procedures. In fact, patients with AIDS have shown a higher incidence of allergic reactions to antibiotics and other medications, so it may endanger the patient's health by over-prescribing antibiotics.

Prophylactic antibiotics should not be prescribed routinely for the dental visit when the HIV infection is well controlled.

Medical Assessment

Annual Health History

Many different oral mucosal lesions have been associated with HIV infection. Some, such as candidiasis and hairy leukoplakia, may indicate HIV disease progression. Medications used for treatment of HIV and associated diseases or prophylaxis of opportunistic infections may have significant adverse effects or may interact with other prescribed medications. To develop an appropriate treatment plan, the oral health care provider should obtain complete information about the patient's health and medication status. Past and present history of tobacco, alcohol, and other substance use affect oral health and such information should be collected during the (initial or updated) annual health history.

If there is any doubt about the accuracy of the information provided by a patient, the dentist should contact the patient's physician.

Annual Extra-Oral (Head and Neck) Examination

Patients with HIV infection may develop associated skin manifestations and cervical lymphadenopathy along with bilateral salivary gland enlargement. Therefore, in addition to oral soft-tissue examinations, extra-oral head and neck examination should be performed routinely.

When to Contact the Patient's Primary Care Physician

It is recommended that the dental provider consult with the patient's physician when additional information is needed to safely provide dental care. This is handled the same way as a consultation request for any other medical condition.

- It is the standard of care to ask the patient about any health conditions, and to collect information about the status of each condition.
- It is also the standard of care to ask the physician to confirm or provide more complete medical information to that already obtained from the patient if needed.
- When medical conditions are well controlled, it is up to the dental care provider based on his or her diagnosis of the patient's treatment needs to determine the need for a consultation with the patient's physician.
- The dental health provider should use the medical history and laboratory test results to decide if treatment should occur in a hospital setting. Such a decision should be made in consultation with the patient's physician.
- If a patient with ADVANCED HIV disease does not know the most recent CD-4 count or Viral Load, the dentist should contact the physician for the correct information, and then determine whether to provide routine care or only emergency care at that time.
- If the patient reports a heart murmur but is not sure what kind, consult the patient's physician regarding the cause of the murmur and use the ADA Guidelines to help determine the need for prophylactic antibiotics to prevent bacterial endocarditis.
- If there is any doubt about the accuracy of the information provided by the patient (i.e., inconsistent or illogical answers to questions about medical history), the dentist should contact the patient's physician.
- If the patient's symptoms have changed, the dentist should consult with the physician to review the impending care and determine if treatment modifications are needed. For example, if there is liver or kidney involvement, the dentist may need to adjust the dosage of analgesics or antibiotics prescribed.
- The medical history should be updated on a regular basis to ensure all medical changes are noted. The medication list should also be updated as dosages and regimens are subject to change. Sometimes medications and dosages may need to be clarified with the physician of record.
- Thrombocytopenia, anemia, and hepatobiliary diseases may occur in the course of HIV disease progression and with opportunistic infections. Laboratory tests prior to extensive surgical intervention should be obtained.

Treatment Considerations

Modifications of Dental Therapy

There is no justification to modify dental treatment based on a patient's HIV status. However, if the patient's medical condition is compromised, treatment adjustments may be necessary, as would be the case with any medically compromised patient. The dentist should determine what treatment modifications, if any, are necessary. It is essential for all practitioners to understand that most HIV patients, even if symptomatic, can be treated safely in a typical dental office or clinic.

- A pre-treatment antibacterial mouth rinse will reduce intraoral bacterial load, especially for those patients with periodontal disease.
- A six-month recall schedule should be instituted to monitor any oral changes. If the patient is severely immunosuppressed i.e. (CD-4 count of <100), a shorter recall period such as a three-month interval should be considered.
- Oral hygiene is important in a medically compromised patient, as poor hygiene may be responsible for more rapid progression of oral disease. A proactive attitude and an emphasis on prevention should be encouraged. Dental treatment should also be prioritized based on the patient's health and circumstances (e.g. ability to tolerate long appointments, ability to perform oral hygiene etc.)
- Infectious diseases, such as Hepatitis B, Hepatitis C, or Tuberculosis, should be ascertained and preventative protocol followed.

It is essential for all practitioners to understand that most HIV patients, even if symptomatic, can be treated safely in a typical dental office or clinic.

Annual Periodontal Examination

Oral health care is an important component of the management of patients with HIV infection. A poorly functioning dentition can adversely affect the quality of life, complicate the management of medical conditions, and create or exacerbate nutritional and psychosocial problems. When the oral cavity is compromised by the presence of pain or discomfort, maintaining adherence to complicated antiretroviral therapy regimens becomes more difficult.

Gingival/periodontal disease, specifically linear gingival erythema (LGE) and necrotizing ulcerative periodontitis (NUP), have been associated with HIV infection. There is now evidence that these diseases also occur in HIV-negative immunocompromised individuals and are not specific to HIV infection. The prevalence of these two diseases remains unclear with current estimates of occurrence among HIV-infected individuals in the 5-10% range. There is some evidence that NUP is associated with a low CD4 count (<200 cells/mm). Early recognition of periodontal problems allows treatment that can prevent progression of these conditions, including severe attachment/bone loss.

HIV-associated gingivitis has been renamed linear gingival erythema (LGE) and HIV-associated periodontitis has been renamed necrotizing ulcerative periodontitis (NUP).

Annual Updated Treatment Plan

There is no evidence to support modifications in oral health care based solely on the presence of HIV infection. However, such modifications may be indicated on the basis of certain medical problems that occur as a result of HIV infection. Severely or terminally ill patients, for example, will require alterations in care similar to those in patients suffering from other conditions that cause debilitating illness, such as cancer or mental health impairment.

A comprehensive treatment plan that includes preventive care and maintenance should be developed and discussed with the patient. Various treatment options should be discussed and developed in collaboration with the patient. As with all patients, a treatment plan appropriate for the patient's health status, financial status, and individual preference should be chosen. Medications may interfere with dental treatment and cause adverse effects, such as decreased salivary flow, altered liver function, and bone marrow suppression, resulting in anemia, thrombocytopenia, and neutropenia.

Phase 1 Treatment Plan Completion

Phase 1 treatment are procedures related to prevention, maintenance, and/or elimination of oral pathology that results from dental caries or periodontal disease. This may include restorative treatment, basic periodontal therapy (non-surgical), basic oral surgery that includes simply extractions and biopsy, non-surgical endodontic therapy, and space maintenance and tooth eruption guidance for transitional dentition.

Community and migrant health center oral health programs seek to increase access to oral health care for the underserved. Completing Phase 1 Treatment Plans within twelve months

addresses two fundamental areas within these dental programs: 1) the need to perform a comprehensive oral health exam that culminates with an accompanying treatment plan and 2) assuring that quality care is incorporated in the process of completing needed treatment in a timely manner. Completion of the Phase 1 Treatment Plan facilitates the identification of contributing and restricting factors and practical low cost improvement options relevant to significant areas listed above. With access to codes associated with comprehensive oral exams and Patient Treatment Completion (PTC), most management information systems will be able to provide an average length of time associated with completion of treatment. With this information, staffing patterns, financial costs (overhead expenses) and efficiency of the oral health program can be assessed. These additional benchmarks could also be measured across health center programs at the local, regional, and national levels. The ultimate goal is to measure and assure that health centers routinely and systematically deliver comprehensive, quality oral health services, and patient treatment is completed within a reasonable amount of time.

Completion of Phase 1 Treatment Plan within 12 months is comprehensive in that subsequent performance analysis can broach a number of significant areas, such as: appointment scheduling, ratio of oral health providers to dental operatories, ratio of oral health providers to support staff, collaboration with medical colleagues emphasizing oral health as an essential component of an interdisciplinary approach to patient care, prioritization of patients and/or procedures, general productivity and efficiency.

Additional clarification is available on page 2 and 3 of the HAB HIV Performance Measures Oral Health FAQs: <http://hab.hrsa.gov/special/pdf/HABPMOralFAQs.pdf>.

Medications in HIV

HIV Medicine is a dynamic field and knowledge of antiretroviral (ARV) medications is constantly evolving. It should be emphasized that long-term clinical data on drug interactions does not exist for many of the newer medications. It is very important to keep an updated list of a patient's ARV medications as it may change. Patients taking some antiretroviral medications may suffer from photophobia, so the dental team can make them more comfortable by avoiding a direct light source at the patient's eyes or offering dark glasses during the treatment. In addition, these patients may suffer from xerostomia as a side effect from some of the ARV medications. Use of prescription medications such as pilocarpine (Salagen) and bethanechol as salivary gland stimulants should be considered. Excellent oral hygiene home care, topical fluoride and frequent hygiene recall visits, as well as nutritional counseling and saliva enhancers (sugarless gum, water, and saliva substitutes) will be critical for prevention of periodontal disease and dental

caries. Patients should also be assessed for consumption of unexpected sources of sugar such as over the counter medications including products like antacids (e.g. Tums, Roloids); cough drops; suspensions (e.g. Nystatin); and, fungal troches (e.g. Mycelex). All of these may contribute to dental caries.

Medications may interfere with dental treatment and cause adverse effects, such as decreased salivary flow, altered liver function, and bone marrow suppression, resulting in anemia, thrombocytopenia, and neutropenia.

Currently, there are no known drug interactions between antiretrovirals and local anesthetics used in general dentistry. There are, however, some medications especially certain sedative-hypnotics that are prescribed by dentists or used in the office that may be contraindicated in patients taking antiretroviral medications. It is recommended that the dental care provider consult a reference that thoroughly discusses drug side effects and interactions prior to prescribing any medications, or consult with the patient's primary care provider.

More information on specific ARV medications is available at:

- <http://www.hhs.gov/drugs/index.html#drugs>
- <http://www.nlm.nih.gov/medlineplus/druginformation.html>
- <http://hivinsite.ucsf.edu/>

To look at specific drug-drug interactions, excellent clinical tools include:

- <http://clinicaloptions.com/HIV/Treatment%20Updates/Drug-Drug%20Interactions.aspx>
- <http://www.hiv-druginteractions.org>

Oral Health Education: Caries Prevention and Smoking

A higher risk of dental caries in patients with HIV may be caused by decreased salivary flow, which may occur as a result of salivary gland disease or as a side effect of a number of medications. Also, some topical antifungal medications have high sugar content, possibly resulting in increased caries susceptibility. The adverse effects of using tobacco should be discussed with the patients. If the patient is a tobacco user, cessation should also be discussed.

For in-office consumer and provider materials on tobacco cessation programs, dentists can access <http://www.surgeongeneral.gov/tobacco/default.htm>.

Oral health education may be provided and documented by a licensed dentist, dental hygienist, dental assistant and/or dental case manager.

Nutritional Counseling

Because of certain oral conditions, the HIV patient may have difficulty consuming a balanced diet. The patient may suffer from changes in taste and decreased ability to chew and swallow because of drug-induced xerostomia. This can lead to GI upset and nausea, further inhibiting the intake of a balanced diet. It is the role of the dentist to recognize oral manifestations, which are associated with nutritional deficiencies that can cause intraoral manifestations such as vitamin B 12, folic acid, etc. Nutritional supplements or referral to the patient's physician or a registered dietitian may be necessary. Some areas to be aware of include:

- Poor oral intake of food or fluid
- Difficulty chewing and swallowing due to continuous mouth sores resulting from candidiasis, herpes simplex, aphthous ulcers, etc.
- Severe dental caries
- Changes in perception of taste or smell
- Patient complaints of economic inability to meet caloric and nutrient needs

Post-Exposure Prophylaxis (PEP)

Most occupational HIV exposures do not result in the transmission of HIV. There have been no documented reports of transmission from a dentist to a patient. Documentation of the event and assessment of risk remain important. The person who is exposed should be referred immediately to a physician who can provide counseling, testing, and appropriate medications. The interval within which PEP should be initiated for optimal efficacy is not known, though some animal studies suggest 24-36 hours. Dentists should balance the risk for infection against the potential toxicity of the agent(s) used when selecting a drug regimen.

Please refer to 2001 guidelines at http://www.cdc.gov/ncidod/dhqp/gl_occupational.html and 2005 update at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5409a1.htm>

Management of Occupational Blood Exposure

- Wash wounds and skin with soap and water
- Flush mucous membranes with water
- The incident should be reported to a supervisor if applicable and should be documented in a injury/exposure log
- Report to a medical provider for testing, and access to post-exposure protocol

Basic Overview:

Determine whether high or low risk depending on source

- Low titer exposure
- Higher titer exposure

Medications

- Start within hours of exposure (under 24-48 hours)
- Triple therapy for 4 weeks

Baseline Labs to Monitor for Adverse Reactions

- Pregnancy test if applicable
- Complete Blood Count with differential and platelets
- Urinalysis
- Renal Function Tests (BUN and Serum Creatinine)
- Liver Function Tests (Aspartate and Alanine Aminotransferase, Alkaline Phosphatase, Total Bilirubin)

Monitor

- Baseline
- Weekly during protocol
- 6 weeks
- 3 months
- 6 months

The National Clinicians' Post-Exposure Prophylaxis Hotline is the PEpline. This excellent resource for questions is open 24 hours a day, 7 days a week. Their number is (888) 448-4911.

Warmline: 800-933-3413

PEpline: 888-448-4911

*Perinatal HIV Hotline:
888-448-8765*

Discrimination and Legal Issues

Referrals to a specialist or to a hospital setting must always be based on the clinical needs of the patient, not the ignorance or fear of the dentist, staff, or other patients. The legal obligation of the dental provider is to refer patients for testing and follow-up.

It is a violation of the Americans with Disabilities Act, California law, and the law of some local jurisdictions, and of the ethical standards of the California Dental Association and the American Dental Association to refuse to care for patients with HIV because of fear of the risk of infection.

Privacy

Many patients are reluctant to disclose HIV status to the dentist because they fear discrimination, even when they understand that full disclosure is essential for providing the best possible care.

- Dentists can establish an atmosphere in which patients feel comfortable in disclosing their status by indicating on the medical intake form that patients are not discriminated against on the basis of disability, and that all medical information disclosed is confidential.
- Dentists are responsible for training staff to ensure that all patient information is kept confidential and is in accordance with all state laws.
- A thorough discussion of HIV privacy law, including practice tips for protecting the privacy of dental records, can be found in the Schulman article in the Journal of the California Dental Association:
http://www.cda.org/library/cda_member/pubs/journal/jour799/hiv.html.
- HIPAA guidelines are found at <http://www.hhs.gov/ocr/hipaa/assist.html>.
- Dentists should also refer to information available from the California Department of Health Services, Office of AIDS. Contact information can be found at <http://www.cdph.ca.gov/programs/aids> or call directly for AIDS information (916) 445-0553.
- In the state of California, written consent of the patient is not required for exchange of treatment-related information between health care providers, as long as that information is obtained for the patient's benefit. However, many medical and dental offices are reluctant to provide lab data over the phone because of the especially sensitive nature of the information. You can more easily obtain medical information related to patient treatment if you offer to fax or mail a consent form.

Selected Bibliography

“Clinician’s Guide to Treatment of HIV-Infected Patients,” 3rd edition, Ed. Lauren Patton, Michael Glick, Academy of Oral Medicine, New York 2001

CDC MMWR “Recommendations and Reports, Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Post exposure Prophylaxis,” June 29, 2001/50(RR11); 1-42.

Abel, S, Croser, D, Fischman, S, Glick, M, Phelan, J “Principles of Oral Health Management for the HIV/AIDS Patient”, Dental Alliance for AIDS/HIV Care (DAAC) 2000.

Dajani AD, Taubert KA, Wilson W, et al: “Prevention of Bacterial Endocarditis: Recommendations by the American Heart Association,” JADA 128:1142-1151, Aug.1997.

“Dental Management of the HIV-Infected Patient,” Supplement to JADA, American Dental Association, Chicago, 1995.

Dental Asepsis Review, from the Sterilization Monitoring Service, Indiana University School of Dentistry, Vol. 22, No. 9, September 2001

Gostin, Lawrence, Feldblum, Chai, and Webber, David, “Disability Discrimination in

America: HIV/AIDS & Other Health Conditions.” JAMA 281:8, 745-52 (Feb. 24, 1999).

Hahn, James K. and Schulman, David I., “Perspective: The Supreme Court Deals with a Dentist’s Fear”. AIDS Policy and Law (Jul. 24, 1998), p.10.

“Hepatitis C Prevention,” CDC Website, updated October 2, 1998 [cited Apr 14, 1999]. <<http://www.cdc.gov/ncidod/diseases/hepatitis/c/lbtinfo.htm> >

“Management of Hepatitis C,” NIH Consensus Statement Online, Mar 24-26, 1997 [cited Apr 14, 1999]; 15(3): 1-41. http://odp.od.nih.gov/consensus/cons/105/105_statement.htm

Mulligan, R.A, Update on the HIV Epidemic: CDA 29:120-122, 2001.

Official Publication of the Organization for Safety and Asepsis Procedures (OSAP), Pub. No. 10, 2001d

“Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and Recommendations for Post exposure Prophylaxis”, MMWR, V. 47(RR-7); 1-28, Centers for Disease Control and Prevention, US Department of Health and Human Services, May 15, 1998.

Schulman, David I., “The Dentist, HIV and the Law: Duty to Treat, Need to Understand.” CDA: Journal of the California Dental Association, 21:9. 45-50 (Sept. 1993).

Selected Websites for HIV/AIDS Information

Sites of Particular Interest to Dentists

HAB HIV Performance Measures: Oral Health Services

<http://hab.hrsa.gov/special/pdf/HABPMsOralHealth.pdf>

<http://hab.hrsa.gov/special/oral.htm>

American Dental Association

<http://www.ada.org/4062.aspx?currentTab=2>

HIVdent

<http://www.hivdent.org/>

National Institute of Dental & Craniofacial Research

<http://www.nidcr.nih.gov/>

Pacific AIDS Education and Training Center at University of Southern California

<http://www.paetc.com/>

American Nursing Association Safe Needles Save Lives

www.needlestick.org/

The Internet drug index - side effects and drug interactions

<http://www.rxlist.com/cgi/generic/brand.htm>

<http://www.hiv-pharmacogenomics.org/>

Other Helpful Links

HIV-Insite (UCSF)

<http://hivinsite.ucsf.edu/>

Johns Hopkins AIDS Service

<http://www.hopkins-aids.edu/>

AIDS Info: US Department of Health and Human Services

<http://www.aidsinfo.nih.gov/>

HIV/AIDS Prevention (CDC)

<http://www.cdc.gov/hiv/dhap.htm>

Morbidity and Mortality Weekly Report (CDC)

<http://www.cdc.gov/mmwr/>

AIDS Education Global Information System (AEGIS)

<http://www.aegis.com/>

The Body - A Multimedia AIDS & HIV Information Resource

<http://www.thebody.com/index.shtml>

National HIV/AIDS Clinicians' Consultation Center (Warmline and PEP line)

<http://www.nccc.ucsf.edu/>

L.A. Public Health Organization: AIDS Info

<http://lapublichealth.org/aids/index.htm>

Women, Children and HIV: Resources for Prevention and Treatment

<http://www.womenchildrenhiv.org/>

American Medical Association

<http://www.ama-assn.org/>

California Office of AIDS HIV Reporting

<http://www.cdph.ca.gov/programs/aids/Pages/OAHIVReporting.aspx>