



© Joe Sohm | Dreamstime.com

HIV in the migrant and seasonal farmworker population: Oral conditions as early indicators of infection

A peer-reviewed article written by Sherri M. Lukes, MS, RDH, FAADH

PUBLICATION DATE:	JULY 2021
EXPIRATION DATE:	JUNE 2024

EARN

3 CE
CREDITS

This continuing education (CE) activity was developed by Endeavor Business Media with no commercial support.

This course was written for dentists, dental hygienists, and dental assistants, from novice to skilled.

Educational methods: This course is a self-instructional journal and web activity.

Provider disclosure: Endeavor Business Media neither has a leadership position nor a commercial interest in any products or services discussed or shared in this educational activity. No manufacturer or third party had any input in the development of the course content.

Requirements for successful completion: To obtain three (3) CE credits for this educational activity, you must pay the required fee, review the material, complete the course evaluation, and obtain an exam score of 70% or higher.

CE planner disclosure: Laura Winfield, Endeavor Business Media dental group CE coordinator, neither has a leadership nor commercial interest with the products or services discussed in this educational activity. Ms. Winfield can be reached at lwinfield@endeavorb2b.com.

Educational disclaimer: Completing a single continuing education course does not provide enough information to result in the participant being an expert in the field related to the course topic. It is a combination of many educational courses and clinical experience that allows the participant to develop skills and expertise.

Image authenticity statement: The images in this educational activity have not been altered.

Scientific integrity statement: Information shared in this CE course is derived from clinical research and represents the most current information available from evidence-based dentistry.

Known benefits and limitations of the data: The information presented in this educational activity is derived from the data and information contained in the reference section.

Registration: Rates for print CE have increased due to the manual nature of producing and grading courses in this format. For a lower-cost option, scan the QR code or go to dentalacademyofce.com to take this course online. **MAIL/FAX:** \$69 for three (3) CE credits. **DIGITAL:** \$59 for three (3) CE credits.

Cancellation and refund policy: Any participant who is not 100% satisfied with this course can request a full refund by contacting Endeavor Business Media in writing.

Provider information:

Dental Board of California: Provider RP5933. Course registration number CA code: 03-5933-21027. Expires 7/31/2022. *This course meets the Dental Board of California's requirements for three (3) units of continuing education."



Endeavor Business Media is a nationally approved PACE program provider for FAGD/MAGD credit. Approval does not imply acceptance by any regulatory authority or AGD endorsement. 11/1/2019 to 10/31/2022. Provider ID# 320452. AGD Code: 750



Endeavor Business Media is designated as an approved Provider by the American Academy of Dental Hygiene, Inc. #AADHPNW (January 1, 2021-December 31, 2022). Approval does not imply acceptance by a state or provincial Board of Dentistry. Licensee should maintain this document in the event of an audit.

ADA CERP® | Continuing Education Recognition Program

Endeavor Business Media is an ADA CERP-recognized provider.

ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of dental continuing education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

Concerns or complaints about a CE provider may be directed to the provider or to ADA CERP at ada.org/cerp.



HIV in the migrant and seasonal farmworker population: Oral conditions as early indicators of infection

Abstract

Migrant and seasonal farmworkers are an underserved population with a myriad of health challenges. Mobility, isolation from family, lack of education, and cultural barriers are just some of the issues placing them at increased risk for HIV infection. Because they are often unaware of their HIV status and have limited access to care, diagnosis is often later in the disease process than that of the average infected individual. Some of the earliest signs of HIV infection manifest in the oral cavity, which makes dental professionals frontline practitioners for possible diagnosis, referral for treatment, and educational strategies. Dental hygienists must be knowledgeable of and able to recognize these oral manifestations as well as equipped with appropriate educational materials as they work collaboratively with other health-care providers. Implications for policy development are warranted to aid in serving this difficult-to-reach population.

Educational objectives

At the conclusion of this course, participants will be able to:

1. Describe the migrant and seasonal farmworker (MSFW) population serving the US
2. Explain the population's vulnerability to HIV infection
3. Describe HIV-related oral lesions that may suggest HIV infection
4. Discuss appropriate HIV education and intervention strategies to utilize with the MSFW population



Dental Academy of Continuing Education™

Go online to take this course.

DentalAcademyofCE.com

QUICK ACCESS code 21027

Introduction

Rural United States is home to the bulk of our country's agricultural industry. Farms both large and small are vital in the delivery of fruits, vegetables, and grains to our dining room tables. Equally as vital to the farms across the country is the migrant and seasonal farmworker (MSFW) workforce. Though invisible to most of us, they are key players in cultivating and harvesting various crops in an efficient and timely manner.¹ Their mobility, among other access barriers, makes them a difficult-to-reach population.¹⁻³ Health-care providers must be educated about and sensitive to the unique and complex needs of MSFWs for the delivery of optimal health services.

Migrant and seasonal farmworkers are an underserved group for which few research findings exist. Mostly from Mexico, MSFWs have a median income of \$7,500–\$10,000 per year, resulting in 61% living below the federal poverty level. Ages range from 13 to the 60s, with the average age at 32 to 33 and a median education level equivalent to the sixth grade. Most are male, single or married, but primarily unaccompanied by a spouse. Fifty percent are undocumented, and most are uninsured.²⁻⁵

MSFWs suffer disproportionate rates of several chronic diseases such as diabetes, hypertension, sexually transmitted infections, and dental conditions.²⁻⁹ Comorbidity factors are often present in the daily lives of MSFWs due to the nature of their work and living conditions: exposure to pesticides manifesting in respiratory and skin diseases; nutritional deficiencies from food insecurity; unsanitary and unsafe working conditions that may lead to injuries; and poor living conditions that contribute to weakening of the immune system and transmission of communicable diseases such as HIV.⁶

Accessing health care is difficult for this population.²⁻¹⁰ Barriers include cost, language, transportation, health-care clinic hours, and knowledge of available service locations. A study of migrant health centers across the country revealed that 52% of the clinics were not open evenings, and only 13.6% were open on Saturday or Sunday.¹¹ Leaving the fields early for a medical

or dental appointment can mean missing several hours of pay, which could translate to not providing the basic life necessities for the following week.² Those who have families are relied upon to either provide for daily needs, if accompanied by spouses and children, or to send money home to family members who remain in Mexico. Absence from the fields could also be cited as reason for termination, making most farmworkers very reluctant to miss work for health-care appointments, providing they even know where to seek health services in the first place. These barriers and others result in health care that is sporadic at best for most of the population, which primarily seeks care only for acute health conditions.

As with general health, MSFWs suffer disproportionate rates of dental disease, compared to the general population.⁹⁻¹⁴ Now 20 years old, the 2000 landmark oral health report written by former Surgeon General Dr. David Satcher refers to oral diseases affecting vulnerable groups such as MSFWs as “a silent epidemic.”¹⁵ Several studies have demonstrated that oral health is one of the top health concerns for MSFWs, yet there are few oral health resources available for migrant populations, and the same barriers exist as for obtaining general health care. Oral health data is scarce, but it is widely recognized by public health researchers that dental care is typically sought sporadically and primarily for acute dental needs.

MSFWs and HIV infection

Though few HIV seroprevalence studies have been conducted on the population, estimates are that 2.6%–13% of MSFWs are infected with HIV.^{5,16-18} Infection rates are believed to be 10 times higher than the US national average.^{18,19} Many issues contribute to MSFWs' vulnerability to HIV infection: lack of understanding of HIV transmission and prevention strategies; attitudes and beliefs that may not support safer sex; and discomfort talking about sex.^{2,19-22} Other HIV risk factors include the mobile lifestyle, low acculturation, cultural beliefs about sexual behavior, isolation from family, food insecurity, high rates of alcohol use, low rates of condom use, increased prevalence of other sexually

transmitted infections, and use of syringes to inject antibiotics and vitamins.^{16,18-26} Sex outside of the marriage relationship is an accepted practice among the population, in addition to their unwillingness to use condoms during sex.^{16,17,19,20,23-25,27}

Acculturation, defined as assimilation to a different culture—typically the dominant one—has been suggested as a factor for predicting HIV risk as well, but both in the positive and negative sense.²⁰ Less acculturated migrant males may exhibit protective behaviors such as sexual modesty and fewer sexual partners and encounters, yet be at higher risk due to machismo characteristics (male dominance and power), little sexual education, and sexual silence. On the other hand, the higher acculturated may espouse protective values of individuality, empowerment, insistence on use of protection, and a lower prevalence of machismo characteristics, but they are more sexually liberated and experience an increased number of sexual partners and behaviors and exposure to a society more condoning of substance use and sex.²⁵ The traditional gender role of machismo or “male pride” that is often prevalent in the MSFW population should not always be considered a negative characteristic, however. When characterized within the cultural context of strength and protection of the family, this attribute can be an asset in intimate relationships.²⁰

MSFWs may be reluctant to have an HIV test for a variety of reasons.^{23,28,29} The health-care access barriers stated previously apply, but oftentimes it may simply be due to confusion about HIV transmission; therefore, they do not perceive themselves to be at risk.^{28,29} Lack of documentation and the fear of being discovered and reported, as well as fear of stigmatization upon diagnosis, can also contribute to a lack of testing.²² This delay in testing results in HIV-positive diagnoses being made later in the course of the disease with lower CD4 counts, poorer clinical outcomes/lower quality of life, and greater opportunity to infect others in the meantime.³⁰ Testing is often prompted by clinical manifestations of AIDS.^{28,29}

In the early 1980s, when the United States was first learning about HIV/AIDS,

the manifestation of oral lesions played a key role in identifying HIV-positive individuals.³¹⁻³⁴ Markers of immune dysregulation become evident in the oral cavity and are some of the first clinical signs of HIV infection.^{35,36} Oral candidiasis and hairy leukoplakia are two of the earliest opportunistic infections among HIV-positive patients (figures 1–3).³¹⁻³⁴ While relatively common among the very old and the very young, candidiasis is not a common condition affecting young, otherwise healthy individuals. Likewise, hairy leukoplakia is almost never encountered in those who are immunocompetent, and it was one of the early indicators of HIV infection in the beginning of the US epidemic. Additional oral lesions experienced later by HIV-positive patients include herpes simplex lesions, aphthous ulcers (aphthous major), condyloma acuminatum, Kaposi's sarcoma, and squamous cell carcinoma (figures 4 and 5).^{36,37}

In the general population, combination antiretroviral therapy (cART) has greatly reduced the prevalence of oral lesions as early manifestations of opportunistic infections in HIV-infected individuals. Early diagnoses and initiation of cART has resulted in a 30% reduction in HIV-associated oral lesions.^{36,38,39} Because MSFWs are typically diagnosed later in the disease course than in the general population, oral lesions can still serve as an early indicator of HIV infection and rationale for suggesting testing. Recognition of the early appearing lesions as well as those that follow later can alert the provider to the possibility of HIV infection and the need for appropriate referral and/or testing. Both medical and dental health-care providers serving the population should be cognizant of increased HIV prevalence in the population, their delayed diagnoses, and what to look for in these patients.

Earliest HIV-related oral lesions

The astute dental hygienist, performing a thorough intra- and extraoral exam during patient assessment can be on the front line of diagnosis of HIV infection among MSFWs. Even in the very earliest stage of infection, many individuals develop persistent lymphadenopathy, which can

be detected during the extraoral exam.³⁶

Candidiasis, a fungal infection, is the most common manifestation of HIV infection intraorally and often the presenting sign that can lead to initial diagnosis.³⁶ Though several species of *Candida* may be present in the oral cavity, the most common in candidiasis is *Candida albicans*. During immunosuppression, the organism can flourish and create a clinical infection manifested as one of four types: pseudomembranous candidiasis, erythematous candidiasis, hyperplastic candidiasis, and angular cheilitis.

The first two comprise most cases. As illustrated in Figure 1, diagnosis of the pseudomembranous form is often obvious from clinical presentation: superficial white plaques occurring anywhere throughout the oral cavity which, when wiped with gauze, release from the epithelium, leaving a red, raw base that may be painful. Most pseudomembranous candidiasis, however, is asymptomatic. Firmly wiping the lesion with gauze and determining if it wipes off are critical in diagnosis, as there are many white lesions that may be included in the differential diagnosis.

Erythematous candidiasis presents as a diffuse redness, often affecting the palatal mucosa in HIV-infected individuals (figure 2). As with the pseudomembranous form, it may or may not be symptomatic; symptoms present as a tenderness or burning sensation. Confirmation can be obtained by cytologic smear or biopsy for both types, and treatment with antifungal medications results in resolution. Severity and rate of recurrence are based on level of immunosuppression and other contributing factors such as smoking, nutritional status, and comorbidities.³⁶

First described as an HIV-related oral lesion in 1984, oral hairy leukoplakia (OHL) is also one of the earliest symptoms of HIV infection. This particular form of leukoplakia is considered an opportunistic infection, related to the presence of Epstein-Barr virus.^{33,36} Though it has been seen in transplant patients, it is rarely seen in immunocompetent individuals and is strongly suggestive of HIV infection.

Clinically, OHL presents as asymptomatic, white mucosal plaques that do not

rub off. They are most commonly on the lateral tongue, appearing as bilateral, vertical, corrugated white lines (figure 3) or simple plaquelike lesions.³¹⁻³⁷ In severe immunosuppression, the lesions may extend onto the dorsum of the tongue and affect a much larger surface area. Rarely, other mucosal areas may be involved. In patients with diagnosed HIV infection, clinical features are sufficient for a presumptive diagnosis and no treatment is required. A more atypical, unilateral, plaquelike lesion, as seen in Figure 6, can make clinical diagnosis problematic, as many lesions must be included in



Photo by Mona Vankaneagan, DDS

FIGURE 1: Acute pseudomembranous candidiasis in an HIV-positive patient



Photo by Mona Vankaneagan, DDS

FIGURE 2: Erythematous candidiasis in an HIV-positive patient



Courtesy of Langlais/Miller, Color Atlas of Common Oral Diseases, 3rd ed, CD-ROM image collection

FIGURE 3: Oral hairy leukoplakia

the differential diagnosis, such as frictional hyperkeratosis, idiopathic leukoplakia, and lichen planus.³³ MSFWs are unlikely to acquire further testing for definitive diagnosis of such a harmless-appearing, asymptomatic lesion, making professional collaboration for HIV testing vitally important.

It is important to note that in a study eliciting dentists' views about offering rapid HIV testing in their offices, only two of 208 participants reported specifically assessing patients for oral lesions or symptoms that were indicative of HIV infection.⁴⁰ Dentists and hygienists alike may

need refresher courses on oral lesions of all stages of HIV infection, including those of AIDS, as well as a concerted effort toward assessing for HIV-related oral lesions, especially in high-risk populations such as MSFWs.

Education and intervention

It is imperative that HIV education and interventions for MSFWs be culturally appropriate for best efficacy and compliance.^{20,41} Many cultural beliefs and practices, different views of health and illness, adherence to traditional practices, and reliance on folk healers can significantly affect how they receive and implement health education and promotion efforts delivered in general and oral health settings.² *Curanderismo*, a general term for a folk healing system, can be a very significant influence on health practices, provoking resistance to recommendations of Western medicine practitioners.⁴² Though some of the concepts may seem ridiculous to those of us educated in conventional US medical and dental training programs, culturally competent health-care providers should show respect for these concepts and, if not harmful, perhaps even weave them into accepted current practices. As a result, practitioners may observe better patient compliance to recommendations and treatment.⁴³

The *Promotora de salud* (promoter of health), also called a community health worker or lay health advisor, is a member of the local community, "one of them" so to speak, who is trained in health education and promotion techniques. Previous research has demonstrated their effectiveness in reaching the population with health messages, as MSFWs tend to listen to and respect these important members of the health-care team.^{2,22,44} They often use the *fotonovela* (figure 7), which is similar to a comic book format with multiple pictures, to relay health information.^{25,45,46} Storytelling is ingrained in Latin culture; therefore, *fotonovelas* have been



FIGURE 7: HIV *fotonovela* examples in both English and Spanish

a successful means for relaying health education messages.⁴⁶ Theatrical presentations are often used, as well as "chat" groups called *charlas*.^{46,47} They may reach more farmworkers than written materials, due to low literacy levels.

The National Center for Farmworker Health (NCFH) recently produced an HIV prevention toolkit for unaccompanied male farmworkers.⁴⁸ Traveling without their female partners increases vulnerability to high-risk behaviors and HIV infection. The complexities surrounding the population call for a combination of educational methods for delivering HIV education messages and preventive interventions.

The lack of diversity among dentists and dental hygienists can be a barrier to understanding and serving the MSFW population. Most US dental hygienists are white females of middle to upper socioeconomic status, who are employed in private dental practices.⁴⁹ Hispanic dental hygienists are grossly underrepresented in the dental hygiene workforce, as are those with experience working with vulnerable populations in public health settings. Expanding the diversity of the dental hygiene workforce can be a first step in reaching populations such as MSFWs. It is incumbent upon those serving this population to educate themselves about the complex characteristics of the population, in order to become familiar with best evidence-based educational and treatment strategies to better implement them into the dental visit.



Photo by Mona VanKanegan, DDS

FIGURE 4: Aphthous ulcer (major) in an HIV-positive patient



Photo by Mona VanKanegan, DDS

FIGURE 5: Kaposi's sarcoma in an HIV-positive patient



Photo by Mona VanKanegan, DDS

FIGURE 6: Hairy leukoplakia in an HIV-positive patient

Best promising practices

As dental professionals become more involved in the interdisciplinary care of patients, screening for chronic illnesses must become routine practice in various dental settings. The oral-systemic link is well documented in the medical and dental literature, validating testing for conditions such as diabetes by dental professionals.⁵⁰ The entire health-care team can play a role in the delivery of HIV intervention as HIV testing should be available by both medical and dental providers in an interdisciplinary approach to care. Though safe and reliable rapid tests are available for use by dental professionals, very few dentists provide this service in dental offices.⁴⁰

Fortunately, MSFWs primarily access health care at migrant/community health centers. This can be a perfect opportunity for provider collaboration in diagnosis and treatment of HIV-infected individuals as these health centers often contain both medical and dental services in the same facility. The fact that MSFWs tend to access both general and oral health care primarily for acute illness places increased responsibility on both medical and dental providers to be able to diagnose at whatever point the patients access the health-care system. They must be both cognizant of signs and symptoms of HIV infection and prepared to test, to decrease delayed diagnosis that is so common in the population. If symptoms are not identified as those of HIV infection during a medical appointment, perhaps the oral manifestations will be identified during a dental visit to prompt testing, and vice versa.

The theory of syndemics is the hypothesis that there are linked health problems involving two or more afflictions interacting synergistically and contributing to excess burden of disease in a population.^{51,52} Epidemiological research has clarified two key points that are evident in the field of migrant health: 1) Health issues tend to cluster among those in positions of structural vulnerability, and 2) this patterning of disease is significantly influenced by upstream determinants.⁵¹

To prevent syndemics, one must seek to prevent or control not only each affliction,

but also the forces/determinants that tie those afflictions together. These forces are multiple for farmworkers and their families; therefore, syndemic principles apply well in the context of risk for and treatment of HIV infection within the population. For example, food insecurity, experienced by many MSFWs, has been associated with increased HIV transmission risk as well as a treatment barrier.⁵³

The substance abuse, violence, and AIDS (SAVA) syndemic would apply as well. These three conditions disproportionately afflict those living in poverty in the US. Substance abuse, intimate partner violence, as well as HIV/AIDS are all at increased levels in the MSFW population, most of which live in poverty.⁵² This concept of syndemics further demonstrates the importance of, and complexity associated with, identifying signs of and diagnosing HIV infection, as multiple comorbidities and vulnerabilities affect diagnosis and treatment.

Once diagnosed, appropriate treatment presents an additional set of challenges for the population. They may be diagnosed at one community health center, but migration to follow agricultural opportunities requires seeking treatment at a different community health center. In the interim, there is an increased risk of transmission to others, increased potential for syndemic effects, and in the event they are able to gain access to cART medications (cost will be a significant barrier), effects of the drugs can be hindered by poor virologic response. This may be due to food insecurity or other issues associated with syndemic vulnerabilities.⁵³

Community-based organizations have been found to be more effective in reaching these at-risk groups because of their greater numbers of bilingual staff, volunteers, and culturally sensitive approaches to service delivery.²⁵ Social workers and/or community health workers can often assist with upstream issues and barriers that produce syndemic effects. All health-care providers should be knowledgeable about the issues MSFWs face, and the idiosyncrasies associated with providing them with comprehensive, culturally appropriate health services.

Conclusion

As outlined in this course, vulnerabilities of MSFWs appear to present a never-ending set of barriers to health care. Prompt diagnosis and services for those infected with HIV is imperative for positive long-term outcomes as well as for general public health implications in disease transmission. Identification of oral lesions can be the first clinical sign of HIV infection in MSFWs; therefore, collaboration among all members of the health-care team is necessary for the adequate delivery of health services to this difficult-to-reach population.

Clinicians cannot be expected to tackle alone all the complexities and vulnerabilities their patients face. But they can collaborate with public health professionals, policy makers, advocacy representatives, members of the vulnerable population itself, and others—both within and beyond their clinical settings—to advocate for structural and political changes that can benefit their patients, the communities their patients belong to, and society as a whole. With syndemic disease concepts in mind, members of the MSFW population are most likely to benefit from HIV prevention and education efforts when these efforts are supported at the community level, provided continuously over time, with additional needs within the community also being addressed.^{25,54}

As the American economy relies on MSFW labor, public policy decision-makers must ensure that MSFWs are identified as a priority population in need of health care and supportive services so that adequate funding is appropriated for necessary care.

References

1. Diring J. Health care for California's farmworkers: Consensus report of local agriculture and labor representatives. Diring and Associates. August 2009.
2. Arcury TA, Quandt SA. Delivery of health services to migrant and seasonal farmworkers. *Annu Rev Public Health*. 2007;28:345-363.
3. Agricultural worker fact sheets & research. National Center for Farmworker Health. Accessed January 12, 2013. <http://www.ncfh.org/fact-sheets—research.html>

4. Villarejo D. The health of US hired farm workers. *Annu Rev Public Health*. 2003;24:175-193.
5. Bechtel GA, Davidhizar R, Spurlock WR. Migrant farm workers and their families: Cultural patterns and delivery of care in the United States. *Int J Nurs Pract*. 2000;6:300-306.
6. Hansen E, Donohoe M. Health issues of migrant and seasonal farmworkers. *J Health Care Poor Underserved*. 2003;14(2):153-164.
7. Dever GE. Migrant health status: Profile of a population with complex health problems. Austin, Tex. 1991. National Migrant Resource Program, Inc. Migrant Clinicians Network Monograph Series.
8. Leon E. The health condition of migrant farmworkers. Michigan State Department of Education. 1996. <https://eric.ed.gov/?id=ED406074>
9. Slesinger DP. Health status and needs of migrant farmworkers in the United States: A literature review. *J Rural Health*. 1992;8:227-236.
10. Finlayson TL, Gansky SA, Shain SG, Weintraub JA. Dental utilization among Hispanic adults in agricultural worker families in California's Central Valley. *J Public Health Dent*. 2010;70:292-299.
11. Lukes SM, Simon B. Dental services for migrant and seasonal farmworkers in US community/migrant health centers. *J Rural Health*. 2006;22(3):269-272.
12. Lukes SM, Simon B. Dental decay in Southern Illinois migrant and seasonal farmworkers: an analysis of clinical data. *J Rural Health*. 2005;22(3):254-258.
13. Serna CA, Sanchez J, Arevalo O, et al. Self-reported factors associated with dental care utilization among Hispanic migrant farmworkers in South Florida. *J Public Health Dent*. 2020;80:186-193.
14. Kline N. "There's nowhere I can go to get help, and I have tooth pain right now": the oral health syndemic among migrant farmworkers in Florida. *Ann Anthropol Pract*. 2013;36(2):387-401.
15. Oral health in America: A report of the Surgeon General. U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health. 2000. <https://www.nidcr.nih.gov/research/data-statistics/surgeon-general>
16. UNIDOS Network of Capacity Building Assistance Providers. AIDS and migrants: solutions and recommendations. Accessed January 13, 2013. <http://lib.ncfh.org/pdfs/5763.pdf>
17. Rhodes SD, Bischoff WE, Burnell JM, et al. HIV and sexually transmitted disease risk among male Hispanic/Latino migrant farmworkers in the Southeast: Findings from a pilot CBPR study. *Amer J Ind Med*. 2010;53:976-983.
18. Fitzgerald K, Chakraborty J, Shah T, et al. HIV/AIDS knowledge among female migrant farmworkers in the Midwest. *J Immigr Minor Health*. 2003;5(1):29-36.
19. Apostolopoulos Y, Sonmez S, Kronenfeld J, et al. STI/HIV risks for Mexican migrant laborers: Exploratory ethnographies. *J Immigr Minor Health*. 2006;8(3):291-302.
20. Herbst JH, Kay LS, Passin WF, et al. A systematic review and meta-analysis of behavioral interventions to reduce HIV risk behaviors of Hispanics in the United States and Puerto Rico. *AIDS Behav*. 2007;11:25-47.
21. Painter T. Connecting the dots: When the risks of HIV/STD infection appear high but the burden of infection is not known—the case of male Latino migrants in the Southern United States. *AIDS Behav*. 2008;12:213-226.
22. Rhodes SD, McCoy TP, Vissman AT, et al. A randomized controlled trial of a culturally congruent intervention to increase condom use and HIV testing among heterosexually active immigrant Latino men. *AIDS Behav*. 2011;15:1764-1775.
23. Fernandez IM, Collazo JB, Hernandez N, et al. Predictors of HIV risk among Hispanic farmworkers in South Florida: Women are at higher risk than men. *AIDS Behav*. 2004;8(2):165-174.
24. Sanchez MA, Lemp GF, Magis-Rprodgiez C, et al. The epidemiology of HIV among Mexican migrants and recent immigrants in California and Mexico. *J Acquir Immune Defic Syndr*. 2004;37(4S):S204-S214.
25. Organista KC, Carrillo H, Ayala G. HIV prevention with Mexican migrants: Review, critique, and recommendations. *J Acquir Immune Defic Syndr*. 2004;37(4S):S227-S239.
26. Martinez-Donate AP, Rangel MG, Hovell MF, et al. HIV infection in mobile populations: The case of Mexican migrants to the United States. *Pan Am J Public Health*. 2005;17(1):26-29.
27. Ford K, King G, Nerenberg L, et al. AIDS knowledge and risk behaviors among Midwest migrant farmworkers. *AIDS Educ Prev*. 2001;13(6):551-560.
28. Ehrlich SF, Organista KC, Oman D. Migrant Latino day laborers and intentions to test for HIV. *AIDS Behav*. 2007;11:743-752.
29. Schulden JD, Painter TM, Song B, et al. HIV testing histories and risk factors among migrants and recent immigrants who received rapid HIV testing from three community-based organizations. *J Immigr Minor Health*. 2013. Accessed March 27, 2013. <http://link.springer.com/article/10.1007/s10903-013-9811-y#page-1>
30. Levy V, Prentiss D, Balmas G, et al. Factors in the delayed HIV presentation of immigrants in Northern California: Implications for voluntary counseling and testing programs. *J Immigr Minor Health*. 2007;9:49-54.
31. Bork K, Hoede N, Korting GW, et al. *Diseases of the Oral Mucosa and the Lips*. WB Saunders; 1993:113.
32. Eversole LR. *Clinical Outline of Oral Pathology: Diagnosis and Treatment*. 3rd ed. Lea & Febiger; 1992:27.
33. Regezi JA, Sciubba J. *Oral Pathology: Clinical-Pathologic Correlations*. 2nd ed. WB Saunders; 1993:112.
34. Ibsen OAC, Andersen Phelan J. *Oral Pathology for the Dental Hygienist*. WB Saunders; 1993:445.
35. Moylett EH, Shearer WT. HIV: Clinical manifestations. *J Allergy Clin Immunol*. 2002;110(1):3-16.
36. Neville BW, Damm DD, Allen CM, et al. *Oral and Maxillofacial Pathology*. 4th ed. Elsevier; 2016:239-258.
37. Sapp JP, Eversole LR, Wysocki GP. *Contemporary Oral and Maxillofacial Pathology*. 2nd ed. Mosby; 2004:226-234.
38. Ceballos-Salobrena A, Gaitan-Cepeda LA, Ceballos-Garcia L, et al. Oral lesions in HIV/AIDS patients undergoing highly active antiretroviral treatment including protease inhibitors: a new face of oral AIDS? *AIDS Patient Care and STDs*. 2000;14(12):627-635.
39. Cherry-Peppers G, Daniels CO, Meeks V, et al. Oral manifestations in the era of HAART. *J Nat Med Assoc*. 2003;95:21S-32S.
40. Siegel K, Abel SN, Pereyra M, et al. Rapid HIV testing in dental practices. *Am J Public Health*. 2012;102:625-632.
41. Fernandez IM, Collazo JB, Bowen S, et al. Predictors of HIV testing and intention to test among Hispanic farmworkers in South Florida. *J Rural Health*. 2005;21(1):56-64.
42. Maduro R. Curanderismo and Latino views of disease and curing. *Westem J Med*. 1983;139(6):868-874.
43. Lukes S. Cultural competence for the dental provider. *RDH*. 2016;36(6):55-62. <https://www.rdhmag.com/career-profession/article/16409281/cultural-competence-for-the-dental-provider>
44. Rhodes SD, Hergenrather KC, Bloom FR, et al. Outcomes from a community-based, participatory lay health advisor HIV/STD prevention intervention for recently arrived immigrant Latino men in rural North Carolina. *AIDS Educ Prev*. 2009;21(SB):103-108.
45. Magis-Rodriguez C, Gayet C, Negoni M, et al. Migration and AIDS in Mexico: An overview based on recent evidence. *J Acquir Immune Defic Syndr*. 2004;37(4S):S215-S226.
46. Hovey JD, Booker V, Seligman LD. Using theatrical presentations as a means of disseminating knowledge of HIV/AIDS risk factors to migrant farmworkers: an evaluation of the effectiveness of the *Informate* program. *J Immigr Minor Health*. 2007;9:147-156.
47. Rios-Ellis B, Espinoza L, Bird M, et al. Increasing HIV-related knowledge, communication, and testing intentions among Latinos: *Protégé tu Familia*:

Notes

Hazte la Prueba. J Health Care Poor Underserved. 2010;21:148-168.

- 48. Bletzer KV, Gonzales A, Saavedra M, et al. An HIV prevention toolkit for unaccompanied men who perform agricultural labor. *California J Health Promotion.* 2012;10(1):57-68.
- 49. National Research Council. *Improving Access to Oral Health Care for Vulnerable and Underserved Populations.* The National Academies Press; 2011. Accessed January 11, 2021. <https://doi.org/10.17226/13116>
- 50. Estrich CG, Araujo MWB, Lipman RD. Prediabetes and diabetes screening in dental care settings: NHANES 2013-2016. *JDR Clin Trans Res.* 2019;4(1):76-85.
- 51. Willen SS, Knipper M, Abadia-Berrero CE, et al. Syndemic vulnerability and the right to health. *Lancet.* 2017;389:964-977.
- 52. Tsai AC, Venkataramani AS. Syndemics and health disparities: a methodological note. *AIDS Behav.* 2016;20:423-430.
- 53. Aibibula W, Cox J, Hamelin AM, et al. Association between food insecurity and HIV viral suppression: a systematic review and meta-analysis. *AIDS Behav.* 2017;21:754-765.
- 54. Sanchez J, De La Rosa M, Serna CA. Project salud: efficacy of a community-based HIV prevention intervention for Hispanic migrant workers in south Florida. *AIDS Educ Prev.* 2013;25(5):363-375.



SHERRI M. LUKES, MS, RDH, FAADH, has been a dental hygienist for 40 years and holds advanced degrees in education. She is an associate professor emerita at Southern Illinois University (SIU), where she taught general and oral pathology, public health, and

multicultural dental hygiene. Her research focus was oral pathology and migrant farmworker oral health, resulting in multiple peer-reviewed publications. She is an approved speaker of, and holds a pathology fellowship in, the American Academy of Dental Hygiene. Lukes is a past president of the Illinois Dental Hygienists' Association and a member of the American Academy of Oral Medicine. Community service includes biannual trips to central/southern Mexico, delivering preventive care in an orphanage and remote villages. Honors include community service, research, and Teacher of the Year awards at SIU, Illinois Department of Public Health Oral Health Champion Award, and the Sunstar/RDH Award of Distinction.

Horizontal lines for taking notes.

ONLINE COMPLETION

QUICK ACCESS code 21027

Use this page to review questions and answers. Visit dentalacademyofce.com and sign in. If you have not previously purchased the course, select it from the Online Courses listing and complete your online purchase. Once purchased, the exam will be added to your Archives page, where a Take Exam link will be provided. Click on the Take Exam link, complete all the program questions, and submit your answers. An immediate grade report will be provided. Upon receiving a grade of 70% or higher, your verification form will be provided immediately for viewing and printing. Verification forms can be viewed and printed at any time in the future by visiting the site and returning to your Archives page.

QUESTIONS

1. Migrant and seasonal farmworkers in the US are primarily from:
 - A. Guatemala
 - B. Jamaica
 - C. Mexico
 - D. South America
2. All of the following are typical characteristics of MSFWs except:
 - A. Male
 - B. Uninsured
 - C. Low education level
 - D. Documented
3. All of the following place MSFWs at increased risk for HIV infection except:
 - A. Mobility
 - B. Alcohol abuse
 - C. Cultural barriers
 - D. Adequate access to health care
4. The risk for HIV infection for MSFWs is estimated to be:
 - A. 10 times higher than the US national average
 - B. Twice as high as the US national average
 - C. Five times higher than the US national average
 - D. The same as the US national average
5. All of the following are chronic diseases from which MSFWs suffer disproportionate rates except:
 - A. Diabetes
 - B. Hypertension
 - C. Dental conditions
 - D. Obesity
6. For MSFWs, cost, language barriers, transportation, and limited hours of service are all contributors to:
 - A. Lack of access to health care
 - B. Lack of opportunities for agricultural work
 - C. Poor housing conditions
 - D. Social isolation
7. The process of assimilating to a different culture, typically the dominant culture of the area, is termed:
 - A. Termination
 - B. Acculturation
 - C. Cultural competence
 - D. Transnationalism
8. "Machismo" or "male pride" that can be a significant aspect of Hispanic culture:
 - A. Is always a negative characteristic
 - B. Only refers to male dominance and power
 - C. Can be characterized within the cultural context of strength and protection of the family
 - D. Is always a positive characteristic
9. MSFWs may be reluctant to test for HIV infection due to all of the following except:
 - A. Documentation status
 - B. Perceived lack of risk
 - C. Fear of stigmatization
 - D. Increased HIV education
10. During the early 1980s, what played a key role as markers of immune suppression in identifying HIV-positive individuals?
 - A. Oral lesions
 - B. Wasting syndrome
 - C. Kaposi's sarcoma of the skin
 - D. Chronic diarrhea
11. HIV-related oral lesions have been greatly reduced in the diagnosed, general HIV population by the introduction of:
 - A. Antibiotics
 - B. Combination antiretroviral therapy
 - C. Immunosuppressive drugs
 - D. General antiviral therapies
12. The most common early appearing oral lesions in HIV-infected individuals are:
 - A. Pseudomembranous candidiasis, hyperplastic candidiasis, and herpes simplex
 - B. Angular cheilitis, oral hairy leukoplakia, and squamous cell carcinoma
 - C. Pseudomembranous candidiasis, erythematous candidiasis, and oral hairy leukoplakia
 - D. Pseudomembranous candidiasis, erythematous candidiasis, and aphthous ulcers
13. All of the following are among the many oral manifestations of HIV infection and/or AIDS except:
 - A. Major aphthous stomatitis
 - B. Kaposi's sarcoma
 - C. Condyloma acuminatum
 - D. Irritation fibroma
14. The most important phase of the dental hygiene process of care for detecting signs of HIV infection is:
 - A. Assessment
 - B. Treatment
 - C. Evaluation
 - D. Documentation
15. Since introduction of effective therapies for use with HIV-infected individuals, HIV-related oral lesions have been reduced by approximately:
 - A. 10%
 - B. 30%
 - C. 75%
 - D. 90%
16. A critical diagnostic procedure to achieve a clinical diagnosis of pseudomembranous candidiasis involves:
 - A. Clinical diascopy
 - B. An acetic acid test
 - C. Wiping the lesion with gauze to remove the pseudomembranous white layer
 - D. Testing for a positive Nikolsky sign

ONLINE COMPLETION

QUICK ACCESS code 21027

Use this page to review questions and answers. Visit dentalacademyofce.com and sign in. If you have not previously purchased the course, select it from the Online Courses listing and complete your online purchase. Once purchased, the exam will be added to your Archives page, where a Take Exam link will be provided. Click on the Take Exam link, complete all the program questions, and submit your answers. An immediate grade report will be provided. Upon receiving a grade of 70% or higher, your verification form will be provided immediately for viewing and printing. Verification forms can be viewed and printed at any time in the future by visiting the site and returning to your Archives page.

QUESTIONS

17. Oral hairy leukoplakia most commonly presents:
 - A. On the lateral tongue
 - B. On the buccal mucosa
 - C. In the oropharynx
 - D. On the attached gingiva
18. Identification of a white plaque on the lateral tongue, suggestive of HIV infection, should include all of the following in the differential diagnosis except:
 - A. Frictional hyperkeratosis
 - B. Leukoplakia
 - C. Lichen planus
 - D. Intraoral herpes simplex
19. One of the most important aspects of HIV education materials for the MSFW population is that they are:
 - A. At 12th grade readability level
 - B. Culturally appropriate
 - C. In color
 - D. Available only at health-care facilities
20. The dental hygiene workforce may not be adequately prepared to treat vulnerable populations such as MSFWs. This is due to:
 - A. Lack of motivation
 - B. Deficiencies in clinical skills
 - C. Lack of diversity in the dental hygiene workforce
 - D. An overabundance of licensed hygienists
21. A member of a local community/population who is trained in health education and promotion techniques utilized for MSFWs and other vulnerable populations may be called by all of the following titles except:
 - A. Clinical outreach worker
 - B. Promotora de salud
 - C. Community health worker
 - D. Lay health advisor
22. The reluctance of MSFWs to be tested for HIV can result in:
 - A. Diagnosis at later disease stage and lower CD4 counts
 - B. Poorer clinical outcomes/lower quality of life
 - C. Both A and B
 - D. There is no significant result from a reluctance to test.
23. Which of the following educational materials/interventions in a dental office waiting area would have the best potential for comprehension by an MSFW?
 - A. A typewritten fact sheet in Spanish
 - B. A comic/picture book type resource with a story in Spanish about a dental condition experienced by a Mexican individual
 - C. Patient education in English provided by the receptionist after the dental visit
 - D. Spanish brochures written at a 12th grade reading level
24. The theory that linked health problems involving two or more afflictions interact synergistically and contribute to an excess burden of disease in a population is termed:
 - A. Syndemics
 - B. Epidemiology
 - C. Pandemic
 - D. Web of causation
25. Research has demonstrated the effectiveness of the community health worker in reaching MSFWs and other vulnerable populations due to:
 - A. The level of knowledge of the community health worker
 - B. The respect and trust that results from health messaging coming from a respected member of the population
 - C. Their presence at a clinical facility
 - D. No formal training of community health workers
26. A comic book format for relaying health messages to Hispanic populations is called a:
 - A. Charla
 - B. Brochure
 - C. Fotonovela
 - D. Module
27. Low literacy levels require creative types of health messaging such as:
 - A. Theatrical presentations
 - B. "Chat" groups or *charlas*
 - C. Storytelling through *fotonovelas*
 - D. All of the above
28. MSFWs primarily access dental and medical care at:
 - A. Private dental and medical offices
 - B. Community health centers
 - C. Medical and dental schools
 - D. None of the above
29. Community-based organizations have been found to be the most effective in reaching at-risk groups such as MSFWs for all of the following reasons except:
 - A. Most private practices have sliding fee scales to accommodate low-income populations.
 - B. Community health centers have greater numbers of bilingual staff.
 - C. Community-based organizations have more volunteers.
 - D. Community-based organizations utilize culturally sensitive approaches to health care.
30. HIV testing for MSFWs:
 - A. Should be provided by medical personnel
 - B. Is not appropriate for the dental setting
 - C. Should be available by both medical and dental providers
 - D. Is not a part of interdisciplinary care

PUBLICATION DATE:	JULY 2021
EXPIRATION DATE:	JUNE 2024

ANSWER SHEET

HIV in the migrant and seasonal farmworker population: Oral conditions as early indicators of infection

NAME: _____ TITLE: _____ SPECIALTY: _____

ADDRESS: _____ EMAIL: _____ AGD MEMBER ID (IF APPLIES): _____

CITY: _____ STATE: _____ ZIP: _____ COUNTRY: _____

TELEPHONE (PRIMARY): _____ TELEPHONE (OFFICE): _____

REQUIREMENTS FOR OBTAINING CE CREDITS BY MAIL/FAX: 1) Read entire course. 2) Complete info above. 3) Complete test by marking one answer per question. 4) Complete course evaluation. 5) Complete credit card info or write check payable to Endeavor Business Media. 6) Mail/fax this page to DACE. If you have any questions, please contact dace@endeavorb2b.com or call (800) 633-1681. A score of 70% or higher is required for CE credit.

COURSE CAN ALSO BE COMPLETED ONLINE AT A LOWER COST. Scan the QR code or go to dentalacademyofce.com to take advantage of the lower rate.



Educational Objectives

- Describe the migrant and seasonal farmworker (MSFW) population serving the US
- Explain the population's vulnerability to HIV infection
- Describe HIV-related oral lesions that may suggest HIV infection
- Discuss appropriate HIV education and intervention strategies to utilize with the MSFW population

Course Evaluation

1. Were the individual course objectives met?

Objective #1: Yes No Objective #3: Yes No
Objective #2: Yes No Objective #4: Yes No

Please evaluate this course by responding to the following statements, using a scale of Excellent = 5 to Poor = 0.

- | | | | | | | |
|---|-------|----|---|---|---|---|
| 2. To what extent were the course objectives accomplished overall? | 5 | 4 | 3 | 2 | 1 | 0 |
| 3. Please rate your personal mastery of the course objectives. | 5 | 4 | 3 | 2 | 1 | 0 |
| 4. How would you rate the objectives and educational methods? | 5 | 4 | 3 | 2 | 1 | 0 |
| 5. How do you rate the author's grasp of the topic? | 5 | 4 | 3 | 2 | 1 | 0 |
| 6. Please rate the author's effectiveness. | 5 | 4 | 3 | 2 | 1 | 0 |
| 7. Was the overall administration of the course effective? | 5 | 4 | 3 | 2 | 1 | 0 |
| 8. Please rate the usefulness and clinical applicability of this course. | 5 | 4 | 3 | 2 | 1 | 0 |
| 9. Please rate the usefulness of the references. | 5 | 4 | 3 | 2 | 1 | 0 |
| 10. Do you feel that the references were adequate? | Yes | No | | | | |
| 11. Would you take a similar course on a different topic? | Yes | No | | | | |
| 12. If any of the continuing education questions were unclear or ambiguous, please list them. | _____ | | | | | |

13. Was there any subject matter you found confusing? Please describe.

14. How long did it take you to complete this course?

15. What additional dental continuing education topics would you like to see?

Mail/fax completed answer sheet to:

Endeavor Business Media

Attn: Dental Division
7666 E. 61st St. Suite 230, Tulsa, OK 74133
Fax: (918) 831-9804

Payment of \$69 is enclosed (this course can be completed online for \$59. Scan the QR code or go to dentalacademyofce.com to take advantage of the lower rate).

Make check payable to Endeavor Business Media

If paying by credit card, please complete the following:

MC Visa AmEx Discover

Acct. number: _____

Exp. date: _____ CVC #: _____

Billing address: _____

Charges on your statement will show up as Endeavor.

- | | |
|---------------------|---------------------|
| 1. (A) (B) (C) (D) | 16. (A) (B) (C) (D) |
| 2. (A) (B) (C) (D) | 17. (A) (B) (C) (D) |
| 3. (A) (B) (C) (D) | 18. (A) (B) (C) (D) |
| 4. (A) (B) (C) (D) | 19. (A) (B) (C) (D) |
| 5. (A) (B) (C) (D) | 20. (A) (B) (C) (D) |
| 6. (A) (B) (C) (D) | 21. (A) (B) (C) (D) |
| 7. (A) (B) (C) (D) | 22. (A) (B) (C) (D) |
| 8. (A) (B) (C) (D) | 23. (A) (B) (C) (D) |
| 9. (A) (B) (C) (D) | 24. (A) (B) (C) (D) |
| 10. (A) (B) (C) (D) | 25. (A) (B) (C) (D) |
| 11. (A) (B) (C) (D) | 26. (A) (B) (C) (D) |
| 12. (A) (B) (C) (D) | 27. (A) (B) (C) (D) |
| 13. (A) (B) (C) (D) | 28. (A) (B) (C) (D) |
| 14. (A) (B) (C) (D) | 29. (A) (B) (C) (D) |
| 15. (A) (B) (C) (D) | 30. (A) (B) (C) (D) |

EXAM INSTRUCTIONS

All questions have only one answer. If mailed or faxed, grading of this examination is done manually. Participants will receive confirmation of passing by receipt of a Verification of Participation form. The form will be mailed within two weeks after receipt of an examination.

COURSE EVALUATION AND FEEDBACK

We encourage participant feedback. Complete the evaluation above and e-mail additional feedback to Aileen.Southerland@endeavorb2b.com and Laura.Winfield@endeavorb2b.com.

COURSE CREDITS AND COST

All participants scoring 70% or higher on the examination will receive a verification form for three (3) continuing education (CE) credits. Participants are urged to contact their state dental boards for CE requirements. The cost for courses ranges from \$20 to \$110.

PROVIDER INFORMATION

Endeavor Business Media is designated as an approved provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP neither approves nor endorses individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry. Concerns about a CE provider may be directed to the provider or to ADA CERP at ada.org/cerp.

Endeavor Business Media is designated as an approved PACE program provider by the Academy of General Dentistry. The formal continuing dental education programs of this program provider are accepted by the AGD for fellowship, mastership, and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. The current term of approval extends from 11/1/2019 to 10/31/2022. Provider ID# 320452. AGD Code: 750.

Dental Board of California: Provider RP5933. Course registration number CA code: 03-5933-21027. Expires 7/31/2022. *This course meets the Dental Board of California's requirements for three (3) units of continuing education.*

Endeavor Business Media is designated as an approved provider by the American Academy of Dental Hygiene Inc. #AADHPNW (January 1 2021 - December 31, 2022). Approval does not imply acceptance by a state or provincial board of dentistry. Licensee should maintain this document in the event of an audit.

RECORD KEEPING

Endeavor Business Media maintains records of your successful completion of any exam for a minimum of six years. Please contact our offices for a copy of your CE credits report. This report, which will list all credits earned to date, will be generated and mailed to you within five business days of receipt.

CANCELLATION AND REFUND POLICY

Participants who are not 100% satisfied can request a refund by contacting Endeavor Business Media in writing.

IMAGE AUTHENTICITY

The images in this educational activity have not been altered.

© 2021 Academy of Dental Therapeutics and Stomatology, a division of Endeavor Business Media