

SOUTH FLORIDA SE AIDS EDUCATION & TRAINING CENTER

HIV and Oral Health **Myths** & **Truths**



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Objectives

- Identify the current demographics of HIV/AIDS and infections rates
- Understand common myths and truths about HIV and Oral Health
- Understand the change in oral health needs in the Era of ART therapy
- Understand U=U

HIV in the United States

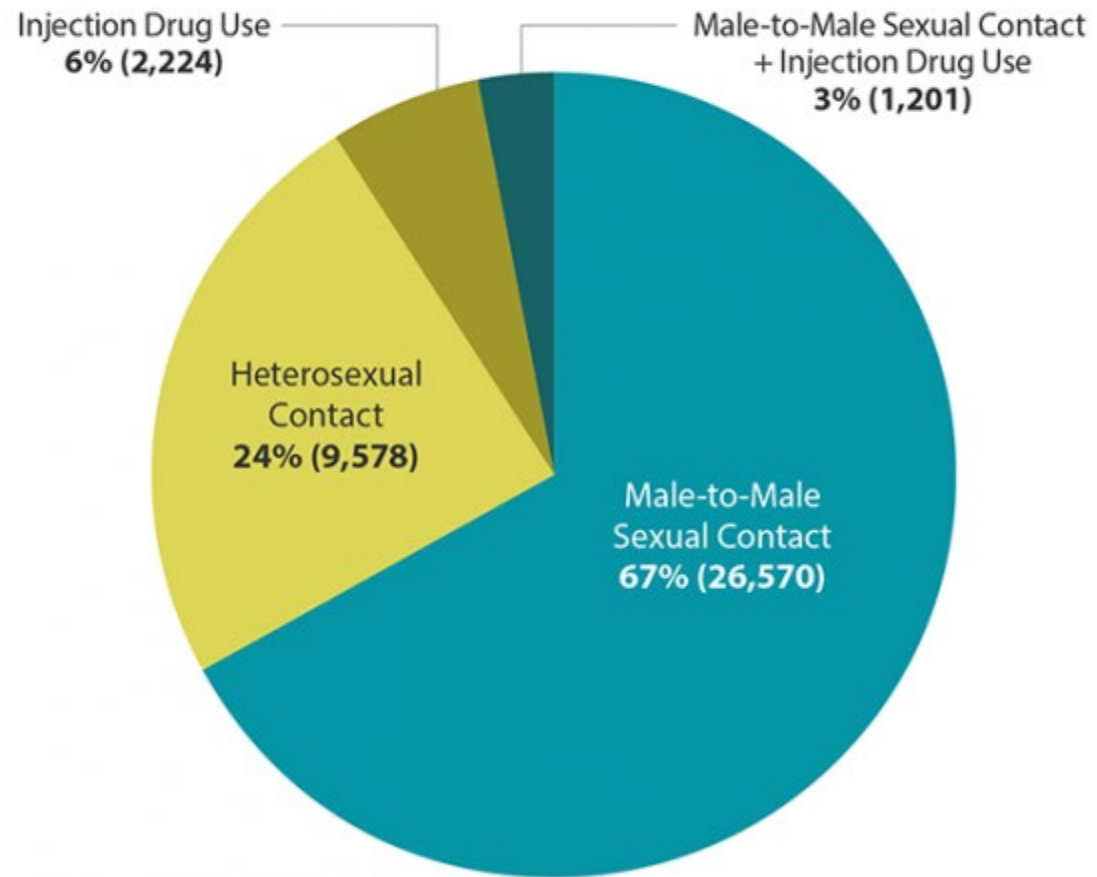
In 2016, an estimated 40,000 people were diagnosed with HIV infection in the United States.

More than 1.1 million people in the US are living with HIV, and 1 in 7 of them don't know it.

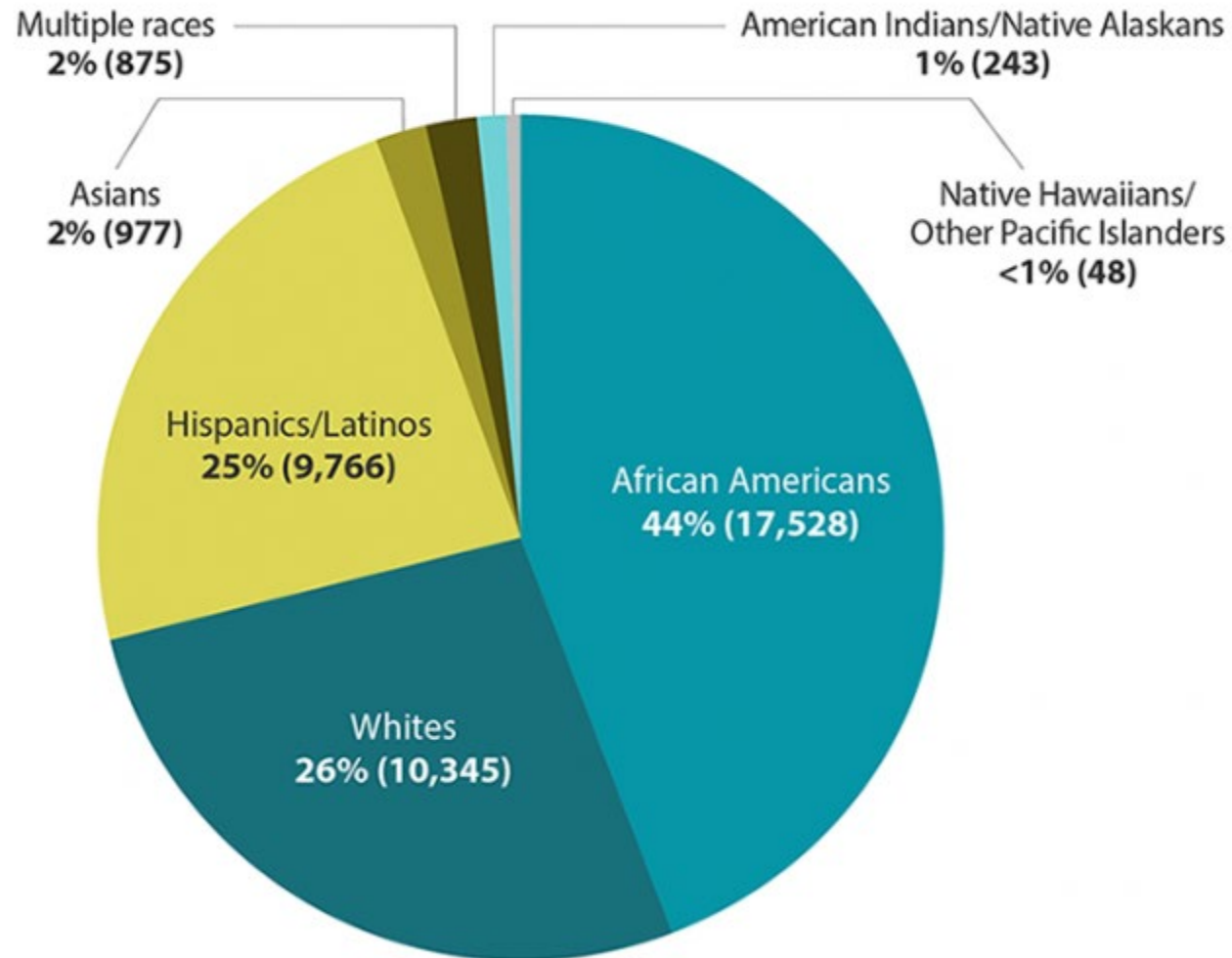
Over the last decade, the annual number of new HIV diagnoses declined 19%.

<http://www.cdc.gov/hiv/statistics/overview/ataglance.html>

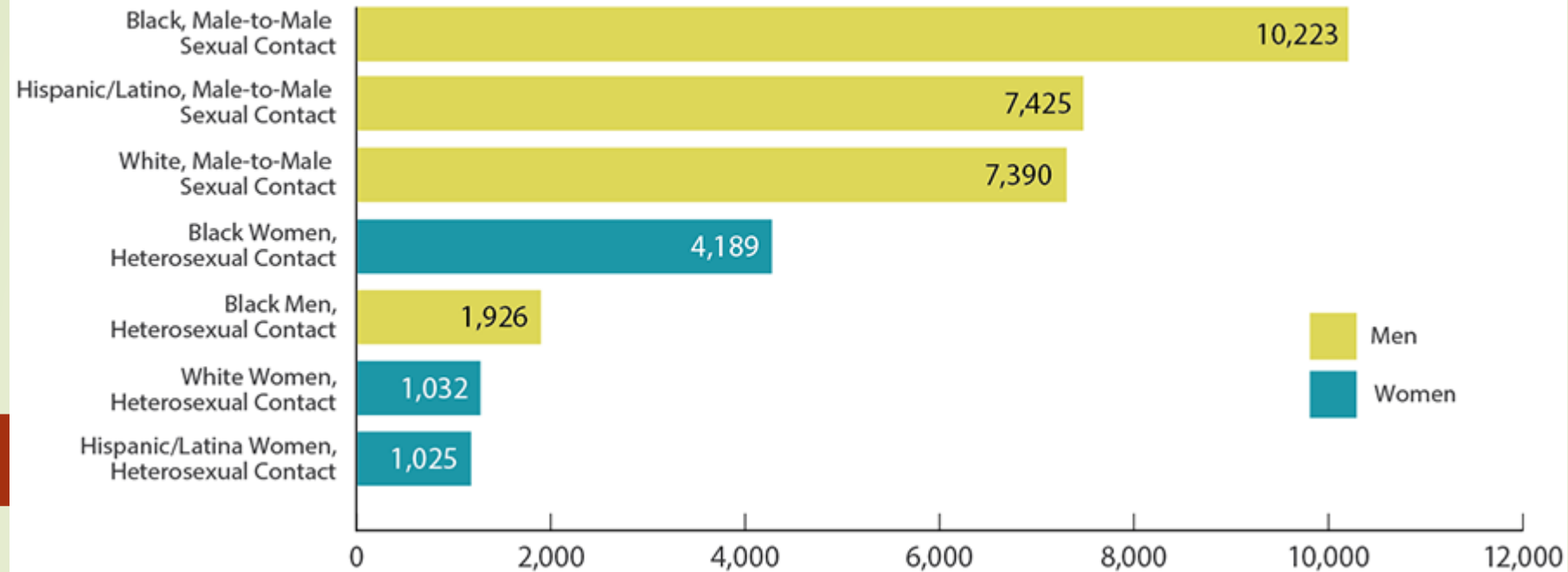
New HIV Diagnoses by Transmission Category (2016, n=39,782)



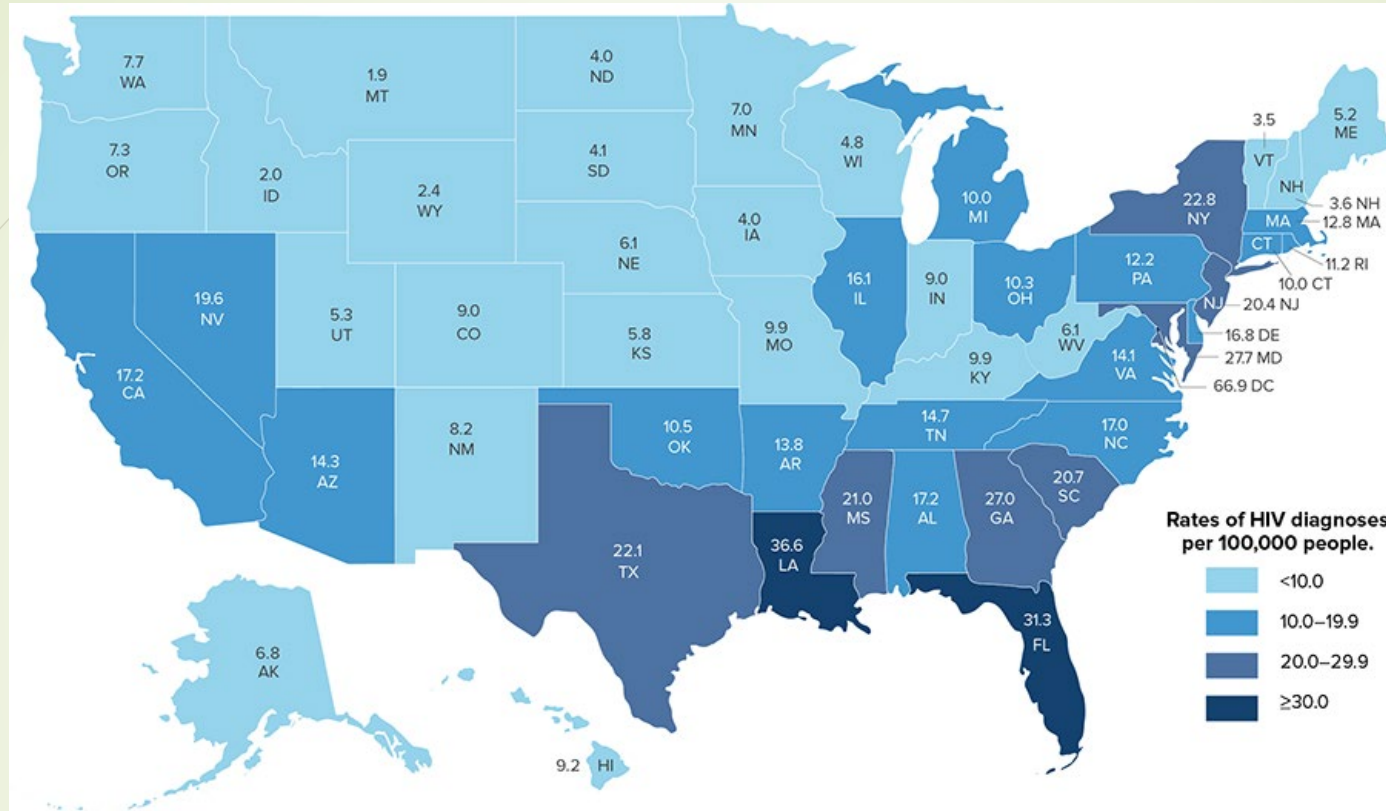
New HIV Diagnoses by Race/Ethnicity (2016, n=39,782)



New HIV Diagnoses in the United States for the Most-Affected Subpopulations, 2016

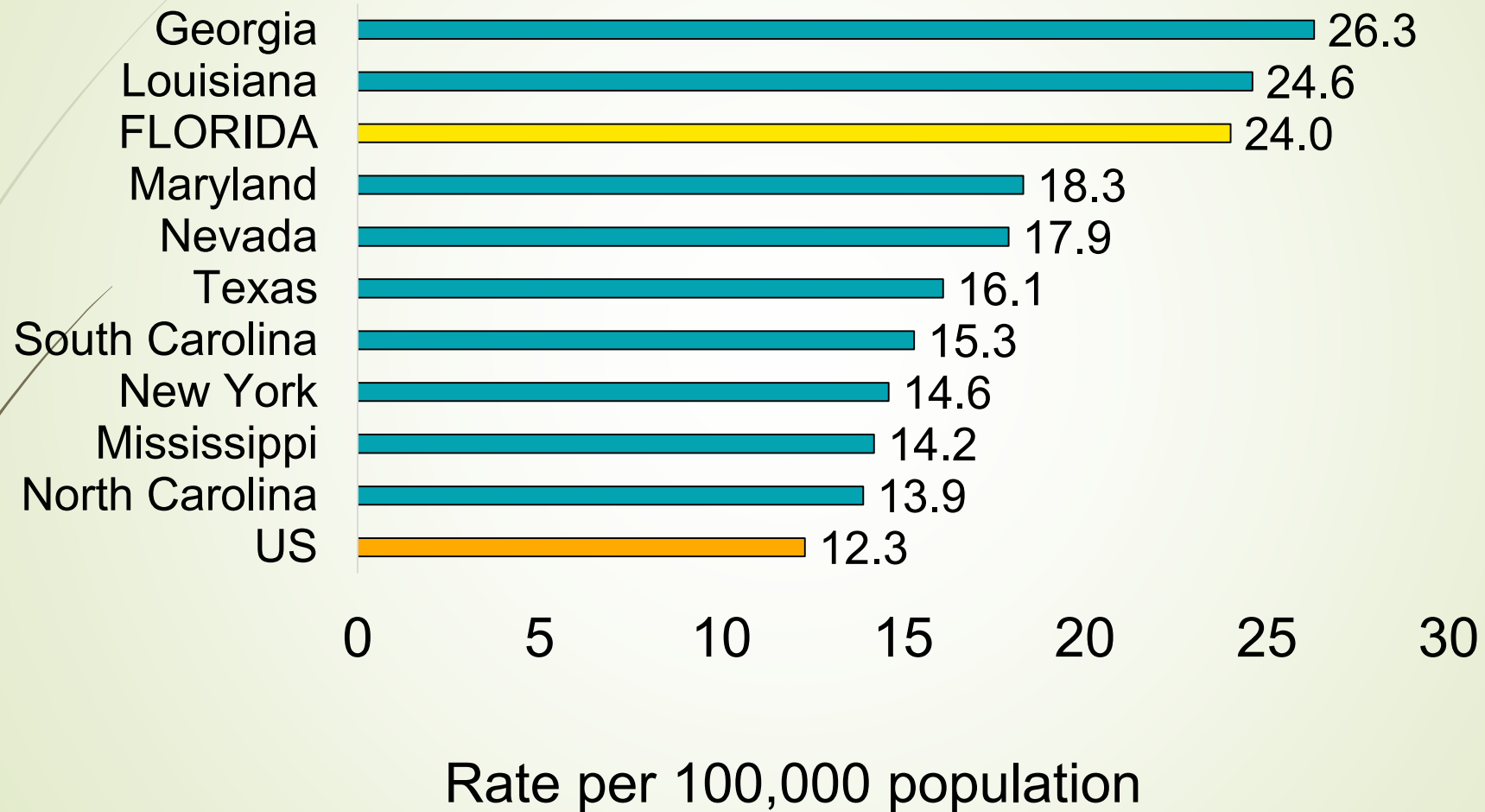


6,721 people died from HIV and AIDS in 2016. HIV remains a significant cause of death for certain populations. In 2014, it was the 8th leading cause of death for those aged 25-34 and 9th for those aged 35-44. In African American males HIV was the 5th leading cause of death in Florida



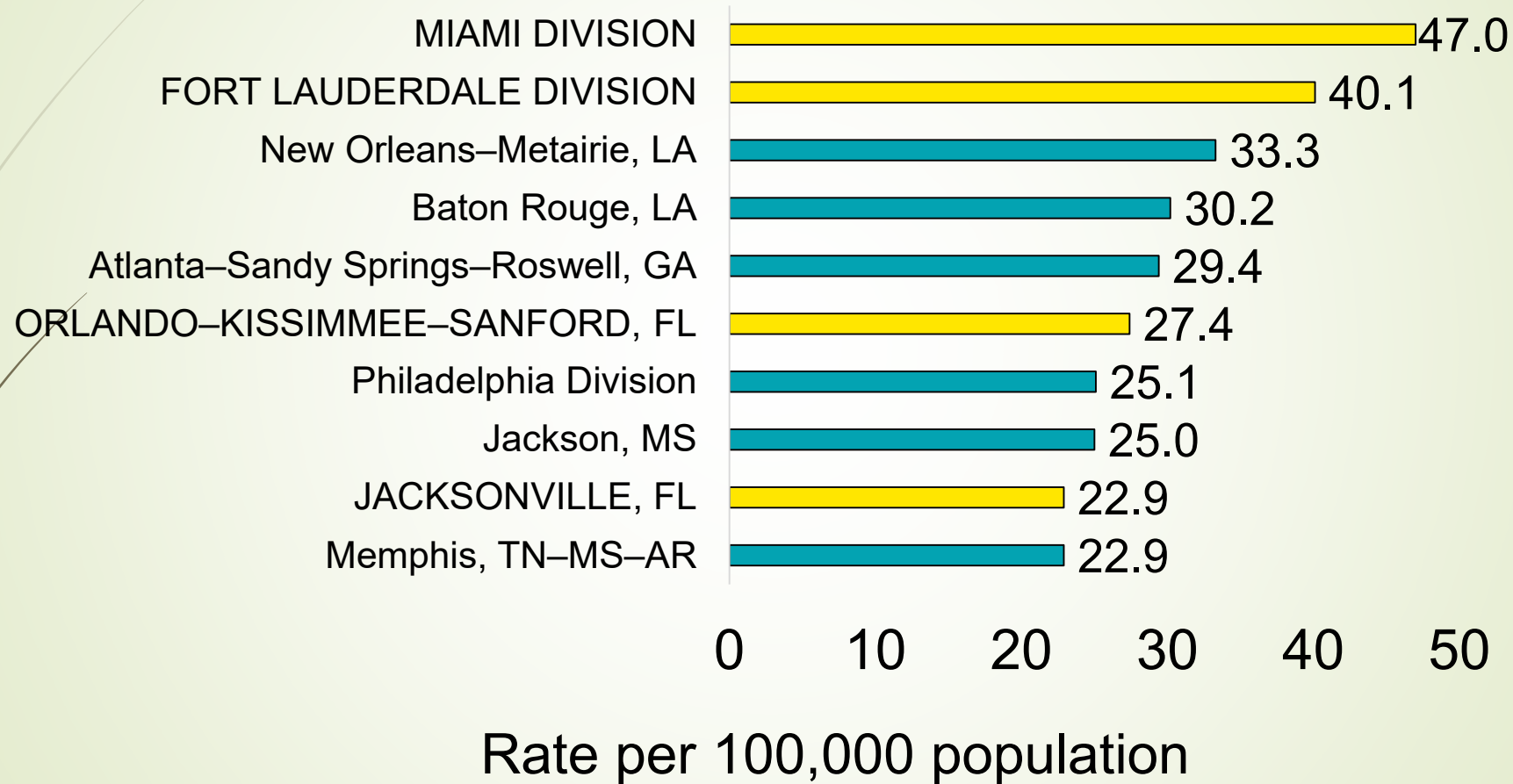
HIV in the United States

Rankings of HIV Case Rates by State¹ Diagnosed in 2016, United States



¹ Source: US data: HIV Surveillance Report, 2016 (most recent available) Vol. 28, Table 24 (HIV data for all 50 states)
<http://www.cdc.gov/hiv/topics/surveillance/resources/reports/index.htm>

Rankings of HIV Case Rates by MSA¹ Diagnosed in 2016, United States



¹ Source: US data: HIV Surveillance Report, 2016 (most recent available) Vol. 28, Table 28 (HIV data for metropolitan statistical area (MSA) of residence) <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/index.htm>


Percent of Unmet Need Care Services of Persons Living with HIV (PLWH) in Florida, Collected from Medical Monitoring Project (MMP)¹ Data

Unmet Needs	Received Services ²	Unmet Need of Service ³
Dental Services	61%	22%
Vision	43%	22%
Public benefits (SSI/SSDI)	44%	14%
Shelter Services	15%	10%
Transportation Assistance	22%	9%
Peer Group Support	10%	6%
Mental Health	26%	5%
Case Management	68%	4%
ADAP	41%	2%
Prevention Education	43%	1%
Adherence Services	25%	1%
Home Health Services	6%	1%
Interpreter Services	5%	1%
Childcare Services	1%	1%
Domestic Violence Services	1%	1%


¹ Source: MMP 2009–2014 health survey participants

² Percent of persons surveyed who claimed they received the specific service.

³ Percent of persons who did NOT receive the specific service who had a need for that service.



MYTH: Patients living with HIV/AIDS should be premedicated before receiving dental treatment





TRUTH: Patients living with HIV/AIDS do not need to be premedicated based on viral load or CD4 count.

Patient who have neutropenia with an absolute neutrophil count <500 white cells /mCL require premedication before receiving dental treatment

LAB TESTS FOR HIV STATUS	NORMAL RANGE ¹	TREATMENT CONSIDERATION	MEDICAL SIGNIFICANCE	DENTAL SIGNIFICANCE	CRITICAL VALUES RECOMMENDED MEDICAL CONSULTATION
<u>HIV VIRAL LOAD</u> # of HIV RNA copies per ml of blood	Can be <20copies/mL on commercially available tests Uncontrolled HIV up to 750,000	If > 20 copies/mL Should be under copies/mL If. over 6 months on ART	Indicates rate of HIV progression and ART response	Predictor of oral manifestation including Candidiasis Xerostomia, Recurrent Caries, cancer, etc.	If > 20 copies per mL after 6 months of ART
<u>CD4 HELPER T CELL COUNT</u> T-lymphocytes/mm ³ (absolute T-cell count) ²	500-1500 ART recommended for all HIV infected patients regardless of CD4 cell count	<200 = AIDS Defining	Indicates immune status & determines therapy irrespective of total Lymphocyte	In general, HIV disease is progressing if the CD4 count is going down.	IF < 200 after 6 months of ART
<u>ANC</u> (Absolute Neutrophil Count) NEUTROPHIL % X WBC COUNT	1500 to 8000	< 500 requires premedication	Susceptibility to infection	Susceptibility to infection	< 2,500/mm ³



MYTH: In the era of Antiretroviral Therapy patients that are virally suppressed no longer have oral lesions.



TRUTH

Oral
Manifestations
of HIV

In the Era of ART

Decreasing:


- Candidiasis
- Necrotizing Gingivitis
- Kaposi's Sarcoma
- Oral Hairy Leukoplakia

Increasing:

- Dental Decay/Periodontal Disease
- Oral HPV



MYTH: The major cause of dental decay in patient living with HIV/AIDS is poor home care, diet, and drug use



TRUTH: Xerostomia is a major cause of dental decay in patients living with HIV





There are multiple causes of xerostomia;

- **Anticholinergic effects of many medications**
- **Alcohol and drug abuse**
- **Damaging head and neck radiation**
- **Comorbidities from HIV/AIDS such as cardiac disease, diabetes, and mental health disorders which occurs in PLWHA. As a result, many of the medications especially the antidepressants, anxiolytics, diuretics, and antihistamines being taken for these comorbidities**

There are still differing studies of the xerostomic effects of antiretroviral medications used to treat HIV.

Xerostomia is the subjective complaint of oral dryness. This must be distinguished from salivary gland dysfunction which is an objective disease characterized by reduced salivary flow. Studies have shown that 40% or more of PLWHA experience major xerostomia during their disease. Studies of PLWHA with xerostomia show a frequently negative effect on their quality of life.

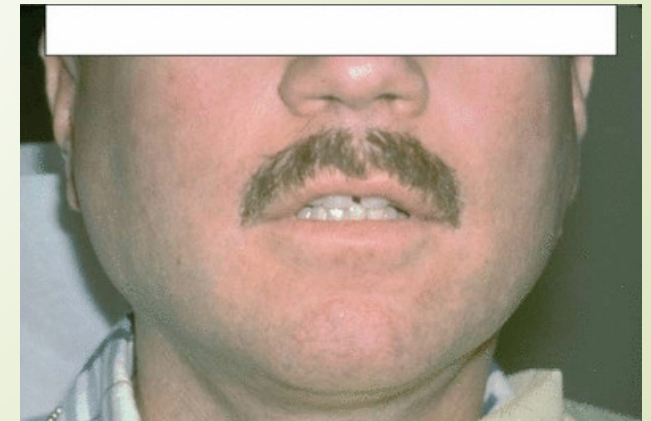
Symptoms of xerostomia include cracked peeled atrophic lips, glossitis, and pale dry buccal mucosa. Xerostomia can lead to dysphagia, oral pain of unknown origin, dental caries, oral infections, periodontal disease, angular cheilitis associated with candidiasis and can affect the health-related quality of life. These features of xerostomia can lead to the inability of the patient to take necessary medications, and can influence intake of proper nutrients, leading to malnutrition and a decline in overall health.



More significant in the era of ART is the increase in prevalence of salivary gland disease. Salivary gland disease can arise in 4% to 10% of adults and children with HIV.

HIV salivary gland disease (HIV-SGD) is a distinct disorder characterized by persistent major salivary gland swelling and xerostomia. Most commonly affected is one or both parotid glands sometimes which will occur without xerostomia. In some cases, salivary gland enlargement may be the first clinical manifestation of HIV infection, but more often a sign of late HIV infection.

The exact pathophysiology of HIV-SD, origins include lymphoepithelial lesions, cysts, intraglandular lymph nodes, and an inflammatory infiltrate similar to what is often observed in Sjogren's, syndrome however with distinct histopathologic and serological differences. In the infiltrate, there are persistent circulating CD8+lymphocytosis and diffuse visceral CD8+ lymphocytic infiltration.



What can we do?

An increase in caries can occur, so fluoride rinses (that can be bought over the counter) or prescription fluorides should be used daily, and visits to the dentist should occur two to three times per year.

OTC products (.05% NaF) ACT, Fluoroguard

Prescription Fluoride Products Neutral Sodium Fluoride administered by brushing or custom fluoride trays.

Salivary stimulants such as sugarless gum or sugarless candies may provide relief.

Candies that are acidic should be avoided as frequent use may lead to loss of tooth enamel

Increase intake of water

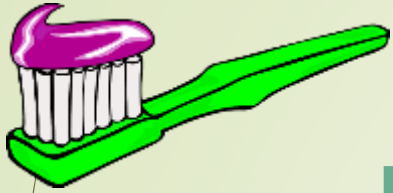
Salagen 5mg/Take 1 to 2 tablets 3 to 4 times per day. Maximum dosage 10mg 3 times per day

Many contraindications including glaucoma, hepatic impairment, heart, lung, etc. Follow prescribing instructions.

Home Care Instructions

Brush, Floss, Tongue Scraper

Work in Collaboration with Dentists Mental Health Professionals and Case Managers



Periodontal Disease in the Era of ART

Shift of prevalence towards periodontal diseases.

Lack of oral hygiene determined by plaque formation and reduced CD4-counts with pronounced periodontal inflammation can be seen as risk factors for periodontal disease. There is an increase in periodontal inflammation markers in patients with HIV.

Increased Prevalence of oral lesions and periodontal diseases in HIV-infected patients on antiretroviral therapy.

Overall high prevalence of manifestations underlines the importance of oral examination for the general practitioner and visits by oral specialists should become a routine procedure in HIV-patients care.

[Kroidl A¹](#), [Schaeben A](#), [Oette M](#), [Wettstein M](#), [Herfordt A](#), [Häussinger D](#). [Eur J Med Res](#). 2005 Oct 18;10(10):448-53. Accessed December 12, 2015.

What can we do?


Periodontal Disease

- **Amoxicillin 250mg 3 x/day with Metronidazole 250mg 3X/day x 5-7days**
- **Antimicrobial rinses (0.12% Chlorhexidine) 15cc 2xday x 14days**
- **Concurrent Antifungal maybe necessary**
- **Referral for immediate dental care**
- **Stress oral home care for clients and routine dental care**



MYTH: HIV can be transmitted by Saliva





**TRUTH: Saliva alone does not transmit HIV
(If there is blood in the saliva there is a low risk
for transmission)**

**Oral sex is a low risk activity for transmitting HIV
however, if there is blood in the saliva from
periodontal disease or an active STD lesion the
chance of transmission does increase.**



Modes of Transmission

Only certain body fluids—**blood, semen (cum), pre-seminal fluid (pre-cum), rectal fluids, vaginal fluids, and breast milk**—from a person who has HIV can transmit HIV. These fluids must come in contact with a mucous membrane or damaged tissue or be directly injected into the bloodstream (from a needle or syringe) for transmission to occur. Mucous membranes are found inside the rectum, vagina, penis, and mouth.

In the United States, HIV is spread mainly by

- Having **anal or vaginal sex with someone who has HIV without using a condom or taking medicines to prevent or treat HIV.**

- For the HIV-negative partner, receptive anal sex (bottoming) is the highest-risk sexual behavior, but you can also get HIV from insertive anal sex (topping).
- Either partner can get HIV through vaginal sex, though it is less risky for getting HIV than receptive anal sex.

- **Sharing needles or syringes, rinse water, or other equipment (works) used to prepare drugs for injection with someone who has HIV. HIV can live in a used needle up to 42 days depending on temperature and other factors.**



Modes of Transmission

Less commonly, HIV may be spread

- From mother to child during **pregnancy, birth, or breastfeeding.**

Although the risk can be high if a mother is living with HIV and not taking medicine, recommendations to test all pregnant women for HIV and start HIV treatment immediately have lowered the number of babies who are born with HIV.

- By being stuck with an HIV-contaminated needle or other sharp object. This is a risk mainly for health care workers.**

- Having another sexually transmitted disease (STD) can increase the risk of getting or transmitting HIV.**

Modes of Transmission/Health Care Workers

The average risk of HIV infection after a needle stick or cut exposure to HIV-infected blood is **0.3%** (i.e., three-tenths of one percent, or about 1 in 300). Stated another way, 99.7% of needle stick/cut exposures do not lead to infection.



The risk after exposure of the eye, nose, or mouth to HIV-infected blood is estimated to be, on average, **0.1%** (1 in 1,000).



The risk after exposure of non-intact skin to HIV-infected blood is estimated to be **less than 0.1%**. A small amount of blood on intact skin probably poses no risk at all. There have been no documented cases of HIV transmission due to an exposure involving a small amount of blood on intact skin (a few drops of blood on skin for a short period of time).

There is only a single documented risk of occupational exposure since 1999 and no reported dental exposure since 1998.

In the community

HIV Can Be Transmitted By



Sexual Contact



Sharing Needles
to Inject Drugs



Mother to Baby
during pregnancy, birth,
or breastfeeding

HIV Is **NOT** Transmitted By



Air or Water



Saliva, Sweat, Tears, or
Closed-Mouth Kissing



Insects or Pets



Sharing Toilets,
Food, or Drinks

Prevention of Transmission of HIV/AIDS

➤ Sexual

- Abstinence
- Barriers: condoms etc.
- HIV treatment

➤ Blood products

- Testing for HIV
- Discriminating use
- Standard precautions
- Needle exchange

➤ Mother to Child

- Anti-HIV treatment of mother
- Preventative treatment of newborn
- Avoidance of breastfeeding
- Avoid pre-mastication



HIV Transmissions in the Dental Office

Universal Precautions

Mask

Gloves

Eye Protection with Face Shield or side protectors

Disposable Gowns

Needle Protectors

Bur Protectors

No open toe shoes

Bare legs



Post-exposure Prophylaxis

- Non-occupational N-PEP

- Occupational Exposure O-PEP

PEP should be considered if you've had a recent possible exposure to HIV at work. Report your exposure to your supervisor, and seek medical attention immediately.

- Occupational transmission of HIV to health care workers is extremely rare, and the proper use of safety devices and barriers can help minimize the risk of exposure while caring for patients with HIV.
- A health care worker who has a possible exposure should see a doctor or visit an emergency room immediately.
- PEP must be started within 72 hours after a recent possible exposure to HIV. The sooner, the better; every hour counts.

The most common regimen is a combination of three anti-HIV drugs from two different classes
Truvada and Isentress

PEPline (1-888-448-4911), which offers around-the-clock advice on managing occupational exposures to HIV, as well as hepatitis B and C. Exposed health care workers may also call the PEPline, but they should seek local medical attention first.

TRUTH:

U=U

UNDETECTABLE
=
UNTRANSMITTABLE



A PERSON LIVING WITH HIV
WHO HAS AN UNDETECTABLE
VIRAL LOAD DOES NOT
TRANSMIT THE VIRUS TO THEIR
PARTNERS.

The International AIDS Society is proud to endorse the U=U consensus statement of the Prevention Access Campaign.



We are available for clinical consultations and trainings

