Global AIDS Overview

• There are approximately 35 million people currently living with HIV and tens of millions of people have died of AIDS-related causes since the beginning of the epidemic.¹
• While new cases have been reported in all regions of the world, approximately 68% are in sub-Saharan Africa.
• Most people living with HIV or at risk for HIV do not have access to prevention, care, and treatment, and there is still no cure!
Global AIDS Overview

• HIV primarily affects those in their most productive years; about 40% of new infections are among those under age 25.
• HIV not only affects the health of individuals, it impacts households, communities, and the development and economic growth of nations. Many of the countries hardest hit by HIV also suffer from other infectious diseases, food insecurity, and other serious problems.
Global AIDS Overview

• Despite these challenges, new global efforts have been mounted to address the epidemic, particularly in the last decade, and there are signs that the epidemic may be changing course.

• The number of people newly infected with HIV and the number of AIDS-related deaths have declined, contributing to the stabilization of the epidemic. In addition, the number of people with HIV receiving treatment has increased to 13.6 million as of June 2014.
Adult HIV Prevalence Rate, 2013

Global HIV/AIDS Prevalence Rate = 0.8%

NOTES: Data are estimates. Prevalence rates include adults ages 15-49. The estimate for Sudan represents data for Sudan only. The estimate for South Sudan is 2.2%.
Current Global Snapshot
Kaiser Family Foundation

• There were 35.0 million people living with HIV in 2013, up from 29.8 million in 2001, the result of continuing new infections, people living longer with HIV, and general population growth.

• 1.5 million people died of AIDS in 2013, a 35% decrease since 2005. Deaths have declined due in part to antiretroviral treatment (ART) scale-up.

• HIV is a leading cause of death worldwide and the number one cause of death in Africa.
• New HIV infections globally have declined by 38% since 2001. In 27 countries with sufficient quality data, new HIV infections have decreased by more than 50% and by more than 75% in 10 countries. Still, there were about 2.1 million new infections in 2013 or about 6,000 new infections per day.

• Most new infections are transmitted heterosexually, although risk factors vary.
  – In some countries, men who have sex with men, injecting drug users, and sex workers are at significant risk. When compared to the general population, HIV prevalence rates are estimated to be 19 times higher among men who have sex with men, 28 times higher among injecting drug users, and 12 times higher among sex workers.
• Although HIV testing capacity has increased over time, enabling more people to learn their HIV status, approximately half of all people with HIV are still unaware they are infected.\(^3\)
Current Global Snapshot

Kaiser Family Foundation

- Women represent half (50%) of all adults living with HIV worldwide. HIV is the leading cause of death among women of reproductive age.

- Gender inequalities, differential access to service, and sexual violence increase women’s vulnerability to HIV, and women, especially younger women, are biologically more susceptible to HIV.
The Role of Traditional African Medicine
South Africa ahead of the curve…
Current Global Snapshot
Kaiser Family Foundation

• Young people, ages 15-24, account for approximately 33% of new HIV infections (among those 15 and over).

• In sub-Saharan Africa, young women are twice as likely to become infected with HIV than their male counterparts.

• Globally, there were 3.2 million children living with HIV in 2013, 240,000 new infections among children, and 190,000 AIDS deaths.
PMCT – AIDS Orphanage – South Africa
## HIV Prevalence & Incidence by Region, 2013

<table>
<thead>
<tr>
<th>Region</th>
<th>Total No. (% Living with HIV)</th>
<th>Newly Infected</th>
<th>Adult Prevalence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Global Total</strong></td>
<td>35.0 million</td>
<td>2.1 million</td>
<td>0.8%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>24.7 million (71%)</td>
<td>1.5 million</td>
<td>4.7%</td>
</tr>
<tr>
<td>Asia and the Pacific</td>
<td>4.8 million (14%)</td>
<td>350,000</td>
<td>0.2%</td>
</tr>
<tr>
<td>Western and Central Europe and North America</td>
<td>2.3 million (7%)</td>
<td>88,000</td>
<td>0.3%</td>
</tr>
<tr>
<td>Latin America</td>
<td>1.6 million (5%)</td>
<td>94,000</td>
<td>0.4%</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>1.1 million (3%)</td>
<td>110,000</td>
<td>0.6%</td>
</tr>
<tr>
<td>Caribbean</td>
<td>250,000 (&lt;1%)</td>
<td>12,000</td>
<td>1.1%</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>230,000 (&lt;1%)</td>
<td>25,000</td>
<td>0.1%</td>
</tr>
</tbody>
</table>
HIV Prevalence & Incidence by Region, 2013
Sub-Saharan Africa

- Sub-Saharan Africa, the hardest hit region, is home to 71% of people living with HIV but only about 13% of the world’s population.
- Most children with HIV live in this region (91%).
- Almost all of the region’s nations have generalized HIV epidemics—that is, their national HIV prevalence rate is greater than 1%.
  - In 9 countries, 10% or more of adults are estimated to be HIV-positive. South Africa has the highest number of people living with HIV in the world (6.2 million). Swaziland has the highest prevalence rate in the world (27.4%).
  - Recent data offer promising signs, with national HIV prevalence and/or incidence stabilizing or even declining in many countries in the region.
HIV Prevalence & Incidence by Region, 2013
Latin America and the Caribbean

• About 1.9 million people are estimated to be living with HIV in Latin America and the Caribbean combined, including 106,000 newly infected in 2013.

• The Caribbean itself, with an adult HIV prevalence rate of 1.1%, is the second hardest hit region in the world after sub-Saharan Africa.

• Six countries in Latin America and the Caribbean have generalized epidemics, with the Bahamas having the region’s highest prevalence rate (3.2%), and Brazil the greatest number of people living with the disease (730,000)."
An estimated 1.1 million people are living with HIV in this region, including 110,000 newly infected in 2013. The epidemic is driven primarily by injection drug use, although heterosexual transmission also plays an important role. The Russian Federation and Ukraine account for 85% of people living with HIV in the region.
Raghu!
Exceptional Infection Control!
MSUMD – Dental Hospital
Russian HIV/AIDS Epidemic Worsening
5.14.15 Agence France-Presse

• Vadim Pokrovsky, head of the state AIDS centre, said the Kremlin’s policies promoting traditional family values has failed to halt the spread of HIV.
  – The last five years of the conservative approach have led to the doubling of the number of PLWH.
  – He estimated that there would be 2 million PLWH registered and approximately 3 million Russians with HIV in 4 – 5 years unless tough measures are taken to halt the spread of HIV.
He said that Russia had approximately 90,000 new infections last year compared to 3,000 in Germany.

Pokrovasky chalked up Germany’s success in fighting HIV for the following reasons:

- Drug replacement therapy for addicts, which is banned in RU
- Legalization of prostitution
- Sex education in school.
HIV Prevalence & Incidence by Region, 2013 Asia and the Pacific

- Asia and the Pacific. An estimated 4.8 million people are living with HIV in Asia and the Pacific. The region is also home to the two most populous nations in the world – China and India – and even relatively low prevalence rates translate into large numbers
THE BEIJING DECLARATION

Having analysed the scientific evidence that has become available over the last 20 years, the participants of this workshop conclude that the evidence now supports the view that Oral Health Care Professionals with HIV do not pose a risk of transmission to patients in the dental setting. They can continue a career in clinical practice, providing that the following criteria are met:

1) The individual is under ongoing care of a suitably qualified HIV Health Care Professional
2) Standard Infection Control is observed
3) The individual remains aware of their health status and acts appropriately
4) Surveillance, especially in resource limited regions, continues.
Prevention – Knowing Your Epidemic

- Effective prevention strategies include behavior change programs, condoms, HIV testing, blood supply safety, harm reduction efforts for injecting drug users, and male circumcision.
- Recent research has shown that providing HIV treatment to people with HIV significantly reduces the risk of transmission to their negative partners.
- The use of antiretroviral-based microbicide gels has been found to reduce the risk of HIV infection in women.
- Pre-exposure antiretroviral prophylaxis (PrEP) has also been shown to be an effective HIV prevention strategy in individuals at high risk for HIV infection.
Prevention – Knowing Your Epidemic

• Experts recommend that prevention be based on “knowing your epidemic,” that is, tailoring prevention to the local context and epidemiology, and using a combination of prevention strategies, bringing programs to scale, and sustaining efforts over time.

• Access to prevention, however, remains limited.
Treatment – We’ve come a long way, but…

• **HIV treatment** includes the use of combination antiretroviral therapy to attack the virus itself, and medications to prevent and treat the many opportunistic infections that can occur when the immune system is compromised by HIV.

• In 2013, WHO released new treatment guidelines which recommend starting treatment of HIV earlier in the course of illness.
Treatment – We’ve come a long way, but…

• Combination ART, first introduced in 1996, has led to dramatic reductions in morbidity and mortality, and access has increased in recent years, rising to 13.6 million people as of June 2014.
• Globally, only 37% of people living with HIV are receiving treatment, which includes 38% of adults and 24% of children living with HIV.
• Approximately 75% of all people receiving antiretroviral therapy live in sub-Saharan Africa.
• The number of pregnant women receiving ART for the prevention of mother-to-child transmission of HIV increased to nearly 1 million in 2013.
• Access to ART among children has also risen significantly, although they have less access than adults.
HPTN 052 – 2011
Lead Author – Myron Cohen, UNC

• The HPTN 052 study recruited 1763 couples in Malawi, Zimbabwe, Botswana, Kenya, South Africa, Brazil, Thailand, the US and India. The trial recruited serodiscordant couples – one HIV-positive, one HIV-negative – in which the HIV-positive partner had a CD4 cell count between 350 and 550 cells/mm³, and was thus ineligible for treatment.

• HPTN 052 showed that early treatment – started at a CD4 count between 350 and 550 cells/mm³ – reduced the risk of HIV transmission to an uninfected partner – by at least 96%. Almost all the study participants were heterosexual couples.

• Bottom line: Early treatment is prevention!
The Global Response to AIDS

• International efforts to combat HIV began in the first decade of the epidemic with the creation of the WHO’s Global Programme on AIDS in 1987.

• UNAIDS was formed in 1996 to serve as the UN system’s coordinating body and to help galvanize worldwide attention to AIDS.

• The role of affected country governments and civil society also has been critical to the response. Over time, funding by donors and others has increased and several key initiatives have been launched.
The Global Response to AIDS

• In 2000, all nations agreed to global HIV targets to halt and begin to reverse the spread of HIV by 2015, as part of the *UN Millennium Development Goals* (MDGs), and the World Bank launched its *Multi-Country AIDS Program* (MAP).

• In 2001, a *United Nations General Assembly Special Session on HIV/AIDS (UNGASS)* was convened and the *Global Fund* was created. More recently, at the June 2011 UNGASS meeting, world leaders adopted a new Declaration that reaffirmed commitments and called for an intensification of efforts to combat the epidemic through new commitments and targets.
World AIDS Day 2014

• On World AIDS Day 2014, UNAIDS set targets for 2020 aimed at ending the epidemic by 2030.

• The targets include achieving “90% of people living with HIV knowing their HIV status; 90% of people who know their HIV-positive status on treatment; and 90% of people on treatment with suppressed viral loads.”\(^4\)
Funding

• Most funding has come from international donor governments who disbursed $8.5 billion in 2013, up from $1.2 billion in 2002, to address HIV in low- and middle-income countries.
• Hard hit countries have also provided significant resources to address their epidemics.
• The Global Fund has committed more than $16 billion for HIV efforts in more than 100 countries to date, and the private sector including foundations and corporations, also plays a major role, particularly the Bill & Melinda Gates Foundation which has committed more than $2.5 billion for HIV, with additional funding provided to the Global Fund.
• UNAIDS estimates global HIV funding totaled $19.1 billion in 2013, however, this total is below the UNAIDS estimate of $22 to $24 billion needed to address the impacts of HIV.
The 7th World Workshop on Oral Health and Disease in HIV/AIDS
KNOWLEDGE, PERCEPTION, ATTITUDES, PRACTICES, AND WILLINGNESS OF DENTISTS IN JAKARTA IN TREATING PLWHA

Kadrianto TH et al, Department of Oral Medicine, Faculty of Dentistry, Universitas Indonesia

• **Methods:** A cross-sectional survey was conducted using a self-administered questionnaire toward 189 dentists in 15 sub districts randomly selected in Jakarta. Dentist with experience of any postgraduate study related to medicine or dentistry was excluded.

• **Results:** Majority of respondents had poor knowledge (76.7%) and attitudes (58.2%), with average level of perception and practices associated with dental treatment for patients with HIV/AIDS. Among 5 topics in the knowledge section, the lowest result was about dental management, while the highest was about HIV transmission.

• Only **47.1% showed willingness to give dental treatment for patients** with HIV/AIDS. Two main reason of refusal reported by the dentists was **fear of HIV transmission** and lack of knowledge about dental management for HIV/AIDS patients.
KNOWLEDGE, ATTITUDE AND BEHAVIOUR OF DENTAL PRACTITIONERS TOWARDS HIV INFECTED PERSONS IN KERALA, SOUTH INDIA

• **Results:** Out of 300 questionnaires distributed, 154 were completed and received.
  – About 88% of the dental surgeons had sufficient knowledge about the transmission and diagnosis of HIV infection.
  – 80% were aware of the universal precautions to be followed in dental practice.
  – While 98% agreed that it is their moral responsibility to treat HIV positive patients, **only 65% considered it safe to treat HIV patients.**
  – 41% of the dentists had the opinion that HIV positive doctors can continue to practice.

• Dr.P.Jayanthi Dr.Varun B.R Dr.Sivakumar T.T.¹ Dept. Of Oral Pathology, Annoor Dental College.² PMS Dental College, Trivandrum
Can we use the international experience of managing the HIV+ infected patient to inform future new infection control risks in the dental setting? Dr. David Croser – UK

- **What is a hazard?**
  - A hazard is something that can cause adverse effects. For example:
    - Water on a staircase is a hazard, because you could make you slip.
    - A patient in the dental surgery is a potential hazard if you think there is a risk of passing the infection to another patient or to a member of the clinical team.

- **What is risk?**
  - A risk is the likelihood that a hazard will actually cause its adverse effects, coupled with a measure of the effect. This is expressed as a probability.
C-1 Can we use the international experience of managing the HIV+ infected patient to inform future new infection control risks in the dental setting? Dr. David Croser - UK

• To prevent the hazard of disease transmission we use a variety of infection control techniques or processes at our disposal.
  – rehearsed
  – used routinely for every patient
  – audited and
  – the audits need to be reviewed and the results shared

  – With a patient carrying a blood-borne disease – the needlestick is the commonest risk of disease transmission in the dental setting - a medical history alerts the team to the risk, but by adopting standard infection control with barrier protection, effective sterilisation techniques and safety devices for needles, the main holes are blocked.
C-4: If the interests of the patient should always come first, what is the best model for the dental profession as a whole to balance dental/oral health needs with the fear of treating the patient when a new life-threatening disease arises? Dr. Lavanya Reddy (India)

- Balancing dental health needs of those we serve vs fear must take into account the lessons learned from the AIDS pandemic.
- Staying abreast of the latest information to base decision-making on factual information as opposed to fear-induced opinion will lead to reasonable outcomes.
- Dentistry needs to determine if Standard precautions are sufficient to prevent occupational exposure and transmission. For instance, in the case of Ebola, standard precautions would not be adequate.
- Understanding the systemic implications of the new disease and potential consequences to oral health and disease are also vital to ensuring a positive outcome. Educational efforts must occur rapidly to ensure that we meet the needs of the population in a timely, morally sound, evidence-based approach.
C-4: If the interests of the patient should always come first, what is the best model for the dental profession as a whole to balance dental/oral health needs with the fear of treating the patient when a new life-threatening disease arises? Dr Lavanya Reddy (India)

• A model language was presented to describe the tension that forms between fear induced self-protection versus professional duty.

• Research pathway
  – Efficient methods of facilitating change in a healthcare setting.
  – The application of novel engineering solutions to eliminating risk to healthcare workers from needlesticks and sharps injuries (occupational exposures).
“I know I have a big responsibility, because the challenge I face in Indonesia is very tough. It is a long journey to widely open access for PLWH to have dental treatment in all dental clinics. To raise the awareness, I know that action speaks louder than words, so that I have to set an example as a dentist who give treatment to HIV-positive patients. I hope I can start this as soon as possible, and I hope lessons I get here will give much benefit to achieve the vision.” Dr Theodorus Hedwin Kadrianto.
For more comprehensive coverage of WW7, please visit HIVdent.org