

HIV Infection in Sindh, Pakistan: Outbreaks, Challenges, and Recommendations

Nasreen Inayat Bughio

Human Immunodeficiency Virus (HIV) infection remains a significant public health and medical problem worldwide. Today, there are over 40 million persons living with HIV (between the age of 15-49) worldwide. More than 630,000 individuals have died from AIDS-related illnesses in 2022. However, due to adherence to HIV Anti-Retroviral Therapy (ART), AIDS-related deaths have decreased by 69% in 2022¹.

When HIV/AIDS was first diagnosed in the United States of America (USA) in 1981, it was predominantly an infection in young white homosexual men. However, today, in 2024, the groups of persons with HIV infection are diverse – HIV affects persons of all ages, genders, sexual orientations, races, ethnicity, disability, geographic location, or socioeconomic status. and anyone can get HIV infection.

HIV attacks T-Helper CD4 immune cells, weakening the human body's ability to fight off simple infections & cancers. If untreated, HIV infection progresses to Acquired Immuno-Deficiency Syndrome (AIDS). AIDS is the last stage of HIV infection. The progression from HIV infection to AIDS takes about 8 to 12 years.

HIV is spread from person to person through body fluids that contain HIV. These fluids include semen, vaginal secretions, blood and breast milk. HIV infection can occur via (a) Sexual contact-HIV get entry via cut/sores in mucus membranes lining inner surfaces of anus and vagina; (b) Unsafe blood transfusions/donor organs; (c) Sharing needles/syringes/equipment to inject drugs; Unethical practices/sharing of unsafe needles/syringes at local clinics/hospitals/Quacks⁹; Sharing unsterilized surgical/dental/dialysis equipment; Sharing unhygienic barber shop/body piercing/beauty parlor manicure/pedicure/tattoo instruments; Sharing Self-Flagellation/Zanjeer Zani equipment, with someone infected with HIV⁶; (d) Mother-to-Baby during pregnancy, delivery, or breastfeeding³. Please note that HIV is not transmitted by mosquitoes/insects, pets, polluted water or air, sharing food, utensils or toilet seat, or casual contact such as handshake/hugging/kissing^{2,3,7}.

There is no cure for HIV infection. However, HIV-infected persons on anti-retroviral therapy (ART) can live healthy long lives. Today, in 2024, HIV infection is

recognized as a manageable chronic condition.

HIV Infection Outbreaks in Pakistan, especially in Sindh Province

The first case of HIV was reported in 1987. Today, over 200,000 people are living with HIV, and 1000s have died due to AIDS-related illnesses⁴.

In the 1980s, HIV infection was reported in drug addicts only; later, it was diagnosed in sex workers, transgender people (LGBTQ), prisoners, and migrants, and today, HIV is found in the general population.

In Sindh, from 2019 to 2024, HIV infection outbreaks have been reported from several rural and urban Districts, including Mirpurkhas, Badin, Karachi, Hyderabad, Latifabad, Hala, Matiyari, Huseri, Rato Dero and Larkana⁵.

From 2004 to 2019, several HIV Infection outbreaks have been reported in Punjab and Khyber Pakhtoon Khawah provinces of Pakistan⁶.

HIV transmission due to unethical practices, including the reuse of unsterilized needles by medical professionals, barber shop tools used for shaving and male circumcision, and unsafe unregulated blood transfusions, are some of the reasons behind frequent HIV outbreaks in Sindh⁷⁻⁹.

Challenges

Despite 40 years, HIV/AIDS is not well understood by most medical health professionals in Pakistan. HIV is often neglected and sometimes misdiagnosed with viral hepatitis and Tuberculosis.

In general public, Lack of HIV/AIDS awareness in public, including educated persons and medical professionals; Use of HIV-contaminated blood supply; Unsafe heterosexual/homosexual practices; Concealment of HIV positive status; Extra-marital relationships; Prostitution; Transgender/LGBTQ/Hijra/Khusra sex trade; Alcohol and drug abuse; Extensive use of unsterilized needles, syringes, dental and surgical equipment by untrained healthcare staff and traditional healers (Quacks); Sharing of unsterilized razors and other instruments at barber shops/beauty and tattoo parlors/body piercing; are some of the significant factors behind the increasing rate of HIV Infection in Sindh, Pakistan^{8,9}.

Pakistan lacks effective systematic surveillance programs and strict policies to halt HIV spread, and accurate, evidence-based statistics are missing.

Recommendations

HIV / AIDS Awareness - schools and academic centres are the best venues for reaching teenagers,

*Medical Consultant & Policy Analyst / Research Scientist -
Federal Government of Canada, Canada*

Correspondence: bughion@yahoo.com
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adolescents, and adults with the HIV information and skills they need to use to prevent HIV infection. Evidence shows that school-based sex and health education can be effective in changing attitudes and practices that lead to risky sexual behavior in the teenage adolescent community. HIV/AIDS Awareness, Prevention, and Control project is taking place, and thousands of students and staff (aged 12-70) are gaining authentic HIV transmission and prevention knowledge via seminars/walks conducted in schools of Sindh. (personal communication).

There is an urgent need to:

- Prevent new HIV infection cases in Pakistan. We must increase HIV awareness efforts.
- Clarify the difference between HIV infection and AIDS and viral hepatitis.
- Increase the diversity and capacity of the healthcare system, community and public health, and all workforce to prevent and diagnose HIV infection.
- Provide hands-on/on-site HIV Infection training to medical professionals at all levels, from medical students to lower staff to top brass.
- Connected HIV-infected persons to healthcare immediately after diagnosis and must be provided low-barrier access to ART treatment
- Build capacity in the areas of healthcare delivery systems and healthcare workforce to identify, diagnose, and provide needed care and ART treatment to HIV-infected people.
- Reduce HIV-related stigma and discrimination in the general public.
- Train a diverse HIV workforce in rural and urban areas and all ART Centers in Pakistan.
- Improve HIV-related communications to reduce HIV/AIDS myths and misinformation.
- Improve our national HIV / AIDS surveillance system in rural and urban districts and remote areas to measure, monitor, evaluate, and correctly use the information to take the correct action and make the right decisions at the right time¹⁰.

At present, the prevalence of HIV infection in Pakistan is less than 0.1%. However, a steady increase in HIV cases is being reported by the general public as HIV Screening became mandatory in some departments. Pakistan introduced an HIV prevention and Treatment program in 2018. Currently, there are 31 ART Centers in Sindh: Karachi, Hyderabad, Sukkur, Larkana, Sehwan, Benazirabad, Mirpurkhas, Sangher, Thatta, Badin, Matiyari, Noshehro Feroze, Khairpur, Jacobabad, Dadu, Shikarpur and Mithi.

HIV/AIDS awareness, early HIV testing, plus early treatment of HIV-infected persons would help reduce the risk of transmission. There is an urgent need for us as a nation to educate ourselves and others, spread HIV awareness and make a difference in this world. "Be proactive, not reactive".

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