

Do we know enough about HIV in Pakistan?

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In the last few years, Pakistan has been facing a continuous upward trend in Human Immunodeficiency Virus (HIV) cases, but knowledge about this disease is almost non-existent throughout the country. Recent statistics suggest that more than 130,000 HIV positive people in Pakistan are unaware of their HIV status¹ and might be unintentionally spreading HIV, and its lifelong treatment implications, to others.

HIV belongs to a group of viruses called 'retroviruses.' It spreads through certain body fluids (including blood, genital fluids, and breast milk) and attacks the body's immune system specifically the CD4 cells (T cells). This damage to the immune system makes it increasingly harder for the body to fight infections and other diseases. Untreated HIV can lead to Acquired Immunodeficiency Syndrome (AIDS). A person with AIDS has very high levels of the virus in their blood, is at greater risk of other opportunistic infections, and can transmit the disease to others. Therefore, it is very important for HIV+ patients to start lifelong treatment, known as Antiretroviral Therapy (ART), to keep the HIV virus suppressed. Due to recent medical advancements in ART and improved access to healthcare, HIV+ patients rarely develop AIDS once they are on HIV medication.

In 2014, the Joint United Nations Program on HIV/AIDS (UNAIDS) and partners launched the 90–90–90 initiative which aims to: 1)diagnose 90% of all persons living with the HIV disease; 2)provide antiretroviral therapy (ART) for at least 90% of those diagnosed; and 3)achieve viral suppression for 90% of those treated by 2020². In the U.S., most state health departments are making UNAIDS 90-90-90 their action policy to control this epidemic. For example, the state of Rhode Island's Department of Health (RIDOH) adopted the 90-90-90 initiative several years ago. Since then, Rhode Island has been implementing different initiatives to achieve these goals through collaboration with state agencies, academia, and health care organizations. Programs provide services

such as free access to ART for HIV+ patients, close engagement with patients to improve treatment retention, and free needle exchange programs. Through these numerous programs, the state of Rhode Island is getting closer to achieving the 90-90-90 goals with early reports stating that the state is close to 90% viral suppression.

Unfortunately, Pakistan is on the opposite spectrum of the 90-90-90 initiative goals, according to a recent World Health Organization (WHO) report¹ published on World AIDS Day 2018: 1)Pakistan is registering 20,000 new HIV infections annually, the highest increase among all countries in the region, 2) Only 16% of the estimated 150,000 people living with HIV have been tested, and 3)Only 9% of those tested are on Antiretroviral Therapy. No statistics on the number that are engaged and retained are available. It is likely that these same individuals are spreading the virus unintentionally. Conversely, in almost all research studies conducted until December 2018, HIV was mostly reported and cited within specific key populations³, though infection is likely to exist within the general Pakistani population as well.

Since April 2019, the HIV landscape completely changed in Pakistan when more than 900 people were diagnosed with HIV (with 82% children under 15 years of age) in Sindh, Pakistan. So far, reused contaminated syringes are cited as the major cause of this outbreak⁴. More in-depth analyses are underway by WHO to identify the root cause of this rare outbreak, one that has raised serious issues for the healthcare sector in Sindh but is also a wakeup call for the entire country.

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Stigma related to HIV disease in Pakistan is very high and its transmission modes are not discussed at public forums. Knowledge is limited even within Pakistan's healthcare community. It is important for all levels of healthcare providers including physicians, nurses, paramedical staff, and home healthcare workers to obtain information on the transmission modes of HIV, accurate diagnoses, and proper disease management, to keep patients and communities healthy and safe.

Now is the time to start prevention and awareness efforts by educating the general population about HIV and its modes of transmission. Some observed modes of HIV transmission cited for Pakistan in various studies³ include re-use of syringes, shared needles by injectable drug abusers, use of contaminated syringes and other instruments in hospitals and non-traditional health care settings, sex workers (including transgender sex workers and men who have sex with men), unprotected sex with any HIV+ person, perinatal HIV transmission (mother-to-child), and use of contaminated instruments by non-traditional service providers (including workers in barber shops, beauty salons, ear piercing, and tattoo making facilities, to name a few). It is also important to educate the already diagnosed HIV patients and their families about available treatment options and the importance of starting and continuing ART medicines.

A few days before the HIV outbreak in Larkana, Sidh, during a young professionals training seminar held in Boston, Massachusetts, U.S., a short survey about "HIV Awareness in Providers" was given to the participants who were mostly fresh medical graduates from different medical schools in Pakistan looking for residency options in the U.S. Out of the 26 respondents, 90% agreed to the question, "Do you think HIV is an emerging threat to Pakistan's health care sector?", but only 50% responded "yes" to the question, "If you are working as a medical doctor in Pakistan, do you think you can discuss HIV disease with your patients and ask them to go for HIV testing?" Though it is a small sample, these results suggest that our young generation of Pakistani physicians need more awareness and training about infectious diseases and their transmission modes, open provider-patient communications, and methods to reduce stigma by providing more knowledge about the disease and preventive strategies in local communities.

Medical colleges in the country can play a vital role in controlling infectious diseases such as HIV, Viral Hepatitis, Tuberculosis, and others. Medical colleges can: 1) Offer

more courses in the emerging and re-emerging infectious diseases, 2) start different educational campaigns at different platforms to promote open debates, 3) encourage their own medical school students and faculty to start community service projects geared towards awareness and prevention, 4) encourage more students to do research on HIV and infectious diseases and present at different platforms, and 5) help nursing and allied health sciences schools to develop and update their curriculums focusing more on prevention and awareness activities.

Since most transmission modes are essentially similar for HIV and Hepatitis, any prevention and awareness campaigns designed for one disease will help control the other. It is suggested that medical professional institutions as well as other educational institutions in Pakistan should start open dialogue about these infectious diseases that can be prevented through specific education, arrange more talks on this topic within their own communities, and increase awareness which perfectly aligns with the Government of Pakistan's national strategy on prevention and control of HIV and viral hepatitis.

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