



## Prevalence of Human Immunodeficiency Virus Infection in Rural Pakistan

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### Dear Editor-in-Chief

Pakistan is among few countries in Asia where new human immunodeficiency virus (HIV) infections are increasing year by year since its emergence nearly 31 yr ago. However, since 2013, there were substantially more deaths and cases as compared to previous years. There were 83,468 HIV infections in 2013, 97,400 in 2014 and 100,000 in 2015 (1). According to most recent data from National AIDS Control Program (NACP), the aggregate numbers (133,000) are reaching alarming proportions and this lethal disease took the lives of about 9,000 people during 2016-17 across the country (2).

A recent study has presented the total HIV infections in Pakistan and an outbreak in a village near Kot Momin, Sargodha, Punjab (3). The study also mentioned several factors contributing to HIV spread in rural Punjab, Pakistan. Punjab, the most populated province, which accommodates almost 50% of the country's population has the highest number of HIV/AIDS patients (4). However, a study (3) showed the HIV infections in just a small village of Punjab and the data only represent the tip of the iceberg relative to the aggregate number of infections. Therefore, there is a dire need for

rapid and reliable screening for HIV in villages of Punjab with high-risk populations to identify the infection, as early diagnosis is key to successful treatment of HIV.

To investigate the seroprevalence of HIV, between Feb and Sep, 2017, a multicenter cross-sectional study was carried out in different villages and semi-urban areas of five big cities (Chiniot, Sargodha, Rawalpindi, Multan, and Dera Ghazi Khan) of Punjab Province. We offered a confidential, voluntary, and free-of-charge rapid immunochromatographic screening tests (SD BIOLINE HIV-1/2 3.0, South Korea) for the participants. Finger-prick blood samples of 2,062 participants consented to the study were tested for HIV and hepatitis C virus (HCV) (SD BIOLINE HCV, South Korea).

The outcome stunned the investigators when 329 out of 2,062 participants were positive for HIV. Of these 329 infections, 78% were HIV-1 type and 22% were HIV-2 type. Male infections accounted for 51.4% while female were 31.3% and 17.3% people were transgender. In our study, 14.2% infections with HIV were co-infected with HCV. The 20–30 yr age-group was found to have the



highest HIV prevalence while 5% infections were found in 10–20 yr age-group. The highest number of infections (72 [22%] of 329) were reported in Multan, followed by Dera Ghazi Khan (21%), Sargodha (21%), Rawalpindi (19%), and Chiniot (17%).

These numbers in a rural community are alarming. Because these data are from rural and semi-urban areas, it would be premature to draw broader conclusions regarding the prevalence of HIV across Punjab province. Nonetheless, the findings are concerning, and should prompt the implementation of active monitoring and prevention measures. Therefore, we would like to draw attention to the health concerns that HIV poses in Punjab Province. Active measures should be put in place as soon as possible to prevent more infections and to minimize their potentially devastating health consequences in the near future.

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## Conflicts of interest

The authors declare that there is no conflict of interest.

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