

Why HIV infection rates are on the rise

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Since HIV infection rates began to rise again around 2000, researchers have been grasping for answers on what could be causing this change, especially in the homosexual community. The rising numbers are a stark contrast to the 1990's, when infection rates dropped due to increased awareness of the virus. A new study in Israel reveals that the number of new HIV cases diagnosed each year in the last decade saw a startling increase of almost 500% compared to the previous decade, and similar trends have been reported in a number of other developed nations, including the U.S.

According to Prof. Zehava Grossman of Tel Aviv University's School of [Public Health](#) at the Sackler Faculty of Medicine and the Central Virology Laboratory of the Ministry of Health, a new approach to studying HIV transmission within a community has yielded a disturbing result. By cross-referencing several databases and performing a molecular analysis of the virus found in patients, an astonishingly high number of newly-diagnosed men with male sexual partners were found to have contracted the virus from infected, medicated partners who are already aware of their HIV-positive status.

Reported in the journal [Clinical Infectious Diseases](#), these findings indicate that the public health approach towards HIV counselling and education needs to be reconsidered, Prof. Grossman says.

Bypassing the questionnaires

Researchers had begun to suspect that the rise in [infection rates](#) was due

to a change in social behavior, but hard evidence was lacking. The answers, Prof. Grossman says, were not easy to find by asking the patients themselves. Questionnaires and similar methods to gather information are hard to interpret because, in addition to the difficulty of recruiting an accurate cross-section of the population, people are often unwilling to be frank about [risky sexual behavior](#).

To unravel the mystery, Prof. Grossman and her colleagues at the Central Virology Laboratory directed by Prof. Ella Mendelson and Israel's leading AIDS clinicians turned to the virus itself. Working with senior epidemiologists of the Public Health Services of Israel's Ministry of Health, they conducted a comprehensive analysis of laboratory, clinical, and epidemiological data, including information about patients' diagnosis and treatment, sexually transmitted diseases contracted along with HIV, and the molecular characteristics of the virus in different patients.

Prof. Grossman and her colleagues found that an overwhelming number of new cases were infected with HIV strains that had already developed resistance to existing HIV drug therapies. Because the virus can only become resistant if previously exposed to medication, this result indicates that new patients are often infected by an HIV-positive partner already receiving the therapies. More often than in the past, HIV found in different patients could be traced back to a common source.

Changing the educational approach

While people are now more knowledgeable about the virus and aware of the risks of unprotected sex, it appears that an increasing number of homosexual men, including those who are infected and treated for [HIV](#), are likely to engage in risky sexual behaviour. Public health authorities, educators, and activists should be encouraged to find new ways of changing this attitude and of better imprinting the message about the risk

and consequences of [HIV transmission](#), particularly within the gay community.

Clearly, Prof. Grossman warns, the need to establish the values of safe sex within at-risk populations is as imperative as it has ever been.

Provided by Tel Aviv University

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