



The Potential for HIV Self-testing in Iran

Fatemeh Jahanbakhsh¹, Ehsan Mostafavi^{1,2}, AliAkbar Haghdoost^{2,3}

¹Department of Virology, Pasteur Institute of Iran, Tehran, Iran, ²Regional Knowledge Hub, and WHO Collaborating Centre for HIV Surveillance, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran, ³Research Center for Modeling in Health, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran

Correspondence to:

Dr. AliAkbar Haghdoost, Regional Knowledge Hub, and WHO Collaborating Centre for HIV Surveillance, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran. E-mail: ahaghdoost@kmu.ac.ir

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DEAR EDITOR,

HIV rates in Iran have been increasing rapidly each year over the past decade; 27,000 individuals registered and 100,000 estimated to be HIV positive in Iran, which means that approximately 75% of those who are HIV positive, are unaware of their HIV status.^[1,2]

People who inject drugs (PWIDs) are one of the key populations at higher risk of HIV in Iran^[3] and the highest HIV incidence rate in Iran was estimated among injection drug users with more than 2500 in 100,000. About half of the HIV positive cases are in the 25–34 age.^[4]

According to the World Health Organization, despite the dramatic increase in the acceptability of HIV testing, it seems that about half of people living with HIV are unaware of their status, a factor that is seriously hampering the global response to the HIV epidemic.^[1,4] Inadequate knowledge of HIV status will compromise effective HIV prevention, care and prompt treatment. HIV testing uptake increased dramatically in recent years in resource limited setting such as Iran. Nevertheless, there are reasons for not actively seeking an HIV test from current strategies, including fear of stigma and discrimination, perceived lack of confidentiality, and inconvenience and opportunity costs of testing.^[5] Ending the HIV epidemic will not be possible without increased efforts to diagnose people living with HIV earlier, expand treatment coverage, and prevent new infections. Late patient identification remains a major contributor to HIV transmission and also to HIV-related mortality.^[2,5,6]

Self-testing for HIV (HIVST) is an additional HIV testing option that enables individuals to find out their HIV status in private.^[7-9] HIVST is a process in which an individual collects his/her sample, generally performs

an HIV rapid diagnostic test and interprets the test result.^[9-11] HIVST is an emerging approach that is both well-accepted and potentially cost-effective. It has a potential to facilitate further uptake of HIV testing particularly in high risk population.^[9] Other potential benefits of HIVST are less resource intensive with respect to the healthcare system, it empowers users, thus helping to normalize testing, reduce stigmatization, increases patients autonomy and mutual partner testing.^[6] HIVST could provide convenient and anonymous HIV testing to anyone who wants to do testing. In particular, depending on cost and availability, self-tests can benefit people who experience significant barriers to health care and people living in rural and remote communities where health care isn't always anonymous or confidential.

Early identification of HIV-infected individuals can lead to the timely commencement of treatment and subsequent effective management of the illness.^[7,8,12] Features of HIVST has potential to increase, coverage of HIV testing and HIV treatment.^[10,11,13-15] As people who are HIV positive and are aware of their status are more likely to change their behavior to reduce the risk of transmitting HIV to others, the use of HIVST can result in a public health benefit and impact on the epidemic.^[9,16,17] The real benefit of HIVST would be in a concentrated setting possibly for high incidence groups like PWID and female sex workers, who are driving the epidemic and are afraid to access services because of stigma and discrimination or other prosecution.

In Iran, the case for HIVST would likely be to serve key population like, PWID, who are afraid to access services because of stigma and discrimination or other prosecution.

The users of HIVST kits should be aware that HIVST does not provide a diagnosis. All reactive (positive) self-test results need to be confirmed according to the national

algorithms. It is essential that this information also be provided to users on the test performance (sensitivity and specificity), potential for user error, false-negative results during “the window period” and the importance for those at high or on-going risk for HIV to re-test including the possibility of false negative results in those with early or acute infection and false-positive results, particularly in low prevalence settings.^[18,19]

Although the HIVST has been incorporated into national HIV programs in high prevalence countries such as Kenya, USA, Zambia, Malawi, Mozambique, Zimbabwe and it is in the process of being included in South Africa, and in some low prevalence countries, such as Hong Kong, Macao, Australia, UK, France, and the USA, it has not yet been implemented formally in health or alternative settings of most countries, Middle East or North Africa (Eastern Mediterranean Regional Office) including Iran.^[11,20,21] Introduction of the home based rapid HIV-1 test (OraQuick In-Home HIV Test) in 2012 for over-the-counter sale, by the United State Food and Drug Administration, provided the opportunity to move HIV testing from the laboratory to clinics and outpatient settings.^[6]

It would therefore appear necessary to revise the current HIVST policy in Iran. From 2012, the HIV rapid test has been used in Iran’s health system as the first step of screening suspected HIV cases, followed by ELISA and western blot test for positive samples. The use of HIV rapid tests for self-testing is illegal and these tests are limited to the triangular clinics (that test, treat, and consult patients) and medical universities with pre and post-test counseling. In practice, some of the individuals go to diagnostic laboratories for illegal HIVST and, therefore, receive no counseling and are rarely linked to care. There is evidence to show that HIVST is being carried out informally in an unregulated manner with poorly regulated HIV rapid test kits that are purchased through pharmacies. The current evaluative approaches in Iran overlook substantial numbers of HIV-infected persons, who may be detected at a later than optimal stage.

The main HIV transmission route in Iran used to be via drug injection: However, recently HIV infection is increasingly being driven by unsafe sexual practices markedly common among Iranian youth.^[2] Substances and alcohol use increases the risk of unsafe sex practices which can lead to HIV infection. All these behavior and having extra-marital relations are illegal in Iran.^[22,23] The individuals who engage in such high risk practices presumably visit clinical settings to test their HIV status rarely.^[24] If these people get infected with HIV, their sexual partners will also be at high risk of HIV infection. Use of a standardized HIVST by these individuals can be helpful in controlling the HIV epidemic among these

high risk groups. Other studies have shown that HIVST is an acceptable testing method for high risk groups.^[6,25] Changing the Iranian HIV transmission route from drug injection to sexual contact. These people who are at high risk of HIV sexual transmission are more educated thus are more care about their and their partners health.^[11] With regards to the young high risk population in Iran and it has already shown that young people are more willing to do self-testing,^[6,26,27] promote and facilitate correctly using of HIVST kits in Iran. HIVST kits have the potential to reach high risk people who otherwise may never seek HIVST. These kits can facilitate mutual partner testing and can avert unprotected sex between discordant partners.

In Iran, like other HIV areas,^[28] stigma is considered to be the greatest obstacle for adopting HIV/AIDS precautionary behaviors, such as HIV voluntary counseling testing. By removing the legal obstacle to HIVST, Iranian people would be able to check their HIV status and it can help reducing stigma surrounding them. As the access to health care providers may be reduced in small cities in Iran, HIVST is possibly a good alternative. If HIVST was legalized in Iran, there are strong grounds to believe that legalization will increase the practice of HIV testing, which is a major health target for the country. Results from studies carried out in the USA and in other countries are encouraging and have begun to change the thinking and debate around HIVST.^[6]

A commonly raised concern with regards to HIVST is the absence of pre- and post-test counseling, so in the setting that HIVST is well incorporated in health system, written instruction and caution are provided, as are toll-free telephone services or Internet for counseling and linkage to care.^[19,29,30] Several studies have been conducted to determine the best methods of creating a HIVST with linked counseling and referral services available in different countries. In summary, legalizing HIVST in Iran can truly respect patients’ autonomy and have significant implication for HIV screening, preventing increase the uptake of HIV testing, HIV transition among high risk people and mutual partner testing has the potential to increase awareness of risk and avert unsafe sex. In the other hand HIVST has disadvantages including; false negative results, especially during the window period, counseling, and linkage to care. By looking at the global evidence on HIVST strategies based on acceptability, feasibility, accuracy, and success with linkages to care, the most compatible strategy can be selected to put into practice in the country. Providing a written Persian guide for users of these kits in the country is another option for ensuring onward referral for HIV positive patients. People should

be allowed to choose where, when, and how they are tested for HIV. When appropriate HIVST kits are available, people need to be in a position to benefit.

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