

## Rationale of HIV Testing in Nepal

\*Dr Benu Bahadur Karki

### INTRODUCTION

Human Immuno-deficiency Virus (HIV) is a causative agent of Acquired Immuno-deficiency Syndrome (AIDS). HIV has quite a long incubation period ranging from 2 to 10 years. Until AIDS is developed such person remain as healthy as any body else with no obvious signs of the disease. Actually AIDS as such is not a disease by itself, but a condition which depletes body immunity to a very low level when he/she can be easily attacked by any diseases often not responding to routine treatment regimen. Since it has no vaccine or any drug to cure, it is of much concern to people around the World.

AIDS was first diagnosed in USA in 1981. It is believed that by this time already about 100,000 people were infected with HIV in about 20 countries.<sup>1</sup> This virus was isolated in 1984 and its test was commercially available throughout the world in 1985. It became easier for scientists to study the epidemiological aspect of HIV and individuals to know their HIV status. To date 14 million people are estimated to have been infected with HIV of which 3 million have already developed AIDS. This convenience also brought various misconceptions among the professionals particularly regarding the role of HIV tests all over the World.<sup>2</sup> Such misconception also exists in Nepal even today and if HIV testing can be made easily available in all hospitals doctors would like to do it among all inpatients particularly those needing surgical procedures. The argument behind these tests is it makes easier to treat other cases or for the health

workers themselves to take precaution. The purpose of this article is to discuss the HIV test related issues at length so that people in the medical profession are well convinced not only in stopping its unnecessary use but also in making its proper use whenever necessary.

### TYPES OF HIV TESTS:

There are various types of kits available for carrying out anti-HIV tests. The Enzyme Linked Immuno Assay (ELISA) and rapid or simple instrument free tests are some of the commonly used tests designed to detect HIV-1 and HIV-2. Unlike in other diseases it is highly essential in case of HIV/AIDS that a person is truly identified of his or her status due to its serious prognostic implication. Therefore it is always essential that all positives are confirmed with another test.

ELISA test is less expensive, but takes more time. It needs a good training of laboratory staff to read it and an equipment, ELISA Reader for its accurate reading. It has an advantage that large number of samples can be tested in a short time. Western blot takes short time. But it is quite expensive not easy to read or standardize and often gives indeterminant results.<sup>3</sup> Therefore a two tier system of testing is suggested in which sera that are reactive on initial testing are retested with a second (supplemented) test either ELISA or a simple test other than Western blot. However a single tests does not confirm HIV-1 and HIV-2 at the same time. Separate tests need to be carried out specific to HIV-1 or HIV-2. It may be Western blot or other

---

\* Chief, National AIDS Prevention and Control Project, Teku, Kathmandu, Nepal.

supplemental test. Using a separate Western blot becomes more expensive particularly when HIV-2 is non-existent or not identified so far in Nepal. In addition to this it is often difficult to differentiate HIV-1 and HIV-2 due to cross reactivity of antibodies even with specific Western blot assay.<sup>4</sup> Though combined HIV-1 and HIV-2 screening assays are available and often used in Nepal, they are not distributed to outside hospitals for different reasons. Therefore for the time being the policy of the National AIDS Prevention and Control Programme is to have ELISA test done in all sentinel hospitals and get HIV positives confirmed in the National Public Health Laboratory, Kathmandu.

### PURPOSE OF HIV TESTING

HIV test is decided to be done only when it is expected to be useful in some or the other way. Therefore the World Health Organization (WHO) has recommended this test only for few selected purposes.<sup>5</sup>

- a) Screening of blood including blood products; and organs and tissues for transplantation.
- b) Epidemiological surveillance, particularly HIV sentinel surveillance using unlinked anonymous HIV testing methodology, where all personal details of a person being tested are removed from the blood samples so that the result of HIV testing cannot be linked with the identity of such person. Thus the identity of any person likely to be positive is concealed purposely from both the parties, the person being tested and the health worker. The purpose of such surveillance is to understand the overall HIV positive status of any community or country as a whole as an indicator to the HIV prevention efforts made or to plan future activities accordingly.
- c) Testing for HIV, if it is expected to influence the decision on diagnostic procedure and therapy. For example a person suffering from focal neurological deficit testing as HIV positive can be treated for toxoplasmosis and not otherwise for fear of toxicity to drugs. This

can avoid unnecessary expenses on various tests and treatments to the patient and frustration to the treating physician.

- d) Persons with risky behaviour may like to know their HIV status and get themselves tested. But such tests (c and d) should be carried out strictly confidentially, with consent from the patient who knows very well all the consequences of such tests.

The National AIDS Prevention and Control Programme does not consider any individual to undergo HIV test in any circumstance are available in selected hospitals like Jhapa, Morang, Dhanusha, Sindhupalchowk, Kathmandu, Nuwakot, Kaski, Rupandehi, Banke and Kanchanpur on an unlinked and anonymous basis, in almost all blood banks to screen blood samples and at the AIDS project office on every Monday and Friday for voluntary confidential testing.

One of the commonest experiences, we have is few young individuals come to us to have their HIV test done as they have to produce it along with the visa application for certain countries. We see absolutely no reason for this. Because if such individuals have acquired the disease in less than 6 weeks they may not show any HIV positive (Window Period) but still able to transmit the virus to others.

### PUBLIC HEALTH RATIONAL AGAINST MANDATORY TESTING:

When any test is carried out it can have two objectives:

- a) to diagnose the disease and/or
- b) to take preventive measure by using vaccine. Both these measures do not work in case of HIV infection, as already mentioned neither there is drug to cure nor vaccine to prevent this infection at present.

If any test is made mandatory there can be number of repercussions which need to be considered carefully, particularly in case of foreigners, refugees, hospital patients or

individuals engaged in high risk behaviour like commercial sex workers and their clients. First of all one should not ignore the human right that one is not supposed to be forced to undergo such tests. The 45th World Health Assembly to which all countries were signatories noted that there is no public health rational for any measure that limit the rights of individual notably measures establishing mandatory screening.<sup>6</sup> In fact various studies and experience all over the world have established number of public health reasons against mandatory HIV testing.

- i) HIV test carried out under well informed consent and a good counselling is likely to bring behavioral changes which is so essential in prevention of HIV transmission. If HIV test is made mandatory then the risky population tend to go underground and they continue to carry out their behaviour in a very unsafe manner as they will not be easily available for health education.
- ii) Generally the concept of health workers is that if they identify the HIV positive people it will be easier for them to manage cases. But such thinking can even damage their reputation. Because it may never be possible to identify all the positive people. Similarly the public may think that since all HIV positives are identified they may not take any precaution. In fact it is the HIV negative people who have to be always careful so that they can avoid contacting such incurable disease. Thus it is obvious that all the HIV positive and more so negatives people have to take precaution so that either they do not infect others or infect themselves. Under such circumstance testing anybody to know anybody's HIV status can have no meaning.
- iii) If HIV positive report is given to a person without any counselling to him/her it can sometimes be much damaging to the extent of committing suicide. The torturous response from the community in discriminating or stigmatizing or from the government or the employer in terms of putting in quarantine or in countries where human rights are easily violated, people are executed are some of the painful examples.

iv) The HIV test itself need not always be reliable, besides its cost. Particularly in development countries the test result can be questionable as quality control measures tend to be inadequate,<sup>7</sup> negligible or totally absent. The cost issue cannot be easily ignored, particularly when more people turn to be positive and various unwarranted financial constraints keep on appearing in a poor country like ours.

### HIV TESTING IN HOSPITALS/ NURSING HOMES

Occupational injuries occur quite often in hospitals. This includes needle prick, scalp cut, and contamination of patient body fluids to health workers raw areas. It was observed in a study that 58.4% of exposures occurred due to needlesticks, 22.7% and 11.2% due to non intact skin and mucous membrane contamination respectively and 7.7% due to cuts.<sup>8</sup> Many health workers mistakenly believe in mandatory testing of all patient so that they can accordingly take precautionary measures. However the experience in the past shows far few such incidence. In USA out of 250,000 AIDS patients diagnosed only 8,467 were identified among health workers and only 6 (0.07%) of them were due to occupational transmission in health care settings.<sup>9</sup> Though many more such injuries occur unnoticed every day, so far only 30 infections have been documented due to needle sticks. It is seen to be less than 0.4%.<sup>9,10</sup> There are other ways as well through which HIV transmission can take place. But they are still more rare. Therefore no mandatory test is in use in many countries including the United States which have collected enough experience with HIV/AIDS. Instead the strategy of universal precaution is well adopted in all these countries and transmission of HIV/AIDS prevented effectively among health workers.

Certain hospitals, nursing homes or blood banks tend to routinely carry out HIV test in antenatal cases, STD patients and blood donors. Argument in favour or against these test are often made. Whatever may be the case

pre-test counselling should always be given in all these instances and people allowed to make their own decision. The scientific community feels the same in case of STD cases that they should not be resorted to mandatory testing.<sup>11</sup>

## COUNSELLING AND VOLUNTARY TESTING

The National AIDS Prevention and Control Programme considers it quite essential that any case which is suspected to have an HIV should receive pre-test counselling then only HIV test should be carried out with their consent. Such tests should be kept quite confidential. Once the result is available it should always be followed by a post-test counselling irrespective of the HIV status of the person tested. Such counselling services should also be supported with other facilities like provision of condom, STD treatment, and facilities for care and treatment of opportunistic infections. If pre-test counselling is done in a satisfactory way it can even reduce the number of people coming with request for HIV tests.

## CONCLUSION

HIV/AIDS is essentially a sexually transmitted disease, like some other diseases it can also spread through blood and from an infected woman to her unborn or new born child. Therefore the WHO Executive Board has suggested the global strategy for the prevention and control of AIDS to organise activities aimed at preventing the transmission of HIV through these three routes.<sup>12</sup> To carry out these preventive activities it is not essential to make the HIV test mandatory for the following important reasons:

i) Once positive people are identified unfortunately they will often be stigmatized and discriminated against even by close relative and health care workers. There are instances when HIV people are chased out of village when there may be many around us living together with us with HIV positive status but strictly confidentially. Imagine, after all what difference has it made.

ii) Before and after identification of people with HIV positive there can be no change in approach to their treatment particularly when we are not even in a position to provide basic health care leave alone a quality health care to such people. It is often said that once they are identified they can be convinced to take preventive measures so that others are not infected. However, in actual situation it is doubtful that how often it really happens. Because it is not uncommon for us to read in newspapers about intentional transmissions even by well educated people. Therefore it is HIV negative people who should be aware and take precaution if they want to continue to do so. In case HIV transmission takes place due to HIV positive people not taking precaution except anger, hate and frustration nothing can be done to them. This also if a definite source is known. Thus whether HIV positive or negative all have to take precaution though with different objective. Also the experience elsewhere in the world has shown that ultimately both health care workers (HCWs) and patients will be protected best by compliance with infection control precautions and by development of suitable instruments, protective equipment and technique that reduce the likelihood of sharp injuries to HCWs without adversely affecting the patient care.<sup>13</sup>

iii) Besides the need of the test its costs, feasibility and reliability also cannot be ignored. There is no single test or combination of various tests reliable for HIV testing objectives.<sup>14</sup> Although the Enzyme Linked Immunossay (ELISA) is comparatively cheap, even it is not feasible to make it available in all hospitals due to the need of training and sophisticated equipments for this purpose. Moreover any blood sample that tests HIV positive needs to be confirmed with another test which still adds the costs. HIV tests can also be carried out by using urine or saliva which may be cheaper. But this technology is yet to be made available commercially. Thus it is essential that in a country like Nepal simple, easy and effective technology already available should be advocated widely and utilized. There is no use investing a huge human and financial resource on something which is known to be

only of little use or none at all. To conclude, in a developing country like ours there is no evidence that HIV testing helps to reduce the HIV infection except ensuring a safe blood supply. Therefore until there is an improvement in the quality of health care HIV testing for diagnostic purpose is generally not

appropriate. Let all of us think it carefully before subjecting any person for HIV testing. After all our common concern is the welfare of humanity, care and comfort, certainly not identify only to hate and discard them.

## REFERENCES

- Jonathan M. Manns et al editors, AIDS in the World, The Global AIDS Policy Coalition, pg 17-18, 1992.
- JP Narain et al, Indian J. Med. Res. [A] 97, pg 219, November 1993.
- J. Mortimer. An alternative approach to confirmatory anti HIV reactivity: a multicountry collaborative study. Bulletin of World Health Organization 70 (6): 751-756 (1992).
- WHO, Weekly Epidemiological Record Pg 37. 11 February 1994.
- WHO Global Programme on AIDS. Recommendations for the selection and use of HIV antibody tests, weekly Epidemiological Record No. 20, 1992 Pg 145-149.
- World Health Assembly Resolution 45-35, May 1992.
- Robert Colebunders, Peter Ndumbe, Priorities for HIV testing in developing countries, The Lancet, Vol. 342, September 4, 1993 Pg. 610-602.
- Ippolito G. et al. The Risk of occupational HIV infection in Health Care Workers Arch. Int. Med. 153 (12): 1451 - 1458 June 1993.
- Ciesiojski et al. International conference on AIDS, Amsterdam, 1992 (Abstract POC 4143).
- Report of a WHO consultation on the prevention of Human Immunodeficiency Virus and Hepatitis 'B' Virus transmission in the Health care setting - Geneva 11-12 April 1991.
- WHO Global Programme on AIDS. Statement from the consultation on Testing and counselling for HIV infection, Geneva 16-18, November 1992. WHO GPA/INF/93.2
- WHO Global strategy for the prevention and control of AIDS 1992 update, EB 89/INF. DOC/2.
- Bell D.M. et al Preventing HIV transmission to patients during invasive procedures. Journal of Public Health Dentistry 53 (3): 170-173 Summer 1993.
- H. Tamashiro et al. Reducing the cost of HIV antibody testing. The Lancet, Public Health. Vol. 342, July 10, 1993.