

## **WHO; Guidelines for personnel involved in collection of skin smears in leprosy control programmes for the prevention and control of possible infection with HIV**

### **I Introduction**

Acquired immunodeficiency syndrome (AIDS) is a serious clinical condition with various manifestations characterized by underlying cellular immunodeficiency. A recently discovered human immunodeficiency virus (HIV) is considered to be the aetiological agent of AIDS. HIV has been demonstrated in several body fluids; however, epidemiological evidence has thus far implicated only blood, semen and vaginal/cervical secretions in transmission of the disease. The virus is quite delicate and can be easily inactivated following treatment with recommended strengths of disinfectants containing sodium hypochlorite, formaldehyde, or alcohol. Worldwide, the most important mode of transmission is sexual contact; however, the accidental or intentional sharing or re-use of contaminated (unsterilized) needles, syringes, scalpels, razors or other skin or mucous membrane-piercing instruments could transmit HIV. Thus, it is important to be sure that health workers (HWs) are familiar with basic practices in infection control.

### **II Recommendations for health workers involved in leprosy control programmes, particularly in areas where HIV infection is known or suspected to exist**

The potential for the spread of HIV infection during routine slit-skin smear taking is probably quite low. However, in order to eliminate any risk of transmission of HIV, either from patient-to-patient or patient-to-HW, the following recommendations which apply to preventing transmission of any bloodborne infectious disease should be strictly observed. Principles of good hygiene, sterilization, antisepsis and disinfection provide the basis for these recommendations:

1 The instruments commonly employed for collecting skin smears include scalpels, scalpels with detachable blades, razor blades etc. Ideally one should use scalpels with sterile detachable blades so that the blades can be disposed of after use. However, in many situations this may not be feasible and, in such situations, it is extremely important that the scalpels or scalpel blades of the reusable type are subjected to strict sterilization procedures (see Section III) in order to prevent potential patient-to-patient transmission of HIV. In field programmes where it may be necessary to collect smears from a number of patients, it will be necessary to carry the required numbers of sterile scalpel blades.

2 It is important that the HWs handle the sharp instruments employed for skin smear collection with extreme care to prevent accidental injuries to themselves. HWs, particularly those with injuries or sores on their hands, should wear gloves to protect themselves against contact with patients' blood or smear material either during collection of smears or during handling of the slides. Blood or other bodily fluids spilled on the skin of HWs should be removed with cotton soaked in a disinfectant (ethanol or chlorine solution). HWs should wash/disinfect their hands following completion of smear taking. All materials contaminated with blood should be sterilized or discarded in a safe manner, e.g. burning.

### III Disinfection and sterilization

Recent studies have shown that disinfectants commonly used in laboratories and health care facilities will kill HIV at concentrations much lower than those commonly used in general practice. Routine sterilization and disinfection procedures used in health care facilities and in laboratories do not need to be altered because of a concern for HIV.

1 Commonly available effective disinfectants are: (a) *Ethanol*: 700 g/litre (70%). 20 min contact time. (b) *Formaldehyde as Formalin*: 50 g/litre (5%). 20 min contact time. (c) *Chlorine–Sodium hypochlorite*: 20 min contact time.

A solution of 5 g/litre (0.5%) as available chlorine is recommended for general use. When using hypochlorite solutions, it is to be remembered that they gradually lose strength, necessitating daily preparation of fresh solutions. Care is required in preparation of the use solution from stock solutions, as the amount of available chlorine in stock solutions varies with the country of manufacture, usually between 5–15% as available chlorine.

2 Sterilization. Ideally, all reusable instruments and instruments entering the blood stream or tissue should be sterilized by steam under pressure (autoclaving). Autoclaves should be operated at 121°C (250°F) for a minimum exposure time of 20 min. Such equipment may also be decontaminated by boiling for 20 min.

### IV Injections and biopsy collections

The above procedures, in general, are also applicable for the safe use of syringes for administering injections, or the safe use of instruments for collecting biopsies. While, under ideal circumstances, disposable syringes or other instruments are preferable, it may not always be feasible. In such circumstances, it is important therefore that strict procedures are followed for sterilizing reusable syringes and other instruments as indicated above.

### V Conclusion

Skin smear examination remains an important part of leprosy control work and will continue to be a very safe procedure both for the patients and HWs provided the necessary simple precautions outlined above are strictly followed.