17.8: Laboratory health and safety

Detailed attention to health and safety are key aspects of any laboratory. This may be of special importance in some field laboratories, as they may be relatively accessible by the public or have other specific safety risks. It is important therefore to ensure that each laboratory has its own health and safety manual, addressing both general and specific risks, and that this is read by each new staff member or authorized laboratory visitor. A process of evaluation should be instituted to make sure that all the staff understand the health and safety rules, before performing laboratory tasks. If field staff are to collect and perform primary processing of samples, they will need to be made aware of potential risks. Procedures that will need to be covered will include disposal of needles, blood, stool, urine, and sputum samples, and of used reagents, chemicals, and detergents. Usually, all sharps should be disposed of in special sharps containers, which should be returned to the base laboratory for final disposal. Special attention should be paid to precautions concerning the transmission of blood-borne infections such as hepatitis B and HIV, and specific instructions given for what staff are to do if they are inadvertently exposed to potential infection. It should be standard procedure that field laboratories have at least a starter supply of antiretroviral drugs for HIV post-exposure prophylaxis if blood is being collected or processed. This is obviously even more important in high HIV prevalence areas. Adequate personal protective equipment should be made available for the type of samples to be collected.

Safety procedures should be regularly reviewed by laboratory supervisors and all staff concerned. Laboratory safety guidelines are given in World Health Organization (2004).