

# Infection Control Practices in Clinical Laboratories in Pakistan

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November, 2006

## Abstract

Clinical laboratories in Karachi, Pakistan, were evaluated for adherence to standard precautions using an observational checklist. Among 44 laboratories, gloves were used in 2, protective gowns in 12, disinfectant in 7, and an incinerator in 7. Standard worker safety precautions are not followed at major clinical laboratories in Karachi (Infect Control Hosp Epidemiol 2003;24:141-142).

Clinical laboratories are not registered in Pakistan and there are no monitoring bodies or laws to ensure the quality of their services. The prevalence of hepatitis B virus infection is high among healthcare and laboratory workers, affecting 20% of housekeepers at one medical center<sup>1</sup>. This suggests that practices in clinical laboratories may not be safe, particularly for laboratory personnel. We evaluated the adherence of technical staff of clinical laboratories in Karachi, Pakistan, to standard safety precautions.

## Methods

A team of five leading pathologists and technologists identified 50 major clinical laboratories in the city on the basis of high workload. Each identified laboratory was visited during working hours in June or July 2000 and practices were observed. An observational checklist was used to determine adherence to universal precautions while working in each laboratory.

If any one technician was found wearing gloves while working, the laboratory was reported as using gloves. If any technician was found wearing a gown while working, the laboratory was reported as using gowns. The presence of discarded disinfectant containers or the ready availability of disinfectant in the laboratory was interpreted to mean that the laboratory was using disinfectant.

## Results

Of 50 selected laboratories, investigators were able to investigate 44. The remaining 6 had moved to a different location or had an incomplete address.

Gloves were used in only 2 laboratories (4.5%). Protective gowns were observed in 12 laboratories (27%). The use of disinfectant was noted in 7 laboratories (16%). A needle cutter was available at 28 laboratories (64%), but its use was observed at only 8 sites (18%). An incinerator was available at 7 of the laboratories.

## Discussion

This study suggests that standard worker safety precautions were not being followed in the major clinical laboratories in Karachi. These conditions may explain some of the previously reported high prevalence of hepatitis B and C infection among healthcare workers in Pakistan.

Although these observations occurred on only a single day and the laboratories were all in one city in Pakistan, there is little reason to believe that conditions would be different on different days or in different cities within the country. Moreover, the criteria for glove, gown, and disinfectant use were minimal. If an assessment of each worker had been conducted, the frequency of precautions would have been even lower.

Part of the barrier to better infection control is financial. Gloves, gowns, and disinfectant cost money. However, the barriers are not entirely economic. For example, needle cutters were being used in only 8 of the 28 sites in which they were available. Thus, education of workers and laboratory managers on the risks of unsafe practices and interventions to promote safer behavior are needed.

## **Reference**

1. Mujeeb SA, Zuberi SJ, Lodi IZ, Mehmood K. Prevalence of HBV infection in health care personnel. *Journal of Pakistan Medical Association* 1994;44:265.