

## Biomedical waste management among indian dentist: a cross section study on knowledge, attitude and practices of health care professionals

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**Background:** Biomedical waste has become a serious health hazard in many countries, including India. Infection control in commercial laboratories has attracted increasing interest in the past 18 to 24 months as evidenced by new laboratory control programs that have been recently initiated. This study was conducted as a national survey among institutional, commercial and charitable pathology laboratories whether working in government or private sector in India. A self-administered questionnaire was designed to obtain knowledge, attitude and practice about procedures used for biomedical waste management and prevention of cross-infection in laboratories. The questionnaire included data on socio demographic characteristics, biomedical waste management practice, knowledge, practice of infection control procedures, sterilization, wearing of gloves, mask, disposal method of contaminated materials, disposal method of sharps along with temperature control mechanisms etc.

**Results:** Of these, 523 responded; out of which 466 questionnaires were included in the analysis, remaining were some types of errors. Identity of the respondents was kept confidential. A total of 800 questionnaires were distributed. Of these, 523 (65.4%) responded. Out of these, 466 questionnaires were included in the analysis, remaining were some types of errors.

**Discussion:** In the present study, almost all the respondents had knowledge about waste management guidelines and 34.5% respondents were aware about any legislation to the lab waste management. Majority (72.5%) of the respondents had knowledge about the importance (very high) of washing hands before and after using gloves. This was almost similar among the respondents of institutional (75.3%) commercial (64.2%) and charitable (63.6%). The practice of washing hands before and after using the instrument was significantly higher among the respondents. More than one third (41.2%) of the respondents were using disinfecting solution and detergents method for pre-sterilization cleaning and asepsis storage. This practice was higher among the respondents of institutional (42.6%) followed by commercial (37%) and charitable (36.4%) labs. Also included, about half (52.1%) of the respondents were washing slides for smear detergent/hypochlorite followed by detergent wash and autoclaved at 121°C for 1 hour, if reused. More than one third (47%) of the respondents were keeping Glass tubes (EDTA/Fluoride vials) after washing with detergent/hypochlorite followed by detergent wash and autoclaved at 121°C for 1 hour, if reused. This practice was almost similar among the respondents of charitable (48.5%), institutional (49.1%) and commercial (37%) labs.

**Conclusions and Recommendations:** Universal work precautions involve the use of protective barriers such as gloves, gowns, aprons, masks, or protective eyewear, which can reduce the risk of the health care worker's skin or mucous membranes to potentially infective materials. It is recommended that all health care workers take precautions to prevent injuries caused by needles, scalpels, and other sharp instruments or devices. The present study revealed appreciable knowledge and attitude regarding infection control procedures and biomedical waste management among Indian Pathologists.

### Biography

Shalini Gupta, Head, Department of Oral & Maxillofacial Pathology, King George's Medical University, Uttar Pradesh, Lucknow, India. She was recipients of Calcutta University, India. Merit Scholarship and fourteen Gold medals for standing first, second, third and final professional BDS examination & completed two research projects and also working as principal investigator of extramural and intramural research projects and has to her credit a number of research papers published in various international and national indexed journals & the reviewer of various international and national journals and also in the editorial panel & invited as guest speaker in many international conferences.

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