



Awareness about Personal Protective Equipments in Hospital Workers (Sweepers and Cleaners) – Research

Harshini Ravichandran*, Brundha M. P

Saveetha Dental College and Hospitals, Chennai, Tamil Nadu, India.

*Corresponding author's E-mail: Harvi1227@yahoo.in

Accepted on: 16-06-2016; Finalized on: 31-08-2016.

ABSTRACT

Personal protective equipment (PPE) is used to create a protective barrier between a worker and hazards in the workplace. PPE includes such equipment as chemical resistant gloves, safety shoes, hard hats, safety glasses, respirators, and clothing such as gowns and aprons. Cleaners and sweepers play important roles for keeping the area clean. Their works entail removing of debris from area collecting solid waste, disposing and recycling waste material. Consequently, they have higher chances to be exposed to numerous risk factors; therefore, their occupational safety and health hazard became crucial. There is little evidence about the sweeping practices, perceptions and knowledge on their occupational safety and health hazards.

Keywords: Personal Protective Equipment, PPE, hospital workers.

INTRODUCTION

Personal protective wear has become essential part of every industry. The need for PPE has increases from the Factories Act 1948.¹ It is designed to protect employees from serious work place injuries or illness resulting from contact with chemical, radiological, physical, electrical, mechanical or other work place hazards.

The type of Personal Protective Equipment include safety helmet, face mask, head cap, safety shoes, goggles, gloves, fire resistant coat, ear muffs and ear plugs, dust mask, safety belts, paper nose mask for protecting head, face, eyes, hands and arms, feet and whole body.²

A study of the knowledge, attitude, and practice on usage of personal protective equipment was carried out and an attempt was made to create awareness among the workers about its importance.

Several types of protective equipment such as safety helmet, safety shoes, goggles, gloves, fire resistant coats etc are being used.

A questionnaire based on their use was prepared and results were tabulated.³

Exposure to the pathogenic microorganisms harboured in blood, body fluids and other potentially infectious material can lead to occupationally acquired infections in healthcare workers.

That is why it is critical that healthcare providers don key pieces of personal protective equipment and understand the levels of barrier protection these PPE items can afford them in patient care and surgical situation.⁴

Personal protective equipment is designed to protect the skin and the mucous membranes of the eyes, nose, and mouth of dental healthcare personnel from exposure to

blood or other potentially infectious material.⁵ Occupational safety and health administration mandates that these PPE in specified circumstances reduces the risk of exposure to blood borne pathogens.

Factors Influencing Selection of Personal Protective Equipment⁶

A number of factors affect the selection of PPE. These are:

- ✓ The first involves the nature of the exposure anticipated – infectious, heat or chemicals. Is the PPE reasonable, necessary, and appropriate for the hazard?
- ✓ Biocompatibility
- ✓ Longevity
- ✓ Style
- ✓ Cost

Indian Market for Personal Protective Equipment

Increasing awareness among end users about improving the safety standards of their employees and safety against occupational hazards opens up opportunities for manufacturers of PPE.⁷ However, low-cost, uncertified and sub standard products that decrease the safety levels of personnel and erode the market shares of certified PPE manufacturers currently dominate the market. Hence PPE manufacturers face the responsibility to encourage industries to invest in certified quality products despite the products high price.⁸⁻¹⁰

AIM

To explore the level of awareness among the hospital workers.

OBJECTIVES

The objective of the study is to explore current cleaning



and sweeping practices, perceived risk and the level of knowledge of a group of hospital sweeper and cleaners.

MATERIALS AND METHODS

This paper is based on a survey conducted amongst 50 hospital workers in Chennai private hospital using the tools of data to gauge awareness on PPE.

Tools of Data Collection

Questionnaire, observations, personal interviews with practitioners

DISCUSSION AND RESULTS

Table 1

| Criteria of preference of PPE on routine basis | Number of worker | Percentage |
|--|------------------|------------|
| Standard of PPE | 2 | 4 |
| cheap and best PPE | 37 | 74 |
| Personal preference | 0 | 0 |
| How easy to wear PPE | 3 | 6 |
| PPE recommended by colleagues | 5 | 10 |
| Others | 3 | 6 |
| Total | 50 | 100 |

Table 2

| Attitude towards PPE | No. of workers |
|----------------------|----------------|
| Very helpful | 34 |
| Helpful | 14 |
| No comments | 2 |
| Not helpful | 0 |
| No help at all | 0 |
| Total | 50 |

When the criteria for preference of PPE on routine basis, (Table 1)

The following were observed

- Majority; 74% of workers preferred cheap and best PPE which can be reasoned due to their economic condition.
- About 10% of workers used PPE on recommendations by their colleagues.
- About 6% of workers preferred by the ease of wearing the PPE.
- About 6% of workers preferred PPE based on other reasons like compulsion by their institution.

When the attitude of workers towards PPE were analysed (Table 2), the following observations were made:

- Out of 50 workers, 34 workers rated PPE very helpful

- 14 workers rated as helpful.
- 2 workers made no comments.

One of the key problems with the personal protection programme is that it places a great deal of emphasis on the user. The apparent simplicity of some PPE could result in a gross underestimation of the amount of care that should be exercised to select suitable and effective equipment.

It is therefore Important that employers and employees have basic knowledge about the potential hazards at work, the length of time for which the device would be expected to perform at a known level of protection, and the proper use and precaution of the equipment in use.

CONCLUSION

Majority of workers prefer cheap and best form of PPE. Moreover none of the worker rated PPE as not helpful and a large majority of worker rated it as very helpful.

Similar questionnaires can be developed depending upon the type of health set-up and the level of nursing care so as to bring a significant change in the health practices with regards to usage and disposal. The survey studies are an essential component of a dynamic system to bring an effective change, which cannot be brought about exclusively by theoretical lectures.

REFERENCES

1. Udasin IG, Gochfeld M. Implications of the occupational safety and health administration's bloodborne pathogen standard for the occupational health professional. *J Occup Med*, 36, 1994, 548-555.
2. Ippolito G, Puro V, De Carli G. The risk of occupational human deficiency virus infection in healthcare workers. *Arch Intern Med*, 153, 1993, 1451-1458.
3. Centers for Disease Control. Recommendations for prevention of HIV transmission in health care settings. *MMWR*, 36(suppl 2), 1987, 1S-18S.
4. Centers for Disease Control. Update: Universal Precautions for prevention of transmission of human immunodeficiency virus, hepatitis B virus, and other bloodborne pathogens in health care settings. *MMWR*, 37, 1988, 377-388.
5. Short LJ, Bell DM. Risk of occupational infection with bloodborne pathogens in operating and delivery room settings. *Am J Infect Control*, 21, 1993, 343-350.
6. Centers for Disease Control. Protection against viral hepatitis: recommendations of the Immunization Practices Advisory Committee. *MMWR*, 39(RR-2), 1990, 1-26.
7. Kelen GD, Green GB, Purcell RH, Chan DW, Qaqish BF, Sivertson KT. Hepatitis B and hepatitis C in emergency department patients. *NEngl J Med*, 326, 1992, 1399-1404.
8. Health care and dental industry in India; 2014; FDI
9. Guidelines and recommendations for infection control [available at: www.cdc.gov]
10. Personal protective equipment: [available at www.dentaleconomics.com]

Source of Support: Nil, Conflict of Interest: None.

