Awareness about HIV infection among the paramedical staff in a tertiary care hospital in Delhi, India

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Abstract

In India, acquired immunodeficiency syndrome (AIDS) is a growing epidemic involving all sections of the society. Health care personnel are at increased risk of acquiring blood borne diseases like AIDS, hepatitis, etc. We aimed to assess the level of awareness of HIV infection among the paramedical staff working in a tertiary care hospital. A total number of 207 paramedical staff were asked to complete a questionnaire covering the various aspects of HIV and AIDS which was then critically reviewed. We observed that 57.54% of the staff was aware of the different aspects of HIV infection. Our results highlighted that awareness regarding the different facets of HIV varied among the nurses, lab technicians and support staff. Transmission of blood borne infections through needle stick injury is a harsh reality involving health care personnel. There is an urgent need to teach basic knowledge about HIV infection among high-risk populations.

Introduction

The alarming rise of sexually transmitted diseases has put India in the top position in AIDS scenario in the Asian continent.1 India is one of the largest and most populated countries in the world, with over one billion inhabitants. In 2007, UNAIDS and the WHO issued HIV estimates for India; HIV had decreased from 5.7 million (3.4-9.4 million) people in 2005 to 2.5 million (2.0-3.1 million) people in 2006.3,2 HIV prevention efforts should concentrate on high-risk groups such as commercial sex workers and their clients, migrant laborers and truck drivers, medical professionals, and injection-drug users.4

Medical professionals and other health care workers, by virtue of their profession, can get infection from patients, a contaminated envi-
The above-specified subgroups included 68, 37, 40, 35 and 27 respondents. On further analysis of any association between knowledge score and years of experience, it was found that respondents' knowledge scores decreased as their years of experience increased.

### Discussion

India ranks third, behind South Africa and Nigeria, in the largest number of people living with HIV. In the present study, it was observed that among the hospital staff only 58% was aware about HIV. Though most of them had knowledge of the symptoms and presentation of the disease, they had no knowledge about disinfection, universal precautions, and prophylaxis against exposure to needle stick injury. This is of the utmost importance in health care centers to prevent occupational exposure and iatrogenic transmission. The study conducted on nurses, lab technicians and support staff indicated very different knowledge scores, with the support staff scoring the least. Approximately 85% of the staff were aware of the symptomology and presentation of AIDS, with the laboratory technicians showing maximum knowledge.

Only 48% were aware that HIV is transmitted through unprotected intercourse, perinatal spread, intravenous drug abuse and transfusion of contaminated blood. They were not aware that HIV is not transmitted by shaking hands, sharing toilets and utensils with HIV positive subjects and mosquito bites. Only 10% of the respondents knew the most common mode of transmission of HIV in India.

Knowledge about disinfection and precautions was even lower at 33%, though 61% of the technicians knew about the universal precautions and various methods that can be adopted for HIV disinfection. However, 90% of the respondents were aware that used needles should be destroyed after single use.

The respondents were found not to have a complete knowledge of the ideal prophylaxis and treatment protocols. Only 45% of the participants could score adequately in the questions about these. Nurses (40%) and support staff (43.7%) were not aware about needle stick injury and post exposure prophylaxis as compared to technicians (55.4%). On further analysis, we found an inverse relationship between the knowledge about HIV and the number of years of service. The highest scores were observed in the young recruits who had been in service for less than five years. In older staff, who had been in service for more than ten years, only approximately 50% of them were aware about the different aspects of HIV as evaluated by us.

### Conclusions

Among participants of the study, the laboratory technicians were more knowledgeable as compared to the nurses and the attendants about all the aspects, which were addressed in our questionnaire. Our study indicates that there are a lot of misconceptions regarding HIV. We would suggest incorporation of regular training programs and classes on HIV awareness and biomedical waste management in the hospital administration curriculum.

### References


### Table 2. Awareness levels according to number of years of service.

<table>
<thead>
<tr>
<th></th>
<th>≤5 years</th>
<th>6-10 years</th>
<th>11-15 years</th>
<th>16-20 years</th>
<th>&gt;20 years</th>
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</thead>
<tbody>
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<td>n</td>
<td>68</td>
<td>37</td>
<td>40</td>
<td>35</td>
<td>27</td>
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<td>Symptomology and presentation</td>
<td>90.8%</td>
<td>82.8%</td>
<td>78%</td>
<td>75.2%</td>
<td>72.8%</td>
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<tr>
<td>Transmission</td>
<td>56%</td>
<td>51.5%</td>
<td>50%</td>
<td>43.3%</td>
<td>38%</td>
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<tr>
<td>Disinfection and precautions</td>
<td>36%</td>
<td>45%</td>
<td>19%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>Prophylaxis and treatment</td>
<td>49.7%</td>
<td>45.7%</td>
<td>33%</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>Total</td>
<td>62.9%</td>
<td>60%</td>
<td>51.7%</td>
<td>54%</td>
<td>50%</td>
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