

AWARENESS OF HIV / AIDS AMONG HOSPITAL WORKERS

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ABSTRACT

Objectives: To determine the knowledge of a) HIV/AIDS among workers in a teaching hospital b) risk of HIV infection among hospital workers, and c) preventive/precautionary measures against HIV infection in the hospital setting.

Methods: 159 randomly selected workers of the Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria were interviewed using an open-ended questionnaire on aetiology, pathogenesis, prevention, spread and risk of occupational transmission of HIV infection. Data analysis was done with EPI-INFO 2000. The Chi-square test was used for statistical analysis and the 0.05 level of significance was adopted.

Results: There were 68 males and 91 females aged between 20 and 60 years drawn from 10 departments Administration, Security, Domestic services, Nursing services, Laboratory, Laundry, Tailoring, Pharmacy, Mortuary and Works. Their level of education varied from no formal education to above senior school certificate. Respondents exhibited a fair understanding of HIV/AIDS. Awareness was more in workers below 40 years and in those with higher education. There was no significant gender difference in knowledge. Certain misconceptions were noted. There was knowledge deficit in etiopathogenesis of HIV infection and of exposure to and prevention of infection in the health care worker. Nurses, pharmacists and laboratory technologists showed superior knowledge of HIV/AIDS than others.

Conclusion: There is a need for health education lectures for all cadres of health care workers so as to reduce occupational transmission of HIV infection.

Key words: awareness, hospital worker, HIV, AIDS.

INTRODUCTION

Acquired Immunodeficiency Syndrome, more conveniently known as "AIDS", has resulted in the greatest public health concern since the tuberculosis epidemics of the early 1900's. AIDS is a global pandemic. Viral infection with the Human Immunodeficiency Virus (HIV) is the causative factor in the development of AIDS. HIV is a blood-borne virus and commonly is transmitted through exchange of body fluids during sexual contact, through parenteral exposure or foetal exposure to blood, and through select body fluids from an individual infected with HIV.

Occupational transmission to health care workers is possible through needle stick injuries or other exposure to HIV-infected materials. It cannot be an understatement, therefore, that a good understanding of the disease and the Universal Precautions Guidelines issued by the Centers for Disease Control (CDC) regarding the handling of blood, body fluids and contaminated instruments, would go a long way in reducing occupational transmission in the hospital environment.^{1,3}

Health care workers need to avoid any contact with potentially infected fluids (blood, semen, urine, or faeces) by always wearing gloves, masks, goggles, footwear etc, when undertaking clinical procedures.

The fear of AIDS and its consequences rank number one as the greatest medical anxiety in our population in recent times, and for as long as there is no specific and effective cure, our main line of defence must remain an educated public.

OBJECTIVES

This study aims to determine the knowledge of

- a. HIV/AIDS among workers in a teaching hospital,
- b. Risk of HIV infection among hospital workers, and
- c. Preventive/precautionary measures against HIV infection in the hospital environment.

SUBJECTS AND METHODS

An open-ended questionnaire on personal data and aspects of knowledge of aetiology, diagnosis, transmission and risk factors for HIV/AIDS was administered on randomly selected workers of the Nnamdi Azikiwe University Teaching Hospital, Nnewi, who were willing to participate in the study. A total of 159 persons were interviewed. These were drawn from the various departments as follows: 20 from Security, 20 from Domestic services, 5 from the Mortuary, 20 from the Laboratory, 20 from the Pharmacy, 20 from Administration, 9 from Laundry, 5 from Tailoring, 20 from Nursing services and 20 from Works.

All members of staff in Tailoring, Laundry and Mortuary departments were interviewed, since they were few in number. The other departments were randomly selected from the nominal role in custody of the departmental heads. All those willing to be interviewed were included. The only exclusion criterion was unwillingness to be interviewed. Because of the very few workers in the Tailoring, Mortuary and Laundry departments, an arbitrary number of 20 was set as the sample size to be drawn from all the other large departments in order to avoid a skew; hence the total sample size of 159.

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Data entry and analysis were done with the software EPI-INFO 2000. Statistical analysis was done with the Chi-square test and the 0.05 level of significance was adopted.

RESULTS

The personal data of respondents are outlined in Table 1. There were 68 males and 91 females, giving a male to female ratio of 1:1.3. 97.5% of the hospital workers claimed good knowledge, while the remainder were hesitant about their depth of knowledge of HIV/AIDS. About half of the workers (51.6%) obtained their information from fellow health workers, while 40.3%, 3.8%, 3.0% and 1.3% were informed by the media, friends /relations, patients or the church respectively.

Ten parameters were used to assess the awareness of HIV/AIDS in respondents. These were: -

- i. Understanding what HIV infection entails
- ii. Aetiology of AIDS
- iii. Mode of spread/transmission
- iv. HIV infection cannot be diagnosed by mere looking at somebody
- v. Diagnosis of HIV infection must be by relevant laboratory investigations
- vi. AIDS has no cure
- vii. General preventive measures against HIV infection
- viii. Risk of HIV infection to the hospital worker
- ix. Modes of exposure of the hospital worker to HIV infection
- x. Preventive measures against HIV infection in hospital workers

The details are given in Tables 2 & 3 and Figures 1 & 2.

Only 20.1% of respondents had a grasp of the implication of infection with the HIV virus. The correct aetiology of AIDS was advanced by 44.0%. An encouraging 99.4% were conversant with the modes of spread/transmission of the virus. 28.3% thought that if a person had contracted the virus it must necessarily manifest physically, while the remaining 71.7% rightly opined that requisite laboratory investigations were needed to ascertain HIV infection. 84.9% of the workers knew that AIDS had no cure; 3.1% were not sure if it had a cure; 12.0% claimed AIDS was curable either by alternative medicine or spiritually.

90.6% understood the general principles of prevention of AIDS. 84.3% agreed that hospital workers were at risk of contracting AIDS as an occupational hazard. Out of this group 62.3% could explain the possible routes of exposure to HIV infection in the workplace. About half of the respondents (55.3%) knew the precautions to be taken by the hospital worker to reduce inadvertent HIV infection.

DISCUSSION

This survey among workers of Nnamdi Azikiwe University Teaching Hospital, Newui revealed that a great majority had been informed about HIV infection and Acquired Immunodeficiency Syndrome (AIDS). It is surprising that

health personnel informed only 51.6% of the workers. The high percentage of those informed through the mass media electronic and print buttresses the powerful role the media can play in disseminating health education to the masses. This also formed the main source of information among Egyptian health care workers.⁴

There was a deficient knowledge of the etiopathogenesis of HIV infection and AIDS. This fact was also noted by other workers.^{5,9} It was quite commendable that almost all respondents were well versed in the mode of spread/transmission of HIV infection.

However, some misconceptions were noted. One was that once a person had contracted the HIV virus he must necessarily manifest physically by wasting. It was, therefore, difficult for them to conceptualise an able-bodied, apparently healthy HIV carrier. Another wrong belief was that unorthodox medical practitioners and spiritualists could cure AIDS. A third misconception was the view that a hospital worker cannot get infected with the HIV virus since he has access to therapeutic interventions. The implication of this is a high rate of occupational transmission. Mbanaya et al in Cameroon¹⁰ also noted similar misconceptions. These misconceptions have to be addressed by organized health education and information so that these workers do not pass on wrong notions to patients they do frequently come in contact with.

It is noteworthy that respondents had a good grasp of general preventive measures against infection by HIV virus. Knowledge was deficient on modes of exposure of the hospital worker to HIV infection and how to prevent infection while working with HIV-infected patients. This was the same experience in Uganda¹¹ but differed from observations made in other studies.^{1,21,5}

Knowledge differed by professional levels. Workers in Ilorin^{1,6} and Lagos^{1,7} obtained similar findings. Laboratory technologists, pharmacists and nurses had a more superior knowledge than workers in other departments. This was probably because they had more patient contact than others. Those in the age bracket of 20-40 years had a better awareness of HIV/AIDS than those above 40 years. This may be because younger fellows make more effort to update their knowledge through formal or informal education. There were no significant sex differences in knowledge. Workers who were more educated had a better understanding of HIV/AIDS than their less educated counterparts. The risk of HIV transmission for a health care worker after needle stick inoculation with HIV infected blood has been estimated to be 0.3% (3 out of 1000 workers will become infected after a contaminated needle prick).^{1,8} The Centre for Disease Control (CDC) has estimated that several thousand health care workers have been diagnosed with AIDS. As of February 1993, 32 health care workers were regarded by the CDC as cases of "documented occupational transmission of HIV (contracted HIV infection from an infected patient)."^{11,8}

One cannot, therefore, overemphasize the need for education about HIV/AIDS to all cadres of health care workers. Health education interventions will impact positively in bridging the knowledge gap and acquiring the requisite attitude to the HIV/AIDS pandemic.^{1,9,2,1}

Uwakwe²² advocated its inclusion in the training programmes (both regular and in-service) of health workers.

Table 1: Demographic characteristics of the hospital workers

	Departments										Overall view
	Security	Domestic services	Mortuary	Laboratory	Pharmacy	Admin-istration	Laundry	Tailoring	Nursing services	Works	
Age (years)											
20-30	5.0	15.0	20.0	55.0	75.0	70.0	22.2	20.0	20.0	25.0	35.8
31-40	45.0	50.0	20.0	45.0	25.0	30.0	33.4	80.0	70.0	50.0	44.7
41-50	45.0	20.0	40.0	0.0	0.0	0.0	22.2	0.0	10.0	25.0	15.1
51-60	5.0	15.0	20.0	0.0	0.0	0.0	22.2	0.0	0.0	0.0	4.4
Sex											
Male	90.0	5.0	100.0	20.0	50.0	20.0	100.0	0.0	0.0	85.0	42.8
Female	10.0	95.0	0.0	80.0	50.0	80.0	0.0	100.0	100.0	15.0	57.2
Level of edu.											
1	25.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7
2	35.0	35.0	60.0	0.0	0.0	0.0	55.6	0.0	0.0	40.0	18.9
3	35.0	45.0	20.0	5.0	5.0	25.0	44.4	60.0	0.0	25.0	22.6
4	5.0	0.0	20.0	95.0	95.0	75.0	0.0	40.0	100.0	35.0	52.8

Note: All proportions are percentages

1= No formal education

2= Primary school level

3= Secondary school level

4= Higher education

Table 2: Awareness of HIV / AIDS of respondents according to their departments

Parameters	Departments										p value
	Security	Domestic services	Mortuary	Laboratory	Pharmacy	Admin-istration	Laundry	Tailoring services	Nursing	Works	
A	0.0	0.0	0.0	60.0	45.0	10.0	0.0	0.0	30.0	15.0	0.0000
B	0.0	20.0	100.0	70.0	80.0	30.0	0.0	80.0	85.0	20.0	0.0000
C	95.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.6377
D	65.0	65.0	40.0	85.0	95.0	75.0	44.4	80.0	70.0	65.0	0.1057
E	35.0	65.0	40.0	85.0	95.0	50.0	22.2	60.0	70.0	60.0	0.0007
F	80.0	85.0	80.0	100.0	100.0	75.0	66.7	40.0	100.0	75.0	0.0045
G	85.0	80.0	100.0	90.0	95.0	80.0	100.0	80.0	100.0	95.0	0.2413
H	40.0	90.0	100.0	100.0	90.0	85.0	88.9	100.0	100.0	75.0	0.0000
I	10.0	45.0	100.0	85.0	85.0	40.0	77.8	40.0	90.0	70.0	0.0000
J	15.0	30.0	60.0	80.0	75.0	40.0	55.6	40.0	85.0	65.0	0.0000

Note: All proportions are percentages

A= Understanding of HIV infection

B= Actiology of AIDS

C= Mode of spread/transmission

D= HIV infection cannot be diagnosed visually

E= Diagnosis of HIV/AIDS is by laboratory tests

F= AIDS has no cure

G= General preventive measures against HIV infection

H= Risk to hospital worker

I= Modes of exposure of hospital worker to HIV

J= Preventive measures against HIV infection in hospital worker

Table 3. Awareness of HIV/AIDS among hospital workers according to level of education

Parameters	Level of education				p value
	No formal education	Primary school level	Secondary school level	Higher education	
A	0.0	3.3	2.8	35.7	0.0000
B	0.0	13.3	25.0	67.9	0.0000
C	100.0	96.7	100.0	100.0	0.2282
D	66.7	53.3	69.4	79.8	0.0486
E	66.7	36.7	52.8	75.0	0.0014
F	77.8	73.3	80.6	91.7	0.0824
G	66.7	90.0	88.9	94.0	0.0619
H	66.7	73.3	75.0	94.0	0.0042
I	11.1	56.7	41.7	78.6	0.0000
J	33.3	50.0	25.0	72.6	0.0000

Note: A - J same as in Table 2

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