

The Impact of HIV/AIDS Epidemic on the Choice of Specialties among Medical Students and House officers in Jos, Nigeria

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Abstract

Background: HIV/AIDS is a scourge that has seriously compromised the lives of millions of people, especially those living in sub-Saharan Africa. With continued high prevalence, there is a high risk of healthcare workers, especially those in the surgical specialties, acquiring the infection. This study was done to investigate the impact of HIV on the choice of surgical specialties in a training institution located in Jos, north-central Nigeria. We hypothesized that the awareness of the risk of acquiring infections associated with surgical practice has no significant impact on the choice of surgical specialties among final-year medical students and house officers at our institution.

Method: A cross-sectional questionnaire based survey was conducted on final-year medical students and house officers during their training in Jos University Teaching Hospital (JUTH), Jos. Two hundred questionnaires were randomly distributed to final year medical students and house officers who volunteered to participate in the survey. The completed questionnaires were returned to the researchers and information obtained was analyzed using Epi info 3.3.

Results: Of the 200 questionnaires distributed, 135 with relevant information were returned for analysis, giving a response rate of 67.5%. Of these respondents, 96.3% said they planned to specialize after their basic medical training and the majority of these (97.8%) were aware of the increased risk associated with surgical specialties, with 83.7% acknowledging the transmission of HIV and hepatitis B as being the greatest risk. About 53.0% of the respondents said they planned to pursue surgical specialties. Fifty three percent (53.3%) and sixteen Percent (16.3%) based their choice of specialty on job satisfaction and favourable work schedule respectively. The knowledge of the risk of acquiring HIV/AIDS affected choice of specialty in only 21% of the respondents.

Conclusion: The awareness of most recently graduated medical doctors and final-year medical students of the risk of acquiring HIV in surgical specialties seems to have not deterred them from wanting to pursue surgical specialties. We recommend improvements in the work environment and adherence to universal precautions to reduce the risk of transmission of HIV and other infections

to surgeons practicing in the region.

Key words: HIV/AIDS, choice of surgical specialties, Jos.

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Introduction

Since its discovery as a disease entity in 1981, AIDS has increasingly affected the landscape of medical practice- diagnosis, treatment and prognosis. HIV/AIDS has become a scourge of all the peoples of the earth with those in developing countries being the most heavily impacted. An estimated 38.6 million people worldwide were living with HIV in 2005.^{1,2} In the same year, an estimated 4.1 million became newly infected with HIV and 2.8 million lost their lives to AIDS.^{1,2}

Sub-Saharan Africa continues to bear the greatest burden of the HIV/AIDS epidemic.² Currently, 70% of people living with HIV, 70% of new infections and 77% of the deaths from the epidemic are from Sub-Saharan Africa.² Heterosexual transmission accounts for about 80% of all infections, mother-to-child transmission (MTCT) accounts for 10% while another 10% is transmitted by the use of unsterilized needles and surgical implements, infected blood and blood products.²

There has been increasing concern on nosocomial transmission of HIV given the high prevalence of HIV in our environment. There is increased risk of healthcare workers, especially those involved in surgeries, acquiring HIV and also hepatitis B. The average risk of HIV infection after percutaneous exposure to HIV-infected blood is 0.3 percent³ and 22-23 percent for hepatitis B.⁴

The importance of HIV/AIDS in the choice of specialty among medical students and house officers cannot be overstated since there is increased awareness among this group of the risks of transmission of HIV, especially in the practice of certain specialties and as part of their training they are involved in the management of patients with AIDS. The risks associated with treating

HIV- positive patients have been shown to affect the choice of specialty and geographic location of residency programmes with avoidance of specialties that often encounter AIDS patients or geographic locations in which the disease is found more often.^{5,6} These factors have a major impact on health care delivery.

It is in this light that we sought to document the impact of HIV/AIDS on the choice of surgical specialties in our region, bearing in mind that there have been few documented studies in this area.

Methodology

This cross sectional questionnaire-based survey was done to investigate the impact of HIV/AIDS epidemic on the choice of surgical specialties among final year medical students and house officers in a training institution, in Jos, north central Nigeria. A total of two hundred questionnaires, which were initially pretested among pre final year medical students, were randomly distributed to final year medical students and house officers who volunteered to participate in the survey. The questionnaire inquired about age, gender, desire to specialize, desired area of specialization, knowledge of risk of HIV transmission in the practice of surgical specialties and the effect of these risks on choice of area of specialization. In this survey, "Surgical specialties" refers to specialties in Surgery, Obstetrics and Gynaecology and Ophthalmology. The information obtained was analyzed for frequencies using Epi-info 3.3 version.

Results

Of the two hundred questionnaires distributed, 135 respondents returned their questionnaires with relevant information for analysis. This gives a response rate of 67.5%. The male to female ratio of the respondents was 1.7:1 and majority (87.41%) were aged between 20-29 years. As shown in Table I, the age of respondents ranged from 22-45 years with a mean of 26.72± 2.97 years.

The majority of the respondents (89%) had been involved in the management of AIDS patients. One hundred and thirty (96.3%) of respondents said they plan to specialize, with HIV affecting the choice of specialty in 21%. The presence of risks associated with surgical specialties was reported by 98% of respondents (Table II). Transmission of HIV/ HBV was most commonly reported (83.7%) as the perceived risk associated with surgical specialties (Table III). Involvement of respondents in the management of patients with AIDS had no significant relationship with the choice of area of specialization (Table IV). Surgical

specialties were the desired area of specialty in 53.1% of the respondents that desire to specialize and the main reason for their choices were Job satisfaction and favourable work schedule (53.3% and 16.3% respectively) as shown in Table V.

Table I: Age and gender of respondents

Age (years)	Sex		Total	Percentage
	Female	Male		
20-29	47	71	118	87.41
30-39	2	14	16	11.85
40-49	1	0	1	0.74
Total	50	85	135	100

Table II: Responses on risk with surgical practice and choice of specialization

Question asked	Yes	No	Don't know
Have you been involved in the management of any HIV/AIDS patient?	120(89.0%)	15(11.0%)	0(0.0%)
Are there risks associated with surgical specialties?	132(98.0%)	1(0.7%)	2(2.0%)
Do you plan to specialize?	130(96.3%)	3(2.2%)	2(2.0%)
Has HIV affected your choice of specialty?	28(21.0%)	105(78.0%)	2(2.0%)

Table III: Risks associated with surgical specialties

Risks	Number	Percentage
Transmission of HIV/ HBV	113	83.70
Injuries	7	5.19
Litigation	3	2.22
Others	6	4.44
No response	6	4.44
Total	135	100

Table IV: Relationship between involvement in management of patients with HIV/AIDS and choice of specialty

	Effect of HIV/AIDS on choice of specialty		
	Yes	No	Total
Management of a patient with AIDS			
Yes	22	96	118
No	6	9	15
Total	28	105	133

STATISTICAL TESTS	Chi-square	1-tailed p	2-tailed p
Chi square - uncorrected	3.5743		0.0586811838
Chi square - Mantel-Haenszel	3.5472		0.0596462372
Chi square - corrected (Yates)	2.4185		0.1199097911

Table V. Desired area of specialization and reasons for their choices

Area of specialization	Number	Percentage
Ob/gyn	37	28.5
Surgery	23	17.7
Public health	19	14.6
Internal medicine	18	13.9
Ophthalmology	9	6.9
Laboratory medicine	6	4.6
Paediatrics	5	3.9
Family medicine	5	3.9
Others*	6	4.6
Undecided	2	1.5
Reasons		
Job satisfaction	72	53.3
Favourable work schedule	22	16.3
Income	8	6.0
Others **	21	15.6
No reason stated	12	9.0

*Psychiatry, Radiology

**Prestige, favourable duration of training, risk associated with other specialties, better job prospects.

Discussion

A survey of final year-medical students and house officers at the Jos University Teaching Hospital, north-central Nigeria was done to investigate the impact of the HIV/AIDS epidemic on their choice of specialty.

The majority of the respondents (89%) had experienced managing patients with HIV/AIDS. Such contact with HIV/AIDS patients has been said to negatively influence choice of specialty,⁵ though this was not the finding in this study.

Nearly all of the respondents (97.8%) were aware that there were risks associated with surgical specialties and 83.7% identified the transmission of HIV and hepatitis B virus as the most important risk associated with surgical specialties. This finding suggests that nearly all of the respondents were well informed of the risks of nosocomial infection with HIV which is more common during surgeries from needle stick injuries and blood splashes.

HIV was reported by 21% of respondents as playing a role in their specialty choices. This agrees with the findings from a study in the United States where HIV/AIDS played a role in the specialty choice of 21% of students.⁶ Other

studies had reported 29-58% students having their specialty choice affected by HIV/AIDS though the importance of HIV/AIDS as a factor in residency selection may be diminishing over time as people become better acquainted with the disease.^{6, 7} Significant variations of HIV/AIDS on specialty choice occur between regions.⁷

About half of the respondents (53.0%) said they desire to pursue a surgical specialty despite awareness of the attendant risks involved. Job satisfaction and favourable work schedule were the major determinants of specialty choices (53.3% and 16.3% respectively) which agree with findings in other studies.^{8,9}

There is a need to make the surgical work environment safer, ensure adherence to universal precautions, and provide readily available post-exposure prophylaxis in our hospitals, so as to drastically reduce the risk of occupational HIV infection among those in the surgical specialties.

The major weakness in this study is the relatively small sample size, with a response rate of 67.5%. Future studies should involve other training institutions across the country.

In conclusion, HIV/AIDS affected choice of specialty in about one fifth of respondents. Though most new doctors/medical students are aware of the risk of acquiring HIV in surgical specialties, this has not deterred many of them from wanting to pursue surgical specialties. We recommend improved surgical work environment and adherence to universal precautions to reduce the risk of transmission of HIV and the possibility of its negative effect on the choice of specialties among potential residents in our region in the future.

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