

**Original Article****MEDICAL STUDENTS' KNOWLEDGE AND ATTITUDES RELATED TO HIV/AIDS:****Shaikh Mohsin<sup>1</sup>, Sunil Nayak<sup>2</sup>, Vipul Mandaviya<sup>3</sup>**<sup>1</sup>Assistant Professor, Dept of Preventive and Social medicine, Govt. Medical College, Bhavnagar<sup>2</sup>Assistant Professor, <sup>3</sup>Resident, Dept of Preventive and Social medicine, SMIMER, Surat**Correspondence:** dr\_mohsinshaikh@yahoo.com**ABSTRACT**

**Objectives:** What attitudes do medical students express about AIDS and does their knowledge correlate with these attitudes. **Methods:** A cross-sectional survey of purposively selected 400 students of 1<sup>st</sup> and 2<sup>nd</sup> MBBS, Medical College Baroda was conducted during July 2008. They were asked to complete a pretested, prestructured, and designed written proforma and information was gathered. **Results:** About 18% believed that urine is a potential source of infection while only 64% believed that tattooing can spread HIV. About 90% stressed upon HIV testing for patients before admission. 66% students are not willing for mouth-to-mouth resuscitation and 40 % were unwilling to assist in surgical procedure on HIV/AIDS patients. **Conclusions:** The results indicate that student's knowledge about transmission was incomplete and their general willingness to provide care for patients with HIV, tempered by substantial concerns regarding the provision of such care.

**Keywords:** Attitudes-medical students-HIV/AIDS-knowledge**INTRODUCTION**

The disease started first among young homosexuals in the west coast of America. Soon the myth was removed; it was detected not only in homosexuals but was also detected among female sex workers of New York who were taking addictive drugs through unsterilised needles.<sup>1</sup>

Since then the disease has become pandemic around the globe. It has affected millions of people throughout the world.<sup>2</sup>

In India, as in many other countries, people with HIV frequently encounter discrimination, while seeking and receiving health care services, with serious adverse consequences for their physical and psycho-social well being. Unjustified calls for isolation of patients with HIV infection might further constrain the potential for expansion of clinical services to deal with greater number of such patients. This infectious illness can evoke irrational emotions and fears in health care providers, including medical students. If unexamined, these fears may produce a barrier to successful educational efforts about HIV/AIDS and result in a variety of adverse outcomes. HIV/AIDS has stimulated ethical debates about a physician's right to refuse treatment. While there is a risk of transmission of the virus from patient to health care worker, this risk has been estimated at 0.3% after a single percutaneous exposure to HIV/AIDS-infected blood<sup>3</sup>. Medical students have refused to care for HIV/AIDS patients (Whalen, 1987)<sup>4</sup>, which is unacceptable for future physicians and illustrates the extreme emotions that HIV/AIDS can elicit.

**OBJECTIVES**

1. What attitudes do medical students express about HIV/AIDS and does their knowledge correlate with these attitudes?
2. Do medical students' attitude toward HIV/AIDS affect their willingness to treat HIV/AIDS patients' infection?

**MATERIAL AND METHODS**

A cross-sectional survey of purposively selected 400 students from 1<sup>st</sup> and 2<sup>nd</sup> year of MBBS, Medical College Baroda was conducted during mid 2008. These students have undergone the science stream of secondary school education and while entering into the MBBS, they are well-versed with patient care activities in the hospital. They were asked to complete an anonymous pretested, prestructured designed written questionnaire after taking an informed verbal consent. Information was gathered regarding demographic details (age, sex); HIV/AIDS related knowledge and attitude; risk perception etc...

All potential responders were clearly advised that participation in this survey was voluntary and anonymous.

**RESULTS**

Out of the 110 questionnaires distributed, 100 were returned completed. Average age of respondents was 20.2 years and majority were males (72%).

Participants were asked to indicate their responses regarding possible route of transmission of HIV (Table I) and their attitude to caring for patients for HIV/AIDS and about routine testing of patients (Table II).

### Students' attitudes and knowledge base regarding AIDS

Students knowledge base regarding potential source of transmission of HIV are presented in

Table I. Students' attitudes regarding a number of potentially controversial aspects of the HIV are presented in Table II.

**Table 1: Medical students' opinions on various statements regarding the transmission of HIV (n=400)**

Sr. No.	Statement	Yes	No	Not sure
1	Sharing plates, cups and spoons can spread HIV/AIDS	04	392	04
2	HIV/AIDS can be spread from an infected woman to her child during pregnancy and birth	400	0	0
3	Contact with urine can spread HIV/AIDS	72	276	52
4	Mosquitoes can spread HIV/AIDS	20	356	24
5	HIV/AIDS can be spread from an infected woman to her child during breastfeeding	284	76	40
6	Coughing and sneezing can spread HIV/AIDS	24	360	16
7	Contact with feces can spread HIV/AIDS	48	320	32
8	Tattooing can spread HIV/AIDS	256	144	0
9	HIV can penetrate intact skin	16	352	32
10	Condoms make sexual contact completely safe	184	168	48
11	Contact with saliva can spread HIV/AIDS	112	248	40

**Table 2: Medical students' opinions on various statements related to attitudes to patients with AIDS and willingness to care for them. (n= 400)**

Sr. No.	Statement	Yes	No	Not sure
1	I feel worried about caring for people with HIV/AIDS	224	160	16
2.	Doctors, nurses and other HCWs should be allowed to refuse to care for people with HIV/AIDS	72	296	32
3.	I am willing to assist with an operation on a patient with HIV/AIDS	232	96	72
4.	I am willing to assist with the delivery of a baby born to a mother with HIV/AIDS	240	100	60
5.	I would prefer not to care for patients with HIV/AIDS	12	340	48
6.	It is necessary to take extra infection control precaution for patients with HIV/AIDS	364	32	4
7.	Patients with HIV/AIDS need to be nursed separately from other patients	256	140	4
8.	I am concerned that in the future we will find that HIV/AIDS can be transmitted in ways now thought safe	64	236	100
9.	My professional education has provided me with enough information to work safely AIDS patients	268	112	20
10.	I would inform an AIDS patient's sexual partner against the patient's wishes	308	72	20
11.	All surgical patients should be routinely tested for HIV/AIDS on admission to hospital	348	24	28
12.	All obstetric patients should be routinely tested for HIV/AIDS on admission to hospital	372	12	16
13.	Doctors, nurses and other HCWs have a high risk of catching BBVs (such as HIV/AIDS and hepatitis B) while treating patients	308	56	36
14.	I am willing to perform mouth-to-mouth resuscitation on patients with HIV/AIDS	96	264	0

98% of participants agreed that sharing plates, cups cannot spread HIV while all of them agreed that HIV can be spread from infected mother to child while delivery. A similar number (90%) agreed that coughing, sneezing cannot spread HIV.

About 18% believed that urine is a potential source of infection while only 64% believed that tattooing can spread HIV.

The data also indicated that 56% of students expressed concern that working with HIV/AIDS

patient may be hazardous. 33% expressed doubt that their professional education has provided them with enough information to work safely with HIV/AIDS patients. More than half (59%) expressed concern that future research would reveal that HIV/AIDS can be transmitted in ways now thought safe.

Approximately three-fourths of the students (77%) stated they would inform the partner of HIV/AIDS patient of the disease, even against the patient's wishes. Approximately 90% of the students expressed the belief that all patients admitted to the hospital should be HIV tested.

### **Relationship between attitudes toward HIV/AIDS and willingness to treat HIV/AIDS patients**

To analyze students' attitudes about HIV/AIDS in terms of their willingness to treat HIV/AIDS patients, we asked students whether they have the right to refuse treatment to HIV/AIDS patients and whether they prefer not to care for HIV/AIDS patients.

74% believed that they do not have the right to refuse care while only 3% would prefer not to care for HIV/AIDS patients. A majority of students (66%) stated they would be unwilling to perform mouth-to-mouth resuscitation on an HIV/AIDS patient. Around 60% were willing to assist in surgical operations of HIV/AIDS patients.

### **DISCUSSION**

The fact that a substantial proportion of students believe that HIV/AIDS can be transmitted by contact, saliva, urine and faeces, mosquitoes indicated that knowledge about transmission was incomplete<sup>1,2,3</sup>. It was also a concern that 36% were unaware that tattooing was a risk factor for HIV transmission<sup>3</sup> and 29% were unaware that HIV/AIDS could be transmitted through breast feeding. 46% believed that condoms make sexual intercourse completely safe whereas there is 10% failure rate of condoms for contraceptive purposes<sup>3</sup>. This indicates that medical students require more training regarding the ways by which HIV/AIDS is and is not transmitted.

A big majority of participants believed that it was necessary to take universal precautions while caring for people with HIV/AIDS and 64% believed that they should be nursed separately from other patients. This in contrast to the belief of a majority of participants that HIV/AIDS cannot be spread by casual social contact with infected persons including within households<sup>1</sup>. These findings highlight a lack of understanding regarding the primary principle underlying Universal Precautions. When Universal Precautions are applied appropriately it is not

necessary to isolate HIV-positive patients (unless they have tuberculosis or other opportunistic infections that require isolation) and identification of infected patients for the protection of patients and HCWs is not required.

A high proportion of students felt that all surgical and obstetric patients should be routinely tested for HIV infection, presumably to identify those patients requiring precautions. However, routine HIV testing of patients does not reduce the risk of occupational exposure and some newly infected patients will have a negative HIV test result even though they are both infected and infectious. The value of Universal Precautions is that they protect HCWs and patients against infection with a range of pathogens, not just HIV/AIDS.<sup>5</sup>

Potential for discrimination against HIV-positive patients was suggested by the fact that 15 % believed that doctors should be allowed to refuse care for HIV-positive patients. 59% of our sample was concerned that new modes of transmission of the virus may be found in the future. 77% of our sample agreed that they would inform an HIV/AIDS patient's spouse, even if forbidden to do so by the patient. It is unlikely that this student's view is informed by a comprehensive understanding of issues of confidentiality versus a duty to warn endangered parties, because these topics are generally taught later in medical school curriculum.

HIV/AIDS-phobia can manifest itself in numerous ways, the most extreme of which may be an unwillingness to treat HIV/AIDS patients altogether. Approximately 20% of our sample believed that they had the right to refuse treatment to HIV/AIDS patients. It was also a matter of concern that although 62% believed that contact with saliva cannot spread HIV/AIDS but still only 24% were willing to perform mouth to mouth resuscitation on HIV/AIDS patients.

This study found a general willingness to provide care for patients with HIV/AIDS, tempered by substantial concerns regarding the provision of such care.

It is possible that unwillingness on the part of Medical students to participate in invasive procedures on patients with HIV/AIDS infection related to concerns about their own safety. These concerns could be ameliorated if Standard/Universal Precautions were more effectively implemented in these settings and medical students received accurate information regarding the risk of occupational infection with HIV/AIDS. The risk related to percutaneous exposure like needle-stick injury has been reported to be 0.3%<sup>3</sup>.

The transmission through blood and body fluids, organs, tissues and contaminated materials in

health care settings is not much though this likely mode of transmission is responsible for apprehensive behavior of medical students towards HIV infected people and AIDS cases.

#### **RECOMMENDATION:**

It appears that neither prior experience with HIV/AIDS patients nor didactic instruction is enough to overcome HIV/AIDS-phobia in some students. Together these findings imply that medical educators may need to address students' fear of infection and HIV/AIDS-phobia before some students will be able to incorporate and utilize advanced instruction about the transmission of the disease. Students need intensive preclinical experience that is focused on identifying and encouraging exploration of their fears. This experience must continue during the clinical years, as some prejudices may increase with exposure. Medical educators must be prepared to help students overcome prejudice and increase their capacity for empathy toward HIV/AIDS patients. If educators fail in these tasks, poor doctor-patient relationships resulting from ignorance or prejudice will lead to poor treatment outcomes. In order to minimize the discrimination experienced by people with HIV/AIDS, it is important that there should be programmes and

special sessions in clinical postings regarding accurate knowledge of HIV/AIDS transmission and promotion of universal work precautions. There should be a formation of core interdisciplinary teams with in medical colleges for providing relevant training and adequate clinical exposure of medical college students with HIV/AIDS patients.

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#### **REFERENCES**

1. Park K; Text Book of Preventive and Social Medicine, Jabalpur; M/s Banarasidas Bhanot Publishers 2007, P285-297.
2. NACO Training module on HIV infection and AIDS for medical officers.
3. Harrison et al; Principals of Internal medicine 16<sup>th</sup> edition 2003, P1076-139.
4. Whalen, J. P., Participation of medical students in the care of patients with AIDS. Journal of Medical Education, 1987 62, 53 -4.
5. Lawrence VA et al; Preoperative HIV testing: is it less expensive than Universal Precautions? J Clin Epidemiol 1993; 46: 1219-27.