



KNOWLEDGE REGARDING HIV / AIDS AND ITS ROUTES OF TRANSMISSION AMONG PARAMEDICAL STAFF OF PRIVATE MEDICAL UNIVERSITY HOSPITALS, KARACHI

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ABSTRACT

OBJECTIVE: To evaluate and motivate the paramedical staff of Baqai Medical University Hospital Karachi, regarding the knowledge of HIV / AIDS and its routes of transmission. **SUBJECTS AND METHODS:** There are cases on record where health care providers are affected with HIV/ AIDS by their professional activities. A cross – sectional study was carried out on 140 paramedical staff (laboratory technicians, operation theatre technicians, dental technicians and nurses) of Baqai Medical university Hospital from April to June 2006. Study subjects were selected by stratified random sampling using probability proportion to size technique. Self- administered questionnaires were used to collect data after informed consent.

RESULTS: Total 140 paramedical staff of different department of Baqai Medical University Hospital, Karachi, participated in the study. The mean age of respondents was 28 years (range 21 – 42 years). The mean duration of working as paramedical staff was 6.5 years (range 2-22 years). Almost 100% respondents were aware of the fact that HIV / AIDS is mainly transmitted by sexual route and through blood or blood products. Only 45% were aware that disease can be transmitted in health care setting with unsterilized instruments, reuse of disposable syringes and other invasive health care activities.

CONCLUSION: Most of paramedical staff of Baqai Medical University Hospital had basic information about HIV/ AIDS and its routes of transmission, 90% of paramedical staff knew about the preventable measures but most of paramedical staff was not using gloves, masks and other protective measures while dealing with patients.

KEY WORDS: HIV/AIDS, paramedical staff, Routes of transmission.

OBJECTIVES:

The objectives of the study were to:

- a) Evaluate the knowledge regarding HIV/ AIDS and its routes of transmission among the Paramedical Staff of Baqai Medical University Hospital, Karachi. Pakistan.
- b) Motivate and encourage the paramedical staff to use the standard precautions while dealing with the patients.

BACKGROUND:

Globally HIV/ AIDS was discovered in early eighties and the first case of AIDS in Pakistan was reported in 1987. ⁽¹⁾ During 1990s an increasing number of Pakistanis, mostly men were infected while living and traveling abroad ⁽²⁾. In late nineties cases of HIV/ AIDS began to appear in high risk groups e. g. sex workers, intravenous drug abusers and jail inmates. ⁽³⁾ As there is no effective treatment or vaccine for HIV/ AIDS, only prevention and awareness can play essential role. Health care staff play key role in management of patients at all level of health care – primary, secondary and tertiary. Paramedical Staff are at increased risk because of their professional duties with patients, which depends on level of exposure, attitude towards patients and knowledge of disease. In Pakistan HIV status of most of patients is not known; which enhances the risk of health care workers ⁽⁴⁾.

INTRODUCTION:

HIV / AIDS is one of the fastest spreading infections around the globe. According to estimates form the United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) more than 40 million people have HIV infection till the end of 2006 ⁽⁵⁾. HIV / AIDS has become the leading cause of mortality and single most important factor

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contributing to burden of disease among aged 15-59 years in the world ⁽⁶⁾.

Pakistan has a narrow window of opportunity to act immediately and decisively to prevent a widespread epidemic of HIV / AIDS. Although the estimated number of cases is still significant ⁽⁷⁾.

Total number of reported cases in all regions of Pakistan are 3224, with 2857 HIV positive and 367 AIDS cases by December 2006. Most infections occur between ages of 25-44 years, with male outnumbering females by a ration of 7:1. Number of reported cases represents only “tip to ice berg” and number of actual cases may be far greater than official reports suggests. ⁽⁸⁾. In Pakistan like other developing countries under reporting is mainly due to social stigma, underdeveloped surveillance & voluntary testing system and lack of knowledge / awareness among the population and health care providers. ⁽⁹⁾.

Human Immune Deficiency virus is transmitted through vaginal, oral or anal sex, injecting drugs users sharing needles & syringes, blood transfusions of unscreened blood and blood products, and infected surgical instruments. It can also be transmitted from infected mother to child ⁽¹⁰⁾.

The manifestations caused by HIV / AIDS are a combination of different diseases which occurs as the HIV weakens and destroys body’s immune system making its victims more susceptible to infection. Scientists have estimated that about half of the people with HIV infection develop symptoms within 10 years ⁽¹¹⁾. This time varies from person to person depending on route of transmission, dose of virus, frequency of exposure to virus and response of infected person.

There is no vaccine yet discovered for the disease. Antiretroviral therapy (ART) slow down the rate at which HIV weakens the immune system. But there are no drugs which could eliminate the virus from the body. Preventive measures against HIV/ AIDS are crucial, especially for the people of health related professions, which are more at risk of HIV infection due to their occupational exposure ⁽¹²⁾.

Paramedical Staffs are exposed to risk of HIV / AIDS either due to lack of protective equipments/ tools, not adhering to safety measures and inadequate information and knowledge about the disease ⁽¹³⁾.

It’s important to motivate paramedical staff through lectures and seminars regarding HIV / AIDS and its risk involve while dealing with patients.

To adhere with the preventive measures one should have knowledge of the disease. Most of the people in Pakistan even many health related paramedical staff are not aware about HIV / AIDS and its routes of transmission.

TABLE – 1
PARAMEDICAL STAFF BY JOB CATEGORY (N: 140)

S. No	Job Category	Number	Percentage
1.	Laboratory Technicians	26	18.6%
2.	Operation Theatre Technicians	20	14.3%
3.	Dental Technicians	22	15.7%
4.	Nurses / Nursing Assistant	46	32.8%
5.	Midwifes	06	4.3%
6.	Others	20	14.3%
7.	Total	140	100%

TABLE – LL
LEVEL OF KNOWLEDGE REGARDING HIV /AIDS
AMONG PARAMEDICAL STAFF (N - 140)

S. No	Knowledge Regarding HIV / AIDS	Yes	No
1	Disease agent	80%	20%
2	Symptoms of HIV/ AIDS	44%	56%
3	Global situation of HIV / AIDS	18%	82%
4	Preventive Measures	90%	10%
5	Dealing with HIV / AIDS Patients	78%	22%
6	Treatment of HIV / AIDS	4%	96%

KNOWLEDGE OF REGARDING ROUTES OF TRANSMISSION
HIV / ADIS (N = 140)

S. No	Mode of Spread	Yes %	No %	Do not know %
1	Transmission through sexual contact	94%	0%	06%
2	By Unscrened Blood Transfusion	85%	05%	10%
3	By Contaminated needles	80%	05%	15%
4	By Contaminated O.T Instruments	60%	20%	20%
5	By infected mother to child	50%	20%	30%
6	By drug users who share needles & syringes	55%	25%	20%
7	Ear, nose piercing by contaminated needles.	45%	35%	20%
8	Barber by reuse of blades	40%	35%	25%
9	Street Dentists (quacks)	35%	35%	25%
10	Living together, eating and sharing utensils	10%	50%	40%
11	Coughing sneezing	25%	40%	35%
12	Toughing, hand shaking & other casual activities.	15%	50%	35%

SUBJECTS AND METHOD

Study Setting: The study was carried out in Baqai Medical University Hospitals, Karachi. Pakistan. Baqai Medical University is located on Super Highway near Toll Plaza. In the university campus there is five hundred bedded teaching hospital, “Fatima Hospital” affiliated with Baqai Medical College. Baqai Dental College has over hundred Dental chairs.

In Nazimabad Institute of Cardiovascular

Diseases, Institute of Diabetology and Kidney Centre is located.

Inclusion Criteria: The Paramedical staff included in the study was laboratory technicians, operation theatre technicians, dental technicians and nurses of Baqai University Hospital, Karachi, who are more at risk due to their invasive professional activities.

Exclusion Criteria: Paramedical and nursing staff of physiotherapy department, psychiatry

department and other departments as Primary Health Care Centers and Maternal & child Health Care centers which do not perform any invasive professional activity was not included in the study.

Sampling procedure was stratified random sampling. Study participants. Study participants involved in invasive procedures form strata, from which random sampling was done using probability proportional to size technique. The data were collected on self – administered questionnaire form paramedical staff after informed consent. Data analysis was done on SPSS version 12.

RESULTS:

Total 140 Paramedical staff members were interviewed. Paramedical staff by job category are shown in table. 1

Out of 140 paramedical staff interviewed, 94% had heard about HIV/AIDS and has some basic knowledge of it. When it was asked “is it a viral disease”. 80% knew it, while 20% were not aware of this fact it has been observed during the study that most of paramedical staff did not know about the global picture of HIV/AIDS, even they did not know about the situation in their own country. Almost 100% respondents were sure that HIV/AIDS it transmitted through sexual contact, as well as by blood and blood products. But there was misconception that infection can be transmitted by coughing, eating together and other casual activities. When other routes of infection were inquired, only 45% were aware that infection can be transmitted by ear/ nose piercing; tattooing and infected needles and syringes. Few paramedical staff (35%) responded that dental quacks have a role in transmission of HIV/AIDS by unsterilized instruments. Level of knowledge regarding HIV/AIDS among paramedical staff is shown in table -II

Out of 140 which includes (laboratory technicians, operation theatre technicians, dental technicians and nurses), approximately 62 (44%) have knowledge about the symptoms like (Weight loss, Pneumonia, Fever, Breathlessness, Weak eyesight, TB etc.). 126 (90%) staff had knowledge regarding preventable measures (e.g. gloved, masks and gowns) while dealing with patients.

DISCUSSION:

We chose our study on health care workers To see the knowledge regarding HIV/AIDS I one of the leading hospital of Karachi. Over the last two decades HIV/AIDS has evolved from a series of interesting case reports to a growing epidemic that threatens the entire world. It is feared to cause devastation among large pockets of populations and may roll back more than thirty years of public health

achievements. This killer disease has been more amenable to behavioral change than by provision of curative services⁽¹⁴⁾.

Health care workers (HCWs) who have occupational exposure to blood and other potential infectious materials are at increased risk for acquiring blood – borne infections. There virus (HCV) and acquired immunodeficiency syndrome (AIDS) caused by human immunodeficiency virus (HIV) are of primary significance to health care workers. Every day thousands of health care workers in the developing nations including Pakistan are accidentally stuck by needles, sharps. Health care workers from all disciplines are prone to receive needle stick injuries including surgeons, anesthesiologists, nurses, laboratory technicians etc⁽¹⁵⁾.

Our study shows that 18% of health care workers are familiar with global situation like HIV/AIDS is the major concern for both developed and developing countries. Almost 44% are well aware of the onset and early symptoms like (Weight loss, Pneumonia, Fever, Breathlessness, Weak eyesight and TB) 78% of workers had knowledge that how to deal the patient of HIV/AIDS.

Infection of HIV/AIDS by infected needles in an important route of transmission. Pakistan has a high rate of medical injections, around 4.5 percent per person per year. Studies indicate that 94% of injections are administered with unsterilized injection equipments⁽¹⁶⁾. According to WHO estimates unsafe injections account for 62% of Hepatitis – B, 84% of Hepatitis – C and 3 % new cases of HIV⁽¹⁷⁾.

All blood should be assumed to be potentially infections in health care settings⁽¹⁸⁾. Though HIV has been isolated from many other body fluids including saliva, tears, urine and breast milk, experience shows that blood is only fluid associated with HIV transmission during health care procedures⁽¹⁹⁾.

The paramedical staffs of the hospital are not taking the proper protective measure while dealing with patients even tho study suggested that 90% of workers are well aware of preventive measures. The need of the hour is to motivate and educate staff through counseling, workshops and seminars about HIV/AIDS and remind them (prevention is better then cure) before it's too late. Main risks to health care workers are injury with a needle or sharp instruments which has been contaminated with blood, exposure to open wounds to infected blood and splash of infected blood or body fluid on to mucosal membrane and eye⁽²⁰⁾

“Universal Precautions” for prevention of transmission of HIV and other blood borne pathogens are simple, standardized procedures should be used in health care

settings. They consists of hand washing, use of protective clothing such as gloves, safe handling of sharps, safe disposal of risk waste including sharps and decontamination of instruments and equipments⁽²¹⁾.

Epidemiological studies have confirmed an association between occupational exposure and infection with some disease. In a study in Mexico among health workers two cases were linked directly with occupational exposure⁽²²⁾. Paramedical staff should be careful when handling blood especially when they have cuts on skin or open wounds. Blood spillage while handling blood and blood products could also be prevented by wearing gloves, masks, aprons and other protective equipments on regular basis. Other important protective measure includes use of bleach for cleaning of hands and instruments⁽²³⁾.

CONCLUSION:

Paramedical staff in our country has low educational status and lacks information. They are also overburdened due to increase workload. Laboratory technicians, operation theatre technicians, dental technicians and nurses are more at risk of HIV/AIDS as they are involved invasive medical procedures.

It is also encouraging that 90% of the laboratory technicians believe that new disposable syringe should be used for the collection of blood samples and 100% agreed to discard the syringes and needles after use. It is concluded that the overall knowledge of the paramedical staff is good about HIV/AIDS and its routes of transmission and the awareness about the prevention of infection is satisfied, but there is lack of using the preventive measures and equipments, which needs to be improved. It is need of the hour to emphasize on practicing universal precautions besides health education sessions should be organized on regular basis. Newspapers and electronic media also have an important role in transmitting knowledge about AIDS.

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