

## **Abstract**

**Introduction:** Patients seek health care from hospitals because of various illnesses in order to live healthy lives. It is therefore the responsibility of the hospital to ensure that the patients get proper treatment while in hospital and to prevent any further infection while in the hospital setting. This is done by observing standard infection control practices in the hospitals

However, adherence to infection control practices in hospital wards has not been given the attention it deserves in terms of regulating it and guiding all the hospital staff to adhere to it. This in the end has had a negative health impact of registering hospital related infections.

### **Objective**

To determine adherence to infection control practices and factors affecting adherence to infection control practices in hospitals in Makindye division.

### **Methods**

A descriptive cross sectional study employing both qualitative and quantitative methods of data collection was used. The study was carried out in four hospitals in Makindye division, Kampala district. Our calculated sample size using the Kish and Leslie formula was 246 respondents who were interviewed using self administered questionnaires. Twenty one observation checklists were administered in the 21 hospital departments/wards. Data was analyzed using SPSS and Epiinfo Version 3.3.2 (2005) and Stata 8.2 soft ware and analysis was done in stages involving uni-variate, bivariate and multivariate analysis. Data is presented in tables, graph and chart.

### **Results**

The study showed that much as the health workers were knowledgeable about infection control, 96.3% revealed it was not practiced in the hospitals where they worked. Lack of equipments to use, lack of knowledge regarding infection control practices and lack of commitment of the administrators to make supervision on infection control practice were reasons given for non adherence in the hospitals. 65% of the hospital staffs ranked the level of adherence to infection control in hospitals as low; 95.1% of the

hospital staff members reported hospital acquired infections in the past two weeks, with tetanus as the most hospital acquired infection. 90.5% of the respondents had been trained in infection control practices, 55.4% from medical schools. 91.4% were in the know of at least hand washing, proper waste disposal, use of protective equipments and prevention of needle stick injuries as “specific infection control practices”. 47.9% had received the three vaccinations that is; Hepatitis, Tetanus and TB. 89.4% knew at least three situations in which they wash hands routinely with soap as “after contact with individual patients or their immediate environment” or “before manipulating medical devices” and “after using bathrooms, toilets and latrines; 88.6% were always washing hands, 84.9% knew that hospitals had infection control guidelines, 77.2% knew about the infection control guidelines as laid down by the ministry of health; 81.6% were taking action as “immediately stopping working the moment they had got needle stick injuries”. 78% were putting on gloves with 93.5% washing hands after removal of gloves. 84.5% were washing hands between patients being examined. 60.8% of the health workers were wearing protective equipments always like gloves, goggles, aprons and masks.

From the check lists, all hospitals had hand washing facilities. 71.4% had a hygiene policy and 42.8% were available but not displayed. 61.9% showed that the wards did not have visible swabs that were dirty, stained or wet, 81% of the wards had puncture proof disposal boxes for disposing of used needles and injection in treatment and 81% had properly well labeled waste disposal bins on the wards, 90.5% of the health workers were putting on protective equipments, 61.9% showed that hospitals were disinfecting patients rooms after patient discharge, The study further revealed at 57.1% that soap was not available at hand wash facility. 71.4% of the available boxes or bins were over flowing, open and pierced, almost all people handling waste were not putting on protective wear. 52.4% did not have cleaning schedule for patients’ rooms. Of those who had cleaning schedules, 47.6% were cleaning once a day, 85.7% hospitals were changing linen only when soiled.

At bivariate analysis, the staff’s training in infection control measures was associated with the level of adherence to infection control with a chi square value of 4.17 and a P-value of 0.001. Hospitals whose

staff members had been trained in infection control were 1.68 times more likely to have high level of adherence to infection control as compared to those hospitals whose staff members had no training at all in infection control.

The staffs' knowledge about whether the hospital has an infection control guide was a significant factor in explaining the level of adherence to infection control with a chi square value of 5.491 and a P-value of 0.004. Hospitals whose staff members were knowledgeable about infection control guidelines/policy were 12.3 times more likely to adhere to infection control measures as compared to those hospitals whose staff members were ignorant of the guide/policy.

The hospital staffs knowledge about the infection control guide as laid down by the ministry of health in Uganda, had a chi-square value of 9.065 and a P-value of 0.0011. This means that hospital which had hospital staff members ignorant of the infection control guides as laid down by Ministry of health Uganda, these hospitals were 0.379 times less likely to adhere to infection control practices as compared to those hospitals whose staff members were knowledgeable about the guide lines as laid down by Ministry of Health.

The hospitals with equipments available are 12.3 times were more likely to adhere to infection control practices as compared to hospital with limited equipments is obtained at a chi square value of 8.275 and a P-value of  $< 0.000$ .

The knowledge of the health workers about the hospital policy of waste management and disposal was significantly associated with the level of adherence levels to infection control practices at a chi square value of 15.921 and a P-value of 0.000.

Administrative commitment on infection control practices was significant at the chi square value of 9.28 and a P-value of 0.0008.

Hospitals in which the patient –health worker ratio was high were 0.25times less likely to adhere to infection control measures as compared to those with a low patient health worker ratio. This was at a chi square value of 4.296 and a P- value of 0.0005.

After adjusting for confounding at the multivariate level using log likelihood ratio, all the variables ended up being significant and these variables were;

Staff levels of training (OR = 2.19, 95%CI 1.70-2.492, P-value 0.000); Staff's knowledge about infection control guides as laid down by MOH (OR= 0.34, 95 % CI -0.86-0.5, P-value 0.0016); Staff's knowledge about hospital infection control guidelines / policy (OR=2.58, 95%CI 1.63-3.79, P-value 0.0010); Staff's knowledge about hospital waste management policy (OR=0.36, 95%CI 0-0.023-0.58, P-value 0.0090) ; Lack of equipment (OR= 3.46, 95%CI 0.41-4.67, P-value 0.021); Staffing; that is; Patient - staff load (OR=4.24, 95%CI 2.46-8.64, P-value 0.032); Administrative commitment/ infection control supervision by infection control personnel (OR= 2.45, 95%CI=1.04-2.967, P-value 0.0013)

### **Conclusion and recommendations**

- Continuous on job training in infection control  
Displaying of the recommended infection control practices within the hospitals in areas that are accessed by all staff and patients on the hospital ward,  
Proper allocation of materials as required;
- A reward systems for those identified as adherence to infection control in the hospital wards.
- The recommendations above will facilitate adherence to infection control practices in the hospital wards.
- A clear system concerning supervision of hospital wards by infection control personnel should be laid out.