



Relationship between Aseptic Procedures Observed by Health Care Personnels and Transmission of Hospital Acquired Infections (HAIs) within National Ear Centre, Kaduna, Nigeria

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ABSTRACT

Hospital acquired infection is an infection that occurs between 48-72 hours of admittance to a health facility and/or 3-10 days after dismissal from the facility. Those patients must not present with obvious/incubatory infections on arrival at the hospital. These infections are transmitted easily by hospital staff inadequately sterilized instruments, aerosol droplets from other ill patients, food and water provided at hospitals. Most hospital staff have acceptable knowledge about infections and hygiene, use of gloves and taking appropriate action after being injured by a sharp object, but they have poor knowledge about use of sanitizing gel and disinfecting procedures. Many HAIs disclose antimicrobial resistance which can complicate treatment, increase the severity of a patient's illness, compromises his/her health and length of stay in the hospital.

Deaths due to HAIs are usually attributed to suboptimal practice by health workers, particularly poor hand hygiene. For each and every incident of nosocomial infection, the integrity of the health care sector is being compromised, the ugly trend if not checked can lead to higher incidences of morbidity and mortality in patients, hospital workers and health care givers.

A total of 90 meat samples were collected in UV irradiated zip bags from local and supermarket of Lahore. These included chicken meat (n=15), fish meat (n=15) and beef from local market. The supermarket meat is also same in number chicken meat (n=15), fish meat (n=15) and beef (n=15) all samples are without bones. From each stores and outlets not more than one sample of each meat type was collected on the same day from both local and supermarket. The sample population was selected by simple random sampling. All cadres of the hospital health care personnel were involved, except for those

who declined to be included. Data was collected using questionnaires. The first part of the questionnaire was demographic, on work specification of participants. The second part was on knowledge of HAIs and practice of aseptic procedures to prevent HAIs, this part was rated on 3 scales: Yes- regularly, Yes-not regularly and No.

Three selective media, Cetrimide agar, MacConkey agar and Mannitol salt agar were prepared according to Manufacturers instruction and poured into petri dishes to gel. To each of these were added 0.1 ml of the specimen broth and spread evenly. All plates were incubated at 32°C for 24 hours. Gram staining and other Biochemical tests which include Oxidase, Coagulase, Indole, catalase and Voges proskers test were carried out for confirmation of pathogens selectively isolated.

The results obtained showed that 83.3% of the health workers had good knowledge of HAIs, while 16.7% did not. There was a relationship between profession and an understanding of what HAI's meant. This work also showed shoes as a major source of spread of HAIs, and the poor awareness of this by 83.3% of the hospital staff. Training on prevention/control of HAIs would help inspire better awareness of HAIs amongst hospital staff. Selective media like MacConkey agar, Cetrimide agar and Mannitol agar were used to isolate pathogens like *Escherichia coli* (20%), *Pseudomonas aeruginosa* (20%) and *Staphylococcus aureus* (60%) respectively from various hospital fomites like chairs, tables, door handles, bed and surfaces of infusion bottles.

From results of this study it was deduced that most of the health workers were aware of HAIs, as stated by 83.3% of the respondents. Like the work carried out by [6] where more than 90% of intensive care unit staff had knowledge of infection control, 60% of National Ear Care Centre, Kaduna were also very aware of infections control, as demonstrated by all health workers wearing protective clothing, disinfecting their hands before and after work and in-between seeing patients. Most health

workers of National Ear Care Centre Kaduna had a good knowledge of hospital acquired infections, but they were not very aware of their role(s) in spread of these infections, especially through personal fomites like their shoes. Continuous training on infectious diseases prevention and control is suggested to help curb the menace of HAIs.

