



Clinical audit of hand washing in the first six months of 1396 at Taleghani Tabriz Educational Center

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ABSTRACT

Introduction: Health care-associated infection causes a great burden on the patient. Hand hygiene is the most important way to save others. Clinical Audit, as a method of improving the quality of services, can have a potential impact in this regard.

Materials and Methods: In this descriptive cross-sectional study, hand hygienic compliance was assessed using a five-point checklist of the World Health Organization during the four-week period in March 1395 and the amount of hand disinfectant (alcohol-based) solution used in the measurement section then compares the amount of solvent consumption with its standard according to the WHO formula. Due to the need to upgrade the present situation, after the results were presented at the hospital infectious disease control committee, there was a need for promotion and necessary measures. The re-evaluation was carried out in September 1396 and the upgrade was estimated.

Results: The findings showed that the level of hand hygiene before the promotion was 34% and after it, 49.48% and out of 1033 cases in the first six months of 1396, 507 cases (49%) performed hand hygiene and 526 (51%) did not. Of the 1854 cases observed in the second six months of 1395, 616 cases (33%) performed hand sanitization and 1238 (67%) did not.

Conclusion: The present study showed that the use of clinical audit as one of the methods for improving the quality of hand hygiene can be effective in improving the process of hand hygiene, which leads to increased safety of patients.



Use of ozone in the treatment of intra-abdominal abscess in patient with LAD

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According to the chosen therapeutic concentration ozone can produce its immune-modulating, anti-inflammatory, anti-bacterial, viral, fungal and other effects. Our patient is a 4.5 month old infant suffering from immunodeficiency disease LAD (leukocyte adhesion deficiency) that has been hospitalized for about two months before for FTT and severe infections. At the last time, the patient was admitted due to the intra-abdominal abscess (size 55 * 35 mm) with fistula to the umbilical. Due to lack of medical response he was Candidate for bone marrow transplantation. Unchanged in previous antibiotics (linezolid & levofloxacin) according to consultation with pediatric infectious specialist. The ozone was given PO to the patient twice in day from the first time of hospitalization. A report of wrinkled abscess size in ultrasound (US) was received on day 14 of hospitalization. WBC count was zero on the 19th Admission day and during this time, an uncontrollable high fever did not occur. Compared to the previous abscess size was not only exacerbated but also abdominal US was observed smaller size. Abscess and fistula were not detected in US on the 30th day after BMT. Ozone therapy is a form of alternative medicine treatment, used to disinfect and treat disease. Some conditions may benefit from treatment with Ozone Therapy include: Cancer, Meniscal tears and joint disorders, Shingles (*Herpes zoster*) and Herpes Simplex, Diabetic ulcers and venous stasis.

We recommend this method in cases resistant to medical and surgical therapy.

Keywords:

Ozone · Ozone Therapy · LAD · Immunosuppressive



Prevalence of multi-drug resistant bacteria isolated from patients with cardiac diseases admitted to the Seyedolshohada Hospital of Uremia

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ABSTRACT

Keywords:

Introduction: Patients with non-infectious diseases such as cardiac diseases who have to stay in hospital for long period are high risk for nosocomial infections.

Materials and Methods: In this cross-sectional study, bacteria isolated from cardiac patients admitted in the second half of 1396 were enrolled

Results: Total 547 samples were cultured and 58 (10.60%) of them were positive. Among culture-positive samples: 40 samples from urine, 13 blood and 4 wound. *Escherichia coli* 30 (75%), *Enterobacter cloacae*

4 (10%), *Staphylococcus Epidermidis* 2 (5%), *Klebsiella pneumoniae* 1 (2.5%), *Staphylococcus saprophyticus* 1 (2.5%), *Citrobacter diversus* 1 (2.5%) and *Staphylococcus lugdunensis* 1 (2.5%) were recorded

Antibiotic-resistant *Escherichia coli* mostly related to sulfamethoxazole/trimethoprim (62.5%), Ciprofloxacin (59.4%), cefotaxime (56.2%), Ceftriaxone (46.9%), Piperacillin (37.5%) and Cefixime (34.4%).

Conclusion: We suggested that antibiogram should be taken into account when prescribing antibiotics.



Frequency of Isolated Bacteria from Blood Culture of Patients in the Hematology Unit at Pediatric SubSpecialty Hospital of Dr. Sheikh in Mashhad in the first 9 months of the year 2017-2018

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Keywords: Bloodstream infection, hematology ward, pathogens

ABSTRACT

Introduction: Bloodstream infection is one of the most important causes of mortality in patients hospitalized in the hospital, especially in hematology wards.

Materials and Methods: In this cross-sectional study, conducted over 9 months in Dr Sheikh hospital from April to December 2017, 2958 blood samples from patients in different parts were studied, which 492 samples belonged to the hematology ward. Blood samples were inoculated into BD and were placed inside the BD machine via automation. Then positive samples on usual subculture environments were identified by morphological and biochemical tests.

Results: Among 492 samples of hematology ward, 128 were positive. Isolated pathogens included 27 *coagulase-negative Staphylococcus* (21%), *Burkholderia* and yeast each 15 (11.7%), *Stenotrophomonas* 13 (10.1%), *Staphylococcus aureus* 12 (9.37%), 6 of them were MRSA, non-fermented gram-negative bacteria 11 (8.99%), *E. Coli* 7 (5.46%), *Klebsiella* 5 (3.9%), *Enterococcus* 4 (3.1%), *Candida*, *Diphtheroid* and *Streptococcus pneumonia* 3 (2.34%) *Enterobacter*, *Micrococcus* and *Staphylococcus haemolyticus* 2 (1.56%) and *pseudomonas aeruginosa* and alpha hemolytic *Streptococci* 1 (0.8%).

Conclusion: According to the results of this study and the high variation of bacteria in blood culture samples in the critical section of hematology, it is more important to pay attention to children at risk for blood infections and to reduce the risk factors.



Evaluation of perception, Knowledge and performance of Nurses in ICU in order to Prevent Ventilator-associated pneumonia (VAP)

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barriers

ABSTRACT

Introduction: Hospital infections have been associated with morbidity, mortality and cost in hospitalized patients. About 25% of hospital infections are reported in ICU. VAP is an infection that the medical team members, especially nurses have an active role to prevent it. The purpose of this study was to determine the knowledge and performance of ICU nurses to prevent ventilation related pneumonia and their perception of prevention barriers of VAP in 1396.

Materials and Methods: This is a descriptive-analytic cross-sectional study. The statistical population consisted of all the nurses in ICU department. A random sampling was performed according to Morgan's table including 52 nurses. A questionnaire including demographic characteristics, knowledge, performance and prevention barriers of Ventilator-associated pneumonia were used. Data were analyzed by SPSS-20 software. Descriptive statistics were used including tables central tendency and dispersion and analytical tests (Pearson correlation coefficient, independent t-test, ANOVA, or equivalent nonparametric for data analysis

Results: More than 70% of the nurses responded to the awareness questionnaire and follow the protocol's performance, and had correct perception of barriers to prevent of Ventilator-associated pneumonia.

Conclusion: Statistical tests showed that there was a significant direct relationship between knowledge and performance of nurses.



The Study of effective factors on hand hygiene in nursing staff of ICU in Sanandaj educational hospitals using Planned Behavioral Model in 2017

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ARTICLE INFO	ABSTRACT
<p>Keywords: Hand Hygiene Critical Care Units Hospital Infection</p>	<p>Introduction: The WHO estimated the incidence of hospital infections over 25% in some developing countries. Hand hygiene is the easiest and most effective way to prevent the transmission of infections and disease. This study is aimed to assess the effective factors on hand hygiene in nursing staff of ICU in Sanandaj educational hospitals using Planned Behavioral Model.</p> <p>Materials and Methods: This study is a cross-sectional and descriptive-analytic study which included all nursing staff of ICU in Sanandaj educational hospitals by census sampling. Data was collected using WHO Standard Checklist about hand hygiene and Planned Behavioral Model questionnaire. Data were analyzed using descriptive and inferential statistics.</p> <p>Results: Only in 42% of participated nurses the hand hygiene observance was above average. Their level of awareness (78%) and attitude (86%) about hand hygiene were high and there was a significant relationship between subjective norms and hand hygiene ($p < 0.05$).</p> <p>Conclusion: Given the great importance of ICU in risk of hospital infections, nurses need more training in this field and it seems necessary to provide appropriate context in order to removing obstacles of improving hand hygiene behavior.</p>



Knowledge, Attitude and Performance of Nurses toward Hand Hygiene in Hospitals

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ARTICLE INFO	ABSTRACT
<p>Keywords: Knowledge Attitude Performance Nurses Hand Hygiene</p>	<p>Introduction: Health Care-Associated Infection (HCAI) is the most frequent adverse event for hospitalized patients. Based on recommendations from World Health Organization (WHO), Hand Hygiene (HH) is simple, important, basic factors and effective solution to protect patients from HCAI. This study aimed at assessing Knowledge, Attitude and Performance (KAP) among nurses about HH at teaching hospital, Tehran, Iran.</p> <p>Materials and Methods: This cross-sectional KAP study was conducted on 270 nurses from teaching hospitals in Tehran city at center of Iran in 2015. Data was collected using a translated version of the World Health Organization (WHO) Hand Hygiene Questionnaire. Data were analyzed through descriptive and statistical tests in the SPSS-PC (v.21.0). The level of significance was set at below 0.05.</p> <p>Results: The majority of nurses had good knowledge 208 (77 %), positive attitude 151(55.9%) and poor performance 153 (56.6%). Multivariable analysis showed that work experience (p=0.008), ward (p<0.001) and formal training(p<0.001) were the most important predictors of participants' KAP about HH.</p> <p>Conclusion: According to the results, nurses' knowledge regarding hand hygiene was good and hand hygiene practice in poor. Many nurses had negative attitude regarding HH. Based on these results, it is necessary to multimodal and continuous training program for all the categories of nursing staff to increase nurses' KAP regarding HH.</p>



Hand hygiene compliance among healthcare workers in an emergency ward in Tehran

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ARTICLE INFO	ABSTRACT
<p>Keywords: Compliance hand hygiene healthcare workers infection control</p>	<p>Introduction: Hand Hygiene (HH) is a cost-effective method in preventing infection transmission. Research findings show that HH compliance has not been satisfactory in Health Care Workers (HCWs). The prevalence of infection due to inappropriate HH will increase enhance morbidity, mortality and costs. This study aimed at assessing HH compliance among HCWs in a emergency ward in Tehran.</p> <p>Materials and Methods: This was a cross-sectional observational study using direct observation technique, during One year (Oct 2015- Oct 2016) in emergency in a selected general hospital in Tehran. During this analysis, 1735 HH opportunities were observed. HH compliance was tested for all 5 moments as per WHO guidelines.</p> <p>Results: Overall compliance according to WHO Guidelines was 10.2%. Nurses had an adherence rate of 13.1%; nurse assistant adherence was 10.4%. HH compliance with the WHO moments was 3.6% before touching a patient, 6.3 before clean/aseptic procedures, 62.8% after body fluid exposure/risk, 33.4 after touching a patient and 52.1% after touching patient surroundings. Glove use was more common in 68% of the opportunities.</p> <p>Conclusion: The observance of HH is still low in emergency ward. Educational programs, assessment and monitoring, encouragement and punishment system recommended to be improved HH in emergency wards.</p>



Evaluation of the level of hand hygiene in intensive care units personnel of Mehr Hospital of Mashhad in autumn of 2017

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Hospital Infection
Intensive Care Unit
personnel

ABSTRACT

Introduction: Intensive Care units have the highest risk for hospital infections among hospital wards. Studies have shown 60 to 70 percent of hand hygiene compliance in advanced countries and 40% to 50% in Iran. Hand hygiene is the simplest, least costly and most effective method of preventing hospital infections. The aim of this study was to determine hand hygiene compliance in the personnel of Intensive Care units of Mehr Hospital in Mashhad.

Materials and Methods: This was a descriptive cross-sectional study which covered 100 personnel of the Intensive Care Units (Dialysis, ICU, CCU, NICU, Open Heart ICU) in the hospital and was conducted by observing 650 positions created in autumn of 2017. The data gathering tool was a checklist approved by Mashhad University of Medical Sciences. Finally the data were analyzed via SPSS software.

Results: The average age in this group was 28 years and 62% of the personnel were women. NICU with 57.5% and Open Heart ICU with 37.4% had the highest and lowest percentages of hand sanitation, respectively. In these observations the personnel had the highest rate of hygiene hand with 34.5%, after touching the secretion of the patients. In general, the rate of hand hygiene was 47.3% in the Intensive Care Units.

Conclusion: It is suggested that using the high-quality disinfectant solutions, enough advertising about the importance of hand hygiene, More continuous training as well as continuous supervision of head nurses in Intensive Care units can increase hand hygiene compliance .



Assessment of Hand Hygiene by Nursing Students in Apprenticeship

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ABSTRACT

Introduction: Care-taking infections are the challenges of health centers. To reduce the incidence of these infections, the most effective, simple and cost-effective way is to recognize the hygiene of the hand by the care provider personnel. Performing different student nursing procedures for patients increases the incidence of infection, and hence the importance of hygiene in preventing hospital infection in sections is important. Objectives: The purpose of this study was to evaluate the level of hand hygiene by nursing students in teaching hospitals affiliated to Kermanshah University of Medical Sciences.

Materials and Methods: The study was performed on 100 nursing students who were trained in educational hospitals of Kermanshah University of Medical Sciences. To collect the data, a checklist including 10 items related to all aspects of hygiene compliance was set up. Each of the subjects of the study population was 6 times and 600 times in total.

Results: The average score of hand hygiene (48.5%) and the total score in the majority of research units (57.7%) were weak. The least amount of handwashed articles was handwashed, hand washing with soap and water (6.3%) and later (10.8%) were followed by hand washing and hand washing after leaving the hand gloves (6 / 15%); in addition, the majority (42.3%) wear gloves while taking care of the patient.

Conclusion: In this study, the degree of hygiene of the majority of students was weak, as well as the students had defects in hand washing with soap and water before and after care and use of gloves for patient care. Also, in view of the importance of comprehensive health care, it is necessary to take measures to fully comply with this important action and to remove the barriers to its implementation.



Evaluation of nurses' satisfaction about hand hygiene sanitation in Shariati hospital in Mashhad

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ARTICLE INFO	ABSTRACT
<p>Keywords: Hand hygiene Nurses, satisfaction</p>	<p>Introduction: Hand hygiene is the first step in preventing and controlling health- care associated infections. This study has been conducted to evaluate nurses' level of satisfaction about facilities needed for hand hygiene in Shariati hospital.</p> <p>Materials and Methods: This cross-sectional study was carried out on 144 employed nurses in 2016. All nurses completed the questionnaire. The questionnaire contained ten questions about the product needed for hand rub, hand wash and hand scrub. The data were analyzed by SPSS software.</p> <p>Results: According to the results of this study 49.3% of nurses chose good option for the quality of liquid hand rub, 40.2% chose good option for the quality of the liquid hand wash. The quality of the hand scrub was good only in 21.5%. They chose 45.1% good for the quantity of hand rub liquid item in the wards. Overall, 58% of nurses satisfied about hand hygiene product.</p> <p>Conclusion: According to this study it is necessary for health centers to promote hand hygiene culture and check their employees' satisfaction about the quality and the quantity of hand hygiene products.</p>



The Effect of Different Educational and Cultural Methods on Hand Hygiene in Payambar Aazam Hospital, Kerman 2016-2017

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ARTICLE INFO

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ABSTRACT

Introduction: Hand hygiene is considered the most important, effective and least costly measure to reduce health-care associated infections. This study was conducted with the aim of the effect of different educational and cultural methods on hand hygiene.

Materials and Methods: In this study, health-care workers divided into four groups: nurses; medical staff, auxiliary, and others. Hand hygiene compliance was measured in six months using ministry health checklist. Interventions include hand hygiene workshop, pamphlet, hand hygiene poster, installing dispenser for each bed, distribution of pocket hand gel, holding hand hygiene festival with gifts, nurses day, food festival etc., Data were analyzed using SPSS16 software and statistical tests.

Results: Prior to intervention hand hygiene compliance was 40% in nurses, medical staff 21%, auxiliary 24% and others 17%. After intervention, hand hygiene compliance increased to 46% in nurses group, medical staff 23%, auxiliary 25%, others 22%. There was a significant difference between hand hygiene compliance before and after intervention ($P < 0.05$).

Conclusion: Cultural and educational interventions have good impact on hand hygiene compliance.



A study of the awareness and attitude of nurses working in neonatal intensive care unit about hand hygiene compliance

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ABSTRACT

Introduction: As we know, about a quarter of infant mortality is caused by infection and hand hygiene can significantly reduce the death rate of neonates. It is therefore important to raise awareness of healthcare workers and adjust their attitudes about the guidelines of hand hygiene. To this end, this study seeks to investigate knowledge and attitude of nurses working in neonatal intensive care units in public and private hospitals

Materials and Methods: A 23-item questionnaire was designed based on the study of Gonzalez et al. regarding the knowledge and attitude of nurses about hand hygiene compliance. The questionnaire was completed by 20 nurses in the public hospital and 19 nurses in the private hospital. The data was analyzed using SPSS software after encoding

Results: In this study, 39 female nurses with a bachelor's degree in nursing with a mean age of 35.87 ± 1.8 years completed the questionnaire on knowledge and attitude of health hygiene compliance. The mean score of knowledge and attitude of nurses was 78.57 ± 6.72 and 78.65 ± 6.7 in public and private hospitals respectively, and there was no significant difference between the two groups in this regard ($p = 0.937$). More than 25% of nurses stated that they were more likely to follow hand hygiene guidelines under supervision and more than 53% declared that if their colleagues adhered to hand hygiene guidelines, they would feel bound to follow suit.

Conclusion: Since knowledge and attitudes are indicators and predictors of behaviors in individuals, and the results of the study suggested that nurses considered supervision and performance of their colleagues as factors affecting hand hygiene compliance, it seems that more accurate training and monitoring in this regard is required.



A study of the Essential Situations of Hand Hygiene Compliance in Neonatal Units in Public and Private Hospitals

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ARTICLE INFO

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hand washing
hand hygiene
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ABSTRACT

Introduction: Hand hygiene has been recognized as the main factor in controlling and reducing hospital infections. However, little attention has been paid to the observance of hands washing guidelines. The purpose of this study is to investigate the essential situations that require hand hygiene compliance in neonates units in public and private hospitals.

Materials and Methods: In this study, the healthcare workers dealing with patients were monitored secretly and the hand hygiene control checklist for five situations was completed for them. Data collected from public and private hospitals were analyzed using SPSS software.

Results: 456 situations in the public hospital and 164 situations in the private hospital were monitored. 155 (25%) situations were before any contact with patients, in which more than 47.1% of nurses used alcohol. 138 (22.3%) situations were before the adoption of any aseptic action in which more than 34.8% of the subjects used alcohol solution. 124 (20%) situation were after contact with patients, where more than 63.7% of subjects used soap and water. 112 (18.1%) situations were after contact with patients, in which more than 42% of subjects used an alcoholic solution, and 91 (14.7%) situations were after environmental contact where more than 40.7% of subjects did not employ any necessary actions.

In all emergency situations, there was a significant difference between the public and private hospitals in terms of hand hygiene compliance ($p = 0.0001$). However, there was no significant difference between the two hospitals after contact with body fluids. ($p = 0.199$)

Conclusion: Despite the importance of hand hygiene in controlling and reducing infection, this issue has not received adequate attention. Therefore, more in-depth interventions and supervisions on staff performance are required.



Evaluation of the Level of Hand Hygiene at Samen Al-aemah Hospital (Chenaran) in 1396

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ABSTRACT

Introduction: Hands are as one of the main ways of transmission of infections and hand hygiene is one of the most effective preventive measures and control of nosocomial infections. . Existence of a uniform method for the measurement of hand hygiene in hospitals could have a major impact on the prevention of infection.

The aim of this study was to determine the level of hand hygiene and the effect of educational interventions on hand hygiene at Samen-Al-aemeh Hospital, Chenaran.

Materials and Methods: In this research, data were extracted from the pre-hospital emergency mission forms, which were collected from the EMS stations in Mashhad and suburbs through systematic random sampling. In addition, supplementary information was obtained from the ambulance dispatch cards and emergency communication center forms.

Results: In this study, the mean compliance of hand hygiene in five situations was 55.2% in nurses (n=70), 39.4% in physicians (n=15) and 36.6% in help nurses and departmental officers (n=23). Also, the highest rate of hygiene compliance was reported for situations after contact with the patient's secretions(60.66%), and the least compliance was related to the situations before contact(30.66%).

Conclusion: According to the results of this study, it is necessary that more trainings be given to improve hand hygiene compliance, some arrangements be made to avoid overwork of personnel, and the equipment required for this health behavior be provided.



Evaluation of the level of knowledge of health care worker and supervisor about hand Hygiene in Shohada hospital, in Tabriz

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ARTICLE INFO

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Knowledge
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Hand Hygiene

ABSTRACT

Introduction: compliance of hand hygiene among staffs is one of the most important ways of hospital infection control. Existence of a uniform method for the measurement of hand hygiene in hospital could as a major impact on the prevention of infection. The aim of this study was to evaluate the level of knowledge of health care worker and supervisor about hand hygiene in Shohada Hospital in Tabriz

Materials and Methods: This study was conducted as a descriptive- sectional study on Shohada hospital for health care worker and supervisor in 2013. To collect the data two questioners and checklist were used:

1- The checklist sent from the Ministry of health (recommended by WHO) used for evaluating 567 oportunities.

2- The two questioners made by researcher (It used for Health care worker, other one for supervisor).

Results: In this study, the mean of knowledge of health care worker was 78%, but the mean of compliance of hand hygiene was 24%. The mean knowledge of supervisor was %30 and their ability to check hand hygiene compliance was 30%.

Conclusion: In this study, supervisor's ability to check hand hygiene compliance was low, therefore it is recommended supervisors must be able and knowledgeable for what is oversees.



Investigating the effect of hand hygiene on the rate of nosocomial infection by years 93-96 in the ICU section

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ARTICLE INFO

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nosocomial infection
hand hygiene

ABSTRACT

Introduction: Nosocomial infection is an infectious disease that occurs 48 to 72 hours after hospitalization and the patient has not illness at the time of admission and has not been during the incubation. The most important factor in the controlling and preventing nosocomial infection is the observance of hand hygiene by all of the care team, patient and patient companions. The control of nosocomial infections is one of the major objectives of the strategic plan and the mission of the hospital, improving the patient's safety, reducing hospitalization time and reducing costs. For this purpose, to achieve organization to the mentioned goals, the ratio of the number of nosocomial infections in the ICU section to the rate of hand hygiene was studied.

Materials and Methods: The study was conducted in a direct observation of all hospital service providers in the ICU section. This was done on the basis of a hand hygiene measurement checklist in five positions by the infection control interface and the supervisor.

Results: The average of the hand hygiene compliance in the studied department in the years of 93 to 96, was 38%, 42.6%, 45.4% and 45.7%, respectively and the rate of nosocomial infection in the aforementioned years was 0.39%, 0.36%, 0.35 % and 0.35 %.

Conclusion: According to the obtained results, the highest level of hand hygiene has performed by nursing staff, doctors and other careers. And, also the highest position of hand hygiene was during the time of clear contamination of blood and carcasses infected on the hands and after contact with the patient, respectively.



Assessment of staff satisfaction with hand wash facilities in selected military hospital of mashhad

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ARTICLE INFO	ABSTRACT
<p>Keywords: hand hygiene hospital facilities</p>	<p>Introduction: The role of hands is recognized as an important factor in the transmission of infection in hospitals and hand sanitization is the first recommended step to control infections. The prevalence of infection due to inappropriate hand sanitation will increase mortality and costs. In this study, we evaluated the satisfaction rate of handlers from hand hygiene facilities.</p> <p>Materials and Methods: The level of satisfaction of personnel at the Military Hospital in the year 1395 was evaluated by a checklist containing five indexes of Hand rub Quality, Hand rub Quantity, Liquid Soap Quality, Napkins Quality and Moisturizing Cream Quality from all health care departments. The data obtained by EXCEL software was evaluated and analyzed.</p> <p>Results: The results of this study showed that the level of satisfaction of the personnel was 70% handrub quality, 78% number of handrub, 52% quality of soap liquid, 77% access to paper napkins and 58% access to moisturizing cream. Also, the lowest satisfaction rate was in the pediatric ward.</p> <p>Conclusion: Considering the importance of hand sanitation in controlling nosocomial infections, increasing the satisfaction of employees from the facilities to hand hygiene is necessary. for this reason, more attention should be paid to improving the quality of the relevant facilities, including appropriate skin-friendly hygiene products, in the plans of the authorities.</p>



Improvement of hand hygiene rate among personnel of police hospital staff an action research

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ARTICLE INFO	ABSTRACT
<p>Keywords: hand hygiene hospital corrective actions</p>	<p>Introduction: Hand sanitation is one of the important strategies in reducing Nosocomial infections that prevent the spread of antibiotic resistance and increase the patient's safety. This article uses corrective measures to promote hand hygiene among staff.</p> <p>Materials and Methods: This study was an action research and 20 medical staffs in the health care units were monitored by an infection control supervisor in the first season of 1396 for half an hour by hand sampling with a handwashing checklist. This monitoring was carried out consciously and in five washing situations. In the second quarter, corrective actions were carried out in three pathways: training, incentives and equipments. In the third quarter, the staffs were monitored again and the results were analyzed by Excel and using descriptive statistics.</p> <p>Results: The results obtained from this study showed that the average hand hygiene rate in the first quarter, was 42% and after corrective measure this rate reached 45%. Although in some wards such as maternity, surgery this rate reduced, the overall rate was increased.</p> <p>Conclusion: Despite the implementation of corrective actions, hand hygiene is still at an unsatisfactory level, and it is suggested that the culture and institutionalization of hand sanitation be revised and training and monitoring programs be put in place.</p>



Hand Hygiene Compliance among Clinical Workers in Allame Bohlool Hospital in 2017

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ARTICLE INFO

Keywords:

Hand Hygiene
infection control
hospital
Health workers.

ABSTRACT

Introduction: Nosocomial infections affect nearly 10% of hospitalized patients. The majority of nosocomial infections are transmitted by contact, primarily by hands of health care workers. Hand hygiene compliance of health workers is important to control nosocomial infections. This study carried out to determine hand hygiene compliance rate among health workers of in Allame Bohlool Hospital.

Materials and Methods: The study was a descriptive-cross sectional. The study carried out in september 2017 in Allame Bohlool hospital. Health workers were physicians, nurses and other workers. Observation for hand hygiene behavior of health workers was blind. Sample collection was based on randomized observations for hand hygiene opportunities. The data collected were then analyzed in SPSS-20.

Results: Hand hygiene compliance rate of health workers was 1058 out of 3015 opportunities (35%). Hand hygiene compliance rate among physicians was 28%, for nurses 42% and for other workers 30%.

Conclusion:

Hand washing is the single most important, simplest and the least expensive way for preventing infection's spreading. Hand hygiene compliance rate of Clinical workers in Allame Bohlool hospital was low. These findings suggest that on job training of health-care team need to be undertaken.



Assessing the effect of verification on improving hand hygiene observing in two professional nurse- practical nurse and nurse’s assistant – Servants groups in Ahwaz Salamat Hospital-1395

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ARTICLE INFO

ABSTRACT

Keywords:

Hospital Infection
Hand Hygiene
Verification

Introduction: The importance of hands in transmitting hospital infections is completely clear and the risk of infections transmission will be reduced through proper hand hygiene (compliance rate at least 50 %). Given the hand hygiene process; it is one of the most valuable subjects to verification.

Materials and Methods: The present study was an interventional one (before and after) which was done in a verification method using Health Ministry checklist for hand hygiene.

Results: The rate of hand sanitation (operation) was (69%) in the nurse-practical nurse group (before intervention) which improved to (78%) in (after intervention).and it was (49%) in the nurse assistant-servants group in (before intervention) that increased to (59%).

Conclusion: In the current verification, the level of hand sanitation standards was assessed in moderate that was upgraded to acceptable level of standards through the interventions.



Evaluation of Knowledge, attitude, and practice of patients admitted in Mousabne Jafar hospital (Quechan) about hand hygiene during first six months of 1396

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ARTICLE INFO

Keywords:
knowledge
attitude
performance
hand hygiene

ABSTRACT

Introduction: The most important step in preventing hospital infections is hand washing. Since the first step in programming hand hygiene training for patients is the careful examination of knowledge, attitude and analysis of learner's functions. This study aimed to determine the knowledge, attitude and practice of patients admitted to Musa bin Ja'far hospital about hand hygiene in the first six months of 1396.

Materials and Methods: This descriptive-analytic study was done on 132 patients with admission criteria at Mousabne Jafar hospital in Quechan during the first six months of 1396 by convenience sampling. The data collection tool was a researcher-made demographic questionnaire and knowledge, attitude and practice of patients about hand washing. Data were analyzed by SPSS software version 16.

Results: The results of the study showed that 83.6% of the patients had a moderate knowledge of hygiene. The average attitude of individuals was 22.6% and in the weak range. 89% of the patients in this study also had a low-level function.

Conclusion: According to the results of this study, the level of knowledge of patients about hygiene is minimal and hand hygiene in different situations is not satisfactory. Many patients also have a negative opinion about hand hygiene; therefore, regarding the importance of hand hygiene in nosocomial infections, it is recommended that more training programs be carried out to improve the level of knowledge, attitude and practice of patients in the hospital.



Nurses attitudes toward hand hygiene barriers in Quechan MousabinJafar hospital

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ARTICLE INFO

Keywords:
Barriers
Hand Hygiene
Nurses

ABSTRACT

Introduction: One of the most important reasons for increasing the hospitalization time, heavy costs and increasing the mortality rate is Hospital infections. Hand hygiene is the first and most effective steps in controlling these infections. The nurses have a unique role in preventing these infections; Because they have direct contact with patients. This study was done to determine the Nurses attitudes toward hand hygiene barriers in Quechan Mousabin Jafar hospital.

Materials and Methods: This descriptive cross-sectional study was done in 1396 by census method on 146 nurses working in Mousa bin Ja'far Hospital. The data collection tools were a demographic data form and a researcher-made questionnaire. The data was analyzed by SPSS software version 16.

Results: The mean work experience of participants was 6 ± 3 years. Most of them were female (74%) and had Bachelor of Nursing(98.3%). The barriers toward hand hygiene were include: lack of facilities such as tissue and gloves, overcrowded unites, hand drying of the skin through the use of disinfectants, non-compliance with hand hygiene by other health care workers, believed in hand hygiene using nylon gloves. No statistically relation was found with other demographic variables.

Conclusion: Considering the priority of the mentioned barriers, it seems that provision of supplies for hand hygiene such as tissue, good disinfectants, standardization of number of patients in unites and finally the commitment of all health care workers to hand hygiene are the most important priorities for improving hand hygiene in the hospital.



Attitude of hand hygiene among Emam Khomeini hospital's nurses in Mahabad City, Iran

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ARTICLE INFO	ABSTRACT
<p>Keywords: Attitude hand hygiene nurses</p>	<p>Introduction: Healthcare workers' hands are the most common vehicle for the transmission of healthcare-associated pathogens from patient to patient and within the healthcare environment.</p> <p>Materials and Methods: A cross-sectional study was conducted on 105 nurses from Emam Khomeini hospital in Mahabad city at northwest of Iran in 2015. The demographic and a researcher made questionnaire based on Ministry of Health and Medical Education's protocol were used to collect data. The data were analyzed using SPSS, version 18.</p> <p>Results: The majority of nurses was female 89 (84.6%), had BSc degree 101 (96.1%) and was married 78 (77.2%). The majority of them had a positive attitude 96 (91.4). In this study, there was no statistically significant difference between work experience, sex, work experience, employment status and service area in terms of hand hygiene. Considering the unwillingness to compliance hand hygiene by nurses, a large number of hospitalized patients and low-quality hand washers were considered as the most important factors for unwilling. The nurses believed that in terms of the equipment, the hospital conditions for hand hygiene were not appropriate and most of them did not wash their hands before and after care according to the instructions for washing hands and the use of disinfectant solution. On the other hand, most nurses were satisfied with the amount necessary for hand washing in the wards, but they were confident that this would not be use for the patients. Unfortunately, most of the nurses mentioned that before and after removing the glove, they did not wash their hands again and considered the glove to do sterile work without handwashing before wearing the gloves.</p> <p>Conclusion: The nurses had a positive attitude. It seems to be more necessary by holding educational classes and courses in cases where they have less knowledge to address the gaps in KAP regarding hand hygiene. Easy access and adequate supply of hand rub solutions, continuous training, performance feedback and verbal reminders will be needed to sustain adherence to hand hygiene.</p>



Surgical Wound Infection Index

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ARTICLE INFO	ABSTRACT
<p>Keywords: Surgical Wound Infection, Patient</p>	<p>Introduction: Surgical wound infection is the second common cause of nosocomial infections, up to 20% of which has been reported. The cause of nearly 80% of deaths in operated patients is infection, which leads to an increase in antibiotic use, hospital costs and the stay of patients in the hospital. Independent variables such as underlying illness and dependent variables are such as high age and immune deficiency makes the surgical wound susceptible to infection. The present study evaluates the rate of surgical ulcer infections in the period of 6 months - 21March to 22 September 2017 in sina training-medical center.</p> <p>Materials and Methods: In this cross-sectional study patients in the surgical wards were selected. The data were completed using infection reporting forms.</p> <p>Results: The mean 6-month index was calculated according to the ratio of cases of post-operative infection to the total number of operated patients during one month. 17 wound infections with incidence 2.89 per thousand are reported.</p> <p>Conclusion: It is essential that the predisposing factors of wound infection, including underlying diseases are considered and the infection control standards are monitored. The most important limitation in this study is the lack of access to post-discharge patients and their referral to the clinic, which can affect in this index.</p>



Campylobacter jejuni Bacteremia in a Patient with Acute Lymphocytic Leukemia (first report in Iran)

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ARTICLE INFO

Keywords:

Acute Lymphocytic Leukemia (ALL)
Bacteremia
Campylobacter jejuni

ABSTRACT

Introduction: Campylobacter jejuni is a slender, motile, non-spore-forming, helical-shaped, gram-negative bacterium. It is one of the most common causes of human gastroenteritis in the world. The aim of this study was to present a patient with acute lymphocytic leukemia (ALL), who was infected with Campylobacter jejuni.

Materials and Methods: We describe the medical records of a pediatric ALL patient with bacteremia caused by C. jejuni, who was diagnosed at Amir hospital, Shiraz, Iran. This 14-year-old male visited the emergency department of Amir hospital with night sweats, severe polar high-grade fever, reduced appetite, and nausea in August 2013. Given the suspected presence of an anaerobic or microaerophilic microorganism, aerobic and anaerobic blood cultures were performed using an automated blood cultivator, the BACTEC 9240 system. In order to characterize the isolate, diagnostic biochemical tests were used. Antibiotic susceptibility testing was done with the disk diffusion method. The primary culture was found to be positive for Campylobacter, and the subculture of the solid plate yielded a confluent growth of colonies typical for Campylobacter, which was identified as C. jejuni by morphological and biochemical tests. The isolate was resistant to ciprofloxacin, cefotaxime, cephalixin, piperacillin/tazobactam, nalidixic acid, aztreonam, cefuroxime, cefixime, ceftazidime, and tobramycin.

Results:

Conclusion: C. jejuni should be considered in the differential diagnosis as a potential cause of bacteremia in immunosuppressed patients. In cases where the BACTEC result is positive in aerobic conditions but the organism cannot be isolated, an anaerobic culture medium is suggested, especially in immunocompromised patients.



Identification and antifungal susceptibility of *Candida* species isolated from blood culture of hospitalized patients in Mashhad

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ARTICLE INFO	ABSTRACT
<p>Keywords: Blood stream infection Candidemia Fluconazole Candida albicans</p>	<p>Introduction: Blood stream infections (BSIs) due to <i>Candida</i> species (Candidemia) are the most clinical manifestation of invasive candidiasis, and are a significant cause of morbidity and mortality in hospitalized patients. The aim of the present study was to identify and determine the antifungal susceptibility of <i>Candida</i> isolated from blood cultures to fluconazole in Mashhad.</p> <p>Materials and Methods: During January 2014 to December 2015, a total of 2500 blood samples from hospitalized patients at Imam Reza Hospital; Mashhad University of Medical Sciences were prospectively examined. Definitive identification of <i>Candida</i> sp. was done using CHROMagar <i>Candida</i> and API 20C AUX. Antifungal susceptibility testing of isolates of <i>Candida</i> spp. was performed in accordance with the CSLI reference broth micro dilution method.</p> <p>Results: Of 2500 blood cultures, 41 positive cultures were obtained. Among them 24 cases (58.5%) were male and 17 cases (41.4%) were female. The most cases of positive cultures were observed in the 50-64 age group (24.4%) and neonates (21.9%). <i>Candida albicans</i> was the most prevalent species, accounting for 17 (41.5%) of all isolates, followed by <i>C. glabrata</i> (17%), <i>C. tropicalis</i> (14.6%), <i>C. krusei</i> and <i>C. kefyr</i> (7.3%), <i>C. parapsilosis</i> (4.9%), <i>C. famata</i> (4.9%) and <i>C. guilliermondii</i> (2.4%). Overall 58.5% of isolates were non-<i>C. albicans</i> species. Candidemia was more common in intensive care unit settings (68.3%). The main underlying conditions were cardiovascular disease (36.6%) and the central venous catheters were the most frequent predisposing factor. In vitro susceptibility to fluconazole revealed that 94.1% of <i>Candida albicans</i> isolates were susceptible to this drug. Fluconazole resistance of <i>Candida glabrata</i> was 28.6% and <i>Candida albicans</i> 5.9%. MIC₉₀ of <i>Candida albicans</i> and <i>Candida glabrata</i> was 32 and 64 µg/ml, respectively.</p> <p>Conclusion: We have demonstrated for the first time the frequency and antifungal susceptibility of <i>Candida</i> species recovered from <i>Candida</i> blood stream infections in Mashhad. Our results showed that <i>Candida albicans</i> was the commonest agent of candidemia and <i>Candida glabrata</i> was the most resistant species.</p>



Evaluation of the effect of perioperative blood glucose level on surgical site infections in patients undergoing total mastectomy

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ARTICLE INFO

Keywords:

Blood glucose
Mastectomy
surgical site infections

ABSTRACT

Introduction: Stress hyperglycemia during surgeries has been reported to increase the possibility of surgical site infections and worsen the patient's prognosis. The aim of the present study was to evaluate the association between perioperative blood glucose level and surgical site infections (SSIs) in patients undergoing mastectomy.

Materials and Methods: In this prospective case control study, 158 female patients undergoing mastectomy were included, with diabetes as an exclusive criteria. Blood glucose levels was measured in five phases for each patient.

Results: Among 158 studied patients, eight (5.5%) developed SSIs. 4 patients (2.74%) in the control group and 4 patients (50%) in the case group had hyperglycemia in at least one of the stages. Logistic regression analysis demonstrated associations between SSI development and any blood glucose value more than 150 mg/dl. Age, past medical history, current smoking, tumor characteristics, previous chemo-radiotherapy, duration of surgery and other surgical factors and prophylactic antibiotic did not seem to have a significant association with the SSI.

Conclusion: As hyperglycemia is an easily controllable factor, glycemic control during the perioperative period is recommended in patients undergoing breast surgeries to lower surgical site infection rate .



Use of PCR-RFLP for molecular identification of *Candidia species* isolated from clinical samples

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ARTICLE INFO

Keywords:

Vulvovaginal candidiasis
Candida species
PCR-RFLP

ABSTRACT

Introduction: Vulvovaginal candidiasis (VC) is a common mucosal infection in genital tract among women. Up to 75 percent of women may experience VC at least once in their lifetime. Rapid and accurate diagnosis of causative agents of VC with molecular techniques is necessary for epidemiological purposes and for effective treatment.

Materials and Methods: Fifty isolates from patients with suspicious symptoms of VC were identified by phenotypic methods and confirmed by molecular approaches based on PCR-RFLP.

Results: Twenty-seven (54%) of strains were *C. albicans*, 12 (24%) strains *C. glabrata*, 3 (6%) strains *C. kefyr*, 2 (4%) strains *C. tropicalis*. Like the most of similar studies performed in this field, the present study found *Candida albicans* as common species isolated from VC.

Conclusion: PCR-RFLP is rapid, sensitive, and reliable method that might be also used for other similar epidemiological studies and medical mycology laboratories.