

ST. PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE

NURSING EDUCATION DIRECTORATE



ASSESSMENT OF HAND HYGIENE PRACTICE AMONG HEALTH CARE WORKERS IN MEDICAL AND SURGICAL WARD AT ST. PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE, ADDIS ABABA, ETHIOPIA.

FINAL RESEARCH TO BE SUBMITTED TO NURSING EDUCATION DIRECTORATE ST.PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE FOR PARTIAL FULFILLMENT OF THE REQUIREMENT FOR DEGREE OF BACHELOR OF SCIENCE IN OPERATING THEATER NURSING.

GROUP MEMBER

ID.NO

1. ASALFEW TSEGAW..... MNOR/006/07
2. SHEGAW ABEBAW MNOR/022/07
3. TESFAYE YIHUNIE..... MNOR/027/07
4. ZEYNU YIMER MNOR/030/07

ADVISOR: MR.DAVENCY S

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Name of investigators	1. Asalfew Tsegaw 2. Shegaw Abebaw 3. Tesfaye Yihunie 4. Zeynu Yimer
Full title of the research proposal	Assessment of hand hygiene practice among health care workers in medical and surgical ward at St. Paul's hospital millennium medical college
Study Area	SPHMMC
Duration of the project	March 6 to September 23/2017
Total cost of the project	3795:00 birr
Address of investigators	0921302599
	0918665302
	aslfewtsegaw@gmail.com
	Zeyene99@gmail.com
Advisors	Advisors: - Davincy S

Name of investigators	5. Asalfew Tsegaw 6. Shegaw Abebaw 7. Tesfaye Yihunie 8. Zeynu Yimer
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	aslfewtsegaw@gmail.com
	Zeyene99@gmail.com
Advisors	Mr. Davincy S (MSc)

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Abbreviations

ABHR	Alcohol Based Hand Rub
AIDS	Acquired Immune Deficiency Syndrome
CSICU	Cardiac Surgical Intensive Care Unit
HAIs	Hospital Acquired Infections
HCAI	Health Care Associated Infection
HCWs	Health Care Workers
HIV	Human Immune Virus
HO	Health Officer
PI	Principal Investigator
SPHMMC	St. Paul's Hospital Millennium Medical College
WHO	World Health Organization

Abstract

Background ;Hand hygiene is a general term that applies to either hand washing with plain soap and water, antiseptic soap and water, antiseptic hand rub or surgical hand antisepsis. One of the most significant, current discussions in healthcare delivery in hospitals is health care associated infection (HCAI), sometimes called hospital acquired infection or nosocomial infections, which is any infection that a person develops as a result of treatment in a hospital.

Objective; The objective of this study was to assess hand hygiene practice among health care Workers at St. Paul's hospital millennium medical college in surgical and medical ward.

Methods; Hospital based quantitative cross sectional study design was conducted by using self-administer questioner and observation among health care worker in St. Paul's hospital millennium medical college from March 6/2017 to September 15/2017. All health care workers those who work in surgical and medical ward were included in the study. The data was sorted and analyzed by using SPSS version 20.

Result; The results shows that, a total of 81 participants completed the questionnaires and 20 participants were under observation. Majority participant's age range is between 25-29 years. 84% of participants had good practice of hand hygiene and 16% of participants had poor hand hygiene practice

Conclusion; Although hand hygiene is a very simple procedure and has long been deemed one of the most important infection control measures, the compliance rate by health care workers are generally reported to be low and does not depend on the years of services.

Recommendation; the researcher recommended that the hospital's senior management team should support and openly promote hand hygiene, and also there should be clear and simple instructions on hand hygiene made visible for every health worker at their work stations.

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Budget; Totally 3795 Ethiopian birr was used for conduct this study.

CHAPTER 1

1. INTRODUCTION

1.1 BACKGROUND

Hand hygiene is a general term that applies to either hand washing with plain soap and water, antiseptic soap and water, antiseptic hand rub or surgical hand antisepsis. One of the most significant, current discussions in healthcare delivery in hospitals is healthcare associated infection (HAI), sometimes called hospital acquired infection (1) or nosocomial infections, which is any infection that a person develops as a result of treatment in a hospital (2).

Hand hygiene was thought to be a key factor in reducing hospital acquired infection during the initial development of healthcare systems. The battle with HAI started when the Hungarian obstetrician, Semmelweis (1847), observed that puerperal fever was more common on a maternity ward, where physicians and medical students provided care to women in labor, than it was on the ward where midwives assisted deliveries. He noted that physicians and medical students were contaminating their hands while performing autopsies and later attending the examination of women without hand washing. Arguably, he was the first to recognize the importance of hand washing in controlling the transmission of infection (3). Equally important was the work of Florence Nightingale during the Crimean war, when she called for basic public health in a military hospital in Scutari in 1854. Her interventions to improve personal hygiene, cleanliness in the hospital environment, living conditions and food, led to a decrease in the

number of deaths. She was one of the first who identified the relationship between nursing and infection control (4).

Hand hygiene practice among HCWs is considered to be the single most clinical and cost effective measure to prevent HAI, a view recognized internationally. The World Health Organization (WHO) strongly emphasize the essential need for hand hygiene during healthcare delivery, to avoid possible infection and subsequent complications; hence, the 'Clean Care is Safe Care' program, launched by WHO in 2005 as part of the 'First Global Patient Safety Challenge'. This program offers new guidelines on hand hygiene training, observation and performance reporting in healthcare settings (5).

Hand hygiene is a core element of patient safety for the prevention of Health Care Associated Infection (HAIs) and spread of anti-microbial resistance. Its promotion represents a challenge that requires a multimodal strategy. Hand hygiene prevents cross infection in hospitals, but Health Care Workers (HCWs) adherence to hand hygiene guidelines is poor. Easy, timely access to both hand hygiene and skin protection is necessary for satisfactory hand hygiene behavior. Alcohol based hand rub may be better than traditional hand washing as they require less time, acts faster, are less irritating, and contribute to sustained improvement in compliance associated with decreased infection rates(6).

1.2. Statement of the problem

The provision of healthcare worldwide is always associated with a potential range of safety problems and patients remain vulnerable to unintentional harm in hospitals because of poor hand hygiene (7).

Over 1.4 million people worldwide suffer from infections acquired in hospital (8). The burden is substantial in developed countries, where it affects from 5% to 15% of hospitalized patients in regular wards and as many as 50% or more of patients in intensive care units (9). In developing countries, the magnitude of the problem remains underestimated or even unknown largely because HAI diagnosis is complex and surveillance activities to guide interventions require expertise and resources (10).

HAI is also a major public health problem in Ethiopia and their prevention has been made a priority as reported by a study on 1383 obstetrics and gynecologic patients at a referral hospital in north west Ethiopia, 246 (17.8%) developed hospital acquired infections (11). In hospital and clinical setting, a high proportion of patients are infected with bacteria and viruses, which cause a continued threat to the health of clients and increase cost to the patient as well as to the healthcare system. In addition, without adequate infection prevention practices like proper use of gloves or proper hand washing, healthcare workers are at increased risk of acquiring infection, most commonly HIV/AIDS, Hepatitis A, Hepatitis B, and Hepatitis C, as well as other common bacterial and viral infections (12).

Although hand hygiene is recognized as the core element to reduce healthcare-associated infections and enhance patient safety, it is still not consistently practiced (13).

In health care settings, compliance to hand hygiene recommendations is the single most important practice for preventing the transmission of pathogens in health care and directly contributes to patient safety (14).

As different literatures was stated that HCW tend to be poor compliers for hand hygiene guidelines than other health care disciplines on clinical attachment. This study aims to fill this gap and assess hand hygiene practice among health care workers.

1.3. Significance of the study

Hand hygiene, a relatively simple cost effective measure has been instituted in several facilities to prevent HCAI. Studies have shown that contaminated HCWS hands are vehicles for spread of micro-organisms. The risk of transmitting infections is higher if basic infection prevention and control practices are not observed especially in high risk patients. In order to develop appropriate and targeted interventions for improving hand hygiene it is crucial to have a baseline evaluation of the current hand hygiene practices .This study aims to evaluate how well the health care workers follow the recommended guidelines.

CHAPTER 2

2. Literature Review

One of the important functions of the review of literature is to ascertain already known in relation to a problem of interest. Review of literature is an organized critique of the important scholarly literature supports a study and a key step of the research process. (15)

A literature review helps to lay the foundations for the study and can also inspires new research ideas. (16)

An observational study was conducted to identify characteristics of encounters between healthcare workers (HCWs) and patients that correlated with hand hygiene adherence among HCWs. The study was conducted in Intensive care unit in a Veterans Affairs hospital including all HCWs. In this study, 767 patient encounters observed (48.6% involved nurses, 20.6% involved physicians, and 30.8% involved other HCWs); 39.8% of encounters involved patients placed under contact precautions. HCW contact with either the patient or surfaces in the patient's environment occurred during all encounters; direct patient contact occurred during 439 encounters (57.4%), and contact with environmental surfaces occurred during 710 encounters (92.6%). The median duration of encounters was 2 minutes (range, <1 to 51 minutes); 33.6% of encounters lasted 1 minute or less, with no significant occupation-

associated differences in the median duration of encounters. Adherence with hand hygiene practices was correlated with the duration of the encounter, with overall adherences of 30.0% after encounters of ≤ 1 minute, 43.4% after encounters of >1 to ≤ 2 minutes, 51.1% after encounters of >2 to ≤ 3 minutes, and 64.9% after encounters of >3 minutes ($P < .001$ by the χ^2 for trend). In multivariate analyses, longer encounter duration, contact precautions status, patient contact, and nursing occupation were independently associated with adherence to hand hygiene recommendations. The authors concluded that in this study, adherence to hand hygiene practices was lowest after brief patient encounters (i.e. <2 minutes). Therefore, improving adherence after brief encounters may have an important overall impact on the transmission of healthcare-associated pathogens and may deserve special emphasis in the design of programs to promote adherence to hand hygiene practices (17).

A cross-sectional study was conducted to assess the compliance with hand hygiene practice among nursing staff in secondary care hospitals in Kuwait. The researcher used direct observation using the Lewis ham observation tool and self-administered questionnaire in six major public secondary care hospitals in Kuwait. Scales were considered as indications for hand hygiene while any attempt for hand. A self-administered questionnaire was prepared and pilot tested and then distributed to nursing staff at each ward immediately after conducting the inspection; 550 were distributed and 454 were completed and returned. Among 204 observation sessions, a total of 935 opportunities and 312 hand hygiene practices were recorded. The Result of the study was that the overall compliance was 33.4%. The observed compliance significantly varied between different ward categories from 14.7% in emergency to 55% in medical wards. Of the 454 nursing staff that participated in self-reported compliance, 409 (90%) indicated that they always washed their hands upon practicing patient care activities. Nurses consistently reported higher compliance after conducting patient care activities rather than before. Being busy with work (42.2%), having sore/dry hands (30.4%) and wearing gloves (20.3%) were the most frequently reported hindrances to improving hand hygiene. Finally the authors concluded that observed hand hygiene compliance among nursing staff in secondary care hospitals in Kuwait was poor. High self-reported compliance may reflect a high level of awareness of hand hygiene but may also suggest that improving compliance through increasing awareness has probably reached saturation (18).

An observational, prospective, longitudinal Study was conducted on the evaluation of hand hygiene compliance at Hera General Hospital, Makkah, and Kingdom of Saudi Arabia from May 2013 to May 2014. Four components to improve hand hygiene compliance were implied; daily audit, monthly staff education; quarterly workshops of hand hygiene and education material distribution. The compliance rate was calculated by its adherence with number of opportunities. The result of the study was that Results Of total 163 healthcare professionals were surveyed for hand hygiene compliance; 57 (35%) were doctors, 92 (56.4%) nurses, and 14 (8.6%) patient care technicians. The overall compliance rate was 50.3%, and its distribution among staff was as follows; doctors 49.1%, nurses 52.2%, and technicians 42.8%. The highest compliance rate among doctors and nurses was found in surgical units. A low compliance in high intensity patient care area was observed such as in the Emergency Room and outpatient department the patient care technicians showed highly variable results, as their compliance rate was 100% in medical units while 0% in various other clinical areas. Finally the authors concluded that the overall hand hygiene compliance rate of healthcare professionals reached 50% after a long education campaign, and was highest among the nurses. Further study is needed to explore the reasons for noncompliance (19).

Institution based quantitative cross sectional study design was used to assess the practice and associated factors that influence hand hygiene practices among undergraduate clinical year medical students. The study was conducted on the assessment of Hand Hygiene Practice and associated factors among undergraduate medical students in the College of Health Sciences Addis Ababa University, Tikur Anbessa Specialized Hospital, Ethiopia (September, 2014). A total of 257 questionnaires were completed. Only 48% indicated that alcohol based hand rub is effective for less than 60 seconds. Overall compliance of hand hygiene was found to be 59% (95% CI (53.3, 65.0)). Demographic and most environmental factors had no association with hand hygiene compliance among medical students only factors: knowledge (AOR [95%CI] = 2.1 [1.06, 4.14]), sex female (AOR [95%CI] = 1.88 [1.05, 3.35]) and beliefs: (AOR [95%CI] = 2.71 [1.5, 4.87]) were significantly associated with the hand hygiene compliance. Finally the researcher conclude that good hand hygiene compliance was indicated "after" caring for a patient; whereas poor hand hygiene compliance was reported "before" having direct contact with a patient and there were no variation in hand hygiene practice and were significant difference in knowledge and belief among groups of medical students in different educational year. (20).

Other research was conducted in CSICU of SCTIMST TVM. It was an observational, study 50 HCWs were taken for observational study, 50 for assess the reported hand hygiene practices. Questionnaire and observation tool were used for data collection. The study revealed that there is a disparity between the opinion and the practices of hand hygiene among health care workers. The overall observed compliance was 67.08% (75 HCWs are included in observation study, 111 number of opportunities are given only 76 opportunities of hand hygiene being performed). The physiotherapist shows higher compliance rate (78%). The nurses and residents shows 68% and the technician and unit helper's shows low rate (60%). The reported hand hygiene compliance among HCWs was above 90% (Questionnaire given to 50 HCWs they were May or may not be included in observation study). Nurses reported 98% compliance rate technician reported 81% and others reported between 90-95%.the researchers Conclude: There were two studies conducted by the investigator. The observational study and reported study. The observational study shows that the overall hand hygiene compliance was 67.08% and the reported study gives more than 90% of compliance among HCWs (21)

CHAPTER 3

3. OBJECTIVES

3.1 General objective

To assess hand hygiene practices among health care Workers in surgical and medical ward at St. Paul's hospital millennium medical college from March 6/2017 to September 2017.

3.2 Specific objective

- To determine the hand hygiene practices among health care workers
- To assess the reasons for non-compliance in hand hygiene practice

CHAPTER 4

4. METHODS

4.1 Study area

The study was conducted at St. Paul's hospital millennium medical college Addis Ababa, Ethiopia. St. Paul's Hospital Millennium Medical College is the second largest specialized and teaching hospital in Ethiopia. It is located in the center of Addis Ababa. The Hospital was built by Emperor Haile Selassie I in 1969 with the help of the German Evangelical Church. The hospital aim is, serving for the poor patients. A medical college was formed in 2007. The hospital has 350 beds. An annually average of 200,000 patients visits in outpatient and inpatient department. It has a catchment population of more than 5 million. The hospital has 2800 clinical and non-clinical staffs. There are over 13 departments which include: internal medicine, neurology, general surgery, ENT, psychiatry, ophthalmology, dentistry (maxillofacial surgery), radiology, dermatology, gynecology and obstetrics, pediatrics, biomedicine, emergency medicine, kidney transplant and medical school.

4.2 Study Design

Institutional based quantitative cross sectional study design was conduct to assess hand hygiene practice among health care workers in surgical and medical ward at SPHMMC.

4.3 Source of Population

All health care workers who work in SPHMMC

4.4 Study Population

All health care workers in surgical and medical ward at st.paul's hospital millennium medical college in direct contact with the patients.

4.5. Sampling method and Sampling technique

Purposive sampling technique was used. All HCWs in the surgical and medical ward will be invited to participate in the study and the researcher used observational study and gave questionnaire to all HCWs they may or may not be included in observational study.

4.6. Data Collection procedures

Data was collected by using structured self-administered questionnaire, which consists of socio-demographic information, practice of hand hygiene; and observation of hand hygiene practice among HCWs for 10-20 minutes randomly who were in direct contact with patients. **At certain instances more than one HCW was observed during these sessions depending on the density** of activities. Hand hygiene actions is defined as either hand washing with soap and water or hand rubbing with alcohol-based hand rub (ABHR). The observation was fully recorded on card separately for each HCW. During each session, availability of soap, free flowing water and ABHR was noted. Data collection took approximately a week, and a record of those observations was kept strictly confidential.

The tool was developed by reviewing related literatures, prepared in English version, and it was prepared to assess the practice of HCWs regarding hand hygiene in hospital. The data collection procedure was carried out by researcher.

Inclusion criteria

All health care workers in surgical and medical ward who are in direct contact with the patients who consent to the study.

Exclusion criteria

The health care workers who are on temporary assignment i.e. those working for less than one week at a given period in the units, nursing and medical students, and Hospital workers who do not deal directly with touching patients.

4.7. Variables of the study

4.7.1. Dependent variable:

Hand hygiene practice

4.7.2. Independent variable:

Environmental factors, availability of soap, towel/tissue paper, alcohol based hand rub and water, availability of glove in the ward and knowing presence of infection prevention committees.

4.8. Operational definitions

- **Hand hygiene:** A general term that applies to hand washing, antiseptic hand washing, antiseptic hand rub or surgical hand antisepsis.
- **Hand washing:** Process of mechanically removing dirt and debris from the skin with soap and plain water
- **Health-care worker (HCW):** Any person who provides health care services (preventive, curative, promotional, rehabilitative).these includes a variety of professionals who are involved in providing health care for patients
- **Healthcare Associated Infections (HAIs):** Refers to any infections acquired during the process of delivery of health care while receiving treatment from or visiting the health facility. This infection can affect Health Care workers, patients and visitors
- **Hand hygiene compliance:** - Refers to hand hygiene practice before, during and after any contact with a patient or with the inanimate material.

- **Good hand hygiene compliance:** - HCWs who scored greater than or equal to mean score of the total hand hygiene practice questions value.
- **Poor hand hygiene compliance:** - HCWs who scored less than mean score of hand hygiene practice questions value

4.9. Data quality assurance

The quality of data is assured through careful design and close supervision of the data collecting procedures by principal investigator for its accuracy and completeness on daily basis. Proper categorization and coding of the data is part of the data quality control. The data collection instrument is checklist. In addition, data checking is done before analysis.

4.10 Data processing, management & analysis

After data collection completion, each checklist was checked for completeness and missing values. The data was sorted and analyzed by SPSS version 20. Finally the result is presented with tables and figures.

4.11. Ethical consideration

The ethical approval and clearance was obtained from the research ethics committee at the St. Paul's hospital millennium medical college. Permission was secured from St. Paul's hospital millennium medical college to conduct this study. A formal letter was submitted to all participants, right to self-determination and autonomy is respected; study participants give any information they need, verbally and in written prior to a self-administration. To this end, the right of each respondent to refuse, answer for few or all questions is respected. Omitting names of the participant from the questionnaire such as personal details which recorded or produced on any documentation related to the study, that help to assure confidentiality of the information and respondents.

Participation was voluntary and participant could withdraw from the study at any time without explanation and without penalty or loss of benefit.

4.13. Dissemination of findings

A detailed report of this study which consists of the main findings will be disseminated to St. Paul's hospital millennium medical college, Ministry of Education and Ministry of Health. In addition effort will be exerted to publish the study findings on local/ international journal

CHAPTER 5

5. Results

This study presents result from a sample of 101 Health care workers from St.paul's hospital millennium medical college .The results are presented in the form of tables and graphs a

total of 81 participants completed the questionnaires and 20 participants were under observation. This study also presents the results which are presented using both tables and graphs. The following sections are illustrated in the research instrument: Socio demographic characteristics of participants, practice questions and observation.

Table 1; Socio demographic characteristics of respondents, St. Paul's hospital millennium medical college, Addis Ababa, Ethiopia august 2017 G.C

Variables		Frequency	Percentage (%)
Gender	Male	29	35.8
	Female	52	64.2
Educational level	Diploma nurse	22	27.2
	BSC nurse	56	69.1
	HO	2	2.5
	Other	1	1.2
Years of service	≤ 4	62	76.5
	5-9	15	18.5
	≥ 10	4	4.9
Age	≤ 24	15	18.5
	25-29	56	69.1
	30-34	8	9.9
	≥ 35	2	2.5

The above table shows that the majority of participant's age range is between 25-29 years 69.1%, and only 2.5% were ≥ 35 years. Years of service the majority participants was ≤ 4 years - 76.5%, with the only 4.9% ≥ 10 years. Professional categories the majority were BSC nurses 69.1%

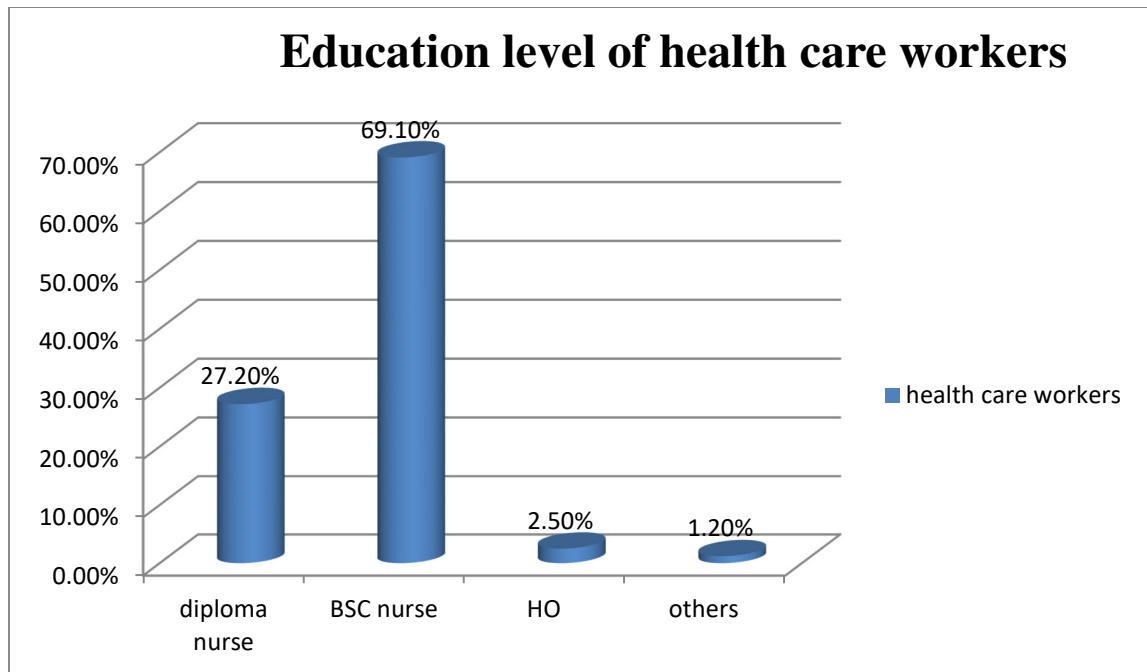


Figure 1; Health care workers / respondents, St. Paul's hospital millennium medical college, Addis Ababa, Ethiopia august 2017 G.C (n=81)

The above figure shows that 69.1% were BSC nurses, 27.2% diploma nurses, 2.5% HO and 1.2% other health workers

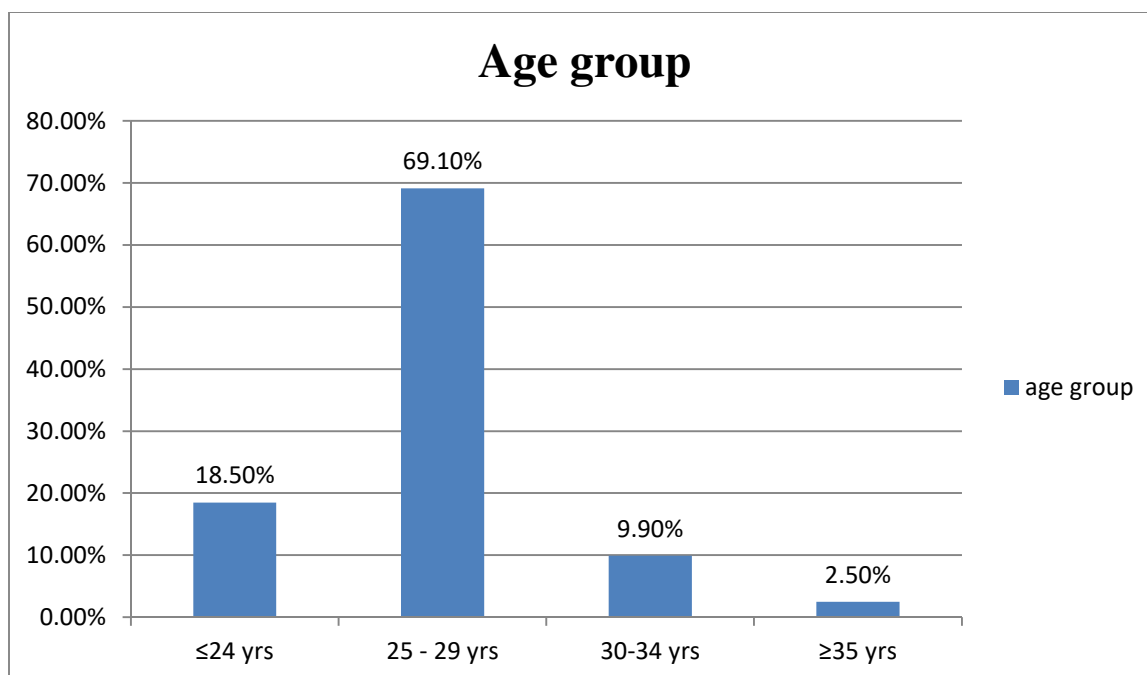


Figure 2; Age group of participants St. Paul's hospital millennium medical college, Addis Ababa, Ethiopia august 2017 G.C

The above figure shows that the age of participant ranged from 25-29 years, (69%), ≤ 24 years (19%), 30-34 years (10%) and ≥ 35 years (3%)

Table 2; Practice of Hand hygiene as reported by respondents St. Paul's hospital millennium medical college, Addis Ababa, Ethiopia august 2017 G.C n =81

Hand hygiene practice	Yes N (%)	No N (%)	Not sure N (%)
I was trained on the practice of hand hygiene	59(69.1)	24(29.6)	1(1.2)
I know what is hand hygiene	76(93.8)	3(3.7)	2(2.5)
I sometimes forget to perform hand hygiene	77(95.1)	4(4.9)	0(0)
I wash my hands every time after I handle the patient	50(61.7)	22(27.2)	9(11.1)
When busy it is more important to complete my tasks than to perform hand hygiene	45(55.6)	33(40.3)	3(3.7)
Performing hand hygiene in the recommended situations can reduce patient Mortality	63(77.8)	12(14.8)	1(1.2)
I can't always perform hand hygiene in recommended situations because my patient's needs come first	27(33.3)	49(60.5)	5(6.2)
Performing hand hygiene in the recommended situations can reduce medical costs associated with hospital acquired infections	73(90.1)	5(6.2)	3(3.7)
Prevention of hospital acquired infection is a valuable part of health care worker's role	38(46.9)	39(48.1)	4(4.1)
I follow the example of senior health care workers when deciding whether or not to perform hand hygiene	36(44.4)	38(46.9)	7(8.6)
I believe I have the power to change poor practices in the workplace	60(74.1)	16(19.8)	5(6.2)

Failure to perform hand hygiene in the recommended situations can be considered as negligence	57(70.4)	19(23.5)	4(4.9)
Hand hygiene is a habit for me in my personal life	59(72.8)	18(22.2)	4(4.9)
I can effectively apply my knowledge of hand hygiene to my clinical practice	61(75.3)	13(16)	7(8.6)
It is an effort to remember to perform hand hygiene in the recommended situations	64(79)	15(18.5)	2(2.5)
I would feel uncomfortable reminding a health professional to do hand wash	36(44.4)	43(53.1)	2(2.5)
Performing hand hygiene slows down building immunity to disease	45(55.6)	32(39.5)	4(4.9)
Cleansing hands after going to the toilet can reduce transmission of infectious disease	76(93.8)	5(6.2)	0(0)
Performing hand hygiene after caring for a wound can protect from infections	73(90.1)	8(9.9)	0(0)
Lack of an acceptable soap product can be a reason for not cleansing hands	39(48.1)	37(45.7)	5(6.2)
Dirty sinks can be a reason for not washing hands	39(48.1)	38(48.9)	3(3.7)
Is Hand Soap Available	64(79.0)	15(18.5)	2(2.5)
Is Soap dispenser available and functional	44(54.3)	28(34.6)	8(9.9)
Is Disposable Hand towel available and accessible	29(35.8)	51(63)	1(1.2)
Hand hygiene posters demonstrating good hand washing techniques availability	62(76.5)	16(19.8)	3(3.7)

Table 1; Above shows that 69.1% HCW trained on the use of hand hygiene, 94% HCW know what is hand hygiene, 46.9% HCW sometimes forget to perform hand hygiene; 61.7% HCW wash my hands every-time after they handle patient, 56% HCW reported that When busy it is more important for the respondent to complete their tasks than to perform hand hygiene. 78% HCW Performing hand hygiene in the recommended situations can reduce patient Mortality, 33% HCWs reported that they can't always perform hand hygiene in recommended situations

because their patient's needs come first. 75% of health care workers can effectively apply their knowledge of hand hygiene to their clinical practice. 73% HCW take Hand hygiene as a habit for them in their personal life. 79% HCW effort to remember to perform hand hygiene in the recommended situations, 44% HCW feel uncomfortable reminding a health professional to do hand wash, 56% HCW Performing hand hygiene slows down building immunity to disease, 44% Cleansing hands after going to the toilet can reduce transmission of infectious disease

In access to hand hygiene tools, the respondents answered five variables. 48% Lack of an acceptable soap product can be a reason for not cleansing hands, 46% HCW available acceptable soap product and 6% not sure. 54% of HCW Soap dispenser available and functional, 34% of HCW Soap dispenser not available and functional and 10% not sure. 79% of HCWs responded that hand soap available and 19% responded that soap was not available, whereas 2% were not sure. 39% responded that disposable hand towel were available and accessible, while 63% responded that disposable hand towels were not available and accessible, and 1% were not sure of the response.

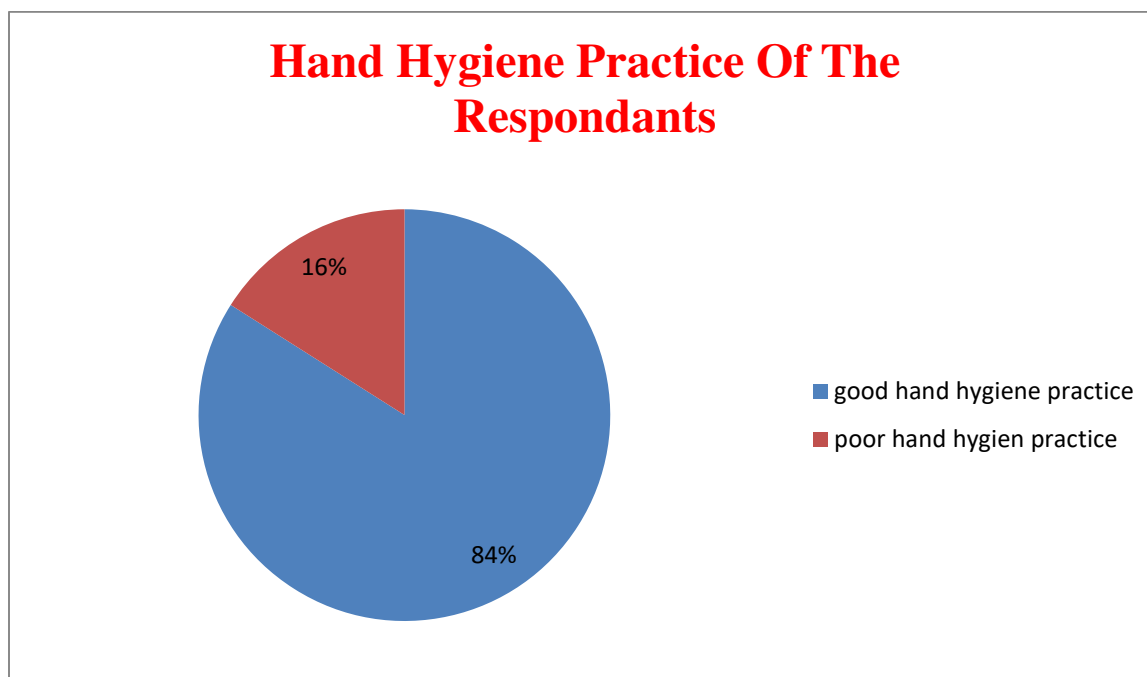


Figure 3; Summary of hand hygiene practice of the respondents in St. Paul's hospital millennium medical college, Addis Ababa, Ethiopia September 2017 G.C

Table 3; Hand hygiene practice observation in St. Paul's hospital millennium medical college, Addis Ababa, Ethiopia August 2017 G.C

Hand hygiene practice observation	Yes N (%)	No N (%)
Before touching the patient	1(5)	19(95)
After touching the patient	17(85)	3(15)
After contact with blood, body fluids, secretions or excretions, mucous membrane, non-intact skin, urinary bag, and drain.	18(90)	2(10)
Before doing any procedures including medication preparation	2(10)	18(90)
After doing any procedures Including medication preparation	14(70)	6(30)
Before touching the patient equipment (soiled linen, patient bed etc.	20(100)	0(0)
After touching patient equipment (soiled linen, patient bed etc.)	20(100)	0(0)
Before wearing gloves for sterile Procedures	2(10)	18(90)
Gloves removed immediately after Use	10(50)	10(50)
Gloves used whenever potential for hand contact with	19(95)	1(5)

blood/body fluids.		
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The above table shows that 5% HCW wash their hand before touching the patient , 95% HCW not wash their hand before touching the patient, 85% HCW wash their hand After touching the patient and 15% HCW not wash their hand After touching the patient, 90% of HCW wash their hand after contact with blood, body fluids, secretions or excretions, mucous membrane, non-intact skin, urinary bag, and drain.10% HCW Before doing any procedures including medication preparation, 70% of HCW wash their hand after doing any procedures Including medication preparation, 100% of HCW wash their hand before touch the patient equipment (soiled linen, patient bed etc. 100% wash their hand after touch patient equipment (soiled linen, patient bed etc.). 10% of HCW wash their hand before wearing gloves for sterile Procedures, 50% of HCW wash their hand gloves removed immediately after use, 95% of HCW used Gloves whenever potential for hand contact with blood/body fluids.

CHAPTER 6

6.1. Discussion

Hand hygiene is a relatively simple and cost effective measure that has been instituted in several facilities to prevent HCAI. A large proportion of the infection acquired in the Surgical wards have been attributed to cross contamination and transmission of microbes from hand of health care workers to patients Many studies have consistently shown that improved hand hygiene practice reduced nosocomial infections and cross transmission of multidrug resistant infections in hospital. Despite this, present day data suggests that hand hygiene compliance among health care personnel in most hospital is at best, less than 50%. Working in surgical and medical ward, overcrowding, insufficient time for surgical patient care, lack of institutional priority etc. were some of the risk factors for poor hand hygiene compliance. Many attempts have been made in the past to improve hand hygiene compliance such as educational intervention, motivational programs etc. However, most of these met with little or temporary success. Hence several multi-faceted Interventions, which include behavioral, environmental and social changes, have been suggested and tried to sustain improvement in hand hygiene compliance.

In the present study the investigator assess the hand hygiene practices among HCWs in surgical and medical wards at SPHMMC. On analysis it was found that 84% of respondents had a good hand hygiene practice. Opposite results were found in the study conducted in CSICU of SCTIMST TVM 98% of the respondent had satisfactory hand hygiene practice compered to these results somewhat decreased hand hygiene practice is obtained in our results (21).

In the present study the investigator attempted to assess the reasons for non-compliance in hand hygiene practice in surgical and medical wards at SPHMMC. The results of the study revealed that availability of the soap was 79%. Opposite results were found in the study conducted in Botswana with health care worker in which 86.9% soap is available. Availability of soap is important and encourages the health care worker to practice hand hygiene, in reducing the transmission of HCAI (18).

6.2. Conclusion

The results of the current study revealed that 84% respondents apply good hand hygiene practice, 16% poor practice and there was no significant difference in practices of hand hygiene between the respondents according to different years of services. Although hand hygiene is a very simple procedure and has long been deemed one of the most important infection control measures, the compliance rate by health care workers are generally reported to be low and does not depend on the years of services.

6.3. Recommendation

- ❖ The hospital's senior management team should support and openly promote hand hygiene.
- ❖ There should be clear and simple instructions on hand hygiene made visible for every health worker at their work stations.
- ❖ Health care workers should receive regular training on correct hand hygiene practices.
- ❖ Soap and towels should be made available in the units.

6.4. Strength and limitation of the study

Strength

- ❖ It was supported by observation
- ❖ It will serve as base line information for further research and important for policy makers to design strategy to prevent and control health care associated infections
- ❖ The standard tool developed by the World Health Organization was used

Limitation

- ❖ This study involved small sample size (n=81)
- ❖ Our study participant will be only medical and surgical ward health care workers at St. Paul's hospital millennium medical college; health care workers from other department and place ,were not included.

CHAPTER 7

7 .References

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CHAPTER 8

9. Annex

I: English version questionnaire

This study will be conducted on the assessment of hand hygiene practice among health care worker at st.paul's hospital millennium medical college, 2017 GC.

1. Information sheet

Hello, we are _____ from St. Paul's hospital millennium medical college nursing department. We would like to ask few questions about hand hygiene practice to you in the previous training. Your genuine information that you are going to provide will help policy makers to design strategy/give priority for improvement of hand hygiene. Your answers will remain confidential and your name will not be taken down. Participation in this study is voluntary and you are not obligated to answer any questions that you do not want to answer and it takes 20 minutes.

Title of the study: Assessment of hand hygiene practice among health care worker at st.paul's hospital millennium medical college, Addis Ababa, Ethiopia 2017GC.

Objective of the study: To assess hand hygiene practice among health care workers at st.paul's hospital millennium medical college, Addis Ababa, Ethiopia 2017GC

Rights of the participants: Participating and not participating is the full right and participants can stop from participation in the study at any time. And also the participant can skip question which does not want to respond. Participants can ask any questions which is not clear for understanding.

Confidentiality: - Any information forwarded will be kept private and his/her name will not specify.

2. Informed consent

We have read all this form or it has been read to me in the language I comprehend and understood all conditions stated above. Therefore, would you willing to participate in this study

Yes. ☐ No. ☐

Name of researchers_____

Signature _____: Address: _____

E-mail_____

Name of witness' _____

Signature_____

Date_____ Starting time _____ Ending time_____

Questionnaire for HCW

Date: _____

Site: Code no.....

Questionnaire

Hand Hygiene practices among Health Care workers in medical and surgical ward at
st.paul's hospital millennium medical college General Instruction

Please attempt to answer all questions as honestly and consistently as possible. Your
personal identity will not be disclosed in this Study.

Please give one answer per question unless multiple answers are required.

Please write neatly or make cross against the appropriate response as applicable.

Part 1 Information on the demographic and qualification of employees

Code	Records Identification	Categories	Skip

101	Age		
102	Sex		
103	Years of services		
104	Educational level		
105	Categories of HCW	Nurse; BSC, diploma, HO Medical Doctors Dental personnel other	

Assessment of hand hygiene practice among health worker in medical and surgical ward at SPHMMC.

Questioner

Yes (√) No (x) Not sure(0)

Code	Question	yes	No	Not sure
201	I was trained on the use of hand hygiene			
202	I know what is hand hygiene			
203	I sometimes forget to perform hand hygiene			
204	I wash my hands every-time after I handle patient			
205	When busy it is more important to complete my tasks than to perform hand hygiene			
206	Performing hand hygiene in the recommended situations can reduce patient Mortality			
207	I can't always perform hand hygiene in recommended situations because my patient's needs come first			
208	Hand hygiene posters demonstrating good hand washing techniques			

	availability			
209	Performing hand hygiene in the recommended situations can reduce medical costs associated with hospital acquired infections			
210	Prevention of hospital acquired infection is a valuable part of health care worker's role			
211	I follow the example of senior health care workers when deciding whether or not to perform hand hygiene			
212	I believe I have the power to change poor practices in the workplace			
213	Failure to perform hand hygiene in the recommended situations can be considered as negligence			
214	Hand hygiene is a habit for me in my personal life			
215	I can effectively apply my knowledge of hand hygiene to my clinical practice			
216	It is an effort to remember to perform hand hygiene in the recommended situations			
217	I would feel uncomfortable reminding a health professional to do hand wash			
218	Performing hand hygiene slows down building immunity to disease			
219	Dirty sinks can be a reason for not washing hands			
220	Lack of an acceptable soap product can be a reason for not cleansing hands			
221	Performing hand hygiene after caring for a wound can protect from infections			
222	Cleansing hands after going to the toilet can reduce transmission of infectious disease			
223	Is Hand Soap Available?			
224	Is Soap dispenser available and functional?			
225	Is Disposable Hand towel available and accessible?			

Hand Hygiene Observation Tool

Date: Yes (√)

Staff title: No (x)

Code	Observations	Yes	No
301	Before touching the patient		
302	After touching the patient		
303	After contact with blood, body fluids, secretions or excretions, mucous membrane, non-intact skin, urinary bag, and drain.		
304	Before doing any procedures Including medication preparation		
305	After doing any procedures Including medication preparation		
306	Before touching the patient equipment (soiled linen, patient cot etc.)		

307	After touching patient equipment (soiled linen, patient cot etc.)		
308	Before putting on gloves for sterile Procedures		
309	Gloves removed immediately after Use		
310	Gloves used whenever potential for hand contact with blood/body fluids.		