

ASSESSMENT OF HAND HYGIENE PRACTICES AMONG HEALTHCARE WORKERS IN CRITICAL CARE UNIT OF PRIME HOSPITAL, HYDERABAD

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Contents

- About Prime hospital
- Introduction about Hand hygiene
- Hand hygiene at hospital
- Hand hygiene at CCU
- Aims & objectives
- Methodology
- Analysis
- Result
- Conclusion
- Solutions

About PRIME hospital

- Prime Hospitals situated in Ameerpet and Kukatpally, are one of the pioneer corporate health care hospitals in the state of Telangana.
- Prime hospitals offers International standard corporate health care facilities.
- Prime Hospitals is a private, full-fledged multi-specialty hospital with 250 beds of which 75 are ICU beds in Ameerpet and also 110 beds of which 30 are ICU beds in Kukatpally centers.

About hand hygiene

- **Hand hygiene**

A general term that refers to a method of removing microorganisms from the hands so the germs cannot be transmitted to anyone else.

- The two most common types of **hand hygiene** are **hand washing** with soap and water and using an alcohol-based hand rub.

Hand hygiene products

Alcohol-based (hand) rub

- ❑ An alcohol-containing preparation (liquid, gel or foam)
- ❑ designed for application to the hands to inactivate microorganisms
- ❑ and/or temporarily suppress their growth.

Antimicrobial (medicated) soap.

- ❑ Soap (detergent) containing an antiseptic agent at a concentration
- ❑ sufficient to inactivate microorganisms
- ❑ and/or temporarily suppress their growth.

About hand hygiene at hospital

- Most nosocomial infections are thought to be transmitted by the hands of health care workers.
- Hand hygiene among health care workers plays a central role in preventing the transmission of infectious agents.
- Hand washing is the most effective way of preventing the spread of infectious diseases in hospital.
- Despite of requirement that Centers for Disease Control and Prevention hand hygiene guidelines be implemented in hospital's, compliance among health care workers remains low.

Hand hygiene

- core element of patient safety
- For the prevention of Health Care Associated Infection (HAIs) and spread of anti microbial resistance.
- Requires a multi-model strategy.
- So it is important & necessary to assess & analyze the individual differences in knowledge levels and health beliefs among HCWs.

Hand hygiene in critical care unit

- (HAIs) affect 1.4 million patients at any time world wide(estimated by (WHO) .
- In Critical Care Units, the burden of HAIs is greatly increased, causing additional morbidity and mortality. Health care associated infections persist as a major problem in most Critical Care Units
- Multidrug– Resistant pathogens are commonly involved in such infections and render effective treatment challenge.
- . Hand hygiene is the most simple and effective method for the prevention.
- So assessing the reported hand hygiene practices and observing is very much important to find out gaps, plan remedial measure to reduce HAIs

Aim & objectives of study

AIM:

To Assess the hand hygiene practices among healthcare workers in Critical care unit .

OBJECTIVES:

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

METHODOLOGY

- **Study setting:** The study was undertaken at a PRIME Hospital in Hyderabad. This hospital is 250 bedded multi-specialty hospital.
- **Study design:** Cross –sectional study
- **Study participants:** All staff in selected CCU, engaged in giving care to patients. Staff includes duty medical doctors, nurses, technicians and unit helpers.
- **Sample size:** 70 healthcare workers (HCWs) for observation; and 25 for questionnaire (unit helpers were excluded so as to avoid any biases.)

Description of the tool

Study tools:

Observational tool and Questionnaire based on the WHO Observational Tool and Questionnaire for hand hygiene assessment.

- Part I: - This part contains items such as demographic data which include : age, sex, profession, total years of experience, CCU experience.
- Part ii: - An observation total was used to assess the hand hygiene practices of HCWs .
- Part iii: - A questionnaire was distributed to HCWs in order to assess the opinion about hand hygiene practices.

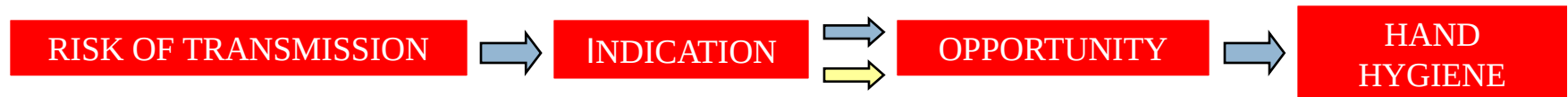
Data collection & analysis

- Observations on activities around individual patient carried out in random 10-minutes period interval during day time, in the busiest shifts in the CCU.
- All Health care personnel who contacted the selected patient during this period (e.g.: duty medical officers, nurses, technicians & unit helpers), were observed unobtrusively.

Data analysis: It was done using MS-EXCEL Tools

About Analysis

- Data was collected for 4 weeks period at PRIME HOSPITAL Hyderabad.
- 4 weeks of observational study
- 1 day of questionnaire based study.
- Total 1382 opportunities for hand hygiene were observed ,out of this only 1007 opportunities were actually performed.
- **Opportunities:**



Opportunity: The need to perform hand hygiene, whether there are single or multiple indications.

Hand hygiene must correspond to each opportunity.

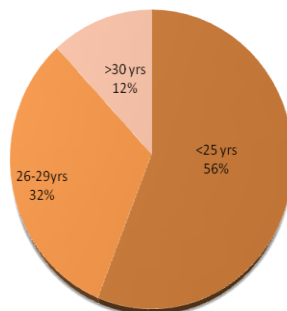
Multiple indications may come together to create a single opportunity

Distribution according to participants in study

- Age
- Sex
- Profession : Duty medical officer
Nurses
Technicians
- Experience

Distribution of sample according to age

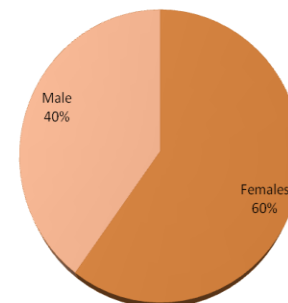
■ <25 yrs ■ 26-29 yrs ■ >30 yrs



More than half of the participants were under 25 years of age
Only 12% were of age more than 30 years.

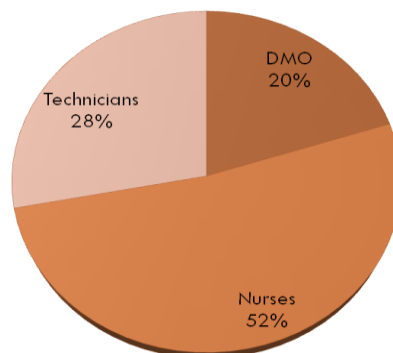
Distribution of sample according to sex

■ Female ■ Male



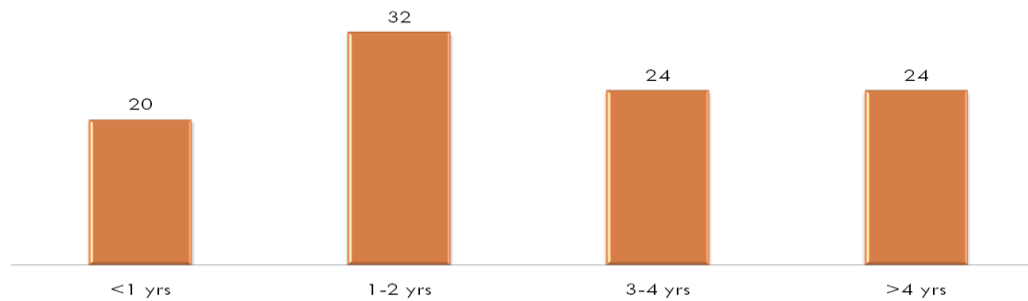
Female : Male ratio was found to be 3:2
About 60% of contributing participant of CCU were females

Distribution of sample according to profession



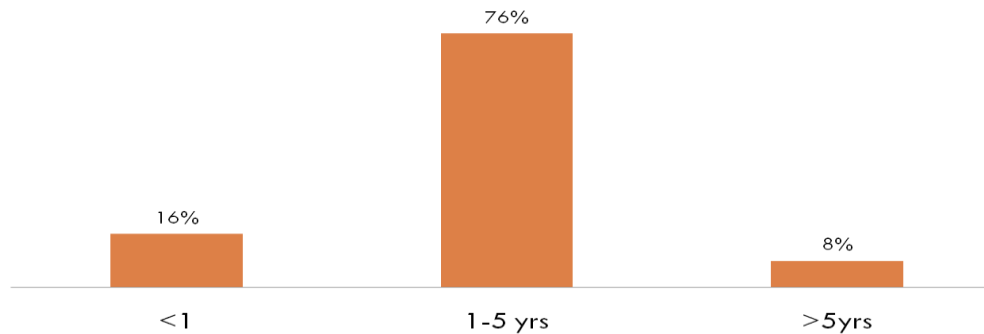
More than half of participants were nurses, remaining consists of DMO'S & Technicians

Distribution according to total professional experience



Maximum participants were having 3-4 or more than 4 years of total experience
Only 20 % of them had less than year experience.

Distribution according to CCU experience



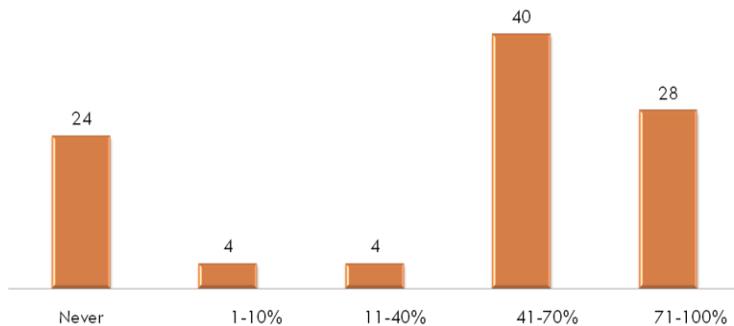
It was found that among the participants maximum were having experience from 1-5 years working at CCU's .Only 8% of them were having more than 5 years.

Findings From Questionnaire

- Reported use of soap & water
- Use of alcohol based hand rub
- Use of both soap & water & alcohol based hand rub
- Reason for lack of hand hygiene
- Satisfaction level from current hand hygiene practices in hospital
- Satisfaction from the hand hygiene material in use in hospital
- Relationship between good hand hygiene practices & HAI'S.

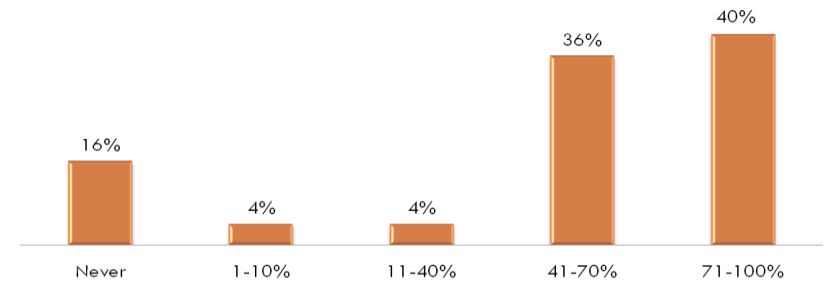
Reported hand hygiene techniques

Distribution of sample according to reported use of soap & water



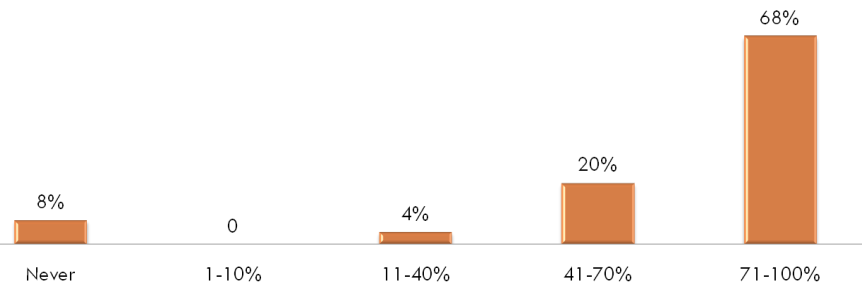
While more than 60% of participants uses soap & water for hand washing regularly, only 28% were those who uses soap & water every time, 24% were those who never use soap & water for hand washing.

Distribution of sample according to use of alcohol based hand rub



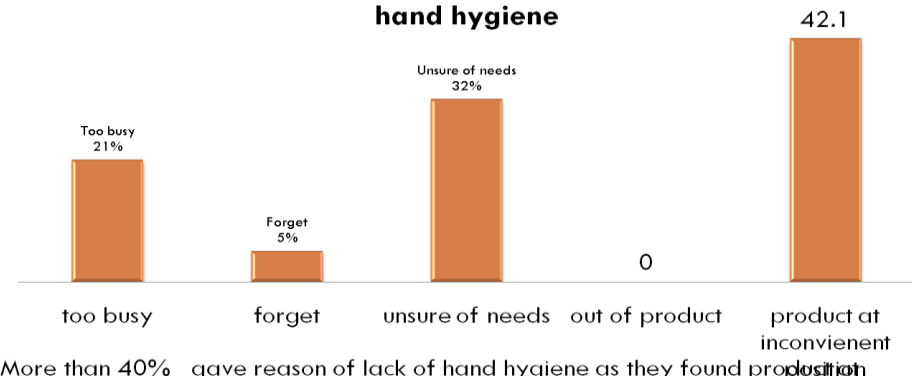
More than 70% of participant uses alcohol based hand rub for hand hygiene, among them 40% uses alcohol based hand rubs every time after every procedure.

Distribution of sample according to use of both soap & water & alcohol based hand rub



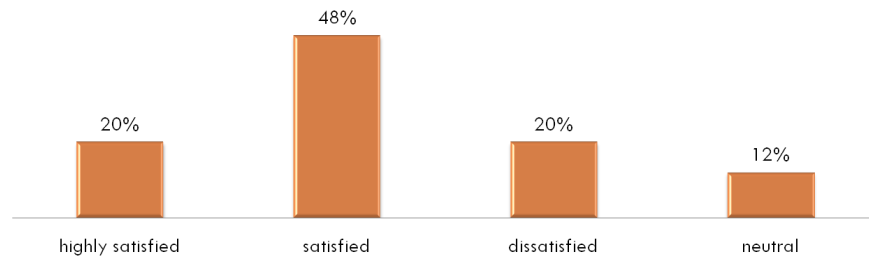
68% of sample uses both soap & water & alcohol based hand after every procedure, 20% of them uses them 40-70% after procedure, 8% of sample uses non of them

Distribution of sample according to reason for lack of hand hygiene



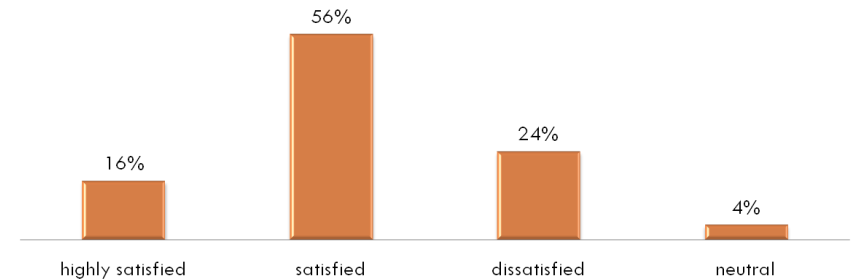
More than 40% gave reason of lack of hand hygiene as they found product at inconvenient position, 32% were unsure of needs, 21% among them gave reason that they are sometimes too busy so lack hand hygiene. 5% of sample actually forgets so they lack hand hygiene

Distribution of sample according to the satisfaction level from current hand hygiene practices in CCU



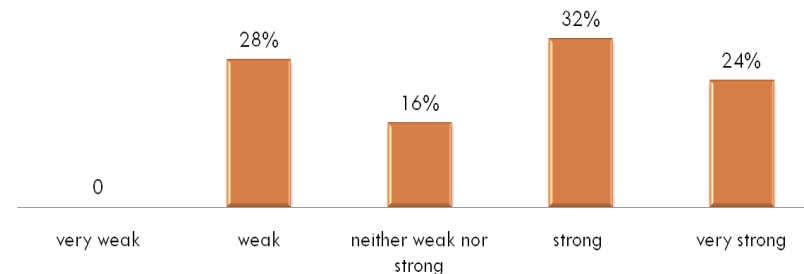
Most of the participants were satisfied from current hand hygiene practices, only 20% of them were highly satisfied. Out of these 20% were dissatisfied from hand hygiene practices in CCU

Distribution of sample according to the satisfaction with hand hygiene material used in unit



According to the satisfaction with hand hygiene material used in the unit 56% of sample were satisfied, only 16% of them were highly satisfied. 24% of sample was dissatisfied from material used in unit.

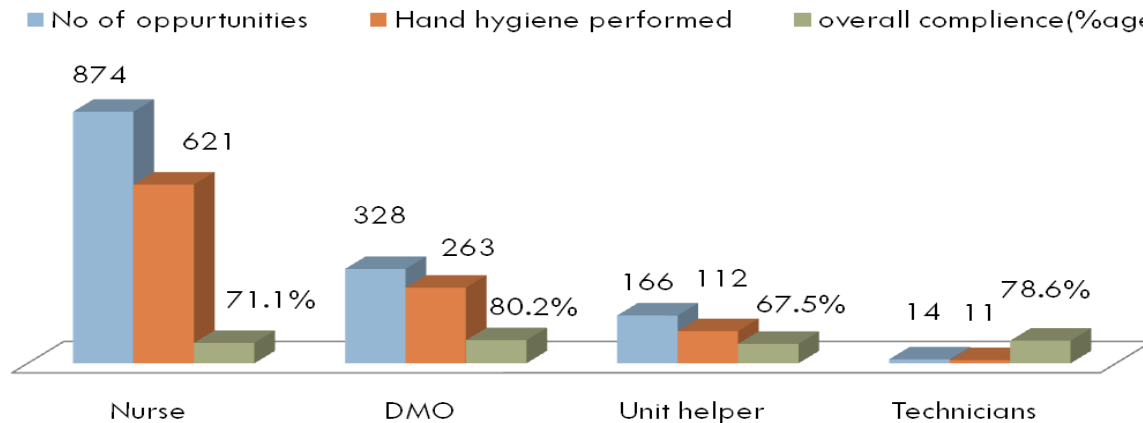
Distribution of samples according to the opinion about the relation between good hand hygiene practices & hospital acquired infection



56% of sample have opinion that there is relationship between good hand hygiene practices & hospital acquired infection, 32% strongly feels relation & only 24% thinks for strong relationship between hand hygiene HAI. 16% Of sample finds no relationship between hand hygiene & HAI

Distribution of sample according to observation of hand hygiene practices

Overall observed hand hygiene compliance among different HCW

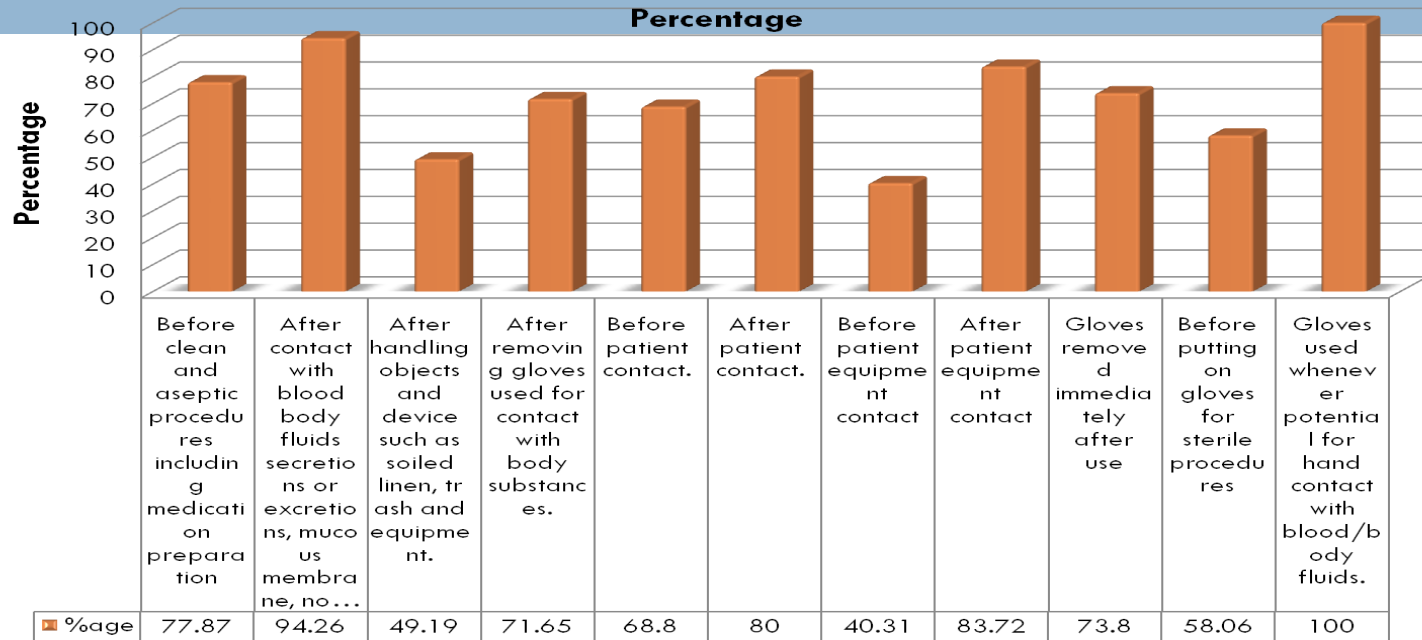


Overall hand hygiene was least among unit helpers.

Among nurses only 71% compliance was seen .

Out of 874 opportunities only 621 were actually performed by nurses..

Observed Hand hygiene compliance specific to each opportunity



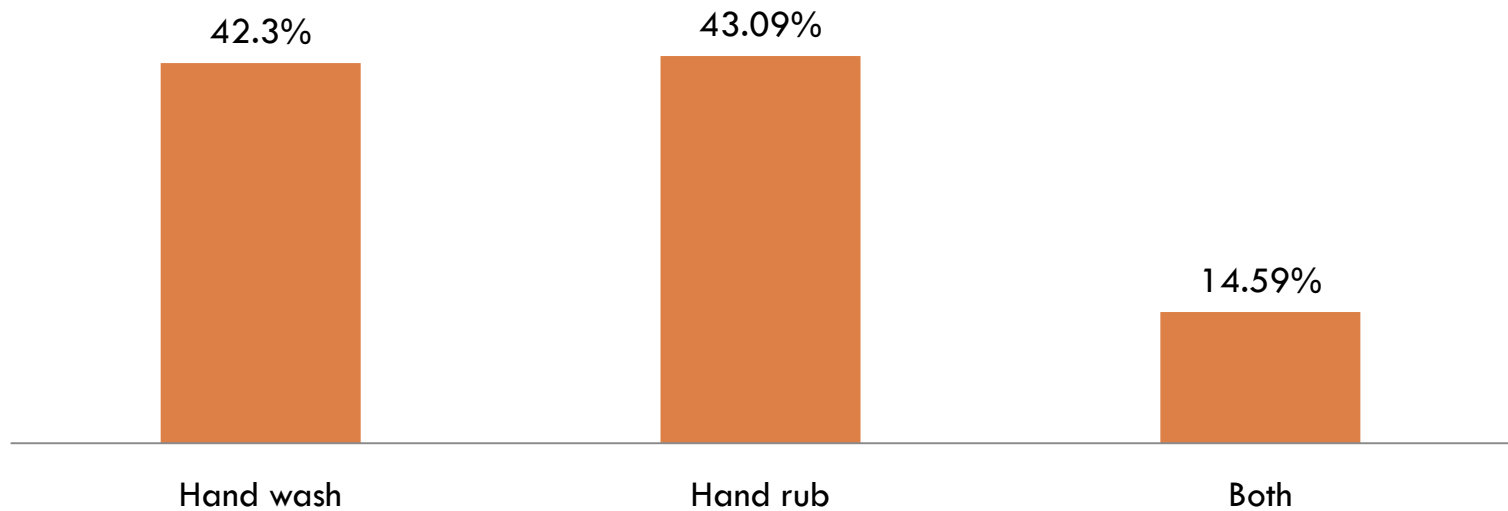
- Almost all participant uses gloves whenever potential for hand contact with blood /body fluid.
- Majority of sample maintains hand hygiene after contact with body fluids , secretions etc, almost 80% maintains hand hygiene after patients & equipment contact.

Least compliance was found in opportunities like:

- After handling of soiled linen etc (49.19%)
- Before patients equipment contact (40.45%)
- Before putting on gloves for sterile procedures (64%)
- Before patients contact (69%).

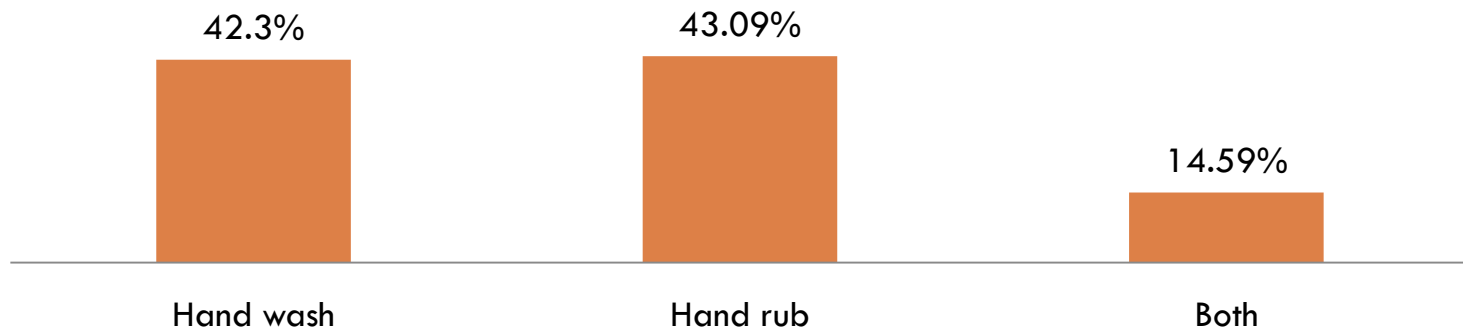
Observed hand hygiene technique

Hand hygiene technique

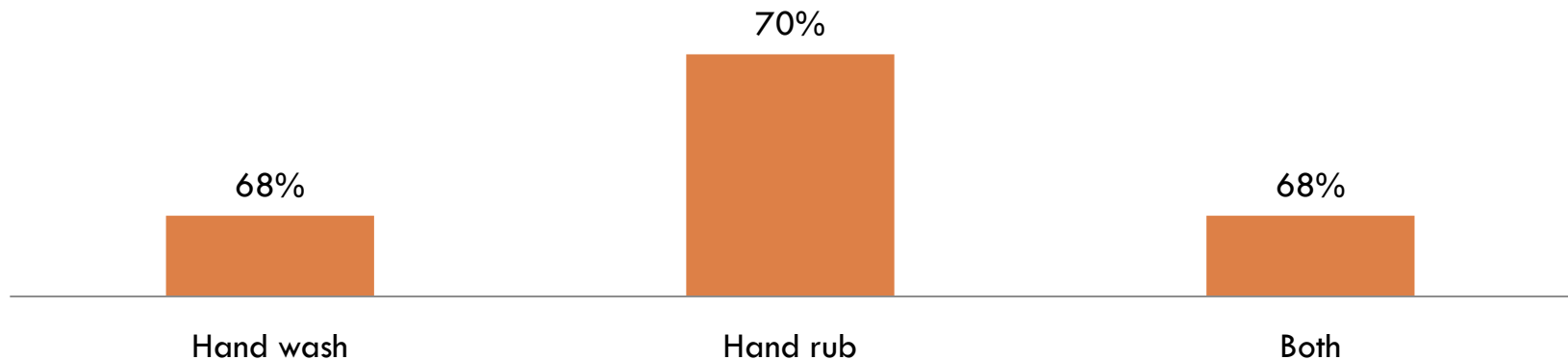


Disparity in reported vs observed

Hand hygiene technique



Reported hand hygiene technique



Result

- The study revealed disparity between reported and observed hand hygiene practices among health care workers
- 68% of respondents reported to use soap and water; and 76% alcohol based hand rub for hand hygiene while on observation only 42% of respondents were actually found using soap & water; & 43% alcohol based hand rub for hand hygiene.

Least compliance was found in opportunities like:

- After handling of soiled linen etc (49.19%)
- Before patients equipment contact (40.45%)
- Before putting on gloves for sterile procedures (64%)
- Before patients contact (69%).

- Compliance in hand hygiene practices was differed among the different categories of HCWs.

The main reasons of non-compliance of hand hygiene practices were

- inconvenient location of sinks/ basins (42%)
- lack of awareness of need of hand hygiene (32%)
- Too busy due to work pressure for hand washing (21%).

Conclusion

- There was significant disparity between reported and observed hand hygiene practices among health care workers.
- The main reasons of non-compliance of hand hygiene practices were:
 - inconvenient location of sinks/ basins
 - lack of awareness of need of hand hygiene
 - work pressure.

Reasons	Solutions
Ineffective placements of dispensers or sinks	Increase visibility & place dispensers in workflow.
Hand hygiene data not collected & reported timely	Use quality coach or champions for data collection
Healthcare workers forget	Visual reminders & involving patients & families.
Unsure of needs	Well designed & planned training & evaluation of the CCU staff.



THANK YOU