

## Assessing Nurses Hand Washing Routines at 7A Military Hospital (Hochiminh City, Viet Nam)

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**Abstract:** Using the cross-sectional description method to assess the current handwashing practice of 106 nurses in 7A Military Hospital with 84% being Intermediate level, 5.6% College, 10.4% University showed that 48.1% of nurses wrongly listed the routine hand washing steps. 74.5% of surveyed nurses on regular hand washing knowledge reached average level; the rate of nurses with a positive attitude to regular hand-wash was 15.1%, and 0.9% of nurses was not positive with regular hand washing. The results of regular hand washing practice skills showed that 91.5% of nurses performed on average; none of them performed excellent handwashing skills. Equipment survey results showed that 79.2% were adequately equipped for hand-washing routine, and no nurses worked under inadequate equipment conditions. We recommended that the Nursing Department developed a plan in collaboration with the Hospitals' Nursing Room to carry out the propagation, inspection, and supervision of handwashing routines to create a standard learning environment for student and intern nurses.

**Keywords:** regular hand washing; knowledge; skill; attitude

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### I. Introduction

Hand-washing in health care facilities is a basic technique that a physician must perform before proceeding with any other medical techniques to reduce the number of bacteria on the skin in order to prevent hospital infection.

According to the World Health Organization, hand washing is considered a homemade vaccine which is very simple, easy to implement, and cost-effective [3]. Based on scientific research, The 3rd Asia Pacific Hospital Infectious Disease Control Conference in 2007 recommended that hand-washing was the simplest, cheapest, and most effective method in infection control. Therefore, it is necessary to increase the compliance of regular hand-washing or quick hand disinfection using alcoholic solutions [3,7].

Although the Ministry of Health had launched hand hygiene movements in both hospitals and communities [2], previous studies had shown that the rate of hand-washing practices in the community and hospitals in Vietnam was low [1].

In Vietnam, there was less research conducted on this issue. Therefore, we conducted the project "Assessing nurses hand washing routines at 7A Military Hospital" with the following research objectives:

Assessing the status of the nurses' knowledge - skills - attitudes about regular hand washing routine.

Proposing some appropriate recommendations in order to step by step improve the quality of procedural hand washing techniques, increase the quality of health care services, and create a standard practice environment for students and interns.

### II. Subject And Research Method:

#### 2.1. Subjects of the research

- Subjects of study: Nurses
- Criteria for selecting research subjects: All nurses with vocational or higher education that directly participate in patient caring.
- Sample size: purposely selected 106 research subjects.
- Exclusion criteria: Nurses that did not follow the data collection process (incomplete questionnaire; copy answers from other nurses).

**2.2. Time and place of research**

- Time: February 2015 to November 2015
- Location: 7A Military Hospital, Hochiminh City, Vietnam

**2.3. Study methodology**

A descriptive cross-sectional research method [10] was used.

**2.4. Research criteria**

- + General criteria: Gender, professional qualifications, seniority of work.
- + Assessing the hand-washing skills of the nurses
- + Assessing knowledge about the sequential steps of the nurses' regular hand-washing routine.
- + Assessing the nurses' general knowledge on regular hand washing routine.
- + Assessing the attitude of the nurses towards regular hand washing routine.
- + Assessing the adequacy of equipment for regular hand washing routine.

**2.5. Data collection technique:**

Randomly observe nurses in the units performing routine hand washing techniques and assess them according to the checklist.

A meeting of all nurses participating in the assessment for handwashing skills was arranged to disseminate the research contents, hand out the forms for nurses to fill in, and immediately collect the forms when done.

**2.6. Data analyzing methods**

The medical statistics method was used with the SPSS17.0 software.

**III. Research Results**

Surveying the knowledge - skills - attitudes about the regular hand-washing routine of 106 Nurses in Internal Medicine, Surgery, Obstetrics, and Oncology Department of 7A Military Hospital, we obtained the following results:

**Table 1: General characteristics of the research sample**

Features	Quantity	Percentage %
Gender	Male	15
	Female	91
Qualification	Vocational School	89
	College	6
	University	11
Working time	From 6 months to 2 years	14
	From 2 years - 5 years	39
	> 5 years	53

Statistics showed that male nurses accounted for 14.2%, and females were 85.8%, in which nurses with Vocational education were 84% and University were 10.4%. 50% of them had over five years of working time.

**Table 2: Assessing the knowledge about the steps of handwashing routine**

Assessing content	Quantity	Percentage %
The sequence of regular hand-washing steps	True	55
	False	51
The extent to which the regular hand-washing steps are incorrectly performed ( <i>n</i> = 51)	Regularly	37
	Sometimes	10
	Not following the process	4

Assessment of the nurses' knowledge about the step sequences of regular hand-washing showed that 48.1% of nurses incorrectly listed the sequence of steps for routine handwashing. Among 48.1% of nurses who incorrectly listed the sequence of routine hand washing steps, 7.8% of nurses admitted that they did not wash their hands regularly according to the procedures; 72.5% of nurses often followed the wrong procedure.

**Table 3: Assessing general knowledge about regular hand-washing.**

Knowledge Level	Quantity	Percentage %
Good	22	20.8
Average	79	74.5
Poor	5	4.7

When surveying the general knowledge of nurses about regular hand washing, only 20.8% of nurses achieved a good knowledge level, 74.5% reached an average knowledge level, and 4.7% got poor knowledge level.

**Table 4: Assessing the attitude of nursing towards regular hand washing**

Attitude	Quantity	Percentage %
Positive	16	15.1
Relatively positive	89	84
Not positive	1	0.9

Surveying the attitude of nurses with regular hand washing found that 84% of nurses had a relatively positive attitude with regular hand washing, 15.1% had positive, and 0.9% did not have a positive attitude with regular hand washing.

**Table 5: Evaluation of hand-washing practice**

The level of implementing regular hand-washing practices	Quantity	Percentage %
Excellent	0	0
Good	6	5.7
Average	97	91.5
Poor	3	2.8

The results of regular hand washing practice assessment showed that 91.5% of nurses performed on an average level, only 5.7% performed at a good level, 2.8% had poor performance, and none of them performed excellent handwashing skills.

**Table 6: Assessing the adequacy of equipment for regular hand washing routine**

Equipment	Quantity	Percentage %
Inadequate	0	0
Relatively adequate	22	20.8
Adequate	84	79.2

Equipment for hand-washing routine survey results showed that 79.2% were adequately equipped, 20.8% were relatively adequately equipped, and no nurses worked under inadequate equipment conditions.

#### IV. Discussion

Through a survey of the current status of knowledge - skills - attitudes of nurses on regular handwashing at 7A Military Hospital, we realized that in terms of knowledge there were 48.1% of nurses incorrectly listed the sequence of routine hand washing steps. This result showed that compliance with routine handwashing was only limited to implementing the technique rather than focusing on the proper practice of the technical procedures. Moreover, in 48.1% of nurses who listed the wrong procedure, 7.8% admitted that they did not wash their hands regularly according to the procedure, and 72.5% often followed the wrong procedure. When surveying the general knowledge about regular hand washing, only 20.8% of nurses achieved a good knowledge level, 74.5% reached an average knowledge level, and 4.7% got poor knowledge level.

The awareness plays an essential role in the nurses' proper handwashing practices; however, the survey showed that the percentage of nurses with a positive attitude was only 15.1%, and 0.9% of nurses did not have a positive attitude towards hand-washing routines.

Although routine handwashing is considered a basic technique that any medical staff must know, understand, and perform [8], the random evaluation of the hand-washing practice of 106 nurses, 86.8% of which had more than two years of working time, showed that 91.5% of them performed at an average level. Only 5.7% of them performed the technique at a good level, 2.8% performed poorly, and none of them performed excellently.

Equipment for hand-washing routine survey results showed that 79.2% were adequately equipped, 20.8% were relatively adequately equipped, and no nurses worked under inadequate equipment conditions.

The limitations of the nurses' knowledge - skills - attitudes on routine hand-washing will increase the risk of infections at health facilities [5]. 7A Military Hospital is one of the prestigious hospitals in Hochiminh city, where often providing internship to Medicine, Pharmaceutical, and Nursing students. The attitudes and conformation of the handwashing routine of medical staff in the hospital will be meaningful in creating the right studying environment for students and contributing to improve the quality of services as well as reduce hospital infections [6].

This research was limited in that it could not simultaneously assess each nurse in terms of skills, knowledge, and attitude; therefore, it could not find out more about other factors related to the nurses' regular hand-washing routine.

## V. Conclusion

The situation of knowledge, skills, and attitudes of nurses on regular handwashing at 7A Military Hospital in times of conducting this research was:

48.1% of nurses wrongly listed the routine hand washing steps. 74.5% of nurses being surveyed on regular hand washing knowledge reached average level; the rate of nurses with a positive attitude to regular hand-washing was 15.1%, and 0.9% of nurses was not positive with regular hand washing. The results of regular hand washing practice assessment showed that 91.5% of nurses performed on an average level, only 5.7% performed at a good level, 2.8% had poor performance, and none of them performed excellent handwashing skills. Equipment survey results showed that 79.2% were adequately equipped for hand-washing routine, and no nurses worked under inadequate equipment conditions.

## VI. Recommendations

1. The Nursing Room of Hospitals should organize more frequent propaganda on the roles, purposes, and meanings of properly implementing regular hand washing routine to the nurses' patient caring procedures.
2. The supervision and inspection of regular hand-washing routine implementing in the patient caring need enforcement.

We recommended that the Nursing Department developed a plan in collaboration with the Hospitals' Nursing Room to carry out the propagation, inspection, and supervision of handwashing routines to create a standard learning environment for student and intern nurses.

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