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# Determinant Factors of Nurse's Compliance with Prevention of Application Standards in Health Care Associated Infection (HAIS) Prevention Effort in ICU And UGD Kendari Hospital.

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***Absctract.*** *Health Care Associated Infection (HAIs) is hospital acquired infections both of which occur in patients when receiving treatment, health workers who work in hospitals and hospital visitors. Standar Precaution created to protect against accidents that can occur. The application of the precaution standard is influenced by compliance. The purpose of knowing the determinants of nurses' adherence to the implementation of Precaution Standards in the prevention of HAIs in the Intensive Care Unit and Emergency Room at the Kendari City Hospital. The type of research used is correlation analytic using the Cross Sectional Study approach. The sample were 37 ICU and IGD room nurses. The sampling technique uses total sampling technique. The variables studied consisted of the dependent variable that is the application of the precaution standard and the independent variables namely knowledge, availability of facilities and motivation. The analysi used is Spearman's rho. The results showed that there is a relationship of knowledge (ρ=0,002; r=0,491), availability of facilities (ρ =0,006; r=0,444) and motivation (ρ =0,009; r=0,425) by applying the precaution standard in the prevention of HAIs. The conclusion of this study is that there is a relationship between knowledge of the availability of facilities and motivation with the application of precaution standards in efforts to prevent HAIs. It is recommended to nurses to increase awareness, understanding, and insight into the quality of nursing services in implementing standard precaution so that the incidence of HAIs can be minimized or prevented.*

## Introduction

Health Care Associated Infections (HAIs) are hospital-acquired infections that occur in patients receiving treatment, health workers working in hospitals and hospital visitors (1)

According to WHO (World Health Organization) data in 2016 the incidence of HAIs in hospitals worldwide in inpatients is around 3-21% (an average of 9%) or more than 1.4 million patients. Based on the results of the 2014 HAIs survey in United States hospitals, the incidence of HAIs reached 722.00 in acute care units and 75,000 patients with HAIs died while hospitalized (5). Meanwhile in Indonesia, the incidence of nosocomial infections in advanced inpatient services until December 2014 reached 148,703 cases (2).

The Southeast Sulawesi Provincial General Hospital is a referral center hospital throughout the Southeast Sulawesi Province. Based on the report of the Nosocomial Infection Committee Team in 2014 the incidence of nosocomial infections from

January to March was 4.9% or 49 people out of 1,002 patients who were operated on, while in 2015 January to March it was 14.52% of 51,306 patients regardless of the laboratory examination criteria.

ICU (Intensive Care Unit) nursing services are services provided to patients in critical condition in the intensive care room. The Emergency Unit which generally serves accident cases and other emergency cases must provide all equipment related to standard precautions because it is very risky for exposure to blood and other fluids from patients (4).

The service of nurses and nurses is very high and fast, this often causes nurses to pay less attention to aseptic techniques in nursing perform maintenance and use of PPE (Personal Protective Equipment). Most ICU patients get infectious diseases due to the use of invasive devices, such as catheters and mechanical ventilators. The mortality rate of patients in the ICU due to bacterial infection is twice as high as that of non-infected patients (5).

The results of a preliminary survey on April 2, 2019, by observing in the IGD and ICU of the Kendari City Hospital 4 nurses noted that on average they did not pay attention to standard precautions such as infusion and blood sampling using gloves and did not wash hands. according to the procedure before and after giving 2000 procedures. In the emergency room, there were 2 incidents of infusion phlebitis, In the ICU room, there were 2 cases of ILO (surgical wound infection) and 3 incidents of infusion phlebitis. These events led to the occurrence of HAIs.

## Method

This research belongs to the type of analytic correlation research using a cross-sectional study approach. This research has been carried out in the Intensive Care Unit and Emergency Installation of the Kendari City Hospital from July 1-15 2019. The sample in this study was all ICU and IGD nurses as many as 37 nurses. The sampling technique used was total sampling.

## Results and Discussion

### Results

1. Distribution of Respondents' Characteristics

**The Frequency Distribution Of Respondents Based On The Characteristics Of Respondents Can Be Seen In The Following Table.**

| Characteristics Respondent | mean±SD | n (%) |
|---|---|---|
| **Gender** | | |
| Man | | 24 (64,9) |
| Women | | 13 (35,1) |
| **Age** | 30,24±2,994 | |
| < 30 year | | 15 (40,5) |
| ≥ 30 year | | 22 (59,5) |
| **Last Education** | | |
| S1 + Ners | | 10 (27) |
| DIII | | 27 (73) |
| **Length Of Working** | 4,68±1,796 | |
| >5 year | | 15 (40,5) |
| ≤5 year | | 22 (59,5) |

*Source : Primery data, 2019*

The table above shows that among respondents whose gender is dominated by men as many as 24 respondents (64.9%) age respondents has an average of 30.24±2.994 and respondents who have the latest education are dominated by respondents who have a DIII education as many as 27 respondents (73%) while the average respondents who work have an average of 4.68±1.796

**2. Distribution of Research Variables**

The Frequency Distribution of Respondents Based On Research Variables Can Be Seen In The Following

| Research Variable | mean±SD | n (%) |
|---|---|---|
| **Application Standard Precaution** | 14,30±3,170 | |
| Applied | | 23 (62,2) |
| Not Applied | | 14 (37,8) |
| **Knowledge** | 7,24±2,229 | |
| Good | | 22 (59,5) |
| Not Enough | | 15 (40,5) |
| **Availability Facility** | 6,95±2,134 | |
| Enough | | 21 (56,8) |
| Not Enough | | 16 (43,2) |
| **Motivation** | 18,68±4,625 | |
| Good | | 23 (62,2) |
| Not Enough | | 14 (37,8) |

*Source : Primery data, 2019*

The table above shows that the average respondent who applies Standard Precaution is 14.30±3.170 with a score of respondents' answers that dominates is applied by 23 respondents (62.2%), the average knowledge is 7.24±2.229 with a score of respondents' answers which dominates is good as many as 22 respondents (59.5%),the average availability of facilities is 6.95 ± 2.134 with a dominating score of enough answers for as many as 21 respondents (56.8%) while the average respondent who has motivation is 18.68 ± 4.625 with a dominating answer score is good for as many as 23 respondents (62.2%).

**3. Results of Bivariate Analysis of Relationships Availability of Facilities by Implementing Standard Precaution in Efforts to Prevent HAIs in the Room ICU & IGD Kendari City Hospital**

| | **Availability_Facilities Score** |
|---|---|
| **Score** | $r = 0{,}444^{**}$ |
| Application standard precaution | $\rho = 0{,}006$<br>n = 37 |

Spearman correlation test results

The table above shows that the results of the Spearman obtained a significant value of value 0.006 (<0.05) which means that H1 is accepted, there is a relationship between the availability of facilities the application of standard precautions in the prevention of HAIs value of the relationship strength (r) shows a moderate correlation of 0.444 (r = 0.26-0.50)

**4. Results of Bivariate Analysis of the Relationship between Motivation and Application of Standard Precaution in Efforts to Prevent HAIs in ICU & IGD Rooms at Kendari City Hospital**

| | |
|---|---|
| **Score Application Standard Precaution** | *r = 0,425*<br>$\rho$=009<br>n = 37 |

Spearman correlation test results

Based on the table shows that the results of the Spearman test obtained a significant value of 0.009 (<0.05), which means that H1 is accepted, namely there is a relationship between motivation and the application of standard precautions in the prevention of HAIs with the value of the relationship strength (r) showing a moderate correlation**.** of 0.425 (r = 0.26-0.50).

## Discussion

### Relationship Between Knowledge And Implementation Of Standard Precaution In Hais. Prevention Efforts

The results indicate that the correlation test value using the Spearman test obtained a value of 0.002 (<0.05) that there is a relationship between the application of standard prevention in the prevention of HAIs. In addition, the value of r = 0.491 (r = 0.26-0.50) indicates the level of relationship between knowledge and the application of standard precautions in the prevention of HAIs moderate. s because nurses always wear disposable gloves whenever there is a possibility of exposure to blood and other body fluids always maintain healthy environmental conditions such as clean air, pressurized ventilation, supply of clean water, clean environmental surfaces, arrangement of equipment in such a way that it looks easy cleaned.

Research conducted by Miftahul Jannah (2015) on of standards at PKU Muhammadiyah Hospital Yogyakarta. Show by a probability value of 0.028 <0.05. Based on knowledge will last a long time, compared to are not based on knowledge. In addition, knowledge can obtain information. The higher better the application of standard precautions will be because nurses have the function of standard precautions (7)

### Facility Availability Relationship With Standard Application Precautions In Hais Prevention Efforts.

The results of a 0.009 (<0.05) relationship between motivation and the application of standard precautions to prevent HAIs. In addition, the value of r = 0.425 (r = 0.26-0.50) shows the value of the strength he moderate correlation.get such as obeying the rules and infection control procedures in hospitals and other people in the vicinity. The leadership gives praise for the work done provides infection control education and training to improve the knowledge and skills of nurses

Motivation is something that gives strength to encourage work values, the desire to get good, attitude, personality, education, while experience, knowledge of extrinsic factors are factors from outside the human self in the form of leadership, encouragement or guidance of others and environmental conditions (6)

Research conducted by Evie Wulan Ningsih (2013) Fisher exact test one was marked as the significant value because of the p-value for the 2-way test. Results calculations release 16.00 are rejecting H0 because p-value < (0.006 < 0.05) between nosocomial infection prevention behavior by nurses workload that nurses must do to prevent nosocomial infections, for example in washing hands before and before taking action (10)

## Conclusion

Based on the results of the research analysis and discussion is a relationship between knowledge of the availability of facilities and motivation for standard precautions in the prevention of HAIs. Awareness, understanding, insight into the quality of nursing services by applying standard precautions so that HAIs be minimized or prevented

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