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### IMPLEMENTATION OF UNIVERSAL AWARENESS IN MANAGEMENT OF HOSPITAL ENVIRONMENT AS A BUSINESS FOR PREVENTION OF NOSOCOMIAL INFECTIONS IN PARIAMAN REGIONAL GENERAL HOSPITAL

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#### **ABSTRACT**

The high prevalence of nosocomial infections in hospitals with infectious diseases such as HIV / AIDS, hepatitis B virus and pulmonary tuberculosis and other infectious diseases means that the risk of health workers who can be infected with infectious diseases, especially if vigilance against blood and bodily fluids is not carried out against all patients. The purpose of this study was to see a picture of the implementation of universal vigilance in nurses at Pariaman District Hospital. Preliminary survey conducted by researchers at Pariaman District Hospital of 8 nurses, some actions of officers who have the potential to increase transmission of disease to themselves, patients served and the wider community, namely improper hand washing, where 2 nurses were seen only washing their hands with use water the gloves were not quite right, after researchers saw that 1 piece of gloves was found to be torn. Descriptive research method. The study was conducted at Pariaman District Hospital. The population in the study was all nurses in the inpatient room of Pariaman District Hospital, amounting to 77 people. The sampling technique is total sampling. Data processing is done univariately. Based on the results of the study, it was found that 46.8% took actions to wash hands improperly, 54.5% took measures to use protective equipment that were less appropriate, 32.5% took actions to administer the syringe less precisely. It is expected that nurses must maintain the health and safety of themselves and clients and be responsible as executors and need to apply work procedures, universal precautions and adhere to them in carrying out daily nursing actions.

Keywords: Infection, Environment, Nosocomial, Universal Precautions

#### INTRODUCTION

Infection is an invasion of the body by pathogens or microorganisms that can cause pain. The hospital is a place of care for patients with a variety of diseases including infectious diseases, ranging from mild to the heaviest, so this can cause the risk of

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spreading infection from one patient to another patient, as well as with health workers who are often exposed to infectious agents. Transmission of infection can be through several ways including through blood and body fluids such as HIV / AIDS, Hepatitis B and Hepatitis (Depkes RI, 2003; 2004; 2006; 2007).

Nosocomial infection is one of the occupational risks faced by health workers in hospitals. Blood and body fluids are a medium for transmitting disease from patients to health care workers. Nursing staff are the most health workers in hospitals and have the longest contact with patients. Nurse work is a type of work that is at risk of contact with blood, bodily fluids of patients, punctured by former patient syringes, and other dangers that can be a medium of disease transmission. Humanodefeciency virus (HIV), Hepatitis B (HBV) and Hepatitis C virus (HCV) are the biggest threats to health workers (Darmadi, 2008; Aprihatin et al, 2020; Arlym et al., 2020; Armaita et al., 2020; Asman et al., 2020). There were 57 cases of health workers infected with HIV due to occupational risks. Of the 57 cases, 24 of them (most) cases were experienced by nurses and estimated that there were 16,000 cases of hepatitis C virus transmission, 66,000 cases of hepatitis B virus transmission and 1000 cases of HIV transmission to health workers worldwide. Reports of transmission of diseases due to occupational risks in Indonesia, there are no definitive data, but if you look at infection control in hospitals that are still weak, the risk of transmission of infections including HIV and other infectious diseases to nurses can be quite high. Even no socomial infections can also occur from one patient to another through intermediaries of medical actions performed by nurses, such as nurse gloves contaminated from the first patient are also worn to the next patient (Emaliyawati, 2009).

Hospitals in Indonesia do not all have fixed procedures (procedures) specifically about universal precautions, including Dr. Wahidin Sudirohusodo Makassar, infectious disease control team (PPI) has been formed but until now there has been no specific permanent procedure on universal vigilance in each room. Which becomes a guideline for nurses in implementing universal precautions. In 2016 to June 2017HIV / AIDS patients who entered through IRD Hospital Dr. Wahidin Sudirohusodo Makassar as many as 19 people and patients with pulmonary TB as many as 247 people. In 2017 it was reported that 2 IRD officers at Wahidin Sudirohusodo Makassar Hospital contracted hepatitis due to contact with patients, while for HIV / AIDS cases there were no reports



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of health workers being infected either in this hospital or in other large hospitals, but if Universal vigilance implementation is not applied in treating every patient, so it does not rule out nurses will be infected by these very dangerous infectious diseases (Muhamad, 2008).

The high prevalence of infectious diseases such as HIV / AIDS, hepatitis B virus and pulmonary tuberculosis and other infectious diseases also means an increased risk of health workers who can be infected with infectious diseases, especially if vigilance against blood and body fluids is not exercised for all patients. Health workers need to consider that all patients are potentially infected with infectious diseases, especially HIV / AIDS and other infectious diseases, and need to exercise caution to minimize the risk of transmission from the blood and body fluids of all patients. health workers when providing care to patients who are likely to have infectious diseases such as HIV / AIDS have the risk of being infected, especially if basic health and safety rules at the hospital (K3RS) are not implemented (Nasronudin, 2007).

Universal Precautions is an infection control effort that must be implemented in service to all patients, every time to reduce the risk of infection transmitted through the blood. In controlling infection the application of Universal Precautions is very basic in nursing care for everyone regardless of the status of the infection. Universal Precautions must be a routine activity, it is necessary to provide adequate materials and equipment, supervision and monitoring to ensure the implementation of Universal Precautions (Hermon, 2020; Indika *et al.*, 2020; Yanti *et al.*, 2020; Oktorie and Bert, 2020; Yuniarti *et al.*, 2020). Every nurse must personally maintain the hygiene of each person, always wash their hands properly before and after taking action. In addition, it is necessary to pay attention to medical equipment that has been through the process of decontamination, washing and disinfection properly. Waste is selected and managed according to regulations, avoid contact with blood and other bodily fluids, wash hands thoroughly after handling patients and contaminated objects. All nurses or medical teams must understand and apply KU for all patients. At any time and anywhere regardless of the patient's infection status.

The results of research conducted by Sri Hanun Prasinahingsih about the description of the implementation of universal vigilance in Dr. Moewardi Surakarta was



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found that there were still nurses who did imperfect hand washing. There are still nurses who wear less protective equipment. There are still nurses who manage used medical devices less than perfect, as many as 15%. It is still found nurses manage less needles and sharp instruments. There are still nurses who manage waste or sanitation the room is less than perfect Pariaman Regional General Hospital is a referral hospital for the Regency and City of Pariaman which has the mission of "providing plenary health services, quality and affordable" and is a type A teaching hospital. Therefore this hospital has warned against vigilance against infectious diseases contagious. In connection with the growing number of infectious diseases at present, prevention of transmission to nurses through the application of general prevention standards is very important.

While nosocomial infections in Pariaman District Hospital in 2015 there were 83 cases, of which 15 cases were infected with ILO, 6 patients had Decubitus nasocomial infection, 62 patients were infected with phlebitis. From an interview the researcher did with one of the nurses in the internal medicine room, said that there was a patient who came in with gastritis after being treated for a few days the diagnosis added to complications of abdominal gastritis, and there was also a recent occurrence of patients who had diarrhea. Chronic contracting hepatitis after being hospitalized for several days.

#### **METHOD**

The research design used is descriptive. With the aim of this study on the disclosure of a state of how it is or describe the disclosure and interpretation of data relating to the description of nurses' knowledge about universal precautions to prevent Nosocomial infections in Pariaman District Hospital. The population in this study were all nurses in the inpatient room of Pariaman District Hospital, amounting to 77 people. The method of taking samples in total sampling is the entire population of Interne nurses, who are willing to be sampled and are in place at the time the study was sampled.



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#### **RESULTS AND DISCUSSION**

#### **Washing Hands**

The washing of hands was obtained in the ICU from 2 respondents (33.3%), in the Surgery room 2 people, (20%) in the Internal Room 7 people, (53.8%) in the Children's room 9 people (52.9%), in the Gondariah room 7 people (70), in the Neurology room 5 people (55.6%) and in the Nan Tongga room 5 respondents (41.7) who did the act of washing their hands were not appropriate. From the results of observations conducted by researchers which found that the act of washing hands is still not appropriate, according to researchers, this is due to the lack of understanding of nurses about universal vigilance, especially the process of washing hands in accordance with existing nursing standards.

According to Tietjen, hand washing is a process of removing dirt and dust mechanically from the skin of both hands by using soap and clean water. Washing hands is an important thing to do before and after taking action on patients, because washing hands can anticipate the transfer of germs through the hands, so that it can prevent cross-infection, which can harm the patient and the nurse itself. Guidelines for the exercise of vigilance in washing hands must always be done correctly before and after making contact with patients. because if not done this will be able to result in the transfer of germs through the hands of officers and can cause disease transmission. This can be proven from the results of Casewell & Philips research (2007) showing that washing hands with water (without soap) can eliminate less than 98% of Klebsiella, whereas using soap can remove more than 98% of Klebsiella in the hands. The best way to wash your hands is not only to the extent of fingers and palms, but washing to the elbows should be done.

Table 1. Frequency Distribution of Respondents Based on Universal Precautions Washing Hands in ICU Room Pariaman Hospital

Washing Hands	Frequency	%
Not suitable	2	33.3
Corresponding	4	66.7
Amount	6	100



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Tabel 2. Frequency Distribution of Respondents Based on Universal Precautions Washing Hands in the Operating Room Pariaman District Hospital

Washing Hands	Frequency	%
Not suitable	2	20
Corresponding	8	80
amount	10	100

Table 3. Frequency Distribution of Respondents Based on Universal Precautions Washing Hands in the Internal Room Pariaman District Hospital

Washing Hands	Frequency	%
Not suitable	7	53,8
Corresponding	6	46,2
amount	13	100

Table 4. Frequency Distribution of Respondents Based on Universal Precautions Washing Hands in Gondariah Room Pariaman District Hospital.

Washing Hands	Frequency	%
Not suitable	7	70
Corresponding	3	30
amount	10	100

Table 5. Frequency Distribution of Respondents Based on Universal Precautions for Handwashing in Children's Rooms Pariaman District Hospital

Washing Hands	Frequency	%
Not suitable	9	52,9
Corresponding	8	47,1
amount	17	100

Tabel 6. Frequency Distribution of Respondents Based on Universal Precautions Washing Hands in Gondariah Room Pariaman District Hospital.

Washing Hands	Frequency	%
Not suitable	7	53,8
Corresponding	6	46,2
amount	13	100

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#### The Use of Protective Equipment

Research results show that washing hands is not only limited to fingers and palms, but up to the elbows must be done, and from the research conducted by researchers, more than most of the respondents surveyed by researchers observed that they did the act of washing their hands not only by fingers and only palms but up to their elbows also do. In the use of protective equipment it can be seen that in the ICU room there were 4 respondents (66.7%), in the Surgery room 5 people (50%), in the Interne room 8 people (61.5%), in the Children's room 10 people (58.8%), in the Gondariah room 6 people (60%), in the Neurology room 3 people (33.3%) and in the Nan Tongga room 6 respondents (50%) who did the act of washing their hands were not appropriate. Based on the results of observations made by researchers, one of the protective devices that are less suitable for respondents is not to use shoes in nursing actions. Most respondents only use flip-flops when entering a patient's room. According to the researchers' assumptions this is due to the lack of understanding they have of self-protection.

Table 7. Frequency Distribution of Respondents Based on Universal Precautions for Use of Protective Equipment in the ICU Room of Pariaman Regional Hospital.

Use of Protective Equipment	Frequency	%
Not suitable	4	66.7
Corresponding	2	33.3
amount	6	100

Table 8. Frequency Distribution of Respondents Based on Universal Precautions for Use of Protective Equipment in the Operating Room of Pariaman Regional Hospital.

Use of Protective Equipment	Frequency	%
Not suitable	5	50
Corresponding	5	50
amount	10	100

According to Ibrahim, K., Protective equipment is used to protect the skin and mucous membranes of officers from the risk of exposure to blood and other bodily fluids. The use of personal protective equipment when in contact with patients who are suspected



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of having an infectious disease that can endanger health workers is very important so that health workers can avoid exposure to infectious diseases

Table 9. Frequency Distribution of Respondents Based on Universal Precautions for Use of Protective Equipment in the Internal Room of Pariaman Regional Hospital.

Use of Protective Equipment	Frequency	%
Not suitable	8	61.5
Corresponding	5	38.5
amount	13	100

Based on observations made by researchers at IRD installations, most nurses wear personal protective equipment (gloves and masks) when performing nursing care, because the two personal protective equipment are very possible to use because at that time they are handling patients suspected of being able to transmit infectious diseases. by air or have been diagnosed by a doctor with pulmonary TB disease and oxygen should be installed and infused.

#### **CONCLUSION**

The management of needles and sharp objects is very important to avoid staff from injuries caused by needling. This can be proven from the results of the DEPKES study, 17% of work accidents occur due to puncture wounds before or after use, 70% of work accidents after use and before disposal of needles and 13% of work accidents occur after disposal of needles and sharp instruments Throwing needles and sharp objects in a special place that has been provided is a way to avoid accidents due to work, because the needle is very at risk of causing injuries that cause the transmission of infectious diseases.

#### REFERENCES

Aprihatin, Y., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Policy Direction for AHP-Based Community Nutrition Management Post Eruption of Dempo Volcano, Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p6-10



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- Arlym, L., D. Hermon, D. Lanin, O. Oktorie, and A. Putra. 2019. A Policy Model of Preparedness The General Hospital in Reducing Victims of Earthquake and Tsunami Disasters in Siberut Mentawai Island, Indonesia. International Journal of Recent Technology and Engineering (IJRTE). Vol. 8. Issue 3. p89-93
- Armaita., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Policy Model of Community Adaptation using AHP in the Malaria Endemic Region of Lahat Regency-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p44-48
- Asman, A., E. Barlian, D. Hermon, I. Dewata, and I. Umar. 2020. Mitigation and Adaptation of Community using AHP in Earthquake Disaster-Prone Areas in Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p34-38
- Depkes RI. 2007. Pedoman Pencegahan dan Pengendalian Infeksi diRumah Sakit dan Fasilitas Pelayanan Kesehatan Lainnya. Jakarta. Perhimpunan pengendali Infeksi Indonesia.
- Darmadi. 2008. Infeksi Nosokomial Problematika dan Pengendaliannya. Jakarta. Salemba Medika.
- Depkes RI. 2004. Kewaspadaan universal Bagi Petugas PengelolaSpecimen Darah. Jakarta. (Online) URL: http.tbhiv. net/protocol\_development/sop\_files/kewaspadaan\_ universal.pdf. diakses 25 Agustus 2009)
- Depkes RI. 2003. Peedoman pelaksanaan kewaspadaan universal dipelayanan Kesehatan. Jakarta, Perhimpunan PengendaliInfeksi Indoneia
- Depkes RI. 2006. Pedoman penanggulangan Tuberculosis.CetakanPertama, Edisi 2, Jakarta. (Online)
- Emaliyawati. 2009. Tindakan kewaspadaan Universal Sebagai UpayaUntuk mengurangi Resiko Penyebaran Infeksi. AvailableFrom: URL: http://pustaka.unpad.co.id/wp-conten/aploads/2009/10/tindakan kewaspadaan universal.pdf(diakses 1 September 2009)
- Hermon. D. 2020. Introduction to the Editor-in-Chief about Disaster of COVID-19: How is COVID-19 Mitigation in Indonesia?. Sumatra Journal of Disaster, Geography and Geography Education. Vol. 4. Issue 1. p1-4
- Heri, P. 2002. Pengantar Ilmu Perilaku Manusia Untuk Keperawatan. Jakarta. EGC
- Indika, P.M., D. Hermon, I. Dewata, E. Barlian, and I. Umar. 2020. Malaria Spatial Pattern as an Outbreak Mitigation Effort in South Bengkulu Regency. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p214-218
- Muhamad, Y. 2008. Kepatuhan Penerapan Prinsi-Prinsippencegahan Infeksi (Universal Precaution) Pada Perawat diRumah Sakit Umum Daerah Abdoel Muluk Bandar Lampung.
- Nasronudin. 2007. HIV & AIDS, Pendekatan Biologi Molekuler, Klinis,dan Sosial. Jakarta. AirLangga University Press
- Oktorie, O and I. Bert. 2020. Spatial Model of COVID 19 Distribution Based on Differences an Climate Characteristics and Environment of According to the Earth Latitude. Sumatra Journal of Disaster, Geography and Geography Education. Vol. 4. Issue 1. p17-21



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- Yanti, E., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Directions for Sanitation-Based Environmental Structuring using AHP for the Prevention of Diarrhea in Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p25-29
- Yuniarti, E., D. Hermon, I. Dewata, E. Barlian, and I. Umar. 2020. Mapping the High Risk Populations Against Coronavirus Disease 2019 in Padang West Sumatra Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p50-58